



REPORT

Phase Two Environmental Site Assessment

40, 64, and 86 Burnhamthorpe Road East, Oakville, Ontario

Submitted to:

Crosstrail Estates Inc. and TWKD Developments Inc.

2031 James Street

Burlington, ON

L7R 1H2

Plans and drawings approved pursuant
to the Planning Act.

Planning & Development Department

A handwritten signature in black ink, likely of a municipal official, placed over the date and department name.

15-May-2026

Town of Oakville

Submitted by:

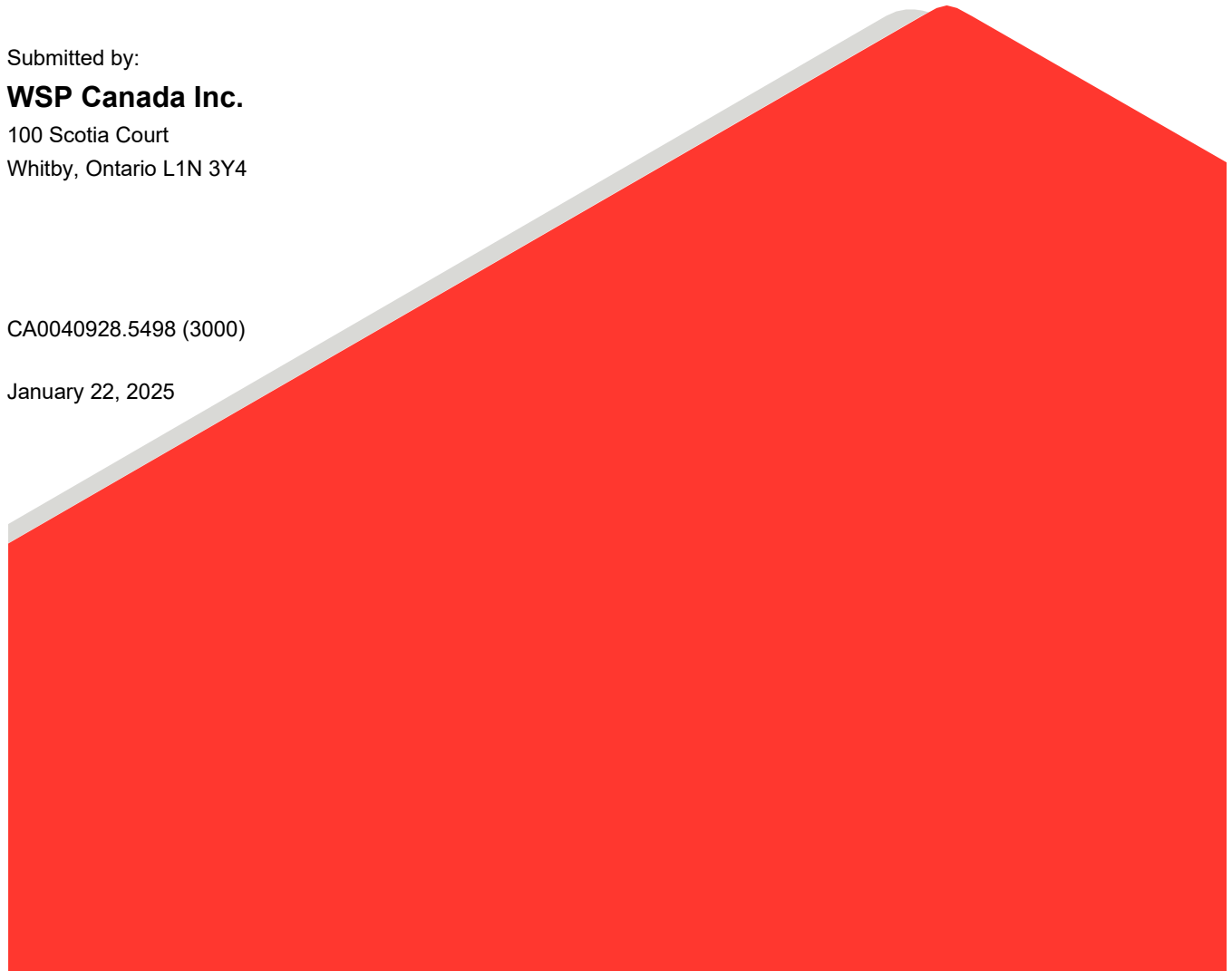
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Record of Issue

Company	Client Contact	Version	Date Issued	Comment
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1.0 EXECUTIVE SUMMARY

WSP Canada Inc (WSP) was retained by Crosstrail Estates Inc. and TWKD Developments Inc. to conduct a Phase Two Environmental Site Assessment (Phase Two ESA) for the property located at 40, 64, and 86 Burnhamthorpe Road East, Oakville, Ontario (Phase Two Property). The location of the Phase Two Property is provided in Figure 1.

WSP previously completed a Phase One Environmental Site Assessment (Phase One ESA) update in 2024 in general accordance with Ontario Regulation (O.Reg. 153/04). Based on the findings of the 2024 Phase One ESA Update, soil and groundwater sampling programs were completed to further investigate the identified areas of potential environmental concern (APECs). As noted in the Phase One Update, a stormwater management pond constructed in 2023 is located on the southwestern portion of the Site (APEC 8). Under Ontario Regulation 153/04, a stormwater management pond is an industrial property use requiring investigation for the purpose of obtaining a record of site condition. Contamination of stormwater management ponds is typically associated with the removal of sediment from storm water runoff from impervious surfaces (e.g., roads), which accumulates on the floor of the pond. Given that the stormwater management pond was recently constructed, it is WSP’s opinion that it is unlikely that there are any soil or groundwater impacts associated with this feature that are relevant to the intended residential use of the remainder of the lands. As discussed with Ms. Natalie Spina of the Region of Halton on November 15, 2024, no further investigation of this APEC was completed.

The analytical results from the sampling and analysis program indicates that the reported concentrations of all contaminants of potential concern (COPCs) in soil and groundwater at the Phase Two Property meet the Ministry of Environment, Conservation and Parks (MECP) Table 2 site condition standards for a residential property use with medium- to fine-textured soil¹.

2.0 INTRODUCTION

2.1 Site Description

WSP was retained by Crosstrail Estates Inc. and TWKD Developments Inc. to conduct a Phase Two ESA of the following property:

Municipal Address	40, 64, and 86 Burnhamthorpe Road East, Oakville, Ontario
Property Identification Number	24929-5132 (LT) & 24929-6900 (LT)
Legal Description	PT LT 15, CON 1 TRAF NDS, PT 1, 20R21076; TOWN OF OAKVILLE; and, FIRSTLY: PT LT 15, CON 1 TRAFALGAR, NORTH OF DUNDAS STREET, PT 1, 20R21012; TOGETHER WITH AN EASEMENT OVER PT 2, 20R21012 AS IN 672489, TOWN OF OAKVILLE AND SECONDLY: PT LT 15, CON 1 TRAFALGAR, NORTH OF DUNDAS STREET, PT 1, 20R21013; TOGETHER WITH AN EASEMENT OVER PT 2, 20R21013 AS IN 177238, TOWN OF OAKVILLE.
Size of the Phase Two Property	6.95 hectares

Note: legal descriptions obtained from the Chain of Title, dated October 23, 2024.

¹ Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act, Ministry of the Environment, April 15, 2011 (PIBS# 7382e01)

The location of the Phase Two Property is provided in Figure 1. A plan of survey for the Phase Two Property is provided in Appendix A. The boundaries of the Phase Two Property are provided in Figure 2.

2.2 Property Ownership

Authorization to proceed with this investigation was received from Kathy Di Silvestro of Crosstrail Estates Inc. and TWKD Developments Inc. on October 23, 2024. The contact information for the Phase Two Property owner is as follows:

Site Owner / Client	Address	Contact Information
Crosstrail Estates Inc. and TWKD Developments Inc.	2031 James Street Burlington, Ontario L7R 1H2	Kathy Di Silvestro telephone: 905-906-8616 kd@crystalhomes.com

2.3 Current and Proposed Future Uses

The Phase Two Property is currently vacant and undergoing construction as a residential subdivision, with a stormwater management pond on the southwest portion. The proposed future use of the Phase Two Property is residential.

2.4 Applicable Site Condition Standard

The analytical results were compared to the Table 2 site condition standards (residential property use, medium to fine soil texture) presented in the MECP document “*Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act*”, dated April 15, 2011. The following was considered when selecting the site condition standards:

- Potable water in the Phase One Study Area is provided by Halton Region. No water wells were observed on the Phase Two Property; however, based on a previous report, three domestic water wells were present (decommissioned as part of the ongoing redevelopment of the Phase Two Property). In addition, five water wells within the Phase One Study Area were used for domestic purposes. As such, standards for potable groundwater are applicable.
- The Phase Two Property is not located in an area designated in a municipal official plan as a wellhead protection area or other designation identified by the municipality for the protection of ground water.
- Four soil samples were collected and submitted for grain size analysis, which indicated that the samples collected are medium to fine textured (Section 6.4). Based on field observations and the above-noted results, more than two thirds of the overburden material at the Phase Two Property consisted predominantly of medium to fine-textured soils.
- No water bodies were identified on or within 30 m of the Phase Two Property. A stormwater management pond is on the southwestern portion of the Phase Two Property. The closest permanent water body is East Sixteen Mile Creek, 1.5 km southwest.
- No areas of natural significance were identified on the Phase Two Property. The North Oakville-Milton East Wetland Complex, a provincially significant wetland, is present in the Phase One Study Area (20 m west). Furthermore, the property located 20 m west was listed in Halton’s Regional Official Plan (2009) as a regional natural heritage system. Therefore, the Phase Two Property would meet the conditions of an environmentally

sensitive site, as described in Section 41 of O.Reg. 153/04. As such, standards for an environmentally sensitive site are applicable.

- The pH of surface soil is $5 \leq \text{pH} \leq 9$ and the pH of sub-surface soil meets the requirement that $5 \leq \text{pH} \leq 11$ (Section 6.4).
- The intended use of the Phase Two Property is residential.
- The overburden thickness is greater than 2 m over more than one-third of the Phase Two Property. The reported depth to water ranged from -0.13 to 5.40 mbgs.

While the Table 1 site condition standards are strictly applicable based on the proximity of a provincially significant wetland, the reported concentrations of soil and groundwater samples collected as part of the Phase Two ESA were compared to the Table 2 site condition standards to understand whether the current soil and groundwater conditions represent a potential human health concern for the proposed development. This approach was confirmed with Ms. Natalie Spina of the Region of Halton on November 15, 2024.

3.0 BACKGROUND INFORMATION

This section presents the background conditions of the Phase Two Property including a description of the physical setting and a summary of past investigations conducted.

The objectives of the Phase Two ESA were to obtain information about environmental conditions in the soil and groundwater on, in or under the Site, and to develop the information necessary to complete a Record of Site Condition ("RSC") for the property. The objectives of this Phase Two ESA update were achieved by:

- Developing an understanding of the geological and hydrogeological conditions at the Phase Two Property.
- Conducting field sampling for all COPCs associated with each APEC.

3.1 Physical Setting

A stormwater management pond is on the southwestern portion of the Phase Two Property. The closest permanent water body is East Sixteen Mile Creek, 1.5 km southwest. No areas of natural significance were identified on the Phase Two Property. However, the North Oakville-Milton East Wetland Complex, a provincially significant wetland, is present in the Phase One Study Area (20 m west). Furthermore, the property located 20 m west was listed in Halton's Regional Official Plan (2009) as a regional natural heritage system.

Based on a previous report, three domestic water wells were present (either abandoned or destroyed as part of the ongoing redevelopment of the Phase Two Property). In addition, five water wells within the Phase One Study Area were used for domestic purposes.

The surrounding properties within the Phase One Study Area included predominantly residential and commercial land uses, as shown in Figure 2.

The surficial geology was described as glaciolacustrine-derived silty to clayey till. The bedrock was reported to be comprised of shale and siltstone, and siltstone to sandstone and limestone interbeds.

The topography of the Phase One Property and surrounding area is generally flat.

3.2 Past Investigations

3.2.1 2019 Phase One ESA

WSP (2019a) conducted a Phase One ESA in accordance with O.Reg. 153/04 to assess the likelihood of soil and/or groundwater contamination resulting from historical activities at the Site and surrounding area. The subject site of the report was the Phase Two Property.

- The Phase Two Property consisted of a 6.94 ha parcel of land developed with three single-storey residential dwellings with basements, sheds and vegetation. The property was likely used for agricultural purposes until 1988, when the residential dwellings were constructed.
- The following Potentially Contaminating Activities (PCAs) resulting in APECs were identified:
 - APEC 1: A 935 L fuel oil aboveground storage tank (AST) was observed in the basement of the residential dwelling at 40 Burnhamthorpe Road East.
 - APEC 2: A 935 L fuel oil AST was observed in the basement of the residential dwelling at 64 Burnhamthorpe Road East.
 - APEC 3: A 935 L fuel oil AST was observed in the basement of the residential dwelling at 86 Burnhamthorpe Road East.
 - APEC 4: Two 5,000 L diesel fuel ASTs were observed adjacent to the shed located on the central portion of 64 Burnhamthorpe Road East.
 - APEC 5: Fill materials were observed on the western and southwestern portions of 40 Burnhamthorpe Road East. Fill materials were also observed to the north of the residential dwelling located at 40 Burnhamthorpe Road East.
- Based on the findings of the Phase One ESA, a Phase Two ESA was required to investigate the identified APECs.

This report was prepared by a Qualified Person and has been relied upon for the Phase Two investigation.

3.2.2 2019 Phase Two ESA

WSP (2019b) conducted a Phase Two ESA in accordance with O.Reg. 153/04, to assess the presence/absence of environmental impact from the PCAs in the APECs identified in the 2019 Phase One ESA. The investigation was completed concurrently with a preliminary geotechnical investigation and was not intended to satisfy the complete investigation requirements of O.Reg. 153/04.

- As part of the investigation, 12 boreholes (BH18-01 to BH18-12) were advanced to depths ranging from 6.38 to 6.71 mbgs, with four of the boreholes (BH18-01 and BH18-07 to BH18-09) instrumented with monitoring wells. Soil stockpile samples were also collected from 0.3 m hand-dug holes from the surface of the stockpile observed during the 2019 Phase One ESA.
- Generally, stratigraphy of the boreholes was described as a surficial layer of topsoil, silty clay or silty sand and gravel fill (0.5 to 1.45 mbgs), underlain by native soil of glacial till of silty clay and varying amounts of sand and gravel. Bedrock was not encountered during the subsurface investigation.
- The stockpiled material reportedly consisted mainly of weathered shale.

- Groundwater was encountered at depths ranging from approximately 3.03 to 4.25 mbgs
- Soil and groundwater samples were collected and submitted for analysis of one or more of the following: petroleum hydrocarbons (PHC), polycyclic aromatic hydrocarbons (PAH), volatile organic compounds (VOC), metals, hydride-forming metals, boron (hot water soluble), chromium hexavalent, mercury, electrical conductivity (EC), sodium adsorption ratio (SAR), cyanide, chloride, and pH. Soil and groundwater samples were submitted to Maxxam Analytics Inc. (Maxxam) for laboratory analysis.
- Analytical results were compared to the 2011 MECP Table 3 site condition standards (residential use, medium/fine textured soils). The analytical results indicated the soil and groundwater samples met the Table 3 site condition standards for the analyzed parameters. In addition, the samples collected from the stockpile generally met the Table 3 site condition standards, apart from SP-4, which had a concentration of copper of 230 µg/g (compared to the Table 3 site condition standards of 180 µg/g).
- Groundwater was inferred to flow east to southeast towards Sixteen Mile Creek.

3.2.3 2021 Phase I ESA Update

- WSP (2021) conducted a Phase I ESA update to update the 2019 Phase One ESA in general accordance with the Canadian Standards Association Standard Z768-01, *Phase I Environmental Site Assessment* (reaffirmed 2016).
- Stockpiles of fill material were still present to the southwest and west of the residential dwelling at 40 Burnhamthorpe Road East. No significant changes were noted with regards to the Phase Two Property and surrounding areas.
- The tenant of 86 Burnhamthorpe Road sourced potable water from the cistern located in the southern portion of the property. The cistern was filled periodically by a bulk water supplier who draws water from the municipal system.
- Based on the Environmental Risk Information Services report reviewed as part of the Phase I ESA update, a 100 L hydraulic oil spill from a truck to a ditch was reported on Burnhamthorpe Road West and Sixth Line, approximately 12 m west/southwest of the Phase Two Property, in May 2018. The MECP listed the impact of the spill as “minor” and there was no evidence that the MECP required further work (e.g. remediation) to be conducted.
- Based on the 2021 Phase I ESA Update, no new issues of potential environmental concern were identified.

3.2.4 2022 Draft Phase Two ESA Addendum Memorandum

- In response to response to comments made by the Region regarding the 2019 Phase Two ESA, WSP (2022) completed a draft Phase Two ESA Addendum Memorandum to further assess the soil stockpile that was south of the residential dwelling at 40 Burnhamthorpe Road East (APEC 5). WSP notes that this stockpile is no longer present at the Phase Two Property.
- Seventeen test pits (TP21-01 to TP21-17) were excavated within the stockpile. Three soil samples were collected from each test pit, one from the top, one from the middle and one from the bottom to obtain representative samples.
- Water levels were collected from two existing monitoring wells (BH18-01 and BH18-07). Water levels could not be collected from BH18-08 as it could not be found, and from BH18-09 as the well appeared to be

damaged. Two additional monitoring wells (MW5S and MW5D) were observed on the Phase Two Property (installed by others) and a round of water levels were collected from the four monitoring wells on March 17, 2022. Based on the groundwater contours, groundwater was found to flow towards the southeast.

- Fifty-one soil samples and six duplicate samples were collected and analyzed for PHC, BTEX, PAH, metals, hydride-forming metals, boron (hot water soluble), chromium hexavalent, mercury, EC, SAR, cyanide, and pH. Eight of the 51 samples were also analyzed for metals under the synthetic precipitation leaching procedure (SPLP) criteria under O.Reg. 406/19.
- The analytical results were compared to the Table 3 site condition standards for residential uses for coarse-textured soils.
- To determine if soil from the stockpile would be suitable for reuse on a residential, parkland, or institutional property and industrial, commercial, or community property, the analytical results were also compared to the O.Reg. 406/19 Table 3.1 Excess Soil Quality Standards for residential, parkland, and institutional property use and coarse-textured soil (O.Reg. 406/19 Table 3.1 Bulk RPI Standards), and O.Reg. 406/19 Table 3.1 Excess Soil Quality Standards for industrial, commercial, and community property use and coarse-textured soil (O.Reg. 406/19 Table 3.1 Bulk ICC Standards), respectively.
- The analytical results indicated that 35 of the 51 bulk soil samples exceeded the Table 3 site condition standards and O.Reg. 406/19 Table 3.1 Bulk RPI Standards for cobalt. Additionally, one soil sample (TP21-14, bottom sample) exceeded the previously noted standards for fluoranthene.
 - One of the eight SPLP samples exceeded the O.Reg. 406/19 Table 3.1 SPLP RPI Standard for copper (TP21-10, middle sample; concentration of 15 µg/L versus criteria of 14 µg/L).
- Three of the 51 bulk soil samples exceeded the O.Reg. 406/19 Table 3.1 Bulk ICC Standard for cobalt. One sample (TP21-14, bottom sample) exceeded the O.Reg. 406/19 Table 3.1 Bulk ICC Standard for fluoranthene.
 - One of the eight SPLP samples exceeded the O.Reg. 406/19 Table 3.1 SPLP ICC Standard for copper (TP21-10, middle sample; concentration of 15 µg/L versus criteria of 14 µg/L).
- It was understood that the stockpile was not intended to remain on the Phase Two Property. Upon the removal of the soil stockpile, additional soil sampling within the footprint of the stockpile was recommended.
- Regarding the reuse of the stockpiled soil, a portion of the stockpile (i.e., the northern portion) may be suitable for reuse at an industrial, commercial or community property, provided the exceedances are segregated out prior to reuse. It was noted that some debris was present within the stockpile (i.e., bricks, pieces of concrete). Depending on the receiving site's geotechnical requirements, this debris may need to be screened out.
- Three groundwater samples were also collected from BH18-01 and BH18-07 on December 22, 2021, and analyzed for PHCs, BTEX, PAHs, metals, hydride-forming metals, chromium hexavalent, and mercury. The analytical results of the groundwater samples met the Table 3 site condition standards.

3.2.5 2024 Phase One ESA Update

- WSP (2024) completed a Phase One ESA update to provide reliance to Halton Region as part of the development planning approval and update the 2019 Phase One ESA as the report was not considered current as defined by O.Reg. 153/04.

- The subject site of the report was the Phase Two Property, and the Phase One ESA update was completed in accordance with O. Reg. 153/04. This included a review of available historical information on the Phase Two Property and surrounding area, interviews with persons familiar with the property and a site reconnaissance.
- At the time of the site reconnaissance, the Phase Two Property was vacant and undergoing construction as a residential subdivision, with a stormwater management pond on the southwest portion. Piles of topsoil and imported granular were present. The Site Representative reported that the importation of fill for grading was not required and that no fill had been imported other than specialty aggregates from a licensed aggregate extraction facility. No storage of fuel or chemicals, or evidence of the former ASTs or piles of fill observed during the 2019 Phase One ESA, was observed.
- A review of Schedule A1 of the Town of Oakville Official Plan (2009) and the Halton's Regional Official Plan (2009) listed the neighbouring property 20 m west as a natural heritage system and a regional natural heritage system, respectively. A review of the Ministry of Natural Resources and Forestry's Make a Map: Natural Heritage Areas (MNR) mapping information indicated a provincially significant wetland (North Oakville-Milton East Wetland Complex) was located <30 m west.
- As discussed with the Region of Halton, while the Table 1 site condition standards are strictly applicable based on the proximity of a provincially significant wetland, the reported concentrations of soil and groundwater samples collected as part of the Phase Two ESA should be compared to the Table 2 site condition standards to understand whether the current soil and groundwater conditions represent a potential human health concern for the proposed development.
- The PCAs and APECs identified are shown in Figures 3 and 4. PCAs resulting in APECs are summarized in the following table:

Area of Potential Environmental Concern ¹	Location of Area of Potential Environmental Concern on Phase One Property	Potentially Contaminating Activity ²	Location of PCA (on-Site or off-Site)	Contaminants of Potential Concern ³	Media Potentially Impacted (Groundwater, Soil and/or Sediment)
APEC 1: A 935 L fuel oil AST was observed within the basement of the residential dwelling located at 40 Burnhamthorpe Road East (PCA 1).	Former basement footprint of the residential dwelling at 40 Burnhamthorpe Road East	#28. Gasoline and Associated Products Storage in Fixed Tanks	On-Site	PHC, BTEX, PAH	Soil and Groundwater
APEC 2: A 935 L fuel oil AST was observed within the basement of the residential dwelling located at 64 Burnhamthorpe Road East (PCA 2).	Former basement footprint of the residential dwelling at 64 Burnhamthorpe Road East	#28. Gasoline and Associated Products Storage in Fixed Tanks	On-Site	PHC, BTEX, PAH	Soil and Groundwater
APEC 3: A 935 L fuel oil AST was observed within the basement of the residential dwelling located at 86 Burnhamthorpe Road East (PCA 3).	Former basement footprint of the residential dwelling at 86 Burnhamthorpe Road East	#28. Gasoline and Associated Products Storage in Fixed Tanks	On-Site	PHC, BTEX, PAH	Soil and Groundwater

Area of Potential Environmental Concern ¹	Location of Area of Potential Environmental Concern on Phase One Property	Potentially Contaminating Activity ²	Location of PCA (on-Site or off-Site)	Contaminants of Potential Concern ³	Media Potentially Impacted (Groundwater, Soil and/or Sediment)
APEC 4: Two 5,000 L diesel fuel ASTs were observed on the eastern portion of 64 Burnhamthorpe Road East (PCA 4).	Eastern portion of 64 Burnhamthorpe Road East, east of the former shed	#28. Gasoline and Associated Products Storage in Fixed Tanks	On-Site	PHC, BTEX, PAH	Soil and Groundwater
APEC 5: Former stockpiles of fill material were located to the south side of the former residential dwelling at 40 Burnhamthorpe Road East (PCA 5).	Central portion of 40 Burnhamthorpe Road East, south and southwest of the former residential dwelling	30. Importation of Fill Material of Unknown Quality	On-Site	PHC, BTEX, VOC, PAH, Metals, Hydride Metals, B-HWS, CN, CrVI, Hg, EC, SAR	Soil
APEC 6: Former stockpiles of fill material were located on the southwestern portion of the Site (PCA 6).	Southwestern portion of 40 Burnhamthorpe Road East	30. Importation of Fill Material of Unknown Quality	On-Site	PHC, BTEX, VOC, PAH, Metals, Hydride Metals, B-HWS, CN, CrVI, Hg, EC, SAR	Soil
APEC 7: Former stockpiles of fill material were located to the north and west of the former residential dwelling at 40 Burnhamthorpe Road East (PCA 7).	Central portion of 40 Burnhamthorpe Road East, north and west of the former residential dwelling	30. Importation of Fill Material of Unknown Quality	On-Site	PHC, BTEX, VOC, PAH, Metals, Hydride Metals, B-HWS, CN, CrVI, Hg, EC, SAR	Soil
APEC 8: A stormwater management pond was observed on the southwest portion of the Phase One Property.	Stormwater management pond (southwest portion of Phase One Property)	N/A	On-Site	PHC, BTEX, VOC, PAH, Metals, Hydride Metals, B-HWS, CN, CrVI, Hg, EC, SAR	Soil and Groundwater

Notes:

- 1 Area of potential environmental concern means the area on, in or under a phase one property where one or more contaminants are potentially present, as determined through the phase one environmental site assessment, including through, •(a) identification of past or present uses on, in or under the phase one property, and •(b) identification of potentially contaminating activity.
- 2 Potentially contaminating activity means a use or activity set out in Column A of Table 2 of Schedule D that is occurring or has occurred in a phase one study area.
- 3 Contaminants of potential concern specified using the method groups as identified in the "Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act and Excess Soil Quality", March 9, 2004, amended as of February 19, 2021.

- With regards to APEC 8, contamination of stormwater management ponds is typically associated with the removal of sediment from storm water runoff from impervious surfaces (e.g., roads), which accumulates on the floor of the pond. Given that the stormwater management pond was recently constructed (2023), it was WSP's opinion that it was unlikely that there are any soil or groundwater impacts associated with this feature

that are relevant to the intended residential use of the remainder of the lands and no further investigation is recommended in this area.

This report was prepared by a Qualified Person and has been relied upon for the Phase Two investigations.

4.0 SCOPE OF THE INVESTIGATION

4.1 Overview of Site Investigation

The Phase Two ESA update investigation activities were completed between September 13, and December 23, 2024 and included the following tasks:

- **Health and Safety Plan:** Preparation of a health and safety plan for internal and subcontractor use prior to initiating any field work at the Phase Two Property.
- **Utility Clearances:** Coordination of utility clearances with local utility companies along with retaining the services of a private locator to assess for possible services in the areas of the proposed test locations.
- **Borehole Advancement and Monitoring Well Installation:** The borehole drilling and monitoring well installation program included drilling of 14 boreholes (BH24-1 to BH24-14) of which four (BH24-1 to BH24-4) were completed as groundwater monitoring wells from December 9 to 10, 2024. An additional three surficial soil samples (BH24-15 to BH24-17) were collected on December 19, 2024. The groundwater monitoring wells were used for groundwater sampling at the Phase Two Property. The rationale for the selected locations of the boreholes, monitoring wells, and surficial soil samples is provided in the Sampling and Analysis Plan provided in Appendix B. The locations of the boreholes, monitoring wells, and surficial soil samples are provided in Figure 5. The monitoring well construction details are presented in Table 1.
- **Soil Sampling:** Soil samples were collected on December 9 and 10, 2024 from the boreholes and surficial soil samples were collected on December 19, 2024. Selected soil samples were submitted for analysis of the COPCs (Table 3).
- **Groundwater Monitoring and Sampling:** Groundwater samples were collected on December 19, 2024. Groundwater samples were submitted for analysis of the COPCs (Table 4).
- **Surveying:** A survey for the boreholes, monitoring wells, and surficial soil sample locations were completed by WSP staff on December 23, 2024.
- **Reporting:** WSP compiled and assessed the field and laboratory results from the above noted activities into this report.

The Phase Two ESA update investigation was carried out in general accordance with WSP's standard operating procedures, which conform to the requirements of Ontario Regulation 153/04 (O. Reg. 153/04). The data from the Phase Two ESA update investigation completed by WSP were incorporated into a single Phase Two ESA report following the Phase Two ESA report format required by O. Reg. 153/04.

There were no impediments or access limitations that in the opinion of the Qualified Person would affect the conclusions of this Phase Two ESA report.

4.2 Media Investigated

The Phase Two ESA included sampling and analysis of soil and groundwater. No sediment was present within the APECs investigated, and therefore sediment sampling was not required. Summaries of the sampling and analysis completed for soil and groundwater are provided in Tables 3 and 4. The sampling and analysis plan (Appendix B) outlines the rationale for the field investigation activities and the associated methodologies used to meet the objectives of the Phase Two ESA.

4.3 Phase One Conceptual Site Model

The following key Site features (where applicable) are presented in Figures 1, 2, 3 and 4:

- Existing buildings and structures.
- Water bodies and areas of natural significance located in the Phase One Study Area.
- Drinking water wells on the Phase One Property.
- Roads (including names) within the Phase One Study Area.
- Uses of properties adjacent to the Phase One Property.
- Location of identified PCAs in the Phase One Study Area (including any storage tanks).

The following describes the Phase One ESA Conceptual Site Model (CSM):

- The Phase One Property consisted of a rectangular shaped parcel of land that is 6.95 ha in area. No permanent buildings or structures were present at the time of the 2024 Phase One ESA Update.
- No water bodies were identified on or within 30 m of the Phase One Property. A stormwater management pond is located in the southwestern portion of the Phase One Property. The closest permanent water body is East Sixteen Mile Creek, 1.5 km southwest of the Phase Two Property.
- No areas of natural significance were identified on the Phase One Property. The North Oakville-Milton East Wetland Complex, a provincially significant wetland, is present in the Phase One Study Area (20 m west). Furthermore, the property located 20 m west was listed in Halton's Regional Official Plan (2009) as a regional natural heritage system.
- Potable water in Phase One Study Area is provided by Halton Region. The Phase One Property is not located in a well-head protection area. No water wells were observed on the Phase One Property; based on the 2019 Phase One ESA, three domestic water wells were present (either abandoned or destroyed as part of the ongoing redevelopment of the Phase One Property). In addition, five water wells within the Phase One Study Area were used for domestic purposes.
- At the time of the site reconnaissance, the Phase One Property was vacant and undergoing construction as a residential subdivision, with a stormwater management pond. Piles of topsoil and imported granular were present. The Site Representative reported that the importation of fill for grading was not required and that no fill had been imported other than specialty aggregates from a licensed aggregate extraction facility. No storage of fuel or chemicals, or evidence of the former ASTs or piles of fill observed during the 2019 Phase One ESA, was observed.

- Historically, the Phase One Property was used for agricultural purposes until 1988, when residential dwellings were constructed. There are no indications that the Phase One Property (excluding the stormwater management pond) was used for any of the following commercial uses: vehicle garage, bulk liquid dispensing facility, or dry-cleaning facility. The stormwater management pond (Block 13) is considered an industrial property use.
- At the time of this Phase One ESA update, the neighbouring properties within the Phase One Study Area predominantly consisted of residential and commercial land uses.
- The following APECs and contaminants of concern were identified:

Area of Potential Environmental Concern ¹	Location of Area of Potential Environmental Concern on Phase One Property	Potentially Contaminating Activity ²	Location of PCA (on-Site or off-Site)	Contaminants of Potential Concern ³	Media Potentially Impacted (Groundwater, Soil and/or Sediment)
APEC 1: A 935 L fuel oil AST was observed within the basement of the residential dwelling located at 40 Burnhamthorpe Road East (PCA 1).	Former basement footprint of the residential dwelling at 40 Burnhamthorpe Road	#28. Gasoline and Associated Products Storage in Fixed Tanks	On-Site	PHC, BTEX, PAH	Soil and Groundwater
APEC 2: A 935 L fuel oil AST was observed within the basement of the residential dwelling located at 64 Burnhamthorpe Road East (PCA 2).	Former basement footprint of the residential dwelling at 64 Burnhamthorpe Road	#28. Gasoline and Associated Products Storage in Fixed Tanks	On-Site	PHC, BTEX, PAH	Soil and Groundwater
APEC 3: A 935 L fuel oil AST was observed within the basement of the residential dwelling located at 86 Burnhamthorpe Road East (PCA 3).	Former basement footprint of the residential dwelling at 86 Burnhamthorpe Road	#28. Gasoline and Associated Products Storage in Fixed Tanks	On-Site	PHC, BTEX, PAH	Soil and Groundwater
APEC 4: Two 5,000 L diesel fuel ASTs were observed on the eastern portion of 64 Burnhamthorpe Road East (PCA 4).	Eastern portion of 64 Burnhamthorpe Road, east of the former shed	#28. Gasoline and Associated Products Storage in Fixed Tanks	On-Site	PHC, BTEX, PAH	Soil and Groundwater

Area of Potential Environmental Concern ¹	Location of Area of Potential Environmental Concern on Phase One Property	Potentially Contaminating Activity ²	Location of PCA (on-Site or off-Site)	Contaminants of Potential Concern ³	Media Potentially Impacted (Groundwater, Soil and/or Sediment)
APEC 5: Former stockpiles of fill material were located to the south side of the former residential dwelling at 40 Burnhamthorpe Road East (PCA 5).	Central portion of 40 Burnhamthorpe Road, south and southwest of the former residential dwelling	30. Importation of Fill Material of Unknown Quality	On-Site	PHC, BTEX, VOC, PAH, Metals, Hydride Metals, B-HWS, CN, CrVI, Hg, EC, SAR	Soil
APEC 6: Former stockpiles of fill material were located on the southwestern portion of the Site (PCA 6).	Southwestern portion of 40 Burnhamthorpe Road	30. Importation of Fill Material of Unknown Quality	On-Site	PHC, BTEX, VOC, PAH, Metals, Hydride Metals, B-HWS, CN, CrVI, Hg, EC, SAR	Soil
APEC 7: Former stockpiles of fill material were located to the north and west of the former residential dwelling at 40 Burnhamthorpe Road East (PCA 7).	Central portion of 40 Burnhamthorpe Road, north and west of the former residential dwelling	30. Importation of Fill Material of Unknown Quality	On-Site	PHC, BTEX, VOC, PAH, Metals, Hydride Metals, B-HWS, CN, CrVI, Hg, EC, SAR	Soil
APEC 8: A stormwater management pond was observed on the southwest portion of the Phase One Property.	Stormwater management pond (southwest portion of Phase One Property)	N/A	On-Site	PHC, BTEX, VOC, PAH, Metals, Hydride Metals, B-HWS, CN, CrVI, Hg, EC, SAR	Soil and Groundwater

4.4 Deviations from Sampling and Analysis Plan

A sampling and analysis plan is provided in Appendix B. The sampling and analysis plan outlines the rationale for the field investigation activities carried out at the Phase Two Property and the associated methodologies used to meet the objectives of this Phase Two ESA update. This plan, dated December 2, 2024, covers the activities undertaken during the Phase Two ESA update. The deviations from the sampling and analysis plan are described below:

- The locations for boreholes BH24-15 to BH24-17 were inaccessible by the drill rig on December 9 and 10, 2024. WSP returned to the Phase Two Property on December 19, 2024, and attempted to advance the boreholes with a hand-auger to a depth of 0.76 mbgs. However, due to the nature of the soils encountered (silty clay), hand-augering was limited to a depth of 0.5 mbgs, and soil samples were collected using a trowel.
- During the advancement of borehole BH24-2, groundwater was not encountered in the open borehole. The borehole was advanced further the following day to a maximum depth of 10.67 mbgs to determine the depth of groundwater; however, no groundwater was encountered.
- WSP attempted to develop the groundwater monitoring wells following the installation of the wells. However, the groundwater monitoring wells were not developed as monitoring wells BH24-2 and BH24-4 were dry, and a low yield of groundwater was observed in BH24-3. WSP returned to the Phase Two Property on December 19, 2024; however, due to the slow recharge of groundwater, groundwater was sampled directly as opposed to purging the wells prior to sampling.
- Monitoring wells BH24-1 and BH24-4 were dry at the time of groundwater sampling (nine days after installation), and therefore, no groundwater samples could be collected from these monitoring wells.

4.5 Impediments

No physical impediments to the Phase Two ESA investigation were encountered. Access to the Phase Two Property was not denied or restricted.

5.0 INVESTIGATION METHOD

5.1 General

The following sections describe the field investigation methodology employed during the Phase Two ESA. The field work was conducted between December 9 and 23, 2024.

Prior to initiating the field work, WSP developed and implemented site-specific protocols to protect the health and safety of its employees and subcontractors through the preparation of a site-specific health and safety plan. An assessment of potential health and safety hazards at the Phase Two Property and those associated with the proposed work was completed each day of the field program. A health and safety tail gate meeting was held with WSP's subcontractors each day prior to completion of the field work. The document was reviewed and signed on-Site by field personnel prior to commencing work. Additionally, prior to any intrusive investigations, including drilling, WSP completed public and private utility clearances.

5.2 Drilling

On December 9 and 10, 2024, 14 boreholes (BH24-1 to BH24-14) were advanced to a maximum depth of 10.67 mbgs. Borehole locations are provided in Figure 5. A description of the quality assurance/quality control measures taken to minimize the potential for cross-contamination between sampling locations is provided in Section 5.12.

Boreholes were advanced by Strata Drilling Group using a track-mounted 7822 Geoprobe drill rig. During borehole drilling activities, overburden soil samples were collected using direct push sampling equipment and augered using solid stem augers. Continuous soil samples were collected using a dual-tube sampler: 1.52 m (5 ft) long, 1.85-inch diameter disposable PVC liner inside a direct push rod.

5.3 Soil: Sampling

Soil samples were collected from undisturbed locations and split in the field into two components. One component was placed into laboratory-prepared container with minimal headspace and stored in a cooler for potential laboratory analysis. The second component was placed inside a plastic bag for field screening, consisting of the soil description, and noting the presence of any staining, odour and/or debris. A dual photoionization/combustible gas detector (RKI Eagle II) calibrated to 100 parts per million (“ppm”) isobutylene gas and hexane gas was used to determine the organic vapour and combustible gas concentrations in the headspace in the sealed plastic bag during the field activities from December 9 to 10, 2024.

As per the sampling and analysis plan (Appendix B) at least one soil sample was submitted from each test location. Where the results of field screening indicated the presence of potentially impacted soil, an additional soil sample at greater depth was submitted on hold for laboratory analysis to vertically delineate impacts.

One soil sample representing “worst-case” conditions at each sampling location was selected for laboratory analysis based on the field headspace screening measurements, visual observations (e.g., staining, discoloration and/or free product, if any), and olfactory observations (if any). Soil samples were submitted to the analytical laboratory under chain of custody procedures. A summary of the soil samples submitted for analysis is provided in Table 3.

Geologic descriptions, visual and olfactory observations, and results of field headspace measurements are presented on the field logs (Appendix C).

5.4 Field Screening Measurements

Field measurements of sample headspace concentration were made using the following equipment:

Equipment	Parameters Detected	Detection Limit	Precision	Accuracy	Calibration Standard
RKI Eagle 2	Combustible gas	0-50,000 ppm	NA	±5%	Hexane (100 ppm)
RKI Eagle 2	Total organic vapour	0-2,000 ppm	NA	±5%	Isobutylene (100 ppm)

Instruments were calibrated before use by Maxim Environmental (rental supplier company).

One soil sample representing “worst-case” conditions at each sampling location was selected for laboratory analysis based on the soil headspace screening measurements, visual observations (e.g., staining, discoloration and/or free product, if any), and olfactory observations (if any). The results of soil headspace screening measurements are provided in the field logs in Appendix C.

5.5 Groundwater: Monitoring Well Installation

Four groundwater monitoring wells (BH24-1 to BH24-4) were installed by Strata Drilling Group on December 9 and 10, 2024. The groundwater monitoring wells were installed using threaded 50 mm diameter, schedule 40, polyvinyl chloride well screens and riser pipe. The annular space was filled with silica filter sand to at least 0.3 m above the well screen. The monitoring wells were sealed with bentonite from the top of the sand pack and completed at ground surface with a monument-style well cover (stick-up) set in concrete. The riser pipes were sealed with a J-plug. A description of the quality assurance/quality control measures taken to minimize the potential for cross-contamination between sampling locations is provided in Section 5.12.

Following drilling, WSP attempted to develop the groundwater monitoring wells following the installation of the wells. However, the groundwater monitoring wells were not developed as monitoring wells BH24-2 and BH24-4 were dry, and a low yield of groundwater was observed in BH24-3.

5.6 Groundwater: Field Measurements for Water Quality Parameters

Due to the slow recharge of groundwater, groundwater was sampled directly as opposed to purging the wells prior to sampling and measuring water quality parameters (including temperature, pH, conductivity, oxidation-reduction potential and dissolved oxygen) with a Horiba U-52 water quality meter.

5.7 Groundwater: Sampling

A summary of the sampling and analysis of groundwater is provided in Table 4.

Groundwater samples were placed in laboratory-prepared containers and stored in a cooler until delivery to the analytical laboratory under chain of custody procedures. A summary of the groundwater samples submitted for analysis is presented in Table 4.

5.8 Sediment: Sampling

No sediment samples were collected as part of this investigation.

5.9 Analytical Testing

The contact information for the analytical laboratory: AGAT Laboratories, 5835 Coopers Avenue, Mississauga, ON, L4Z 1Y2 (Hina Siddiqui, 905-712-5126).

The analytical laboratory is accredited in accordance with the International Standard ISO/IEC 17025 (General Requirement for the Competence of Testing and Calibration Laboratories, May 5, 2005, as amended) and the standards for proficiency testing developed by the Standards Council of Canada, the Canadian Association for Laboratory Accreditation or another accreditation body accepted by the MECP.

5.10 Residue Management Procedures

All residues produced during the investigation (e.g., soil cuttings from drilling) were left on the Phase Two Property after being visually screened for the absence of potential contamination.

5.11 Elevation Surveying

A survey of the boreholes, monitoring wells and surficial soil samples advanced/collected in 2024 was completed by WSP staff using a Trimble Catalyst GNSS GPS unit (with precision corrections, typ. horiz. ± 0.03 m, vert. ± 0.06 m, reported as NAD83 Zone 17).

5.12 Quality Assurance and Quality Control Measures

WSP's quality assurance program for environmental investigations was implemented to ensure that analytical data obtained by the investigation were valid and representative. The quality assurance program included the following measures:

- The use of standard operating procedures for all field investigation activities.
- The collection of field duplicate samples at a minimum frequency of one duplicate for every ten samples.

- As part of the Phase Two ESA update, 20 soil samples and three field duplicates, and two groundwater samples and one field duplicate were collected.
- The collection of a trip blank for the groundwater sampling event which included the analysis of volatile compounds (e.g. PHC F1, BTEX) in groundwater.
- Field equipment (water quality meter, RKI Eagle II) was calibrated by Maxim Environmental prior to use using a standard of known concentration.
- Soil and groundwater samples were handled and stored in accordance with the sample collection and preservation requirement of the MECP “*Protocol for Analytical Methods Used in the Assessment of Properties Under Part XV.I of the Environmental Protection Act and Excess Soil Quality*”, July 1, 2011 (as amended February 19, 2021). Samples were collected directly into pre-cleaned, laboratory-supplied sample containers with the appropriate preservative for the analyte group. Upon collection, samples were placed in insulated coolers with ice for storage in WSP’s warehouse and transported to the analytical laboratory under chain of custody protocols.
- Dedicated sampling equipment (tubing and foot valves) and clean disposable Nitrile™ gloves were used at each sampling location to prevent cross-contamination. All non-dedicated sampling equipment (e.g., oil/water interface probe, water quality meter, and dual-tube sampler) was decontaminated between sampling locations. Sampling equipment in contact with soil or groundwater was cleaned by mechanical means; washed with a laboratory-grade detergent and thoroughly rinsed with distilled water.
- Detailed field records documenting the methods and circumstances of collection for each field sample were prepared at the time of sample collection. Each sample was assigned a unique sample identification number recorded in the field notes, along with the date and time of sample collection, the sample matrix, and the requested analyses.
- The submission of samples to the analytical laboratory in accordance with standard chain of custody procedures.

Below is a summary of the primary and duplicate samples.

Date	Media	Primary Sample ID	Duplicate Sample ID	Trip Blanks
December 10, 2014	Soil	BH24-5-SS1 BH24-9-SS1	DUP1 DUP2	NA
December 19, 2024	Soil	BH24-15-SS1	DUP1	NA
December 19, 2024	Groundwater	BH24-3	DUP A	Trip Blank

6.0 REVIEW AND EVALUATION

This section of the report presents a review and evaluation of the results of the drilling, monitoring and sampling activities conducted as part of the Phase Two ESA.

6.1 Geology

The soil conditions encountered during the borehole drilling programs are presented in the field logs (Appendix C) and cross-sections (Figures 7 and 8). The following presents a summary of the subsurface soil conditions encountered during the investigation.

In general, the subsurface soil conditions encountered at the borehole locations consisted of a surficial layer of topsoil, ranging from 0.15 to 0.69 mbgs, underlain by native deposits of glacial till predominantly consisting of silty clay with varying amounts of sand and gravel to the termination depths of the boreholes (maximum depth of 10.67 mbgs). The glacial till in borehole BH18-06 was underlain by a silty sand deposit from 5.64 mbgs to the termination depth of the borehole. Fill material was identified in boreholes BH18-02 and BH18-08 and consisted of silty clay or silty sand and gravel to a depth of 1.45 mbgs.

Based on the soil conditions encountered in the boreholes, the native silty clay likely represents a water table aquitard.

6.2 Groundwater: Elevations and Flow Direction

The groundwater investigation included the sampling and analysis of groundwater in the aquitard, noting that the inferred elevation of the water table appears to be variable. The bottom of the monitoring well screens were installed at elevations ranging from 176.22 to 183.81 masl (6.10 and 10.67 mbgs). A summary of the monitoring well construction details are presented in Table 1.

Monitoring for water levels and free product was completed using an interface probe from July 19 to 24, 2018, March 17, 2022, and December 19, 2024. No evidence of petroleum hydrocarbon free product or sheen in groundwater was observed.

The groundwater elevations at each monitoring well are summarized in Table 2. Groundwater elevations in the aquitard ranged from 178.98 to 187.04 masl (2.29 to 3.62 mbgs) on July 19 to 24, 2018, from 178.74 to 185.89 masl (-0.34 to 1.12 mbgs) on March 17, 2022, and 183.81 and 184.40 masl (4.01 and 5.40 mbgs) on December 19, 2024. Based on the groundwater elevation contours presented in Figures 6A and 6B, the inferred direction of groundwater flow was southwest in July 2018 and southeast in March 2022. In December 2024, all of the monitoring wells installed as part of prior investigations were no longer accessible and monitoring wells BH24-1 and BH24-4, installed as part of the current investigation were dry. Accordingly, insufficient water level data were obtained in December 2024 to permit the determination of groundwater flow direction.

Where petroleum hydrocarbons or light non-aqueous phase liquids may be present on, in or under the Phase Two Property, the screened intervals of monitoring wells must be positioned to intersect the water table. The elevations of the screened intervals and the water table elevations for monitoring wells located in APECs 1 to 4 are summarized below.

Well ID and Relevant APEC	Top of Well Screen (masl)	Bottom of Well Screen (masl)	Water Level September 16, 2021 (masl)	Comment
BH24-1 (APEC 1)	185.33	182.28	Dry	Additional details provided below
BH24-2 (APEC 2)	180.79	177.74	184.40	Screen is submerged by 3.61 m. Additional details provided below
BH24-3 (APEC 3)	186.16	183.11	183.81	Screen straddles the water table
BH24-4 (APEC 4)	182.71	179.66	Dry	Additional details provided below

Monitoring wells BH24-1 and BH24-4 were dry at the time of groundwater sampling and the monitoring well screen of BH24-2 was submerged below the water table. However, based on water levels collected from monitoring wells BH24-2 and BH24-3, the depth of the water table was between 4.01 and 5.40 mbgs. No visual or olfactory evidence of soil contamination (i.e., staining, odours) were identified in boreholes BH24-1, BH24-2, and BH24-4. Based on the soil analytical results (Section 6.6), the reported concentrations of all COPCs in soil met the applicable site condition standards. Noting that the Owner reports that no evidence of soil impacts was encountered during construction and given the low permeability of the native silty clay till, the vertical separation distance between ground surface and the water table acts as a protective feature that is likely to prevent a release of petroleum hydrocarbon fuels associated with these APECs from impacting groundwater quality. No additional monitoring for APECs 1, 2, and 4 is warranted.

Any temporary fluctuation in water levels on the Phase Two Property is not anticipated to affect the conclusions of the Phase Two ESA. Seasonal fluctuation in water levels should be expected. Given the limited number of monitoring events, seasonal trends could not be identified; however shallow groundwater water levels are typically highest following the spring recharge and decline throughout the summer and fall months into the winter.

Underground utility drawings were not available for the Phase Two Property. The presence of subsurface utilities and structures at the Phase Two Property are not expected to act as preferential pathways promoting the migration of COCs as the water table is not inferred to intercept buried utilities and subsurface structures at the Phase Two Property. Furthermore, no COPCs are present in groundwater exceeding the applicable site condition standards.

6.3 Groundwater: Hydraulic Gradients

The horizontal hydraulic gradient in the unconfined aquifer was 0.02 m/m from July 19 to 24, 2018 (Figure 6A), and 0.04 m/m on March 17, 2022 (Figure 6B). Variability in the hydraulic gradient may be related to point sources of recharge from the roofs of the former site buildings and variability in infiltration rates through the surficial soil.

Vertical hydraulic gradients were not determined since the reported concentrations of all COPCs in groundwater met the applicable site condition standards.

6.4 Fine-Medium Soil Texture and pH

Four soil samples were collected from the native overburden materials and analyzed to characterize the soils across the Phase Two Property. A summary of the test results is provided below.

Sample ID	Sample Depth (mbgs)	Soil Description	%Passing (75 µm)	Soil Texture
BH18-01 SA3 (BH18-01)	1.52 – 2.13	Silty Clay	73	Fine
BH24-1-SS6 (BH24-1)	3.81 – 4.57	Silty Clay	61	Fine
BH24-3-SS1 (BH24-3)	0 – 0.76	Silty Clay	66	Fine
BH24-4-SS3 (BH24-4)	1.52 – 2.29	Silty Clay	70	Fine

The results of the grain size analysis of the four samples showed that all samples contained less than 50% by mass of particles that are 75 µm or larger in mean diameter. The predominant soil type is silty clay till. Based on field observations, borehole stratigraphy and the soil texture analysis results, soil at the Phase Two Property is considered to be fine to medium-textured.

Soil samples were collected from surface and subsurface soil and submitted to AGAT Laboratories for pH determination. A summary of the test results is presented below.

Location ID	Sample ID	Sample Depth (mbgs)	Surface/Subsurface Soil	pH
BH18-02	BH18-2 SA1	0 - 0.60	Surface soil	7.98
BH18-05	BH18-5 SA1B	0.2 - 0.6	Surface soil	7.66
BH18-03	BH18-3 SA2	0.8 - 1.1	Surface soil	7.74
BH18-09	BH18-9 SA2	0.8 - 1.0	Surface soil	7.76
BH18-11	BH18-11 SA2	0.8 - 1.0	Surface soil	7.83
BH18-04	BH18-4 SA3	1.5 - 1.9	Subsurface soil	7.84
BH18-08	BH18-8 SA3	1.5 - 1.9	Subsurface soil	7.71
BH18-10	BH18-10 SA3	1.5 - 1.8	Subsurface soil	7.77
BH18-01	BH18-1 SA4	2.3 - 2.7	Subsurface soil	7.87
BH18-07	BH18-7 SA5	3.1 - 3.4	Subsurface soil	7.84
BH18-07	DUP5	3.1 - 3.4	Subsurface soil	7.92
BH18-12	BH18-12 SA5	3.1 - 3.4	Subsurface soil	7.87
BH18-02	BH18-2 SA6	4.6 - 5.0	Subsurface soil	7.99
BH18-06	BH18-6 SA6	4.6 - 5.2	Subsurface soil	7.98

The reported pH of five samples of surface soil meets the requirement that $5 \leq \text{pH} \leq 9$. The reported pH of nine samples of subsurface soil meets the requirement that $5 \leq \text{pH} \leq 11$.

6.5 Soil: Field Screening

The results of headspace vapour measurements are presented on the field logs in Appendix C. Combustible gas vapour ranged from 0 to 50 ppm (highest reading at BH18-5-SA1B from 0.2 to 0.6 mbgs) and organic vapour measurements ranged from 0 to 16 ppm (highest reading at BH18-7-SA6 from 6.1 to 6.7 mbgs) in June 2018 and were both non-detectable in December 2024.

6.6 Soil: Quality

A list of soil samples submitted for laboratory analysis is provided in Table 3. The soil analytical results are presented in Tables 5A to 5D. Certificates of analyses are provided in Appendix D. The comparison of soil analytical results to the applicable site condition standards identified the following exceedance of the applicable site condition standards:

- BH18-02: The reported concentrations of EC and SAR exceeded in a soil samples collected from 0-0.60 mbgs.

WSP understands that the Phase Two Property is not used, and has not been used, for manufacturing, processing, or bulk storage of salt. A review of the aerial photographs also indicated that the western portion of the Site (where BH18-02 is located) was extensively used for stockpiling of soils between 2016 and 2019 and it is anticipated that trucks/construction equipment were active within this area. Truck traffic during winter months has the potential to track salt impacts from Sixth Line into this area. As such, WSP understands that the impacts may result in salt applied to surfaces for the safety of vehicular or pedestrian traffic under conditions of snow or ice or both at the Phase Two Property. It is therefore the Qualified Person's opinion, as per Section 49(1) of O.Reg. 153/04, as amended, that EC and SAR are deemed to meet the site condition standards. Furthermore, it is noted that elevated concentrations of EC and SAR above the Table 2 site condition standards only pose a potential risk to plants, and are not relevant to human health. Therefore, the current soil conditions do not represent a potential human health concern for the proposed residential development.

The reported concentrations of all COPCs in soil met the applicable site condition standards.

6.7 Groundwater: Quality

Monitoring well construction details are summarized in Table 1 and a list of groundwater samples submitted for laboratory analysis is provided in Table 4. The analytical results for groundwater samples are summarized in Tables 6A to 6D. Certificates of analysis are provided in Appendix D.

The reported concentrations of the contaminants of potential concern met the applicable site condition standards.

In addition to the numerical standards, the MECP sets out aesthetic standards relating to the presence of petroleum hydrocarbon product. Specifically, a property does not meet the site condition standards if there is evidence of free product, including but not limited to, visible petroleum hydrocarbon film or sheen present on groundwater, surface water or in any groundwater or surface water samples. Monitoring for free phase product was conducted during groundwater sample collection. No evidence of free product or sheen in groundwater was observed.

6.8 Sediment: Quality

Sampling and analysis of sediment was not required as part of the Phase Two investigation.

6.9 Data Quality Review

The quality assurance assessment of the field duplicate sample results was conducted according to the MECP document “*Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act and Excess Soil Quality*”, March 9, 2004 (amended February 19, 2021) (“Analytical Protocol”). The reported concentrations for the trip blank were non-detectable and the relative percent difference (RPD) for the duplicate sample set is within the acceptable control limits, aside from the following:

- The RPD for nickel and EC exceeded the control limits for BH24-5-SS1 (parent) and DUP1 (duplicate) in December 2024. The RPD values were 44% for nickel and 16% for EC, which is above the control limits of 30% for metals and 10% for EC.
- The RPD for EC exceeded the control limit for BH24-9-SS1 (parent) and DUP2 (duplicate) in December 2024. The RPD value was 24%, which is above the control limit of 10% for EC.
- The RPD for EC exceeded the control limit for BH24-15-0-0.5 (parent) and DUP1 (duplicate) in December 2024. The RPD value was 20%, which is above the control limit of 10% for EC.

The reported concentrations of nickel and EC in the parent samples and field duplicates met the Table 2 site condition standards. As such, this is not considered to alter the overall findings and conclusions of the investigation and the analytical data generated during the investigation are valid and may be used in this Phase Two ESA without further qualification.

All certificates of analysis or analytical reports received pursuant to clause 47(2)(b) of O. Reg. 153/04 comply with subsection 47(3). A certificate of analysis or analytical report has been received for each sample submitted for analysis and is provided in Appendix D.

6.10 Phase Two Conceptual Site Model

The Phase Two conceptual site model is presented in the following sections. The location of the Phase Two Property is provided in Figure 1. The boundaries of the Phase Two Property are provided in Figure 2.

POTENTIAL SOURCES OF CONTAMINATION

Potentially Contaminating Activities

Based on the information obtained as part of the Phase One ESA and Phase One ESA Update, the following PCAs were identified. The location of each PCA is provided in Figure 3.

Location	Potentially Contaminating Activity	Information Source	Rationale for Potential Contribution of the PCA to an APEC
Phase One Property	28. Gasoline and Associated Products Storage in Fixed Tanks – A former fuel oil AST was located in the basement of the residential dwelling at 40 Burnhamthorpe Road East (PCA 1).	2019 Phase One ESA	The PCA is located on the Phase One Property and must be identified as an APEC.
	28. Gasoline and Associated Products Storage in Fixed Tanks – A former fuel oil AST was observed in the basement of the residential dwelling located at 64 Burnhamthorpe Road East (PCA 2).	2019 Phase One ESA	The PCA is located on the Phase One Property and must be identified as an APEC.

Location	Potentially Contaminating Activity	Information Source	Rationale for Potential Contribution of the PCA to an APEC
	28. Gasoline and Associated Products Storage in Fixed Tanks – A former fuel oil AST was observed in the basement of the residential dwelling located at 86 Burnhamthorpe Road East (PCA 3).	2019 Phase One ESA	The PCA is located on the Phase One Property and must be identified as an APEC.
	28. Gasoline and Associated Products Storage in Fixed Tanks – Two former diesel fuel ASTs were located on the eastern portion of 64 Burnhamthorpe Road East (PCA 4).	2019 Phase One ESA	The PCA is located on the Phase One Property and must be identified as an APEC.
	30. Importation of Fill Material of Unknown Quality – Former stockpiles of fill material were located to the south of the residential dwelling at 40 Burnhamthorpe Road East. As part of the 2019 Phase Two ESA, exceedances of PHCs, hexane, copper and/or electrical conductivity were identified in the stockpile samples. The stockpiles were removed in 2024 (PCA 5).	2019 Phase One ESA, 2019 Phase Two ESA	The PCA is located on the Phase One Property and must be identified as an APEC.
	30. Importation of Fill Material of Unknown Quality – Former stockpiles of fill material were located on the southwestern portion of the Site. According to the 2019 Phase Two ESA, PHC impacts in soil were identified in soil samples collected from BH18-2 at depths ranging from 0 to 0.6 mbgs and from 4.6 to 5.0 mbgs. The stockpiles were removed in 2023 (PCA 6).	2019 Phase Two ESA	The PCA is located on the Phase One Property and must be identified as an APEC.
	30. Importation of Fill Material of Unknown Quality – Former stockpiles of fill material were located to the north and west of the residential dwelling at 40 Burnhamthorpe Road East. The stockpiles were removed in 2023 (PCA 7).	2019 Phase One ESA	The PCA is located on the Phase One Property and must be identified as an APEC.
Phase One Study Area (excluding the Phase One Property)	28. Gasoline and Associated Products Storage in Fixed Tanks – Two ASTs were observed on the neighbouring property (3483 Sixth Line, PCA 8).	Site observations	Based on the downgradient location of the Site, it is not considered to contribute to an APEC.

Areas of Potential Environmental Concern

The following APECs were identified at the Phase Two Property. The location of each APEC is presented in Figure 4.

Area of Potential Environmental Concern	Location of Area of Potential Environmental Concern on Phase One Property	Potentially Contaminating Activity	Location of PCA (on-Site or off-Site)	Contaminants of Potential Concern	Media Potentially Impacted (Groundwater, Soil and/or Sediment)
APEC 1: A 935 L fuel oil AST was observed within the basement of the residential dwelling located at 40 Burnhamthorpe Road East (PCA 1).	Former basement footprint of the residential dwelling at 40 Burnhamthorpe Road East	#28. Gasoline and Associated Products Storage in Fixed Tanks	On-Site	PHC, BTEX, PAH	Soil and Groundwater
APEC 2: A 935 L fuel oil AST was observed within the basement of the residential dwelling located at 64 Burnhamthorpe Road East (PCA 2).	Former basement footprint of the residential dwelling at 64 Burnhamthorpe Road East	#28. Gasoline and Associated Products Storage in Fixed Tanks	On-Site	PHC, BTEX, PAH	Soil and Groundwater
APEC 3: A 935 L fuel oil AST was observed within the basement of the residential dwelling located at 86 Burnhamthorpe Road East (PCA 3).	Former basement footprint of the residential dwelling at 86 Burnhamthorpe Road East	#28. Gasoline and Associated Products Storage in Fixed Tanks	On-Site	PHC, BTEX, PAH	Soil and Groundwater
APEC 4: Two 5,000 L diesel fuel ASTs were observed on the eastern portion of 64 Burnhamthorpe Road East (PCA 4).	Eastern portion of 64 Burnhamthorpe Road East, east of the former shed	#28. Gasoline and Associated Products Storage in Fixed Tanks	On-Site	PHC, BTEX, PAH	Soil and Groundwater
APEC 5: Former stockpiles of fill material were located to the south side of the former residential dwelling at 40 Burnhamthorpe Road East (PCA 5).	Central portion of 40 Burnhamthorpe Road East, south and southwest of the former residential dwelling	30. Importation of Fill Material of Unknown Quality	On-Site	PHC, BTEX, VOC, PAH, Metals, Hydride Metals, B-HWS, CN, CrVI, Hg, EC, SAR	Soil
APEC 6: Former stockpiles of fill material were located on the southwestern portion of the Site (PCA 6).	Southwestern portion of 40 Burnhamthorpe Road East	30. Importation of Fill Material of Unknown Quality	On-Site	PHC, BTEX, VOC, PAH, Metals, Hydride Metals, B-HWS, CN, CrVI, Hg, EC, SAR	Soil

Area of Potential Environmental Concern	Location of Area of Potential Environmental Concern on Phase One Property	Potentially Contaminating Activity	Location of PCA (on-Site or off-Site)	Contaminants of Potential Concern	Media Potentially Impacted (Groundwater, Soil and/or Sediment)
APEC 7: Former stockpiles of fill material were located to the north and west of the former residential dwelling at 40 Burnhamthorpe Road East (PCA 7).	Central portion of 40 Burnhamthorpe Road East, north and west of the former residential dwelling	30. Importation of Fill Material of Unknown Quality	On-Site	PHC, BTEX, VOC, PAH, Metals, Hydride Metals, B-HWS, CN, CrVI, Hg, EC, SAR	Soil
APEC 8: A stormwater management pond was observed on the southwest portion of the Phase One Property.	Stormwater management pond (southwest portion of Phase One Property)	N/A	On-Site	PHC, BTEX, VOC, PAH, Metals, Hydride Metals, B-HWS, CN, CrVI, Hg, EC, SAR	Soil and Groundwater

Subsurface Structures and Utilities

Underground utility drawings were not available for the Phase Two Property. The presence of subsurface utilities and structures at the Phase Two Property are not expected to act as preferential pathways promoting the migration of COCs as the water table is not inferred to intercept buried utilities and subsurface structures at the Phase Two Property. Furthermore, no COPCs are present in groundwater exceeding the Table 2 site condition standards.

PHYSICAL SETTING

Stratigraphy

Representative geologic cross-sections of the Phase Two Property are presented in Figures 7 and 8. In general, the subsurface soil conditions encountered at the borehole locations consisted of a surficial layer of topsoil, ranging from 0.15 to 0.69 mbgs, underlain by native deposits of glacial till predominantly consisting of silty clay with varying amounts of sand and gravel to the termination depths of the boreholes (maximum depth of 10.67 mbgs). The glacial till in borehole BH18-06 was underlain by a silty sand deposit from 5.64 mbgs to the termination depth of the borehole. Fill material was identified in boreholes BH18-02 and BH18-08 and consisted of silty clay or silty sand and gravel to a depth of 1.45 mbgs.

Based on the soil conditions encountered in the boreholes, the native silty clay likely represents a water table aquitard.

Hydrogeological Characteristics

The groundwater investigation included the sampling and analysis of groundwater in the aquitard. The bottom of the monitoring well screens were installed at elevations ranging from 176.22 to 183.81 masl (6.10 and 10.67 mbgs).

Groundwater elevations in the aquitard ranged from 178.98 to 187.04 masl (2.29 to 3.62 mbgs) on July 19 to 24, 2018, from 178.74 to 185.89 masl (-0.34 to 1.12 mbgs) on March 17, 2022, and 183.81 and 184.40 masl (4.01 and 5.40 mbgs) on December 19, 2024. Based on the groundwater elevation contours presented in Figures 6A

and 6B, the inferred direction of groundwater flow was southwest in July 2018 and southeast in March 2022. In December 2024, all of the monitoring wells installed as part of prior investigations were no longer accessible and monitoring wells BH24-1 and BH24-4, installed as part of the current investigation were dry. Accordingly, insufficient water level data were obtained in December 2024 to permit the determination of groundwater flow direction.

The horizontal hydraulic gradient in the unconfined aquifer was 0.02 m/m from July 19 to 24, 2018 (Figure 6A), and 0.04 m/m on March 17, 2022 (Figure 6B). Variability in the hydraulic gradient may be related to point sources of recharge from the roofs of the former site buildings and variability in infiltration rates through the surficial soil.

Bedrock was not encountered during the Phase Two investigation. The reported depth to bedrock is at least 10.67 mbgs.

Soil Texture

A summary of the test results of laboratory analysis to determine soil texture is presented below.

Sample ID	Sample Depth (mbgs)	Soil Description	%Passing (75 µm)	Soil Texture
BH18-01 SA3 (BH18-01)	1.52 – 2.13	Silty Clay	73	Fine
BH24-1-SS6 (BH24-1)	3.81 – 4.57	Silty Clay	61	Fine
BH24-3-SS1 (BH24-3)	0 – 0.76	Silty Clay	66	Fine
BH24-4-SS3 (BH24-4)	1.52 – 2.29	Silty Clay	70	Fine

The results of the grain size analysis of the four samples showed that all samples contained less than 50% by mass of particles that are 75 µm or larger in mean diameter. The predominant soil type is silty clay till. Based on field observations, borehole stratigraphy and the soil texture analysis results, soil at the Phase Two Property is considered to be fine to medium-textured.

Non-potable Standards (Section 35)

Potable water in the Phase One Study Area is provided by Halton Region. The Phase Two 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. No water wells were observed on the Phase Two Property; based on the 2019 Phase One ESA, three domestic water wells were present (either abandoned or destroyed as part of the ongoing redevelopment of the Phase Two Property). In addition, five water wells within the Phase One Study Area were used for domestic purposes. Therefore, potable standards apply to the Phase Two Property.

Environmentally Sensitive Areas (Section 41)

No areas of natural significance were identified on the Phase Two Property. The North Oakville-Milton East Wetland Complex, a provincially significant wetland, is present in the Phase One Study Area (20 m west). Furthermore, the property located 20 m west was listed in Halton's Regional Official Plan (2009) as a regional natural heritage system. Accordingly, Section 41 of O. Reg. 153/04 applies to the Phase Two Property in the context of RSC submission.

As discussed with Halton Region, while the Table 1 site condition standards are strictly applicable based on the proximity of a provincially significant wetland, the reported concentrations of soil and groundwater samples collected as part of the Phase Two ESA were compared to the Table 2 site condition standards to understand whether the current soil and groundwater conditions represent a potential human health concern for the proposed development.

Shallow Soil Property or Water Body (Section 43.1)

Overburden thickness at the RSC Property extends beyond the maximum depth of drilling (10.67 mbgs). The Phase Two Property does not include all or part of a water body and is not adjacent to a water body or include land that is within 30 m of a water body. Accordingly, Section 43.1 of the Regulation does not apply to the Phase Two Property.

Excess Soil

No soil has been brought from another property and placed on, in or under the Phase Two Property as part of the Phase Two ESA.

Site Condition Standards

The analytical results were compared to Table 2 site condition standards (residential property use, medium to fine-textured soil) listed in the MECP document “*Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act*”, April 2011.

Proposed Buildings and Other Structures

It is understood that the Phase Two Property is to be redeveloped with 132 residential townhouses. It is noted that the proposed development plan is subject to change.

DELINEATION OF CONTAMINANT IMPACTS

APEC Where Contaminants are Present at a Concentration Above the Applicable Site Condition Standard

APEC 1 – The investigation included the collection of one soil sample (BH24-1-SS5) from a depth of 3.05-3.81 mbgs from borehole BH24-1 within APEC 1 for the associated COPCs. The reported concentrations of all COPCs were non-detectable and met the Table 2 site condition standards. No groundwater sample was collected from monitoring well BH24-1 as the monitoring well was dry at the time of groundwater monitoring and sampling. Water levels collected from monitoring wells BH24-2 and BH24-3 indicated the depth of the water table was between 4.01 and 5.40 mbgs. No visual or olfactory evidence of soil contamination (i.e., staining, odours) was identified in the borehole at the time of drilling.

APEC 2 – The investigation included the collection of one soil sample (BH24-2-SS6) from a depth of 3.81-4.57 mbgs from borehole BH24-2 and a groundwater sample (BH24-2) at a depth of 7.62-10.67 mbgs from monitoring well BH24-2 within APEC 2 for the associated COPCs. The reported concentrations of all COPCs in soil and groundwater were non-detectable, aside from toluene in groundwater, which was marginally above the reportable detection limit. The reported concentrations of all COPCs met the Table 2 site condition standards.

It is noted that the monitoring well screen of BH24-2 was submerged by 3.61 m below the water table. However, no visual or olfactory evidence of soil contamination (i.e., staining, odours) were identified in the borehole at the time of drilling. Furthermore, the soil analytical results indicated no contamination was identified in soil at the depth of the water table.

APEC 3 - The investigation included the collection of one soil sample (BH24-3-SS6) from a depth of 3.81-4.57 mbgs from borehole BH24-3 and a groundwater sample (BH24-3) and field duplicate (DUP A) at a depth of 3.05-6.10 mbgs from monitoring well BH24-3 within APEC 3 for the associated COPCs. The reported concentrations of all COPCs in soil and groundwater were non-detectable, aside from toluene and phenanthrene in groundwater, which were marginally above the reportable detection limits. The reported concentrations of all COPCs met the Table 2 site condition standards.

APEC 4 – The investigation included the collection of one soil sample (BH24-4-SS6) from a depth of 3.81-4.57 mbgs from borehole BH24-4 within APEC 4 for the associated COPCs. The reported concentrations of all COPCs in soil were non-detectable and met the Table 2 site condition standards. No groundwater sample was collected from monitoring well BH24-4 as the monitoring well was dry at the time of groundwater monitoring and sampling. Water levels collected from monitoring wells BH24-2 and BH24-3 indicated the depth of the water table was between 4.01 and 5.40 mbgs. No visual or olfactory evidence of soil contamination (i.e., staining, odours) was identified in the borehole at the time of drilling.

APEC 5 - The investigation included the collection of five soil samples (BH24-5-SS1 to BH24-9-SS1) and two field duplicates (DUP1 and DUP2) from a depth of 0.0-0.76 mbgs from five boreholes (BH24-5 to BH24-9) within APEC 5 for the associated COPCs. The reported concentrations of all COPCs met the Table 2 site condition standards.

APEC 6 – The investigation included the collection of seven soil samples (BH18-2 SA1, BH18-2 SA6, and BH24-10-SS1 to BH24-14-SS1) from depths of 0.0-0.60, 4.6-5.0, and 0.0-0.76 mbgs from six boreholes (BH18-02 and BH24-10 to BH24-14) within APEC 6 for the associated COPCs. The reported concentrations of all COPCs met the Table 2 site condition standards, aside from EC and SAR from borehole BH18-2 at a depth of 0.0-0.60 mbgs which exceeded the Table 2 site condition standards.

WSP understands that the Phase Two Property is not used, and has not been used, for manufacturing, processing, or bulk storage of salt. A review of the aerial photographs indicated that APEC 6 was extensively used for stockpiling of soils between 2016 and 2019 and that trucks hauling fill were active within this area. Truck traffic during winter months has the potential to track salt impacts from Sixth Line into APEC 6. As such, WSP understands that the EC/SAR impacts may result from salt applied to surfaces for the safety of vehicular or pedestrian traffic under conditions of snow or ice or both. It is therefore the Qualified Person's opinion, as per Section 49(1) of O.Reg. 153/04, as amended, that EC and SAR are deemed to meet the site condition standards. It is noted that elevated concentrations of EC and SAR above the Table 2 site condition standards only pose a potential risk to plants, and are not associated with potential human health risks. Therefore, the current soil conditions do not represent a potential human health concern for the proposed residential development.

APEC 7 – The investigation included the collection of three surficial soil samples (BH24-15-0-0.5 to BH24-17-0-0.5) and a field duplicate (DUP1) from depths of 0.10 to 0.20 or 0.15 to 0.35 mbgs from three locations (BH24-15 to BH24-17) within APEC 7 for the associated COPCs. The reported concentrations of all COPCs met the Table 2 site condition standards.

APEC 8 – No investigation of APEC 8 was conducted as contamination of stormwater management ponds is typically associated with the removal of sediment from storm water runoff from impervious surfaces (e.g., roads), which accumulates on the floor of the pond. Given that the stormwater management pond was recently constructed (2023), it was WSP's opinion that it was unlikely that there are any soil or groundwater impacts associated with this feature that are relevant to the intended residential use of the remainder of the lands and no further investigation is recommended in this area.

Contaminant Distribution

No contaminants of potential concern were present in soil or groundwater samples at a concentration greater than the Table 2 site condition standards.

Potential Reason for Discharge into the Environment at the Site

No discharge of contaminants has occurred on, in or under the Phase Two Property which has resulted in impacts at concentrations greater than the Table 2 site condition standards.

Contaminant Migration

The reported concentrations of the contaminants of potential concern met the Table 2 site condition standards and therefore contaminant migration in groundwater is not relevant.

Meteorological and Climatic Considerations

Seasonal fluctuation in water levels should be expected. Given the limited number of monitoring events seasonal trends could not be identified; however shallow groundwater water levels are typically highest following the spring recharge and decline throughout the summer and fall months into the winter.

Soil Vapour Intrusion Pathways

The depth and location of building foundations and footings are unknown. No contaminants were present at concentrations greater than the Table 2 site condition standards and therefore soil vapour intrusion is not anticipated.

CROSS-SECTIONS

Lateral and Vertical Distribution of Contaminants

Representative cross-sections are presented in Figures 7 and 8.

POTENTIAL EXPOSURE PATHWAYS AND RECEPTORS

No contaminants were present at concentrations greater than the applicable site condition standards and therefore potential release and transport mechanisms, exposure pathways and human and ecological receptors are not considered further.

NON-STANDARD DELINEATION

Non-standard delineation conducted in accordance with section 7.1 of Schedule E was not part of preparing the phase two environmental site assessment report.

STANDARDS DEEMED TO BE MET

The reported concentrations of electrical conductivity and sodium adsorption ratio in a soil sample collected from BH18-2 at a depth of 0.0-0.60 mbgs exceed the Table 2 site condition standards. In accordance with paragraph 1 of section 49.1, the Qualified Person has determined that salt application to surfaces for the safety of vehicular or pedestrian traffic under conditions of snow or ice or both is solely responsible for these exceedances based on the following lines of evidence:

- The Phase Two Property is not used, and has not been used, for manufacturing, processing, or bulk storage of salt; and,

- WSP understands that salt has been applied to Sixth Line for the safety of vehicular or pedestrian traffic under conditions of snow or ice or both and that vehicle traffic from Sixth Line to the vicinity of BH18-2 may have caused tracking of salt from Sixth Line to the Phase Two Property during winter months.

Accordingly, the applicable site condition standards for electrical conductivity and sodium adsorption ratio in soil are deemed not to be exceeded for the purpose of obtaining a record of site condition.

The exemptions set out in paragraphs 1.1, 2 and 3 of section 49.1 are not applicable.

SUBSECTION 6(2) EXEMPTION

Limited groundwater investigation was conducted as part of the Phase Two ESA update.

7.0 CONCLUSIONS

The Phase Two ESA investigated seven of the APECs identified in the 2024 Phase One ESA Update.

Based on the results of the soil and groundwater samples submitted as part of this Phase Two ESA update, the reported concentrations of the COPCs met the Table 2 site condition standards as of the last sampling date (December 19, 2024).

8.0 REFERENCES

Phase One Environmental Site Assessment 40, 64 and 86 Burnhamthorpe Road East, Oakville, Ontario. Project number 1792964. Prepared for Crosstrail Estates Inc. and TWKD Developments Inc. by WSP Canada Inc. (formerly Golder Associates Ltd.). January 2019 (WSP, 2019a)

Phase Two Environmental Site Assessment 40, 64 and 86 Burnhamthorpe Road East, Oakville, Ontario. Project number 1792964. Prepared for Crosstrail Estates Inc. and TWKD Developments Inc. by WSP Canada Inc. (formerly Golder Associates Ltd.). January 2019 (WSP, 2019b)

Phase I Environmental Site Assessment Update of Three Adjacent Properties Located at 40, 64 and 86 Burnhamthorpe Road East in Oakville, Ontario. Project number 21468131. Prepared for TWKD Developments Inc. by WSP Canada Inc. (formerly Golder Associates Ltd.). June 16, 2021 (WSP, 2021)

Draft Phase Two ESA Addendum Memorandum, 40, 64 and 86 Burnhamthorpe Road East, Oakville, Ontario. Project number 21509494. Prepared for TWKD Developments Inc. by WSP Canada Inc. (formerly Golder Associates Ltd.). May 19, 2022 (WSP, 2022)

Phase One Environmental Site Assessment Update, 40, 64, and 86 Burnhamthorpe Road East, Oakville, Ontario. Project number CA0040928.5498. Prepared for Crosstrail Estates Inc. and TWKD Developments Inc. by WSP Canada Inc. October 3, 2024 (WSP, 2024)

Quaternary Geology of Ontario, Southern Sheet. Map 2556. Ontario Ministry of Development and Mines dated 1991 (Map No. 2556, Quaternary Geology of Ontario, Southern Sheet, 1991).

Bedrock Geology of Ontario, Southern Sheet. Map 2544. Ontario Ministry of Development and Mines dated 1991 (Map No. 2544, Bedrock Geology of Ontario, Southern Sheet, 1991).

9.0 LIMITATIONS

This report was prepared for the exclusive use of Crosstrail Estates Inc. and TWKD Developments Inc. The report, which specifically includes all tables, figures and appendices, is based on data and information, collected during conducting the Phase Two ESA, and is based solely on the conditions of the property at the time of conducting investigations, supplemented by historical information and data obtained by WSP Canada Inc. as described in this report.

The assessment of environmental conditions at this Site has been made using the results of field screening techniques and chemical analysis of soil and groundwater samples at a limited number of locations. The Site conditions between sampling locations have been inferred based on conditions observed at the sampling locations. Conditions may vary from these sample locations. Additional study, including further investigation, can reduce the inherent uncertainties associated with this type of study. However, it is never possible, even with exhaustive sampling and testing, to dismiss the possibility that part of a Site may be contaminated and remain undetected. Borehole logs should not be used for geotechnical purposes, except as directed by a geotechnical engineer.

The services performed as described in this report were conducted in a manner consistent with that level of care and skill normally exercised by other members of the engineering and science professions currently practicing under similar conditions, subject to the time limits and financial and physical constraints applicable to the services.

Any use which a third party makes of this report, or any reliance on, or decisions to be made based on it, are the responsibilities of such third parties. WSP Canada Inc. accepts no responsibility for damages, if any, suffered by any third party (other than as noted above) as a result of decisions made or actions based on this report.

The content of this report is based on information collected during the drilling, soil and groundwater sampling activities, our present understanding of the Site conditions, and our professional judgement in light of such information at the time of this report. This report provides a professional opinion and therefore no warranty is expressed, implied, or made as to the conclusions, advice and recommendations offered in this report. This report does not provide a legal opinion regarding compliance with applicable laws. With respect to regulatory compliance issues, it should be noted that regulatory statutes and the interpretation of regulatory statutes are subject to change.

The findings and conclusions of this report are valid only as of the date of this report. If new information is discovered in future work, including excavations, borings or other studies, WSP Canada Inc. should be requested to re-evaluate the conclusions of this report, and to provide amendments as required.

The monitoring wells installed as part of this project have been constructed using licensed drilling/well contractors employing licensed well technicians. It is owner's responsibility to have a licensed well technician properly abandon all monitoring wells, if required.

10.0 SIGNATURES

We trust that you will find the contents of this report satisfactory for your current needs. Should you require clarification of the information provided, please do not hesitate to contact the undersigned.

Signature Page

The objectives and requirements set out in O.Reg. 153/04 for a Phase Two Environmental Site Assessment were applied in carrying out the environmental site assessment and preparing this report.

WSP Canada Inc.



Blake D'Souza, BASc
Environmental Scientist



Eric Hood, PhD, PEng, QP
Senior Principal, Environmental Engineer



BD/REM/EH/lb

[https://wsponlinecan.sharepoint.com/sites/ca-ca0040928.5498/shared documents/06. deliverables/02. phase two esa update/ca0040928.5498-r-rev0-ph two up, 40-86 burnhamthorpe rd e_oakville-jan 22, 2025.docx](https://wsponlinecan.sharepoint.com/sites/ca-ca0040928.5498/shared%20documents/06.%20deliverables/02.%20phase%20two%20esa%20update/ca0040928.5498-r-rev0-ph%20two%20up,%2040-86%20burnhamthorpe%20rd%20e_oakville-jan%2022,%202025.docx)

Tables

TABLE 1
SUMMARY OF SAMPLING LOCATIONS
40, 64, and 86 Burnhamthorpe Road East, Oakville, Ontario

Location ID	Location Type	Contractor	Installation Date	Construction Material	Nominal Diameter (mm)	Northing	Easting	Top of Casing Elevation (masl)	Ground Surface Elevation (masl)	Stickup (m)	Total Borehole Depth (mbgs)	Top of Screen (mbgs)	Bottom of Screen (mbgs)	Screen Length (m)	Top of Screen Elevation (masl)	Bottom of Screen Elevation (masl)
BH18-01	Monitoring Well	Tri-Phase Group	20-Jun-2018	PVC	50	4816273.76	601401.46	183.23	182.32	0.91	6.43	3.05	6.10	3.05	179.27	176.22
BH18-02	Borehole	Tri-Phase Group	20-Jun-2018	NA	NA	4816292.68	601351.92	NA	184.77	NA	6.71	NA	NA	NA	NA	NA
BH18-03	Borehole	Tri-Phase Group	20-Jun-2018	NA	NA	4816347.22	601304.17	NA	186.77	NA	6.71	NA	NA	NA	NA	NA
BH18-04	Borehole	Tri-Phase Group	21-Jun-2018	NA	NA	4816400.27	601338.35	NA	187.28	NA	6.71	NA	NA	NA	NA	NA
BH18-05	Borehole	Tri-Phase Group	20-Jun-2018	NA	NA	4816345.43	601395.81	NA	183.61	NA	6.71	NA	NA	NA	NA	NA
BH18-06	Borehole	Tri-Phase Group	20-Jun-2018	NA	NA	4816312.42	601460.86	NA	183.30	NA	6.38	NA	NA	NA	NA	NA
BH18-07	Monitoring Well	Tri-Phase Group	22-Jun-2018	PVC	50	4816437.77	601419.36	186.51	185.76	0.75	6.71	3.05	6.10	3.05	182.71	179.66
BH18-08	Monitoring Well	Tri-Phase Group	22-Jun-2018	PVC	50	4816449.49	601484.81	187.58	187.58	0.00	6.71	3.05	6.10	3.05	184.53	181.48
BH18-09	Monitoring Well	Tri-Phase Group	21-Jun-2018	PVC	50	4816635.44	601516.37	190.64	189.91	0.73	6.71	3.05	6.10	3.05	186.86	183.81
BH18-10	Borehole	Tri-Phase Group	22-Jun-2018	NA	NA	4816537.57	601437.16	NA	189.28	NA	6.71	NA	NA	NA	NA	NA
BH18-11	Borehole	Tri-Phase Group	21-Jun-2018	NA	NA	4816559.99	601506.88	NA	189.28	NA	6.71	NA	NA	NA	NA	NA
BH18-12	Borehole	Tri-Phase Group	21-Jun-2018	NA	NA	4816546.07	601585.69	NA	187.55	NA	6.71	NA	NA	NA	NA	NA
MW5S	Monitoring Well	Unknown	Unknown	PVC	50	4816230.96	601420.62	180.70	179.86	0.84	5.83	Unknown	Unknown	Unknown	Unknown	Unknown
MW5D	Monitoring Well	Unknown	Unknown	PVC	50	4816229.34	601418.40	180.48	179.84	0.64	9.04	Unknown	Unknown	Unknown	Unknown	Unknown
BH24-1	Monitoring Well	Strata Drilling Group	09-Dec-2024	PVC	50	4816434.26	601387.63	189.42	188.38	1.04	6.10	3.05	6.10	3.05	185.33	182.28
BH24-2	Monitoring Well	Strata Drilling Group	9/10-Dec-2024	PVC	50	4816489.51	601465.34	189.37	188.41	0.96	10.67	7.62	10.67	3.05	180.79	177.74
BH24-3	Monitoring Well	Strata Drilling Group	09-Dec-2024	PVC	50	4816554.96	601490.45	190.21	189.21	1.00	6.10	3.05	6.10	3.05	186.16	183.11
BH24-4	Monitoring Well	Strata Drilling Group	09-Dec-2024	PVC	50	4816423.62	601525.11	186.76	185.76	1.00	6.10	3.05	6.10	3.05	182.71	179.66
BH24-5	Borehole	Strata Drilling Group	10-Dec-2024	NA	NA	4816397.30	601376.37	NA	193.82	NA	1.52	NA	NA	NA	NA	NA
BH24-6	Borehole	Strata Drilling Group	10-Dec-2024	NA	NA	4816364.12	601395.47	NA	192.48	NA	1.52	NA	NA	NA	NA	NA
BH24-7	Borehole	Strata Drilling Group	10-Dec-2024	NA	NA	4816375.46	601410.65	NA	190.31	NA	1.52	NA	NA	NA	NA	NA
BH24-8	Borehole	Strata Drilling Group	10-Dec-2024	NA	NA	4816410.68	601408.34	NA	192.43	NA	1.52	NA	NA	NA	NA	NA
BH24-9	Borehole	Strata Drilling Group	10-Dec-2024	NA	NA	4816393.07	601392.17	NA	193.02	NA	1.52	NA	NA	NA	NA	NA
BH24-10	Borehole	Strata Drilling Group	10-Dec-2024	NA	NA	4816307.13	601316.35	NA	185.22	NA	1.52	NA	NA	NA	NA	NA
BH24-11	Borehole	Strata Drilling Group	10-Dec-2024	NA	NA	4816299.67	601329.93	NA	184.93	NA	1.52	NA	NA	NA	NA	NA
BH24-12	Borehole	Strata Drilling Group	10-Dec-2024	NA	NA	4816286.05	601345.16	NA	184.32	NA	1.52	NA	NA	NA	NA	NA
BH24-13	Borehole	Strata Drilling Group	10-Dec-2024	NA	NA	4816250.70	601375.23	NA	182.27	NA	1.52	NA	NA	NA	NA	NA
BH24-14	Borehole	Strata Drilling Group	10-Dec-2024	NA	NA	4816226.20	601393.84	NA	180.51	NA	1.52	NA	NA	NA	NA	NA
BH24-15	Borehole	WSP	19-Dec-2024	NA	NA	4816416.39	601363.73	NA	187.30	NA	0.20	NA	NA	NA	NA	NA
BH24-16	Borehole	WSP	19-Dec-2024	NA	NA	4816435.59	601365.35	NA	188.39	NA	0.35	NA	NA	NA	NA	NA
BH24-17	Borehole	WSP	19-Dec-2024	NA	NA	4816436.40	601378.88	NA	188.51	NA	0.20	NA	NA	NA	NA	NA

Notes

Northing and easting are UTM NAD 83 Zone 17.

masl metres above sea level

mbgs metres below ground surface

PVC polyvinyl chloride

NA not applicable

TABLE 2
GROUNDWATER MONITORING
40, 64, and 86 Burnhamthorpe Road East, Oakville, Ontario

CA0040928.5498 (3000)

Location ID	Date	Depth to Water (mbgs)	Depth to Water (mbtoc)	Water Elevation (masl)	Total Depth (mbtoc)	Water Volume (L)	Volume Purged (L)	Temperature (°C)	pH	Conductivity (mS/cm)	Dissolved Oxygen (mg/L)	Redox Potential (mV)	Turbidity (NTU)	Remarks
BH18-01	19-Jul-2018	3.34	4.25	178.98	-	-	-	-	-	-	-	-	-	-
BH18-07	19-Jul-2018	2.29	3.04	183.48	-	-	-	-	-	-	-	-	-	-
BH18-08	24-Jul-2018	3.62	3.62	183.96	-	-	-	-	-	-	-	-	-	-
BH18-09	24-Jul-2018	2.87	3.60	187.04	-	-	-	-	-	-	-	-	-	-
BH18-01	17-Mar-2022	-0.34	0.57	182.66	7.99	-	-	-	-	-	-	-	-	-
BH18-07	17-Mar-2022	-0.13	0.62	185.89	7.76	-	-	-	-	-	-	-	-	-
MW5S	17-Mar-2022	1.12	1.96	178.74	6.67	-	-	-	-	-	-	-	-	NA
MW5D	17-Mar-2022	0.14	0.78	179.70	9.65	-	-	-	-	-	-	-	-	NA
BH24-1	19-Dec-2024	-	Dry	-	7.05	-	-	-	-	-	-	-	-	NA
BH24-2	19-Dec-2024	4.01	4.97	184.40	11.64	14.01	0.5	7.60	7.99	1.09	13.66	53	7.6	None
BH24-3	19-Dec-2024	5.40	6.40	183.81	7.09	1.46	0.5	7.50	7.60	1.43	10.67	106	91.5	None
BH24-4	19-Dec-2024	-	Dry	-	6.87	-	-	-	-	-	-	-	-	NA

Notes:
mbgs - metres below ground surface
mbtoc - metres below top of casing
masl - metres above sea level
- not reported
NA - not applicable

TABLE 3
SUMMARY OF SOIL SAMPLES SUBMITTED FOR ANALYSIS
40, 64, and 86 Burnhamthorpe Road East, Oakville, Ontario

CA0040928.5498 (3000)

Location ID	Sample ID	Date	Sample Depth (mbgs)	Headspace Screening Result (ppm)	Soil Description	Analyses Completed
BH18-01	BH18-1 SA4	20-Jun-18	2.3 - 2.7	0 / 0	Silty Clay	PHC, BTEX, PAH, Metals, Hydride-Forming Metals, HWS-B, CrVI, CN, Hg, EC, SAR, pH
BH18-02	BH18-2 SA1	20-Jun-18	0 - 0.60	45 / 0	FILL - Silty Clay	PHC, BTEX, PAH, Metals, Hydride-Forming Metals, HWS-B, CrVI, CN, Hg, EC, SAR, pH
BH18-02	BH18-2 SA6	20-Jun-18	4.6 - 5.0	0 / 0	Silty Clay	PHC, BTEX, PAH, Metals, Hydride-Forming Metals, HWS-B, CrVI, CN, Hg, EC, SAR, pH
BH18-03	BH18-3 SA2	20-Jun-18	0.8 - 1.1	0 / 1	Silty Clay	PHC, BTEX, PAH, Metals, Hydride-Forming Metals, HWS-B, CrVI, CN, Hg, EC, SAR, pH
BH18-04	BH18-4 SA3	21-Jun-18	1.5 - 1.9	0 / 6	Silty Clay	PHC, BTEX, PAH, Metals, Hydride-Forming Metals, HWS-B, CrVI, CN, Hg, EC, SAR, pH
BH18-05	BH18-5 SA1B	20-Jun-18	0.2 - 0.6	50 / 0	Silty Clay	PHC, BTEX, PAH, Metals, Hydride-Forming Metals, HWS-B, CrVI, CN, Hg, EC, SAR, pH
BH18-06	BH18-6 SA6	20-Jun-18	4.6 - 5.2	0 / 1	Silty Clay	PHC, BTEX, PAH, Metals, Hydride-Forming Metals, HWS-B, CrVI, CN, Hg, EC, SAR, pH
BH18-07	BH18-7 SA5	22-Jun-18	3.1 - 3.4	0 / 14	Silty Clay	PHC, BTEX, PAH, Metals, Hydride-Forming Metals, HWS-B, CrVI, CN, Hg, EC, SAR, pH
BH18-07	DUP5	22-Jun-18	3.1 - 3.4	0 / 14	Silty Clay	PHC, BTEX, PAH, Metals, Hydride-Forming Metals, HWS-B, CrVI, CN, Hg, EC, SAR, pH
BH18-08	BH18-8 SA3	22-Jun-18	1.5 - 1.9	0 / 13	Silty Clay	PHC, BTEX, PAH, Metals, Hydride-Forming Metals, HWS-B, CrVI, CN, Hg, EC, SAR, pH
BH18-09	BH18-9 SA2	21-Jun-18	0.8 - 1.0	0 / 9	Silty Clay	PHC, BTEX, PAH, Metals, Hydride-Forming Metals, HWS-B, CrVI, CN, Hg, EC, SAR, pH
BH18-10	BH18-10 SA3	22-Jun-18	1.5 - 1.8	0 / 8	Silty Clay	PHC, BTEX, PAH, Metals, Hydride-Forming Metals, HWS-B, CrVI, CN, Hg, EC, SAR, pH
BH18-11	BH18-11 SA2	21-Jun-18	0.8 - 1.0	10 / 8	Silty Clay	PHC, BTEX, PAH, Metals, Hydride-Forming Metals, HWS-B, CrVI, CN, Hg, EC, SAR, pH
BH18-12	BH18-12 SA5	21-Jun-18	3.1 - 3.4	0 / 7	Silty Clay	PHC, BTEX, PAH, Metals, Hydride-Forming Metals, HWS-B, CrVI, CN, Hg, EC, SAR, pH
BH24-1	BH24-1-SS5	9-Dec-24	3.05 - 3.81	0 / 0	Silty Clay	PHC, BTEX, PAH
BH24-1	BH24-1-SS6	9-Dec-24	3.81 - 4.57	0 / 0	Silty Clay	Grain size
BH24-2	BH24-2-SS6	9-Dec-24	3.81 - 4.57	0 / 0	Silty Clay	PHC, BTEX, PAH
BH24-3	BH24-3-SS1	9-Dec-24	0 - 0.76	0 / 0	Silty Clay	Grain size
BH24-3	BH24-3-SS6	9-Dec-24	3.81 - 4.57	0 / 0	Silty Clay	PHC, BTEX, PAH
BH24-4	BH24-4-SS3	10-Dec-24	1.52 - 2.29	0 / 0	Silty Clay	Grain size
BH24-4	BH24-4-SS6	10-Dec-24	3.81 - 4.57	0 / 0	Silty Clay	PHC, BTEX, PAH
BH24-5	BH24-5-SS1	10-Dec-24	0 - 0.76	0 / 0	Silty Clay	PHC, VOC, PAH, Metals, Hydride-Forming Metals, HWS-B, CrVI, CN, Hg, EC, SAR
BH24-5	DUP1	10-Dec-24	0 - 0.76	0 / 0	Silty Clay	PHC, VOC, PAH, Metals, Hydride-Forming Metals, HWS-B, CrVI, CN, Hg, EC, SAR
BH24-6	BH24-6-SS1	10-Dec-24	0 - 0.76	0 / 0	Silty Clay	PHC, VOC, PAH, Metals, Hydride-Forming Metals, HWS-B, CrVI, CN, Hg, EC, SAR
BH24-7	BH24-7-SS1	10-Dec-24	0 - 0.76	0 / 0	Silty Clay	PHC, VOC, PAH, Metals, Hydride-Forming Metals, HWS-B, CrVI, CN, Hg, EC, SAR
BH24-8	BH24-8-SS1	10-Dec-24	0 - 0.76	0 / 0	Silty Clay	PHC, VOC, PAH, Metals, Hydride-Forming Metals, HWS-B, CrVI, CN, Hg, EC, SAR
BH24-9	BH24-9-SS1	10-Dec-24	0 - 0.76	-	Silty Clay	PHC, VOC, PAH, Metals, Hydride-Forming Metals, HWS-B, CrVI, CN, Hg, EC, SAR
BH24-9	DUP2	10-Dec-24	0 - 0.76	-	Silty Clay	PHC, VOC, PAH, Metals, Hydride-Forming Metals, HWS-B, CrVI, CN, Hg, EC, SAR
BH24-10	BH24-10-SS1	10-Dec-24	0 - 0.76	0 / 0	Silty Clay	PHC, VOC, PAH, Metals, Hydride-Forming Metals, HWS-B, CrVI, CN, Hg, EC, SAR
BH24-11	BH24-11-SS1	10-Dec-24	0 - 0.76	0 / 0	Silty Clay	PHC, VOC, PAH, Metals, Hydride-Forming Metals, HWS-B, CrVI, CN, Hg, EC, SAR
BH24-12	BH24-12-SS1	10-Dec-24	0 - 0.76	0 / 0	Silty Clay	PHC, VOC, PAH, Metals, Hydride-Forming Metals, HWS-B, CrVI, CN, Hg, EC, SAR
BH24-13	BH24-13-SS1	10-Dec-24	0 - 0.76	0 / 0	Silty Clay	PHC, VOC, PAH, Metals, Hydride-Forming Metals, HWS-B, CrVI, CN, Hg, EC, SAR
BH24-14	BH24-14-SS1	10-Dec-24	0 - 0.76	0 / 0	Silty Clay	PHC, VOC, PAH, Metals, Hydride-Forming Metals, HWS-B, CrVI, CN, Hg, EC, SAR
BH24-15	BH24-15-SS1	19-Dec-24	0.10 - 0.20	-	Silty Clay	PHC, VOC, PAH, Metals, Hydride-Forming Metals, HWS-B, CrVI, CN, Hg, EC, SAR
BH24-15	DUP1	19-Dec-24	0.10 - 0.20	-	Silty Clay	PHC, VOC, PAH, Metals, Hydride-Forming Metals, HWS-B, CrVI, CN, Hg, EC, SAR
BH24-16	BH24-16-SS1	19-Dec-24	0.15 - 0.35	-	Clayey Silt	PHC, VOC, PAH, Metals, Hydride-Forming Metals, HWS-B, CrVI, CN, Hg, EC, SAR
BH24-17	BH24-17-SS1	19-Dec-24	0.10 - 0.20	-	Silty Clay	PHC, VOC, PAH, Metals, Hydride-Forming Metals, HWS-B, CrVI, CN, Hg, EC, SAR

Notes:
mbgs meters below ground surface
ppm parts per million
PHC petroleum hydrocarbons
BTEX benzene, toluene, ethylbenzene, xylenes
PAH polycyclic aromatic hydrocarbons
VOC volatile organic compounds
B-HWS hot water-soluble boron
CrVI hexavalent chromium
CN cyanide
Hg mercury
EC electrical conductivity
SAR sodium adsorption ratio

TABLE 4
SUMMARY OF GROUNDWATER SAMPLES SUBMITTED FOR ANALYSIS
40, 64, and 86 Burnhamthorpe Road East, Oakville, Ontario

CA0040928.5498 (3000)

Location ID	Sample ID	Date	Sample Depth (mbgs)	Analyses Completed	Field Observations
BH18-01	BH18-01	19-Jul-2018	3.05 - 6.10	PHC, BTEX, PAH, Metals, Hydride-Forming Metals, CrVI, CN, Hg, Na, Cl	-
BH18-01	DUP	19-Jul-2018	3.05 - 6.10	PHC, BTEX, PAH, Metals, Hydride-Forming Metals, CrVI, CN, Hg, Na, Cl	-
BH18-07	BH18-07	19-Jul-2018	3.05 - 6.10	PHC, BTEX, PAH, Metals, Hydride-Forming Metals, CrVI, CN, Hg, Na, Cl	-
BH18-08	BH18-08	24-Jul-2018	3.05 - 6.10	PHC, BTEX, PAH, Metals, Hydride-Forming Metals, CrVI, CN, Hg, Na, Cl	-
BH18-09	BH18-09	24-Jul-2018	3.05 - 6.10	PHC, BTEX, PAH, Metals, Hydride-Forming Metals, CrVI, CN, Hg, Na, Cl	-
BH18-01	BH18-01	22-Dec-2021	3.05 - 6.10	PHC, BTEX, PAH, Metals, Hydride-Forming Metals, CrVI, Hg, Na	-
BH18-01	DUP01	22-Dec-2021	3.05 - 6.10	PHC, BTEX, PAH, Metals, Hydride-Forming Metals, CrVI, Hg, Na	-
BH18-07	BH18-07	22-Dec-2021	3.05 - 6.10	PHC, BTEX, PAH, Metals, Hydride-Forming Metals, CrVI, Hg, Na	-
BH24-2	BH24-2	19-Dec-2024	7.62 - 10.67	PHC, BTEX, PAH	Clear, no odour, no sheen
BH24-3	BH24-3	19-Dec-2024	3.05 - 6.10	PHC, BTEX, PAH	Clear, no odour, no sheen
BH24-3	DUP A	19-Dec-2024	3.05 - 6.10	PHC, BTEX, PAH	Clear, no odour, no sheen
NA	Trip Blank	19-Jul-2018	NA	PHC F1, BTEX	NA
NA	Trip Blank	22-Dec-2021	NA	PHC F1, BTEX	NA
NA	Trip Blank	19-Dec-2024	NA	PHC F1, VOC	NA

Notes:

mbgs meters below ground surface
 PHC petroleum hydrocarbons
 BTEX benzene, toluene, ethylbenzene, xylenes
 PAH polycyclic aromatic hydrocarbons
 CrVI hexavalent chromium
 CN cyanide
 Hg mercury
 Na sodium
 Cl chloride
 - not listed/reported
 NA not applicable

Table 5A
Soil Analytical Results - Petroleum Hydrocarbons and BTEX
40, 64, and 86 Burnhamthorpe Road East, Oakville, Ontario

Location ID		BH18-01	BH18-02	BH18-02	BH18-03	BH18-04	BH18-05	BH18-06	BH18-07	BH18-08	BH18-09	BH18-10	BH18-11	BH18-12	BH24-1	BH24-2	BH24-3	
Sample ID		BH18-1 SA4	BH18-2 SA1	BH18-2 SA6	BH18-3 SA2	BH18-4 SA3	BH18-5 SA1B	BH18-6 SA6	BH18-7 SA5	DUP5	BH18-8 SA3	BH18-9 SA2	BH18-10 SA3	BH18-11 SA2	BH18-12 SA5	BH24-1-SS5	BH24-2-SS6	BH24-3-SS6
Date		20-Jun-2018	20-Jun-2018	20-Jun-2018	20-Jun-2018	21-Jun-2018	20-Jun-2018	20-Jun-2018	22-Jun-2018	22-Jun-2018	22-Jun-2018	21-Jun-2018	22-Jun-2018	21-Jun-2018	21-Jun-2018	09-Dec-2024	09-Dec-2024	09-Dec-2024
Depth (mbgs)		2.3 - 2.7	0 - 0.60	4.6 - 5.0	0.8 - 1.1	1.5 - 1.9	0.2 - 0.6	4.6 - 5.2	3.1 - 3.4	3.1 - 3.4	1.5 - 1.9	0.8 - 1.0	1.5 - 1.8	0.8 - 1.0	3.1 - 3.4	3.05 - 3.81	3.81 - 4.57	3.81 - 4.57
Lab Sample ID		HAP914	HAP915	HAP919	HAP916	HAP917	HAP918	HAP920	HAP993	HAP990	HAP992	HAP921	HAP991	HAP922	HAP923	6400618	6400624	6400635
Parameter		Units	Table 2 SCS															
F1 (C6-C10)	ug/g	65	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<5	<5	<5
F1 (C6-C10) - BTEX	ug/g	65	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<5	<5	<5
F2 (C10-C16)	ug/g	150	<10	<10	15	<10	<10	<10	13	<10	<10	<10	<10	<10	<10	<10	<10	<10
F3 (C16-C34)	ug/g	1300	<50	280	63	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
F4 (C34-C50)	ug/g	5600	<50	560	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
F4 Gravimetric	ug/g	5600	-	1900	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzene	ug/g	0.17	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.02	<0.02	<0.02
Toluene	ug/g	6	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.05	<0.05	<0.05
Ethylbenzene	ug/g	1.6	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.05	<0.05	<0.05
m & p-Xylene	ug/g	NV	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.05	<0.05	<0.05
o-Xylene	ug/g	NV	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.05	<0.05	<0.05
Total Xylenes	ug/g	25	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.05	<0.05	<0.05

Notes:

mbgs = metres below ground surface

µg/g = micrograms per gram

< = parameter was not detected at a concentration that was greater than the associated value, which is the reportable detection limit

- = not analyzed

NV = No value

Table 2 SCS = Ministry of the Environment, Conservation and Parks, "Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act", Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition for Use within Residential/Parkland/ Institutional Property Use and Medium to Fine-Textured Soils (April 15, 2011).

BOLD = Exceeds the Table 2 SCS

Table 5A
Soil Analytical Results - Petroleum Hydrocarbons and BTEX
40, 64, and 86 Burnhamthorpe Road East, Oakville, Ontario

Location ID		BH24-4	BH24-5		BH24-6	BH24-7	BH24-8	BH24-9		BH24-10	BH24-11	BH24-12	BH24-13	BH24-14	BH24-15	BH24-15	BH24-16	BH24-17
Sample ID		BH24-4-SS6	BH24-5-SS1	DUP1	BH24-6-SS1	BH24-7-SS1	BH24-8-SS1	BH24-9-SS1	DUP2	BH24-10-SS1	BH24-11-SS1	BH24-12-SS1	BH24-13-SS1	BH24-14-SS1	BH24-15-0-0.5	DUP1	BH24-16-0-0.5	BH24-17-0-0.5
Date		10-Dec-2024	10-Dec-2024	10-Dec-2024	10-Dec-2024	10-Dec-2024	10-Dec-2024	10-Dec-2024	10-Dec-2024	10-Dec-2024	10-Dec-2024	10-Dec-2024	10-Dec-2024	10-Dec-2024	10-Dec-2024	19-Dec-2024	19-Dec-2024	19-Dec-2024
Depth (mbgs)		3.81 - 4.57	0 - 0.76	0 - 0.76	0 - 0.76	0 - 0.76	0 - 0.76	0 - 0.76	0 - 0.76	0 - 0.76	0 - 0.76	0 - 0.76	0 - 0.76	0 - 0.76	0.10 - 0.20	0.10 - 0.20	0.15 - 0.35	0.10 - 0.20
Lab Sample ID		6400638	6400640	6400662	6400642	6400645	6400647	6400650	6400663	6400652	6400654	6400656	6400658	6400660	6426264	6426265	6426263	6426259
Parameter	Units	Table 2 SCS																
F1 (C6-C10)	ug/g	65	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
F1 (C6-C10) - BTEX	ug/g	65	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
F2 (C10-C16)	ug/g	150	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
F3 (C16-C34)	ug/g	1300	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
F4 (C34-C50)	ug/g	5600	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
F4 Gravimetric	ug/g	5600	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzene	ug/g	0.17	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Toluene	ug/g	6	<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
Ethylbenzene	ug/g	1.6	<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
m & p-Xylene	ug/g	NV	<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
o-Xylene	ug/g	NV	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Total Xylenes	ug/g	25	<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:

mbgs = metres below ground surface

µg/g = micrograms per gram

< = parameter was not detected at a concentration that was greater than the associated value, which is the reportable detection limit

- = not analyzed

NV = No value

Table 2 SCS = Ministry of the Environment, Conservation and Parks, "Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act", Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition for Use within Residential/Parkland/Institutional Property Use and Medium to Fine-Textured Soils (April 15, 2011).

BOLD = Exceeds the Table 2 SCS

Table 5B
Soil Analytical Results - Metals, Hydride-Forming Metals, and Other Regulated Parameters
40, 64, and 86 Burnhamthorpe Road East, Oakville, Ontario

Location ID		BH18-01	BH18-02			BH18-03	BH18-04	BH18-05	BH18-06	BH18-07		BH18-08	BH18-09	BH18-10	BH18-11	BH18-12
Sample ID		BH18-1 SA4	BH18-2 SA1	BH18-2 SA6		BH18-3 SA2	BH18-4 SA3	BH18-5 SA1B	BH18-6 SA6	BH18-7 SA5	DUP5	BH18-8 SA3	BH18-9 SA2	BH18-10 SA3	BH18-11 SA2	BH18-12 SA5
Date		20-Jun-2018	20-Jun-2018	20-Jun-2018	20-Jun-2018	20-Jun-2018	21-Jun-2018	20-Jun-2018	20-Jun-2018	22-Jun-2018	22-Jun-2018	22-Jun-2018	21-Jun-2018	22-Jun-2018	21-Jun-2018	21-Jun-2018
Depth (mbgs)		2.3 - 2.7	0 - 0.60	4.6 - 5.0		0.8 - 1.1	1.5 - 1.9	0.2 - 0.6	4.6 - 5.2	3.1 - 3.4	3.1 - 3.4	1.5 - 1.9	0.8 - 1.0	1.5 - 1.8	0.8 - 1.0	3.1 - 3.4
Lab Sample ID		HAP914	HAP915	HAP919		HAP916	HAP917	HAP918	HAP920	HAP893	HAP890	HAP892	HAP921	HAP891	HAP922	HAP923
Parameter	Units	Table 2 SCS														
Antimony	ug/g	7.5	<0.20	0.36	<0.20	<0.20	0.2	<0.20	0.23	<0.20	<0.20	0.23	<0.20	0.21	<0.20	<0.20
Arsenic	ug/g	18	4.4	4.7	3.4	4.5	4.8	4.7	3.7	3.4	4.2	4.6	4.1	5.1	4.4	4.6
Barium	ug/g	390	82	71	60	86	110	69	95	60	63	71	85	100	88	60
Beryllium	ug/g	5	0.73	0.72	0.61	0.69	0.8	0.79	0.67	0.64	0.65	0.73	0.68	0.73	0.72	0.66
Boron (Total)	ug/g	120	11	13	10	8.4	9.2	9.3	14	12	12	11	8.9	11	9	11
Boron (Hot Water Soluble)	ug/g	1.5	0.26	0.34	0.34	0.065	0.18	0.12	0.32	0.56	0.54	0.094	0.079	0.084	0.11	0.36
Cadmium	ug/g	1.2	0.15	0.12	<0.10	0.16	0.16	0.17	<0.10	0.11	<0.10	0.12	0.11	0.14	0.12	0.12
Chromium	ug/g	160	20	20	18	18	23	21	19	20	20	19	20	19	20	19
Cobalt	ug/g	22	12	12	10	12	13	12	11	11	11	12	12	13	11	11
Copper	ug/g	180	26	14	24	28	28	28	26	28	26	29	30	28	28	30
Lead	ug/g	120	13	13	8.9	11	13	13	8.9	9.8	13	12	11	12	12	12
Molybdenum	ug/g	6.9	0.59	0.59	0.59	<0.50	0.63	<0.50	<0.50	<0.50	<0.50	<0.50	0.5	0.7	0.5	<0.50
Nickel	ug/g	130	25	25	23	25	28	27	24	25	25	27	25	28	25	25
Selenium	ug/g	2.4	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Silver	ug/g	25	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Thallium	ug/g	1	0.15	0.096	0.12	0.13	0.16	0.16	0.11	0.16	0.12	0.15	0.14	0.15	0.16	0.14
Uranium	ug/g	23	0.7	0.57	0.77	0.52	0.71	0.55	0.96	0.68	0.66	0.65	0.56	0.73	0.66	0.7
Vanadium	ug/g	86	28	27	24	26	30	30	26	26	26	30	26	29	27	26
Zinc	ug/g	340	64	89	61	60	71	69	53	63	64	69	62	69	62	67
Chromium VI	ug/g	10	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Cyanide, Free	ug/g	0.051	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Mercury	ug/g	1.8	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Conductivity	mS/cm	0.7	0.23	1	0.27	0.23	0.69	0.14	0.2	0.24	0.24	0.16	0.14	0.49	0.47	0.19
Sodium Adsorption Ratio	NA	5	0.57	5.7	0.48	0.55	1.7	0.27	0.39	0.68	0.71	0.34	0.37	1.5	0.52	0.49
pH	NA	NV	7.87	7.98	7.99	7.74	7.84	7.66	7.98	7.84	7.92	7.71	7.76	7.77	7.83	7.87

Notes:

mbgs = metres below ground surface

µg/g = micrograms per gram

< = parameter was not detected at a concentration that was greater than the associated value, which is the reportable detection limit

NA = Not applicable

NV = No value

- = Not measured

= Ministry of the Environment, Conservation and Parks, "Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act", Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition for Use within Residential/Parkland/ Institutional Property Use and Medium to Fine-Textured Soils (April 15, 2011).

Table 2 SCS

BOLD = Exceeds the Table 2 SCS

Table 5B
Soil Analytical Results - Metals, Hydride-Forming Metals, and Other Regulated Parameters
40, 64, and 86 Burnhamthorpe Road East, Oakville, Ontario

Location ID		BH24-5		BH24-6		BH24-7		BH24-8		BH24-9		BH24-10		BH24-11		BH24-12		BH24-13		BH24-14		BH24-15		BH24-16		BH24-17							
Sample ID		BH24-5-SS1		DUP1		BH24-6-SS1		BH24-7-SS1		BH24-8-SS1		BH24-9-SS1		DUP2		BH24-10-SS1		BH24-11-SS1		BH24-12-SS1		BH24-13-SS1		BH24-14-SS1		BH24-15-0-0.5		DUP1		BH24-16-0-0.5		BH24-17-0-0.5	
Date		10-Dec-2024		10-Dec-2024		10-Dec-2024		10-Dec-2024		10-Dec-2024		10-Dec-2024		10-Dec-2024		10-Dec-2024		10-Dec-2024		10-Dec-2024		10-Dec-2024		10-Dec-2024		19-Dec-2024		19-Dec-2024		19-Dec-2024		19-Dec-2024	
Depth (mbgs)		0 - 0.76		0 - 0.76		0 - 0.76		0 - 0.76		0 - 0.76		0 - 0.76		0 - 0.76		0 - 0.76		0 - 0.76		0 - 0.76		0 - 0.76		0 - 0.76		0.10 - 0.20		0.10 - 0.20		0.15 - 0.35		0.10 - 0.20	
Lab Sample ID		6400640		6400662		6400642		6400645		6400647		6400650		6400663		6400652		6400654		6400656		6400658		6400660		6426264		6426265		6426263		6426259	
Parameter	Units	Table 2 SCS																															
Antimony	ug/g	7.5	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8		
Arsenic	ug/g	18	5	6	6	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	
Barium	ug/g	390	100	117	102	84.8	92.3	62.5	55.4	72.3	92.1	96.2	94.0	66.7	93.5	86	74.5	91.0															
Beryllium	ug/g	5	0.7	0.9	0.9	0.8	0.8	0.7	0.6	0.8	0.9	1.0	0.7	0.9	0.7	0.6	0.6	0.6															
Boron (Total)	ug/g	120	14	13	10	12	12	11	10	6	6	6	12	13	11	9	11	9															
Boron (Hot Water Soluble)	ug/g	1.5	0.20	0.18	0.37	0.11	0.13	0.19	0.23	0.36	0.49	0.44	0.11	0.13	0.15	0.19	0.25	0.21															
Cadmium	ug/g	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5															
Chromium	ug/g	160	16	22	20	17	17	15	16	18	19	20	17	21	21	20	18	19															
Cobalt	ug/g	22	13.2	15.7	13.6	12.6	14.2	12.5	10.9	11.2	11.5	11.8	14.5	13.7	10.4	11.2	8.4	11.2															
Copper	ug/g	180	26.3	28.4	40.4	27.3	26.5	24.5	27.2	20.0	20.0	22.4	27.3	27.4	31.5	41.1	26.9	28.4															
Lead	ug/g	120	12	13	36	12	12	12	12	21	19	18	13	11	13	13	13	14															
Molybdenum	ug/g	6.9	0.5	0.7	0.6	0.5	0.6	0.5	0.6	<0.5	0.5	0.5	0.6	<0.5	<0.5	<0.5	<0.5	<0.5															
Nickel	ug/g	130	25	39	27	25	26	25	26	25	26	21	23	27	26	23	20	22															
Selenium	ug/g	2.4	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8															
Silver	ug/g	25	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5															
Thallium	ug/g	1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5															
Uranium	ug/g	23	0.72	0.76	0.73	0.73	0.65	0.70	0.68	0.68	1.11	1.08	0.72	0.65	0.61	0.63	0.57	0.58															
Vanadium	ug/g	86	25.2	28.8	31.4	25.7	26.4	24.3	19.7	29.2	31.4	32.1	25.5	32.4	28.5	27.4	23.5	26.5															
Zinc	ug/g	340	59	67	102	62	63	57	57	69	84	79	66	69	59	62	55	65															
Chromium VI	ug/g	10	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2															
Cyanide, Free	ug/g	0.051	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040															
Mercury	ug/g	1.8	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10															
Conductivity	mS/cm	0.7	0.202	0.237	0.270	0.255	0.199	0.228	0.179	0.218	0.453	0.285	0.174	0.261	0.286	0.349	0.484	0.375															
Sodium Adsorption Ratio	NA	5	0.292	0.498	0.709	0.487	0.760	0.517	0.406	0.380	2.680	1.080	0.221	1.27	0.821	0.835	0.871	1.05															
pH	NA	NV	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-															

Notes:

mbgs = metres below ground surface

ug/g = micrograms per gram

< = parameter was not detected at a concentration that was greater than the associated value, which is the reportable detection limit

NA = Not applicable

NV = No value

- = Not measured

= Ministry of the Environment, Conservation and Parks, "Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act", Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition for Use within Residential/Parkland/ Institutional Property Use and Medium to Fine-Textured Soils (April 15, 2011).

Table 2 SCS

BOLD = Exceeds the Table 2 SCS

Table 5C
Soil Analytical Results - Polycyclic Aromatic Hydrocarbons
40, 64, and 86 Burnhamthorpe Road East, Oakville, Ontario

CA0040928.5498 (3000)

Borehole ID		BH18-01	BH18-02		BH18-03	BH18-04	BH18-05	BH18-06	BH18-07		BH18-08	BH18-09
Sample ID		BH18-1 SA4	BH18-2 SA1	BH18-2 SA6	BH18-3 SA2	BH18-4 SA3	BH18-5 SA1B	BH18-6 SA6	BH18-7 SA5	DUP 5	BH18-8 SA3	BH18-9 SA2
Date		20-Jun-2018	20-Jun-2018	20-Jun-2018	20-Jun-2018	21-Jun-2018	20-Jun-2018	20-Jun-2018	22-Jun-2018	22-Jun-2018	22-Jun-2018	21-Jun-2018
Depth (mbgs)		2.3 - 2.7	0 - 0.60	4.6 - 5.0	0.8 - 1.1	1.5 - 1.9	0.2 - 0.6	4.6 - 5.2	3.1 - 3.4	3.1 - 3.4	1.5 - 1.9	0.8 - 1.0
Lab Sample ID		HAP914	HAP915	HAP919	HAP916	HAP917	HAP918	HAP920	HAP893	HAP890	HAP892	HAP921
Parameter	Units	Table 2 SCS										
Acenaphthene	ug/g	29	<0.0050	<0.050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Acenaphthylene	ug/g	0.17	<0.0050	<0.050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Anthracene	ug/g	0.74	<0.0050	<0.050	<0.0050	<0.0050	<0.0050	<0.0050	0.0056	<0.0050	<0.0050	<0.0050
Benzo(a)anthracene	ug/g	0.63	<0.0050	<0.050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Benzo(a)pyrene	ug/g	0.3	<0.0050	<0.050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Benzo(b)fluoranthene	ug/g	0.78	<0.0050	<0.050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Benzo(ghi)perylene	ug/g	7.8	<0.0050	0.078	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Benzo(k)fluoranthene	ug/g	0.78	<0.0050	<0.050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Chrysene	ug/g	7.8	<0.0050	<0.050	0.0063	<0.0050	<0.0050	<0.0050	0.0051	<0.0050	0.0054	<0.0050
Dibenzo(a,h)anthracene	ug/g	0.1	<0.0050	<0.050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Fluoranthene	ug/g	0.69	<0.0050	<0.050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Fluorene	ug/g	69	<0.0050	<0.050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Indeno(1,2,3-cd)pyrene	ug/g	0.48	<0.0050	<0.050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
1-Methylnaphthalene	ug/g	NV	<0.0050	<0.050	<0.0050	<0.0050	<0.0050	<0.0050	0.013	<0.0050	<0.0050	<0.0050
2-Methylnaphthalene	ug/g	NV	<0.0050	<0.050	<0.0050	<0.0050	<0.0050	<0.0050	0.013	<0.0050	<0.0050	<0.0050
Methylnaphthalene, 2-(1-)	ug/g	3.4	-	-	-	-	-	-	-	-	-	-
Naphthalene	ug/g	0.75	<0.0050	<0.050	<0.0050	<0.0050	<0.0050	<0.0050	0.0055	<0.0050	<0.0050	<0.0050
Phenanthrene	ug/g	7.8	<0.0050	<0.050	0.0094	<0.0050	<0.0050	<0.0050	0.016	0.009	0.016	<0.0050
Pyrene	ug/g	78	<0.0050	<0.050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050

Notes:

- mbgs = metres below ground surface
- µg/g = micrograms per gram
- < = parameter was not detected at a concentration that was greater than the associated value, which is the reportable detection limit
- NV = No value
- = Not analyzed
- Table 2 SCS = Ministry of the Environment, Conservation and Parks, "Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act", Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition for Use within Residential/Parkland/Institutional Property Use and Medium to Fine-Textured Soils (April 15, 2011).

BOLD = Exceeds the Table 2 SCS

Table 5C
Soil Analytical Results - Polycyclic Aromatic Hydrocarbons
40, 64, and 86 Burnhamthorpe Road East, Oakville, Ontario

CA0040928.5498 (3000)

Borehole ID		BH18-10	BH18-11	BH18-12	BH24-1	BH24-2	BH24-3	BH24-4	BH24-5		BH24-6	BH24-7	BH24-8
Sample ID		BH18-10 SA3	BH18-11 SA2	BH18-12 SA5	BH24-1-SS5	BH24-2-SS6	BH24-3-SS6	BH24-4-SS6	BH24-5-SS1	DUP1	BH24-6-SS1	BH24-7-SS1	BH24-8-SS1
Date		22-Jun-2018	21-Jun-2018	21-Jun-2018	09-Dec-2024	09-Dec-2024	09-Dec-2024	10-Dec-2024	10-Dec-2024	10-Dec-2024	10-Dec-2024	10-Dec-2024	10-Dec-2024
Depth (mbgs)		1.5 - 1.8	0.8 - 1.0	3.1 - 3.4	3.05 - 3.81	3.81 - 4.57	3.81 - 4.57	3.81 - 4.57	0 - 0.76	0 - 0.76	0 - 0.76	0 - 0.76	0 - 0.76
Lab Sample ID		HAP891	HAP922	HAP923	6400618	6400624	6400635	6400638	6400640	6400662	6400642	6400645	6400647
Parameter	Units	Table 2 SCS											
Acenaphthene	ug/g	29	<0.0050	<0.0050	<0.0050	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Acenaphthylene	ug/g	0.17	<0.0050	<0.0050	<0.0050	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Anthracene	ug/g	0.74	<0.0050	<0.0050	<0.0050	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Benzo(a)anthracene	ug/g	0.63	<0.0050	<0.0050	<0.0050	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Benzo(a)pyrene	ug/g	0.3	<0.0050	<0.0050	<0.0050	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Benzo(b)fluoranthene	ug/g	0.78	<0.0050	<0.0050	<0.0050	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Benzo(ghi)perylene	ug/g	7.8	<0.0050	<0.0050	<0.0050	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Benzo(k)fluoranthene	ug/g	0.78	<0.0050	<0.0050	<0.0050	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Chrysene	ug/g	7.8	<0.0050	<0.0050	<0.0050	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Dibenzo(a,h)anthracene	ug/g	0.1	<0.0050	<0.0050	<0.0050	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Fluoranthene	ug/g	0.69	<0.0050	<0.0050	<0.0050	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Fluorene	ug/g	69	<0.0050	<0.0050	<0.0050	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Indeno(1,2,3-cd)pyrene	ug/g	0.48	<0.0050	<0.0050	<0.0050	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
1-Methylnaphthalene	ug/g	NV	<0.0050	<0.0050	<0.0050	-	-	-	-	-	-	-	-
2-Methylnaphthalene	ug/g	NV	<0.0050	<0.0050	<0.0050	-	-	-	-	-	-	-	-
Methylnaphthalene, 2-(1-)	ug/g	3.4	-	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Naphthalene	ug/g	0.75	<0.0050	<0.0050	<0.0050	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Phenanthrene	ug/g	7.8	<0.0050	<0.0050	<0.0050	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Pyrene	ug/g	78	<0.0050	<0.0050	<0.0050	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05

Notes:

mbgs = metres below ground surface

ug/g = micrograms per gram

< = parameter was not detected at a concentration that was greater than the associated value, which is the reportable detection limit

NV = No value

- = Not analyzed

Table 2 SCS = Ministry of the Environment, Conservation and Parks, "Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act", Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition for Use within Residential/Parkland/Institutional Property Use and Medium to Fine-Textured Soils (April 15, 2011).

BOLD = Exceeds the Table 2 SCS

Table 5C
Soil Analytical Results - Polycyclic Aromatic Hydrocarbons
40, 64, and 86 Burnhamthorpe Road East, Oakville, Ontario

CA0040928.5498 (3000)

Borehole ID			BH24-9		BH24-10	BH24-11	BH24-12	BH24-13	BH24-14	BH24-15	BH24-16	BH24-17	
Sample ID			BH24-9-SS1	DUP2	BH24-10-SS1	BH24-11-SS1	BH24-12-SS1	BH24-13-SS1	BH24-14-SS1	BH24-15-0-0.5	DUP1	BH24-16-0-0.5	BH24-17-0-0.5
Date			10-Dec-2024	10-Dec-2024	10-Dec-2024	10-Dec-2024	10-Dec-2024	10-Dec-2024	10-Dec-2024	19-Dec-2024	19-Dec-2024	19-Dec-2024	19-Dec-2024
Depth (mbgs)			0 - 0.76	0 - 0.76	0 - 0.76	0 - 0.76	0 - 0.76	0 - 0.76	0 - 0.76	0.10 - 0.20	0.10 - 0.20	0.15 - 0.35	0.10 - 0.20
Lab Sample ID			6400650	6400663	6400652	6400654	6400656	6400658	6400660	6426264	6426265	6426263	6426259
Parameter	Units	Table 2 SCS											
Acenaphthene	ug/g	29	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Acenaphthylene	ug/g	0.17	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Anthracene	ug/g	0.74	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Benzo(a)anthracene	ug/g	0.63	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Benzo(a)pyrene	ug/g	0.3	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Benzo(b)fluoranthene	ug/g	0.78	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Benzo(ghi)perylene	ug/g	7.8	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Benzo(k)fluoranthene	ug/g	0.78	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Chrysene	ug/g	7.8	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Dibenzo(a,h)anthracene	ug/g	0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Fluoranthene	ug/g	0.69	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Fluorene	ug/g	69	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Indeno(1,2,3-cd)pyrene	ug/g	0.48	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
1-Methylnaphthalene	ug/g	NV	-	-	-	-	-	-	-	-	-	-	-
2-Methylnaphthalene	ug/g	NV	-	-	-	-	-	-	-	-	-	-	-
Methylnaphthalene, 2-(1-)	ug/g	3.4	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Naphthalene	ug/g	0.75	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Phenanthrene	ug/g	7.8	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Pyrene	ug/g	78	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05

Notes:

- mbgs = metres below ground surface
- µg/g = micrograms per gram
- < = parameter was not detected at a concentration that was greater than the associated value, which is the reportable detection limit
- NV = No value
- = Not analyzed
- Table 2 SCS = Ministry of the Environment, Conservation and Parks, "Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act", Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition for Use within Residential/Parkland/ Institutional Property Use and Medium to Fine-Textured Soils (April 15, 2011).
- BOLD** = Exceeds the Table 2 SCS

Table 5D
Soil Analytical Results - Volatile Organic Compounds
40, 64, and 88 Burnhamthorpe Road East, Oakville, Ontario

CA0040928.5498 (3000)

Borehole ID		BH24-5		BH24-6	BH24-7	BH24-8	BH24-9		BH24-10	BH24-11	BH24-12	BH24-13	BH24-14	BH24-15		BH24-16	BH24-17
Sample ID		BH24-5-SS1	DUP1	BH24-6-SS1	BH24-7-SS1	BH24-8-SS1	BH24-9-SS1	DUP2	BH24-10-SS1	BH24-11-SS1	BH24-12-SS1	BH24-13-SS1	BH24-14-SS1	BH24-15-0-0.5	DUP1	BH24-16-0-0.5	BH24-17-0-0.5
Date		10-Dec-2024	10-Dec-2024	10-Dec-2024	10-Dec-2024	10-Dec-2024	10-Dec-2024	10-Dec-2024	10-Dec-2024	10-Dec-2024	10-Dec-2024	10-Dec-2024	10-Dec-2024	19-Dec-2024	19-Dec-2024	19-Dec-2024	19-Dec-2024
Depth (mbgs)		0 - 0.76	0 - 0.76	0 - 0.76	0 - 0.76	0 - 0.76	0 - 0.76	0 - 0.76	0 - 0.76	0 - 0.76	0 - 0.76	0 - 0.76	0 - 0.76	0.10 - 0.20	0.10 - 0.20	0.15 - 0.35	0.10 - 0.20
Lab Sample ID		6400640	6400662	6400642	6400645	6400647	6400650	6400663	6400652	6400654	6400656	6400658	6400660	6426264	6426265	6426263	6426259
Parameter	Units	Table 2 SCS															
Acetone	ug/g	28	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Benzene	ug/g	0.17	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Bromodichloromethane	ug/g	1.9	<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
Bromoform	ug/g	0.26	<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
Bromomethane	ug/g	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
Carbon Tetrachloride	ug/g	0.12	<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
Chlorobenzene	ug/g	2.7	<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
Chloroform	ug/g	0.18	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04
Dibromochloromethane	ug/g	2.9	<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
1,2-Dichlorobenzene	ug/g	1.7	<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
1,3-Dichlorobenzene	ug/g	6	<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
1,4-Dichlorobenzene	ug/g	0.997	<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
Dichlorodifluoromethane	ug/g	25	<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
1,1-Dichloroethane	ug/g	0.6	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
1,2-Dichloroethane	ug/g	0.05	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
1,1-Dichloroethylene	ug/g	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
Cis- 1,2-Dichloroethylene	ug/g	2.5	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Trans- 1,2-Dichloroethylene	ug/g	0.75	<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
1,2-Dichloropropane	ug/g	0.085	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
Cis-1,3-Dichloropropylene	ug/g	NV	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Trans-1,3-Dichloropropylene	ug/g	NV	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,3-Dichloropropene (Cis + Trans)	ug/g	0.081	<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
Ethylbenzene	ug/g	1.6	<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
Ethylene Dibromide	ug/g	0.05	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04
n-Hexane	ug/g	34	<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
Methyl Ethyl Ketone	ug/g	44	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Methyl Isobutyl Ketone	ug/g	4.3	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Methyl tert-butyl Ether	ug/g	1.4	<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
Methylene Chloride	ug/g	0.96	<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
Styrene	ug/g	2.2	<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
1,1,1,2-Tetrachloroethane	ug/g	0.05	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04
1,1,2,2-Tetrachloroethane	ug/g	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
Tetrachloroethylene	ug/g	2.3	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Toluene	ug/g	6	<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
1,1,1-Trichloroethane	ug/g	3.4	<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
1,1,2-Trichloroethane	ug/g	0.05	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04
Trichloroethylene	ug/g	0.52	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
Trichlorofluoromethane	ug/g	5.8	<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
Vinyl Chloride	ug/g	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
m & p-Xylene	ug/g	NV	<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
o-Xylene	ug/g	NV	<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
Xylenes (Total)	ug/g	25	<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:

- mbgs = metres below ground surface
- ug/g = micrograms per gram
- < = parameter was not detected at a concentration that was greater than the associated value, which is the reportable detection limit
- NV = No value
- = Not measured
- = Ministry of the Environment, Conservation and Parks, "Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act", Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition for Use within Residential/Parkland/ Institutional Property Use and Medium to Fine- Textured Soils (April 15, 2011).
- BOLD** = Exceeds the Table 2 SCS

Table 6A
Groundwater Analytical Results - Petroleum Hydrocarbons and BTEX
40, 64, and 86 Burnhamthorpe Road East, Oakville, Ontario

Location ID		BH18-01		BH18-01		BH18-07		BH18-07		BH18-08		BH18-09		BH24-2		BH24-3		NA		NA							
Sample ID		BH18-01		DUP		BH18-01		DUP01		BH18-07		BH18-07		BH18-08		BH18-09		BH24-2		BH24-3		DUP A		Trip Blank		Trip Blank	
Date		19-Jul-2018		19-Jul-2018		22-Dec-2021		22-Dec-2021		19-Jul-2018		22-Dec-2021		24-Jul-2018		24-Jul-2018		19-Dec-2024		19-Dec-2024		19-Dec-2024		22-Dec-2021		19-Dec-2024	
Depth (mbgs)		3.05 - 6.10		3.05 - 6.10		3.05 - 6.10		3.05 - 6.10		3.05 - 6.10		3.05 - 6.10		3.05 - 6.10		3.05 - 6.10		7.62 - 10.67		3.05 - 6.10		3.05 - 6.10		NA		NA	
Lab Sample ID		HGV427		HGV429		RLV051		RLV053		HGV428		RLV052		HHK621		HHK623		6426230		6426226		6426229		RLV054		6426236	
Parameter	Units	Table 2 SCS																									
Petroleum Hydrocarbons																											
F1 (C6-C10)	µg/L	750	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	
F1 (C6-C10) - BTEX	µg/L	750	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	
F2 (C10-C16)	µg/L	150	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	-	-	-	-	
F3 (C16-C34)	µg/L	500	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	-	-	-	-	
F4 (C34-C50)	µg/L	500	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	-	-	-	-	
BTEX																											
Benzene	µg/L	5	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	
Toluene	µg/L	24	<0.20	<0.20	<0.20	<0.20	0.2	<0.20	0.27	<0.20	<0.20	<0.20	<0.20	<0.20	0.36	<0.20	0.36	0.21	0.27	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	
Ethylbenzene	µg/L	2.4	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	
m & p-Xylene	µg/L	NV	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	
o-Xylene	µg/L	NV	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	
Total Xylenes	µg/L	300	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<0.20	<0.20	<0.20	<0.20	<0.40	<0.40	<0.40	<0.40	<0.20	

Notes:

mbgs = metres below ground surface

µg/L = micrograms per litre

< = parameter was not detected at a concentration that was greater than the associated value, which is the reportable detection limit

NV = No value

- = Not measured

= Ministry of the Environment, Conservation and Parks, "Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act", Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition for Use within All Types of Property Use and Medium to Fine-Textured Soils (April 15, 2011).

BOLD = Exceeds the Table 2 SCS

Table 6B
Groundwater Analytical Results - Metals, Hydride-Forming Metals, and Other Regulated Parameters
40, 64, and 86 Burnhamthorpe Road East, Oakville, Ontario

Location ID		BH18-01		BH18-01		BH18-07	BH18-07	BH18-08	BH18-09
Sample ID		BH18-01	DUP	BH18-01	DUP01	BH18-07	BH18-07	BH18-08	BH18-09
Date		19-Jul-2018	19-Jul-2018	22-Dec-2021	22-Dec-2021	19-Jul-2018	22-Dec-2021	24-Jul-2018	24-Jul-2018
Depth (mbgs)		3.05 - 6.10	3.05 - 6.10	3.05 - 6.10	3.05 - 6.10	3.05 - 6.10	3.05 - 6.10	3.05 - 6.10	3.05 - 6.10
Lab Sample ID		HGV427	HGV429	RLV051	RLV053	HGV428	RLV052	HHK621	HHK623
Parameter	Units	Table 2 SCS							
Antimony	µg/L	6	<0.50	0.53	<0.50	<0.50	<0.50	<0.50	0.52
Arsenic	µg/L	25	2.4	2.3	3.3	3.1	<1.0	<1.0	<1.0
Barium	µg/L	1000	39	37	19	20	40	64	60
Beryllium	µg/L	4	<0.50	<0.50	<0.40	<0.40	<0.50	<0.40	<0.50
Boron (Total)	µg/L	5000	320	310	350	350	600	800	320
Cadmium	µg/L	2.7	<0.10	<0.10	<0.090	<0.090	<0.10	<0.090	<0.10
Chromium	µg/L	50	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
Cobalt	µg/L	3.8	1.7	1.7	1.3	1.3	0.9	<0.50	1.8
Copper	µg/L	87	<1.0	<1.0	<0.90	<0.90	1.4	<0.90	<1.0
Lead	µg/L	10	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Molybdenum	µg/L	70	3.9	3.9	2.5	2.6	4.5	3.7	4.3
Nickel	µg/L	100	6.9	7.8	1.1	1.1	5.3	2.8	5.2
Selenium	µg/L	10	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	2.3
Silver	µg/L	1.5	<0.10	<0.10	<0.090	<0.090	<0.10	<0.090	<0.10
Sodium	µg/L	490000	64000	63000	68000	65000	100000	110000	50000
Thallium	µg/L	2	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	0.055
Uranium	µg/L	20	4.6	4.6	2.7	2.5	4.9	5.9	7.4
Vanadium	µg/L	6.2	<0.50	0.61	<0.50	<0.50	<0.50	<0.50	<0.50
Zinc	µg/L	1100	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
Chromium VI	µg/L	25	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Cyanide, Free	µg/L	66	<1	<1	-	-	<1	-	<1
Mercury	µg/L	1	<0.1	<0.1	<0.10	<0.10	<0.1	<0.10	<0.1
Chloride	µg/L	790000	13	13	-	-	41	-	26
									11

Notes:

- mbgs = metres below ground surface
- µg/L = micrograms per litre
- < = parameter was not detected at a concentration that was greater than the associated value, which is the reportable detection limit
- = Not measured
- Table 2 SCS = Ministry of the Environment, Conservation and Parks, "Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act", Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition for Use within All Types of Property Use and Medium to Fine-Textured Soils (April 15, 2011).
- BOLD = Exceeds the Table 2 SCS

Table 6C
Groundwater Analytical Results - Polycyclic Aromatic Hydrocarbons
40, 64, and 86 Burnhamthorpe Road East, Oakville, Ontario

CA0040928.5498 (3000)

Borehole ID		BH18-01		BH18-01		BH18-07	BH18-07	BH18-08	BH18-09	BH24-2	BH24-3	
Sample ID		BH18-01	DUP	BH18-01	DUP01	BH18-07	BH18-07	BH18-08	BH18-09	BH24-2	BH24-3	DUP A
Date		19-Jul-2018	19-Jul-2018	22-Dec-2021	22-Dec-2021	19-Jul-2018	22-Dec-2021	24-Jul-2018	24-Jul-2018	19-Dec-2024	19-Dec-2024	19-Dec-2024
Depth (mbgs)		3.05 - 6.10	3.05 - 6.10	3.05 - 6.10	3.05 - 6.10	3.05 - 6.10	3.05 - 6.10	3.05 - 6.10	3.05 - 6.10	7.62 - 10.67	3.05 - 6.10	3.05 - 6.10
Lab Sample ID		HGV427	HGV429	RLV051	RLV053	HGV428	RLV052	HHK621	HHK623	6426230	6426226	6426229
Table 2 SCS												
Parameter	Units											
Acenaphthene	µg/L	4.1	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.20	<0.20	<0.20
Acenaphthylene	µg/L	1	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.20	<0.20	<0.20
Anthracene	µg/L	2.4	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.10	<0.10	<0.10
Benzo(a)anthracene	µg/L	1	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.20	<0.20	<0.20
Benzo(a)pyrene	µg/L	0.01	<0.010	<0.010	<0.0090	<0.0090	<0.010	<0.0090	<0.010	<0.01	<0.01	<0.01
Benzo(b)fluoranthene	µg/L	0.1	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.10	<0.10	<0.10
Benzo(g,h,i)perylene	µg/L	0.2	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.20	<0.20	<0.20
Benzo(k)fluoranthene	µg/L	0.1	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.10	<0.10	<0.10
Chrysene	µg/L	0.1	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.10	<0.10	<0.10
Dibenzo(a,h)anthracene	µg/L	0.2	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.20	<0.20	<0.20
Fluoranthene	µg/L	0.41	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.20	<0.20	<0.20
Fluorene	µg/L	120	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.20	<0.20	<0.20
Indeno(1,2,3-cd)pyrene	µg/L	0.2	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.20	<0.20	<0.20
1-Methylnaphthalene	µg/L	NV	<0.050	<0.050	<0.050	<0.050	<0.050	0.052	<0.050	-	-	-
2-Methylnaphthalene	µg/L	NV	<0.050	<0.050	<0.050	<0.050	<0.050	0.08	<0.050	-	-	-
Methylnaphthalene, 2-(1-)	µg/L	3.2	<0.071	<0.071	<0.071	<0.071	<0.071	0.13	<0.071	<0.20	<0.20	<0.20
Naphthalene	µg/L	11	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	0.052	<0.20	<0.20	<0.20
Phenanthrene	µg/L	1	<0.030	<0.030	<0.030	<0.030	<0.030	<0.088	<0.030	<0.10	0.22	0.22
Pyrene	µg/L	4.1	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.20	<0.20	<0.20

Notes:

- mbgs = metres below ground surface
- µg/L = micrograms per litre
- < = parameter was not detected at a concentration that was greater than the associated value, which is the reportable detection limit
- NV = No value
- = Not measured
- = Ministry of the Environment, Conservation and Parks, "Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act", Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition for Use within All Types of Property Use and Medium to Fine-Textured Soils (April 15, 2011).
- Table 2 SCS
- BOLD** = Exceeds the Table 2 SCS

Table 6D
Groundwater Analytical Results - Volatile Organic Compounds
40, 64, and 86 Burnhamthorpe Road East, Oakville, Ontario

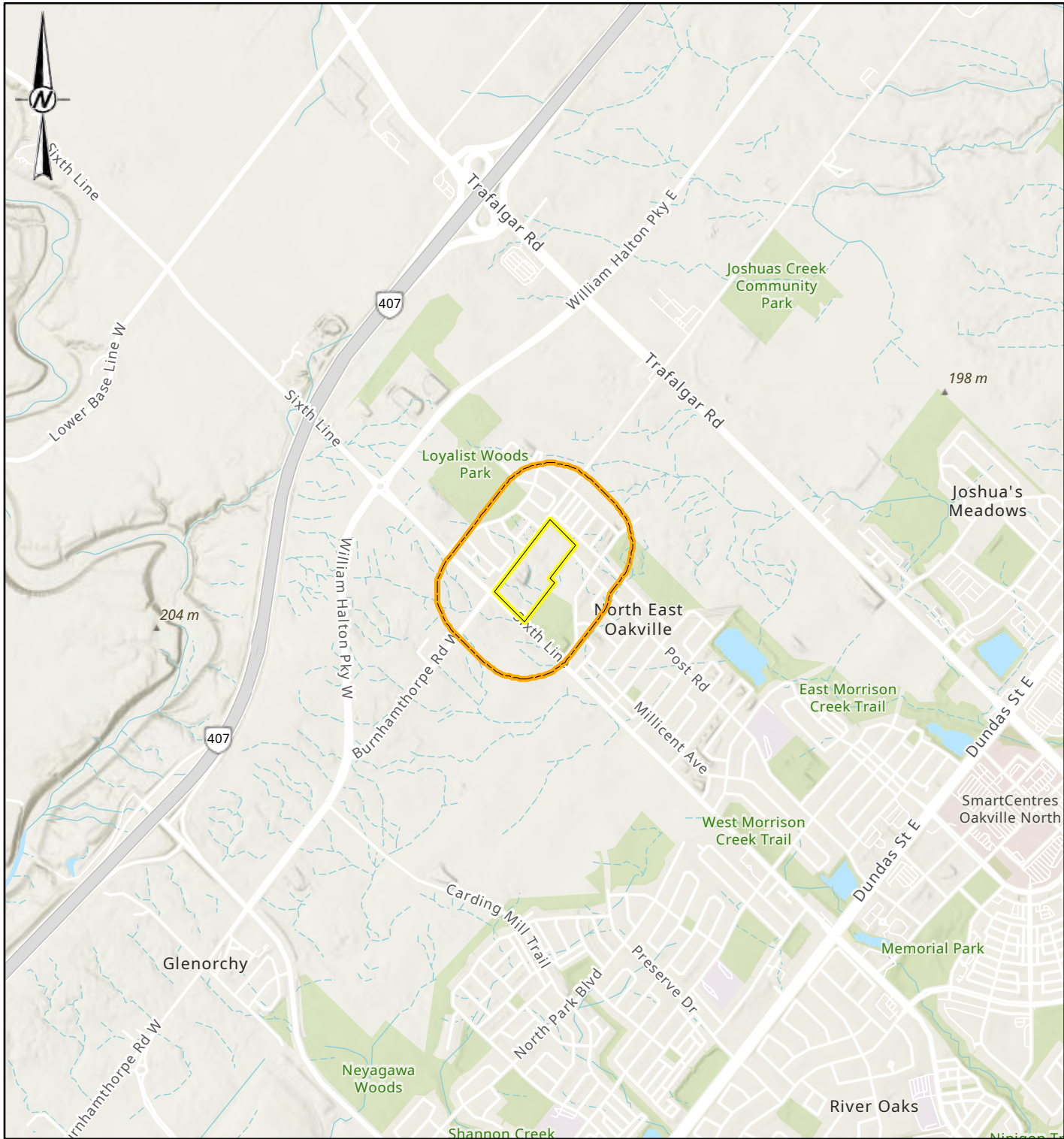
CA0040928.5498 (3000)

Borehole ID		NA	
Sample ID		Trip Blank	
Date		19-Dec-2024	
Depth (mbgs)		NA	
Lab Sample ID		6426236	
Parameter	Units	Table 2 SCS	
Acetone	µg/L	2700	<1.0
Benzene	µg/L	5	<0.20
Bromodichloromethane	µg/L	16	<0.20
Bromoform	µg/L	25	<0.10
Bromomethane	µg/L	0.89	<0.20
Carbon Tetrachloride	µg/L	5	<0.20
Chlorobenzene	µg/L	30	<0.10
Chloroform	µg/L	22	<0.20
Dibromochloromethane	µg/L	25	<0.10
1,2-Dichlorobenzene	µg/L	3	<0.10
1,3-Dichlorobenzene	µg/L	59	<0.10
1,4-Dichlorobenzene	µg/L	1	<0.10
Dichlorodifluoromethane	µg/L	590	<0.40
1,1-Dichloroethane	µg/L	5	<0.30
1,2-Dichloroethane	µg/L	5	<0.20
1,1-Dichloroethylene	µg/L	14	<0.30
Cis- 1,2-Dichloroethylene	µg/L	17	<0.20
Trans- 1,2-Dichloroethylene	µg/L	17	<0.20
1,2-Dichloropropane	µg/L	5	<0.20
Cis-1,3-Dichloropropylene	µg/L	NV	-
Trans-1,3-Dichloropropylene	µg/L	NV	-
1,3-Dichloropropene (Cis + Trans)	µg/L	0.5	<0.30
Ethylbenzene	µg/L	2.4	<0.10
Ethylene Dibromide	µg/L	0.2	<0.10
n-Hexane	µg/L	520	<0.20
Methyl Ethyl Ketone	µg/L	1800	<1.0
Methyl Isobutyl Ketone	µg/L	640	<1.0
Methyl tert-butyl Ether	µg/L	15	<0.20
Methylene Chloride	µg/L	50	<0.30
Styrene	µg/L	5.4	<0.10
1,1,1,2-Tetrachloroethane	µg/L	1.1	<0.10
1,1,2,2-Tetrachloroethane	µg/L	1	<0.10
Tetrachloroethylene	µg/L	17	<0.20
Toluene	µg/L	24	<0.20
1,1,1,1-Trichloroethane	µg/L	200	<0.30
1,1,2-Trichloroethane	µg/L	5	<0.20
Trichloroethylene	µg/L	5	<0.20
Trichlorofluoromethane	µg/L	150	<0.40
Vinyl Chloride	µg/L	1.7	<0.17
m & p-Xylene	µg/L	NV	<0.20
o-Xylene	µg/L	NV	<0.10
Xylenes (Total)	µg/L	300	<0.20

Notes:

mbgs	= metres below ground surface
µg/L	= micrograms per litre
<	= parameter was not detected at a concentration that was greater than the associated value, which is the reportable detection limit
NV	= No value
-	= Not measured
Table 2 SCS	= Ministry of the Environment, Conservation and Parks, "Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act", Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition for Use within All Types of Property Use and Medium to Fine-Textured Soils (April 15, 2011).
BOLD	= Exceeds the Table 2 SCS

Figures



LEGEND

-  PHASE TWO PROPERTY BOUNDARY
-  PHASE ONE STUDY AREA



NOTE(S)

1. BASE MAP: ESRI, NASA, NGA, USGS, FEMA, PROVINCE OF ONTARIO, TOWN OF OAKVILLE, ESRI CANADA, ESRI, TOMTOM, GARMIN, SAFEGRAPH, GEOTECHNOLOGIES, INC, METI/NASA, USGS, EPA, NPS, US CENSUS BUREAU, USDA, NRCAN, PARKS CANADA
2. COORDINATE SYSTEM: NAD 1983 UTM ZONE 17N

REFERENCE(S)

1. BASE MAP: ESRI, NASA, NGA, USGS, FEMA, PROVINCE OF ONTARIO, TOWN OF OAKVILLE, ESRI CANADA, ESRI, TOMTOM, GARMIN, SAFEGRAPH, GEOTECHNOLOGIES, INC, METI/NASA, USGS, EPA, NPS, US CENSUS BUREAU, USDA, NRCAN, PARKS CANADA
2. COORDINATE SYSTEM: NAD 1983 UTM ZONE 17N

CLIENT

CROSSTRAIL ESTATES INC. AND TWKD DEVELOPMENTS INC.

PROJECT NAME

40, 64, AND 86 BURNHAMTHORPE ROAD EAST, OAKVILLE, ONTARIO

TITLE

KEY PLAN

CONSULTANT



YYYY-MM-DD 2025-01-14

DESIGNED QA/REM

PREPARED NM

REVIEWED REM

APPROVED EH

Project Number
CA0040928.5498

CONTROL
0002

REV.
A

FIGURE
1



LEGEND

- A FORMER AST
- A CURRENT AST
- WELL RECORD
- INFERRED GROUNDWATER FLOW DIRECTION
- WATERCOURSE
- STORMWATER MANAGEMENT POND
- PHASE TWO PROPERTY BOUNDARY
- PHASE ONE STUDY AREA
- PROVINCIAL SIGNIFICANT WETLAND

SITE FEATURES

ID	FEATURE DESCRIPTION
A	FORMER RESIDENTIAL DWELLING AT 40 BURNHAMTHORPE ROAD EAST
B	FORMER RESIDENTIAL DWELLING AT 64 BURNHAMTHORPE ROAD EAST
C	FORMER RESIDENTIAL DWELLING AT 86 BURNHAMTHORPE ROAD EAST
D	FORMER SHED AT 40 BURNHAMTHORPE ROAD EAST
E	FORMER SHED AT 64 BURNHAMTHORPE ROAD EAST
F	FORMER SHED AT 86 BURNHAMTHORPE ROAD EAST
G	FORMER POND
H	STORMWATER MANAGEMENT POND
I	FORMER STOCKPILES OF FILL MATERIAL
J	STOCKPILE OF TOPSOIL
K	STOCKPILE OF GRANULAR MATERIAL

0 100 200
1:4,000 METRES

REFERENCE(S)

- FIGURE INCLUDES THE FOLLOWING LAYERS OBTAINED FROM LAND INFORMATION ONTARIO: WATER BODIES, WELL RECORDS, PETROLEUM WELLS, FGP/DFO SARA CRITICAL HABITAT, PROVINCIAL SIGNIFICANT WETLANDS, WILDERNESS AREAS, NIAGARA ESCARPMENT PLAN DESIGNATION, ORM LAND USE DESIGNATION, PROVINCAL PARKS/ CONSERVATION RESERVES
- BASE MAP: PEEL REGION, TOWN OF OAKVILLE, MAXAR, MICROSOFT
- COORDINATE SYSTEM: NAD 1983 UTM ZONE 17N

CLIENT

CROSSTRAIL ESTATES INC. AND TWKD DEVELOPMENTS INC.

PROJECT NAME

40, 64, AND 86 BURNHAMTHORPE ROAD EAST, OAKVILLE, ONTARIO

TITLE

PHASE TWO PROPERTY AND PHASE ONE STUDY AREA

	CONSULTANT	YYYY-MM-DD	2025-01-14
		DESIGNED	QA/REM
		PREPARED	NM
		REVIEWED	REM
		APPROVED	EH

Project Number	CONTROL	REV.	FIGURE
CA0040928.5498	0002	A	2

PATH: S:\Client\Crosstrail Estates Oakville_40_64_and_86_Burnhamthorpe_Rd_East\09_PRC\CA040928_5498\00_PRC\00002_Phase 1_ESA\CA040928_5498-0002-PS-0000.aprx PRINTED ON: AT: 12:34:45 PM



LEGEND

- INFERRED GROUNDWATER FLOW DIRECTION
- WATERCOURSE
- PHASE TWO PROPERTY BOUNDARY
- PHASE ONE STUDY AREA
- PROVINCIALY SIGNIFICANT WETLAND

LABE	PCA	DESCRIPTION
1	28 - GASOLINE AND ASSOCIATED PRODUCTS STORAGE IN FIXED TANKS	A 935 L FUEL OIL AST WAS OBSERVED WITHIN THE BASEMENT OF THE RESIDENTIAL DWELLING LOCATED AT 40 BURNHAMTHORPE ROAD EAST.
2	28 - GASOLINE AND ASSOCIATED PRODUCTS STORAGE IN FIXED TANKS	A 935 L FUEL OIL AST WAS OBSERVED WITHIN THE BASEMENT OF THE RESIDENTIAL DWELLING LOCATED AT 64 BURNHAMTHORPE ROAD EAST.
3	28 - GASOLINE AND ASSOCIATED PRODUCTS STORAGE IN FIXED TANKS	A 935 L FUEL OIL AST WAS OBSERVED WITHIN THE BASEMENT OF THE RESIDENTIAL DWELLING LOCATED AT 86 BURNHAMTHORPE ROAD EAST.
4	28 - GASOLINE AND ASSOCIATED PRODUCTS STORAGE IN FIXED TANKS	TWO 5,000 L DIESEL FUEL ASTS WERE OBSERVED EAST OF THE FORMER SHED LOCATED ON THE EASTERN PORTION OF 64 BURNHAMTHORPE ROAD EAST.
5	30 - IMPORTATION OF FILL MATERIAL OF UNKNOWN QUALITY	FORMER STOCKPILES OF FILL MATERIAL WERE LOCATED TO THE SOUTH SIDE OF THE FORMER RESIDENTIAL DWELLING AT 40 BURNHAMTHORPE ROAD EAST.
8	28 - GASOLINE AND ASSOCIATED PRODUCTS STORAGE IN FIXED TANKS	TWO ASTS WERE OBSERVED WITHIN THE NEIGHBOURING CONSTRUCTION PROPERTY'S FENCED AREA, WHICH WAS LOCATED APPROXIMATELY 50 M EAST OF THE SITE.
6	30 - IMPORTATION OF FILL MATERIAL OF UNKNOWN QUALITY	FORMER STOCKPILES OF FILL MATERIAL WERE LOCATED ON THE SOUTHWESTERN PORTION OF THE SITE.
7	30 - IMPORTATION OF FILL MATERIAL OF UNKNOWN QUALITY	FORMER STOCKPILES OF FILL MATERIAL WERE LOCATED TO THE NORTH AND WEST OF THE FORMER RESIDENTIAL DWELLING AT 40 BURNHAMTHORPE ROAD EAST.
8	28 - GASOLINE AND ASSOCIATED PRODUCTS STORAGE IN FIXED TANKS	TWO ASTS WERE OBSERVED WITHIN THE NEIGHBOURING CONSTRUCTION PROPERTY'S FENCED AREA, WHICH WAS LOCATED APPROXIMATELY 50 M EAST OF THE SITE.

REFERENCE(S)

- FIGURE INCLUDES THE FOLLOWING LAYERS OBTAINED FROM LAND INFORMATION ONTARIO: WATER BODIES, WELL RECORDS, PETROLEUM WELLS, FGP/DFO SARA CRITICAL HABITAT, PROVINCIALY SIGNIFICANT WETLANDS, WILDERNESS AREAS, NIAGARA ESCARPMENT PLAN DESIGNATION, ORM LAND USE DESIGNATION, PROVINCAL PARKS/ CONSERVATION RESERVES.
- BASE MAP: PEEL REGION, TOWN OF OAKVILLE, MAXAR, MICROSOFT
- COORDINATE SYSTEM: NAD 1983 UTM ZONE 17N

CLIENT

CROSSTRAIL ESTATES INC. AND TWKD DEVELOPMENTS INC.

PROJECT NAME

40, 64, AND 86 BURNHAMTHORPE ROAD EAST, OAKVILLE, ONTARIO

TITLE

POTENTIALLY CONTAMINATING ACTIVITIES

CONSULTANT



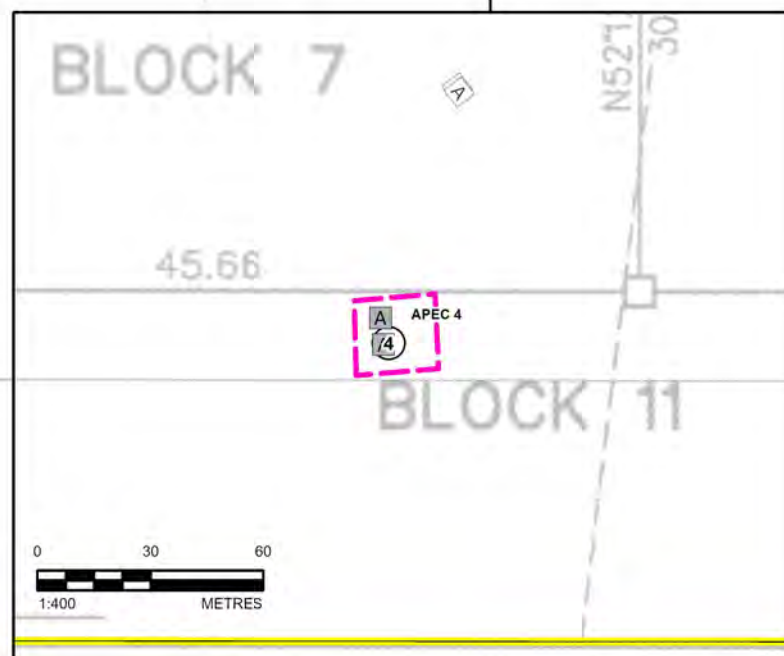
YYYY-MM-DD	2025-01-14
DESIGNED	QA/REM
PREPARED	NM
REVIEWED	REM
APPROVED	EH

Project Number
CA040928.5498

CONTROL
0001

REV.
A

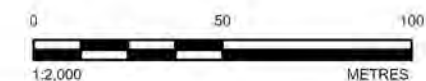
FIGURE
3



LEGEND

- ☒ A FORMER AST
- ☐ A CURRENT AST
- ☐ PHASE TWO PROPERTY BOUNDARY

APCC	COMMENT
1	A 935 L FUEL OIL AST WAS OBSERVED WITHIN THE BASEMENT OF THE RESIDENTIAL DWELLING _LOCATED AT 40 BURNHAMTHORPE ROAD EAST.
2	A 935 L FUEL OIL AST WAS OBSERVED WITHIN THE BASEMENT OF THE RESIDENTIAL DWELLING _LOCATED AT 64 BURNHAMTHORPE ROAD EAST.
3	A 935 L FUEL OIL AST WAS OBSERVED WITHIN THE BASEMENT OF THE RESIDENTIAL DWELLING _LOCATED AT 86 BURNHAMTHORPE ROAD EAST.
4	TWO 5,000 L DIESEL FUEL ASTS WERE OBSERVED EAST OF THE FORMER SHED LOCATED ON THE EASTERN PORTION OF 64 BURNHAMTHORPE ROAD EAST.
5	FORMER STOCKPILES OF FILL MATERIAL WERE LOCATED TO THE SOUTH SIDE OF THE FORMER RESIDENTIAL DWELLING AT 40 BURNHAMTHORPE ROAD EAST.
6	FORMER STOCKPILES OF FILL MATERIAL WERE LOCATED ON THE SOUTHWESTERN PORTION OF THE SITE.
7	FORMER STOCKPILES OF FILL MATERIAL WERE LOCATED TO THE NORTH AND WEST OF THE FORMER RESIDENTIAL DWELLING AT 40 BURNHAMTHORPE ROAD EAST.
8	A STORMWATER MANAGEMENT POND WAS OBSERVED ON THE SOUTHWEST PORTION OF THE PHASE ONE PROPERTY.



NOTE(S)

1. PCA DESCRIPTIONS ARE PRESENTED IN FIGURE 3.

REFERENCE(S)

1. PLAN OF SURVEY PROVIDED BY J.D. BARNES, DATED SEPTEMBER 18, 2024.
2. COORDINATE SYSTEM: NAD 1983 UTM ZONE 17N

CLIENT

CROSSTRAIL ESTATES INC. AND TWKD DEVELOPMENTS INC.

PROJECT NAME

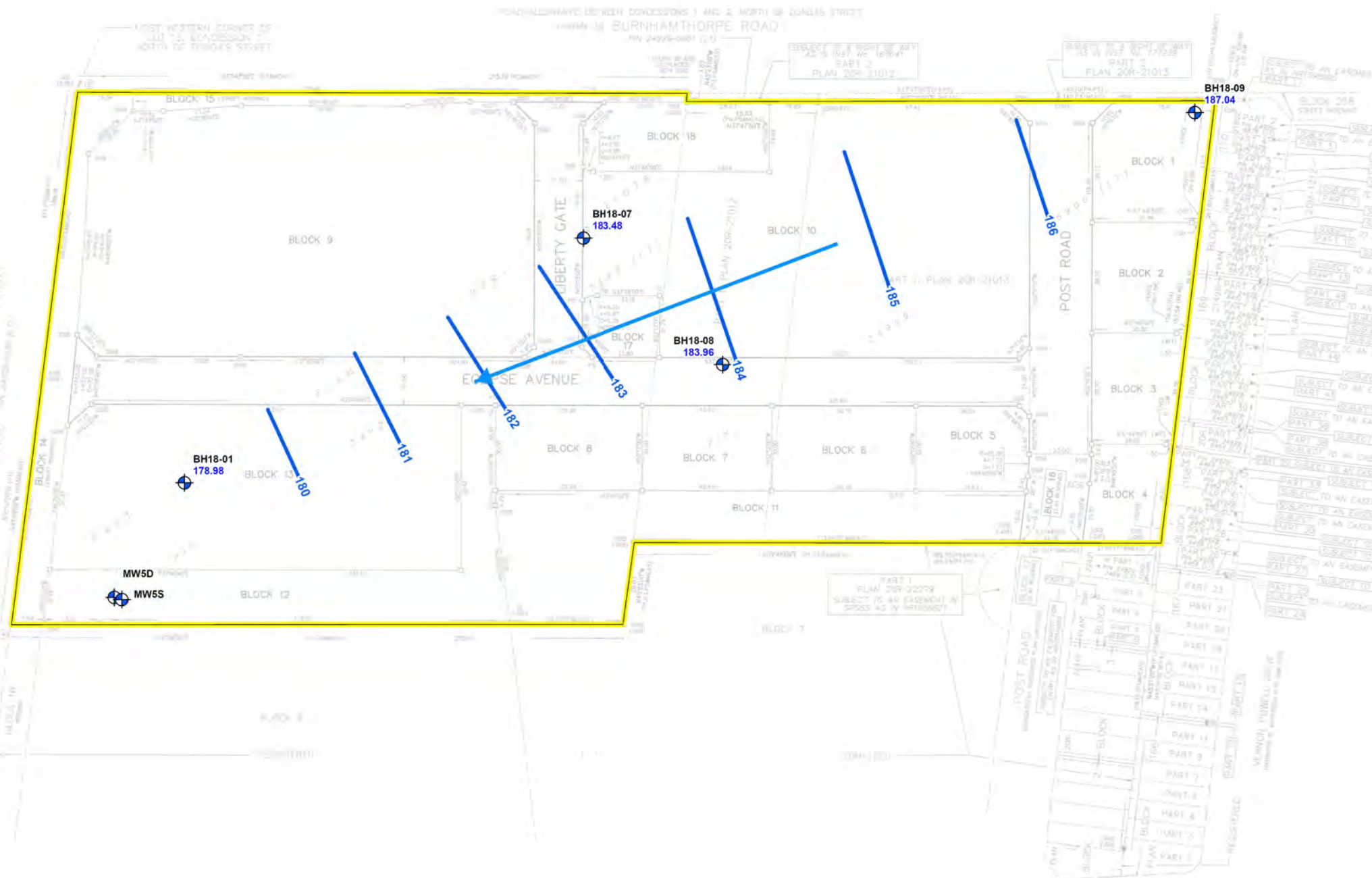
40, 64, AND 86 BURNHAMTHORPE ROAD EAST, OAKVILLE, ONTARIO

TITLE

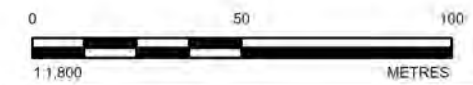
AREAS OF POTENTIAL ENVIRONMENTAL CONCERN

CONSULTANT	YYYY-MM-DD	2025-01-14
	DESIGNED	BD
	PREPARED	GU
	REVIEWED	BD
	APPROVED	EH

Project Number	CONTROL	REV.	FIGURE
CA0040928.5498	0002	A	



- LEGEND**
- MONITORING WELL LOCATION
 - GROUNDWATER FLOW DIRECTION
 - GROUNDWATER ELEVATION CONTOUR (M)
 - PHASE TWO PROPERTY BOUNDARY
 - (187.00) GROUNDWATER ELEVATION (m)



- REFERENCE(S)**
1. PLAN OF SURVEY PROVIDED BY J.D. BARNES, DATED SEPTEMBER 18, 2024.
 2. COORDINATE SYSTEM: NAD 1983 UTM ZONE 17N

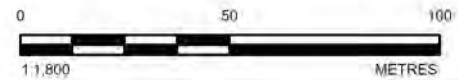
CLIENT
CROSSTRAIL ESTATES INC. AND TWKD DEVELOPMENTS INC.

PROJECT NAME
40, 64, AND 86 BURNHAMTHORPE ROAD EAST, OAKVILLE, ONTARIO

TITLE
GROUNDWATER ELEVATIONS AND INFERRED FLOW DIRECTION (JULY 19 TO 24, 2018)

CONSULTANT	YYYY-MM-DD	2025-01-14
DESIGNED	BD	
PREPARED	GU	
REVIEWED	BD	
APPROVED	EH	

Project Number CA0040928.549E CONTROL 0002 REV A FIGURE 6A



LEGEND

- | | |
|---|-----------------------------------|
|  | MONITORING WELL LOCATION |
|  | GROUNDWATER FLOW DIRECTION |
|  | GROUNDWATER ELEVATION CONTOUR (M) |
|  | PHASE TWO PROPERTY BOUNDARY |
| (181.00) | GROUNDWATER ELEVATION (m) |

REFERENCE(S)

1. PLAN OF SURVEY PROVIDED BY J.D. BARNES, DATED SEPTEMBER 18, 2024.
2. COORDINATE SYSTEM: NAD 1983 UTM ZONE 17N

CLIENT

CROSSTRAIL ESTATES INC. AND TWKD DEVELOPMENTS INC.

PROJECT NAME

40, 64, AND 86 BURNHAMTHORPE ROAD EAST, OAKVILLE, ONTARIO

TITLE	
-------	--

GROUNDWATER ELEVATIONS AND INFERRED FLOW DIRECTION (MARCH 17, 2022)

CONSULTANT

YYYY-MM-DD	2025-01-14
DESIGNED	BD
PREPARED	GU
REVIEWED	BD
APPROVED	EH

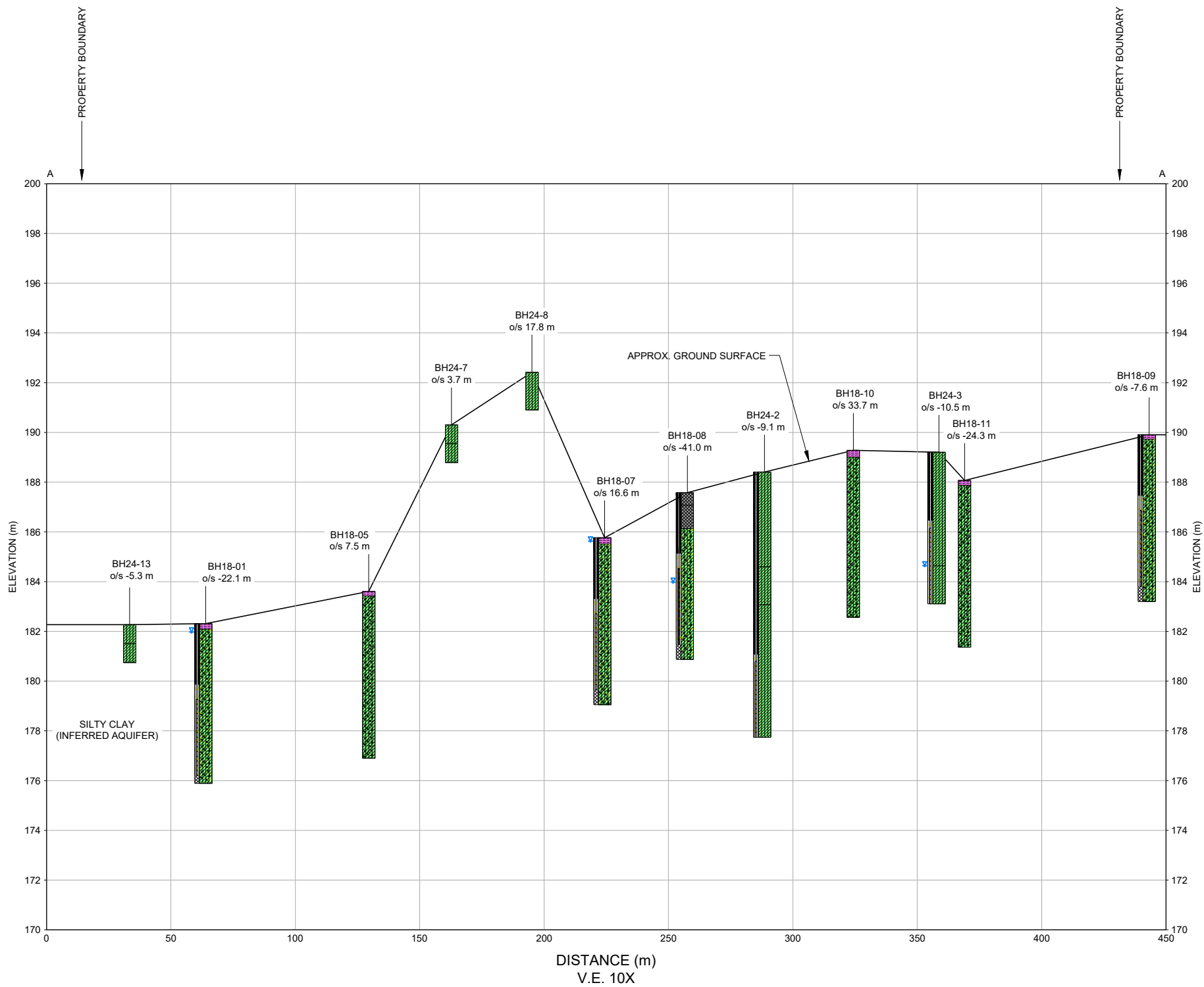
Project Number	CONTROL
CA0040928.5498	0002

REV
A

FIGURE 6B

\\ATH-S\Clients\Crossl\Estates\Oakville_40_64_and_86\Bumamthorpe_Rd_East96_PROD\0002_Phase_II_ESA\CA0040928_5498\40_PROD\0002_HS-0000.png PRINTED ON: AT: 8:55:03 PM

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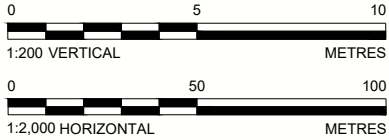
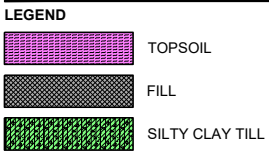


HORIZ. SCALE 1:2,000 m
VERT. SCALE 1:200 m

A-A'

5

CROSS-SECTION A-A'



CLIENT

CROSSTRAIL ESTATES INC. AND TWKD DEVELOPMENTS INC.

PROJECT

PHASE TWO ENVIRONMENTAL SITE ASSESSMENT

40, 60 AND 86 BURNHAMTHORPE ROAD EAST

OAKVILLE, ONTARIO

TITLE

GEOLOGIC CROSS SECTION A-A'

CONSULTANT	YYYY-MM-DD	2025-01-15
	DESIGNED	BD
	PREPARED	MK
	REVIEWED	BD
	APPROVED	EH

PROJECT NO. CA0040928.5498 0001

CONTROL

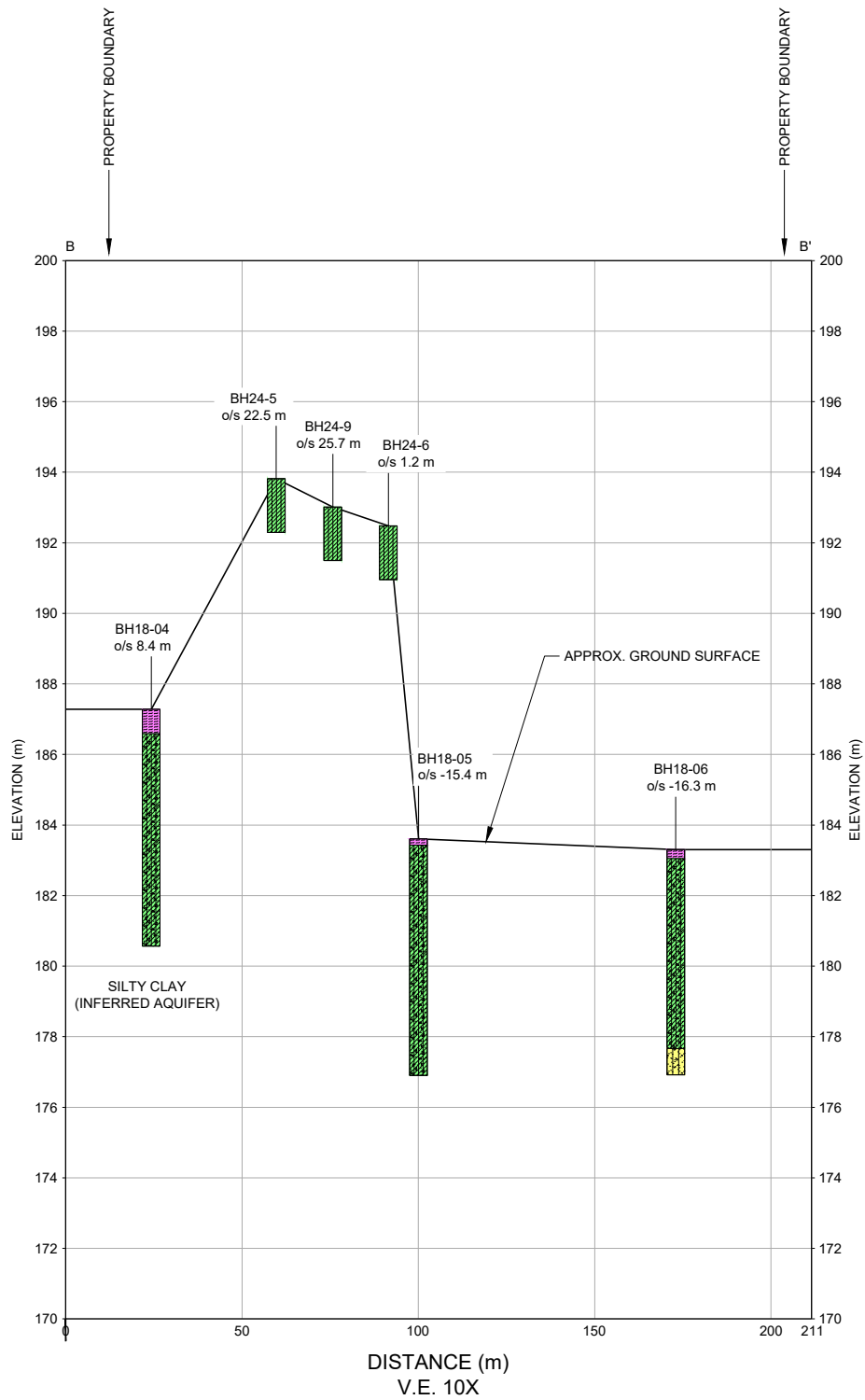
REV. A

FIGURE 7

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

25 mm

Path: \\spp.phwan.net\CAM\IS00\CTX_Data\SI\MClients\Crosstrail_Estates\Oakville_40_64_and_86_Burnhamthorpe_Rd_East\99_PROD\CA0040928_5498\40_PROD\0002_Phase_II_ESA\1 File Name: CA0040928_5498\0002_HS-0008.dwg | Last Edited By: wds_stephen.labude Date: 2025-01-16 Time: 10:50:05 AM | Printed By: wds_stephen.labude Date: 2025-01-16 Time: 10:50:19 AM

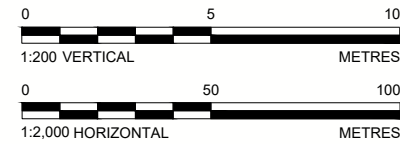
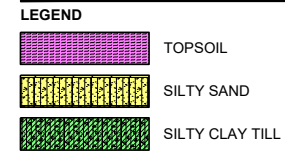


HORIZ. SCALE 1:2,000 m
VERT. SCALE 1:200 m

B-B'

CROSS-SECTION B-B'

5



CLIENT

CROSSTRAIL ESTATES INC. AND TWKD DEVELOPMENTS INC.

PROJECT

PHASE TWO ENVIRONMENTAL SITE ASSESSMENT
40, 60 AND 86 BURNHAMTHORPE ROAD EAST
OAKVILLE, ONTARIO

TITLE

GEOLOGIC CROSS SECTION B-B'

CONSULTANT	YYYY-MM-DD	2025-01-15
	DESIGNED	BD
	PREPARED	MK
	REVIEWED	BD
	APPROVED	EH

PROJECT NO. CA0040928.5498 0001

CONTROL

REV. A

FIGURE 8

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



The map displays the study area with the following features:

- Yellow Boundary:** Defines the study area.
- Black Line A-A':** A diagonal line across the map.
- Black Line B-B':** A vertical line on the left side of the map.
- Boreholes (Green Circles):**
 - BH18-03: 0.8 - 1.1
 - BH24-10: 0 - 0.76
 - BH24-11: 0 - 0.76
 - BH24-12: 0 - 0.76
 - BH18-02: 4.5 - 5.0
 - BH24-13: 0 - 0.76
 - BH24-14: 0 - 0.76
 - BH18-04: 1.5 - 1.9
 - BH24-15: 0.10 - 0.20
 - BH24-16: 0.15 - 0.35
 - BH24-17: 0.10 - 0.20
 - BH24-1: 3.05 - 3.81
 - BH24-5: 0 - 0.76
 - BH24-9: 0 - 0.76
 - BH24-8: 0 - 0.76
 - BH24-6: 0 - 0.76
 - BH18-05: 0.2 - 0.6
 - BH24-7: 0 - 0.76
 - BH18-06: 4.6 - 5.2
 - BH18-07: 3.1 - 3.4
 - BH18-10: 1.5 - 1.8
 - BH24-2: 3.81 - 4.57
 - BH24-3: 3.81 - 4.57
 - BH18-08: 1.5 - 1.9
 - BH24-4: 3.81 - 4.57
 - BH18-09: 0.8 - 1.0
 - BH18-11: 0.8 - 1.0
 - BH18-12: 3.1 - 3.4
- Monitoring Points (Blue Circles):**
 - BH18-01: 2.3 - 2.7



REFERENCE(S)

1. PLAN OF SURVEY PROVIDED BY J.D. BARNES, DATED SEPTEMBER 18, 2024.
2. COORDINATE SYSTEM: NAD 1983 UTM ZONE 17N

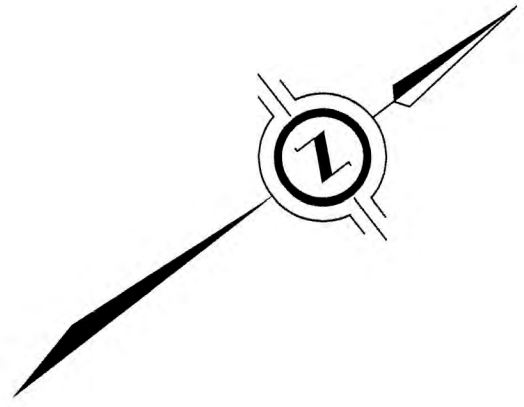
TITLE
**ANALYTICAL RESULTS FOR PETROLEUM HYDROCARBONS,
BTX, POLYCYCLIC AROMATIC HYDROCARBONS, VOLATILE
ORGANIC COMPOUNDS, METALS AND HYDRIDE-FORMING
METALS. HWS-B. CrVI. CN. Hq. EC. SAR. pH IN SOIL (PLAN)**

CONSULTANT	YYYY-MM-DD	2025-01-17
	DESIGNED	BD
	PREPARED	GU
	REVIEWED	BD
	APPROVED	EH

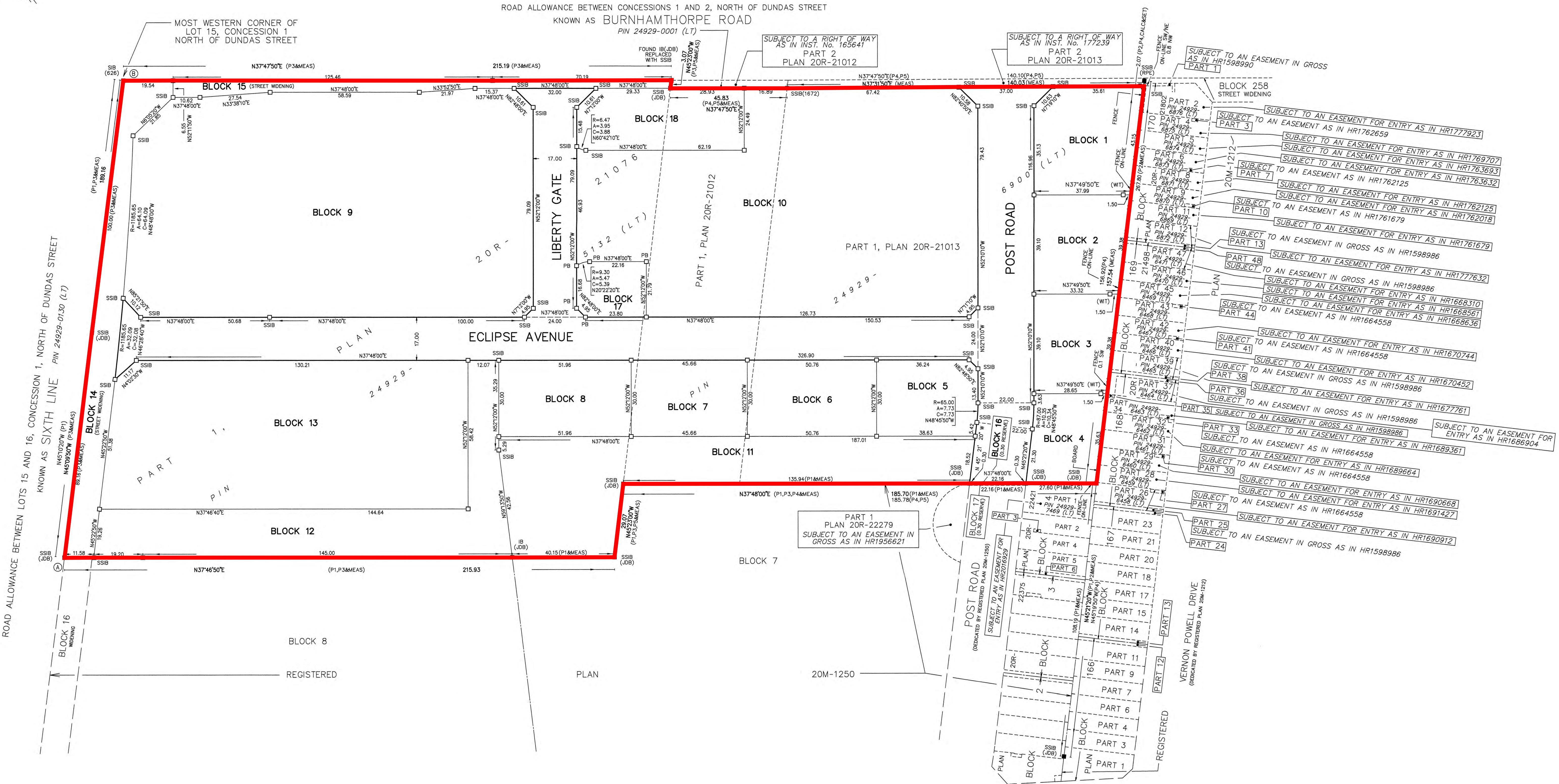
Project Number	CONTROL	REV.	FIGURE
CA0040928.5498	0002	A	

APPENDIX A

Plan of Survey



Phase One Property,
Phase Two Property



PLAN 20M-

I CERTIFY THAT THIS PLAN IS REGISTERED IN THE LAND REGISTRY OFFICE FOR THE LAND TITLES DIVISION OF HALTON (No. 20)

AT----- O'CLOCK ON THE----- DAY OF-----, 2024 AND ENTERED IN THE PARCEL REGISTER FOR PROPERTY IDENTIFIER 24929-5132 (LT) AND 24929-6900 (LT)

AND THE REQUIRED CONSENTS ARE REGISTERED AS PLAN DOCUMENT No.-----

REPRESENTATIVE FOR LAND REGISTRAR

PLAN OF SUBDIVISION OF
PART OF LOT 15, CONCESSION 1 NORTH OF DUNDAS STREET
(GEOGRAPHIC TOWNSHIP OF TRAFALGAR)
TOWN OF OAKVILLE
REGIONAL MUNICIPALITY OF HALTON

SCALE 1 : 750

J. D. BARNES LIMITED

METRIC DISTANCES AND COORDINATES SHOWN ON THIS PLAN ARE IN METRES AND CAN BE CONVERTED TO FEET BY DIVIDING BY 0.3048.

OWNER'S CERTIFICATE - PLAN OF SUBDIVISION
FOR PIN: 24929-5132 (LT)

THIS IS TO CERTIFY THAT:

- BLOCKS 9, 12 AND 13, PART OF BLOCKS 7, 8, 10, 11, 17 AND 18 AND THE STREETS NAMELY: LIBERTY GATE AND PART OF ECLIPSE AVENUE AND THE STREET WIDENINGS NAMELY BLOCKS 14 AND 15, HAVE BEEN LAID OUT IN ACCORDANCE WITH OUR INSTRUCTIONS.
- THE STREETS ARE HEREBY DEDICATED TO THE CORPORATION OF THE TOWN OF OAKVILLE.
- THE STREET WIDENING NAMELY BLOCK 14 IS HEREBY DEDICATED TO THE CORPORATION OF THE TOWN OF OAKVILLE.
- THE STREET WIDENING NAMELY BLOCK 15 IS HEREBY DEDICATED TO THE REGIONAL MUNICIPALITY OF HALTON.

DATED THIS----- DAY OF-----, 2024

CROSSTRAIL ESTATES INC.

STEVE MALOVIC, R.S.O.

I HAVE THE AUTHORITY TO BIND THE CORPORATION

OWNER'S CERTIFICATE - PLAN OF SUBDIVISION
FOR PIN: 24929-6900 (LT)

THIS IS TO CERTIFY THAT:

- BLOCKS 1 TO 6 BOTH INCLUSIVE, PART OF BLOCKS 7, 8, 10, 11, 17 AND 18 AND THE STREETS NAMELY: POST ROAD AND PART OF ECLIPSE AVENUE AND THE 0.3m RESERVE NAMELY BLOCK 16, HAVE BEEN LAID OUT IN ACCORDANCE WITH OUR INSTRUCTIONS.
- THE STREETS ARE HEREBY DEDICATED TO THE CORPORATION OF THE TOWN OF OAKVILLE.

DATED THIS----- DAY OF-----, 2024

TWKD DEVELOPMENTS INC.

KATHY DI SILVESTRO, PRESIDENT

I HAVE THE AUTHORITY TO BIND THE CORPORATION

- LEGEND**
- DENOTES SURVEY MONUMENT FOUND
 - DENOTES SURVEY MONUMENT SET
 - SSIB DENOTES STANDARD IRON BAR
 - SSIB DENOTES SHORT STANDARD IRON BAR
 - IB DENOTES IRON BAR
 - PB DENOTES PLASTIC BAR
 - WT DENOTES WITNESS
 - MEAS DENOTES MEASURED
 - CALC DENOTES CALCULATED
 - P1 DENOTES REGISTERED PLAN 20M-1250
 - P2 DENOTES REGISTERED PLAN 20M-1212
 - P3 DENOTES PLAN 20R-21076
 - P4 DENOTES PLAN 20R-21013
 - P5 DENOTES PLAN 20R-21012
 - JDB DENOTES J.D. BARNES LIMITED, O.L.S.
 - 1672 DENOTES TONY STAUŠKAS SURVEYING INC., O.L.S.
 - RPE DENOTES R-P-E SURVEYING LTD., O.L.S.
 - 626 DENOTES H.D. SEWELL, O.L.S.
- N=North / S=South / E=East / W=West
- ALL SET SSIB AND PB MONUMENTS WERE USED DUE TO LACK OF OVERBURDEN AND/OR PROXIMITY OF UNDERGROUND UTILITIES IN ACCORDANCE WITH SECTION 11 (4) OF O.REG. 525/91.
- SURVEY MONUMENTS PLANTED ARE IRON BARS UNLESS OTHERWISE NOTED.

SURVEYOR'S CERTIFICATE
I CERTIFY THAT:

- THIS SURVEY AND PLAN ARE CORRECT AND IN ACCORDANCE WITH THE SURVEY'S ACT, THE SURVEYORS ACT AND THE LAND TITLES ACT AND THE REGULATIONS MADE UNDER THEM
- THE SURVEY WAS COMPLETED ON SEPTEMBER 10, 2024.

September 18, 2024 DATE

Monika Budziak
MONIKA BUDZIAK
ONTARIO LAND SURVEYOR

THIS PLAN OF SURVEY RELATES TO AOLS PLAN SUBMISSION FORM NUMBER 2216480

J.D.BARNES SURVEYING
LIMITED
LAND INFORMATION SPECIALISTS
401 WHEELABRATOR WAY, SUITE A, MILTON, ON L9T 3C1
T: (905) 875-9955 F: (905) 875-9956 www.jdbarnes.com

DRAWN BY: ML CHECKED BY: MB REFERENCE NO.: 21-30-803-00-MPLAN
PLOTTED: 9/18/24 DATED: SEPTEMBER 18, 2024

MUNICIPAL APPROVAL
24T-21001/1315
APPROVED UNDER SECTION 51 OF THE PLANNING ACT, R.S.O. 1990, c.P.13.
THIS----- DAY OF-----, 2024

GABRIEL A.R. CHARLES, M.O.P., R.P.P.
DIRECTOR OF PLANNING SERVICES
TOWN OF OAKVILLE
(AUTHORITY GRANTED BY BY-LAW 1998-272, AS AMENDED)

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 0.999702.

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)	601 403.66	4 816 194.72
ORP (B)	601 269.56	4 816 328.05

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 189.16 AT N45°09'50"W

APPENDIX B

Sampling and Analysis Plan



MEMORANDUM

DATE December 2, 2024

TO Mohammad Janghorban
WSP Canada Inc.

CC Eric Hood, PhD, PEng

FROM Rica Esmirna Maliwat, PEng

Project No. CA0040928.5498

EMAIL ricaesmirna.maliwat@wsp.com

SAMPLING AND ANALYSIS PLAN – PHASE TWO ENVIRONMENTAL SITE ASSESSMENT, 40, 64 AND 86 BURNHAMTHORPE ROAD EAST, OAKVILLE, ONTARIO

Contact Information

- Rica Esmirna Maliwat – cell – 437 928-3714

OBJECTIVE

According to the findings of the Phase One ESA Update conducted by WSP in 2024, eight areas of potential environmental concern (APECs) were identified at the Site, in support of an application for municipal planning approval. A preliminary Phase Two ESA was completed at the Site in 2018, which included sampling programs of both soil and groundwater at the Site. The results of the investigation were compared to the Table 2 site condition standards (residential, medium to fine-textured soils), hereinafter referred to the Table 2 standards, as presented in the MECP document “*Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act*”, dated April 15, 2011. Elevated concentrations of copper and fluoranthene were identified in a stockpile that has since been removed from the Site. The intent of the current investigation is to conduct additional investigations of soil and groundwater quality that are sufficient to permit reliance to the Region of Halton.

As required by O.Reg. 153/04, this site-specific sampling and analysis plan (SAP), which includes WSP’s Quality Assurance Program (QAP), and standard operating procedures (SOPs) is to be developed for each environmental field investigation activity. The SAP is a required component of the Phase Two ESA report that outlines the proposed field work, identified the number and location of samples to be collected, specifies which SOPs will be used, and the quality assurance measures to be implemented during the field work. All field work will be completed in accordance with the requirements of the SAP, QAP, and SOPs.

Our team for the project will be Mohammad Janghorban (field work), Blake D’Souza (data management and reporting), Rica Esmirna Maliwat (project coordination and reporting), and Eric Hood (QPESA).

Site Access Requirements

The Site consists of vacant land which is currently under development. A stormwater management pond is located on the southwest portion of the Site.

Access Concern	Information
Client Contact	Muaadh Solomah (Cell: 905-577-1876)
Site Access Representative	Muaadh Solomah
Strata Drilling Group Contacts	Office: Mike Muir (Cell: 647-205-0586) Driller/Field Crew: TBD
Access/Hours of Work	Drilling/Test Pitting/Groundwater Field Work – Access to Site beginning at 8:00 AM
Site Check-in Procedure	Check in with Rica Maliwat (437-928-3714) on arrival and departure
Photography	Permitted Photos of work area and each borehole location must be taken every day and uploaded to the SharePoint
On-site Orientation or Training	Daily tailgate meeting

GENERAL PROJECT REQUIREMENTS

- Review and sign-off on the Site-specific health and safety plan at the beginning of the project. Document daily conditions and tailgate meetings on the Field Level Risk Assessment form.
- Complete a Daily Field Log to document the date, time, work progress, weather conditions, work area physical conditions and potential risks/concerns, any disruptions, deviations and/or delays, any incidents that occurred and any other relevant information to the project. Identified risks/concerns at the Site are to be discussed with Rica Maliwat (437-928-3714).
- Follow standard operating procedures and use standard field forms (forms saved to SharePoint). **Every sample must have an associated field form.**
- Initial calibration of field equipment should be performed at the start of each field day. If equipment is supplied by a rental company, take a photo of the calibration certificate and a calibration check using a standard of known concentration may be completed (record on field form). A daily check of calibration using a known concentration is required for the following day.
- Photos are required of each borehole and test pit location, and the general work area each day. Photos are to be uploaded to the SharePoint site soon after completion of the field program.
- Ensure to bring the following equipment to the field: pen, field forms, camera, spatula, stainless steel spoon, permanent marker, measuring tape, oil/water interface probe, plastic bags, plastic bucket, brush, gloves, allen key set, spray containing Liquinox or Alconox solution, spray bottle containing distilled water, paper towels.
- **Clean disposable Nitrile gloves will be used at each sampling location to prevent cross-contamination.**

- All non-dedicated sampling equipment (e.g., split spoons, oil/water interface probes, spatula, stainless steel spoon) will be decontaminated between sampling locations. Sampling equipment in contact with soil or groundwater will be cleaned with a brush; washed with a laboratory-grade detergent solution (e.g., phosphate-free LiquiNox or AlcoNox) and thoroughly rinsed with distilled water.
- Soil sample containers will be supplied by AGAT Laboratories ("AGAT"). Sample containers will be delivered to the WSP Etobicoke warehouse at 252 Galaxy Boulevard and available for pickup by Friday December 6 end of day. The RKI Eagle dual gas meter and groundwater development equipment will be supplied by Maxim Environmental and delivered to the WSP Etobicoke warehouse by Friday December 6 end of day.
- Groundwater sample containers will be supplied by AGAT. Sample containers will be delivered to the WSP Etobicoke warehouse and available for pickup by Thursday December 12 end of day. The groundwater sampling equipment will be supplied by Maxim Environmental and delivered to the Etobicoke warehouse by December 12 end of day.

Schedule

- Layout and Private Locates – December 2nd @ 8:00 AM
- Borehole Drilling and Well Installation – Monday December 9th to Tuesday December 10th @ 8:00 AM
- Soil Sampling Review and Submission – Wednesday, December 11th
- Groundwater Sampling – Friday, December 13th @ 8:00 AM

APECs

Area of Potential Environmental Concern ¹	Location of Area of Potential Environmental Concern on Phase One Property	Potentially Contaminating Activity ²	Location of PCA (on-Site or off-Site)	Contaminants of Potential Concern ³	Media Potentially Impacted (Groundwater, Soil and/or Sediment)
APEC 1: A 935 L fuel oil AST was observed within the basement of the residential dwelling located at 40 Burnhamthorpe Road East (PCA 1).	Former basement footprint of the residential dwelling at 40 Burnhamthorpe Road	#28. Gasoline and Associated Products Storage in Fixed Tanks	On-Site	PHC, BTEX, PAH	Soil and Groundwater
APEC 2: A 935 L fuel oil AST was observed within the basement of the residential dwelling located at 64 Burnhamthorpe Road East (PCA 2).	Former basement footprint of the residential dwelling at 64 Burnhamthorpe Road	#28. Gasoline and Associated Products Storage in Fixed Tanks	On-Site	PHC, BTEX, PAH	Soil and Groundwater
APEC 3: A 935 L fuel oil AST was observed within the basement of the residential dwelling located at 86	Former basement footprint of the residential dwelling at 86	#28. Gasoline and Associated Products Storage in Fixed Tanks	On-Site	PHC, BTEX, PAH	Soil and Groundwater

Area of Potential Environmental Concern ¹	Location of Area of Potential Environmental Concern on Phase One Property	Potentially Contaminating Activity ²	Location of PCA (on-Site or off-Site)	Contaminants of Potential Concern ³	Media Potentially Impacted (Groundwater, Soil and/or Sediment)
Burnhamthorpe Road East (PCA 3).	Burnhamthorpe Road				
APEC 4: Two 5,000 L diesel fuel ASTs were observed on the eastern portion of 64 Burnhamthorpe Road East (PCA 4).	Eastern portion of 64 Burnhamthorpe Road, east of the former shed	#28. Gasoline and Associated Products Storage in Fixed Tanks	On-Site	PHC, BTEX, PAH	Soil and Groundwater
APEC 5: Former stockpiles of fill material were located to the south side of the former residential dwelling at 40 Burnhamthorpe Road East (PCA 5).	Central portion of 40 Burnhamthorpe Road, south and southwest of the former residential dwelling	30. Importation of Fill Material of Unknown Quality	On-Site	PHC, BTEX, VOC, PAH, Metals, Hydride Metals, B-HWS, CN, CrVI, Hg, EC, SAR	Soil
APEC 6: Former stockpiles of fill material were located on the southwestern portion of the Site (PCA 6).	Southwestern portion of 40 Burnhamthorpe Road	30. Importation of Fill Material of Unknown Quality	On-Site	PHC, BTEX, VOC, PAH, Metals, Hydride Metals, B-HWS, CN, CrVI, Hg, EC, SAR	Soil
APEC 7: Former stockpiles of fill material were located to the north and west of the former residential dwelling at 40 Burnhamthorpe Road East (PCA 7).	Central portion of 40 Burnhamthorpe Road, north and west of the former residential dwelling	30. Importation of Fill Material of Unknown Quality	On-Site	PHC, BTEX, VOC, PAH, Metals, Hydride Metals, B-HWS, CN, CrVI, Hg, EC, SAR	Soil
APEC 8: A stormwater management pond was observed on the southwest portion of the Phase One Property.	Stormwater management pond (southwest portion of Phase One Property)	N/A (industrial use)	On-Site	PHC, BTEX, VOC, PAH, Metals, Hydride Metals, B-HWS, CN, CrVI, Hg, EC, SAR	Soil and Groundwater

SCOPE OF WORK

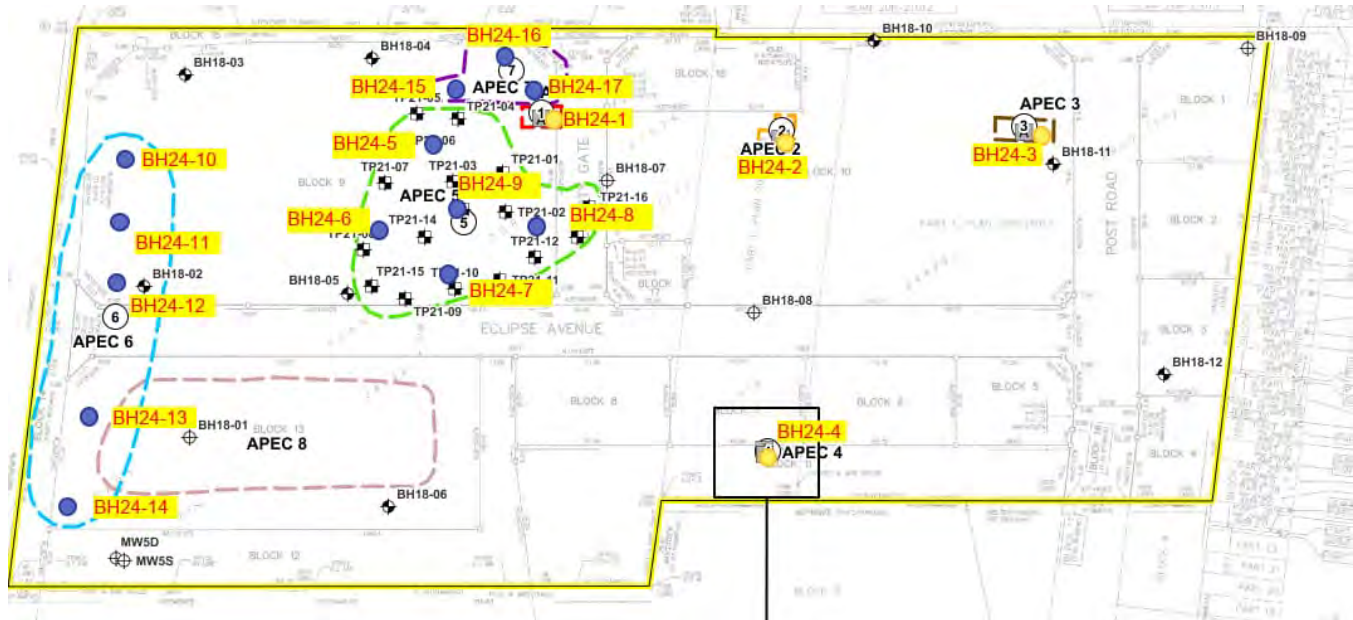


Figure 1: Proposed Investigation Locations

Borehole Drilling

- Before going to Site, please bring bagged ice and place it in the cooler(s). The sampling containers must be kept on ice and soil samples should be placed in the cooler on ice immediately after collecting. Refill the ice in the cooler as the day goes on/as needed. This is a regulatory requirement.
- Soil samples kept overnight must be stored on ice or stored in a refrigerator.
- Private Locates to be completed by OnSite Locates Inc. on December 3rd.
- Review public locates, private locates, and ground disturbance with Strata prior to drilling.
- Drilling to be completed using dual tube/auger drilling equipment supplied and operated by Strata.
- The program includes four boreholes completed as monitoring wells and thirteen shallow boreholes. Four boreholes are to be drilled up to a maximum depth of 16.5 feet (5.0 m) below ground surface (bgs) and thirteen shallow boreholes are to be drilled up to a maximum depth of 5 feet (1.2 m) bgs. Soil sampling is required at 2-foot intervals to maximum borehole depth.
- If the inferred water table is encountered at <16.5 ft, the boreholes are to be terminated approximately 5 ft below the water table and the monitoring wells are to be installed at a depth such that the well screen straddles the inferred water table. **Since this is a regulatory requirement, the screen installation depth must be discussed with Rica in advance, considering the findings on the field log, the depth to water in the augers, and the depth to water in any wells that were previously installed.**
- Collect soil samples at each borehole in soil sampling jars (as outlined in Table 1).

- Collect soil samples in bags and label the bags appropriately (borehole ID, sample ID and sample depth, date, project number). **Ensure that samples to be submitted to the lab are collected directly from the dual tubes into laboratory supplied containers first, and the remaining soil can be collected in the sample bags.**
- Allow at least 15 minutes for the bags to equilibrate at a constant temperature, then collect headspace measurements from each soil sample bag for organic vapour (IBL) and combustible gas (HEX) following SOP4 Headspace Screening.
- Survey each location using the Trimble. Mark the borehole locations with stakes, and label them for the surveyor (i.e., WSP BH24-1).
- At the end of the drilling program, store samples in the fridge at the Etobicoke warehouse. Ensure that all bags are labelled with the project number, date of drilling and the project coordinator's name (use Rica M.).
- **Samples must be submitted to the lab on ice and below 10°C.**
- Install monitoring wells 0.5 ft above the bottom of the filter pack with a 10-foot long well screen. Sand pack surrounding each well screen will be #0 grade and monitoring wells will be completed at surface with a flush mount protective casing set in concrete and sealed with a PVC J-plug.
- Measure the water level at the first monitoring well installed and send a photo to Rica prior to installing the other wells.
- Mark the reference point at the top of well pipe with a small notch. Install Waterra tubing and foot valve in the monitoring wells.
- Record monitoring well installation details on the borehole log (length and depth of screen, sand pack, seal, cement/finish). If you are unsure of the measurements/depths, ask the drillers for clarification.
- Develop each monitoring well by purging up to ten well volumes or dryness.
- Provide field logs to Rica and discuss which samples will be submitted for analysis. Send Rica a photo of the chain of custody to review prior to submission.

Table 1: Soil Sampling and Analysis Plan

Borehole/ Test Pit ID	Borehole/ Test Pit Depth (mbgs)	Well Installed (Y/N)	Location Purpose	Sampling and Analysis Summary
BH24-1 BH24-2 BH24-3 BH24-4	5.0	Y Install wells to straddle the water table	Investigate APECs 1 to 4	1 st sample (at or above the water table) – Collect 1x soil sample from each borehole for PHC/BTEX (1xMeOH vial and 1x120 mL jar) and PAH (1x120 mL jar). 2 nd sample (inferred clean native) – Submit on HOLD with containers for PHC/BTEX and PAH.

Borehole/ Test Pit ID	Borehole/ Test Pit Depth (mbgs)	Well Installed (Y/N)	Location Purpose	Sampling and Analysis Summary
				Collect soil samples at each borehole for grain size analysis.
BH24-5 to BH24-17	1.2	N	Further assessment of APECs 5 to 7 (underneath the former stockpiles)	1st sample (surficial sample 0.0 to 0.6 mbgs) – Collect 1x soil sample from each test pit for PHC/BTEX and VOC (1xMeOH vial and 1x120 mL jar), PAH (1x120 mL jar), metals, hydride metals and ORPs (B-HWS, CN, CrVI, Hg, EC and SAR) (1x250 mL jar or bag). 2nd sample (inferred clean native) – Submit on HOLD with containers for PHC/BTEX, VOC, PAH, metals, hydride metals and ORPs. Collect 2x duplicate samples for analysis of PHC/BTEX, VOC, PAH, metals, hydride metals and ORPs.

Notes:

- Ensure that the Terracorer's are completely packed with soil to ensure there is sufficient sample mass.
- If a soil bag is provided, ensure enough sample is provided in the bag for analysis (just a little over a third of the bag can be filled).

Groundwater Monitoring and Sampling

- To measure water levels, open the J-plug and allow air in the casing to vent and the water level to stabilize. Measure water levels from the top of PVC pipe at the four new monitoring wells and any existing wells using the oil/water interface probe. Measure the readings twice consecutively. Collect a round of water level measurements. Use the "Static Water Level Field Form".
- Collect groundwater samples from the four new monitoring wells BH24-1 to BH24-4 using a peristaltic pump upon water quality parameters stabilizing as per WSP's SOP for low-flow sampling methodology and measure field chemistry parameters (i.e., temperature, pH, electrical conductivity) after each well volume.
- Submit one sample each from BH24-1 to BH24-4 for laboratory analysis of PHC/BTEX and PAH. Submit one duplicate groundwater sample for the same parameters as the parent sample from one of the wells. Send Rica a photo of the chain of custody to review prior to submission.
- Submit one trip blank sample for analysis of VOCs and PHC F1.
- Call Rica if you see or suspect product in any of the monitoring wells.

Chain-of-Custody Item	Information
Analytical Laboratory	AGAT, Mississauga

Chain-of-Custody Item	Information
Generic Site Condition Standards	O.Reg.153/04 Table 2 (RPI Property Use) for medium to fine-textured soils
Use Record of Site Condition Analytical Procedure	Yes
Turn-around Time	Regular turnaround
WSP Reporting Contact	Rica Esmirna Maliwat (ricaesmirna.maliwat@wsp.com)
WSP Billing Contact	CAPayablesInvoice@wsp.com
Is an EQuIS EDD Required?	Yes

MANAGEMENT OF INVESTIGATION DERIVED WASTES

- Soil cuttings and purged groundwater to be stored in 45-gallon drums supplied by Strata. A waste hauler will be retained by the Client to pickup the soil and groundwater drums at the end of the field program.
- Label containers for waste management purposes and include WSP, project number, date, and drum contents (i.e., soil, purge water).
- Discuss best location to store drums with driller and Rica M. (should be secure as possible from public access, accessible to a waste hauler and convenient for the client).
- Record inventory of waste containers on Daily Field Log.

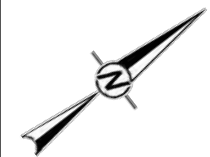
SPECIAL INSTRUCTIONS

- Check-in with Rica (437-928-3714) at start and end of each workday.
- Submit complete package of field notes (including field logs, calibration records, field forms, and chain-of-custody forms) as described in SOP1.
- The use of ink for recording field notes is recommended to ensure the legibility of scanned field forms. Scan field notes at resolution and contrast settings that ensure the scanned documents are easily legible.
- Use standard field forms (not field books).
- Include a daily log for every day of field work.
- Save field notes (including daily logs, field forms, field logs, calibration records, and chain-of-custody documents) as a single .pdf document with the following file name "PROJECT_NUMBER Field Notes COMPLETION_DATE" (for example, "1712345 Field Notes April 27, 2021.pdf", where COMPLETION_DATE represents the last date of field work associated with the sampling event).
- Sort pages in the .pdf document by form type and in chronological order with daily logs at the front to simplify review.

REM/EH/

Attachments: Proposed Sampling Location Plan

[https://wsponlinecan.sharepoint.com/sites/ca-ca0040928.5498/shared documents/05. technical/02. 2024 phase two update/01. sap/ca0040928.5498-r-reva-sap-burnhamthorpe rd e, oakville-10oct2024.docx](https://wsponlinecan.sharepoint.com/sites/ca-ca0040928.5498/shared%20documents/05.%20technical/02.%202024%20phase%20two%20update/01.%20sap/ca0040928.5498-r-reva-sap-burnhamthorpe%20rd%20e,%20oakville-10oct2024.docx)



APEC	Proposed BH/MW	Proposed Depth	Medium to Sample	COPCs
APEC 1	BH24-1	6.0	Soil (at water table) Groundwater	PHC, BTEX, PAH
APEC 2	BH24-2	6.0	Soil (at water table) Groundwater	PHC, BTEX, PAH
APEC 3	BH24-3	6.0	Soil (at water table) Groundwater	PHC, BTEX, PAH
APEC 4	BH24-4	6.0	Soil (at water table) Groundwater	PHC, BTEX, PAH
APEC 5	BH24-5 to BH24-9	1.2	Soil (fill)	PHC, BTEX, PAH, Metals, Hydride Metals, B-HWS, CrVI, Hg, CN, EC, SAR
APEC 6	BH24-10 to BH24-14	1.2	Soil (fill)	PHC, BTEX, PAH, Metals, Hydride Metals, B-HWS, CrVI, Hg, CN, EC, SAR
APEC 7	BH24-15 to BH24-17	1.2	Soil (fill)	PHC, BTEX, PAH, Metals, Hydride Metals, B-HWS, CrVI, Hg, CN, EC, SAR
APEC 8	None			

- LEGEND
- FORMER AST
 - BOREHOLE LOCATION
 - MONITORING WELL LOCATION
 - TEST PIT LOCATION
 - PHASE ONE PROPERTY BOUNDARY

APEC	DESCRIPTION
1	A 935 L FUEL OIL AST WAS OBSERVED WITHIN THE BASEMENT OF THE RESIDENTIAL DWELLING LOCATED AT 40 BURNHAMTHORPE ROAD EAST.
2	A 935 L FUEL OIL AST WAS OBSERVED WITHIN THE BASEMENT OF THE RESIDENTIAL DWELLING LOCATED AT 64 BURNHAMTHORPE ROAD EAST.
3	A 935 L FUEL OIL AST WAS OBSERVED WITHIN THE BASEMENT OF THE RESIDENTIAL DWELLING LOCATED AT 86 BURNHAMTHORPE ROAD EAST.
4	TWO 5,000 L DIESEL FUEL ASTS WERE OBSERVED EAST OF THE FORMER SHED LOCATED ON THE EASTERN PORTION OF 64 BURNHAMTHORPE ROAD EAST.
5	FORMER STOCKPILES OF FILL MATERIAL WERE LOCATED TO THE SOUTH SIDE OF THE FORMER RESIDENTIAL DWELLING AT 40 BURNHAMTHORPE ROAD EAST.
6	FORMER STOCKPILES OF FILL MATERIAL WERE LOCATED ON THE SOUTHWESTERN PORTION OF THE SITE.
7	FORMER STOCKPILES OF FILL MATERIAL WERE LOCATED TO THE NORTH AND WEST OF THE FORMER RESIDENTIAL DWELLING AT 40 BURNHAMTHORPE ROAD EAST.
8	A STORMWATER MANAGEMENT POND WAS OBSERVED ON THE SOUTHWEST PORTION OF THE PHASE ONE PROPERTY.

- Proposed Borehole/Monitoring Well (~6.0 mbgs)
- Shallow Boreholes (~1.2 mbgs)



NOTE(S)
1. PCA DESCRIPTIONS ARE PRESENTED IN FIGURE 3.

REFERENCE(S)
1. PLAN OF SURVEY PROVIDED BY J.D. BARNES, DATED DECEMBER 11, 2023.
2. COORDINATE SYSTEM: NAD 1983 UTM ZONE 17N

CLIENT
CROSSTRAIL ESTATES INC. AND TWKD DEVELOPMENTS INC.

PROJECT
PHASE ONE ENVIRONMENTAL SITE ASSESSMENT UPDATE, 40, 64, AND 86 BURNHAMTHORPE ROAD EAST, OAKVILLE, ONTARIO

TITLE
AREAS OF POTENTIAL ENVIRONMENTAL CONCERN

CONSULTANT	YYYY-MM-DD	2024-10-02
DESIGNED	QA/REM	
PREPARED	NM	
REVIEWED	REM	
APPROVED	EH	

PROJECT NO. CA0040928.5498 CONTROL 0001 REV. A FIGURE 4

APPENDIX C

Field Logs

PROJECT: 1792964

LOCATION: N 4816273.76; E 601401.46

RECORD OF BOREHOLE: BH18-01

SHEET 1 OF 1

BORING DATE: June 20, 2018

DATUM: Geodetic

SPT/DCPT HAMMER: MASS, 64kg; DROP, 760mm

DRILL RIG: NARL M5

HAMMER TYPE: AUTOMATIC

DEPTH SCALE METRES	BORING METHOD	SOIL PROFILE		SAMPLES		HEADSPACE COMBUSTIBLE VAPOUR CONCENTRATIONS [PPM] ⊕				HYDRAULIC CONDUCTIVITY, k, cm/s				ADDITIONAL LAB. TESTING	PIEZOMETER OR STANDPIPE INSTALLATION				
		DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	NUMBER	TYPE	BLOWS/0.3m	HEADSPACE ORGANIC VAPOUR CONCENTRATIONS [PPM] □				WATER CONTENT PERCENT							
								ND = Not Detected				Wp -----○W----- WI							
								100	200	300	400			10	20	30	40		
								100	200	300	400								
0		GROUND SURFACE		182.32															
	Power Auger 153 mm O.D. Solid Stem Augers	TOPSOIL (230 mm)		0.00	1A														
		(CL) SILTY CLAY, trace to some sand to sandy SILTY CLAY, trace to some gravel, trace shale fragments; mottled brown to grey (TILL); cohesive, w<PL, firm to hard		182.09															
				0.23	1B	SS	7		ND										
1						2	SS	21		ND									
						3	SS	35		ND									
2																			
				4	SS	88		ND											
				5	SS	48		ND											
3																			
4																			
5					6	SS	31		ND										
6																			

DEPTH SCALE

1 : 50



LOGGED: CL

CHECKED: EM

GTA-BHS 001 S:\CLIENTS\KLM PLANNING PARTNERS\ON OAKVILLE 40.64 88 BURNHAMTHORPE RD E\02 DATA\GINT\BURNHAMTHORPE-RD-E.GPJ GAL-MIS.GDT 1/15/25

PROJECT: 1792964
LOCATION: N 4816292.68; E 601351.92

RECORD OF BOREHOLE: BH18-02

SHEET 1 OF 1
DATUM: Geodetic

BORING DATE: June 20, 2018

SPT/DCPT HAMMER: MASS, 64kg; DROP, 760mm

DRILL RIG: NARL M5

HAMMER TYPE: AUTOMATIC

DEPTH SCALE METRES	BORING METHOD	SOIL PROFILE		SAMPLES		HEADSPACE COMBUSTIBLE VAPOUR CONCENTRATIONS [PPM] ⊕ ND = Not Detected				HYDRAULIC CONDUCTIVITY, k, cm/s				ADDITIONAL LAB. TESTING	PIEZOMETER OR STANDPIPE INSTALLATION		
		DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	NUMBER	TYPE	BLOWS/0.3m	HEADSPACE ORGANIC VAPOUR CONCENTRATIONS [PPM] □				WATER CONTENT PERCENT					
								ND = Not Detected				Wp ———— W ———— WI					
							100	200	300	400		10 ⁻⁶	10 ⁻⁵	10 ⁻⁴	10 ⁻³		
0		GROUND SURFACE		184.77 0.00													
	Power Auger 153 mm O.D. Solid Stem Augers	FILL - (CL) SILTY CLAY, some sand, some gravel; reddish brown to grey, asphalt and shale fragments; cohesive, w<PL, stiff to very stiff		1	SS	18	□ ⊕									PHC's PAH's METALS and INORG	
						ND											
1				2	SS	15	⊕										
						ND											
			(CL) SILTY CLAY, trace to some sand, trace to some gravel; reddish brown to grey (TILL); cohesive, w<PL, very stiff to hard		3	SS	31									PHC's PAH's METALS and INORG	
2																	
		4			SS	47											
3																	
		5			SS	40											
4																	
				6	SS	39	□ ⊕										
5																	
6																	
				7	SS	21	⊕										
					</												

DEPTH SCALE

1 : 50



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CHECKED: EM

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PROJECT: 1792964
LOCATION: N 4816347.22; E 601304.17

RECORD OF BOREHOLE: BH18-03

SHEET 1 OF 1
DATUM: Geodetic

SPT/DCPT HAMMER: MASS, 64kg; DROP, 760mm

BORING DATE: June 20, 2018

DRILL RIG: NARL M5

HAMMER TYPE: AUTOMATIC

DEPTH SCALE METRES	BORING METHOD	SOIL PROFILE			SAMPLES			HEADSPACE COMBUSTIBLE VAPOUR CONCENTRATIONS [PPM] ⊕ ND = Not Detected				HYDRAULIC CONDUCTIVITY, k, cm/s				ADDITIONAL LAB. TESTING	PIEZOMETER OR STANDPIPE INSTALLATION
		DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	NUMBER	TYPE	BLOWS/0.3m	HEADSPACE ORGANIC VAPOUR CONCENTRATIONS [PPM] □ ND = Not Detected				WATER CONTENT PERCENT					
								100	200	300	400	Wp	W	Wi	10		
0		GROUND SURFACE		186.77													
		TOPSOIL (180 mm)		0.00 186.59	1A												
		(CL) SILTY CLAY, trace to some sand, trace to some gravel; mottled brown to grey, some shale fragments (TILL); cohesive, w<PL to w~PL, stiff to hard		0.18	1B	SS	13	⊕									
1						2	SS	38	⊕	ND							
						3	SS	25	⊕	ND							
2																	
						4	SS	33	⊕	ND							
					5	SS	26	⊕	ND								
					6	SS	13	⊕	ND								
					7	SS	9	⊕	ND								
7		END OF BOREHOLE		180.06 6.71													
		NOTE: 1. Borehole dry upon completion of drilling.															
8																	
9																	
10																	

DEPTH SCALE

1 : 50



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PROJECT: 1792964
LOCATION: N 4816345.43; E 601395.81

RECORD OF BOREHOLE: BH18-05

SHEET 1 OF 1
DATUM: Geodetic

BORING DATE: June 20, 2018

SPT/DCPT HAMMER: MASS, 64kg; DROP, 760mm

DRILL RIG: NARL M5

HAMMER TYPE: AUTOMATIC

DEPTH SCALE METRES	BORING METHOD	SOIL PROFILE			SAMPLES		HEADSPACE COMBUSTIBLE VAPOUR CONCENTRATIONS [PPM] ⊕ ND = Not Detected				HYDRAULIC CONDUCTIVITY, k, cm/s				ADDITIONAL LAB. TESTING	PIEZOMETER OR STANDPIPE INSTALLATION	
		DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	NUMBER	TYPE	BLOWS/0.3m	HEADSPACE ORGANIC VAPOUR CONCENTRATIONS [PPM] □ ND = Not Detected				WATER CONTENT PERCENT					
								100	200	300	400	Wp	W	Wi			10 ⁻⁶
0	Power Auger 153 mm O.D. Solid Stem Augers	GROUND SURFACE		183.61													
		TOPSOIL (180 mm)		0.00 183.43	1A												
		(CL) SILTY CLAY, trace to some sand, trace to some gravel; brown to brownish grey (TILL); cohesive, w<PL, very stiff to hard		0.18	1B	SS	24	□	⊕							PHC's PAH's METALS and INORG	
1							2	SS	31	□	⊕						
2							3	SS	28	□	⊕						
							4	SS	58	□	⊕						
3																	
4																	
5																	
6																	
7																	
8																	
9																	
10																	

DEPTH SCALE

1 : 50



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PROJECT: 1792964

LOCATION: N 4816312.42; E 601460.86

RECORD OF BOREHOLE: BH18-06

SHEET 1 OF 1

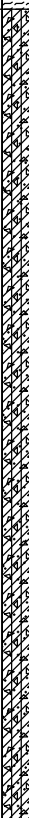
BORING DATE: June 20, 2018

DATUM: Geodetic

SPT/DCPT HAMMER: MASS, 64kg; DROP, 760mm

DRILL RIG: NARL M5

HAMMER TYPE: AUTOMATIC

DEPTH SCALE METRES	BORING METHOD	SOIL PROFILE			SAMPLES		HEADSPACE COMBUSTIBLE VAPOUR CONCENTRATIONS [PPM] ⊕				HYDRAULIC CONDUCTIVITY, k, cm/s				ADDITIONAL LAB. TESTING	PIEZOMETER OR STANDPIPE INSTALLATION	
		DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	NUMBER	TYPE	BLOWS/0.3m	ND = Not Detected				10 ⁻⁶ 10 ⁻⁵ 10 ⁻⁴ 10 ⁻³					
								HEADSPACE ORGANIC VAPOUR CONCENTRATIONS [PPM] □				WATER CONTENT PERCENT					
								ND = Not Detected				Wp ——— W ——— WI					
							100	200	300	400							
0		GROUND SURFACE		183.30													
	Power Auger 153 mm O.D. Solid Stem Augers	TOPSOIL (250 mm)		0.00	1A												
		(CL) SILTY CLAY, trace sand, some gravel; mottled reddish brown to grey, oxidation staining (TILL); cohesive, w<PL, stiff to hard		183.05													
				0.25	1B	SS	12	ND									
1					2	SS	20	ND									
2																	
		- Silt seam encountered at a depth of about 2.1 m below ground surface															
									</								

DEPTH SCALE

1 : 50



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CHECKED: EM

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PROJECT: 1792964

LOCATION: N 4816437.77; E 601419.36

RECORD OF BOREHOLE: BH18-07

SHEET 1 OF 1

BORING DATE: June 22, 2018

DATUM: Geodetic

SPT/DCPT HAMMER: MASS, 64kg; DROP, 760mm

DRILL RIG: NARL M5

HAMMER TYPE: AUTOMATIC

DEPTH SCALE METRES	BORING METHOD	SOIL PROFILE		SAMPLES		HEADSPACE COMBUSTIBLE VAPOUR CONCENTRATIONS [PPM] ⊕				HYDRAULIC CONDUCTIVITY, k, cm/s				ADDITIONAL LAB. TESTING	PIEZOMETER OR STANDPIPE INSTALLATION		
		DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	NUMBER	TYPE	BLOWS/0.3m	HEADSPACE ORGANIC VAPOUR CONCENTRATIONS [PPM] □				WATER CONTENT PERCENT					
								ND = Not Detected				Wp — W — Wi					
								100	200	300	400						
								100	200	300	400						
0		GROUND SURFACE		185.76													
		TOPSOIL (250 mm)		0.00	1A												
		(CL) SILTY CLAY, trace to some sand, trace to some gravel, some shale fragments; mottled brown to brown to grey, with oxidation staining (TILL); cohesive, w<PL to w~PL, stiff to hard		185.51													
			0.25	1B		12	ND										
1																	
						2	SS	46	ND								
2																	
						3	SS	41	ND								
3																	
					4	SS	52	ND									
4																	
					5	SS	51	ND									
5																	
					6	SS	20	ND									
6																	
					7	SS	20	ND									
7		END OF BOREHOLE		179.05													
				6.71													
7		NOTES:															
8		1. Borehole dry upon completion of drilling.															
		2. Groundwater level measured in monitoring well at a depth of 4.3 m below ground surface (Elev. 181.2 m) on July 19/18.															
9																	
10																	

DEPTH SCALE

1 : 50



LOGGED: CL

CHECKED: EM

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PROJECT: 1792964

LOCATION: N 4816449.49; E 601484.81

RECORD OF BOREHOLE: BH18-08

SHEET 1 OF 1

BORING DATE: June 22, 2018

DATUM: Geodetic

SPT/DCPT HAMMER: MASS, 64kg; DROP, 760mm

DRILL RIG: NARL M5

HAMMER TYPE: AUTOMATIC

DEPTH SCALE METRES	BORING METHOD	SOIL PROFILE		SAMPLES		HEADSPACE COMBUSTIBLE VAPOUR CONCENTRATIONS [PPM] ⊕				HYDRAULIC CONDUCTIVITY, k, cm/s				ADDITIONAL LAB. TESTING	PIEZOMETER OR STANDPIPE INSTALLATION		
		DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	NUMBER	TYPE	BLOWS/0.3m	HEADSPACE ORGANIC VAPOUR CONCENTRATIONS [PPM] □				WATER CONTENT PERCENT					
								ND = Not Detected				Wp — W — Wi					
								100	200	300	400						
								100	200	300	400						
								10	20	30	40						
0		GROUND SURFACE		187.58													
	Power Auger 153 mm O.D. Solid Stem Augers	FILL - (SM-GP) SILTY SAND and GRAVEL; brown; non-cohesive, moist, compact		0.00	1A	SS	20	ND									
				187.07	1B												
		FILL - (CL) SILTY CLAY, some sand, trace gravel; brown to grey; cohesive, w<PL, firm		0.51	2	SS	8	ND									
1																	
		(CL) SILTY CLAY, trace to some sand, trace to some gravel, trace shale fragments; brown to grey (TILL); cohesive, w<PL, very stiff to hard		1.45	3	SS	23	ND									
2																	
						4	SS	74	ND								
3																	
						5	SS	64	ND								
4																	
					6	SS	58	ND									
5																	
					7	SS	24	ND									
6																	
				180.87													
7		END OF BOREHOLE		6.71													
		NOTES:															
		1. Borehole dry upon completion of drilling.															
		2. Groundwater level measured in monitoring well at a depth of 3.6 m below ground surface (Elev. 184.0 m) on July 24/18.															
8																	
9																	
10																	

DEPTH SCALE

1 : 50



LOGGED: CL

CHECKED: EM

GTA-BHS 001 S:\CLIENTS\KLM PLANNING PARTNERS\ON OAKVILLE 40.64 86 BURNHAMTHORPE RD E\02 DATA\GINT\BURNHAMTHORPE-RD-E.GPJ GAL-MIS.GDT 1/15/25

PROJECT: 1792964
LOCATION: N 4816635.44; E 601516.37

RECORD OF BOREHOLE: BH18-09

SHEET 1 OF 1
DATUM: Geodetic

BORING DATE: June 21, 2018

SPT/DCPT HAMMER: MASS, 64kg; DROP, 760mm

DRILL RIG: NARL M5

HAMMER TYPE: AUTOMATIC

DEPTH SCALE METRES	BORING METHOD	SOIL PROFILE		SAMPLES		HEADSPACE COMBUSTIBLE VAPOUR CONCENTRATIONS [PPM] ⊕		HYDRAULIC CONDUCTIVITY, k, cm/s				ADDITIONAL LAB. TESTING	PIEZOMETER OR STANDPIPE INSTALLATION
		DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	NUMBER	TYPE	BLOWS/0.3m	HEADSPACE ORGANIC VAPOUR CONCENTRATIONS [PPM] □		WATER CONTENT PERCENT			
								ND = Not Detected		Wp	W		
								100	200	300	400		
0		GROUND SURFACE		189.91									
		TOPSOIL (180 mm)		0.00 189.73	1A								
		(CL) SILTY CLAY, trace to some sand, trace to some gravel, some shale fragments; mottled brown and grey (TILL); cohesive, w<PL to w~PL, very stiff to hard		0.18	1B	SS	22	ND					
						2	SS	20	ND				
1													
						3	SS	28	ND				
2													
	</												

DEPTH SCALE

1 : 50



LOGGED: CL

CHECKED: EM

GTA-BHS 001 S:\CLIENTS\KLM PLANNING PARTNERS\ON OAKVILLE 40.64 86 BURNHAMTHORPE RD E\02 DATA\GINT\BURNHAMTHORPE-RD-E.GPJ GAL-MIS.GDT 1/15/25

PROJECT: 1792964
LOCATION: N 4816537.57; E 601437.16

RECORD OF BOREHOLE: BH18-10

SHEET 1 OF 1
DATUM: Geodetic

BORING DATE: June 22, 2018

SPT/DCPT HAMMER: MASS, 64kg; DROP, 760mm

DRILL RIG: NARL M5

HAMMER TYPE: AUTOMATIC

DEPTH SCALE METRES	BORING METHOD	SOIL PROFILE		SAMPLES		HEADSPACE COMBUSTIBLE VAPOUR CONCENTRATIONS [PPM] ⊕				HYDRAULIC CONDUCTIVITY, k, cm/s				ADDITIONAL LAB. TESTING	PIEZOMETER OR STANDPIPE INSTALLATION			
		DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	NUMBER	TYPE	BLOWS/0.3m	ND = Not Detected				10 ⁻⁶ 10 ⁻⁵ 10 ⁻⁴ 10 ⁻³						
								HEADSPACE ORGANIC VAPOUR CONCENTRATIONS [PPM] □				WATER CONTENT PERCENT						
								ND = Not Detected				Wp ——— W ——— WI						
							100	200	300	400	10	20	30	40				
0		GROUND SURFACE		189.28														
	Power Auger 153 mm O.D. Solid Stem Augers	TOPSOIL (280 mm)		0.00														
				189.00														
		(CL) SILTY CLAY, trace to some sand, trace to some gravel, some shale and limestone fragments; brown to mottled brown to grey (TILL); cohesive, w<PL to w~PL, very stiff to hard		0.28	1	SS	9											
1					2	SS	24	⊕	ND									
					3	SS	49	⊕	ND									
2																		
				4	SS	31	⊕	ND										
3																		
4																		
5																		
6																		
7																		
8																		
9																		
10																		

PROJECT: 1792964

LOCATION: N 4816559.99; E 601506.88

RECORD OF BOREHOLE: BH18-11

SHEET 1 OF 1

BORING DATE: June 21, 2018

DATUM: Geodetic

SPT/DCPT HAMMER: MASS, 64kg; DROP, 760mm

DRILL RIG: NARL M5

HAMMER TYPE: AUTOMATIC

DEPTH SCALE METRES	BORING METHOD	SOIL PROFILE		SAMPLES		HEADSPACE COMBUSTIBLE VAPOUR CONCENTRATIONS [PPM] ⊕				HYDRAULIC CONDUCTIVITY, k, cm/s				ADDITIONAL LAB. TESTING	PIEZOMETER OR STANDPIPE INSTALLATION			
		DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	NUMBER	TYPE	BLOWS/0.3m	ND = Not Detected				10 ⁻⁶ 10 ⁻⁵ 10 ⁻⁴ 10 ⁻³						
								HEADSPACE ORGANIC VAPOUR CONCENTRATIONS [PPM] □				WATER CONTENT PERCENT Wp ——— W ——— WI						
								100	200	300	400			10	20	30	40	
0		GROUND SURFACE		188.07														
	Power Auger 153 mm O.D. Solid Stem Augers	TOPSOIL (200 mm)		0.00 187.87	1A													
		(CL) SILTY CLAY, trace to some sand, trace to some gravel, some shale fragments; mottled brown to grey (TILL), oxidation staining; cohesive, w<PL, stiff to hard		0.20	1B	SS	10											
				2	SS	23	ND											
1																		
				3	SS	30	ND											
2																		
				4	SS	61	ND											
3																		
		5	SS	50	ND													
4																		
5					6	SS	32	ND										
6																		
					7	SS	24	ND										
7		END OF BOREHOLE		181.36 6.71														
		NOTE: 1. Borehole dry upon completion of drilling.																
8																		
9																		
10																		

DEPTH SCALE

1 : 50



LOGGED: CL

CHECKED: EM

GTA-BHS 001 S:\CLIENTS\KLM PLANNING PARTNERS\ON OAKVILLE 40.64 88 BURNHAMTHORPE RD E\02 DATA\GINT\BURNHAMTHORPE-RD-E.GPJ GAL-MIS.GDT 1/15/25

PROJECT: 1792964
LOCATION: N 4816546.07; E 601585.69

RECORD OF BOREHOLE: BH18-12

SHEET 1 OF 1
DATUM: Geodetic

BORING DATE: June 21, 2018

SPT/DCPT HAMMER: MASS, 64kg; DROP, 760mm

DRILL RIG: NARL M5

HAMMER TYPE: AUTOMATIC

DEPTH SCALE METRES	BORING METHOD	SOIL PROFILE			SAMPLES		HEADSPACE COMBUSTIBLE VAPOUR CONCENTRATIONS [PPM] ⊕				HYDRAULIC CONDUCTIVITY, k, cm/s				ADDITIONAL LAB. TESTING	PIEZOMETER OR STANDPIPE INSTALLATION			
		DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	NUMBER	TYPE	BLOWS/0.3m	ND = Not Detected				10 ⁻⁶ 10 ⁻⁵ 10 ⁻⁴ 10 ⁻³							
								HEADSPACE ORGANIC VAPOUR CONCENTRATIONS [PPM] □				WATER CONTENT PERCENT							
								ND = Not Detected				Wp — W — Wi							
								100	200	300	400			10	20	30	40		
0		GROUND SURFACE		187.55															
		TOPSOIL (150 mm)		0.00	1A														
		(CL) SILTY CLAY, trace to some sand, trace to some gravel, some shale fragments; mottled brown to grey (TILL); cohesive, w<PL, very stiff to hard		0.15	1B	SS	10	ND											
1						2	SS	29	ND										
						3	SS	30	ND										
2																			
						4	SS	38	ND										
					5	SS	42	ND											
3	Power Auger 153 mm O.D. Solid Stem Augers																		
4																			
						6	SS	29	ND										
5																			
					7	SS	22	ND											
6																			
7		END OF BOREHOLE		180.84															
				6.71															
		NOTE:																	
		1. Borehole dry upon completion of drilling.																	
8																			
9																			
10																			

DEPTH SCALE

1 : 50



LOGGED: CL

CHECKED: EM

GTA-BHS 001 S:\CLIENTS\KLM PLANNING PARTNERS\ON OAKVILLE 40.64 86 BURNHAMTHORPE RD E\02 DATA\GINT\BURNHAMTHORPE-RD-E.GPJ GAL-MIS.GDT 1/15/25

PROJECT: CA0040928.5498
LOCATION: N 4816434.26; E 601387.63

RECORD OF BOREHOLE: BH24-1

SHEET 1 OF 1
DATUM: Geodetic

SPT/DCPT HAMMER: MASS, 64kg; DROP, 1524mm

BORING DATE: December 9, 2024

DRILL RIG: 7822 Geoprobe (Strata Drilling Group)

HAMMER TYPE: AUTOMATIC

DEPTH SCALE METRES	BORING METHOD	SOIL PROFILE			SAMPLES				HEADSPACE COMBUSTIBLE VAPOUR CONCENTRATIONS [PPM] ⊕				HYDRAULIC CONDUCTIVITY, k, cm/s				ADDITIONAL LAB. TESTING	PIEZOMETER OR STANDPIPE INSTALLATION	
		DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	NUMBER	TYPE	BLOWS/0.3m	ND = Not Detected				10 ⁻⁶ 10 ⁻⁵ 10 ⁻⁴ 10 ⁻³							
								HEADSPACE ORGANIC VAPOUR CONCENTRATIONS [PPM] □				WATER CONTENT PERCENT							
								ND = Not Detected				Wp ———— W ———— WI							
								100	200	300	400			10	20	30	40		
0	Direct Push Solid Stem Auger	GROUND SURFACE		188.38															
		(CL) SILTY CLAY, trace gravel; brown; cohesive, w<PL		0.00	1	DO	- 63 ND												
1					2	DO	- 63 ND												
		- Light brown to orange staining from 1.52 to 2.29 mbgs			3	DO	- 63 ND												
2					4	DO	- 63 ND												
					5	DO	- 63 ND												
3		(CL) SILTY CLAY, trace gravel; grey; cohesive, w~PL		185.33	3.05	6	DO	- 63 ND											
		- Light brown to orange staining from 3.81 to 4.57 mbgs			7	DO	- 63 ND												
4				8	DO	- 63 ND													
5																			
6		END OF BOREHOLE		182.28															
		Note(s): 1. Water encountered at a depth of 3.66 mbgs in the open borehole. 2. Monitoring well was dry at the time of monitoring on December 19, 2024. 3. Record of borehole not prepared for geotechnical purposes.		6.10															
7																			
8																			
9																			
10																			
11																			
12																			

DEPTH SCALE

1 : 60



LOGGED: Mohammad

CHECKED: BD

GTA-BHS 001 S:\CLIENTS\CROSSTRAIL ESTATES\OAKVILLE 40 64 AND 86 BURNAMTHORPE RD EAST\02 DATA\INT40-86 BURNAMTHORPE ROAD EAST.GPJ GAL-MIS.GDT 1/16/25

PROJECT: CA0040928.5498
LOCATION: N 4816489.51; E 601465.34

RECORD OF BOREHOLE: BH24-2

SHEET 1 OF 1
DATUM: Geodetic

BORING DATE: December 9 and 10, 2024

SPT/DCPT HAMMER: MASS, 64kg; DROP, 1524mm

DRILL RIG: 7822 Geoprobe (Strata Drilling Group)

HAMMER TYPE: AUTOMATIC

GTA-BHS 001 S:\CLIENTS\CROSSTRAIL ESTATES\OAKVILLE 40 64 AND 86 BURNAMTHORPE RD EAST\02 DATA\INT40-86 BURNAMTHORPE ROAD EAST.GPJ GAL-MIS.GDT 1/16/25

DEPTH SCALE METRES	BORING METHOD	SOIL PROFILE			SAMPLES		HEADSPACE COMBUSTIBLE VAPOUR CONCENTRATIONS [PPM] ⊕ ND = Not Detected				HYDRAULIC CONDUCTIVITY, k, cm/s				ADDITIONAL LAB. TESTING	PIEZOMETER OR STANDPIPE INSTALLATION	
		DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	NUMBER	TYPE	BLOWS/0.3m	HEADSPACE ORGANIC VAPOUR CONCENTRATIONS [PPM] □ ND = Not Detected				WATER CONTENT PERCENT					
								100	200	300	400	Wp	W	Wi			10 ⁻⁶
								100	200	300	400						
0	Direct Push Solid Stem Auger	GROUND SURFACE		188.41													
		(CL) SILTY CLAY; brown; cohesive, w<PL		0.00	1	DO	-	ND									
1		- Trace gravel present from a depth of 0.76 mbgs			2	DO	-	ND									
2					3	DO	-	ND									
		- Becomes grey from a depth of 2.29 mbgs			4	DO	-	ND									
3					5	DO	-	ND									
		- Light brown to orange staining from 3.05 - 4.57 mbgs															
4		(CL) SILTY CLAY, trace gravel; grey; cohesive, w~PL		184.60 3.81	6	DO	-	ND									
5					7	DO	-	ND									
		(CL) SILTY CLAY, trace gravel; grey; cohesive, w~PL		183.08 5.33	8	DO	-	ND									
6					9	DO	-	ND									
7			- Light brown to orange staining from 6.86 - 7.62 mbgs		10	DO	-	ND									
8					11	DO	-	ND									
9					12	DO	-	ND									
10		- Trace presence of crushed stones from 9.14 mbgs		13	DO	-	ND										
	- Becomes brown from 9.91 mbgs			14	DO	-	ND										
11		END OF BOREHOLE		177.74 10.67													
12		Note(s): 1. Borehole was dry upon completion. 2. Water level in monitoring well measured at a depth of 4.01 mbgs on December 19, 2024. 3. Record of borehole not prepared for geotechnical purposes.															

Bentonite

Silica sand

50 mm Diam. PVC
#10 Slot Screen

DEPTH SCALE

1 : 60



LOGGED: Mohammad

CHECKED: BD

PROJECT: CA0040928.5498
LOCATION: N 4816554.96; E 601490.45

RECORD OF BOREHOLE: BH24-3

SHEET 1 OF 1
DATUM: Geodetic

SPT/DCPT HAMMER: MASS, 64kg; DROP, 1524mm

BORING DATE: December 9, 2024

DRILL RIG: 7822 Geoprobe (Strata Drilling Group)

HAMMER TYPE: AUTOMATIC

GTA-BHS 001 S:\CLIENTS\CROSSTRAIL ESTATES\OAKVILLE 40 64 AND 86 BURNAMTHORPE RD EAST\02 DATA\INT40-86 BURNAMTHORPE ROAD EAST.GPJ GAL-MIS.GDT 1/16/25

DEPTH SCALE METRES	BORING METHOD	SOIL PROFILE		SAMPLES		HEADSPACE COMBUSTIBLE VAPOUR CONCENTRATIONS [PPM] ⊕ <i>ND = Not Detected</i>				HYDRAULIC CONDUCTIVITY, k, cm/s				ADDITIONAL LAB. TESTING	PIEZOMETER OR STANDPIPE INSTALLATION						
		DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	NUMBER	TYPE	BLOWS/0.3m	HEADSPACE ORGANIC VAPOUR CONCENTRATIONS [PPM] □ <i>ND = Not Detected</i>				WATER CONTENT PERCENT									
								100	200	300	400	Wp	W			Wi	10 ⁻⁶	10 ⁻⁵	10 ⁻⁴	10 ⁻³	
0		GROUND SURFACE		189.21 0.00																	
	Direct Push Solid Stem Auger	(CL) SILTY CLAY; brown; cohesive, w<PL			1	DO	- 63	<i>ND</i>							Bentonite						
				2	DO	- 63	<i>ND</i>														
				3	DO	- 63			<i>ND</i>												
				4	DO	- 63				<i>ND</i>											
				5	DO	- 63					<i>ND</i>										
				6	DO	- 63						<i>ND</i>									
		(CL) SILTY CLAY; grey; cohesive, w~PL		184.64 4.57	7	DO		- 63					<i>ND</i>								50 mm Diam. PVC #10 Slot Screen
					8	DO	- 63														
6		END OF BOREHOLE		183.11 6.10																	
7		Note(s): 1. Water encountered at a depth of 4.57 mbgs in the open borehole. 2. Water level in monitoring well measured at a depth of 5.40 mbgs on December 19, 2024. 3. Record of borehole not prepared for geotechnical purposes.																			
8																					
9																					
10																					
11																					
12																					

Bentonite

Silica sand

50 mm Diam. PVC
#10 Slot Screen

DEPTH SCALE

1 : 60



LOGGED: Mohammad

CHECKED: BD

PROJECT: CA0040928.5498
LOCATION: N 4816423.62; E 601525.11

RECORD OF BOREHOLE: BH24-4

SHEET 1 OF 1
DATUM: Geodetic

SPT/DCPT HAMMER: MASS, 64kg; DROP, 1524mm

BORING DATE: December 10, 2024

DRILL RIG: 7822 Geoprobe (Strata Drilling Group)

HAMMER TYPE: AUTOMATIC

GTA-BHS 001 S:\CLIENTS\CROSSTRAIL ESTATES\OAKVILLE 40 64 AND 86 BURNAMTHORPE RD EAST\02 DATA\INT40-86 BURNAMTHORPE ROAD EAST.GPJ GAL-MIS.GDT 1/16/25

DEPTH SCALE METRES	BORING METHOD	SOIL PROFILE		SAMPLES			HEADSPACE COMBUSTIBLE VAPOUR CONCENTRATIONS [PPM] ⊕ <i>ND = Not Detected</i>				HYDRAULIC CONDUCTIVITY, k, cm/s				ADDITIONAL LAB. TESTING	PIEZOMETER OR STANDPIPE INSTALLATION	
		DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	NUMBER	TYPE	BLOWS/0.3m	HEADSPACE ORGANIC VAPOUR CONCENTRATIONS [PPM] □ <i>ND = Not Detected</i>				WATER CONTENT PERCENT					
								100	200	300	400	Wp	W	Wi			10 ⁻⁶
0		GROUND SURFACE		185.76 0.00													
	Direct Push Solid Stem Auger	(CL) SILTY CLAY, trace gravel; brown; cohesive, w<PL			1	DO	-  <i>ND</i>										
		- Light brown to orange staining from 0.76 - 1.52 mbgs			2	DO	-  <i>ND</i>										
		- Presence of trace crushed stones from 1.52 - 2.29 mbgs			3	DO	-  <i>ND</i>										
		- Light brown to orange staining from 2.29 - 3.81 mbgs			4	DO	-  <i>ND</i>										
					5	DO	-  <i>ND</i>										
		- Becomes grey from 3.81 mbgs			6	DO	-  <i>ND</i>										
					7	DO	-  <i>ND</i>										
					8	DO	-  <i>ND</i>										
6		END OF BOREHOLE		179.66 6.10													
7		Note(s): 1. Borehole was dry upon completion. 2. Monitoring well was dry at the time of monitoring on December 19, 2024. 3. Record of borehole not prepared for geotechnical purposes.															
8																	
9																	
10																	
11																	
12																	

Bentonite

Silica sand

50 mm Diam. PVC
#10 Slot Screen

DEPTH SCALE

1 : 60



LOGGED: Mohammad

CHECKED: BD

LOCATION: N 4816397.30; E 601376.37

RECORD OF BOREHOLE: BH24-5

SHEET 1 OF 1

DATUM: Geodetic

BORING DATE: December 10, 2024

DRILL RIG: 7822 Geoprobe (Strata Drilling Group)

SPT/DCPT HAMMER: MASS, 64kg; DROP, 1524mm

HAMMER TYPE: AUTOMATIC

[illegible]

DEPTH SCALE

1 : 60



LOGGED: Mohammad

CHECKED: BD

GTA-BHS 001 S:\CLIENTS\CROSSTAIL_ESTATES\OAKVILLE 40 64 AND 86 BURNAMTHORPE RD EAST\02_DATA\GINT\40-86 BURNHAMTHORPE ROAD EAST.GPJ GAL-MIS.GDT 1/16/25

CHECKED: BD

PROJECT: CA0040928.5498
LOCATION: N 4816375.45; E 601410.65

RECORD OF BOREHOLE: BH24-7

SHEET 1 OF 1
DATUM: Geodetic

SPT/DCPT HAMMER: MASS, 64kg; DROP, 1524mm

BORING DATE: December 10, 2024

DRILL RIG: 7822 Geoprobe (Strata Drilling Group)

HAMMER TYPE: AUTOMATIC

GTA-BHS 001 S:\CLIENTS\CROSSTRAIL ESTATES\OAKVILLE 40 64 AND 86 BURNAMTHORPE RD EAST\02 DATA\GINT40-86 BURNAMTHORPE ROAD EAST.GPJ GAL-MIS.GDT 1/16/25

DEPTH SCALE METRES	BORING METHOD	SOIL PROFILE			SAMPLES			HEADSPACE COMBUSTIBLE VAPOUR CONCENTRATIONS [PPM] ⊕ <i>ND = Not Detected</i>				HYDRAULIC CONDUCTIVITY, k, cm/s				ADDITIONAL LAB. TESTING	PIEZOMETER OR STANDPIPE INSTALLATION
		DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	NUMBER	TYPE	BLOWS/0.3m	HEADSPACE ORGANIC VAPOUR CONCENTRATIONS [PPM] □ <i>ND = Not Detected</i>				WATER CONTENT PERCENT					
								100 200 300 400				10 ⁻⁶ 10 ⁻⁵ 10 ⁻⁴ 10 ⁻³ Wp ———— W ———— WI					
0	Direct Push Solid Stem Auger	GROUND SURFACE		190.31													
		(CL) SILTY CLAY, trace gravel; brown; cohesive, w<PL		0.00	1	DO	-	ND									
1		(CL) SILTY CLAY, trace gravel; brown; cohesive, w~PL		189.55 0.76	2	DO	-	ND									
		END OF BOREHOLE		188.79 1.52													
2		Notes: 1. Record of borehole not prepared for geotechnical purposes.															
3																	
4																	
5																	
6																	
7																	
8																	
9																	
10																	
11																	
12																	

DEPTH SCALE

1 : 60



LOGGED: Mohammad

CHECKED: BD

PROJECT: CA0040928.5498
LOCATION: N 4816410.68; E 601408.34

RECORD OF BOREHOLE: BH24-8

SHEET 1 OF 1
DATUM: Geodetic

SPT/DCPT HAMMER: MASS, 64kg; DROP, 1524mm

BORING DATE: December 10, 2024

DRILL RIG: 7822 Geoprobe (Strata Drilling Group)

HAMMER TYPE: AUTOMATIC

GTA-BHS 001 S:\CLIENTS\CROSSTRAIL ESTATES\OAKVILLE 40 64 AND 86 BURNAMTHORPE RD EAST\02 DATA\GINT40-86 BURNHAMTHORPE ROAD EAST.GPJ GAL-MIS.GDT 1/16/25

DEPTH SCALE METRES	BORING METHOD	SOIL PROFILE		SAMPLES		HEADSPACE COMBUSTIBLE VAPOUR CONCENTRATIONS [PPM] ⊕ ND = Not Detected		HYDRAULIC CONDUCTIVITY, k, cm/s		ADDITIONAL LAB. TESTING	PIEZOMETER OR STANDPIPE INSTALLATION								
		DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	NUMBER	TYPE	BLOWS/0.3m	HEADSPACE ORGANIC VAPOUR CONCENTRATIONS [PPM] □ ND = Not Detected				WATER CONTENT PERCENT							
												Wp — W — Wi							
0	Direct Push Solid Stem Auger	GROUND SURFACE		192.43															
		(CL) SILTY CLAY, trace gravel; brown; cohesive, w<PL		0.00	1	DO	-	ND											
1		- Light brown to orange staining from 0 - 0.76 mbgs			2	DO	-	ND											
2		END OF BOREHOLE		190.91															
		Notes: 1. Record of borehole not prepared for geotechnical purposes.		1.52															
3																			
4																			
5																			
6																			
7																			
8																			
9																			
10																			
11																			
12																			

DEPTH SCALE

1 : 60



LOGGED: Mohammad

CHECKED: BD

PROJECT: CA0040928.5498
LOCATION: N 4816307.13; E 601316.35

RECORD OF BOREHOLE: BH24-10

SHEET 1 OF 1
DATUM: Geodetic

SPT/DCPT HAMMER: MASS, 64kg; DROP, 1524mm

BORING DATE: December 10, 2024

DRILL RIG: 7822 Geoprobe (Strata Drilling Group)

HAMMER TYPE: AUTOMATIC

GTA-BHS 001 S:\CLIENTS\CROSSTRAIL ESTATES\OAKVILLE 40 64 AND 86 BURNAMTHORPE RD EAST\02 DATA\GINT40-86 BURNHAMTHORPE ROAD EAST.GPJ GAL-MIS.GDT 1/16/25

DEPTH SCALE METRES	BORING METHOD	SOIL PROFILE		SAMPLES			HEADSPACE COMBUSTIBLE VAPOUR CONCENTRATIONS [PPM] ⊕ <i>ND = Not Detected</i>				HYDRAULIC CONDUCTIVITY, k, cm/s				ADDITIONAL LAB. TESTING	PIEZOMETER OR STANDPIPE INSTALLATION	
		DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	NUMBER	TYPE	BLOWS/0.3m	HEADSPACE ORGANIC VAPOUR CONCENTRATIONS [PPM] □ <i>ND = Not Detected</i>				WATER CONTENT PERCENT					
								100	200	300	400	Wp	W	Wi			10 ⁻⁶
0	Direct Push Solid Stem Auger	GROUND SURFACE		185.22													
		(CL) SILTY CLAY, trace gravel; brown; cohesive, w<PL		0.00	1	DO	- 63 <i>ND</i>										
1		- Light brown to orange staining from 0 - 0.76 mbgs			2	DO	- 63 <i>ND</i>										
2		END OF BOREHOLE		183.70													
		Notes: 1. Record of borehole not prepared for geotechnical purposes.		1.52													
3																	
4																	
5																	
6																	
7																	
8																	
9																	
10																	
11																	
12																	

DEPTH SCALE

1 : 60



LOGGED: Mohammad

CHECKED: BD

PROJECT: CA0040928.5498
LOCATION: N 4816299.67; E 601329.93

RECORD OF BOREHOLE: BH24-11

SHEET 1 OF 1
DATUM: Geodetic

SPT/DCPT HAMMER: MASS, 64kg; DROP, 1524mm

BORING DATE: December 10, 2024

DRILL RIG: 7822 Geoprobe (Strata Drilling Group)

HAMMER TYPE: AUTOMATIC

GTA-BHS 001 S:\CLIENTS\CROSSTRAIL ESTATES\OAKVILLE 40 64 AND 86 BURNAMTHORPE RD EAST\02 DATA\GINT40-86 BURNHAMTHORPE ROAD EAST.GPJ GAL-MIS.GDT 1/16/25

DEPTH SCALE METRES	BORING METHOD	SOIL PROFILE			SAMPLES			HEADSPACE COMBUSTIBLE VAPOUR CONCENTRATIONS [PPM] ⊕ <i>ND = Not Detected</i>				HYDRAULIC CONDUCTIVITY, k, cm/s				ADDITIONAL LAB. TESTING	PIEZOMETER OR STANDPIPE INSTALLATION
		DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	NUMBER	TYPE	BLOWS/0.3m	HEADSPACE ORGANIC VAPOUR CONCENTRATIONS [PPM] □ <i>ND = Not Detected</i>				WATER CONTENT PERCENT					
								100	200	300	400	10 ⁻⁶	10 ⁻⁵	10 ⁻⁴	10 ⁻³		
								100	200	300	400	10	20	30	40		
0	Direct Push Solid Stem Auger	GROUND SURFACE		184.93													
		(CL) SILTY CLAY, trace gravel; brown; cohesive, w<PL		0.00	1	DO	-	ND									
					2	DO	-	ND									
1				183.41													
		END OF BOREHOLE		1.52													
2		Notes: 1. Record of borehole not prepared for geotechnical purposes.															
3																	
4																	
5																	
6																	
7																	
8																	
9																	
10																	
11																	
12																	

DEPTH SCALE

1 : 60



LOGGED: Mohammad

CHECKED: BD

PROJECT: CA0040928.5498
LOCATION: N 4816286.05; E 601345.16

RECORD OF BOREHOLE: BH24-12

SHEET 1 OF 1
DATUM: Geodetic

SPT/DCPT HAMMER: MASS, 64kg; DROP, 1524mm

BORING DATE: December 10, 2024

DRILL RIG: 7822 Geoprobe (Strata Drilling Group)

HAMMER TYPE: AUTOMATIC

GTA-BHS 001 S:\CLIENTS\CROSSTRAIL ESTATES\OAKVILLE 40 64 AND 86 BURNAMTHORPE RD EAST\02 DATA\GINT40-86 BURNHAMTHORPE ROAD EAST.GPJ GAL-MIS.GDT 1/16/25

DEPTH SCALE METRES	BORING METHOD	SOIL PROFILE			SAMPLES			HEADSPACE COMBUSTIBLE VAPOUR CONCENTRATIONS [PPM] ⊕ <i>ND = Not Detected</i>				HYDRAULIC CONDUCTIVITY, k, cm/s				ADDITIONAL LAB. TESTING	PIEZOMETER OR STANDPIPE INSTALLATION
		DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	NUMBER	TYPE	BLOWS/0.3m	HEADSPACE ORGANIC VAPOUR CONCENTRATIONS [PPM] □ <i>ND = Not Detected</i>				WATER CONTENT PERCENT					
								100	200	300	400	10 ⁻⁶	10 ⁻⁵	10 ⁻⁴	10 ⁻³		
								100	200	300	400	10	20	30	40		
0	Direct Push Solid Stem Auger	GROUND SURFACE		184.32													
		(CL) SILTY CLAY, trace gravel; brown; cohesive, w<PL		0.00	1	DO	-	ND									
1		- Tree branches present from 0.76 - 1.52 mbgs			2	DO	-	ND									
		END OF BOREHOLE		182.80													
2		Notes: 1. Record of borehole not prepared for geotechnical purposes.		1.52													
3																	
4																	
5																	
6																	
7																	
8																	
9																	
10																	
11																	
12																	

DEPTH SCALE

1 : 60



LOGGED: Mohammad

CHECKED: BD

PROJECT: CA0040928.5498
LOCATION: N 4816250.70; E 601375.23

RECORD OF BOREHOLE: BH24-13

SHEET 1 OF 1
DATUM: Geodetic

BORING DATE: December 10, 2024

SPT/DCPT HAMMER: MASS, 64kg; DROP, 1524mm

DRILL RIG: 7822 Geoprobe (Strata Drilling Group)

HAMMER TYPE: AUTOMATIC

GTA-BHS 001 S:\CLIENTS\CROSSTRAIL ESTATES\OAKVILLE 40 64 AND 86 BURNAMTHORPE RD EAST\02 DATA\GINT40-86 BURNAMTHORPE ROAD EAST.GPJ GAL-MIS.GDT 1/16/25

DEPTH SCALE METRES	BORING METHOD	SOIL PROFILE		SAMPLES			HEADSPACE COMBUSTIBLE VAPOUR CONCENTRATIONS [PPM] ⊕ <i>ND = Not Detected</i>				HYDRAULIC CONDUCTIVITY, k, cm/s				ADDITIONAL LAB. TESTING	PIEZOMETER OR STANDPIPE INSTALLATION	
		DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	NUMBER	TYPE	BLOWS/0.3m	HEADSPACE ORGANIC VAPOUR CONCENTRATIONS [PPM] □ <i>ND = Not Detected</i>				WATER CONTENT PERCENT					
												Wp — W — Wi					
0	Direct Push Solid Stem Auger	GROUND SURFACE		182.27				100	200	300	400	10 ⁻⁶	10 ⁻⁵	10 ⁻⁴	10 ⁻³		
		(CL) SILTY CLAY, trace gravel; brown, no odour, no staining; cohesive, w<PL		0.00	1	DO	-	ND									
1		(CL) SILTY CLAY, trace gravel; brown, no odour, no staining; cohesive, w<PL		181.51 0.76	2	DO	-	ND									
		END OF BOREHOLE		180.75 1.52													
2		Notes: 1. Record of borehole not prepared for geotechnical purposes.															
3																	
4																	
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7																	
8																	
9																	
10																	
11																	
12																	

DEPTH SCALE

1 : 60



LOGGED: Mohammad

CHECKED: BD

PROJECT: CA0040928.5498
LOCATION: N 4816226.20; E 601393.84

RECORD OF BOREHOLE: BH24-14

SHEET 1 OF 1
DATUM: Geodetic

SPT/DCPT HAMMER: MASS, 64kg; DROP, 1524mm

BORING DATE: December 10, 2024

DRILL RIG: 7822 Geoprobe (Strata Drilling Group)

HAMMER TYPE: AUTOMATIC

GTA-BHS 001 S:\CLIENTS\CROSSTRAIL ESTATES\OAKVILLE 40 64 AND 86 BURNAMTHORPE RD EAST\02 DATA\GINT40-86 BURNHAMTHORPE ROAD EAST.GPJ GAL-MIS.GDT 1/16/25

DEPTH SCALE METRES	BORING METHOD	SOIL PROFILE			SAMPLES			HEADSPACE COMBUSTIBLE VAPOUR CONCENTRATIONS [PPM] ⊕ <i>ND = Not Detected</i>				HYDRAULIC CONDUCTIVITY, k, cm/s				ADDITIONAL LAB. TESTING	PIEZOMETER OR STANDPIPE INSTALLATION
		DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	NUMBER	TYPE	BLOWS/0.3m	HEADSPACE ORGANIC VAPOUR CONCENTRATIONS [PPM] □ <i>ND = Not Detected</i>				WATER CONTENT PERCENT					
								100	200	300	400	10 ⁻⁶	10 ⁻⁵	10 ⁻⁴	10 ⁻³		
0	Direct Push Solid Stem Auger	GROUND SURFACE		180.51													
		(CL) SILTY CLAY, some gravel; brown, no odour, no staining; cohesive, w<PL		0.00	1	DO	-	ND									
1		(CL) SILTY CLAY, trace gravel; brown to red, no odour, no staining; cohesive, w<PL		179.75 0.76	2	DO	-	ND									
		END OF BOREHOLE		178.99 1.52													
2		Notes: 1. Record of borehole not prepared for geotechnical purposes.															
3																	
4																	
5																	
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7																	
8																	
9																	
10																	
11																	
12																	

DEPTH SCALE

1 : 60



LOGGED: Mohammad

CHECKED: BD

APPENDIX D

Certificates of Analysis

Your Project #: 1792964
Site Location: CROSS TRAILS
Your C.O.C. #: 670089-01-01

Attention: Prabhjot Bal

Golder Associates Ltd
6925 Century Ave
Suite 100
Mississauga, ON
CANADA L5N 7K2

Report Date: 2018/06/29
Report #: R5273306
Version: 1 - Final

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B8F4644

Received: 2018/06/22, 16:03

Sample Matrix: Soil
Samples Received: 4

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Reference
Methylnaphthalene Sum	4	N/A	2018/06/26	CAM SOP-00301	EPA 8270D m
Hot Water Extractable Boron	4	2018/06/25	2018/06/26	CAM SOP-00408	R153 Ana. Prot. 2011
Free (WAD) Cyanide	4	2018/06/25	2018/06/26	CAM SOP-00457	OMOE E3015 m
Conductivity	4	2018/06/27	2018/06/27	CAM SOP-00414	OMOE E3530 v1 m
Hexavalent Chromium in Soil by IC (1)	4	2018/06/25	2018/06/28	CAM SOP-00436	EPA 3060/7199 m
Petroleum Hydro. CCME F1 & BTEX in Soil (2)	4	N/A	2018/06/26	CAM SOP-00315	CCME PHC-CWS m
Petroleum Hydrocarbons F2-F4 in Soil (3)	4	2018/06/25	2018/06/26	CAM SOP-00316	CCME CWS m
Strong Acid Leachable Metals by ICPMS	4	2018/06/25	2018/06/27	CAM SOP-00447	EPA 6020B m
Moisture	4	N/A	2018/06/25	CAM SOP-00445	Carter 2nd ed 51.2 m
PAH Compounds in Soil by GC/MS (SIM)	4	2018/06/25	2018/06/26	CAM SOP-00318	EPA 8270D m
pH CaCl2 EXTRACT	4	2018/06/26	2018/06/26	CAM SOP-00413	EPA 9045 D m
Sodium Adsorption Ratio (SAR)	4	N/A	2018/06/28	CAM SOP-00102	EPA 6010C

Remarks:

Maxxam Analytics' laboratories are accredited to ISO/IEC 17025:2005 for specific parameters on scopes of accreditation. Unless otherwise noted, procedures used by Maxxam are based upon recognized Provincial, Federal or US method compendia such as CCME, MDDELCC, EPA, APHA.

All work recorded herein has been done in accordance with procedures and practices ordinarily exercised by professionals in Maxxam's profession using accepted testing methodologies, quality assurance and quality control procedures (except where otherwise agreed by the client and Maxxam in writing). All data is in statistical control and has met quality control and method performance criteria unless otherwise noted. All method blanks are reported; unless indicated otherwise, associated sample data are not blank corrected.

Maxxam Analytics' liability is limited to the actual cost of the requested analyses, unless otherwise agreed in writing. There is no other warranty expressed or implied. Maxxam has been retained to provide analysis of samples provided by the Client using the testing methodology referenced in this report. Interpretation and use of test results are the sole responsibility of the Client and are not within the scope of services provided by Maxxam, unless otherwise agreed in writing.

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

Results relate to samples tested.

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

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

Your Project #: 1792964
Site Location: CROSS TRAILS
Your C.O.C. #: 670089-01-01

Attention: Prabhjot Bal

Golder Associates Ltd
6925 Century Ave
Suite 100
Mississauga, ON
CANADA L5N 7K2

Report Date: 2018/06/29
Report #: R5273306
Version: 1 - Final

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B8F4644

Received: 2018/06/22, 16:03

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

- (1) Soils are reported on a dry weight basis unless otherwise specified.
- (2) No lab extraction date is given for F1BTEX & VOC samples that are field preserved with methanol. Extraction date is the date sampled unless otherwise stated.
- (3) All CCME PHC results met required criteria unless otherwise stated in the report. The CWS PHC methods employed by Maxxam conform to all prescribed elements of the reference method and performance based elements have been validated. All modifications have been validated and proven equivalent following "Alberta Environment's Interpretation of the Reference Method for the Canada-Wide Standard for Petroleum Hydrocarbons in Soil Validation of Performance-Based Alternative Methods September 2003". Documentation is available upon request. Modifications from Reference Method for the Canada-wide Standard for Petroleum Hydrocarbons in Soil-Tier 1 Method: F2/F3/F4 data reported using validated cold solvent extraction instead of Soxhlet extraction.

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.
Ema Gitej, Senior Project Manager
Email: EGitej@maxxam.ca
Phone# (905)817-5829

=====

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

O.REG 153 METALS & INORGANICS PKG (SOIL)

Maxxam ID			HAP890	HAP891	HAP892	HAP893		
Sampling Date			2018/06/22	2018/06/22	2018/06/22	2018/06/22		
COC Number			670089-01-01	670089-01-01	670089-01-01	670089-01-01		
	UNITS	Criteria	DUP5	BH18-10 SA3	BH18-8 SA3	BH18-7 SA5	RDL	QC Batch
Calculated Parameters								
Sodium Adsorption Ratio	N/A	5.0	0.71	1.5	0.34	0.68		5595768
Inorganics								
Conductivity	mS/cm	0.7	0.24	0.49	0.16	0.24	0.002	5600054
Moisture	%	-	10	11	11	9.3	1.0	5597292
Available (CaCl ₂) pH	pH	-	7.92	7.77	7.71	7.84		5597819
WAD Cyanide (Free)	ug/g	0.051	<0.01	<0.01	<0.01	<0.01	0.01	5597334
Chromium (VI)	ug/g	10	<0.2	<0.2	<0.2	<0.2	0.2	5597833
Metals								
Hot Water Ext. Boron (B)	ug/g	1.5	0.54	0.084	0.094	0.56	0.050	5597466
Acid Extractable Antimony (Sb)	ug/g	7.5	<0.20	0.21	0.23	<0.20	0.20	5597337
Acid Extractable Arsenic (As)	ug/g	18	4.2	5.1	4.6	3.4	1.0	5597337
Acid Extractable Barium (Ba)	ug/g	390	63	100	71	60	0.50	5597337
Acid Extractable Beryllium (Be)	ug/g	5	0.65	0.73	0.73	0.64	0.20	5597337
Acid Extractable Boron (B)	ug/g	120	12	11	11	12	5.0	5597337
Acid Extractable Cadmium (Cd)	ug/g	1.2	<0.10	0.14	0.12	0.11	0.10	5597337
Acid Extractable Chromium (Cr)	ug/g	160	20	20	20	20	1.0	5597337
Acid Extractable Cobalt (Co)	ug/g	22	11	13	12	11	0.10	5597337
Acid Extractable Copper (Cu)	ug/g	180	26	28	29	28	0.50	5597337
Acid Extractable Lead (Pb)	ug/g	120	13	12	12	9.8	1.0	5597337
Acid Extractable Molybdenum (Mo)	ug/g	6.9	<0.50	0.70	<0.50	<0.50	0.50	5597337
Acid Extractable Nickel (Ni)	ug/g	130	25	28	27	25	0.50	5597337
Acid Extractable Selenium (Se)	ug/g	2.4	<0.50	<0.50	<0.50	<0.50	0.50	5597337
Acid Extractable Silver (Ag)	ug/g	25	<0.20	<0.20	<0.20	<0.20	0.20	5597337
Acid Extractable Thallium (Tl)	ug/g	1	0.12	0.15	0.15	0.16	0.050	5597337
Acid Extractable Uranium (U)	ug/g	23	0.66	0.73	0.65	0.68	0.050	5597337
Acid Extractable Vanadium (V)	ug/g	86	26	29	30	26	5.0	5597337
Acid Extractable Zinc (Zn)	ug/g	340	64	69	69	63	5.0	5597337
Acid Extractable Mercury (Hg)	ug/g	1.8	<0.050	<0.050	<0.050	<0.050	0.050	5597337
RDL = Reportable Detection Limit								
QC Batch = Quality Control Batch								
Criteria: Ontario Reg. 153/04 (Amended April 15, 2011)								
Table 3: Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition								
Soil - Residential/Parkland/Institutional Property Use - Medium and Fine Textured Soil								

O.REG 153 PAHS (SOIL)

Maxxam ID			HAP890	HAP891	HAP892	HAP893		
Sampling Date			2018/06/22	2018/06/22	2018/06/22	2018/06/22		
COC Number			670089-01-01	670089-01-01	670089-01-01	670089-01-01		
	UNITS	Criteria	DUP5	BH18-10 SA3	BH18-8 SA3	BH18-7 SA5	RDL	QC Batch
Calculated Parameters								
Methylnaphthalene, 2-(1-)	ug/g	3.4	<0.0071	<0.0071	<0.0071	<0.0071	0.0071	5595845
Polyaromatic Hydrocarbons								
Acenaphthene	ug/g	58	<0.0050	<0.0050	<0.0050	<0.0050	0.0050	5597362
Acenaphthylene	ug/g	0.17	<0.0050	<0.0050	<0.0050	<0.0050	0.0050	5597362
Anthracene	ug/g	0.74	<0.0050	<0.0050	<0.0050	<0.0050	0.0050	5597362
Benzo(a)anthracene	ug/g	0.63	<0.0050	<0.0050	<0.0050	<0.0050	0.0050	5597362
Benzo(a)pyrene	ug/g	0.3	<0.0050	<0.0050	<0.0050	<0.0050	0.0050	5597362
Benzo(b/j)fluoranthene	ug/g	0.78	<0.0050	<0.0050	<0.0050	<0.0050	0.0050	5597362
Benzo(g,h,i)perylene	ug/g	7.8	<0.0050	<0.0050	<0.0050	<0.0050	0.0050	5597362
Benzo(k)fluoranthene	ug/g	0.78	<0.0050	<0.0050	<0.0050	<0.0050	0.0050	5597362
Chrysene	ug/g	7.8	0.0054	<0.0050	<0.0050	<0.0050	0.0050	5597362
Dibenz(a,h)anthracene	ug/g	0.1	<0.0050	<0.0050	<0.0050	<0.0050	0.0050	5597362
Fluoranthene	ug/g	0.69	<0.0050	<0.0050	<0.0050	<0.0050	0.0050	5597362
Fluorene	ug/g	69	<0.0050	<0.0050	<0.0050	<0.0050	0.0050	5597362
Indeno(1,2,3-cd)pyrene	ug/g	0.48	<0.0050	<0.0050	<0.0050	<0.0050	0.0050	5597362
1-Methylnaphthalene	ug/g	3.4	<0.0050	<0.0050	<0.0050	<0.0050	0.0050	5597362
2-Methylnaphthalene	ug/g	3.4	<0.0050	<0.0050	<0.0050	<0.0050	0.0050	5597362
Naphthalene	ug/g	0.75	<0.0050	<0.0050	<0.0050	<0.0050	0.0050	5597362
Phenanthrene	ug/g	7.8	0.016	<0.0050	<0.0050	0.0090	0.0050	5597362
Pyrene	ug/g	78	<0.0050	<0.0050	<0.0050	<0.0050	0.0050	5597362
Surrogate Recovery (%)								
D10-Anthracene	%	-	88	73	82	79		5597362
D14-Terphenyl (FS)	%	-	90	74	85	80		5597362
D8-Acenaphthylene	%	-	90	76	86	79		5597362
RDL = Reportable Detection Limit QC Batch = Quality Control Batch Criteria: Ontario Reg. 153/04 (Amended April 15, 2011) Table 3: Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition Soil - Residential/Parkland/Institutional Property Use - Medium and Fine Textured Soil								

O.REG 153 PETROLEUM HYDROCARBONS (SOIL)

Maxxam ID			HAP890	HAP891	HAP892	HAP893		
Sampling Date			2018/06/22	2018/06/22	2018/06/22	2018/06/22		
COC Number			670089-01-01	670089-01-01	670089-01-01	670089-01-01		
	UNITS	Criteria	DUP5	BH18-10 SA3	BH18-8 SA3	BH18-7 SA5	RDL	QC Batch
BTEX & F1 Hydrocarbons								
Benzene	ug/g	0.17	<0.020	<0.020	<0.020	<0.020	0.020	5596511
Toluene	ug/g	6	<0.020	<0.020	<0.020	<0.020	0.020	5596511
Ethylbenzene	ug/g	15	<0.020	<0.020	<0.020	<0.020	0.020	5596511
o-Xylene	ug/g	-	<0.020	<0.020	<0.020	<0.020	0.020	5596511
p+m-Xylene	ug/g	-	<0.040	<0.040	<0.040	<0.040	0.040	5596511
Total Xylenes	ug/g	25	<0.040	<0.040	<0.040	<0.040	0.040	5596511
F1 (C6-C10)	ug/g	65	<10	<10	<10	<10	10	5596511
F1 (C6-C10) - BTEX	ug/g	65	<10	<10	<10	<10	10	5596511
F2-F4 Hydrocarbons								
F2 (C10-C16 Hydrocarbons)	ug/g	150	<10	<10	<10	<10	10	5597348
F3 (C16-C34 Hydrocarbons)	ug/g	1300	<50	<50	<50	<50	50	5597348
F4 (C34-C50 Hydrocarbons)	ug/g	5600	<50	<50	<50	<50	50	5597348
Reached Baseline at C50	ug/g	-	Yes	Yes	Yes	Yes		5597348
Surrogate Recovery (%)								
1,4-Difluorobenzene	%	-	100	101	104	102		5596511
4-Bromofluorobenzene	%	-	88	92	89	95		5596511
D10-Ethylbenzene	%	-	88	84	89	91		5596511
D4-1,2-Dichloroethane	%	-	78	78	80	78		5596511
o-Terphenyl	%	-	96	93	96	90		5597348
RDL = Reportable Detection Limit QC Batch = Quality Control Batch Criteria: Ontario Reg. 153/04 (Amended April 15, 2011) Table 3: Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition Soil - Residential/Parkland/Institutional Property Use - Medium and Fine Textured Soil								

TEST SUMMARY

Maxxam ID: HAP890
Sample ID: DUP5
Matrix: Soil

Collected: 2018/06/22
Shipped:
Received: 2018/06/22

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	5595845	N/A	2018/06/26	Automated Statchk
Hot Water Extractable Boron	ICP	5597466	2018/06/25	2018/06/26	Suban Kanapathippilai
Free (WAD) Cyanide	TECH	5597334	2018/06/25	2018/06/26	Louise Harding
Conductivity	AT	5600054	2018/06/27	2018/06/27	Tahir Anwar
Hexavalent Chromium in Soil by IC	IC/SPEC	5597833	2018/06/25	2018/06/28	Rupinder Sihota
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	5596511	N/A	2018/06/26	Georgeta Rusu
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	5597348	2018/06/25	2018/06/26	Jeevaraj Jeevaratnam
Strong Acid Leachable Metals by ICPMS	ICP/MS	5597337	2018/06/25	2018/06/27	Daniel Teclu
Moisture	BAL	5597292	N/A	2018/06/25	Min Yang
PAH Compounds in Soil by GC/MS (SIM)	GC/MS	5597362	2018/06/25	2018/06/26	Mitesh Raj
pH CaCl2 EXTRACT	AT	5597819	2018/06/26	2018/06/26	Tahir Anwar
Sodium Adsorption Ratio (SAR)	CALC/MET	5595768	N/A	2018/06/28	Automated Statchk

Maxxam ID: HAP891
Sample ID: BH18-10 SA3
Matrix: Soil

Collected: 2018/06/22
Shipped:
Received: 2018/06/22

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	5595845	N/A	2018/06/26	Automated Statchk
Hot Water Extractable Boron	ICP	5597466	2018/06/25	2018/06/26	Suban Kanapathippilai
Free (WAD) Cyanide	TECH	5597334	2018/06/25	2018/06/26	Louise Harding
Conductivity	AT	5600054	2018/06/27	2018/06/27	Tahir Anwar
Hexavalent Chromium in Soil by IC	IC/SPEC	5597833	2018/06/25	2018/06/28	Rupinder Sihota
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	5596511	N/A	2018/06/26	Georgeta Rusu
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	5597348	2018/06/25	2018/06/26	Jeevaraj Jeevaratnam
Strong Acid Leachable Metals by ICPMS	ICP/MS	5597337	2018/06/25	2018/06/27	Daniel Teclu
Moisture	BAL	5597292	N/A	2018/06/25	Min Yang
PAH Compounds in Soil by GC/MS (SIM)	GC/MS	5597362	2018/06/25	2018/06/26	Mitesh Raj
pH CaCl2 EXTRACT	AT	5597819	2018/06/26	2018/06/26	Tahir Anwar
Sodium Adsorption Ratio (SAR)	CALC/MET	5595768	N/A	2018/06/28	Automated Statchk

Maxxam ID: HAP892
Sample ID: BH18-8 SA3
Matrix: Soil

Collected: 2018/06/22
Shipped:
Received: 2018/06/22

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	5595845	N/A	2018/06/26	Automated Statchk
Hot Water Extractable Boron	ICP	5597466	2018/06/25	2018/06/26	Suban Kanapathippilai
Free (WAD) Cyanide	TECH	5597334	2018/06/25	2018/06/26	Louise Harding
Conductivity	AT	5600054	2018/06/27	2018/06/27	Tahir Anwar
Hexavalent Chromium in Soil by IC	IC/SPEC	5597833	2018/06/25	2018/06/28	Rupinder Sihota
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	5596511	N/A	2018/06/26	Georgeta Rusu
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	5597348	2018/06/25	2018/06/26	Jeevaraj Jeevaratnam
Strong Acid Leachable Metals by ICPMS	ICP/MS	5597337	2018/06/25	2018/06/27	Daniel Teclu

TEST SUMMARY

Maxxam ID: HAP892
Sample ID: BH18-8 SA3
Matrix: Soil

Collected: 2018/06/22
Shipped:
Received: 2018/06/22

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Moisture	BAL	5597292	N/A	2018/06/25	Min Yang
PAH Compounds in Soil by GC/MS (SIM)	GC/MS	5597362	2018/06/25	2018/06/26	Mitesh Raj
pH CaCl ₂ EXTRACT	AT	5597819	2018/06/26	2018/06/26	Tahir Anwar
Sodium Adsorption Ratio (SAR)	CALC/MET	5595768	N/A	2018/06/28	Automated Statchk

Maxxam ID: HAP893
Sample ID: BH18-7 SA5
Matrix: Soil

Collected: 2018/06/22
Shipped:
Received: 2018/06/22

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	5595845	N/A	2018/06/26	Automated Statchk
Hot Water Extractable Boron	ICP	5597466	2018/06/25	2018/06/26	Suban Kanapathippilai
Free (WAD) Cyanide	TECH	5597334	2018/06/25	2018/06/26	Louise Harding
Conductivity	AT	5600054	2018/06/27	2018/06/27	Tahir Anwar
Hexavalent Chromium in Soil by IC	IC/SPEC	5597833	2018/06/25	2018/06/28	Rupinder Sihota
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	5596511	N/A	2018/06/26	Georgeta Rusu
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	5597348	2018/06/25	2018/06/26	Jeevaraj Jeevaratnam
Strong Acid Leachable Metals by ICPMS	ICP/MS	5597337	2018/06/25	2018/06/27	Daniel Teclu
Moisture	BAL	5597292	N/A	2018/06/25	Min Yang
PAH Compounds in Soil by GC/MS (SIM)	GC/MS	5597362	2018/06/25	2018/06/26	Mitesh Raj
pH CaCl ₂ EXTRACT	AT	5597819	2018/06/26	2018/06/26	Tahir Anwar
Sodium Adsorption Ratio (SAR)	CALC/MET	5595768	N/A	2018/06/28	Automated Statchk

GENERAL COMMENTS

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

Package 1	8.3°C
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Results relate only to the items tested.

QUALITY ASSURANCE REPORT

Golder Associates Ltd
Client Project #: 1792964
Site Location: CROSS TRAILS
Sampler Initials: CL

QC Batch	Parameter	Date	Matrix Spike		SPIKED BLANK		Method Blank		RPD	
			% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
5596511	1,4-Difluorobenzene	2018/06/25	104	60 - 140	102	60 - 140	105	%		
5596511	4-Bromofluorobenzene	2018/06/25	95	60 - 140	94	60 - 140	90	%		
5596511	D10-Ethylbenzene	2018/06/25	92	60 - 140	87	60 - 140	84	%		
5596511	D4-1,2-Dichloroethane	2018/06/25	82	60 - 140	80	60 - 140	83	%		
5597348	o-Terphenyl	2018/06/25	106	60 - 130	102	60 - 130	96	%		
5597362	D10-Anthracene	2018/06/26	73	50 - 130	77	50 - 130	81	%		
5597362	D14-Terphenyl (FS)	2018/06/26	74	50 - 130	77	50 - 130	81	%		
5597362	D8-Acenaphthylene	2018/06/26	76	50 - 130	79	50 - 130	84	%		
5596511	Benzene	2018/06/26	115	60 - 140	113	60 - 140	<0.020	ug/g	NC	50
5596511	Ethylbenzene	2018/06/26	100	60 - 140	98	60 - 140	<0.020	ug/g	NC	50
5596511	F1 (C6-C10) - BTEX	2018/06/26					<10	ug/g	NC	30
5596511	F1 (C6-C10)	2018/06/26	96	60 - 140	98	80 - 120	<10	ug/g	NC	30
5596511	o-Xylene	2018/06/26	98	60 - 140	98	60 - 140	<0.020	ug/g	NC	50
5596511	p+m-Xylene	2018/06/26	92	60 - 140	93	60 - 140	<0.040	ug/g	NC	50
5596511	Toluene	2018/06/26	94	60 - 140	93	60 - 140	<0.020	ug/g	NC	50
5596511	Total Xylenes	2018/06/26					<0.040	ug/g	NC	50
5597292	Moisture	2018/06/25							11	20
5597334	WAD Cyanide (Free)	2018/06/26	101	75 - 125	99	80 - 120	<0.01	ug/g	5.0	35
5597337	Acid Extractable Antimony (Sb)	2018/06/27	89	75 - 125	102	80 - 120	<0.20	ug/g	NC	30
5597337	Acid Extractable Arsenic (As)	2018/06/27	101	75 - 125	101	80 - 120	<1.0	ug/g	9.1	30
5597337	Acid Extractable Barium (Ba)	2018/06/27	NC	75 - 125	104	80 - 120	<0.50	ug/g	4.6	30
5597337	Acid Extractable Beryllium (Be)	2018/06/27	103	75 - 125	101	80 - 120	<0.20	ug/g	0.82	30
5597337	Acid Extractable Boron (B)	2018/06/27	91	75 - 125	98	80 - 120	<5.0	ug/g	3.4	30
5597337	Acid Extractable Cadmium (Cd)	2018/06/27	101	75 - 125	103	80 - 120	<0.10	ug/g	27	30
5597337	Acid Extractable Chromium (Cr)	2018/06/27	100	75 - 125	105	80 - 120	<1.0	ug/g	7.3	30
5597337	Acid Extractable Cobalt (Co)	2018/06/27	98	75 - 125	104	80 - 120	<0.10	ug/g	6.4	30
5597337	Acid Extractable Copper (Cu)	2018/06/27	NC	75 - 125	103	80 - 120	<0.50	ug/g	2.6	30
5597337	Acid Extractable Lead (Pb)	2018/06/27	99	75 - 125	103	80 - 120	<1.0	ug/g	0.63	30
5597337	Acid Extractable Mercury (Hg)	2018/06/27	98	75 - 125	102	80 - 120	<0.050	ug/g	NC	30
5597337	Acid Extractable Molybdenum (Mo)	2018/06/27	101	75 - 125	103	80 - 120	<0.50	ug/g	NC	30
5597337	Acid Extractable Nickel (Ni)	2018/06/27	NC	75 - 125	107	80 - 120	<0.50	ug/g	7.0	30

QUALITY ASSURANCE REPORT(CONT'D)

Golder Associates Ltd
Client Project #: 1792964
Site Location: CROSS TRAILS
Sampler Initials: CL

QC Batch	Parameter	Date	Matrix Spike		SPIKED BLANK		Method Blank		RPD	
			% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
5597337	Acid Extractable Selenium (Se)	2018/06/27	103	75 - 125	107	80 - 120	<0.50	ug/g	NC	30
5597337	Acid Extractable Silver (Ag)	2018/06/27	99	75 - 125	100	80 - 120	<0.20	ug/g	NC	30
5597337	Acid Extractable Thallium (Tl)	2018/06/27	99	75 - 125	103	80 - 120	<0.050	ug/g	1.1	30
5597337	Acid Extractable Uranium (U)	2018/06/27	101	75 - 125	101	80 - 120	<0.050	ug/g	11	30
5597337	Acid Extractable Vanadium (V)	2018/06/27	NC	75 - 125	103	80 - 120	<5.0	ug/g	8.4	30
5597337	Acid Extractable Zinc (Zn)	2018/06/27	NC	75 - 125	103	80 - 120	<5.0	ug/g	5.8	30
5597348	F2 (C10-C16 Hydrocarbons)	2018/06/26	99	50 - 130	93	80 - 120	<10	ug/g	NC	30
5597348	F3 (C16-C34 Hydrocarbons)	2018/06/26	103	50 - 130	95	80 - 120	<50	ug/g	NC	30
5597348	F4 (C34-C50 Hydrocarbons)	2018/06/26	98	50 - 130	92	80 - 120	<50	ug/g	NC	30
5597362	1-Methylnaphthalene	2018/06/26	96	50 - 130	92	50 - 130	<0.0050	ug/g	NC	40
5597362	2-Methylnaphthalene	2018/06/26	89	50 - 130	86	50 - 130	<0.0050	ug/g	NC	40
5597362	Acenaphthene	2018/06/26	91	50 - 130	86	50 - 130	<0.0050	ug/g	NC	40
5597362	Acenaphthylene	2018/06/26	99	50 - 130	93	50 - 130	<0.0050	ug/g	NC	40
5597362	Anthracene	2018/06/26	94	50 - 130	84	50 - 130	<0.0050	ug/g	NC	40
5597362	Benzo(a)anthracene	2018/06/26	103	50 - 130	98	50 - 130	<0.0050	ug/g	NC	40
5597362	Benzo(a)pyrene	2018/06/26	93	50 - 130	91	50 - 130	<0.0050	ug/g	NC	40
5597362	Benzo(b/j)fluoranthene	2018/06/26	86	50 - 130	88	50 - 130	<0.0050	ug/g	NC	40
5597362	Benzo(g,h,i)perylene	2018/06/26	91	50 - 130	85	50 - 130	<0.0050	ug/g	NC	40
5597362	Benzo(k)fluoranthene	2018/06/26	94	50 - 130	87	50 - 130	<0.0050	ug/g	NC	40
5597362	Chrysene	2018/06/26	101	50 - 130	92	50 - 130	<0.0050	ug/g	NC	40
5597362	Dibenz(a,h)anthracene	2018/06/26	102	50 - 130	95	50 - 130	<0.0050	ug/g	NC	40
5597362	Fluoranthene	2018/06/26	100	50 - 130	94	50 - 130	<0.0050	ug/g	NC	40
5597362	Fluorene	2018/06/26	91	50 - 130	87	50 - 130	<0.0050	ug/g	NC	40
5597362	Indeno(1,2,3-cd)pyrene	2018/06/26	101	50 - 130	95	50 - 130	<0.0050	ug/g	NC	40
5597362	Naphthalene	2018/06/26	86	50 - 130	83	50 - 130	<0.0050	ug/g	NC	40
5597362	Phenanthrene	2018/06/26	93	50 - 130	88	50 - 130	<0.0050	ug/g	NC	40
5597362	Pyrene	2018/06/26	93	50 - 130	88	50 - 130	<0.0050	ug/g	NC	40
5597466	Hot Water Ext. Boron (B)	2018/06/26	96	75 - 125	97	75 - 125	<0.050	ug/g	14	40
5597819	Available (CaCl2) pH	2018/06/26			101	97 - 103			0.72	N/A
5597833	Chromium (VI)	2018/06/28	9.7 (1)	70 - 130	90	80 - 120	<0.2	ug/g	NC	35

QUALITY ASSURANCE REPORT(CONT'D)

Golder Associates Ltd
Client Project #: 1792964
Site Location: CROSS TRAILS
Sampler Initials: CL

QC Batch	Parameter	Date	Matrix Spike		SPIKED BLANK		Method Blank		RPD	
			% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
5600054	Conductivity	2018/06/27			100	90 - 110	<0.002	mS/cm	1.9	10

N/A = Not Applicable

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

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

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

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

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

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

NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (absolute difference $\leq 2 \times \text{RDL}$).

(1) The matrix spike recovery was below the lower control limit. This may be due in part to the reducing environment of the sample. The sample was reanalyzed with the same results.

VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by the following individual(s).

Cristina Carriere

Cristina Carriere, Scientific Service Specialist

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.



Maxxam Analytics International Corporation o/a Maxxam Analytics
5740 Campobello Road, Mississauga, Ontario Canada L5N 2L8 Tel: (905) 817-5700 Toll-free 800-563-6266 Fax: (905) 817-5777 www.maxxam.ca

INVOICE TO:
Company Name: #1326 Golder Associates Ltd
Attention: Accounts Payable
Address: 6925 Century Ave Suite 100
Mississauga ON L5N 7K2
Tel: (905) 567-4444 Fax: (905) 567-6561
Email: AP_CustomerService@golder.com

REPORT TO:
Company Name:
Attention: Prabhjot Bal
Address:
Tel: (905) 567-4444 Ext: 1550 Fax: (905) 567-6561
Email: Prabhjot_Bal@golder.com

PROJECT INFORMATION:

Quotation #: B80683
P.O. #:
Project: 1792964
Project Name: CROSS TRAILS
Site #:
Sampled By: C. Linyard

22-Jun-18 16:03

Ema Gitej

B8F4644

PS4

ENV-1163

Page of

Only:

Bottle Order #:

670089

Project Manager:

Ema Gitej

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

Regulation 153 (2011)	Other Regulations	Special Instructions
☐ Table 1 ☐ Table 2 ☒ Table 3 ☐ Table	☒ Res/Park ☐ Ind/Comm ☐ Agri/Other ☒ Medium/Fine ☐ Coarse ☐ For RSC ☐ CCME ☐ Sanitary Sewer Bylaw ☐ Reg 558 ☐ Storm Sewer Bylaw ☐ MISA ☐ Municipality ☐ PWGO ☐ Other	

Include Criteria on Certificate of Analysis (Y/N)?

Y

Sample Barcode Label	Sample (Location) Identification	Date Sampled	Time Sampled	Matrix
1	DUP 5	JUNE 22/18		SOIL
2	BH18-10 SA3			SOIL
3	BH18-8 SA3			SOIL
4	BH18-7 SA5			SOIL
5				SOIL
6				SOIL
7				SOIL
8				SOIL
9				SOIL
10				SOIL

Field Filtered (please circle)
Metals / Hg / Cr / VI

ANALYSIS REQUESTED (PLEASE BE SPECIFIC)

☒ O Reg 153 PAHs	☒ O Reg 153 Petroleum Hydrocarbons BTEX+1+4	☒ O Reg 153 Metals & Inorganics Pkg	☐ O Reg 153 VOCs by HS	☐ O Reg 558 TCLP Inorganics Package	☐ O Reg 558 TCLP Benzene HS	☐ O Reg 558 TCLP PCBs	☐ Ignitability
--	---	---	---	--	--	--	---------------------------------------

Turnaround Time (TAT) Required:

Please provide advance notice for rush projects

Regular (Standard) TAT:

(will be applied if Rush TAT is not specified)

Standard TAT = 5-7 Working days for most tests.

Please note: Standard TAT for certain tests such as BOD and Dioxins/Furans are > 5 days - contact your Project Manager for details.

Job Specific Rush TAT (if applies to entire submission)

Date Required: Time Required:

Rush Confirmation Number:

(call lab for #)

of Bottles

Comments

* RELINQUISHED BY: (Signature/Print) Karl Linyard Date: (YY/MM/DD) JUNE 22/18 Time 1602
RECEIVED BY: (Signature/Print) [Signature] Date: (YY/MM/DD) 18/06/22 Time 16:03

jars used and not submitted

Laboratory Use Only

Time Sensitive

Temperature (°C) on Recei

Custody Seal

Present

Intact

Yes

No

White: Maxxa Yellow: Client

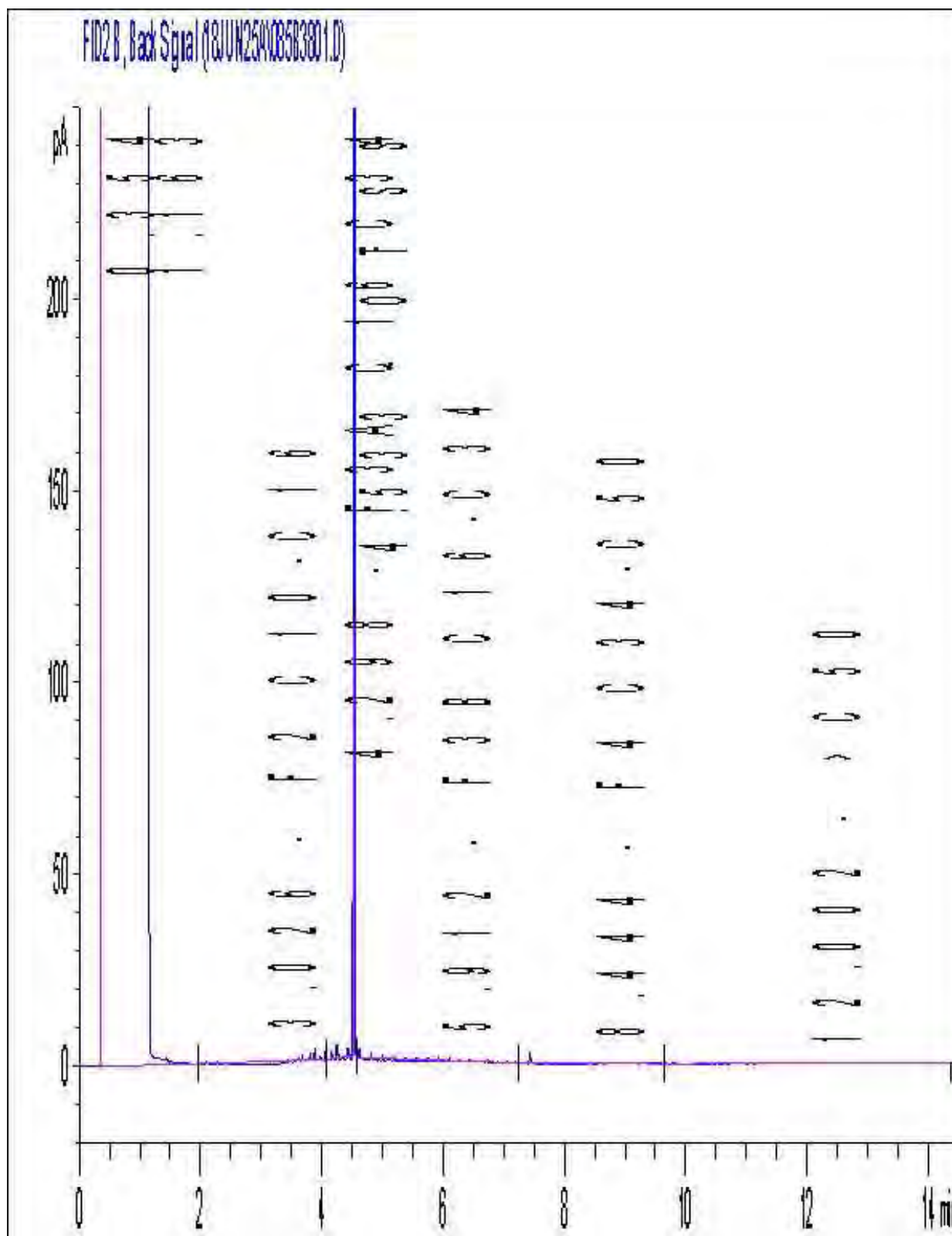
* UNLESS OTHERWISE AGREED TO IN WRITING, WORK SUBMITTED ON THIS CHAIN OF CUSTODY IS SUBJECT TO MAXXAM'S STANDARD TERMS AND CONDITIONS. SIGNING OF THIS CHAIN OF CUSTODY DOCUMENT IS ACKNOWLEDGMENT AND ACCEPTANCE OF OUR TERMS WHICH ARE AVAILABLE FOR VIEWING AT WWW.MAXXAM.CA/TERMS.

* IT IS THE RESPONSIBILITY OF THE RELINQUISHER TO ENSURE THE ACCURACY OF THE CHAIN OF CUSTODY RECORD. AN INCOMPLETE CHAIN OF CUSTODY MAY RESULT IN ANALYTICAL TAT DELAYS.

** SAMPLE CONTAINER, PRESERVATION, HOLD TIME AND PACKAGE INFORMATION CAN BE VIEWED AT HTTP://MAXXAM.CA/WP-CONTENT/UPLOADS/ONTARIO-COC.PDF.

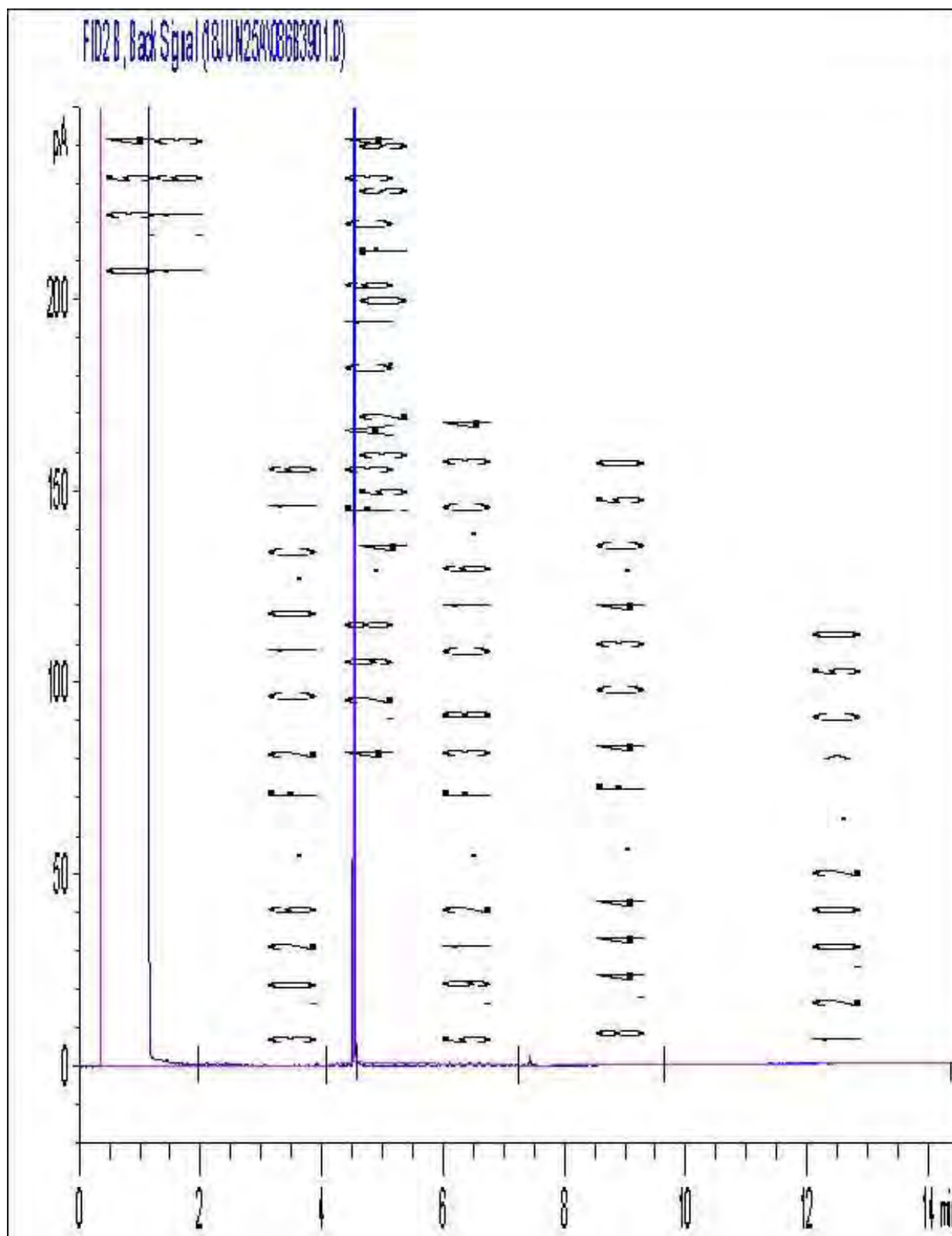
SAMPLES MUST BE KEPT COOL (< 10° C) FROM TIME OF SAMPLING UNTIL DELIVERY TO MAXXAM

Petroleum Hydrocarbons F2-F4 in Soil Chromatogram



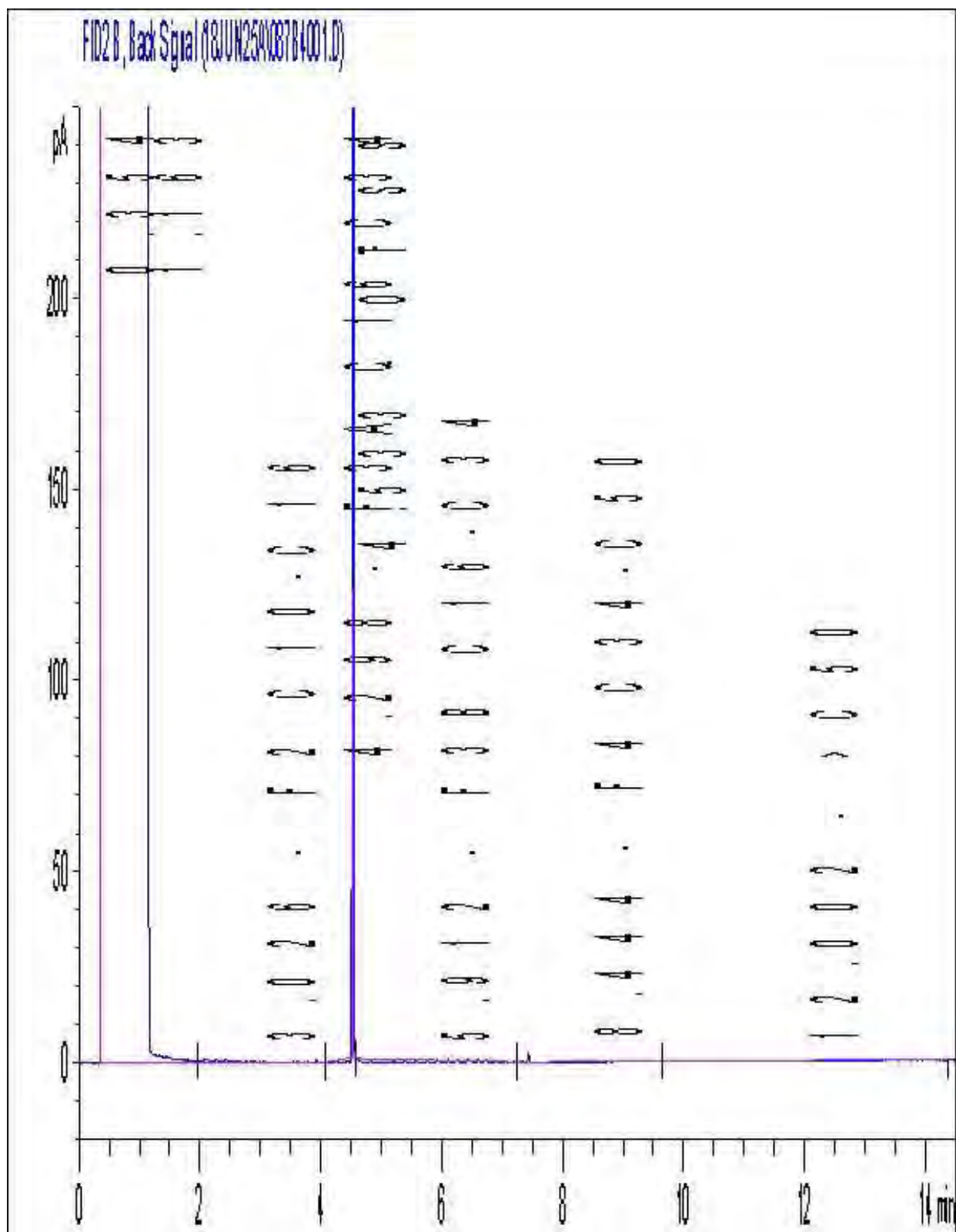
Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Petroleum Hydrocarbons F2-F4 in Soil Chromatogram



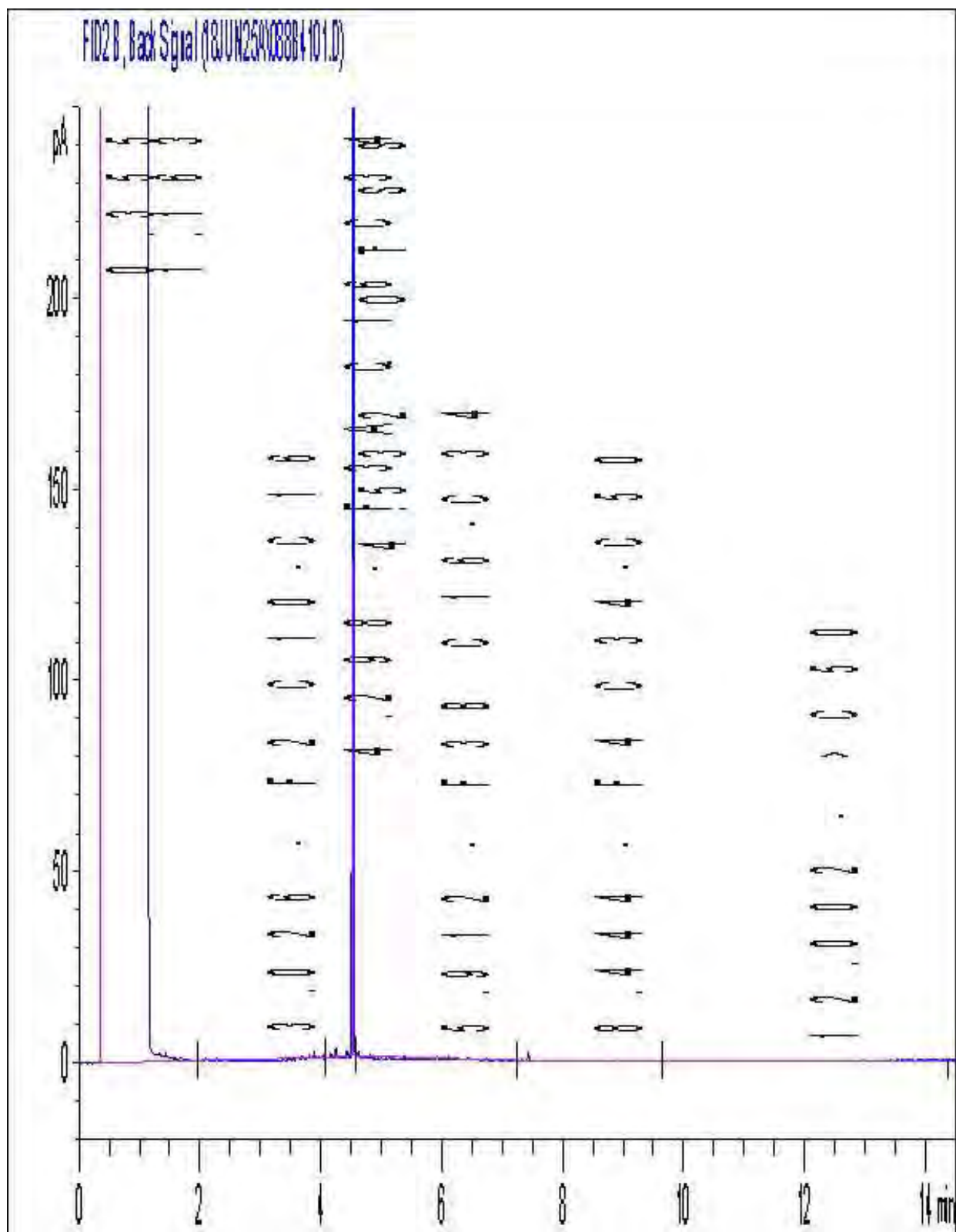
Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Petroleum Hydrocarbons F2-F4 in Soil Chromatogram



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

Petroleum Hydrocarbons F2-F4 in Soil Chromatogram



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

Your Project #: 1792964
Your C.O.C. #: 641804-14-01

Attention: Prabhjot Bal

Golder Associates Ltd
6925 Century Ave
Suite 100
Mississauga, ON
CANADA L5N 7K2

Report Date: 2018/06/29
Report #: R5273452
Version: 1 - Final

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B8F4648

Received: 2018/06/22, 14:00

Sample Matrix: Soil
Samples Received: 10

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Reference
Methylnaphthalene Sum	10	N/A	2018/06/27	CAM SOP-00301	EPA 8270D m
Hot Water Extractable Boron	10	2018/06/25	2018/06/26	CAM SOP-00408	R153 Ana. Prot. 2011
Free (WAD) Cyanide	10	2018/06/25	2018/06/26	CAM SOP-00457	OMOE E3015 m
Conductivity	10	2018/06/27	2018/06/27	CAM SOP-00414	OMOE E3530 v1 m
Hexavalent Chromium in Soil by IC (1)	10	2018/06/26	2018/06/27	CAM SOP-00436	EPA 3060/7199 m
Petroleum Hydro. CCME F1 & BTEX in Soil (2)	10	N/A	2018/06/26	CAM SOP-00315	CCME PHC-CWS m
Petroleum Hydrocarbons F2-F4 in Soil (3)	10	2018/06/26	2018/06/26	CAM SOP-00316	CCME CWS m
F4G (CCME Hydrocarbons Gravimetric)	1	2018/06/28	2018/06/28	CAM SOP-00316	CCME PHC-CWS m
Strong Acid Leachable Metals by ICPMS	10	2018/06/25	2018/06/27	CAM SOP-00447	EPA 6020B m
Moisture	10	N/A	2018/06/26	CAM SOP-00445	Carter 2nd ed 51.2 m
PAH Compounds in Soil by GC/MS (SIM)	5	2018/06/26	2018/06/26	CAM SOP-00318	EPA 8270D m
PAH Compounds in Soil by GC/MS (SIM)	5	2018/06/26	2018/06/27	CAM SOP-00318	EPA 8270D m
pH CaCl2 EXTRACT	10	2018/06/27	2018/06/27	CAM SOP-00413	EPA 9045 D m
Sodium Adsorption Ratio (SAR)	10	N/A	2018/06/28	CAM SOP-00102	EPA 6010C

Remarks:

Maxxam Analytics' laboratories are accredited to ISO/IEC 17025:2005 for specific parameters on scopes of accreditation. Unless otherwise noted, procedures used by Maxxam are based upon recognized Provincial, Federal or US method compendia such as CCME, MDDELCC, EPA, APHA.

All work recorded herein has been done in accordance with procedures and practices ordinarily exercised by professionals in Maxxam's profession using accepted testing methodologies, quality assurance and quality control procedures (except where otherwise agreed by the client and Maxxam in writing). All data is in statistical control and has met quality control and method performance criteria unless otherwise noted. All method blanks are reported; unless indicated otherwise, associated sample data are not blank corrected.

Maxxam Analytics' liability is limited to the actual cost of the requested analyses, unless otherwise agreed in writing. There is no other warranty expressed or implied. Maxxam has been retained to provide analysis of samples provided by the Client using the testing methodology referenced in this report. Interpretation and use of test results are the sole responsibility of the Client and are not within the scope of services provided by Maxxam, unless otherwise agreed in writing.

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

Results relate to samples tested.

Your Project #: 1792964
Your C.O.C. #: 641804-14-01

Attention: Prabhjot Bal

Golder Associates Ltd
6925 Century Ave
Suite 100
Mississauga, ON
CANADA L5N 7K2

Report Date: 2018/06/29
Report #: R5273452
Version: 1 - Final

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B8F4648

Received: 2018/06/22, 14:00

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

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

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

(1) Soils are reported on a dry weight basis unless otherwise specified.

(2) No lab extraction date is given for F1BTEX & VOC samples that are field preserved with methanol. Extraction date is the date sampled unless otherwise stated.

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

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.

Ema Gitej, Senior Project Manager

Email: EGitej@maxxam.ca

Phone# (905)817-5829

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Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

O.REG 153 METALS & INORGANICS PKG (SOIL)

Maxxam ID			HAP914		HAP915		HAP916		
Sampling Date			2018/06/20		2018/06/20		2018/06/20		
COC Number			641804-14-01		641804-14-01		641804-14-01		
	UNITS	Criteria	BH18-1 SA4	QC Batch	BH18-2 SA1	QC Batch	BH18-3 SA2	RDL	QC Batch

Calculated Parameters

Sodium Adsorption Ratio	N/A	5.0	0.57	5595768	5.7	5595768	0.55		5595768
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Inorganics

Conductivity	mS/cm	0.7	0.23	5600054	1.0	5600054	0.23	0.002	5600054
Moisture	%	-	8.8	5598736	8.1	5598736	12	1.0	5598736
Available (CaCl2) pH	pH	-	7.87	5599407	7.98	5599407	7.74		5599407
WAD Cyanide (Free)	ug/g	0.051	<0.01	5597355	<0.01	5597355	<0.01	0.01	5597355
Chromium (VI)	ug/g	8	<0.2	5598824	<0.2	5598824	<0.2	0.2	5598824

Metals

Hot Water Ext. Boron (B)	ug/g	1.5	0.26	5597466	0.34	5597160	0.065	0.050	5597466
Acid Extractable Antimony (Sb)	ug/g	7.5	<0.20	5597235	0.36	5597235	<0.20	0.20	5597235
Acid Extractable Arsenic (As)	ug/g	18	4.4	5597235	4.7	5597235	4.5	1.0	5597235
Acid Extractable Barium (Ba)	ug/g	390	82	5597235	71	5597235	86	0.50	5597235
Acid Extractable Beryllium (Be)	ug/g	4	0.73	5597235	0.72	5597235	0.69	0.20	5597235
Acid Extractable Boron (B)	ug/g	120	11	5597235	13	5597235	8.4	5.0	5597235
Acid Extractable Cadmium (Cd)	ug/g	1.2	0.15	5597235	0.12	5597235	0.16	0.10	5597235
Acid Extractable Chromium (Cr)	ug/g	160	20	5597235	20	5597235	18	1.0	5597235
Acid Extractable Cobalt (Co)	ug/g	22	12	5597235	12	5597235	12	0.10	5597235
Acid Extractable Copper (Cu)	ug/g	140	26	5597235	14	5597235	28	0.50	5597235
Acid Extractable Lead (Pb)	ug/g	120	13	5597235	13	5597235	11	1.0	5597235
Acid Extractable Molybdenum (Mo)	ug/g	6.9	0.59	5597235	0.59	5597235	<0.50	0.50	5597235
Acid Extractable Nickel (Ni)	ug/g	100	25	5597235	25	5597235	25	0.50	5597235
Acid Extractable Selenium (Se)	ug/g	2.4	<0.50	5597235	<0.50	5597235	<0.50	0.50	5597235
Acid Extractable Silver (Ag)	ug/g	20	<0.20	5597235	<0.20	5597235	<0.20	0.20	5597235
Acid Extractable Thallium (Tl)	ug/g	1	0.15	5597235	0.096	5597235	0.13	0.050	5597235
Acid Extractable Uranium (U)	ug/g	23	0.70	5597235	0.57	5597235	0.52	0.050	5597235
Acid Extractable Vanadium (V)	ug/g	86	28	5597235	27	5597235	26	5.0	5597235
Acid Extractable Zinc (Zn)	ug/g	340	64	5597235	89	5597235	60	5.0	5597235
Acid Extractable Mercury (Hg)	ug/g	0.27	<0.050	5597235	<0.050	5597235	<0.050	0.050	5597235

RDL = Reportable Detection Limit

QC Batch = Quality Control Batch

Criteria: Ontario Reg. 153/04 (Amended April 15, 2011)

Table 3: Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition

Soil - Residential/Parkland/Institutional Property Use - Coarse Textured Soil

O.REG 153 METALS & INORGANICS PKG (SOIL)

Maxxam ID			HAP916		HAP917			HAP917		
Sampling Date			2018/06/20		2018/06/21			2018/06/21		
COC Number			641804-14-01		641804-14-01			641804-14-01		
	UNITS	Criteria	BH18-3 SA2 Lab-Dup	QC Batch	BH18-4 SA3	RDL	QC Batch	BH18-4 SA3 Lab-Dup	RDL	QC Batch

Calculated Parameters

Sodium Adsorption Ratio	N/A	5.0			1.7		5595768			
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Inorganics

Conductivity	mS/cm	0.7			0.69	0.002	5600054			
Moisture	%	-			11	1.0	5598736	11	1.0	5598736
Available (CaCl2) pH	pH	-	7.71	5599407	7.84		5599407			
WAD Cyanide (Free)	ug/g	0.051			<0.01	0.01	5597355			
Chromium (VI)	ug/g	8			<0.2	0.2	5598824			

Metals

Hot Water Ext. Boron (B)	ug/g	1.5			0.18	0.050	5597466	0.21	0.050	5597466
Acid Extractable Antimony (Sb)	ug/g	7.5			0.20	0.20	5597235			
Acid Extractable Arsenic (As)	ug/g	18			4.8	1.0	5597235			
Acid Extractable Barium (Ba)	ug/g	390			110	0.50	5597235			
Acid Extractable Beryllium (Be)	ug/g	4			0.80	0.20	5597235			
Acid Extractable Boron (B)	ug/g	120			9.2	5.0	5597235			
Acid Extractable Cadmium (Cd)	ug/g	1.2			0.16	0.10	5597235			
Acid Extractable Chromium (Cr)	ug/g	160			23	1.0	5597235			
Acid Extractable Cobalt (Co)	ug/g	22			13	0.10	5597235			
Acid Extractable Copper (Cu)	ug/g	140			28	0.50	5597235			
Acid Extractable Lead (Pb)	ug/g	120			13	1.0	5597235			
Acid Extractable Molybdenum (Mo)	ug/g	6.9			0.63	0.50	5597235			
Acid Extractable Nickel (Ni)	ug/g	100			28	0.50	5597235			
Acid Extractable Selenium (Se)	ug/g	2.4			<0.50	0.50	5597235			
Acid Extractable Silver (Ag)	ug/g	20			<0.20	0.20	5597235			
Acid Extractable Thallium (Tl)	ug/g	1			0.16	0.050	5597235			
Acid Extractable Uranium (U)	ug/g	23			0.71	0.050	5597235			
Acid Extractable Vanadium (V)	ug/g	86			30	5.0	5597235			
Acid Extractable Zinc (Zn)	ug/g	340			71	5.0	5597235			
Acid Extractable Mercury (Hg)	ug/g	0.27			<0.050	0.050	5597235			

RDL = Reportable Detection Limit

QC Batch = Quality Control Batch

Lab-Dup = Laboratory Initiated Duplicate

Criteria: Ontario Reg. 153/04 (Amended April 15, 2011)

Table 3: Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition

Soil - Residential/Parkland/Institutional Property Use - Coarse Textured Soil

O.REG 153 METALS & INORGANICS PKG (SOIL)

Maxxam ID			HAP918			HAP918		
Sampling Date			2018/06/20			2018/06/20		
COC Number			641804-14-01			641804-14-01		
	UNITS	Criteria	BH18-5 SA1B	RDL	QC Batch	BH18-5 SA1B Lab-Dup	RDL	QC Batch
Calculated Parameters								
Sodium Adsorption Ratio	N/A	5.0	0.27		5595768			
Inorganics								
Conductivity	mS/cm	0.7	0.14	0.002	5600054			
Moisture	%	-	8.9	1.0	5598736			
Available (CaCl ₂) pH	pH	-	7.66		5599407			
WAD Cyanide (Free)	ug/g	0.051	<0.01	0.01	5597355			
Chromium (VI)	ug/g	8	<0.2	0.2	5598824			
Metals								
Hot Water Ext. Boron (B)	ug/g	1.5	0.12	0.050	5597160			
Acid Extractable Antimony (Sb)	ug/g	7.5	<0.20	0.20	5597235	0.22	0.20	5597235
Acid Extractable Arsenic (As)	ug/g	18	4.7	1.0	5597235	4.3	1.0	5597235
Acid Extractable Barium (Ba)	ug/g	390	69	0.50	5597235	64	0.50	5597235
Acid Extractable Beryllium (Be)	ug/g	4	0.79	0.20	5597235	0.74	0.20	5597235
Acid Extractable Boron (B)	ug/g	120	9.3	5.0	5597235	8.9	5.0	5597235
Acid Extractable Cadmium (Cd)	ug/g	1.2	0.17	0.10	5597235	0.15	0.10	5597235
Acid Extractable Chromium (Cr)	ug/g	160	21	1.0	5597235	20	1.0	5597235
Acid Extractable Cobalt (Co)	ug/g	22	12	0.10	5597235	12	0.10	5597235
Acid Extractable Copper (Cu)	ug/g	140	28	0.50	5597235	27	0.50	5597235
Acid Extractable Lead (Pb)	ug/g	120	13	1.0	5597235	12	1.0	5597235
Acid Extractable Molybdenum (Mo)	ug/g	6.9	<0.50	0.50	5597235	<0.50	0.50	5597235
Acid Extractable Nickel (Ni)	ug/g	100	27	0.50	5597235	26	0.50	5597235
Acid Extractable Selenium (Se)	ug/g	2.4	<0.50	0.50	5597235	<0.50	0.50	5597235
Acid Extractable Silver (Ag)	ug/g	20	<0.20	0.20	5597235	<0.20	0.20	5597235
Acid Extractable Thallium (Tl)	ug/g	1	0.16	0.050	5597235	0.14	0.050	5597235
Acid Extractable Uranium (U)	ug/g	23	0.55	0.050	5597235	0.52	0.050	5597235
Acid Extractable Vanadium (V)	ug/g	86	30	5.0	5597235	27	5.0	5597235
Acid Extractable Zinc (Zn)	ug/g	340	69	5.0	5597235	67	5.0	5597235
Acid Extractable Mercury (Hg)	ug/g	0.27	<0.050	0.050	5597235	<0.050	0.050	5597235
RDL = Reportable Detection Limit QC Batch = Quality Control Batch Lab-Dup = Laboratory Initiated Duplicate Criteria: Ontario Reg. 153/04 (Amended April 15, 2011) Table 3: Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition Soil - Residential/Parkland/Institutional Property Use - Coarse Textured Soil								

O.REG 153 METALS & INORGANICS PKG (SOIL)

Maxxam ID			HAP919	HAP920			HAP920		
Sampling Date			2018/06/20	2018/06/20			2018/06/20		
COC Number			641804-14-01	641804-14-01			641804-14-01		
	UNITS	Criteria	BH18-2 SA6	BH18-6 SA6	RDL	QC Batch	BH18-6 SA6 Lab-Dup	RDL	QC Batch
Calculated Parameters									
Sodium Adsorption Ratio	N/A	5.0	0.48	0.39		5595768			
Inorganics									
Conductivity	mS/cm	0.7	0.27	0.20	0.002	5600054			
Moisture	%	-	9.4	9.2	1.0	5598736			
Available (CaCl ₂) pH	pH	-	7.99	7.98		5599407			
WAD Cyanide (Free)	ug/g	0.051	<0.01	<0.01	0.01	5597355	<0.01	0.01	5597355
Chromium (VI)	ug/g	8	<0.2	<0.2	0.2	5598824	<0.2	0.2	5598824
Metals									
Hot Water Ext. Boron (B)	ug/g	1.5	0.34	0.32	0.050	5597466			
Acid Extractable Antimony (Sb)	ug/g	7.5	<0.20	0.23	0.20	5597235			
Acid Extractable Arsenic (As)	ug/g	18	3.4	3.7	1.0	5597235			
Acid Extractable Barium (Ba)	ug/g	390	60	95	0.50	5597235			
Acid Extractable Beryllium (Be)	ug/g	4	0.61	0.67	0.20	5597235			
Acid Extractable Boron (B)	ug/g	120	10	14	5.0	5597235			
Acid Extractable Cadmium (Cd)	ug/g	1.2	<0.10	<0.10	0.10	5597235			
Acid Extractable Chromium (Cr)	ug/g	160	18	19	1.0	5597235			
Acid Extractable Cobalt (Co)	ug/g	22	10	11	0.10	5597235			
Acid Extractable Copper (Cu)	ug/g	140	24	19	0.50	5597235			
Acid Extractable Lead (Pb)	ug/g	120	8.9	8.9	1.0	5597235			
Acid Extractable Molybdenum (Mo)	ug/g	6.9	0.59	<0.50	0.50	5597235			
Acid Extractable Nickel (Ni)	ug/g	100	23	24	0.50	5597235			
Acid Extractable Selenium (Se)	ug/g	2.4	<0.50	<0.50	0.50	5597235			
Acid Extractable Silver (Ag)	ug/g	20	<0.20	<0.20	0.20	5597235			
Acid Extractable Thallium (Tl)	ug/g	1	0.12	0.11	0.050	5597235			
Acid Extractable Uranium (U)	ug/g	23	0.77	0.96	0.050	5597235			
Acid Extractable Vanadium (V)	ug/g	86	24	26	5.0	5597235			
Acid Extractable Zinc (Zn)	ug/g	340	61	53	5.0	5597235			
Acid Extractable Mercury (Hg)	ug/g	0.27	<0.050	<0.050	0.050	5597235			
RDL = Reportable Detection Limit QC Batch = Quality Control Batch Lab-Dup = Laboratory Initiated Duplicate Criteria: Ontario Reg. 153/04 (Amended April 15, 2011) Table 3: Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition Soil - Residential/Parkland/Institutional Property Use - Coarse Textured Soil									

O.REG 153 METALS & INORGANICS PKG (SOIL)

Maxxam ID			HAP921		HAP922		HAP923		
Sampling Date			2018/06/21		2018/06/21		2018/06/21		
COC Number			641804-14-01		641804-14-01		641804-14-01		
	UNITS	Criteria	BH18-9 SA2	QC Batch	BH18-11 SA2	QC Batch	BH18-12 SA5	RDL	QC Batch

Calculated Parameters

Sodium Adsorption Ratio	N/A	5.0	0.37	5595768	0.52	5595768	0.49		5595768
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Inorganics

Conductivity	mS/cm	0.7	0.14	5600054	0.47	5600054	0.19	0.002	5600054
Moisture	%	-	11	5598736	11	5598736	9.3	1.0	5598736
Available (CaCl2) pH	pH	-	7.76	5599407	7.83	5599407	7.87		5599407
WAD Cyanide (Free)	ug/g	0.051	<0.01	5597355	<0.01	5597355	<0.01	0.01	5597355
Chromium (VI)	ug/g	8	<0.2	5598824	<0.2	5598824	<0.2	0.2	5598824

Metals

Hot Water Ext. Boron (B)	ug/g	1.5	0.079	5597466	0.11	5597160	0.36	0.050	5597466
Acid Extractable Antimony (Sb)	ug/g	7.5	<0.20	5597235	<0.20	5597235	<0.20	0.20	5597235
Acid Extractable Arsenic (As)	ug/g	18	4.1	5597235	4.4	5597235	4.6	1.0	5597235
Acid Extractable Barium (Ba)	ug/g	390	85	5597235	88	5597235	60	0.50	5597235
Acid Extractable Beryllium (Be)	ug/g	4	0.68	5597235	0.72	5597235	0.66	0.20	5597235
Acid Extractable Boron (B)	ug/g	120	8.9	5597235	9.0	5597235	11	5.0	5597235
Acid Extractable Cadmium (Cd)	ug/g	1.2	0.11	5597235	0.12	5597235	0.12	0.10	5597235
Acid Extractable Chromium (Cr)	ug/g	160	19	5597235	19	5597235	19	1.0	5597235
Acid Extractable Cobalt (Co)	ug/g	22	12	5597235	11	5597235	11	0.10	5597235
Acid Extractable Copper (Cu)	ug/g	140	30	5597235	28	5597235	30	0.50	5597235
Acid Extractable Lead (Pb)	ug/g	120	11	5597235	12	5597235	12	1.0	5597235
Acid Extractable Molybdenum (Mo)	ug/g	6.9	0.50	5597235	0.50	5597235	<0.50	0.50	5597235
Acid Extractable Nickel (Ni)	ug/g	100	25	5597235	25	5597235	25	0.50	5597235
Acid Extractable Selenium (Se)	ug/g	2.4	<0.50	5597235	<0.50	5597235	<0.50	0.50	5597235
Acid Extractable Silver (Ag)	ug/g	20	<0.20	5597235	<0.20	5597235	<0.20	0.20	5597235
Acid Extractable Thallium (Tl)	ug/g	1	0.14	5597235	0.16	5597235	0.14	0.050	5597235
Acid Extractable Uranium (U)	ug/g	23	0.56	5597235	0.66	5597235	0.70	0.050	5597235
Acid Extractable Vanadium (V)	ug/g	86	26	5597235	27	5597235	26	5.0	5597235
Acid Extractable Zinc (Zn)	ug/g	340	62	5597235	62	5597235	67	5.0	5597235
Acid Extractable Mercury (Hg)	ug/g	0.27	<0.050	5597235	<0.050	5597235	<0.050	0.050	5597235

RDL = Reportable Detection Limit

QC Batch = Quality Control Batch

Criteria: Ontario Reg. 153/04 (Amended April 15, 2011)

Table 3: Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition

Soil - Residential/Parkland/Institutional Property Use - Coarse Textured Soil

O.REG 153 PAHS (SOIL)

Maxxam ID			HAP914		HAP915		HAP916	HAP917		
Sampling Date			2018/06/20		2018/06/20		2018/06/20	2018/06/21		
COC Number			641804-14-01		641804-14-01		641804-14-01	641804-14-01		
	UNITS	Criteria	BH18-1 SA4	RDL	BH18-2 SA1	RDL	BH18-3 SA2	BH18-4 SA3	RDL	QC Batch

Calculated Parameters

Methylnaphthalene, 2-(1-)	ug/g	0.99	<0.0071	0.0071	<0.071	0.071	<0.0071	<0.0071	0.0071	5595845
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Polyaromatic Hydrocarbons

Acenaphthene	ug/g	7.9	<0.0050	0.0050	<0.050	0.050	<0.0050	<0.0050	0.0050	5598669
Acenaphthylene	ug/g	0.15	<0.0050	0.0050	<0.050	0.050	<0.0050	<0.0050	0.0050	5598669
Anthracene	ug/g	0.67	<0.0050	0.0050	<0.050	0.050	<0.0050	<0.0050	0.0050	5598669
Benzo(a)anthracene	ug/g	0.5	<0.0050	0.0050	<0.050	0.050	<0.0050	<0.0050	0.0050	5598669
Benzo(a)pyrene	ug/g	0.3	<0.0050	0.0050	<0.050	0.050	<0.0050	<0.0050	0.0050	5598669
Benzo(b,j)fluoranthene	ug/g	0.78	<0.0050	0.0050	<0.050	0.050	<0.0050	<0.0050	0.0050	5598669
Benzo(g,h,i)perylene	ug/g	6.6	<0.0050	0.0050	0.078	0.050	<0.0050	<0.0050	0.0050	5598669
Benzo(k)fluoranthene	ug/g	0.78	<0.0050	0.0050	<0.050	0.050	<0.0050	<0.0050	0.0050	5598669
Chrysene	ug/g	7	<0.0050	0.0050	<0.050	0.050	<0.0050	<0.0050	0.0050	5598669
Dibenz(a,h)anthracene	ug/g	0.1	<0.0050	0.0050	<0.050	0.050	<0.0050	<0.0050	0.0050	5598669
Fluoranthene	ug/g	0.69	<0.0050	0.0050	<0.050	0.050	<0.0050	<0.0050	0.0050	5598669
Fluorene	ug/g	62	<0.0050	0.0050	<0.050	0.050	<0.0050	<0.0050	0.0050	5598669
Indeno(1,2,3-cd)pyrene	ug/g	0.38	<0.0050	0.0050	<0.050	0.050	<0.0050	<0.0050	0.0050	5598669
1-Methylnaphthalene	ug/g	0.99	<0.0050	0.0050	<0.050	0.050	<0.0050	<0.0050	0.0050	5598669
2-Methylnaphthalene	ug/g	0.99	<0.0050	0.0050	<0.050	0.050	<0.0050	<0.0050	0.0050	5598669
Naphthalene	ug/g	0.6	<0.0050	0.0050	<0.050	0.050	<0.0050	<0.0050	0.0050	5598669
Phenanthrene	ug/g	6.2	<0.0050	0.0050	<0.050	0.050	<0.0050	<0.0050	0.0050	5598669
Pyrene	ug/g	78	<0.0050	0.0050	<0.050	0.050	<0.0050	<0.0050	0.0050	5598669

Surrogate Recovery (%)

D10-Anthracene	%	-	83		112		84	81		5598669
D14-Terphenyl (FS)	%	-	79		81		80	78		5598669
D8-Acenaphthylene	%	-	77		82		78	75		5598669

RDL = Reportable Detection Limit

QC Batch = Quality Control Batch

Criteria: Ontario Reg. 153/04 (Amended April 15, 2011)

Table 3: Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition

Soil - Residential/Parkland/Institutional Property Use - Coarse Textured Soil

O.REG 153 PAHS (SOIL)

Maxxam ID			HAP918			HAP918			HAP919		
Sampling Date			2018/06/20			2018/06/20			2018/06/20		
COC Number			641804-14-01			641804-14-01			641804-14-01		
	UNITS	Criteria	BH18-5 SA1B	RDL	QC Batch	BH18-5 SA1B Lab-Dup	RDL	QC Batch	BH18-2 SA6	RDL	QC Batch

Calculated Parameters

Methylnaphthalene, 2-(1-)	ug/g	0.99	<0.0071	0.0071	5595845				<0.0071	0.0071	5595845
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Polyaromatic Hydrocarbons

Acenaphthene	ug/g	7.9	<0.0050	0.0050	5598669	<0.0050	0.0050	5598669	<0.0050	0.0050	5598669
Acenaphthylene	ug/g	0.15	<0.0050	0.0050	5598669	<0.0050	0.0050	5598669	<0.0050	0.0050	5598669
Anthracene	ug/g	0.67	<0.0050	0.0050	5598669	<0.0050	0.0050	5598669	<0.0050	0.0050	5598669
Benzo(a)anthracene	ug/g	0.5	<0.0050	0.0050	5598669	<0.0050	0.0050	5598669	<0.0050	0.0050	5598669
Benzo(a)pyrene	ug/g	0.3	<0.0050	0.0050	5598669	<0.0050	0.0050	5598669	<0.0050	0.0050	5598669
Benzo(b,j)fluoranthene	ug/g	0.78	<0.0050	0.0050	5598669	<0.0050	0.0050	5598669	<0.0050	0.0050	5598669
Benzo(g,h,i)perylene	ug/g	6.6	<0.0050	0.0050	5598669	<0.0050	0.0050	5598669	<0.0050	0.0050	5598669
Benzo(k)fluoranthene	ug/g	0.78	<0.0050	0.0050	5598669	<0.0050	0.0050	5598669	<0.0050	0.0050	5598669
Chrysene	ug/g	7	<0.0050	0.0050	5598669	<0.0050	0.0050	5598669	0.0063	0.0050	5598669
Dibenz(a,h)anthracene	ug/g	0.1	<0.0050	0.0050	5598669	<0.0050	0.0050	5598669	<0.0050	0.0050	5598669
Fluoranthene	ug/g	0.69	<0.0050	0.0050	5598669	<0.0050	0.0050	5598669	<0.0050	0.0050	5598669
Fluorene	ug/g	62	<0.0050	0.0050	5598669	<0.0050	0.0050	5598669	<0.0050	0.0050	5598669
Indeno(1,2,3-cd)pyrene	ug/g	0.38	<0.0050	0.0050	5598669	<0.0050	0.0050	5598669	<0.0050	0.0050	5598669
1-Methylnaphthalene	ug/g	0.99	<0.0050	0.0050	5598669	<0.0050	0.0050	5598669	<0.0050	0.0050	5598669
2-Methylnaphthalene	ug/g	0.99	<0.0050	0.0050	5598669	<0.0050	0.0050	5598669	<0.0050	0.0050	5598669
Naphthalene	ug/g	0.6	<0.0050	0.0050	5598669	<0.0050	0.0050	5598669	<0.0050	0.0050	5598669
Phenanthrene	ug/g	6.2	<0.0050	0.0050	5598669	<0.0050	0.0050	5598669	0.0094	0.0050	5598669
Pyrene	ug/g	78	<0.0050	0.0050	5598669	<0.0050	0.0050	5598669	<0.0050	0.0050	5598669

Surrogate Recovery (%)

D10-Anthracene	%	-	84		5598669	82		5598669	86		5598669
D14-Terphenyl (FS)	%	-	80		5598669	79		5598669	82		5598669
D8-Acenaphthylene	%	-	77		5598669	76		5598669	80		5598669

RDL = Reportable Detection Limit

QC Batch = Quality Control Batch

Lab-Dup = Laboratory Initiated Duplicate

Criteria: Ontario Reg. 153/04 (Amended April 15, 2011)

Table 3: Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition

Soil - Residential/Parkland/Institutional Property Use - Coarse Textured Soil

O.REG 153 PAHS (SOIL)

Maxxam ID			HAP920	HAP921	HAP922	HAP923		
Sampling Date			2018/06/20	2018/06/21	2018/06/21	2018/06/21		
COC Number			641804-14-01	641804-14-01	641804-14-01	641804-14-01		
	UNITS	Criteria	BH18-6 SA6	BH18-9 SA2	BH18-11 SA2	BH18-12 SA5	RDL	QC Batch

Calculated Parameters

Methylnaphthalene, 2-(1-)	ug/g	0.99	0.026	<0.0071	<0.0071	<0.0071	0.0071	5595845
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Polyaromatic Hydrocarbons

Acenaphthene	ug/g	7.9	<0.0050	<0.0050	<0.0050	<0.0050	0.0050	5598669
Acenaphthylene	ug/g	0.15	<0.0050	<0.0050	<0.0050	<0.0050	0.0050	5598669
Anthracene	ug/g	0.67	0.0056	<0.0050	<0.0050	<0.0050	0.0050	5598669
Benzo(a)anthracene	ug/g	0.5	<0.0050	<0.0050	<0.0050	<0.0050	0.0050	5598669
Benzo(a)pyrene	ug/g	0.3	<0.0050	<0.0050	<0.0050	<0.0050	0.0050	5598669
Benzo(b/j)fluoranthene	ug/g	0.78	<0.0050	<0.0050	<0.0050	<0.0050	0.0050	5598669
Benzo(g,h,i)perylene	ug/g	6.6	<0.0050	<0.0050	<0.0050	<0.0050	0.0050	5598669
Benzo(k)fluoranthene	ug/g	0.78	<0.0050	<0.0050	<0.0050	<0.0050	0.0050	5598669
Chrysene	ug/g	7	0.0051	<0.0050	<0.0050	<0.0050	0.0050	5598669
Dibenz(a,h)anthracene	ug/g	0.1	<0.0050	<0.0050	<0.0050	<0.0050	0.0050	5598669
Fluoranthene	ug/g	0.69	<0.0050	<0.0050	<0.0050	<0.0050	0.0050	5598669
Fluorene	ug/g	62	<0.0050	<0.0050	<0.0050	<0.0050	0.0050	5598669
Indeno(1,2,3-cd)pyrene	ug/g	0.38	<0.0050	<0.0050	<0.0050	<0.0050	0.0050	5598669
1-Methylnaphthalene	ug/g	0.99	0.013	<0.0050	<0.0050	<0.0050	0.0050	5598669
2-Methylnaphthalene	ug/g	0.99	0.013	<0.0050	<0.0050	<0.0050	0.0050	5598669
Naphthalene	ug/g	0.6	0.0055	<0.0050	<0.0050	<0.0050	0.0050	5598669
Phenanthrene	ug/g	6.2	0.016	<0.0050	<0.0050	<0.0050	0.0050	5598669
Pyrene	ug/g	78	<0.0050	<0.0050	<0.0050	<0.0050	0.0050	5598669

Surrogate Recovery (%)

D10-Anthracene	%	-	81	88	84	86		5598669
D14-Terphenyl (FS)	%	-	78	83	80	82		5598669
D8-Acenaphthylene	%	-	77	80	78	81		5598669

RDL = Reportable Detection Limit

QC Batch = Quality Control Batch

Criteria: Ontario Reg. 153/04 (Amended April 15, 2011)

Table 3: Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition

Soil - Residential/Parkland/Institutional Property Use - Coarse Textured Soil

O.REG 153 PETROLEUM HYDROCARBONS (SOIL)

Maxxam ID			HAP914	HAP915			HAP915		
Sampling Date			2018/06/20	2018/06/20			2018/06/20		
COC Number			641804-14-01	641804-14-01			641804-14-01		
	UNITS	Criteria	BH18-1 SA4	BH18-2 SA1	RDL	QC Batch	BH18-2 SA1 Lab-Dup	RDL	QC Batch
BTEX & F1 Hydrocarbons									
Benzene	ug/g	0.21	<0.020	<0.020	0.020	5596511	<0.020	0.020	5596511
Toluene	ug/g	2.3	<0.020	<0.020	0.020	5596511	<0.020	0.020	5596511
Ethylbenzene	ug/g	2	<0.020	<0.020	0.020	5596511	<0.020	0.020	5596511
o-Xylene	ug/g	-	<0.020	<0.020	0.020	5596511	<0.020	0.020	5596511
p+m-Xylene	ug/g	-	<0.040	<0.040	0.040	5596511	<0.040	0.040	5596511
Total Xylenes	ug/g	3.1	<0.040	<0.040	0.040	5596511	<0.040	0.040	5596511
F1 (C6-C10)	ug/g	55	<10	<10	10	5596511	<10	10	5596511
F1 (C6-C10) - BTEX	ug/g	55	<10	<10	10	5596511	<10	10	5596511
F2-F4 Hydrocarbons									
F2 (C10-C16 Hydrocarbons)	ug/g	98	<10	<10	10	5598664			
F3 (C16-C34 Hydrocarbons)	ug/g	300	<50	280	50	5598664			
F4 (C34-C50 Hydrocarbons)	ug/g	2800	<50	560	50	5598664			
Reached Baseline at C50	ug/g	-	Yes	No		5598664			
Surrogate Recovery (%)									
1,4-Difluorobenzene	%	-	103	103		5596511	105		5596511
4-Bromofluorobenzene	%	-	92	93		5596511	90		5596511
D10-Ethylbenzene	%	-	91	86		5596511	90		5596511
D4-1,2-Dichloroethane	%	-	79	79		5596511	79		5596511
o-Terphenyl	%	-	87	89		5598664			
RDL = Reportable Detection Limit QC Batch = Quality Control Batch Lab-Dup = Laboratory Initiated Duplicate Criteria: Ontario Reg. 153/04 (Amended April 15, 2011) Table 3: Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition Soil - Residential/Parkland/Institutional Property Use - Coarse Textured Soil									

O.REG 153 PETROLEUM HYDROCARBONS (SOIL)

Maxxam ID			HAP916	HAP917	HAP918			HAP918		
Sampling Date			2018/06/20	2018/06/21	2018/06/20			2018/06/20		
COC Number			641804-14-01	641804-14-01	641804-14-01			641804-14-01		
	UNITS	Criteria	BH18-3 SA2	BH18-4 SA3	BH18-5 SA1B	RDL	QC Batch	BH18-5 SA1B Lab-Dup	RDL	QC Batch

BTEX & F1 Hydrocarbons

Benzene	ug/g	0.21	<0.020	<0.020	<0.020	0.020	5596511			
Toluene	ug/g	2.3	<0.020	<0.020	<0.020	0.020	5596511			
Ethylbenzene	ug/g	2	<0.020	<0.020	<0.020	0.020	5596511			
o-Xylene	ug/g	-	<0.020	<0.020	<0.020	0.020	5596511			
p+m-Xylene	ug/g	-	<0.040	<0.040	<0.040	0.040	5596511			
Total Xylenes	ug/g	3.1	<0.040	<0.040	<0.040	0.040	5596511			
F1 (C6-C10)	ug/g	55	<10	<10	<10	10	5596511			
F1 (C6-C10) - BTEX	ug/g	55	<10	<10	<10	10	5596511			

F2-F4 Hydrocarbons

F2 (C10-C16 Hydrocarbons)	ug/g	98	<10	<10	<10	10	5598664	<10	10	5598664
F3 (C16-C34 Hydrocarbons)	ug/g	300	<50	<50	<50	50	5598664	<50	50	5598664
F4 (C34-C50 Hydrocarbons)	ug/g	2800	<50	<50	<50	50	5598664	<50	50	5598664
Reached Baseline at C50	ug/g	-	Yes	Yes	Yes		5598664	Yes		5598664

Surrogate Recovery (%)

1,4-Difluorobenzene	%	-	100	101	107		5596511			
4-Bromofluorobenzene	%	-	93	89	84		5596511			
D10-Ethylbenzene	%	-	87	86	92		5596511			
D4-1,2-Dichloroethane	%	-	77	86	91		5596511			
o-Terphenyl	%	-	86	91	90		5598664	92		5598664

RDL = Reportable Detection Limit

QC Batch = Quality Control Batch

Lab-Dup = Laboratory Initiated Duplicate

Criteria: Ontario Reg. 153/04 (Amended April 15, 2011)

Table 3: Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition

Soil - Residential/Parkland/Institutional Property Use - Coarse Textured Soil

O.REG 153 PETROLEUM HYDROCARBONS (SOIL)

Maxxam ID			HAP919	HAP920	HAP921	HAP922	HAP923		
Sampling Date			2018/06/20	2018/06/20	2018/06/21	2018/06/21	2018/06/21		
COC Number			641804-14-01	641804-14-01	641804-14-01	641804-14-01	641804-14-01		
	UNITS	Criteria	BH18-2 SA6	BH18-6 SA6	BH18-9 SA2	BH18-11 SA2	BH18-12 SA5	RDL	QC Batch

BTEX & F1 Hydrocarbons

Benzene	ug/g	0.21	<0.020	<0.020	<0.020	<0.020	<0.020	0.020	5596511
Toluene	ug/g	2.3	<0.020	<0.020	<0.020	<0.020	<0.020	0.020	5596511
Ethylbenzene	ug/g	2	<0.020	<0.020	<0.020	<0.020	<0.020	0.020	5596511
o-Xylene	ug/g	-	<0.020	<0.020	<0.020	<0.020	<0.020	0.020	5596511
p+m-Xylene	ug/g	-	<0.040	<0.040	<0.040	<0.040	<0.040	0.040	5596511
Total Xylenes	ug/g	3.1	<0.040	<0.040	<0.040	<0.040	<0.040	0.040	5596511
F1 (C6-C10)	ug/g	55	<10	<10	<10	<10	<10	10	5596511
F1 (C6-C10) - BTEX	ug/g	55	<10	<10	<10	<10	<10	10	5596511

F2-F4 Hydrocarbons

F2 (C10-C16 Hydrocarbons)	ug/g	98	15	13	<10	<10	<10	10	5598664
F3 (C16-C34 Hydrocarbons)	ug/g	300	63	<50	<50	<50	<50	50	5598664
F4 (C34-C50 Hydrocarbons)	ug/g	2800	<50	<50	<50	<50	<50	50	5598664
Reached Baseline at C50	ug/g	-	Yes	Yes	Yes	Yes	Yes		5598664

Surrogate Recovery (%)

1,4-Difluorobenzene	%	-	119	100	105	101	104		5596511
4-Bromofluorobenzene	%	-	89	92	95	87	88		5596511
D10-Ethylbenzene	%	-	87	88	90	85	89		5596511
D4-1,2-Dichloroethane	%	-	103	78	81	79	81		5596511
o-Terphenyl	%	-	93	92	94	93	96		5598664

RDL = Reportable Detection Limit

QC Batch = Quality Control Batch

Criteria: Ontario Reg. 153/04 (Amended April 15, 2011)

Table 3: Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition

Soil - Residential/Parkland/Institutional Property Use - Coarse Textured Soil

PETROLEUM HYDROCARBONS (CCME)

Maxxam ID			HAP915		
Sampling Date			2018/06/20		
COC Number			641804-14-01		
	UNITS	Criteria	BH18-2 SA1	RDL	QC Batch
F2-F4 Hydrocarbons					
F4G-sg (Grav. Heavy Hydrocarbons)	ug/g	2800	1900	100	5603126
RDL = Reportable Detection Limit					
QC Batch = Quality Control Batch					
Criteria: Ontario Reg. 153/04 (Amended April 15, 2011)					
Table 3: Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition					
Soil - Residential/Parkland/Institutional Property Use - Coarse Textured Soil					

TEST SUMMARY

Maxxam ID: HAP914
Sample ID: BH18-1 SA4
Matrix: Soil

Collected: 2018/06/20
Shipped:
Received: 2018/06/22

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	5595845	N/A	2018/06/27	Automated Statchk
Hot Water Extractable Boron	ICP	5597466	2018/06/25	2018/06/26	Suban Kanapathippalai
Free (WAD) Cyanide	TECH	5597355	2018/06/25	2018/06/26	Louise Harding
Conductivity	AT	5600054	2018/06/27	2018/06/27	Tahir Anwar
Hexavalent Chromium in Soil by IC	IC/SPEC	5598824	2018/06/26	2018/06/27	Sally Coughlin
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	5596511	N/A	2018/06/26	Georgeta Rusu
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	5598664	2018/06/26	2018/06/26	Atoosa Keshavarz
Strong Acid Leachable Metals by ICPMS	ICP/MS	5597235	2018/06/25	2018/06/27	Daniel Teclu
Moisture	BAL	5598736	N/A	2018/06/26	Min Yang
PAH Compounds in Soil by GC/MS (SIM)	GC/MS	5598669	2018/06/26	2018/06/26	Mitesh Raj
pH CaCl2 EXTRACT	AT	5599407	2018/06/27	2018/06/27	Surinder Rai
Sodium Adsorption Ratio (SAR)	CALC/MET	5595768	N/A	2018/06/28	Automated Statchk

Maxxam ID: HAP915
Sample ID: BH18-2 SA1
Matrix: Soil

Collected: 2018/06/20
Shipped:
Received: 2018/06/22

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	5595845	N/A	2018/06/27	Automated Statchk
Hot Water Extractable Boron	ICP	5597160	2018/06/25	2018/06/26	Suban Kanapathippalai
Free (WAD) Cyanide	TECH	5597355	2018/06/25	2018/06/26	Louise Harding
Conductivity	AT	5600054	2018/06/27	2018/06/27	Tahir Anwar
Hexavalent Chromium in Soil by IC	IC/SPEC	5598824	2018/06/26	2018/06/27	Sally Coughlin
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	5596511	N/A	2018/06/26	Georgeta Rusu
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	5598664	2018/06/26	2018/06/26	Atoosa Keshavarz
F4G (CCME Hydrocarbons Gravimetric)	BAL	5603126	2018/06/28	2018/06/28	Debra Deslandes
Strong Acid Leachable Metals by ICPMS	ICP/MS	5597235	2018/06/25	2018/06/27	Daniel Teclu
Moisture	BAL	5598736	N/A	2018/06/26	Min Yang
PAH Compounds in Soil by GC/MS (SIM)	GC/MS	5598669	2018/06/26	2018/06/26	Mitesh Raj
pH CaCl2 EXTRACT	AT	5599407	2018/06/27	2018/06/27	Surinder Rai
Sodium Adsorption Ratio (SAR)	CALC/MET	5595768	N/A	2018/06/28	Automated Statchk

Maxxam ID: HAP915 Dup
Sample ID: BH18-2 SA1
Matrix: Soil

Collected: 2018/06/20
Shipped:
Received: 2018/06/22

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	5596511	N/A	2018/06/26	Georgeta Rusu

Maxxam ID: HAP916
Sample ID: BH18-3 SA2
Matrix: Soil

Collected: 2018/06/20
Shipped:
Received: 2018/06/22

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	5595845	N/A	2018/06/27	Automated Statchk
Hot Water Extractable Boron	ICP	5597466	2018/06/25	2018/06/26	Suban Kanapathippalai

TEST SUMMARY

Maxxam ID: HAP916
Sample ID: BH18-3 SA2
Matrix: Soil

Collected: 2018/06/20
Shipped:
Received: 2018/06/22

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Free (WAD) Cyanide	TECH	5597355	2018/06/25	2018/06/26	Louise Harding
Conductivity	AT	5600054	2018/06/27	2018/06/27	Tahir Anwar
Hexavalent Chromium in Soil by IC	IC/SPEC	5598824	2018/06/26	2018/06/27	Sally Coughlin
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	5596511	N/A	2018/06/26	Georgeta Rusu
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	5598664	2018/06/26	2018/06/26	Atoosa Keshavarz
Strong Acid Leachable Metals by ICPMS	ICP/MS	5597235	2018/06/25	2018/06/27	Daniel Teclu
Moisture	BAL	5598736	N/A	2018/06/26	Min Yang
PAH Compounds in Soil by GC/MS (SIM)	GC/MS	5598669	2018/06/26	2018/06/26	Mitesh Raj
pH CaCl2 EXTRACT	AT	5599407	2018/06/27	2018/06/27	Surinder Rai
Sodium Adsorption Ratio (SAR)	CALC/MET	5595768	N/A	2018/06/28	Automated Statchk

Maxxam ID: HAP916 Dup
Sample ID: BH18-3 SA2
Matrix: Soil

Collected: 2018/06/20
Shipped:
Received: 2018/06/22

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
pH CaCl2 EXTRACT	AT	5599407	2018/06/27	2018/06/27	Surinder Rai

Maxxam ID: HAP917
Sample ID: BH18-4 SA3
Matrix: Soil

Collected: 2018/06/21
Shipped:
Received: 2018/06/22

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	5595845	N/A	2018/06/27	Automated Statchk
Hot Water Extractable Boron	ICP	5597466	2018/06/25	2018/06/26	Suban Kanapathipillai
Free (WAD) Cyanide	TECH	5597355	2018/06/25	2018/06/26	Louise Harding
Conductivity	AT	5600054	2018/06/27	2018/06/27	Tahir Anwar
Hexavalent Chromium in Soil by IC	IC/SPEC	5598824	2018/06/26	2018/06/27	Sally Coughlin
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	5596511	N/A	2018/06/26	Georgeta Rusu
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	5598664	2018/06/26	2018/06/26	Atoosa Keshavarz
Strong Acid Leachable Metals by ICPMS	ICP/MS	5597235	2018/06/25	2018/06/27	Daniel Teclu
Moisture	BAL	5598736	N/A	2018/06/26	Min Yang
PAH Compounds in Soil by GC/MS (SIM)	GC/MS	5598669	2018/06/26	2018/06/26	Mitesh Raj
pH CaCl2 EXTRACT	AT	5599407	2018/06/27	2018/06/27	Surinder Rai
Sodium Adsorption Ratio (SAR)	CALC/MET	5595768	N/A	2018/06/28	Automated Statchk

Maxxam ID: HAP917 Dup
Sample ID: BH18-4 SA3
Matrix: Soil

Collected: 2018/06/21
Shipped:
Received: 2018/06/22

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hot Water Extractable Boron	ICP	5597466	2018/06/25	2018/06/26	Suban Kanapathipillai
Moisture	BAL	5598736	N/A	2018/06/26	Min Yang

TEST SUMMARY

Maxxam ID: HAP918
Sample ID: BH18-5 SA1B
Matrix: Soil

Collected: 2018/06/20
Shipped:
Received: 2018/06/22

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	5595845	N/A	2018/06/27	Automated Statchk
Hot Water Extractable Boron	ICP	5597160	2018/06/25	2018/06/26	Suban Kanapathippalai
Free (WAD) Cyanide	TECH	5597355	2018/06/25	2018/06/26	Louise Harding
Conductivity	AT	5600054	2018/06/27	2018/06/27	Tahir Anwar
Hexavalent Chromium in Soil by IC	IC/SPEC	5598824	2018/06/26	2018/06/27	Sally Coughlin
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	5596511	N/A	2018/06/26	Georgeta Rusu
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	5598664	2018/06/26	2018/06/26	Atoosa Keshavarz
Strong Acid Leachable Metals by ICPMS	ICP/MS	5597235	2018/06/25	2018/06/27	Daniel Teclu
Moisture	BAL	5598736	N/A	2018/06/26	Min Yang
PAH Compounds in Soil by GC/MS (SIM)	GC/MS	5598669	2018/06/26	2018/06/26	Mitesh Raj
pH CaCl2 EXTRACT	AT	5599407	2018/06/27	2018/06/27	Surinder Rai
Sodium Adsorption Ratio (SAR)	CALC/MET	5595768	N/A	2018/06/28	Automated Statchk

Maxxam ID: HAP918 Dup
Sample ID: BH18-5 SA1B
Matrix: Soil

Collected: 2018/06/20
Shipped:
Received: 2018/06/22

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	5598664	2018/06/26	2018/06/26	Atoosa Keshavarz
Strong Acid Leachable Metals by ICPMS	ICP/MS	5597235	2018/06/25	2018/06/27	Daniel Teclu
PAH Compounds in Soil by GC/MS (SIM)	GC/MS	5598669	2018/06/26	2018/06/26	Mitesh Raj

Maxxam ID: HAP919
Sample ID: BH18-2 SA6
Matrix: Soil

Collected: 2018/06/20
Shipped:
Received: 2018/06/22

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	5595845	N/A	2018/06/27	Automated Statchk
Hot Water Extractable Boron	ICP	5597466	2018/06/25	2018/06/26	Suban Kanapathippalai
Free (WAD) Cyanide	TECH	5597355	2018/06/25	2018/06/26	Louise Harding
Conductivity	AT	5600054	2018/06/27	2018/06/27	Tahir Anwar
Hexavalent Chromium in Soil by IC	IC/SPEC	5598824	2018/06/26	2018/06/27	Sally Coughlin
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	5596511	N/A	2018/06/26	Georgeta Rusu
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	5598664	2018/06/26	2018/06/26	Atoosa Keshavarz
Strong Acid Leachable Metals by ICPMS	ICP/MS	5597235	2018/06/25	2018/06/27	Daniel Teclu
Moisture	BAL	5598736	N/A	2018/06/26	Min Yang
PAH Compounds in Soil by GC/MS (SIM)	GC/MS	5598669	2018/06/26	2018/06/27	Mitesh Raj
pH CaCl2 EXTRACT	AT	5599407	2018/06/27	2018/06/27	Surinder Rai
Sodium Adsorption Ratio (SAR)	CALC/MET	5595768	N/A	2018/06/28	Automated Statchk

Maxxam ID: HAP920
Sample ID: BH18-6 SA6
Matrix: Soil

Collected: 2018/06/20
Shipped:
Received: 2018/06/22

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	5595845	N/A	2018/06/27	Automated Statchk

TEST SUMMARY

Maxxam ID: HAP920
Sample ID: BH18-6 SA6
Matrix: Soil

Collected: 2018/06/20
Shipped:
Received: 2018/06/22

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hot Water Extractable Boron	ICP	5597466	2018/06/25	2018/06/26	Suban Kanapathipplai
Free (WAD) Cyanide	TECH	5597355	2018/06/25	2018/06/26	Louise Harding
Conductivity	AT	5600054	2018/06/27	2018/06/27	Tahir Anwar
Hexavalent Chromium in Soil by IC	IC/SPEC	5598824	2018/06/26	2018/06/27	Sally Coughlin
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	5596511	N/A	2018/06/26	Georgeta Rusu
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	5598664	2018/06/26	2018/06/26	Atoosa Keshavarz
Strong Acid Leachable Metals by ICPMS	ICP/MS	5597235	2018/06/25	2018/06/27	Daniel Teclu
Moisture	BAL	5598736	N/A	2018/06/26	Min Yang
PAH Compounds in Soil by GC/MS (SIM)	GC/MS	5598669	2018/06/26	2018/06/27	Mitesh Raj
pH CaCl2 EXTRACT	AT	5599407	2018/06/27	2018/06/27	Surinder Rai
Sodium Adsorption Ratio (SAR)	CALC/MET	5595768	N/A	2018/06/28	Automated Statchk

Maxxam ID: HAP920 Dup
Sample ID: BH18-6 SA6
Matrix: Soil

Collected: 2018/06/20
Shipped:
Received: 2018/06/22

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Free (WAD) Cyanide	TECH	5597355	2018/06/25	2018/06/26	Louise Harding
Hexavalent Chromium in Soil by IC	IC/SPEC	5598824	2018/06/26	2018/06/27	Sally Coughlin

Maxxam ID: HAP921
Sample ID: BH18-9 SA2
Matrix: Soil

Collected: 2018/06/21
Shipped:
Received: 2018/06/22

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	5595845	N/A	2018/06/27	Automated Statchk
Hot Water Extractable Boron	ICP	5597466	2018/06/25	2018/06/26	Suban Kanapathipplai
Free (WAD) Cyanide	TECH	5597355	2018/06/25	2018/06/26	Louise Harding
Conductivity	AT	5600054	2018/06/27	2018/06/27	Tahir Anwar
Hexavalent Chromium in Soil by IC	IC/SPEC	5598824	2018/06/26	2018/06/27	Sally Coughlin
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	5596511	N/A	2018/06/26	Georgeta Rusu
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	5598664	2018/06/26	2018/06/26	Atoosa Keshavarz
Strong Acid Leachable Metals by ICPMS	ICP/MS	5597235	2018/06/25	2018/06/27	Daniel Teclu
Moisture	BAL	5598736	N/A	2018/06/26	Min Yang
PAH Compounds in Soil by GC/MS (SIM)	GC/MS	5598669	2018/06/26	2018/06/27	Mitesh Raj
pH CaCl2 EXTRACT	AT	5599407	2018/06/27	2018/06/27	Surinder Rai
Sodium Adsorption Ratio (SAR)	CALC/MET	5595768	N/A	2018/06/28	Automated Statchk

Maxxam ID: HAP922
Sample ID: BH18-11 SA2
Matrix: Soil

Collected: 2018/06/21
Shipped:
Received: 2018/06/22

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	5595845	N/A	2018/06/27	Automated Statchk
Hot Water Extractable Boron	ICP	5597160	2018/06/25	2018/06/26	Suban Kanapathipplai
Free (WAD) Cyanide	TECH	5597355	2018/06/25	2018/06/26	Louise Harding

TEST SUMMARY

Maxxam ID: HAP922
Sample ID: BH18-11 SA2
Matrix: Soil

Collected: 2018/06/21
Shipped:
Received: 2018/06/22

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Conductivity	AT	5600054	2018/06/27	2018/06/27	Tahir Anwar
Hexavalent Chromium in Soil by IC	IC/SPEC	5598824	2018/06/26	2018/06/27	Sally Coughlin
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	5596511	N/A	2018/06/26	Georgeta Rusu
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	5598664	2018/06/26	2018/06/26	Atoosa Keshavarz
Strong Acid Leachable Metals by ICPMS	ICP/MS	5597235	2018/06/25	2018/06/27	Daniel Teclu
Moisture	BAL	5598736	N/A	2018/06/26	Min Yang
PAH Compounds in Soil by GC/MS (SIM)	GC/MS	5598669	2018/06/26	2018/06/27	Mitesh Raj
pH CaCl2 EXTRACT	AT	5599407	2018/06/27	2018/06/27	Surinder Rai
Sodium Adsorption Ratio (SAR)	CALC/MET	5595768	N/A	2018/06/28	Automated Statchk

Maxxam ID: HAP923
Sample ID: BH18-12 SA5
Matrix: Soil

Collected: 2018/06/21
Shipped:
Received: 2018/06/22

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	5595845	N/A	2018/06/27	Automated Statchk
Hot Water Extractable Boron	ICP	5597466	2018/06/25	2018/06/26	Suban Kanapathipillai
Free (WAD) Cyanide	TECH	5597355	2018/06/25	2018/06/26	Louise Harding
Conductivity	AT	5600054	2018/06/27	2018/06/27	Tahir Anwar
Hexavalent Chromium in Soil by IC	IC/SPEC	5598824	2018/06/26	2018/06/27	Sally Coughlin
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	5596511	N/A	2018/06/26	Georgeta Rusu
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	5598664	2018/06/26	2018/06/26	Atoosa Keshavarz
Strong Acid Leachable Metals by ICPMS	ICP/MS	5597235	2018/06/25	2018/06/27	Daniel Teclu
Moisture	BAL	5598736	N/A	2018/06/26	Min Yang
PAH Compounds in Soil by GC/MS (SIM)	GC/MS	5598669	2018/06/26	2018/06/27	Mitesh Raj
pH CaCl2 EXTRACT	AT	5599407	2018/06/27	2018/06/27	Surinder Rai
Sodium Adsorption Ratio (SAR)	CALC/MET	5595768	N/A	2018/06/28	Automated Statchk

GENERAL COMMENTS

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

Package 1	2.3°C
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Sample HAP915 [BH18-2 SA1] : PAH Analysis: Due to the sample matrix, sample required dilution. Detection limits were adjusted accordingly.

Sample HAP918 [BH18-5 SA1B] : SAR Analysis: Sodium was not detected. To report SAR the sodium detection limit was used in the calculation. This value represents a maximum ratio.

Results relate only to the items tested.

QUALITY ASSURANCE REPORT

Golder Associates Ltd
Client Project #: 1792964
Sampler Initials: CL

QC Batch	Parameter	Date	Matrix Spike		SPIKED BLANK		Method Blank		RPD	
			% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
5596511	1,4-Difluorobenzene	2018/06/25	104	60 - 140	102	60 - 140	105	%		
5596511	4-Bromofluorobenzene	2018/06/25	95	60 - 140	94	60 - 140	90	%		
5596511	D10-Ethylbenzene	2018/06/25	92	60 - 140	87	60 - 140	84	%		
5596511	D4-1,2-Dichloroethane	2018/06/25	82	60 - 140	80	60 - 140	83	%		
5598664	o-Terphenyl	2018/06/26	94	60 - 130	91	60 - 130	89	%		
5598669	D10-Anthracene	2018/06/26	83	50 - 130	84	50 - 130	81	%		
5598669	D14-Terphenyl (FS)	2018/06/26	81	50 - 130	79	50 - 130	76	%		
5598669	D8-Acenaphthylene	2018/06/26	78	50 - 130	79	50 - 130	73	%		
5596511	Benzene	2018/06/26	115	60 - 140	113	60 - 140	<0.020	ug/g	NC	50
5596511	Ethylbenzene	2018/06/26	100	60 - 140	98	60 - 140	<0.020	ug/g	NC	50
5596511	F1 (C6-C10) - BTEX	2018/06/26					<10	ug/g	NC	30
5596511	F1 (C6-C10)	2018/06/26	96	60 - 140	98	80 - 120	<10	ug/g	NC	30
5596511	o-Xylene	2018/06/26	98	60 - 140	98	60 - 140	<0.020	ug/g	NC	50
5596511	p+m-Xylene	2018/06/26	92	60 - 140	93	60 - 140	<0.040	ug/g	NC	50
5596511	Toluene	2018/06/26	94	60 - 140	93	60 - 140	<0.020	ug/g	NC	50
5596511	Total Xylenes	2018/06/26					<0.040	ug/g	NC	50
5597160	Hot Water Ext. Boron (B)	2018/06/26	101	75 - 125	98	75 - 125	<0.050	ug/g	1.3	40
5597235	Acid Extractable Antimony (Sb)	2018/06/27	85	75 - 125	107	80 - 120	<0.20	ug/g	10	30
5597235	Acid Extractable Arsenic (As)	2018/06/27	92	75 - 125	98	80 - 120	<1.0	ug/g	8.7	30
5597235	Acid Extractable Barium (Ba)	2018/06/27	NC	75 - 125	99	80 - 120	<0.50	ug/g	7.9	30
5597235	Acid Extractable Beryllium (Be)	2018/06/27	98	75 - 125	100	80 - 120	<0.20	ug/g	6.7	30
5597235	Acid Extractable Boron (B)	2018/06/27	86	75 - 125	99	80 - 120	<5.0	ug/g	4.9	30
5597235	Acid Extractable Cadmium (Cd)	2018/06/27	97	75 - 125	102	80 - 120	<0.10	ug/g	14	30
5597235	Acid Extractable Chromium (Cr)	2018/06/27	91	75 - 125	99	80 - 120	<1.0	ug/g	6.1	30
5597235	Acid Extractable Cobalt (Co)	2018/06/27	89	75 - 125	98	80 - 120	<0.10	ug/g	5.3	30
5597235	Acid Extractable Copper (Cu)	2018/06/27	NC	75 - 125	99	80 - 120	<0.50	ug/g	5.0	30
5597235	Acid Extractable Lead (Pb)	2018/06/27	93	75 - 125	102	80 - 120	<1.0	ug/g	5.2	30
5597235	Acid Extractable Mercury (Hg)	2018/06/27	91	75 - 125	100	80 - 120	<0.050	ug/g	NC	30
5597235	Acid Extractable Molybdenum (Mo)	2018/06/27	95	75 - 125	98	80 - 120	<0.50	ug/g	NC	30
5597235	Acid Extractable Nickel (Ni)	2018/06/27	NC	75 - 125	97	80 - 120	<0.50	ug/g	5.4	30
5597235	Acid Extractable Selenium (Se)	2018/06/27	96	75 - 125	102	80 - 120	<0.50	ug/g	NC	30

QUALITY ASSURANCE REPORT(CONT'D)

Golder Associates Ltd
Client Project #: 1792964
Sampler Initials: CL

QC Batch	Parameter	Date	Matrix Spike		SPIKED BLANK		Method Blank		RPD	
			% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
5597235	Acid Extractable Silver (Ag)	2018/06/27	94	75 - 125	98	80 - 120	<0.20	ug/g	NC	30
5597235	Acid Extractable Thallium (Tl)	2018/06/27	93	75 - 125	101	80 - 120	<0.050	ug/g	12	30
5597235	Acid Extractable Uranium (U)	2018/06/27	92	75 - 125	97	80 - 120	<0.050	ug/g	4.1	30
5597235	Acid Extractable Vanadium (V)	2018/06/27	NC	75 - 125	96	80 - 120	<5.0	ug/g	8.1	30
5597235	Acid Extractable Zinc (Zn)	2018/06/27	NC	75 - 125	102	80 - 120	<5.0	ug/g	3.2	30
5597355	WAD Cyanide (Free)	2018/06/26	104	75 - 125	101	80 - 120	<0.01	ug/g	NC	35
5597466	Hot Water Ext. Boron (B)	2018/06/26	96	75 - 125	97	75 - 125	<0.050	ug/g	14	40
5598664	F2 (C10-C16 Hydrocarbons)	2018/06/26	102	50 - 130	103	80 - 120	<10	ug/g	NC	30
5598664	F3 (C16-C34 Hydrocarbons)	2018/06/26	100	50 - 130	99	80 - 120	<50	ug/g	NC	30
5598664	F4 (C34-C50 Hydrocarbons)	2018/06/26	96	50 - 130	97	80 - 120	<50	ug/g	NC	30
5598669	1-Methylnaphthalene	2018/06/26	81	50 - 130	84	50 - 130	<0.0050	ug/g	NC	40
5598669	2-Methylnaphthalene	2018/06/26	82	50 - 130	85	50 - 130	<0.0050	ug/g	NC	40
5598669	Acenaphthene	2018/06/26	85	50 - 130	87	50 - 130	<0.0050	ug/g	NC	40
5598669	Acenaphthylene	2018/06/26	85	50 - 130	89	50 - 130	<0.0050	ug/g	NC	40
5598669	Anthracene	2018/06/26	83	50 - 130	84	50 - 130	<0.0050	ug/g	NC	40
5598669	Benzo(a)anthracene	2018/06/26	94	50 - 130	96	50 - 130	<0.0050	ug/g	NC	40
5598669	Benzo(a)pyrene	2018/06/26	89	50 - 130	93	50 - 130	<0.0050	ug/g	NC	40
5598669	Benzo(b/j)fluoranthene	2018/06/26	81	50 - 130	84	50 - 130	<0.0050	ug/g	NC	40
5598669	Benzo(g,h,i)perylene	2018/06/26	83	50 - 130	92	50 - 130	<0.0050	ug/g	NC	40
5598669	Benzo(k)fluoranthene	2018/06/26	84	50 - 130	92	50 - 130	<0.0050	ug/g	NC	40
5598669	Chrysene	2018/06/26	90	50 - 130	94	50 - 130	<0.0050	ug/g	NC	40
5598669	Dibenz(a,h)anthracene	2018/06/26	88	50 - 130	90	50 - 130	<0.0050	ug/g	NC	40
5598669	Fluoranthene	2018/06/26	89	50 - 130	92	50 - 130	<0.0050	ug/g	NC	40
5598669	Fluorene	2018/06/26	85	50 - 130	87	50 - 130	<0.0050	ug/g	NC	40
5598669	Indeno(1,2,3-cd)pyrene	2018/06/26	89	50 - 130	95	50 - 130	<0.0050	ug/g	NC	40
5598669	Naphthalene	2018/06/26	80	50 - 130	83	50 - 130	<0.0050	ug/g	NC	40
5598669	Phenanthrene	2018/06/26	84	50 - 130	87	50 - 130	<0.0050	ug/g	NC	40
5598669	Pyrene	2018/06/26	88	50 - 130	89	50 - 130	<0.0050	ug/g	NC	40
5598736	Moisture	2018/06/26							0.94	20
5598824	Chromium (VI)	2018/06/27	75	70 - 130	88	80 - 120	<0.2	ug/g	NC	35
5599407	Available (CaCl2) pH	2018/06/27			101	97 - 103			0.36	N/A

QUALITY ASSURANCE REPORT(CONT'D)

QC Batch	Parameter	Date	Matrix Spike		SPIKED BLANK		Method Blank		RPD	
			% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
5600054	Conductivity	2018/06/27			100	90 - 110	<0.002	mS/cm	1.9	10
5603126	F4G-sg (Grav. Heavy Hydrocarbons)	2018/06/28	117	65 - 135	101	65 - 135	<100	ug/g	8.0	50

N/A = Not Applicable

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

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

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

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

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

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

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

VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by the following individual(s).

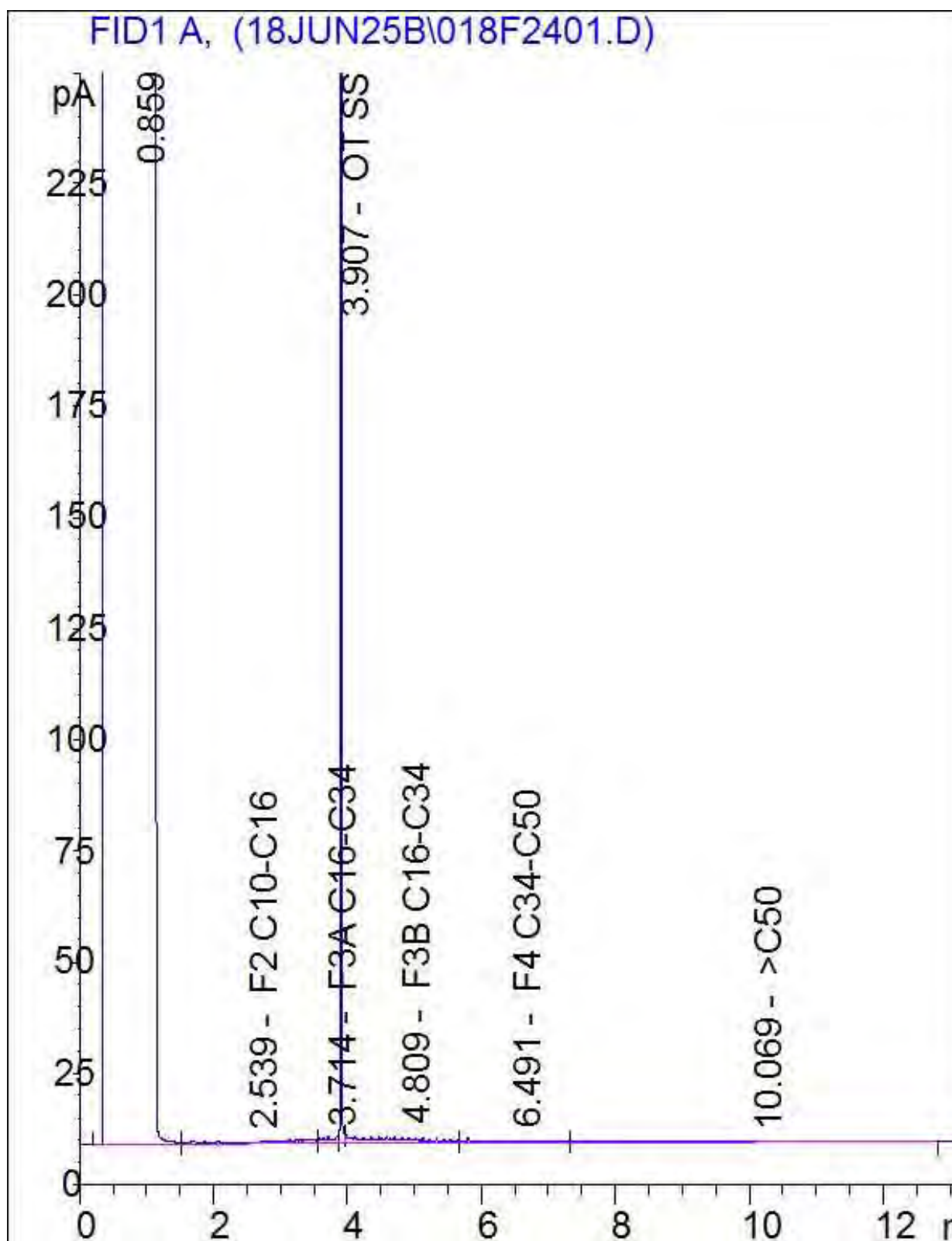
Cristina Carriere

Cristina Carriere, Scientific Service Specialist

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

Maxxam A subsidiary of the Maxxam Group		Maxxam Analytics International Corporation o/a Maxxam Analytics 6740 Campbellville Road, Mississauga, Ontario Canada L5N 2L8 Tel: (905) 817-5700 Toll-free 800-563-6266 Fax: (905) 817-5777 www.maxxam.ca				CHAIN OF CUSTODY RECORD Page 1 of 1							
INVOICE TO: Company Name: #1326 Golder Associates Ltd Attention: Accounts Payable Address: 6925 Century Ave Suite 100 Mississauga ON L5N 7K2 Tel: (905) 567-4444 x Fax: (905) 567-6561 x Email: AP_CustomerService@golder.com		REPORT TO: Company Name: Golder Associates Ltd. Attention: Prabhjot Bal Address: Tel: Fax: Email: prabhjot_bal@golder.com		PROJECT INFORMATION: Quotation #: B70915 P.O. #: 1792964 Project: Project Name: Site #: Sampled By: Carl Linard		Laboratory Use Only: Maxxam Job #: Bottle Order #: COC #: Project Manager: C#641804-14-01 Ema Gitej							
MOE REGULATED DRINKING WATER OR WATER INTENDED FOR HUMAN CONSUMPTION MUST BE SUBMITTED ON THE MAXXAM DRINKING WATER CHAIN OF CUSTODY						ANALYSIS REQUESTED (PLEASE BE SPECIFIC) 22-Jun-18 14:00 Ema Gitej B8F4648 PS4 ENV-1163							
Regulation 153 (2011) ☐ Table 1 ☒ Res/Park ☐ Medium/Fine ☐ Table 2 ☐ Ind/Comm ☒ Coarse ☒ Table 3 ☐ Agri/Other ☒ For RSC ☐ Table		Other Regulations ☐ CCME ☐ Sanitary Sewer Bylaw ☐ Reg 558 ☐ Storm Sewer Bylaw ☐ MISA Municipality ☐ PWQO ☐ Other		Special Instructions		Field Filtered (please circle): Metals / Hg / Cr VI PHCs (BTEX, FI-F4) PAHS Metals and Inorganics							
Include Criteria on Certificate of Analysis (Y/N)?						Turnaround Time (TAT) Required: Please provide advance notice for rush projects Regular (Standard) TAT: (will be applied if Rush TAT is not specified) Standard TAT = 5-7 Working days for most tests. Please note: Standard TAT for certain tests such as BOD and Dioxins/Furans are > 5 days - contact your Project Manager for details. Job Specific Rush TAT (if applies to entire submission) Date Required: Time Required: ☐ Rush Confirmation Number: (call lab for #)							
Sample Barcode Label		Sample (Location) Identification		Date Sampled		Time Sampled		Matrix		# of Bottles		Comments	
1		BH18-1 SA4		June 20/18		NA		Soil		4			
2		BH18-2 SA1		June 20/18						4			
3		BH18-3 SA2		June 20/18						4			
4		BH18-4 SA3		June 21/18						4			
5		BH18-5 SA1B		June 20/18						4			
6		BH18-2 SA6		June 20/18						4			
7		BH18-6 SA6		June 20/18						4			
8		BH18-9 SA2		June 21/18						4			
9		BH18-11 SA2		June 21/18						4			
10		BH18-10 SAS		June 21/18		✓		✓		4			
* RELINQUISHED BY: (Signature/Print) Prabhjot Bal		Date: (YY/MM/DD) 18/06/22		Time 14:00		RECEIVED BY: (Signature/Print) Poojap/Poojap Kulkarni		Date: (YY/MM/DD) 20/06/22		Time 14:00		# Jars used and not submitted 0	
												Laboratory Use Only Time Sensitive Temperature (°C) on Recept: 4/1/2 Custody Seal Present Intact: ☒	
* UNLESS OTHERWISE AGREED TO IN WRITING, WORK SUBMITTED ON THIS CHAIN OF CUSTODY IS SUBJECT TO MAXXAM'S STANDARD TERMS AND CONDITIONS. SIGNING OF THIS CHAIN OF CUSTODY DOCUMENT IS ACKNOWLEDGMENT AND ACCEPTANCE OF OUR TERMS WHICH ARE AVAILABLE FOR VIEWING AT WWW.MAXXAM.CA/TERMS. * IT IS THE RESPONSIBILITY OF THE RELINQUISHER TO ENSURE THE ACCURACY OF THE CHAIN OF CUSTODY RECORD. AN INCOMPLETE CHAIN OF CUSTODY MAY RESULT IN ANALYTICAL TAT DELAYS. ** SAMPLE CONTAINER, PRESERVATION, HOLD TIME AND PACKAGE INFORMATION CAN BE VIEWED AT HTTP://MAXXAM.CA/WP-CONTENT/UPLOADS/ONTARIO-COC.PDF.												White: Maxxa Yellow: Client	

Petroleum Hydrocarbons F2-F4 in Soil Chromatogram



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

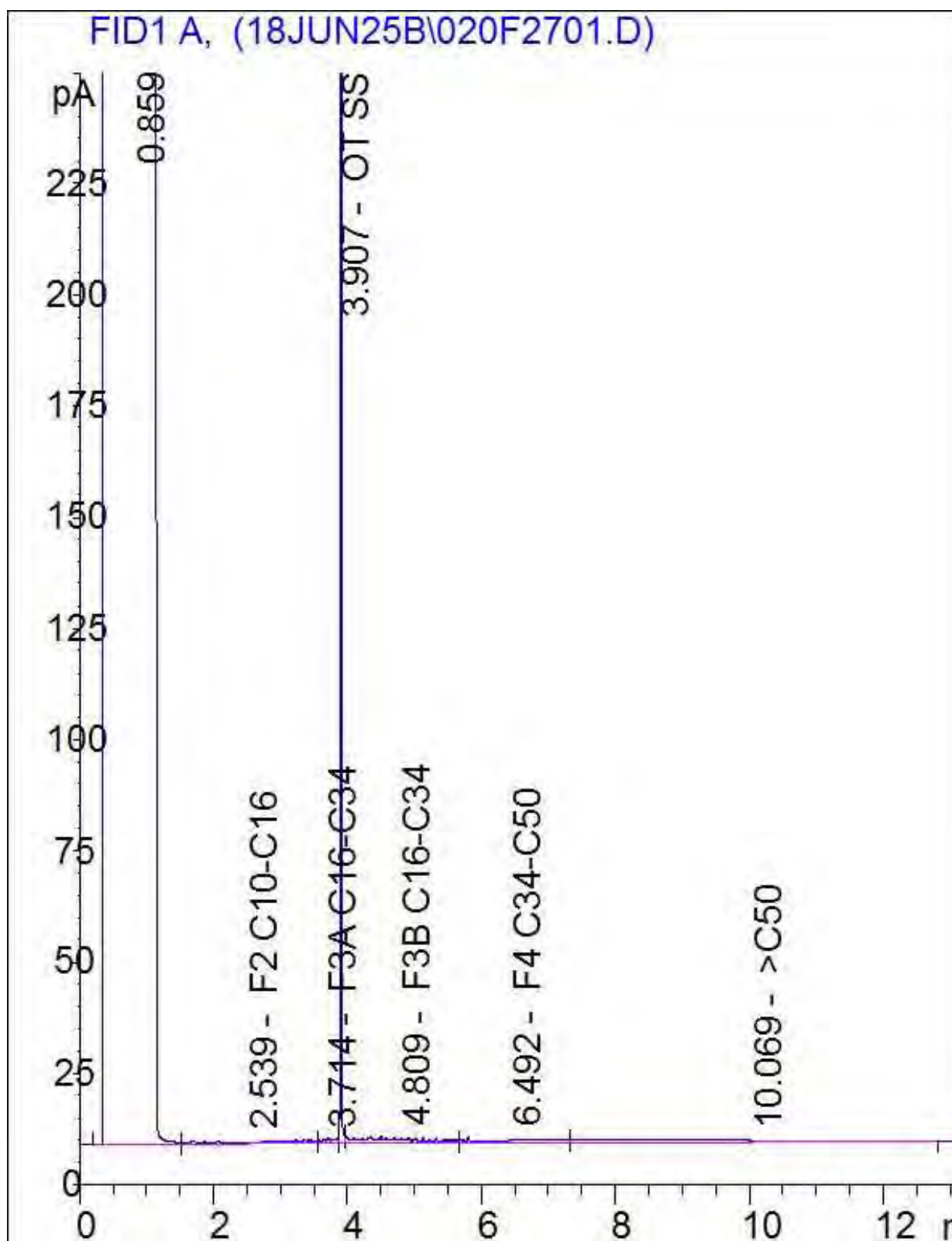
FID1 A, (18JUN25B\019F2501.D)

Chromatogram showing detector response (pA) versus time (min). The plot displays several peaks with their retention times and areas.

Retention Time (min)	Peak Label	Area
3.452	F2 C10-C16	3.85
3.852	F3A C16-C34	4.73
5.637	F3B C16-C34	3.55
5.984	F4 C34-C50	1.95
7.389	> C140	1497.1
8.240		10.53

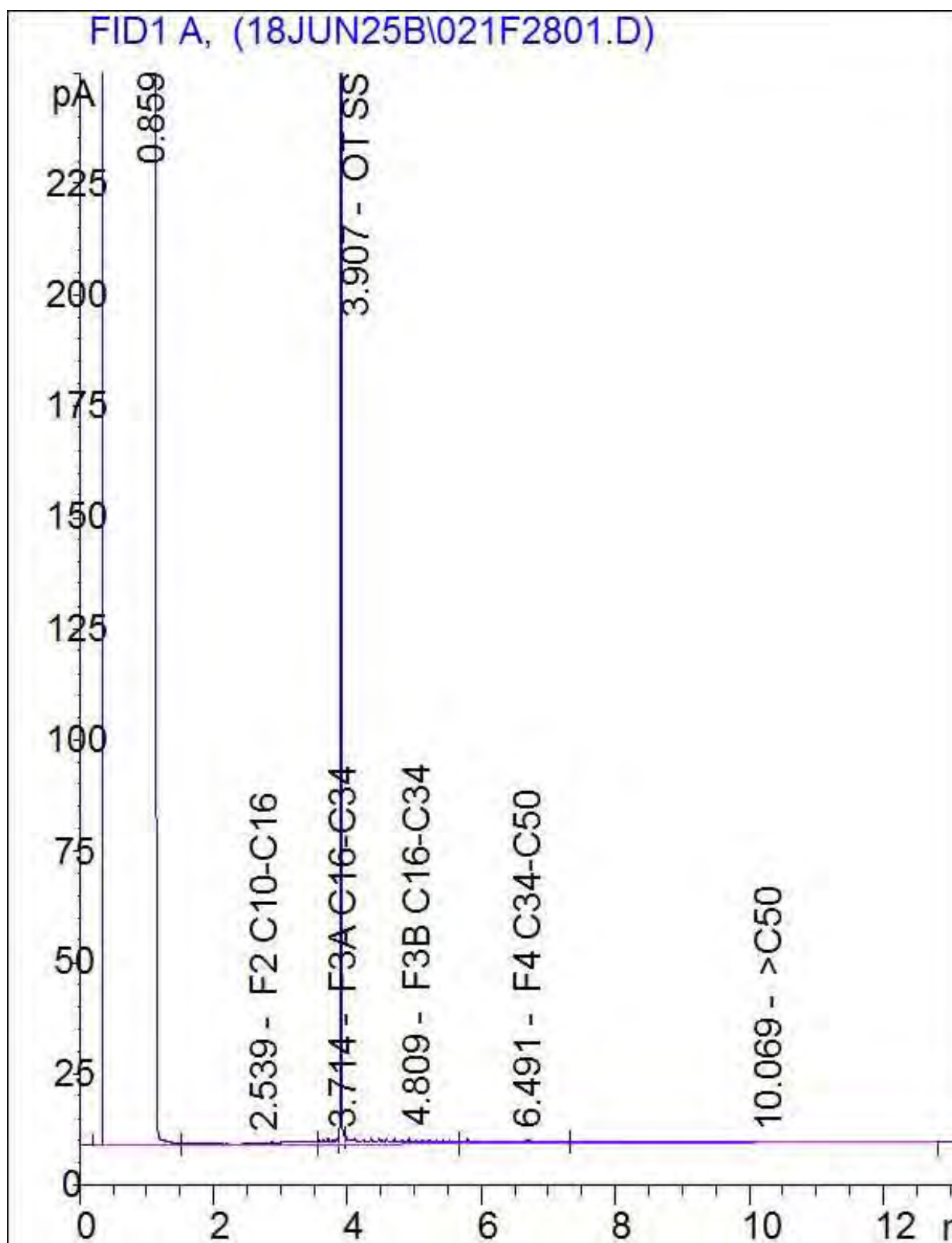
Page 27 of 36

Petroleum Hydrocarbons F2-F4 in Soil Chromatogram



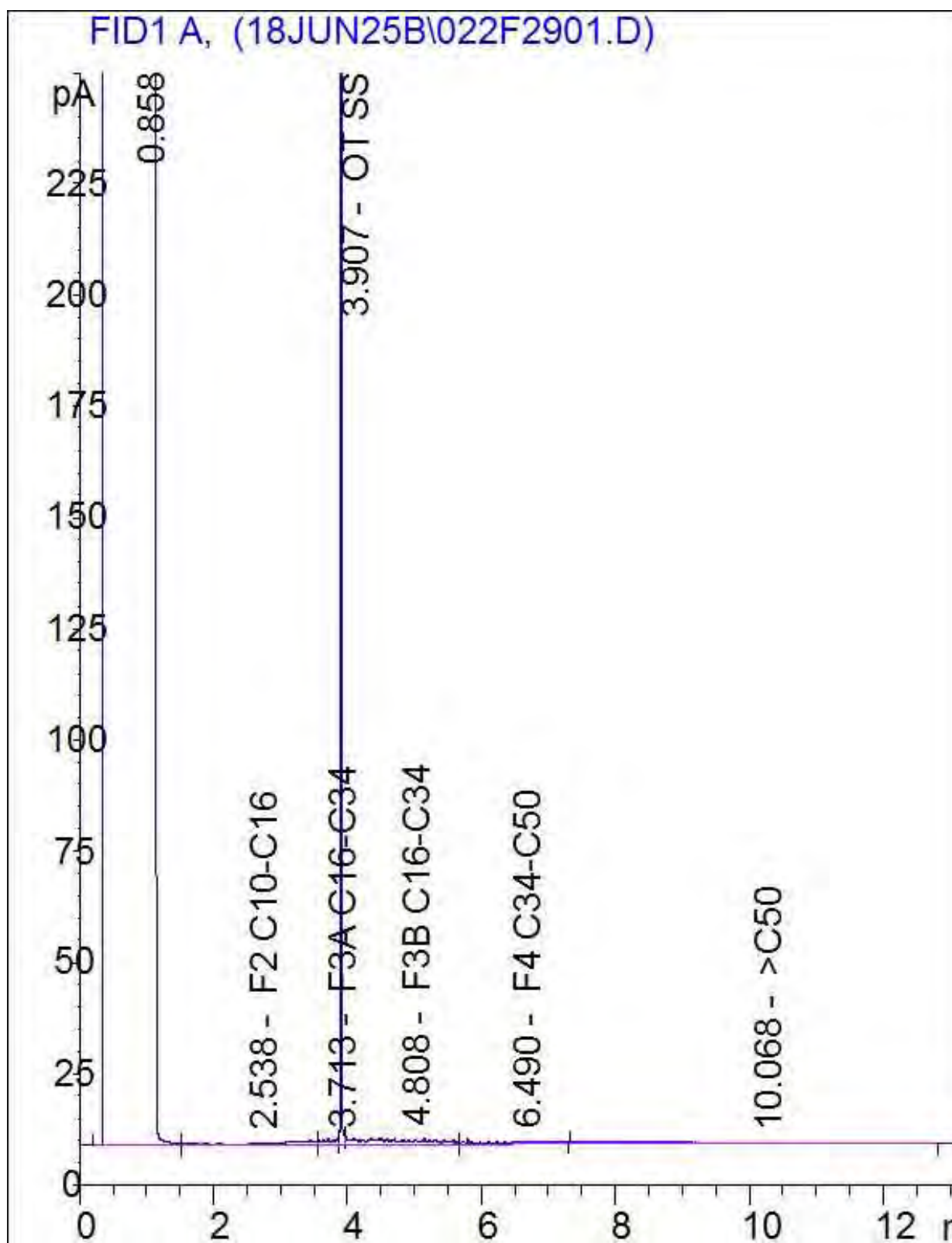
Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Petroleum Hydrocarbons F2-F4 in Soil Chromatogram



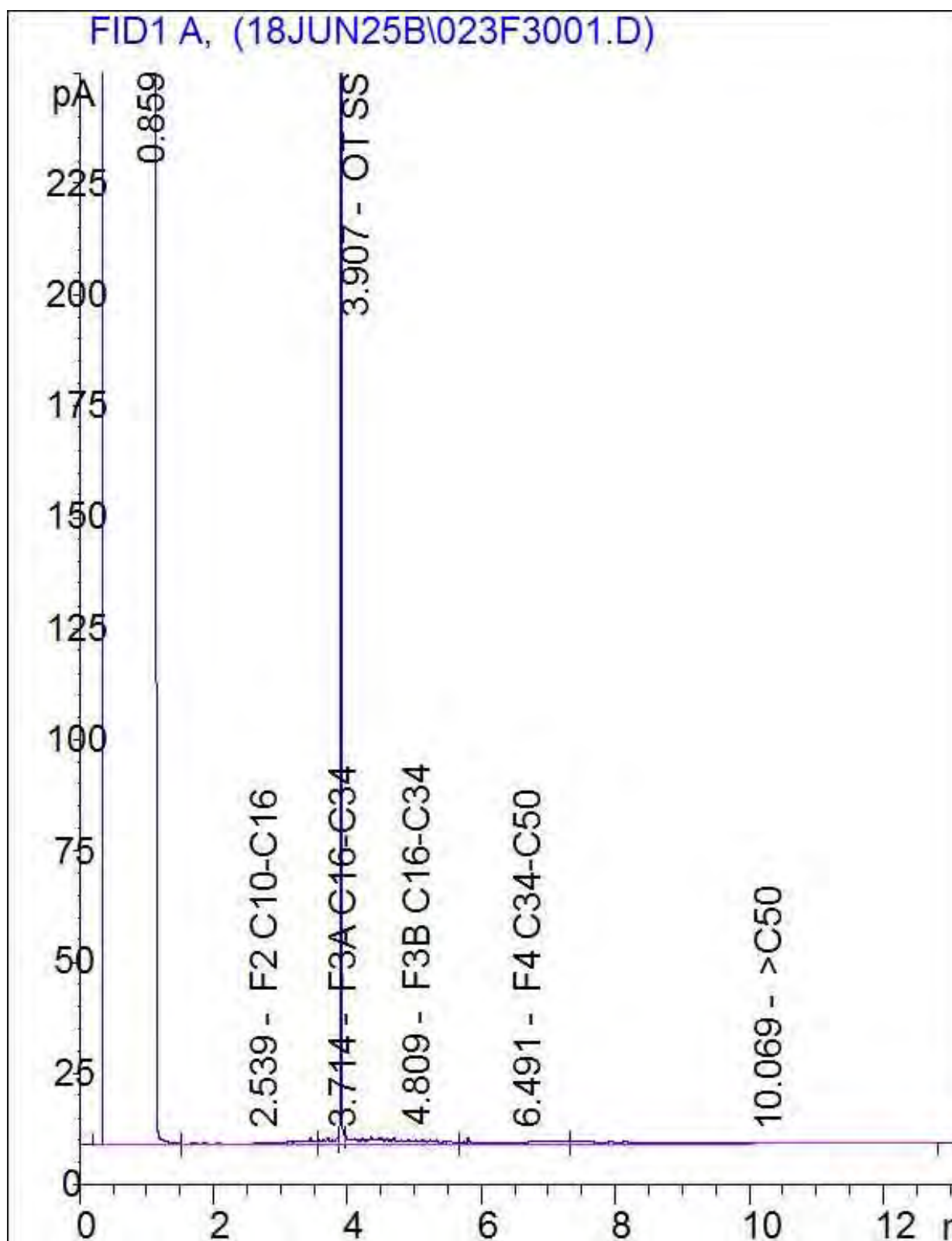
Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Petroleum Hydrocarbons F2-F4 in Soil Chromatogram



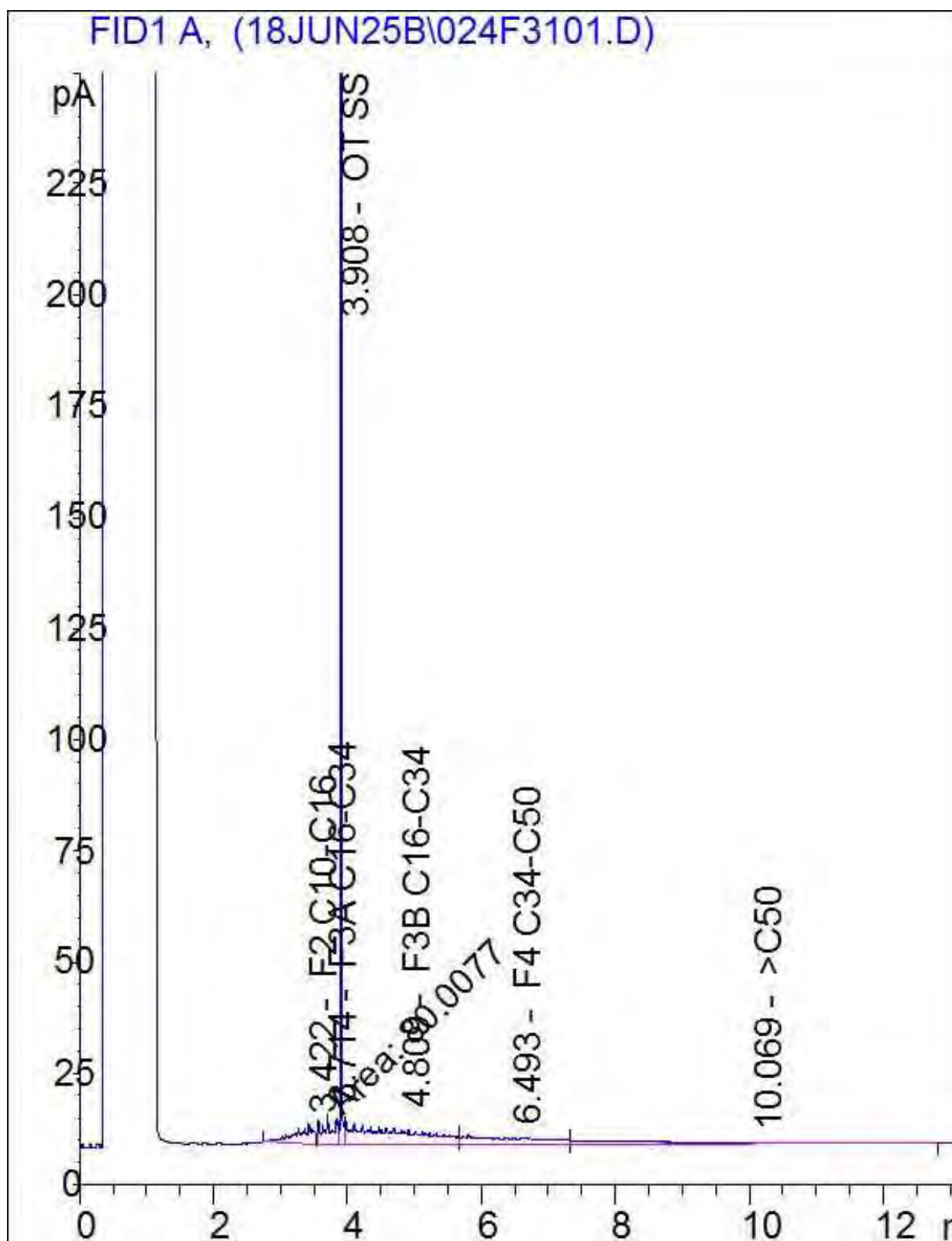
Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Petroleum Hydrocarbons F2-F4 in Soil Chromatogram



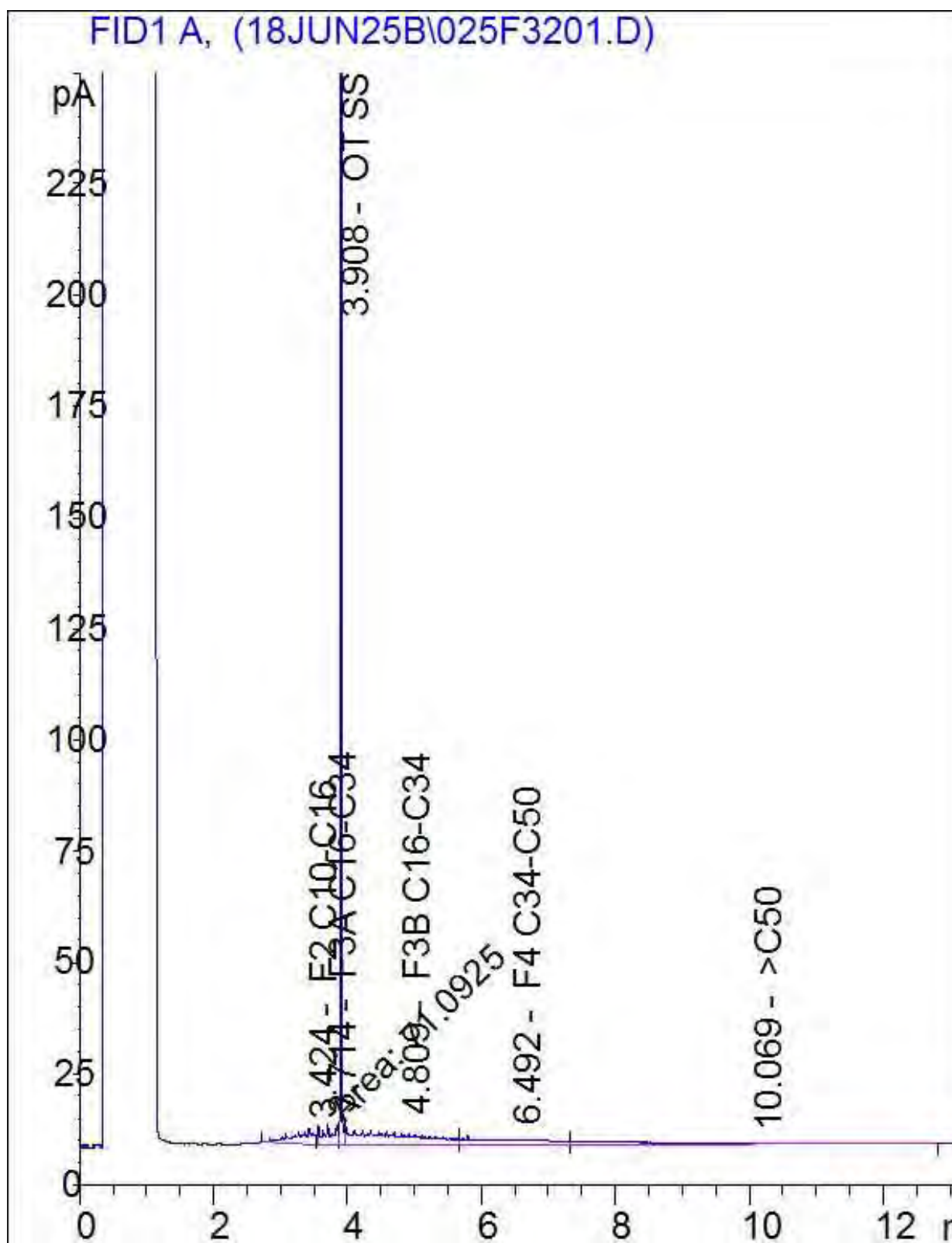
Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Petroleum Hydrocarbons F2-F4 in Soil Chromatogram



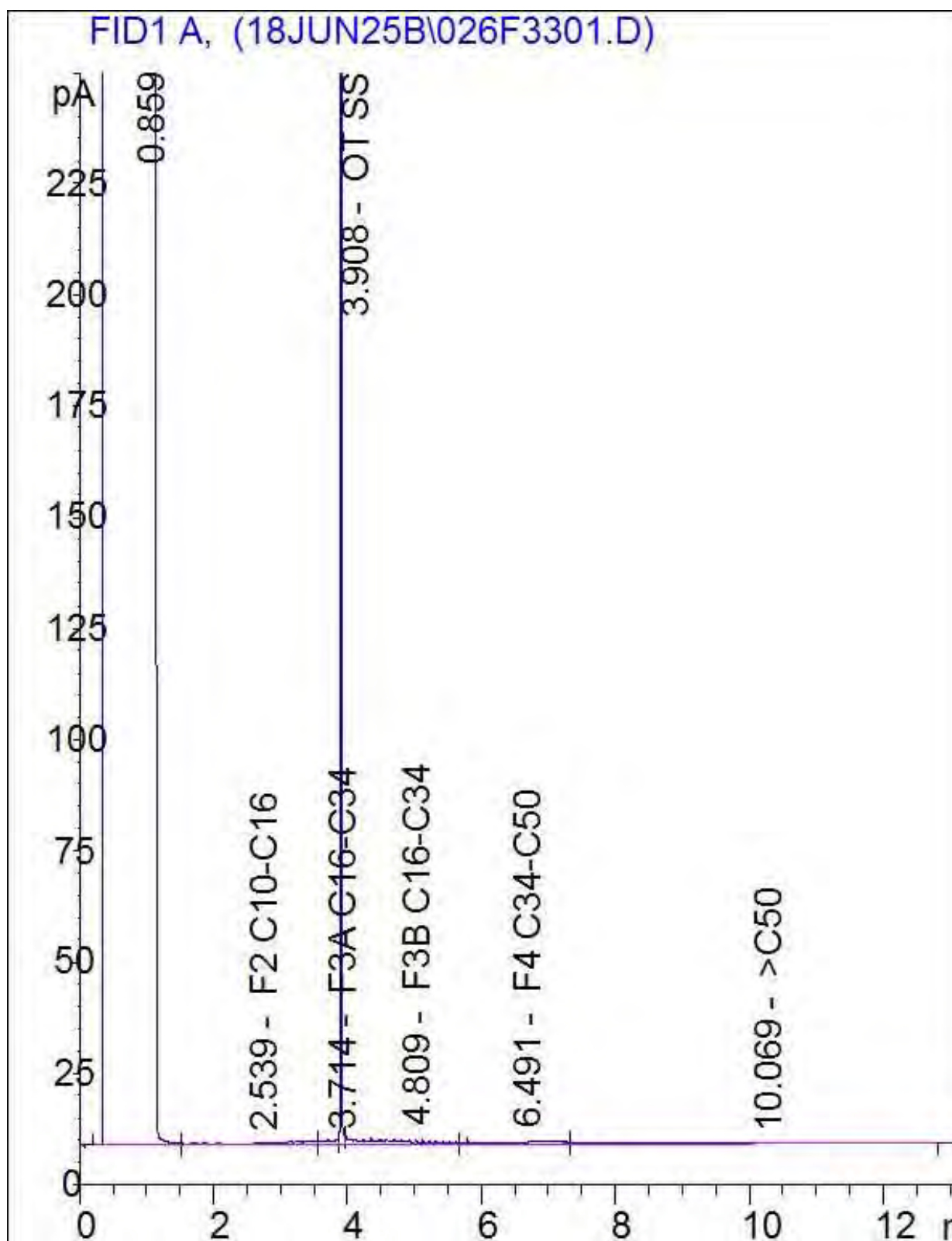
Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Petroleum Hydrocarbons F2-F4 in Soil Chromatogram



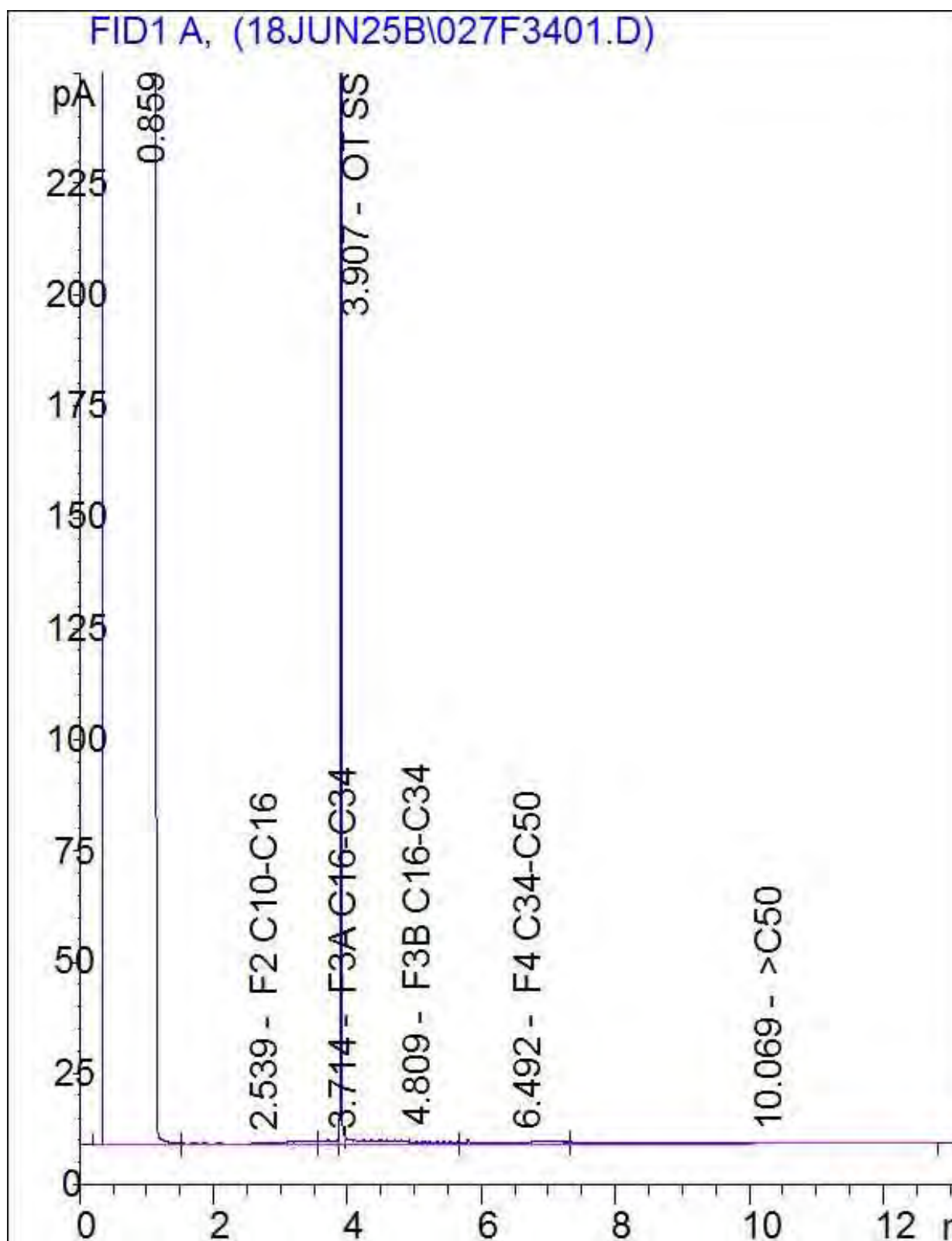
Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Petroleum Hydrocarbons F2-F4 in Soil Chromatogram



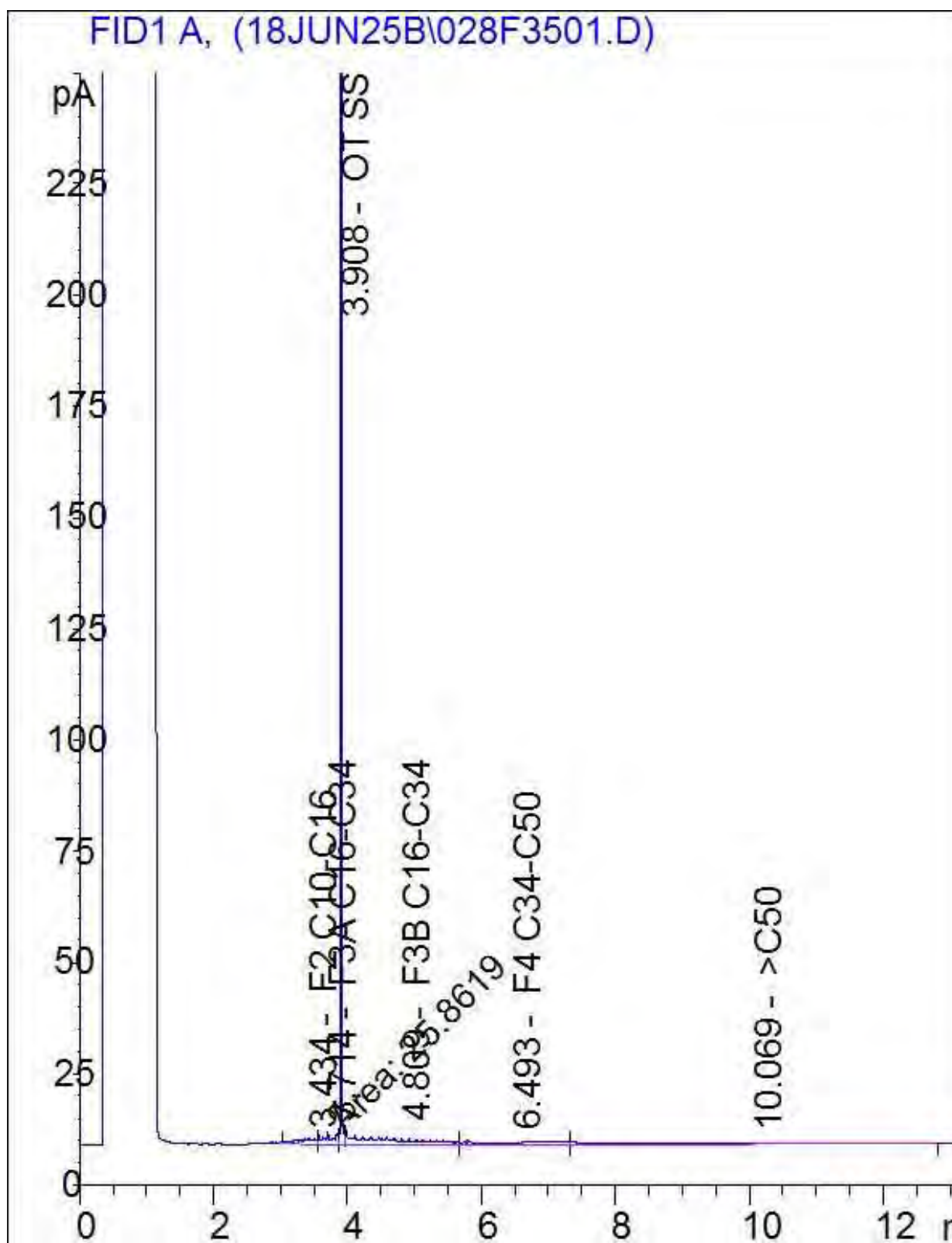
Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Petroleum Hydrocarbons F2-F4 in Soil Chromatogram



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

Petroleum Hydrocarbons F2-F4 in Soil Chromatogram



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

Your Project #: 1792964 (5000)
Your C.O.C. #: 674482-01-01

Attention: Erti Mansaku

Golder Associates Ltd
6925 Century Ave
Suite 100
Mississauga, ON
CANADA L5N 7K2

Report Date: 2018/07/27
Report #: R5322600
Version: 1 - Final

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B8I3496

Received: 2018/07/20, 15:25

Sample Matrix: Water
Samples Received: 7

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Reference
Methylnaphthalene Sum	3	N/A	2018/07/25	CAM SOP-00301	EPA 8270D m
Methylnaphthalene Sum	2	N/A	2018/07/26	CAM SOP-00301	EPA 8270D m
Chloride by Automated Colourimetry	3	N/A	2018/07/25	CAM SOP-00463	EPA 325.2 m
Chloride by Automated Colourimetry	2	N/A	2018/07/27	CAM SOP-00463	EPA 325.2 m
Chromium (VI) in Water	5	N/A	2018/07/26	CAM SOP-00436	EPA 7199 m
Free (WAD) Cyanide	3	N/A	2018/07/24	CAM SOP-00457	OMOE E3015 m
Free (WAD) Cyanide	2	N/A	2018/07/25	CAM SOP-00457	OMOE E3015 m
Petroleum Hydro. CCME F1 & BTEX in Water	5	N/A	2018/07/24	CAM SOP-00315	CCME PHC-CWS m
Petroleum Hydro. CCME F1 & BTEX in Water	2	N/A	2018/07/25	CAM SOP-00315	CCME PHC-CWS m
Petroleum Hydrocarbons F2-F4 in Water (1)	3	2018/07/24	2018/07/25	CAM SOP-00316	CCME PHC-CWS m
Petroleum Hydrocarbons F2-F4 in Water (1)	2	2018/07/25	2018/07/26	CAM SOP-00316	CCME PHC-CWS m
Mercury	5	2018/07/26	2018/07/26	CAM SOP-00453	EPA 7470A m
Dissolved Metals by ICPMS	3	N/A	2018/07/25	CAM SOP-00447	EPA 6020B m
Dissolved Metals by ICPMS	2	N/A	2018/07/26	CAM SOP-00447	EPA 6020B m
PAH Compounds in Water by GC/MS (SIM)	3	2018/07/24	2018/07/25	CAM SOP-00318	EPA 8270D m
PAH Compounds in Water by GC/MS (SIM)	2	2018/07/25	2018/07/26	CAM SOP-00318	EPA 8270D m

Remarks:

Maxxam Analytics' laboratories are accredited to ISO/IEC 17025:2005 for specific parameters on scopes of accreditation. Unless otherwise noted, procedures used by Maxxam are based upon recognized Provincial, Federal or US method compendia such as CCME, MDDELCC, EPA, APHA.

All work recorded herein has been done in accordance with procedures and practices ordinarily exercised by professionals in Maxxam's profession using accepted testing methodologies, quality assurance and quality control procedures (except where otherwise agreed by the client and Maxxam in writing). All data is in statistical control and has met quality control and method performance criteria unless otherwise noted. All method blanks are reported; unless indicated otherwise, associated sample data are not blank corrected.

Maxxam Analytics' liability is limited to the actual cost of the requested analyses, unless otherwise agreed in writing. There is no other warranty expressed or implied. Maxxam has been retained to provide analysis of samples provided by the Client using the testing methodology referenced in this report. Interpretation and use of test results are the sole responsibility of the Client and are not within the scope of services provided by Maxxam, unless otherwise agreed in writing.

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

Your Project #: 1792964 (5000)
Your C.O.C. #: 674482-01-01

Attention: Erti Mansaku

Golder Associates Ltd
6925 Century Ave
Suite 100
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CANADA L5N 7K2

Report Date: 2018/07/27
Report #: R5322600
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CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B8I3496

Received: 2018/07/20, 15:25

dilution methods.

Results relate to samples tested.

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

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

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

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

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.

Ema Gitej, Senior Project Manager

Email: EGitej@maxxam.ca

Phone# (905)817-5829

=====

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

PETROLEUM HYDROCARBONS (CCME)

Maxxam ID			HGV430			HGV431		
Sampling Date			2018/07/19			2018/07/19		
COC Number			674482-01-01			674482-01-01		
	UNITS	Criteria	TRIP BLANK	RDL	QC Batch	TRIP SPIKE	RDL	QC Batch
BTEX & F1 Hydrocarbons								
Benzene	ug/L	44	<0.20	0.20	5643717	89	0.20	5643717
Toluene	ug/L	18000	<0.20	0.20	5643717	91	0.20	5643717
Ethylbenzene	ug/L	2300	<0.20	0.20	5643717	87	0.20	5643717
o-Xylene	ug/L	-	<0.20	0.20	5643717	85	0.20	5643717
p+m-Xylene	ug/L	-	<0.40	0.40	5643717	86	0.40	5643717
Total Xylenes	ug/L	4200	<0.40	0.40	5643717			
F1 (C6-C10)	ug/L	750	<25	25	5643717			
F1 (C6-C10) - BTEX	ug/L	750	<25	25	5643717			
Surrogate Recovery (%)								
1,4-Difluorobenzene	%	-	102		5643717	102		5643717
4-Bromofluorobenzene	%	-	97		5643717	96		5643717
D10-Ethylbenzene	%	-	87		5643717	87		5643717
D4-1,2-Dichloroethane	%	-	98		5643717	97		5643717
RDL = Reportable Detection Limit QC Batch = Quality Control Batch Criteria: Ontario Reg. 153/04 (Amended April 15, 2011) Table 3: Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition Non- Potable Ground Water - All Types of Property Uses - Coarse Textured Soil								

O.REG 153 METALS & INORGANICS PKG (WTR)

Maxxam ID			HGV427			HGV427			HGV428		
Sampling Date			2018/07/19 11:30			2018/07/19 11:30			2018/07/19 13:00		
COC Number			674482-01-01			674482-01-01			674482-01-01		
	UNITS	Criteria	BH18-01	RDL	QC Batch	BH18-01 Lab-Dup	RDL	QC Batch	BH18-07	RDL	QC Batch

Inorganics

WAD Cyanide (Free)	ug/L	66	<1	1	5639606				<1	1	5639606
Dissolved Chloride (Cl-)	mg/L	2300	13	1.0	5645698				41	1.0	5645698

Metals

Chromium (VI)	ug/L	140	<0.50	0.50	5642829				<0.50	0.50	5642829
Mercury (Hg)	ug/L	0.29	<0.1	0.1	5648813				<0.1	0.1	5648813
Dissolved Antimony (Sb)	ug/L	20000	<0.50	0.50	5644554	<0.50	0.50	5644554	<0.50	0.50	5644554
Dissolved Arsenic (As)	ug/L	1900	2.4	1.0	5644554	2.4	1.0	5644554	<1.0	1.0	5644554
Dissolved Barium (Ba)	ug/L	29000	39	2.0	5644554	37	2.0	5644554	40	2.0	5644554
Dissolved Beryllium (Be)	ug/L	67	<0.50	0.50	5644554	<0.50	0.50	5644554	<0.50	0.50	5644554
Dissolved Boron (B)	ug/L	45000	320	10	5644554	320	10	5644554	600	10	5644554
Dissolved Cadmium (Cd)	ug/L	2.7	<0.10	0.10	5644554	<0.10	0.10	5644554	<0.10	0.10	5644554
Dissolved Chromium (Cr)	ug/L	810	<5.0	5.0	5644554	<5.0	5.0	5644554	<5.0	5.0	5644554
Dissolved Cobalt (Co)	ug/L	66	1.7	0.50	5644554	1.6	0.50	5644554	0.90	0.50	5644554
Dissolved Copper (Cu)	ug/L	87	<1.0	1.0	5644554	<1.0	1.0	5644554	1.4	1.0	5644554
Dissolved Lead (Pb)	ug/L	25	<0.50	0.50	5644554	<0.50	0.50	5644554	<0.50	0.50	5644554
Dissolved Molybdenum (Mo)	ug/L	9200	3.9	0.50	5644554	3.8	0.50	5644554	4.5	0.50	5644554
Dissolved Nickel (Ni)	ug/L	490	6.9	1.0	5644554	7.1	1.0	5644554	5.3	1.0	5644554
Dissolved Selenium (Se)	ug/L	63	<2.0	2.0	5644554	<2.0	2.0	5644554	<2.0	2.0	5644554
Dissolved Silver (Ag)	ug/L	1.5	<0.10	0.10	5644554	<0.10	0.10	5644554	<0.10	0.10	5644554
Dissolved Sodium (Na)	ug/L	2300000	64000	100	5644554	64000	100	5644554	100000	100	5644554
Dissolved Thallium (Tl)	ug/L	510	<0.050	0.050	5644554	<0.050	0.050	5644554	<0.050	0.050	5644554
Dissolved Uranium (U)	ug/L	420	4.6	0.10	5644554	4.6	0.10	5644554	4.9	0.10	5644554
Dissolved Vanadium (V)	ug/L	250	<0.50	0.50	5644554	<0.50	0.50	5644554	<0.50	0.50	5644554
Dissolved Zinc (Zn)	ug/L	1100	<5.0	5.0	5644554	<5.0	5.0	5644554	<5.0	5.0	5644554

RDL = Reportable Detection Limit

QC Batch = Quality Control Batch

Lab-Dup = Laboratory Initiated Duplicate

Criteria: Ontario Reg. 153/04 (Amended April 15, 2011)

Table 3: Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition

Non- Potable Ground Water - All Types of Property Uses - Coarse Textured Soil

O.REG 153 METALS & INORGANICS PKG (WTR)

Maxxam ID			HHK621	HHK623		HGV429		
Sampling Date			2018/07/24 10:40	2018/07/24 11:30		2018/07/19 11:30		
COC Number			674482-01-01	674482-01-01		674482-01-01		
	UNITS	Criteria	BH18-08	BH18-09	QC Batch	DUP	RDL	QC Batch
Inorganics								
WAD Cyanide (Free)	ug/L	66	<1	<1	5644501	<1	1	5639606
Dissolved Chloride (Cl-)	mg/L	2300	26	11	5647551	13	1.0	5645698
Metals								
Chromium (VI)	ug/L	140	<0.50	<0.50	5644876	<0.50	0.50	5642829
Mercury (Hg)	ug/L	0.29	<0.1	<0.1	5648813	<0.1	0.1	5648813
Dissolved Antimony (Sb)	ug/L	20000	<0.50	0.52	5649880	0.53	0.50	5644554
Dissolved Arsenic (As)	ug/L	1900	<1.0	<1.0	5649880	2.3	1.0	5644554
Dissolved Barium (Ba)	ug/L	29000	64	60	5649880	37	2.0	5644554
Dissolved Beryllium (Be)	ug/L	67	<0.50	<0.50	5649880	<0.50	0.50	5644554
Dissolved Boron (B)	ug/L	45000	330	320	5649880	310	10	5644554
Dissolved Cadmium (Cd)	ug/L	2.7	<0.10	<0.10	5649880	<0.10	0.10	5644554
Dissolved Chromium (Cr)	ug/L	810	<5.0	<5.0	5649880	<5.0	5.0	5644554
Dissolved Cobalt (Co)	ug/L	66	1.8	1.5	5649880	1.7	0.50	5644554
Dissolved Copper (Cu)	ug/L	87	<1.0	<1.0	5649880	<1.0	1.0	5644554
Dissolved Lead (Pb)	ug/L	25	<0.50	<0.50	5649880	<0.50	0.50	5644554
Dissolved Molybdenum (Mo)	ug/L	9200	4.3	7.1	5649880	3.9	0.50	5644554
Dissolved Nickel (Ni)	ug/L	490	5.2	6.8	5649880	7.8	1.0	5644554
Dissolved Selenium (Se)	ug/L	63	<2.0	2.3	5649880	<2.0	2.0	5644554
Dissolved Silver (Ag)	ug/L	1.5	<0.10	<0.10	5649880	<0.10	0.10	5644554
Dissolved Sodium (Na)	ug/L	2300000	50000	42000	5649880	63000	100	5644554
Dissolved Thallium (Tl)	ug/L	510	<0.050	0.055	5649880	<0.050	0.050	5644554
Dissolved Uranium (U)	ug/L	420	7.4	9.4	5649880	4.6	0.10	5644554
Dissolved Vanadium (V)	ug/L	250	<0.50	<0.50	5649880	0.61	0.50	5644554
Dissolved Zinc (Zn)	ug/L	1100	<5.0	<5.0	5649880	<5.0	5.0	5644554
RDL = Reportable Detection Limit								
QC Batch = Quality Control Batch								
Criteria: Ontario Reg. 153/04 (Amended April 15, 2011)								
Table 3: Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition								
Non- Potable Ground Water - All Types of Property Uses - Coarse Textured Soil								

O.REG 153 PAHS (WATER)

Maxxam ID			HGV427	HGV428		HHK621	HHK623		
Sampling Date			2018/07/19 11:30	2018/07/19 13:00		2018/07/24 10:40	2018/07/24 11:30		
COC Number			674482-01-01	674482-01-01		674482-01-01	674482-01-01		
	UNITS	Criteria	BH18-01	BH18-07	QC Batch	BH18-08	BH18-09	RDL	QC Batch

Calculated Parameters

Methylnaphthalene, 2-(1-)	ug/L	1800	<0.071	<0.071	5642369	<0.071	<0.071	0.071	5644228
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Polyaromatic Hydrocarbons

Acenaphthene	ug/L	600	<0.050	<0.050	5645316	<0.050	<0.050	0.050	5647660
Acenaphthylene	ug/L	1.8	<0.050	<0.050	5645316	<0.050	<0.050	0.050	5647660
Anthracene	ug/L	2.4	<0.050	<0.050	5645316	<0.050	<0.050	0.050	5647660
Benzo(a)anthracene	ug/L	4.7	<0.050	<0.050	5645316	<0.050	<0.050	0.050	5647660
Benzo(a)pyrene	ug/L	0.81	<0.010	<0.010	5645316	<0.010	<0.010	0.010	5647660
Benzo(b,j)fluoranthene	ug/L	0.75	<0.050	<0.050	5645316	<0.050	<0.050	0.050	5647660
Benzo(g,h,i)perylene	ug/L	0.2	<0.050	<0.050	5645316	<0.050	<0.050	0.050	5647660
Benzo(k)fluoranthene	ug/L	0.4	<0.050	<0.050	5645316	<0.050	<0.050	0.050	5647660
Chrysene	ug/L	1	<0.050	<0.050	5645316	<0.050	<0.050	0.050	5647660
Dibenz(a,h)anthracene	ug/L	0.52	<0.050	<0.050	5645316	<0.050	<0.050	0.050	5647660
Fluoranthene	ug/L	130	<0.050	<0.050	5645316	<0.050	<0.050	0.050	5647660
Fluorene	ug/L	400	<0.050	<0.050	5645316	<0.050	<0.050	0.050	5647660
Indeno(1,2,3-cd)pyrene	ug/L	0.2	<0.050	<0.050	5645316	<0.050	<0.050	0.050	5647660
1-Methylnaphthalene	ug/L	1800	<0.050	<0.050	5645316	<0.050	<0.050	0.050	5647660
2-Methylnaphthalene	ug/L	1800	<0.050	<0.050	5645316	<0.050	<0.050	0.050	5647660
Naphthalene	ug/L	1400	<0.050	<0.050	5645316	<0.050	0.052	0.050	5647660
Phenanthrene	ug/L	580	<0.030	<0.030	5645316	<0.030	<0.030	0.030	5647660
Pyrene	ug/L	68	<0.050	<0.050	5645316	<0.050	<0.050	0.050	5647660

Surrogate Recovery (%)

D10-Anthracene	%	-	94	94	5645316	97	90		5647660
D14-Terphenyl (FS)	%	-	72	86	5645316	77	49 (1)		5647660
D8-Acenaphthylene	%	-	95	95	5645316	86	82		5647660

RDL = Reportable Detection Limit

QC Batch = Quality Control Batch

Criteria: Ontario Reg. 153/04 (Amended April 15, 2011)

Table 3: Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition

Non- Potable Ground Water - All Types of Property Uses - Coarse Textured Soil

(1) Surrogate recovery may have been impacted by the amount of sediment that was present in sample.

O.REG 153 PAHS (WATER)

Maxxam ID			HGV429		
Sampling Date			2018/07/19 11:30		
COC Number			674482-01-01		
	UNITS	Criteria	DUP	RDL	QC Batch
Calculated Parameters					
Methylnaphthalene, 2-(1-)	ug/L	1800	<0.071	0.071	5642369
Polyaromatic Hydrocarbons					
Acenaphthene	ug/L	600	<0.050	0.050	5645316
Acenaphthylene	ug/L	1.8	<0.050	0.050	5645316
Anthracene	ug/L	2.4	<0.050	0.050	5645316
Benzo(a)anthracene	ug/L	4.7	<0.050	0.050	5645316
Benzo(a)pyrene	ug/L	0.81	<0.010	0.010	5645316
Benzo(b/j)fluoranthene	ug/L	0.75	<0.050	0.050	5645316
Benzo(g,h,i)perylene	ug/L	0.2	<0.050	0.050	5645316
Benzo(k)fluoranthene	ug/L	0.4	<0.050	0.050	5645316
Chrysene	ug/L	1	<0.050	0.050	5645316
Dibenz(a,h)anthracene	ug/L	0.52	<0.050	0.050	5645316
Fluoranthene	ug/L	130	<0.050	0.050	5645316
Fluorene	ug/L	400	<0.050	0.050	5645316
Indeno(1,2,3-cd)pyrene	ug/L	0.2	<0.050	0.050	5645316
1-Methylnaphthalene	ug/L	1800	<0.050	0.050	5645316
2-Methylnaphthalene	ug/L	1800	<0.050	0.050	5645316
Naphthalene	ug/L	1400	<0.050	0.050	5645316
Phenanthrene	ug/L	580	<0.030	0.030	5645316
Pyrene	ug/L	68	<0.050	0.050	5645316
Surrogate Recovery (%)					
D10-Anthracene	%	-	90		5645316
D14-Terphenyl (FS)	%	-	69		5645316
D8-Acenaphthylene	%	-	91		5645316
RDL = Reportable Detection Limit					
QC Batch = Quality Control Batch					
Criteria: Ontario Reg. 153/04 (Amended April 15, 2011)					
Table 3: Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition					
Non- Potable Ground Water - All Types of Property Uses - Coarse Textured Soil					

O.REG 153 PETROLEUM HYDROCARBONS (WATER)

Maxxam ID			HGV427	HGV428		HHK621	HHK623		
Sampling Date			2018/07/19 11:30	2018/07/19 13:00		2018/07/24 10:40	2018/07/24 11:30		
COC Number			674482-01-01	674482-01-01		674482-01-01	674482-01-01		
	UNITS	Criteria	BH18-01	BH18-07	QC Batch	BH18-08	BH18-09	RDL	QC Batch
BTEX & F1 Hydrocarbons									
Benzene	ug/L	44	<0.20	<0.20	5643717	<0.20	<0.20	0.20	5646094
Toluene	ug/L	18000	<0.20	<0.20	5643717	<0.20	<0.20	0.20	5646094
Ethylbenzene	ug/L	2300	<0.20	<0.20	5643717	<0.20	<0.20	0.20	5646094
o-Xylene	ug/L	-	<0.20	<0.20	5643717	<0.20	<0.20	0.20	5646094
p+m-Xylene	ug/L	-	<0.40	<0.40	5643717	<0.40	<0.40	0.40	5646094
Total Xylenes	ug/L	4200	<0.40	<0.40	5643717	<0.40	<0.40	0.40	5646094
F1 (C6-C10)	ug/L	750	<25	<25	5643717	<25	<25	25	5646094
F1 (C6-C10) - BTEX	ug/L	750	<25	<25	5643717	<25	<25	25	5646094
F2-F4 Hydrocarbons									
F2 (C10-C16 Hydrocarbons)	ug/L	150	<100	<100	5645318	<100	<100	100	5647665
F3 (C16-C34 Hydrocarbons)	ug/L	500	<200	<200	5645318	<200	<200	200	5647665
F4 (C34-C50 Hydrocarbons)	ug/L	500	<200	<200	5645318	<200	<200	200	5647665
Reached Baseline at C50	ug/L	-	Yes	Yes	5645318	Yes	Yes		5647665
Surrogate Recovery (%)									
1,4-Difluorobenzene	%	-	103	104	5643717	104	106		5646094
4-Bromofluorobenzene	%	-	96	96	5643717	80	79		5646094
D10-Ethylbenzene	%	-	89	82	5643717	97	101		5646094
D4-1,2-Dichloroethane	%	-	98	98	5643717	106	109		5646094
o-Terphenyl	%	-	94	95	5645318	96	96		5647665
RDL = Reportable Detection Limit QC Batch = Quality Control Batch Criteria: Ontario Reg. 153/04 (Amended April 15, 2011) Table 3: Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition Non- Potable Ground Water - All Types of Property Uses - Coarse Textured Soil									

O.REG 153 PETROLEUM HYDROCARBONS (WATER)

Maxxam ID			HGV429		
Sampling Date			2018/07/19 11:30		
COC Number			674482-01-01		
	UNITS	Criteria	DUP	RDL	QC Batch
BTEX & F1 Hydrocarbons					
Benzene	ug/L	44	<0.20	0.20	5643717
Toluene	ug/L	18000	<0.20	0.20	5643717
Ethylbenzene	ug/L	2300	<0.20	0.20	5643717
o-Xylene	ug/L	-	<0.20	0.20	5643717
p+m-Xylene	ug/L	-	<0.40	0.40	5643717
Total Xylenes	ug/L	4200	<0.40	0.40	5643717
F1 (C6-C10)	ug/L	750	<25	25	5643717
F1 (C6-C10) - BTEX	ug/L	750	<25	25	5643717
F2-F4 Hydrocarbons					
F2 (C10-C16 Hydrocarbons)	ug/L	150	<100	100	5645318
F3 (C16-C34 Hydrocarbons)	ug/L	500	<200	200	5645318
F4 (C34-C50 Hydrocarbons)	ug/L	500	<200	200	5645318
Reached Baseline at C50	ug/L	-	Yes		5645318
Surrogate Recovery (%)					
1,4-Difluorobenzene	%	-	103		5643717
4-Bromofluorobenzene	%	-	95		5643717
D10-Ethylbenzene	%	-	89		5643717
D4-1,2-Dichloroethane	%	-	99		5643717
o-Terphenyl	%	-	96		5645318
RDL = Reportable Detection Limit QC Batch = Quality Control Batch Criteria: Ontario Reg. 153/04 (Amended April 15, 2011) Table 3: Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition Non- Potable Ground Water - All Types of Property Uses - Coarse Textured Soi					

TEST SUMMARY

Maxxam ID: HGV427
Sample ID: BH18-01
Matrix: Water

Collected: 2018/07/19
Shipped:
Received: 2018/07/20

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	5642369	N/A	2018/07/25	Automated Statchk
Chloride by Automated Colourimetry	KONE	5645698	N/A	2018/07/25	Deonarine Ramnarine
Chromium (VI) in Water	IC	5642829	N/A	2018/07/26	Lang Le
Free (WAD) Cyanide	SKAL/CN	5639606	N/A	2018/07/24	Xuanhong Qiu
Petroleum Hydro. CCME F1 & BTEX in Water	HSGC/MSFD	5643717	N/A	2018/07/24	Ravinder Gaidhu
Petroleum Hydrocarbons F2-F4 in Water	GC/FID	5645318	2018/07/24	2018/07/25	Barbara Wowk
Mercury	CV/AA	5648813	2018/07/26	2018/07/26	Ron Morrison
Dissolved Metals by ICPMS	ICP/MS	5644554	N/A	2018/07/25	Thao Nguyen
PAH Compounds in Water by GC/MS (SIM)	GC/MS	5645316	2018/07/24	2018/07/25	Mitesh Raj

Maxxam ID: HGV427 Dup
Sample ID: BH18-01
Matrix: Water

Collected: 2018/07/19
Shipped:
Received: 2018/07/20

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Dissolved Metals by ICPMS	ICP/MS	5644554	N/A	2018/07/25	Thao Nguyen

Maxxam ID: HGV428
Sample ID: BH18-07
Matrix: Water

Collected: 2018/07/19
Shipped:
Received: 2018/07/20

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	5642369	N/A	2018/07/25	Automated Statchk
Chloride by Automated Colourimetry	KONE	5645698	N/A	2018/07/25	Deonarine Ramnarine
Chromium (VI) in Water	IC	5642829	N/A	2018/07/26	Lang Le
Free (WAD) Cyanide	SKAL/CN	5639606	N/A	2018/07/24	Xuanhong Qiu
Petroleum Hydro. CCME F1 & BTEX in Water	HSGC/MSFD	5643717	N/A	2018/07/24	Ravinder Gaidhu
Petroleum Hydrocarbons F2-F4 in Water	GC/FID	5645318	2018/07/24	2018/07/25	Barbara Wowk
Mercury	CV/AA	5648813	2018/07/26	2018/07/26	Ron Morrison
Dissolved Metals by ICPMS	ICP/MS	5644554	N/A	2018/07/25	Thao Nguyen
PAH Compounds in Water by GC/MS (SIM)	GC/MS	5645316	2018/07/24	2018/07/25	Mitesh Raj

Maxxam ID: HGV429
Sample ID: DUP
Matrix: Water

Collected: 2018/07/19
Shipped:
Received: 2018/07/20

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	5642369	N/A	2018/07/25	Automated Statchk
Chloride by Automated Colourimetry	KONE	5645698	N/A	2018/07/25	Deonarine Ramnarine
Chromium (VI) in Water	IC	5642829	N/A	2018/07/26	Lang Le
Free (WAD) Cyanide	SKAL/CN	5639606	N/A	2018/07/24	Xuanhong Qiu
Petroleum Hydro. CCME F1 & BTEX in Water	HSGC/MSFD	5643717	N/A	2018/07/24	Ravinder Gaidhu
Petroleum Hydrocarbons F2-F4 in Water	GC/FID	5645318	2018/07/24	2018/07/25	Barbara Wowk
Mercury	CV/AA	5648813	2018/07/26	2018/07/26	Ron Morrison
Dissolved Metals by ICPMS	ICP/MS	5644554	N/A	2018/07/25	Thao Nguyen
PAH Compounds in Water by GC/MS (SIM)	GC/MS	5645316	2018/07/24	2018/07/25	Mitesh Raj

TEST SUMMARY

Maxxam ID: HGV430
Sample ID: TRIP BLANK
Matrix: Water

Collected: 2018/07/19
Shipped:
Received: 2018/07/20

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Petroleum Hydro. CCME F1 & BTEX in Water	HSGC/MSFD	5643717	N/A	2018/07/24	Ravinder Gaidhu

Maxxam ID: HGV431
Sample ID: TRIP SPIKE
Matrix: Water

Collected: 2018/07/19
Shipped:
Received: 2018/07/20

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Petroleum Hydro. CCME F1 & BTEX in Water	HSGC/MSFD	5643717	N/A	2018/07/24	Ravinder Gaidhu

Maxxam ID: HHK621
Sample ID: BH18-08
Matrix: Water

Collected: 2018/07/24
Shipped:
Received: 2018/07/20

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	5644228	N/A	2018/07/26	Automated Statchk
Chloride by Automated Colourimetry	KONE	5647551	N/A	2018/07/27	Deonarine Ramnarine
Chromium (VI) in Water	IC	5644876	N/A	2018/07/26	Lang Le
Free (WAD) Cyanide	SKAL/CN	5644501	N/A	2018/07/25	Xuanhong Qiu
Petroleum Hydro. CCME F1 & BTEX in Water	HSGC/MSFD	5646094	N/A	2018/07/25	Joe Paino
Petroleum Hydrocarbons F2-F4 in Water	GC/FID	5647665	2018/07/25	2018/07/26	Zhiyue (Frank) Zhu
Mercury	CV/AA	5648813	2018/07/26	2018/07/26	Ron Morrison
Dissolved Metals by ICPMS	ICP/MS	5649880	N/A	2018/07/26	Thao Nguyen
PAH Compounds in Water by GC/MS (SIM)	GC/MS	5647660	2018/07/25	2018/07/26	Mitesh Raj

Maxxam ID: HHK623
Sample ID: BH18-09
Matrix: Water

Collected: 2018/07/24
Shipped:
Received: 2018/07/20

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	5644228	N/A	2018/07/26	Automated Statchk
Chloride by Automated Colourimetry	KONE	5647551	N/A	2018/07/27	Deonarine Ramnarine
Chromium (VI) in Water	IC	5644876	N/A	2018/07/26	Lang Le
Free (WAD) Cyanide	SKAL/CN	5644501	N/A	2018/07/25	Xuanhong Qiu
Petroleum Hydro. CCME F1 & BTEX in Water	HSGC/MSFD	5646094	N/A	2018/07/25	Joe Paino
Petroleum Hydrocarbons F2-F4 in Water	GC/FID	5647665	2018/07/25	2018/07/26	Zhiyue (Frank) Zhu
Mercury	CV/AA	5648813	2018/07/26	2018/07/26	Ron Morrison
Dissolved Metals by ICPMS	ICP/MS	5649880	N/A	2018/07/26	Thao Nguyen
PAH Compounds in Water by GC/MS (SIM)	GC/MS	5647660	2018/07/25	2018/07/26	Mitesh Raj

GENERAL COMMENTS

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

Package 1	8.7°C
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Trip Spike analyzed for BTEX as per client request.

Sample HGV431 [TRIP SPIKE] : F1BTEX Analysis: Trip spike results are expressed as percentage of the spiked amounts.

Results relate only to the items tested.

QUALITY ASSURANCE REPORT

Golder Associates Ltd
Client Project #: 1792964 (5000)
Sampler Initials: WR

QC Batch	Parameter	Date	Matrix Spike		SPIKED BLANK		Method Blank		RPD	
			% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
5643717	1,4-Difluorobenzene	2018/07/24	104	70 - 130	100	70 - 130	103	%		
5643717	4-Bromofluorobenzene	2018/07/24	99	70 - 130	101	70 - 130	97	%		
5643717	D10-Ethylbenzene	2018/07/24	87	70 - 130	86	70 - 130	91	%		
5643717	D4-1,2-Dichloroethane	2018/07/24	97	70 - 130	101	70 - 130	99	%		
5645316	D10-Anthracene	2018/07/24	101	50 - 130	98	50 - 130	99	%		
5645316	D14-Terphenyl (FS)	2018/07/24	97	50 - 130	95	50 - 130	96	%		
5645316	D8-Acenaphthylene	2018/07/24	99	50 - 130	96	50 - 130	97	%		
5645318	o-Terphenyl	2018/07/25	99	60 - 130	100	60 - 130	98	%		
5646094	1,4-Difluorobenzene	2018/07/25	96	70 - 130	101	70 - 130	104	%		
5646094	4-Bromofluorobenzene	2018/07/25	118	70 - 130	103	70 - 130	82	%		
5646094	D10-Ethylbenzene	2018/07/25	100	70 - 130	100	70 - 130	101	%		
5646094	D4-1,2-Dichloroethane	2018/07/25	98	70 - 130	106	70 - 130	107	%		
5647660	D10-Anthracene	2018/07/26	97	50 - 130	94	50 - 130	100	%		
5647660	D14-Terphenyl (FS)	2018/07/26	87	50 - 130	84	50 - 130	86	%		
5647660	D8-Acenaphthylene	2018/07/26	91	50 - 130	88	50 - 130	87	%		
5647665	o-Terphenyl	2018/07/26	98	60 - 130	98	60 - 130	95	%		
5639606	WAD Cyanide (Free)	2018/07/24	97	80 - 120	96	80 - 120	<1	ug/L	NC	20
5642829	Chromium (VI)	2018/07/26	98	80 - 120	100	80 - 120	<0.50	ug/L	NC	20
5643717	Benzene	2018/07/24	95	70 - 130	98	70 - 130	<0.20	ug/L	NC	30
5643717	Ethylbenzene	2018/07/24	88	70 - 130	90	70 - 130	<0.20	ug/L	NC	30
5643717	F1 (C6-C10) - BTEX	2018/07/24					<25	ug/L	NC	30
5643717	F1 (C6-C10)	2018/07/24	93	70 - 130	103	70 - 130	<25	ug/L	NC	30
5643717	o-Xylene	2018/07/24	92	70 - 130	92	70 - 130	<0.20	ug/L	NC	30
5643717	p+m-Xylene	2018/07/24	89	70 - 130	88	70 - 130	<0.40	ug/L	NC	30
5643717	Toluene	2018/07/24	89	70 - 130	90	70 - 130	<0.20	ug/L	NC	30
5643717	Total Xylenes	2018/07/24					<0.40	ug/L	NC	30
5644501	WAD Cyanide (Free)	2018/07/25	100	80 - 120	97	80 - 120	<1	ug/L	NC	20
5644554	Dissolved Antimony (Sb)	2018/07/25	109	80 - 120	107	80 - 120	<0.50	ug/L	NC	20
5644554	Dissolved Arsenic (As)	2018/07/25	102	80 - 120	100	80 - 120	<1.0	ug/L	2.5	20
5644554	Dissolved Barium (Ba)	2018/07/25	101	80 - 120	102	80 - 120	<2.0	ug/L	4.4	20
5644554	Dissolved Beryllium (Be)	2018/07/25	106	80 - 120	107	80 - 120	<0.50	ug/L	NC	20

QUALITY ASSURANCE REPORT(CONT'D)

Golder Associates Ltd
Client Project #: 1792964 (5000)
Sampler Initials: WR

QC Batch	Parameter	Date	Matrix Spike		SPIKED BLANK		Method Blank		RPD	
			% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
5644554	Dissolved Boron (B)	2018/07/25	95	80 - 120	94	80 - 120	<10	ug/L	0.18	20
5644554	Dissolved Cadmium (Cd)	2018/07/25	102	80 - 120	101	80 - 120	<0.10	ug/L	NC	20
5644554	Dissolved Chromium (Cr)	2018/07/25	98	80 - 120	96	80 - 120	<5.0	ug/L	NC	20
5644554	Dissolved Cobalt (Co)	2018/07/25	97	80 - 120	97	80 - 120	<0.50	ug/L	6.6	20
5644554	Dissolved Copper (Cu)	2018/07/25	100	80 - 120	100	80 - 120	<1.0	ug/L	NC	20
5644554	Dissolved Lead (Pb)	2018/07/25	96	80 - 120	99	80 - 120	<0.50	ug/L	NC	20
5644554	Dissolved Molybdenum (Mo)	2018/07/25	106	80 - 120	103	80 - 120	<0.50	ug/L	3.1	20
5644554	Dissolved Nickel (Ni)	2018/07/25	96	80 - 120	97	80 - 120	<1.0	ug/L	3.0	20
5644554	Dissolved Selenium (Se)	2018/07/25	102	80 - 120	101	80 - 120	<2.0	ug/L	NC	20
5644554	Dissolved Silver (Ag)	2018/07/25	99	80 - 120	98	80 - 120	<0.10	ug/L	NC	20
5644554	Dissolved Sodium (Na)	2018/07/25	NC	80 - 120	98	80 - 120	<100	ug/L	0.25	20
5644554	Dissolved Thallium (Tl)	2018/07/25	97	80 - 120	98	80 - 120	<0.050	ug/L	NC	20
5644554	Dissolved Uranium (U)	2018/07/25	98	80 - 120	98	80 - 120	<0.10	ug/L	1.4	20
5644554	Dissolved Vanadium (V)	2018/07/25	101	80 - 120	100	80 - 120	<0.50	ug/L	NC	20
5644554	Dissolved Zinc (Zn)	2018/07/25	98	80 - 120	97	80 - 120	<5.0	ug/L	NC	20
5644876	Chromium (VI)	2018/07/26	96	80 - 120	98	80 - 120	<0.50	ug/L	3.4	20
5645316	1-Methylnaphthalene	2018/07/25	118	50 - 130	117	50 - 130	<0.050	ug/L	NC	30
5645316	2-Methylnaphthalene	2018/07/25	110	50 - 130	109	50 - 130	<0.050	ug/L	NC	30
5645316	Acenaphthene	2018/07/25	104	50 - 130	103	50 - 130	<0.050	ug/L	NC	30
5645316	Acenaphthylene	2018/07/25	106	50 - 130	105	50 - 130	<0.050	ug/L	NC	30
5645316	Anthracene	2018/07/25	101	50 - 130	101	50 - 130	<0.050	ug/L	NC	30
5645316	Benzo(a)anthracene	2018/07/25	105	50 - 130	104	50 - 130	<0.050	ug/L	26	30
5645316	Benzo(a)pyrene	2018/07/25	102	50 - 130	102	50 - 130	<0.010	ug/L	50 (1)	30
5645316	Benzo(b/j)fluoranthene	2018/07/25	105	50 - 130	102	50 - 130	<0.050	ug/L	NC	30
5645316	Benzo(g,h,i)perylene	2018/07/25	83	50 - 130	84	50 - 130	<0.050	ug/L	NC	30
5645316	Benzo(k)fluoranthene	2018/07/25	102	50 - 130	105	50 - 130	<0.050	ug/L	NC	30
5645316	Chrysene	2018/07/25	108	50 - 130	106	50 - 130	<0.050	ug/L	8.4	30
5645316	Dibenz(a,h)anthracene	2018/07/25	77	50 - 130	80	50 - 130	<0.050	ug/L	NC	30
5645316	Fluoranthene	2018/07/25	107	50 - 130	106	50 - 130	<0.050	ug/L	67 (1)	30
5645316	Fluorene	2018/07/25	100	50 - 130	100	50 - 130	<0.050	ug/L	NC	30
5645316	Indeno(1,2,3-cd)pyrene	2018/07/25	86	50 - 130	88	50 - 130	<0.050	ug/L	NC	30

QUALITY ASSURANCE REPORT(CONT'D)

Golder Associates Ltd
Client Project #: 1792964 (5000)
Sampler Initials: WR

QC Batch	Parameter	Date	Matrix Spike		SPIKED BLANK		Method Blank		RPD	
			% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
5645316	Naphthalene	2018/07/25	104	50 - 130	102	50 - 130	<0.050	ug/L	NC	30
5645316	Phenanthrene	2018/07/25	103	50 - 130	103	50 - 130	<0.030	ug/L	73 (2)	30
5645316	Pyrene	2018/07/25	106	50 - 130	105	50 - 130	<0.050	ug/L	NC	30
5645318	F2 (C10-C16 Hydrocarbons)	2018/07/25	96	50 - 130	95	60 - 130	<100	ug/L	NC	30
5645318	F3 (C16-C34 Hydrocarbons)	2018/07/25	96	50 - 130	96	60 - 130	<200	ug/L	NC	30
5645318	F4 (C34-C50 Hydrocarbons)	2018/07/25	95	50 - 130	94	60 - 130	<200	ug/L	NC	30
5645698	Dissolved Chloride (Cl-)	2018/07/25	NC	80 - 120	103	80 - 120	<1.0	mg/L	0.019	20
5646094	Benzene	2018/07/25	NC	70 - 130	111	70 - 130	<0.20	ug/L	0.21	30
5646094	Ethylbenzene	2018/07/25	124	70 - 130	109	70 - 130	<0.20	ug/L	2.4	30
5646094	F1 (C6-C10) - BTEX	2018/07/25					<25	ug/L	11	30
5646094	F1 (C6-C10)	2018/07/25	95	70 - 130	95	70 - 130	<25	ug/L	4.4	30
5646094	o-Xylene	2018/07/25	111	70 - 130	105	70 - 130	<0.20	ug/L	10	30
5646094	p+m-Xylene	2018/07/25	126	70 - 130	117	70 - 130	<0.40	ug/L	0.99	30
5646094	Toluene	2018/07/25	103	70 - 130	106	70 - 130	<0.20	ug/L	2.4	30
5646094	Total Xylenes	2018/07/25					<0.40	ug/L	2.0	30
5647551	Dissolved Chloride (Cl-)	2018/07/27	NC	80 - 120	103	80 - 120	<1.0	mg/L	1.2	20
5647660	1-Methylnaphthalene	2018/07/26	92	50 - 130	91	50 - 130	<0.050	ug/L	NC	30
5647660	2-Methylnaphthalene	2018/07/26	93	50 - 130	92	50 - 130	<0.050	ug/L	NC	30
5647660	Acenaphthene	2018/07/26	94	50 - 130	94	50 - 130	<0.050	ug/L	NC	30
5647660	Acenaphthylene	2018/07/26	95	50 - 130	96	50 - 130	<0.050	ug/L	NC	30
5647660	Anthracene	2018/07/26	96	50 - 130	97	50 - 130	<0.050	ug/L	NC	30
5647660	Benzo(a)anthracene	2018/07/26	103	50 - 130	101	50 - 130	<0.050	ug/L	NC	30
5647660	Benzo(a)pyrene	2018/07/26	99	50 - 130	100	50 - 130	<0.010	ug/L	NC	30
5647660	Benzo(b/j)fluoranthene	2018/07/26	91	50 - 130	92	50 - 130	<0.050	ug/L	NC	30
5647660	Benzo(g,h,i)perylene	2018/07/26	96	50 - 130	99	50 - 130	<0.050	ug/L	NC	30
5647660	Benzo(k)fluoranthene	2018/07/26	92	50 - 130	92	50 - 130	<0.050	ug/L	NC	30
5647660	Chrysene	2018/07/26	100	50 - 130	101	50 - 130	<0.050	ug/L	NC	30
5647660	Dibenz(a,h)anthracene	2018/07/26	88	50 - 130	91	50 - 130	<0.050	ug/L	NC	30
5647660	Fluoranthene	2018/07/26	99	50 - 130	98	50 - 130	<0.050	ug/L	NC	30
5647660	Fluorene	2018/07/26	94	50 - 130	94	50 - 130	<0.050	ug/L	NC	30
5647660	Indeno(1,2,3-cd)pyrene	2018/07/26	101	50 - 130	104	50 - 130	<0.050	ug/L	NC	30

QUALITY ASSURANCE REPORT(CONT'D)

Golder Associates Ltd
Client Project #: 1792964 (5000)
Sampler Initials: WR

QC Batch	Parameter	Date	Matrix Spike		SPIKED BLANK		Method Blank		RPD	
			% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
5647660	Naphthalene	2018/07/26	89	50 - 130	90	50 - 130	<0.050	ug/L	NC	30
5647660	Phenanthrene	2018/07/26	95	50 - 130	94	50 - 130	<0.030	ug/L	7.1	30
5647660	Pyrene	2018/07/26	96	50 - 130	95	50 - 130	<0.050	ug/L	NC	30
5647665	F2 (C10-C16 Hydrocarbons)	2018/07/26	92	50 - 130	91	60 - 130	<100	ug/L	NC	30
5647665	F3 (C16-C34 Hydrocarbons)	2018/07/26	89	50 - 130	91	60 - 130	<200	ug/L	NC	30
5647665	F4 (C34-C50 Hydrocarbons)	2018/07/26	90	50 - 130	90	60 - 130	<200	ug/L	NC	30
5648813	Mercury (Hg)	2018/07/26	100	75 - 125	101	80 - 120	<0.1	ug/L	NC	20
5649880	Dissolved Antimony (Sb)	2018/07/26	109	80 - 120	105	80 - 120	<0.50	ug/L	NC	20
5649880	Dissolved Arsenic (As)	2018/07/26	99	80 - 120	97	80 - 120	<1.0	ug/L	NC	20
5649880	Dissolved Barium (Ba)	2018/07/26	100	80 - 120	101	80 - 120	<2.0	ug/L	0.25	20
5649880	Dissolved Beryllium (Be)	2018/07/26	98	80 - 120	97	80 - 120	<0.50	ug/L	NC	20
5649880	Dissolved Boron (B)	2018/07/26	98	80 - 120	101	80 - 120	<10	ug/L	NC	20
5649880	Dissolved Cadmium (Cd)	2018/07/26	102	80 - 120	100	80 - 120	<0.10	ug/L	NC	20
5649880	Dissolved Chromium (Cr)	2018/07/26	96	80 - 120	96	80 - 120	<5.0	ug/L	NC	20
5649880	Dissolved Cobalt (Co)	2018/07/26	94	80 - 120	96	80 - 120	<0.50	ug/L	6.0	20
5649880	Dissolved Copper (Cu)	2018/07/26	98	80 - 120	98	80 - 120	<1.0	ug/L	4.5	20
5649880	Dissolved Lead (Pb)	2018/07/26	92	80 - 120	94	80 - 120	<0.50	ug/L	NC	20
5649880	Dissolved Molybdenum (Mo)	2018/07/26	105	80 - 120	102	80 - 120	<0.50	ug/L	0.19	20
5649880	Dissolved Nickel (Ni)	2018/07/26	91	80 - 120	95	80 - 120	<1.0	ug/L	5.2	20
5649880	Dissolved Selenium (Se)	2018/07/26	97	80 - 120	98	80 - 120	<2.0	ug/L	NC	20
5649880	Dissolved Silver (Ag)	2018/07/26	96	80 - 120	95	80 - 120	<0.10	ug/L	NC	20
5649880	Dissolved Sodium (Na)	2018/07/26	NC	80 - 120	100	80 - 120	<100	ug/L	2.4	20
5649880	Dissolved Thallium (Tl)	2018/07/26	93	80 - 120	95	80 - 120	<0.050	ug/L	NC	20
5649880	Dissolved Uranium (U)	2018/07/26	96	80 - 120	96	80 - 120	<0.10	ug/L	0.11	20
5649880	Dissolved Vanadium (V)	2018/07/26	99	80 - 120	98	80 - 120	<0.50	ug/L	NC	20

QUALITY ASSURANCE REPORT(CONT'D)

Golder Associates Ltd
Client Project #: 1792964 (5000)
Sampler Initials: WR

QC Batch	Parameter	Date	Matrix Spike		SPIKED BLANK		Method Blank		RPD	
			% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
5649880	Dissolved Zinc (Zn)	2018/07/26	94	80 - 120	96	80 - 120	<5.0	ug/L	NC	20

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

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

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

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

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

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

NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (absolute difference $\leq 2 \times \text{RDL}$).

(1) Recovery or RPD for this parameter is outside control limits. The overall quality control for this analysis meets acceptability criteria.

(2) Duplicate results exceeded RPD acceptance criteria. The variability in the results for flagged analytes may be more pronounced.

VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by the following individual(s).

Cristina Carriere

Cristina Carriere, Scientific Service Specialist

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

Ema Gitej

Presence of Visible Particulate/Sediment

When there is >1cm of visible particulate/sediment, the amount will be recorded in the field below

Bottle Types

[illegible]

Comments: except all DSM bottles.

Legend:	
P	Suspended Particulate
TS	Trace Settled Sediment (just covers bottom of container or less)
S	Sediment greater than (>) Trace, but less than (<) 1 cm

Recorded By: (signature/print)

Paper	Paper	Paper
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Maxxam A Bureau Veritas Group Company		Maxxam Analytics International Corporation o/a Maxxam Analytics 8740 Campbell Road, Mississauga, Ontario Canada L5N 2L8 Tel: (905) 817-5700 Toll-free 800-563-6266 Fax: (905) 817-5777 www.maxxam.ca				CHAIN OF CUSTODY RECORD Page 1 of 1	
INVOICE TO: Company Name: #1326 Golder Associates Ltd Attention: Accounts Payable Address: 6925 Century Ave Suite 100 Mississauga ON L5N 7K2 Tel: (905) 567-4444 Fax: (905) 567-6561 Email: AP_CustomerService@golder.com		REPORT TO: Company Name: Attention: Erti Mansaku Address: Tel: Fax: Email: Erti_Mansaku@golder.com		PROJECT INFORMATION: Quotation #: B80683 P.O. #: Project: 1792964 (5000) Project Name: Site #: Sampled By:		Laboratory Use Only: Maxxam Job #: B8I 3496 Bottle Order #: 675423 COC #: Project Manager: Ema Gitej	
MOE REGULATED DRINKING WATER OR WATER INTENDED FOR HUMAN CONSUMPTION MUST BE SUBMITTED ON THE MAXXAM DRINKING WATER CHAIN OF CUSTODY				ANALYSIS REQUESTED (PLEASE BE SPECIFIC)		Turnaround Time (TAT) Required: Please provide advance notice for rush projects	
Regulation 153 (2011) ☐ Table 1 ☒ Res/Park ☐ Medium/Fine ☐ Table 2 ☐ Ind/Comm ☐ Coarse ☒ Table 3 ☐ Agri/Other ☒ For RSC ☐ Table _____		Other Regulations ☐ CCME ☐ Sanitary Sewer Bylaw ☐ Reg 558 ☐ Storm Sewer Bylaw ☐ MISA Municipality _____ ☐ PWQO ☐ Other _____		Special Instructions		Regular (Standard) TAT: (will be applied if Rush TAT is not specified) Standard TAT = 5-7 Working days for most tests. Please note: Standard TAT for certain tests such as BOD and Dioxins/Furans are > 5 days - contact your Project Manager for details.	
Include Criteria on Certificate of Analysis (Y/N)?				Job Specific Rush TAT (if applies to entire submission) Date Required: _____ Time Required: _____ Rush Confirmation Number: _____ (call lab for #)		# of Bottles Comments	
Sample Barcode Label 		Sample (Location) Identification BH18-01		Date Sampled 07/24/2018		Time Sampled 12:30 pm	
Matrix GW		Field Filtered (please circle): Metals / Hg / Cr / V: <u>Metals</u>		Chromium (VI) in Water ☒		Mercury ☒	
1		2		3		4	
5		6		7		8	
9		10		11		12	
13		14		15		16	
17		18		19		20	
21		22		23		24	
25		26		27		28	
29		30		31		32	
33		34		35		36	
37		38		39		40	
41		42		43		44	
45		46		47		48	
49		50		51		52	
53		54		55		56	
57		58		59		60	
61		62		63		64	
65		66		67		68	
69		70		71		72	
73		74		75		76	
77		78		79		80	
81		82		83		84	
85		86		87		88	
89		90		91		92	
93		94		95		96	
97		98		99		100	
101		102		103		104	
105		106		107		108	
109		110		111		112	
113		114		115		116	
117		118		119		120	
121		122		123		124	
125		126		127		128	
129		130		131		132	
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149		150		151		152	
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465		466		467		468	
469		470		471		472	
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493		494		495		496	
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509		510		511		512	
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525		526		527		528	
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545		546		547		548	
549		550		551		552	
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557		558		559		560	
561		562		563		564	
565		566		567		568	
569		570		571		572	
573		574		575		576	
577		578		579		580	
581		582		583		584	
585		586		587		588	
589							

INCOMING ADDITIONAL SAMPLES

Maxxam Analytics
CAM FCD-00923/3
Page 1 of 1



Client Name:	Golder
Job #:	B813496
Maxxam PM:	Ema Gitej

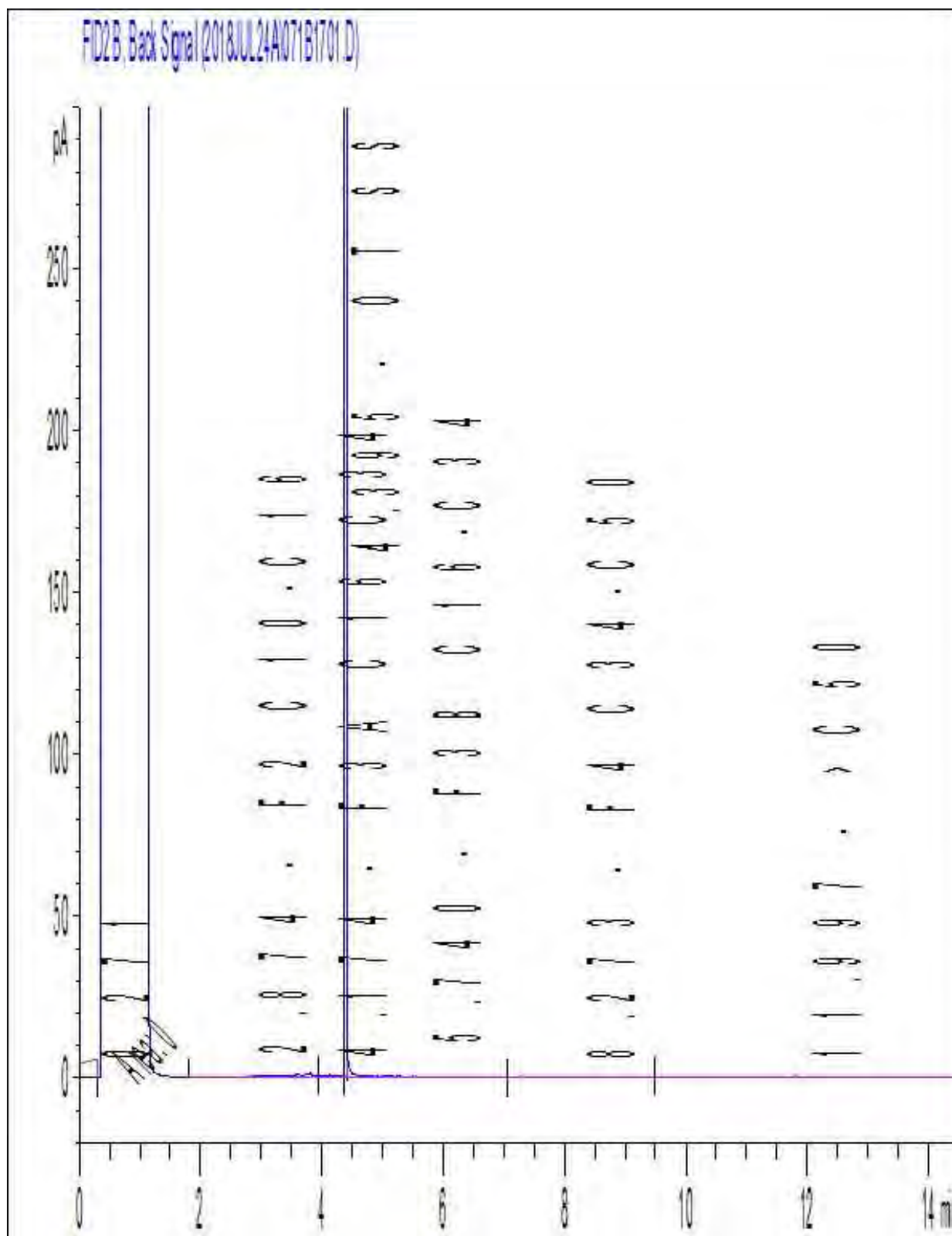
		Bottle Codes																
Line:	Sample ID	MVIA	F24S/ ORG	F18S/ VOC	INOT	VOCW	F24	ORGW/ SVOC	OG	PCB/OC	P/H	G	BOD	CR6	HGHC	M	DF/ NDMA	OTHER
1	BH18-01													x	x			
2	BH18-07													x	x			
3	DUP													x	x			
4	BH18-08		As per 100															
5	BH18-09		As per 100															
6																		
7																		
8																		
9																		
10																		

Instructions:

Please add Hg and CrVI container to existing samples and proceed with analysis of Reg. 153 Hg and Cr VI (these new containers are field filtered)

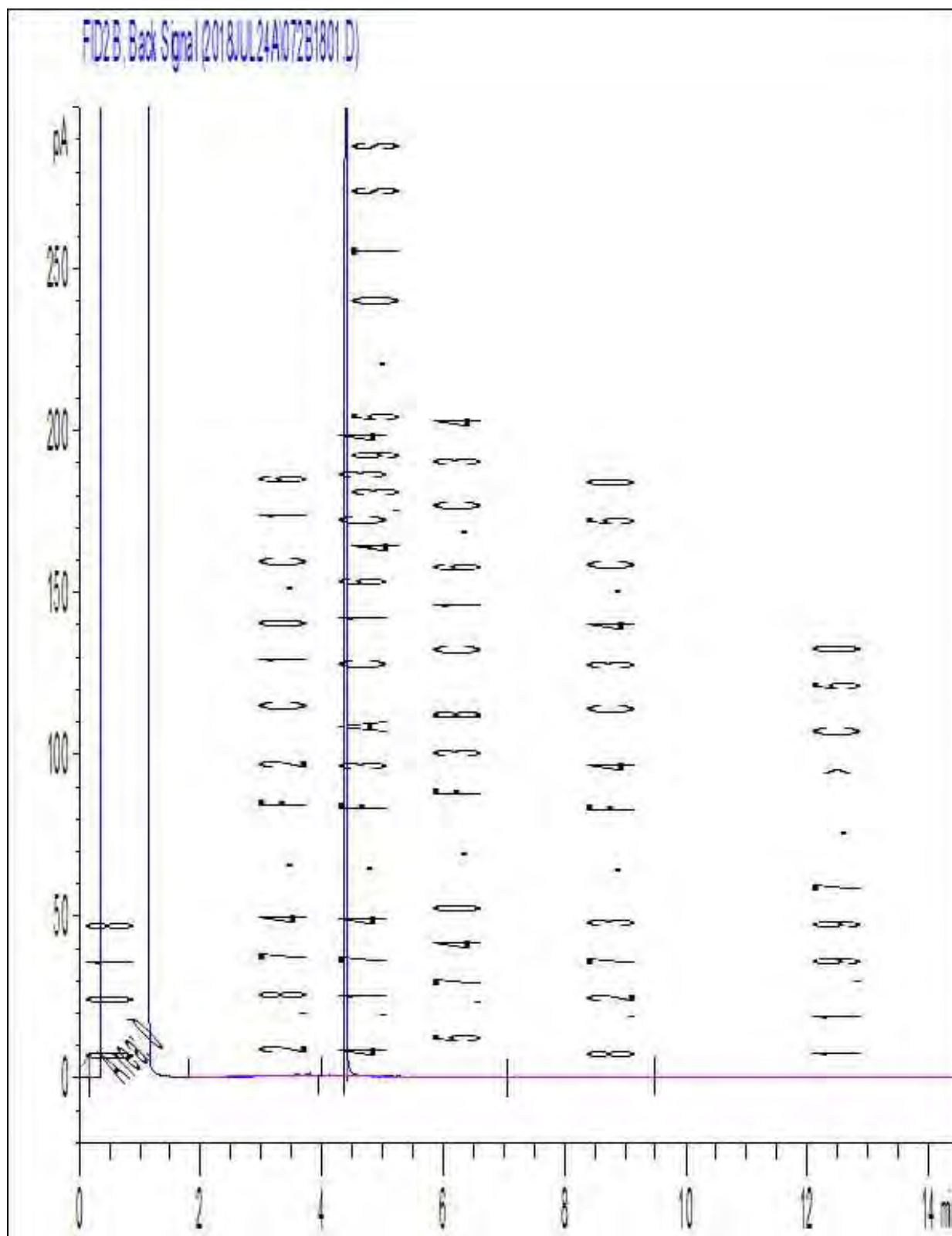
Relinquished By:	Date:	Time:	Received By:	Date:	Time:	Custody Seal Y/N	Temperature on Receipt
Prabhjot Bahl	6/13/2018	14:25	[Signature]	2018/07/24	14:25	N	4/5/6

Petroleum Hydrocarbons F2-F4 in Water Chromatogram



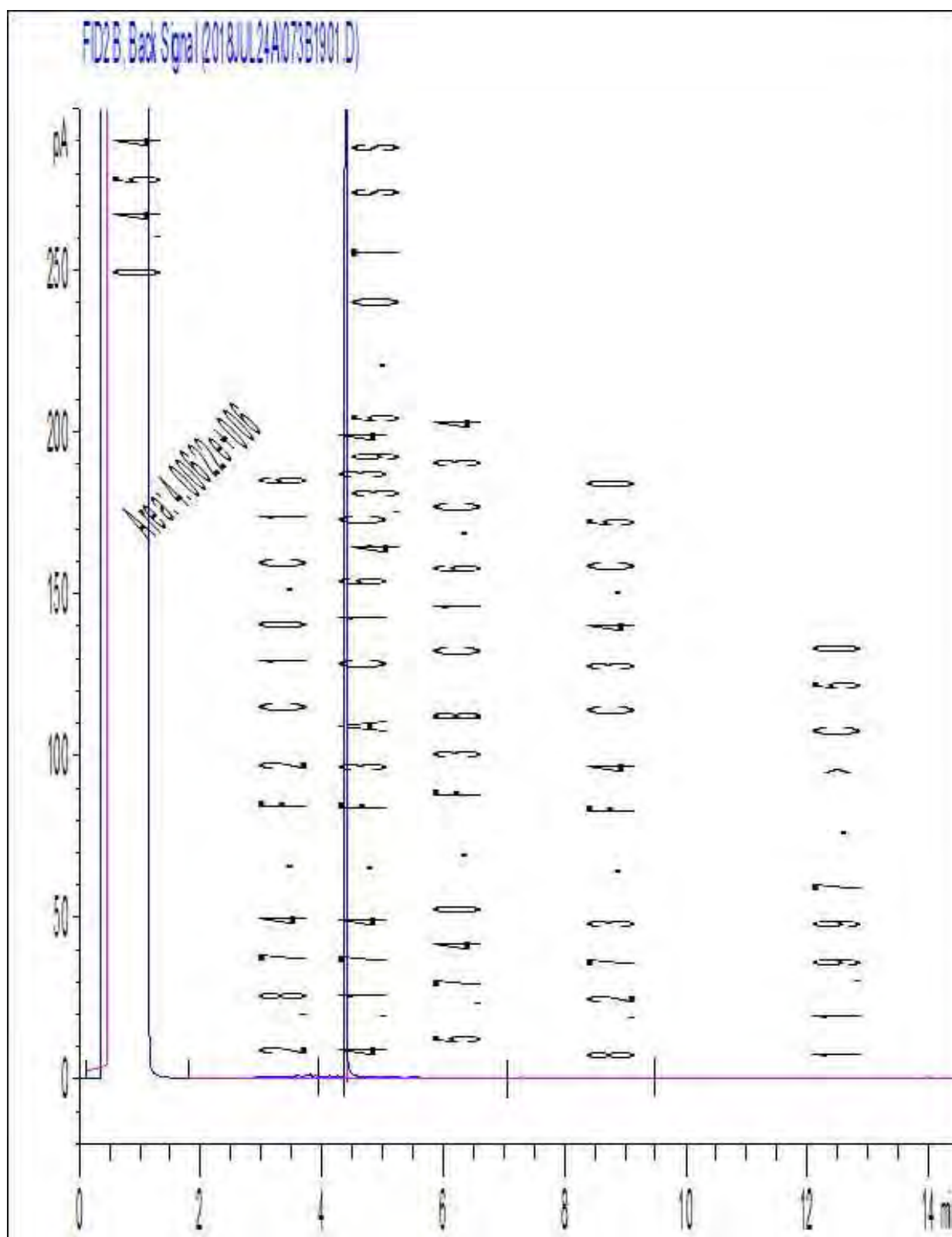
Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Petroleum Hydrocarbons F2-F4 in Water Chromatogram



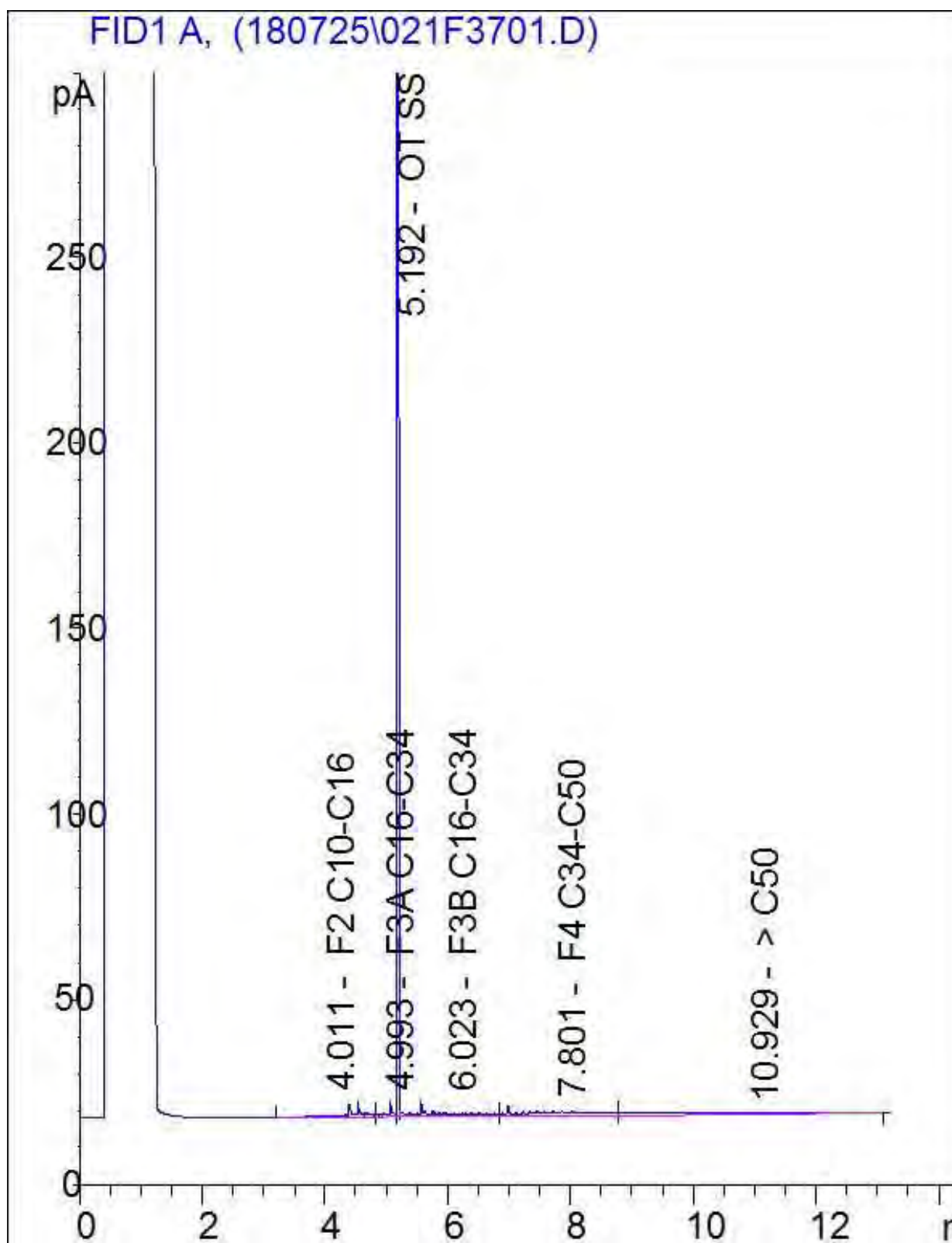
Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Petroleum Hydrocarbons F2-F4 in Water Chromatogram



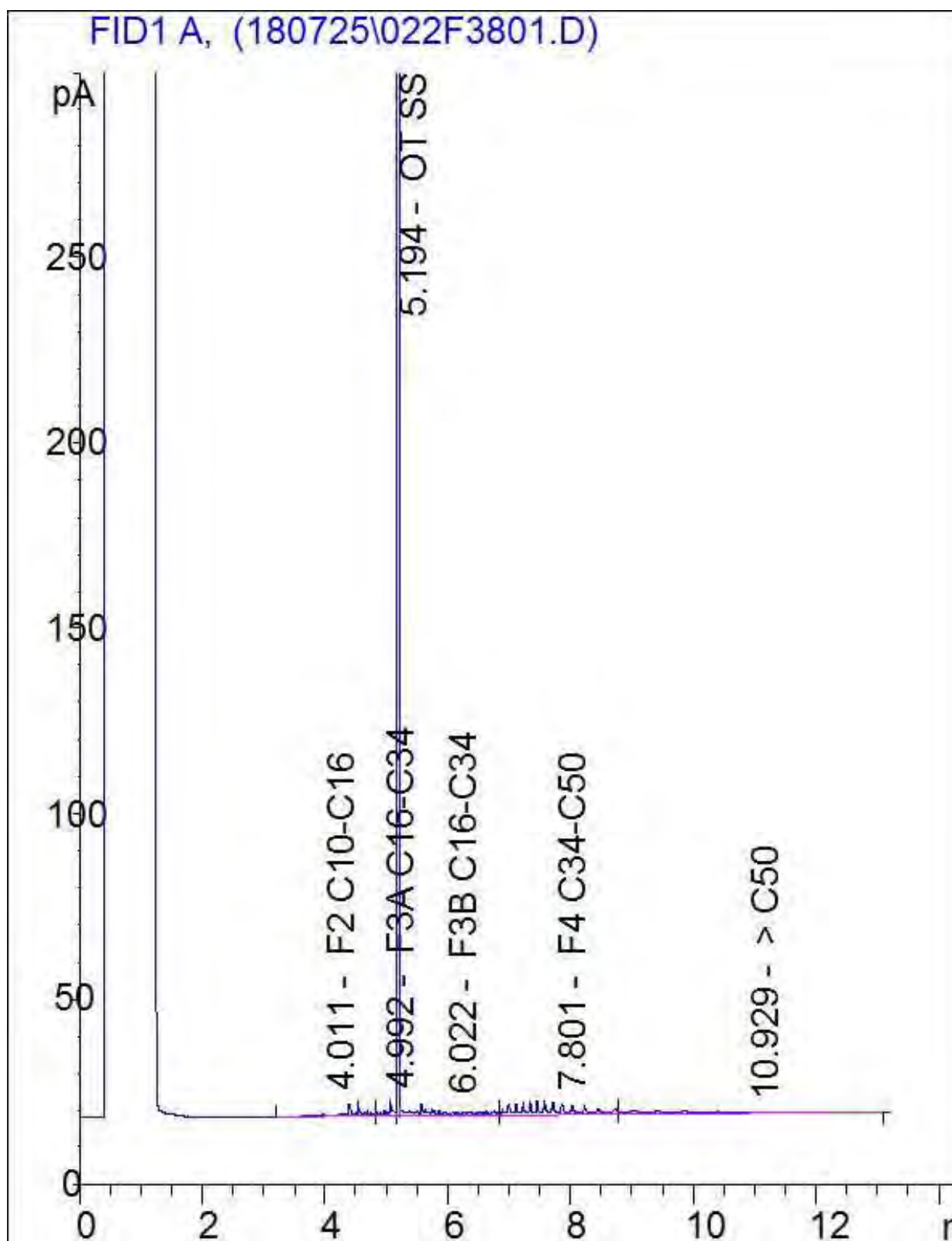
Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Petroleum Hydrocarbons F2-F4 in Water Chromatogram



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

Petroleum Hydrocarbons F2-F4 in Water Chromatogram



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

Your Project #: 1792964 (5000)
Your C.O.C. #: 675074-01-01

Attention: Prabhjot Bal

Golder Associates Ltd
6925 Century Ave
Suite 100
Mississauga, ON
CANADA L5N 7K2

Report Date: 2018/10/17
Report #: R5445021
Version: 1 - Final

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B8Q7244

Received: 2018/10/10, 16:27

Sample Matrix: Soil
Samples Received: 20

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Reference
Methylnaphthalene Sum	1	N/A	2018/10/15	CAM SOP-00301	EPA 8270D m
Methylnaphthalene Sum	19	N/A	2018/10/16	CAM SOP-00301	EPA 8270D m
Hot Water Extractable Boron	20	2018/10/12	2018/10/15	CAM SOP-00408	R153 Ana. Prot. 2011
1,3-Dichloropropene Sum	19	N/A	2018/10/15		EPA 8260C m
Free (WAD) Cyanide	20	2018/10/12	2018/10/15	CAM SOP-00457	OMOE E3015 m
Cyanide (WAD) in Leachates	5	N/A	2018/10/15	CAM SOP-00457	OMOE 3015 m
Conductivity	20	2018/10/15	2018/10/15	CAM SOP-00414	OMOE E3530 v1 m
Hexavalent Chromium in Soil by IC (1)	20	2018/10/11	2018/10/12	CAM SOP-00436	EPA 3060/7199 m
Petroleum Hydrocarbons F2-F4 in Soil (2)	19	2018/10/12	2018/10/15	CAM SOP-00316	CCME CWS m
F4G (CCME Hydrocarbons Gravimetric)	2	2018/10/17	2018/10/17	CAM SOP-00316	CCME PHC-CWS m
Fluoride by ISE in Leachates	5	2018/10/13	2018/10/15	CAM SOP-00449	SM 23 4500-F- C m
Mercury (TCLP Leachable) (mg/L)	5	N/A	2018/10/15	CAM SOP-00453	EPA 7470A m
Strong Acid Leachable Metals by ICPMS	20	2018/10/12	2018/10/12	CAM SOP-00447	EPA 6020B m
Total Metals in TCLP Leachate by ICPMS	5	2018/10/13	2018/10/15	CAM SOP-00447	EPA 6020B m
Ignitability of a Sample	5	2018/10/15	2018/10/15	CAM SOP-00432	EPA 1030 Rev. 1 m
Moisture	11	N/A	2018/10/11	CAM SOP-00445	Carter 2nd ed 51.2 m
Moisture	9	N/A	2018/10/12	CAM SOP-00445	Carter 2nd ed 51.2 m
Nitrate(NO3) + Nitrite(NO2) in Leachate	5	N/A	2018/10/15	CAM SOP-00440	SM 23 4500-NO3I/NO2B
PAH Compounds in Soil by GC/MS (SIM)	2	2018/10/12	2018/10/12	CAM SOP-00318	EPA 8270D m
PAH Compounds in Soil by GC/MS (SIM)	17	2018/10/12	2018/10/13	CAM SOP-00318	EPA 8270D m
PAH Compounds in Soil by GC/MS (SIM)	1	2018/10/13	2018/10/14	CAM SOP-00318	EPA 8270D m
Polychlorinated Biphenyl in Leachate	5	2018/10/15	2018/10/15	CAM SOP-00309	EPA 8082A m
pH CaCl2 EXTRACT	20	2018/10/12	2018/10/12	CAM SOP-00413	EPA 9045 D m
Sodium Adsorption Ratio (SAR)	20	N/A	2018/10/16	CAM SOP-00102	EPA 6010C
TCLP Zero Headspace Extraction	5	2018/10/12	2018/10/13	CAM SOP-00430	EPA 1311 m
Volatile Organic Compounds and F1 PHCs	19	N/A	2018/10/12	CAM SOP-00230	EPA 8260C m
VOCs in ZHE Leachates	5	2018/10/15	2018/10/15	CAM SOP-00228	EPA 8260C m

Remarks:

Maxxam Analytics' laboratories are accredited to ISO/IEC 17025:2005 for specific parameters on scopes of accreditation. Unless otherwise noted,



Your Project #: 21468131
Your C.O.C. #: 859643-01-01

Attention: Reilly Andrews

Golder Associates Ltd
210 Sheldon Drive
Cambridge, ON
CANADA N1T 1A8

Report Date: 2022/01/04

Report #: R6947877

Version: 1 - Final

CERTIFICATE OF ANALYSIS

BV LABS JOB #: C1AC893

Received: 2021/12/22, 15:48

Sample Matrix: Ground Water
Samples Received: 4

Analyses	Date		Date Analyzed	Laboratory Method	Analytical Method
	Quantity	Extracted			
Methylnaphthalene Sum	3	N/A	2021/12/30	CAM SOP-00301	EPA 8270D m
Chromium (VI) in Water	3	N/A	2021/12/29	CAM SOP-00436	EPA 7199 m
Petroleum Hydro. CCME F1 & BTEX in Water	1	N/A	2021/12/28	CAM SOP-00315	CCME PHC-CWS m
Petroleum Hydro. CCME F1 & BTEX in Water	3	N/A	2021/12/29	CAM SOP-00315	CCME PHC-CWS m
Petroleum Hydrocarbons F2-F4 in Water (1)	2	2021/12/23	2021/12/24	CAM SOP-00316	CCME PHC-CWS m
Petroleum Hydrocarbons F2-F4 in Water (1)	1	2021/12/23	2021/12/30	CAM SOP-00316	CCME PHC-CWS m
Mercury	1	2021/12/29	2021/12/30	CAM SOP-00453	EPA 7470A m
Mercury	2	2021/12/30	2021/12/30	CAM SOP-00453	EPA 7470A m
Dissolved Metals by ICPMS	3	N/A	2021/12/31	CAM SOP-00447	EPA 6020B m
PAH Compounds in Water by GC/MS (SIM)	3	2021/12/23	2021/12/24	CAM SOP-00318	EPA 8270D m

Remarks:

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

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

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

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

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

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

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

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



Your Project #: 21468131
Your C.O.C. #: 859643-01-01

Attention: Reilly Andrews

Golder Associates Ltd
210 Sheldon Drive
Cambridge, ON
CANADA N1T 1A8

Report Date: 2022/01/04
Report #: R6947877
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BV LABS JOB #: C1AC893

Received: 2021/12/22, 15:48

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

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.

Ema Gitej, Senior Project Manager

Email: emese.gitej@bureauveritas.com

Phone# (905)817-5829

=====

BV Labs has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per ISO/IEC 17025, signing the reports. For Service Group specific validation please refer to the Validation Signature Page.



PETROLEUM HYDROCARBONS (CCME)

Bureau Veritas ID		RLV054		
Sampling Date		2021/12/22		
COC Number		859643-01-01		
	UNITS	TRIP BLANK	RDL	QC Batch
BTEX & F1 Hydrocarbons				
Benzene	ug/L	<0.20	0.20	7754973
Toluene	ug/L	<0.20	0.20	7754973
Ethylbenzene	ug/L	<0.20	0.20	7754973
o-Xylene	ug/L	<0.20	0.20	7754973
p+m-Xylene	ug/L	<0.40	0.40	7754973
Total Xylenes	ug/L	<0.40	0.40	7754973
F1 (C6-C10)	ug/L	<25	25	7754973
F1 (C6-C10) - BTEX	ug/L	<25	25	7754973
Surrogate Recovery (%)				
1,4-Difluorobenzene	%	120		7754973
4-Bromofluorobenzene	%	80		7754973
D10-o-Xylene	%	121		7754973
D4-1,2-Dichloroethane	%	114		7754973
RDL = Reportable Detection Limit				
QC Batch = Quality Control Batch				



O.REG 153 METALS PACKAGE (WATER)

Bureau Veritas ID		RLV051		RLV052		RLV053		
Sampling Date		2021/12/22 12:50		2021/12/22 13:55		2021/12/22		
COC Number		859643-01-01		859643-01-01		859643-01-01		
	UNITS	BH18-01	QC Batch	BH18-07	QC Batch	DUP01	RDL	QC Batch
Metals								
Chromium (VI)	ug/L	<0.50	7752341	<0.50	7752341	<0.50	0.50	7752341
Mercury (Hg)	ug/L	<0.10	7759504	<0.10	7757934	<0.10	0.10	7759504
Dissolved Antimony (Sb)	ug/L	<0.50	7753285	<0.50	7753285	<0.50	0.50	7753285
Dissolved Arsenic (As)	ug/L	3.3	7753285	<1.0	7753285	3.1	1.0	7753285
Dissolved Barium (Ba)	ug/L	19	7753285	15	7753285	20	2.0	7753285
Dissolved Beryllium (Be)	ug/L	<0.40	7753285	<0.40	7753285	<0.40	0.40	7753285
Dissolved Boron (B)	ug/L	350	7753285	800	7753285	350	10	7753285
Dissolved Cadmium (Cd)	ug/L	<0.090	7753285	<0.090	7753285	<0.090	0.090	7753285
Dissolved Chromium (Cr)	ug/L	<5.0	7753285	<5.0	7753285	<5.0	5.0	7753285
Dissolved Cobalt (Co)	ug/L	1.3	7753285	<0.50	7753285	1.3	0.50	7753285
Dissolved Copper (Cu)	ug/L	<0.90	7753285	<0.90	7753285	<0.90	0.90	7753285
Dissolved Lead (Pb)	ug/L	<0.50	7753285	<0.50	7753285	<0.50	0.50	7753285
Dissolved Molybdenum (Mo)	ug/L	2.5	7753285	3.7	7753285	2.6	0.50	7753285
Dissolved Nickel (Ni)	ug/L	1.1	7753285	2.8	7753285	1.1	1.0	7753285
Dissolved Selenium (Se)	ug/L	<2.0	7753285	<2.0	7753285	<2.0	2.0	7753285
Dissolved Silver (Ag)	ug/L	<0.090	7753285	<0.090	7753285	<0.090	0.090	7753285
Dissolved Sodium (Na)	ug/L	68000	7753285	110000	7753285	65000	100	7753285
Dissolved Thallium (Tl)	ug/L	<0.050	7753285	<0.050	7753285	<0.050	0.050	7753285
Dissolved Uranium (U)	ug/L	2.7	7753285	5.9	7753285	2.5	0.10	7753285
Dissolved Vanadium (V)	ug/L	<0.50	7753285	<0.50	7753285	<0.50	0.50	7753285
Dissolved Zinc (Zn)	ug/L	<5.0	7753285	<5.0	7753285	<5.0	5.0	7753285
RDL = Reportable Detection Limit								
QC Batch = Quality Control Batch								



O.REG 153 PAHS (GROUND WATER)

Bureau Veritas ID		RLV051	RLV052	RLV053		
Sampling Date		2021/12/22 12:50	2021/12/22 13:55	2021/12/22		
COC Number		859643-01-01	859643-01-01	859643-01-01		
	UNITS	BH18-01	BH18-07	DUP01	RDL	QC Batch
Calculated Parameters						
Methylnaphthalene, 2-(1-)	ug/L	<0.071	0.13	<0.071	0.071	7750881
Polyaromatic Hydrocarbons						
Acenaphthene	ug/L	<0.050	<0.050	<0.050	0.050	7752707
Acenaphthylene	ug/L	<0.050	<0.050	<0.050	0.050	7752707
Anthracene	ug/L	<0.050	<0.050	<0.050	0.050	7752707
Benzo(a)anthracene	ug/L	<0.050	<0.050	<0.050	0.050	7752707
Benzo(a)pyrene	ug/L	<0.0090	<0.0090	<0.0090	0.0090	7752707
Benzo(b,j)fluoranthene	ug/L	<0.050	<0.050	<0.050	0.050	7752707
Benzo(g,h,i)perylene	ug/L	<0.050	<0.050	<0.050	0.050	7752707
Benzo(k)fluoranthene	ug/L	<0.050	<0.050	<0.050	0.050	7752707
Chrysene	ug/L	<0.050	<0.050	<0.050	0.050	7752707
Dibenzo(a,h)anthracene	ug/L	<0.050	<0.050	<0.050	0.050	7752707
Fluoranthene	ug/L	<0.050	<0.050	<0.050	0.050	7752707
Fluorene	ug/L	<0.050	<0.050	<0.050	0.050	7752707
Indeno(1,2,3-cd)pyrene	ug/L	<0.050	<0.050	<0.050	0.050	7752707
1-Methylnaphthalene	ug/L	<0.050	0.052	<0.050	0.050	7752707
2-Methylnaphthalene	ug/L	<0.050	0.080	<0.050	0.050	7752707
Naphthalene	ug/L	<0.050	<0.050	<0.050	0.050	7752707
Phenanthrene	ug/L	<0.030	0.088	<0.030	0.030	7752707
Pyrene	ug/L	<0.050	<0.050	<0.050	0.050	7752707
Surrogate Recovery (%)						
D10-Anthracene	%	107	87	95		7752707
D14-Terphenyl (FS)	%	78	58	60		7752707
D8-Acenaphthylene	%	99	95	92		7752707
RDL = Reportable Detection Limit						
QC Batch = Quality Control Batch						



O.REG 153 PHCS, BTEX/F1-F4 (GROUND WATER)

Bureau Veritas ID		RLV051	RLV052	RLV053		
Sampling Date		2021/12/22 12:50	2021/12/22 13:55	2021/12/22		
COC Number		859643-01-01	859643-01-01	859643-01-01		
	UNITS	BH18-01	BH18-07	DUP01	RDL	QC Batch
BTEX & F1 Hydrocarbons						
Benzene	ug/L	<0.20	<0.20	<0.20	0.20	7754973
Toluene	ug/L	<0.20	0.27	0.20	0.20	7754973
Ethylbenzene	ug/L	<0.20	<0.20	<0.20	0.20	7754973
o-Xylene	ug/L	<0.20	<0.20	<0.20	0.20	7754973
p+m-Xylene	ug/L	<0.40	<0.40	<0.40	0.40	7754973
Total Xylenes	ug/L	<0.40	<0.40	<0.40	0.40	7754973
F1 (C6-C10)	ug/L	<25	<25	<25	25	7754973
F1 (C6-C10) - BTEX	ug/L	<25	<25	<25	25	7754973
F2-F4 Hydrocarbons						
F2 (C10-C16 Hydrocarbons)	ug/L	<100	<100	<100	100	7752705
F3 (C16-C34 Hydrocarbons)	ug/L	<200	<200	<200	200	7752705
F4 (C34-C50 Hydrocarbons)	ug/L	<200	<200	<200	200	7752705
Reached Baseline at C50	ug/L	Yes	Yes	Yes		7752705
Surrogate Recovery (%)						
1,4-Difluorobenzene	%	100	100	102		7754973
4-Bromofluorobenzene	%	77	87	89		7754973
D10-o-Xylene	%	95	94	95		7754973
D4-1,2-Dichloroethane	%	104	104	102		7754973
o-Terphenyl	%	113	84	76		7752705
RDL = Reportable Detection Limit						
QC Batch = Quality Control Batch						



Bureau Veritas Job #: C1AC893
Report Date: 2022/01/04

Golder Associates Ltd
Client Project #: 21468131
Sampler Initials: CI

TEST SUMMARY

Bureau Veritas ID: RLV051
Sample ID: BH18-01
Matrix: Ground Water

Collected: 2021/12/22
Shipped:
Received: 2021/12/22

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	7750881	N/A	2021/12/30	Automated Statchk
Chromium (VI) in Water	IC	7752341	N/A	2021/12/29	Theodora LI
Petroleum Hydro. CCME F1 & BTEX in Water	HSGC/MSFD	7754973	N/A	2021/12/29	Domnica Andronesco
Petroleum Hydrocarbons F2-F4 in Water	GC/FID	7752705	2021/12/23	2021/12/30	Dennis Ngondou
Mercury	CV/AA	7759504	2021/12/30	2021/12/30	Gagandeep Rai
Dissolved Metals by ICPMS	ICP/MS	7753285	N/A	2021/12/31	Daniel Teclu
PAH Compounds in Water by GC/MS (SIM)	GC/MS	7752707	2021/12/23	2021/12/24	Jonghan Yoon

Bureau Veritas ID: RLV052
Sample ID: BH18-07
Matrix: Ground Water

Collected: 2021/12/22
Shipped:
Received: 2021/12/22

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	7750881	N/A	2021/12/30	Automated Statchk
Chromium (VI) in Water	IC	7752341	N/A	2021/12/29	Theodora LI
Petroleum Hydro. CCME F1 & BTEX in Water	HSGC/MSFD	7754973	N/A	2021/12/29	Domnica Andronesco
Petroleum Hydrocarbons F2-F4 in Water	GC/FID	7752705	2021/12/23	2021/12/24	Dennis Ngondou
Mercury	CV/AA	7757934	2021/12/29	2021/12/30	Gagandeep Rai
Dissolved Metals by ICPMS	ICP/MS	7753285	N/A	2021/12/31	Daniel Teclu
PAH Compounds in Water by GC/MS (SIM)	GC/MS	7752707	2021/12/23	2021/12/24	Jonghan Yoon

Bureau Veritas ID: RLV053
Sample ID: DUP01
Matrix: Ground Water

Collected: 2021/12/22
Shipped:
Received: 2021/12/22

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	7750881	N/A	2021/12/30	Automated Statchk
Chromium (VI) in Water	IC	7752341	N/A	2021/12/29	Theodora LI
Petroleum Hydro. CCME F1 & BTEX in Water	HSGC/MSFD	7754973	N/A	2021/12/29	Domnica Andronesco
Petroleum Hydrocarbons F2-F4 in Water	GC/FID	7752705	2021/12/23	2021/12/24	Dennis Ngondou
Mercury	CV/AA	7759504	2021/12/30	2021/12/30	Gagandeep Rai
Dissolved Metals by ICPMS	ICP/MS	7753285	N/A	2021/12/31	Daniel Teclu
PAH Compounds in Water by GC/MS (SIM)	GC/MS	7752707	2021/12/23	2021/12/24	Jonghan Yoon

Bureau Veritas ID: RLV054
Sample ID: TRIP BLANK
Matrix: Ground Water

Collected: 2021/12/22
Shipped:
Received: 2021/12/22

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Petroleum Hydro. CCME F1 & BTEX in Water	HSGC/MSFD	7754973	N/A	2021/12/28	Domnica Andronesco



Bureau Veritas Job #: C1AC893
Report Date: 2022/01/04

Golder Associates Ltd
Client Project #: 21468131
Sampler Initials: CI

GENERAL COMMENTS

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

Package 1	2.0°C
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Results relate only to the items tested.



Bureau Veritas Job #: C1AC893
Report Date: 2022/01/04

QUALITY ASSURANCE REPORT

Golder Associates Ltd
Client Project #: 21468131
Sampler Initials: CI

QC Batch	Parameter	Date	Matrix Spike		SPIKED BLANK		Method Blank		RPD	
			% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
7752705	o-Terphenyl	2021/12/24	102	60 - 130	95	60 - 130	92	%		
7752707	D10-Anthracene	2021/12/28	106	50 - 130	104	50 - 130	99	%		
7752707	D14-Terphenyl (FS)	2021/12/28	113	50 - 130	111	50 - 130	106	%		
7752707	D8-Acenaphthylene	2021/12/28	99	50 - 130	99	50 - 130	93	%		
7754973	1,4-Difluorobenzene	2021/12/28	114	70 - 130	110	70 - 130	123	%		
7754973	4-Bromofluorobenzene	2021/12/28	102	70 - 130	98	70 - 130	73	%		
7754973	D10-o-Xylene	2021/12/28	108	70 - 130	111	70 - 130	119	%		
7754973	D4-1,2-Dichloroethane	2021/12/28	102	70 - 130	107	70 - 130	114	%		
7752341	Chromium (VI)	2021/12/29	102	80 - 120	102	80 - 120	<0.50	ug/L	NC	20
7752705	F2 (C10-C16 Hydrocarbons)	2021/12/24	96	60 - 130	94	60 - 130	<100	ug/L	NC	30
7752705	F3 (C16-C34 Hydrocarbons)	2021/12/24	95	60 - 130	96	60 - 130	<200	ug/L		
7752705	F4 (C34-C50 Hydrocarbons)	2021/12/24	96	60 - 130	93	60 - 130	<200	ug/L		
7752707	1-Methylnaphthalene	2021/12/28	85	50 - 130	71	50 - 130	<0.050	ug/L		
7752707	2-Methylnaphthalene	2021/12/28	77	50 - 130	68	50 - 130	<0.050	ug/L		
7752707	Acenaphthene	2021/12/28	89	50 - 130	79	50 - 130	<0.050	ug/L	0.052	30
7752707	Acenaphthylene	2021/12/28	83	50 - 130	77	50 - 130	<0.050	ug/L	1.8	30
7752707	Anthracene	2021/12/28	100	50 - 130	90	50 - 130	<0.050	ug/L		
7752707	Benzo(a)anthracene	2021/12/28	103	50 - 130	94	50 - 130	<0.050	ug/L	NC	30
7752707	Benzo(a)pyrene	2021/12/28	102	50 - 130	95	50 - 130	<0.0090	ug/L	15	30
7752707	Benzo(b/j)fluoranthene	2021/12/28	107	50 - 130	99	50 - 130	<0.050	ug/L		
7752707	Benzo(g,h,i)perylene	2021/12/28	96	50 - 130	98	50 - 130	<0.050	ug/L		
7752707	Benzo(k)fluoranthene	2021/12/28	100	50 - 130	89	50 - 130	<0.050	ug/L		
7752707	Chrysene	2021/12/28	106	50 - 130	102	50 - 130	<0.050	ug/L		
7752707	Dibenzo(a,h)anthracene	2021/12/28	92	50 - 130	92	50 - 130	<0.050	ug/L	NC	30
7752707	Fluoranthene	2021/12/28	117	50 - 130	109	50 - 130	<0.050	ug/L		
7752707	Fluorene	2021/12/28	107	50 - 130	91	50 - 130	<0.050	ug/L		
7752707	Indeno(1,2,3-cd)pyrene	2021/12/28	100	50 - 130	102	50 - 130	<0.050	ug/L	NC	30
7752707	Naphthalene	2021/12/28	102	50 - 130	64	50 - 130	<0.050	ug/L	0.33	30
7752707	Phenanthrene	2021/12/28	114	50 - 130	99	50 - 130	<0.030	ug/L		
7752707	Pyrene	2021/12/28	114	50 - 130	107	50 - 130	<0.050	ug/L		
7753285	Dissolved Antimony (Sb)	2021/12/31	106	80 - 120	101	80 - 120	<0.50	ug/L		



Bureau Veritas Job #: C1AC893
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QUALITY ASSURANCE REPORT(CONT'D)

Golder Associates Ltd
Client Project #: 21468131
Sampler Initials: CI

QC Batch	Parameter	Date	Matrix Spike		SPIKED BLANK		Method Blank		RPD	
			% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
7753285	Dissolved Arsenic (As)	2021/12/31	103	80 - 120	100	80 - 120	<1.0	ug/L		
7753285	Dissolved Barium (Ba)	2021/12/31	101	80 - 120	101	80 - 120	<2.0	ug/L		
7753285	Dissolved Beryllium (Be)	2021/12/31	101	80 - 120	94	80 - 120	<0.40	ug/L		
7753285	Dissolved Boron (B)	2021/12/31	101	80 - 120	95	80 - 120	<10	ug/L		
7753285	Dissolved Cadmium (Cd)	2021/12/31	97	80 - 120	98	80 - 120	<0.090	ug/L		
7753285	Dissolved Chromium (Cr)	2021/12/31	105	80 - 120	94	80 - 120	<5.0	ug/L		
7753285	Dissolved Cobalt (Co)	2021/12/31	100	80 - 120	99	80 - 120	<0.50	ug/L		
7753285	Dissolved Copper (Cu)	2021/12/31	108	80 - 120	100	80 - 120	<0.90	ug/L		
7753285	Dissolved Lead (Pb)	2021/12/31	93	80 - 120	97	80 - 120	<0.50	ug/L		
7753285	Dissolved Molybdenum (Mo)	2021/12/31	117	80 - 120	103	80 - 120	<0.50	ug/L		
7753285	Dissolved Nickel (Ni)	2021/12/31	94	80 - 120	97	80 - 120	<1.0	ug/L		
7753285	Dissolved Selenium (Se)	2021/12/31	97	80 - 120	99	80 - 120	<2.0	ug/L		
7753285	Dissolved Silver (Ag)	2021/12/31	92	80 - 120	98	80 - 120	<0.090	ug/L		
7753285	Dissolved Sodium (Na)	2021/12/31	NC	80 - 120	100	80 - 120	<100	ug/L		
7753285	Dissolved Thallium (Tl)	2021/12/31	94	80 - 120	100	80 - 120	<0.050	ug/L		
7753285	Dissolved Uranium (U)	2021/12/31	97	80 - 120	97	80 - 120	<0.10	ug/L		
7753285	Dissolved Vanadium (V)	2021/12/31	106	80 - 120	96	80 - 120	<0.50	ug/L		
7753285	Dissolved Zinc (Zn)	2021/12/31	91	80 - 120	97	80 - 120	<5.0	ug/L		
7754973	Benzene	2021/12/28	NC	50 - 140	110	50 - 140	<0.20	ug/L	2.2	30
7754973	Ethylbenzene	2021/12/28	114	50 - 140	122	50 - 140	<0.20	ug/L	5.1	30
7754973	F1 (C6-C10) - BTEX	2021/12/28					<25	ug/L	2.5	30
7754973	F1 (C6-C10)	2021/12/28	87	60 - 140	91	60 - 140	<25	ug/L	2.6	30
7754973	o-Xylene	2021/12/28	110	50 - 140	115	50 - 140	<0.20	ug/L	2.5	30
7754973	p+m-Xylene	2021/12/28	124	50 - 140	128	50 - 140	<0.40	ug/L	2.0	30
7754973	Toluene	2021/12/28	105	50 - 140	111	50 - 140	<0.20	ug/L	2.3	30
7754973	Total Xylenes	2021/12/28					<0.40	ug/L	2.1	30
7757934	Mercury (Hg)	2021/12/30	93	75 - 125	97	80 - 120	<0.10	ug/L	NC	20



Bureau Veritas Job #: C1AC893
Report Date: 2022/01/04

QUALITY ASSURANCE REPORT(CONT'D)

Golder Associates Ltd
Client Project #: 21468131
Sampler Initials: CI

QC Batch	Parameter	Date	Matrix Spike		SPIKED BLANK		Method Blank		RPD	
			% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
7759504	Mercury (Hg)	2021/12/30	92	75 - 125	94	80 - 120	<0.10	ug/L	NC	20
Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement. Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference. Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy. Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination. Surrogate: A pure or isotopically labeled compound whose behavior mirrors the analytes of interest. Used to evaluate extraction efficiency. NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spike amount was too small to permit a reliable recovery calculation (matrix spike concentration was less than the native sample concentration) NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (absolute difference $\leq 2 \times \text{RDL}$).										



Bureau Veritas Job #: C1AC893
Report Date: 2022/01/04

Golder Associates Ltd
Client Project #: 21468131
Sampler Initials: CI

VALIDATION SIGNATURE PAGE

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

A handwritten signature in black ink, appearing to read "Brad Newman".

Brad Newman, B.Sc., C.Chem., Scientific Service Specialist

BV Labs has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per ISO/IEC 17025, signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

Bureau Veritas Laboratories
6740 Campobello Road, Mississauga, Ontario Canada L5N 2L8 Tel: (905) 817-5700 Toll-free: 800-563-6266 Fax: (905) 817-5777 www.bvna.com

22-Dec-21 15:48
Ema Gitej
CIAC893
ATM ENV-410

INVOICE TO:
Company Name: #21375 Golder Associates Ltd
Attention: Accounts Payable
Address: 210 Sheldon Drive, Cambridge ON N1T 1A8
Tel: (519) 620-8182 Fax:
Email: CanadaAccountsPayableInvoices@golder.com

REPORT TO:
Company Name:
Attention: Reilly Andrews
Address:
Tel: (519) 620-8182 Ext: 6520 Fax:
Email: Reilly_Andrews@golder.com

PROJECT INFORMATION:
Quotation #: B80683
P.O. #:
Project: 21468131
Project Name:
Site #:
Sampled By: Colin Tane

Only:
Bottle Order #:
Project Manager: Ema Gitej

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

Regulation 153 (2011)
Table 1: Res/Park, Medium/Fine, CCME, Sanitary Sewer Bylaw, Reg 558, Storm Sewer Bylaw, MISA, Municipality, PWQO, Reg 406 Table, Other

Other Regulations
CCME, Sanitary Sewer Bylaw, Reg 558, Storm Sewer Bylaw, MISA, Municipality, PWQO, Reg 406 Table, Other

Special Instructions

Include Criteria on Certificate of Analysis (Y/N)?

ANALYSIS REQUESTED (PLEASE BE SPECIFIC)
Field Filtered (please circle): (Metals/Hg/Cr/V)
O Reg 153 PHCs BTEX/F1-F4
O Reg 153 PAHs
O Reg 153 Metals Pkg (ICPMS, Hg, Cr, V, BHOI)
O Reg 406 Excess Soil SPLP ABNs
O Reg 406 Excess Soil SPLP Metals
SPLP PHCs, BTEX/F1-F4

Turnaround Time (TAT) Required:
Regular (Standard) TAT: (will be applied if Rush TAT is not specified). Standard TAT = 5-7 Working days for most tests. Please note: Standard TAT for certain tests such as BOD and Dioxins/Furans are > 5 days - contact your Project Manager for details.
Job Specific Rush TAT (if applies to entire submission)
Date Required: Time Required:
Rush Confirmation Number: (call lab for #)

Sample Barcode Label	Sample (Location) Identification	Date Sampled	Time Sampled	Matrix	Field Filtered (please circle): (Metals/Hg/Cr/V)	O Reg 153 PHCs BTEX/F1-F4	O Reg 153 PAHs	O Reg 153 Metals Pkg (ICPMS, Hg, Cr, V, BHOI)	O Reg 406 Excess Soil SPLP ABNs	O Reg 406 Excess Soil SPLP Metals	SPLP PHCs, BTEX/F1-F4	# of Bottles	Comments
1	BH18-01	22-Dec-21	12:50	GW	Y	✓	✓	✓					pH 7.30, Temp 8.3°C
2	BH18-01		1:55		Y	✓	✓	✓					pH 7.30, Temp 8.4°C
3	BCPI		/		Y	✓	✓	✓					
4	Trip blank		/		/	✓							
5													
6													
7													2 Empty subm entered
8													
9													
10													

* RELINQUISHED BY: (Signature/Print) Date: (YY/MM/DD) Time RECEIVED BY: (Signature/Print) Date: (YY/MM/DD) Time # jars used and not submitted Laboratory Use Only

Time Sensitive Temperature (°C) on Reel Custody Seal Present Intact Yes No

White: Bureau Veritas Yellow: Client

SAMPLES MUST BE KEPT COOL (< 10°C) FROM TIME OF SAMPLING UNTIL DELIVERY TO BUREAU VERITAS

UNLESS OTHERWISE AGREED TO IN WRITING, WORK SUBMITTED ON THIS CHAIN OF CUSTODY IS SUBJECT TO BUREAU VERITAS'S STANDARD TERMS AND CONDITIONS. SIGNING OF THIS CHAIN OF CUSTODY DOCUMENT IS ACKNOWLEDGMENT AND ACCEPTANCE OF OUR TERMS WHICH ARE AVAILABLE FOR VIEWING AT WWW.BVLABS.COM/TERMS-AND-CONDITIONS.

IT IS THE RESPONSIBILITY OF THE RELINQUISHER TO ENSURE THE ACCURACY OF THE CHAIN OF CUSTODY RECORD. AN INCOMPLETE CHAIN OF CUSTODY MAY RESULT IN ANALYTICAL TAT DELAYS.

SAMPLE CONTAINER, PRESERVATION, HOLD TIME AND PACKAGE INFORMATION CAN BE VIEWED AT WWW.BVLABS.COM/RESOURCES/CHAIN-OF-CUSTODY-FORMS.

Bureau Veritas Canada (2019) Inc.



Bureau Veritas Job #: C1AC893
Report Date: 2022/01/04

Golder Associates Ltd
Client Project #: 21468131
Sampler Initials: CI

Exceedance Summary Table – Reg153/04 T3-GW-F/M
Result Exceedances

Sample ID	Bureau Veritas ID	Parameter	Criteria	Result	DL	UNITS
No Exceedances						
The exceedance summary table is for information purposes only and should not be considered a comprehensive listing or statement of conformance to applicable regulatory guidelines.						

CLIENT NAME: WSP CANADA INC.
100 SCOTIA COURT
WHITBY, ON L1N8Y6
(905) 723-2727

ATTENTION TO: Rica Esmirna Maliwat

PROJECT: CA0040928.5498 Task 3000

AGAT WORK ORDER: 24T230918

SOIL ANALYSIS REVIEWED BY: Sukhwinder Randhawa, Inorganic Team Lead

TRACE ORGANICS REVIEWED BY: Neli Popnikolova, Senior Chemist

DATE REPORTED: Dec 19, 2024

PAGES (INCLUDING COVER): 30

VERSION*: 1

Should you require any information regarding this analysis please contact your client services representative at (905) 712-5100

*Notes

Disclaimer:

- All work conducted herein has been done using accepted standard protocols, and generally accepted practices and methods. AGAT test methods may incorporate modifications from the specified reference methods to improve performance.
- All samples will be disposed of within 30 days after receipt unless a Long Term Storage Agreement is signed and returned. Some specialty analysis may be exempt, please contact your Client Project Manager for details.
- AGAT's liability in connection with any delay, performance or non-performance of these services is only to the Client and does not extend to any other third party. Unless expressly agreed otherwise in writing, AGAT's liability is limited to the actual cost of the specific analysis or analyses included in the services.
- This Certificate shall not be reproduced except in full, without the written approval of the laboratory.
- The test results reported herewith relate only to the samples as received by the laboratory.
- Application of guidelines is provided "as is" without warranty of any kind, either expressed or implied, including, but not limited to, warranties of merchantability, fitness for a particular purpose, or non-infringement. AGAT assumes no responsibility for any errors or omissions in the guidelines contained in this document.
- All reportable information is available on request from AGAT Laboratories, in accordance with ISO/IEC 17025:2017, ISO/IEC 17025:2005 (Quebec), DR-12-PALA and/or NELAP Standards.
- This document is signed by an authorized signatory who meets the requirements of the MELCCFP, CALA, CCN and NELAP.
- For environmental samples in the Province of Quebec: The analysis is performed on and results apply to samples as received. A temperature above 6°C upon receipt, as indicated in the Sample Reception Notification (SRN), could indicate the integrity of the samples has been compromised if the delay between sampling and submission to the laboratory could not be minimized.



Certificate of Analysis

AGAT WORK ORDER: 24T230918

PROJECT: CA0040928.5498 Task 3000

5835 COOPERS AVENUE
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<http://www.agatlabs.com>

CLIENT NAME: WSP CANADA INC.

ATTENTION TO: Rica Esmirna Maliwat

SAMPLING SITE: 86 Burnhamthorpe Rd.

SAMPLED BY: Mohammad

O. Reg. 153(511) - Metals & Inorganics (Soil)

DATE RECEIVED: 2024-12-11

DATE REPORTED: 2024-12-19

SAMPLE DESCRIPTION:				BH24-5-SS1	BH24-6-SS1	BH24-7-SS1	BH24-8-SS1	BH24-9-SS1	BH24-10-SS1	BH24-11-SS1	BH24-12-SS1
SAMPLE TYPE:				Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
DATE SAMPLED:				2024-12-10 08:30	2024-12-10 09:35	2024-12-10 09:30	2024-12-10 08:55	2024-12-10 08:45	2024-12-10 10:05	2024-12-10 10:15	2024-12-10 10:25
Parameter	Unit	G / S	RDL	6400640	6400642	6400645	6400647	6400650	6400652	6400654	6400656
Antimony	µg/g	7.5	0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8
Arsenic	µg/g	18	1	5	6	5	5	5	4	5	5
Barium	µg/g	390	2.0	100	102	84.8	92.3	62.5	72.3	92.1	96.2
Beryllium	µg/g	5	0.5	0.7	0.9	0.8	0.8	0.7	0.8	0.9	1.0
Boron	µg/g	120	5	14	10	12	12	11	6	6	6
Boron (Hot Water Soluble)	µg/g	1.5	0.10	0.20	0.37	0.11	0.13	0.19	0.36	0.49	0.44
Cadmium	µg/g	1.2	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Chromium	µg/g	160	5	16	20	17	17	15	18	19	20
Cobalt	µg/g	22	0.8	13.2	13.6	12.6	14.2	12.5	11.2	11.5	11.8
Copper	µg/g	180	1.0	26.3	40.4	27.3	26.5	24.5	20.0	20.0	22.4
Lead	µg/g	120	1	12	36	12	12	12	21	19	18
Molybdenum	µg/g	6.9	0.5	0.5	0.6	0.5	0.6	0.5	<0.5	0.5	0.5
Nickel	µg/g	130	1	25	27	25	26	25	21	21	23
Selenium	µg/g	2.4	0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8
Silver	µg/g	25	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Thallium	µg/g	1	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Uranium	µg/g	23	0.50	0.72	0.73	0.73	0.65	0.70	0.68	1.11	1.08
Vanadium	µg/g	86	2.0	25.2	31.4	25.7	26.4	24.3	29.2	31.4	32.1
Zinc	µg/g	340	5	59	102	62	63	57	69	84	79
Chromium, Hexavalent	µg/g	10	0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Cyanide, WAD	µg/g	0.051	0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040
Mercury	µg/g	1.8	0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Electrical Conductivity (2:1)	mS/cm	0.7	0.005	0.202	0.270	0.255	0.199	0.228	0.218	0.453	0.285
Sodium Adsorption Ratio (2:1) (Calc.)	N/A	5	N/A	0.292	0.709	0.487	0.760	0.517	0.380	2.68	1.08

Certified By:





Certificate of Analysis

AGAT WORK ORDER: 24T230918

PROJECT: CA0040928.5498 Task 3000

5835 COOPERS AVENUE
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<http://www.agatlabs.com>

CLIENT NAME: WSP CANADA INC.

ATTENTION TO: Rica Esmirna Maliwat

SAMPLING SITE: 86 Burnhamthorpe Rd.

SAMPLED BY: Mohammad

O. Reg. 153(511) - Metals & Inorganics (Soil)

DATE RECEIVED: 2024-12-11

DATE REPORTED: 2024-12-19

		SAMPLE DESCRIPTION:		BH24-13-SS1	BH24-14-SS1	DUP1	DUP2
		SAMPLE TYPE:		Soil	Soil	Soil	Soil
		DATE SAMPLED:		2024-12-10 10:35	2024-12-10 10:45	2024-12-10	2024-12-10
Parameter	Unit	G / S	RDL	6400658	6400660	6400662	6400663
Antimony	µg/g	7.5	0.8	<0.8	<0.8	<0.8	<0.8
Arsenic	µg/g	18	1	5	5	6	5
Barium	µg/g	390	2.0	94.0	66.7	117	55.4
Beryllium	µg/g	5	0.5	0.7	0.9	0.9	0.6
Boron	µg/g	120	5	12	13	13	10
Boron (Hot Water Soluble)	µg/g	1.5	0.10	0.11	0.13	0.18	0.23
Cadmium	µg/g	1.2	0.5	<0.5	<0.5	<0.5	<0.5
Chromium	µg/g	160	5	17	21	22	16
Cobalt	µg/g	22	0.8	14.5	13.7	15.7	10.9
Copper	µg/g	180	1.0	27.3	27.4	28.4	27.2
Lead	µg/g	120	1	13	11	13	12
Molybdenum	µg/g	6.9	0.5	0.6	<0.5	0.7	0.6
Nickel	µg/g	130	1	27	26	39	26
Selenium	µg/g	2.4	0.8	<0.8	<0.8	<0.8	<0.8
Silver	µg/g	25	0.5	<0.5	<0.5	<0.5	<0.5
Thallium	µg/g	1	0.5	<0.5	<0.5	<0.5	<0.5
Uranium	µg/g	23	0.50	0.72	0.65	0.76	0.68
Vanadium	µg/g	86	2.0	25.5	32.4	28.8	19.7
Zinc	µg/g	340	5	66	69	67	57
Chromium, Hexavalent	µg/g	10	0.2	<0.2	<0.2	<0.2	<0.2
Cyanide, WAD	µg/g	0.051	0.040	<0.040	<0.040	<0.040	<0.040
Mercury	µg/g	1.8	0.10	<0.10	<0.10	<0.10	<0.10
Electrical Conductivity (2:1)	mS/cm	0.7	0.005	0.174	0.261	0.237	0.179
Sodium Adsorption Ratio (2:1) (Calc.)	N/A	5	N/A	0.221	1.27	0.498	0.406

Certified By:





Certificate of Analysis

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PROJECT: CA0040928.5498 Task 3000

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O. Reg. 153(511) - Metals & Inorganics (Soil)

DATE RECEIVED: 2024-12-11

DATE REPORTED: 2024-12-19

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition - Soil - Residential/Parkland/Institutional Property Use - Medium and Fine Textured Soils **pH range listed applies to surface soil only**
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.
6400640-6400663 EC was determined on the DI water extract obtained from the 2:1 leaching procedure (2 parts DI water:1 part soil). SAR is a calculated parameter.
Analysis performed at AGAT Toronto (unless marked by *)

Certified By:





Certificate of Analysis

AGAT WORK ORDER: 24T230918

PROJECT: CA0040928.5498 Task 3000

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SAMPLING SITE: 86 Burnhamthorpe Rd.

SAMPLED BY: Mohammad

Particle Size by Sieve (Wet)

DATE RECEIVED: 2024-12-11

DATE REPORTED: 2024-12-19

SAMPLE DESCRIPTION:				BH24-1-SS6	BH24-3-SS1	BH24-4-SS3
SAMPLE TYPE:				Soil	Soil	Soil
DATE SAMPLED:				2024-12-09 14:10	2024-12-09 10:05	2024-12-10 15:10
Parameter	Unit	G / S	RDL	6400620	6400630	6400637
Sieve Analysis - 75 µm (retained)	%		NA	38.60	33.40	29.70
Sieve Analysis - 75 µm (passing)	%		NA	61.40	66.60	70.30
Soil Texture (Toronto)				Fine	Fine	Fine

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard

6400620-6400637 Value reported is the amount of sample passing through or retained on sieve after wash with water and represents proportion by weight particles smaller or larger than indicated sieve size.

Analysis performed at AGAT Toronto (unless marked by *)

Certified By:





Certificate of Analysis

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PROJECT: CA0040928.5498 Task 3000

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CLIENT NAME: WSP CANADA INC.

ATTENTION TO: Rica Esmirna Maliwat

SAMPLING SITE: 86 Burnhamthorpe Rd.

SAMPLED BY: Mohammad

O. Reg. 153(511) - PAHs (Soil)

DATE RECEIVED: 2024-12-11

DATE REPORTED: 2024-12-19

SAMPLE DESCRIPTION:				BH24-1-SS5	BH24-2-SS6	BH24-3-SS6	BH24-4-SS6	BH24-5-SS1	BH24-6-SS1	BH24-7-SS1	BH24-8-SS1
SAMPLE TYPE:				Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
DATE SAMPLED:				2024-12-09 14:10	2024-12-09 14:50	2024-12-09 10:15	2024-12-10 15:15	2024-12-10 08:30	2024-12-10 09:35	2024-12-10 09:30	2024-12-10 08:55
Parameter	Unit	G / S	RDL	6400618	6400624	6400635	6400638	6400640	6400642	6400645	6400647
Naphthalene	µg/g	0.75	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Acenaphthylene	µg/g	0.17	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Acenaphthene	µg/g	29	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Fluorene	µg/g	69	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Phenanthrene	µg/g	7.8	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Anthracene	µg/g	0.74	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Fluoranthene	µg/g	0.69	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Pyrene	µg/g	78	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Benzo(a)anthracene	µg/g	0.63	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Chrysene	µg/g	7.8	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Benzo(b)fluoranthene	µg/g	0.78	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Benzo(k)fluoranthene	µg/g	0.78	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Benzo(a)pyrene	µg/g	0.3	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Indeno(1,2,3-cd)pyrene	µg/g	0.48	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Dibenz(a,h)anthracene	µg/g	0.1	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Benzo(g,h,i)perylene	µg/g	7.8	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
2-and 1-methyl Naphthalene	µg/g	3.4	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Moisture Content	%		0.1	14.8	9.4	8.3	10.4	15.8	10.9	15.1	12.1
Surrogate	Unit	Acceptable Limits									
Naphthalene-d8	%	50-140		75	70	70	75	70	75	70	80
Acridine-d9	%	50-140		90	85	80	85	110	110	100	85
Terphenyl-d14	%	50-140		110	110	75	80	90	70	70	85

Certified By:

N Popmukolof



Certificate of Analysis

AGAT WORK ORDER: 24T230918

PROJECT: CA0040928.5498 Task 3000

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CLIENT NAME: WSP CANADA INC.

ATTENTION TO: Rica Esmirna Maliwat

SAMPLING SITE: 86 Burnhamthorpe Rd.

SAMPLED BY: Mohammad

O. Reg. 153(511) - PAHs (Soil)

DATE RECEIVED: 2024-12-11

DATE REPORTED: 2024-12-19

SAMPLE DESCRIPTION:				BH24-9-SS1	BH24-10-SS1	BH24-11-SS1	BH24-12-SS1	BH24-13-SS1	BH24-14-SS1	DUP1	DUP2
SAMPLE TYPE:				Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
DATE SAMPLED:				2024-12-10 08:45	2024-12-10 10:05	2024-12-10 10:15	2024-12-10 10:25	2024-12-10 10:35	2024-12-10 10:45	2024-12-10	2024-12-10
Parameter	Unit	G / S	RDL	6400650	6400652	6400654	6400656	6400658	6400660	6400662	6400663
Naphthalene	µg/g	0.75	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Acenaphthylene	µg/g	0.17	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Acenaphthene	µg/g	29	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Fluorene	µg/g	69	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Phenanthrene	µg/g	7.8	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Anthracene	µg/g	0.74	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Fluoranthene	µg/g	0.69	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Pyrene	µg/g	78	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Benzo(a)anthracene	µg/g	0.63	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Chrysene	µg/g	7.8	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Benzo(b)fluoranthene	µg/g	0.78	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Benzo(k)fluoranthene	µg/g	0.78	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Benzo(a)pyrene	µg/g	0.3	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Indeno(1,2,3-cd)pyrene	µg/g	0.48	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Dibenz(a,h)anthracene	µg/g	0.1	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Benzo(g,h,i)perylene	µg/g	7.8	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
2-and 1-methyl Naphthalene	µg/g	3.4	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Moisture Content	%		0.1	12.2	15.6	26.6	26.7	25.3	10.0	12.8	14.8
Surrogate	Unit	Acceptable Limits									
Naphthalene-d8	%	50-140		70	75	70	70	70	70	75	75
Acridine-d9	%	50-140		80	100	80	100	85	90	85	90
Terphenyl-d14	%	50-140		75	80	85	80	75	70	90	75

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition - Soil - Residential/Parkland/Institutional Property Use - Medium and Fine Textured Soils **pH range listed applies to surface soil only**
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

6400618-6400663 Results are based on the dry weight of the soil.

Note: The result for Benzo(b)Fluoranthene is the total of the Benzo(b)&j)Fluoranthene isomers because the isomers co-elute on the GC column.

2- and 1-Methyl Naphthalene is a calculated parameter. The calculated value is the sum of 2-Methyl Naphthalene and 1-Methyl Naphthalene.

Analysis performed at AGAT Toronto (unless marked by *)

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Certificate of Analysis

AGAT WORK ORDER: 24T230918

PROJECT: CA0040928.5498 Task 3000

5835 COOPERS AVENUE
MISSISSAUGA, ONTARIO
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<http://www.agatlabs.com>

CLIENT NAME: WSP CANADA INC.

ATTENTION TO: Rica Esmirna Maliwat

SAMPLING SITE: 86 Burnhamthorpe Rd.

SAMPLED BY: Mohammad

O. Reg. 153(511) - PHCs F1 - F4 (with PAHs and VOC) (Soil)

DATE RECEIVED: 2024-12-11

DATE REPORTED: 2024-12-19

		SAMPLE DESCRIPTION:		BH24-5-SS1	BH24-6-SS1	BH24-7-SS1	BH24-8-SS1	BH24-9-SS1	BH24-10-SS1	BH24-11-SS1	BH24-12-SS1
		SAMPLE TYPE:		Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
		DATE SAMPLED:		2024-12-10 08:30	2024-12-10 09:35	2024-12-10 09:30	2024-12-10 08:55	2024-12-10 08:45	2024-12-10 10:05	2024-12-10 10:15	2024-12-10 10:25
Parameter	Unit	G / S	RDL	6400640	6400642	6400645	6400647	6400650	6400652	6400654	6400656
F1 (C6 to C10)	µg/g	65	5	<5	<5	<5	<5	<5	<5	<5	<5
F1 (C6 to C10) minus BTEX	µg/g	65	5	<5	<5	<5	<5	<5	<5	<5	<5
F2 (C10 to C16)	µg/g	150	10	<10	<10	<10	<10	<10	<10	<10	<10
F2 (C10 to C16) minus Naphthalene	µg/g		10	<10	<10	<10	<10	<10	<10	<10	<10
F3 (C16 to C34)	µg/g	1300	50	<50	<50	<50	<50	<50	<50	<50	<50
F3 (C16 to C34) minus PAHs	µg/g		50	<50	<50	<50	<50	<50	<50	<50	<50
F4 (C34 to C50)	µg/g	5600	50	<50	<50	<50	<50	<50	<50	<50	<50
Gravimetric Heavy Hydrocarbons	µg/g	5600	50	NA	NA	NA	NA	NA	NA	NA	NA
Moisture Content	%		0.1	15.8	10.9	15.1	12.1	12.2	15.6	26.6	26.7
Surrogate	Unit	Acceptable Limits									
Toluene-d8	%	50-140		92	94	102	98	103	95	105	106
Terphenyl	%	60-140		97	97	99	106	78	97	95	92

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CLIENT NAME: WSP CANADA INC.

ATTENTION TO: Rica Esmirna Maliwat

SAMPLING SITE: 86 Burnhamthorpe Rd.

SAMPLED BY: Mohammad

O. Reg. 153(511) - PHCs F1 - F4 (with PAHs and VOC) (Soil)

DATE RECEIVED: 2024-12-11

DATE REPORTED: 2024-12-19

		SAMPLE DESCRIPTION:		BH24-13-SS1	BH24-14-SS1	DUP1	DUP2
		SAMPLE TYPE:		Soil	Soil	Soil	Soil
		DATE SAMPLED:		2024-12-10 10:35	2024-12-10 10:45	2024-12-10	2024-12-10
Parameter	Unit	G / S	RDL	6400658	6400660	6400662	6400663
F1 (C6 to C10)	µg/g	65	5	<5	<5	<5	<5
F1 (C6 to C10) minus BTEX	µg/g	65	5	<5	<5	<5	<5
F2 (C10 to C16)	µg/g	150	10	<10	<10	<10	<10
F2 (C10 to C16) minus Naphthalene	µg/g		10	<10	<10	<10	<10
F3 (C16 to C34)	µg/g	1300	50	<50	<50	<50	<50
F3 (C16 to C34) minus PAHs	µg/g		50	<50	<50	<50	<50
F4 (C34 to C50)	µg/g	5600	50	<50	<50	<50	<50
Gravimetric Heavy Hydrocarbons	µg/g	5600	50	NA	NA	NA	NA
Moisture Content	%		0.1	25.3	10.0	12.8	14.8
Surrogate	Unit	Acceptable Limits					
Toluene-d8	%	50-140		97	104	96	105
Terphenyl	%	60-140		82	76	100	90

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition - Soil - Residential/Parkland/Institutional Property Use - Medium and Fine Textured Soils **pH range listed applies to surface soil only**
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

6400640-6400663 Results are based on sample dry weight.
The C6-C10 fraction is calculated using toluene response factor.
C6-C10 (F1 minus BTEX) is a calculated parameter. The calculated value is F1 minus BTEX. The calculated parameter is non-accredited. The parameters that are components of the calculation are accredited.
The C10 - C16, C16 - C34, and C34 - C50 fractions are calculated using the average response factor for n-C10, n-C16, and n-C34.
Gravimetric Heavy Hydrocarbons are not included in the Total C16-C50 and are only determined if the chromatogram of the C34 - C50 hydrocarbons indicates that hydrocarbons >C50 are present.
The chromatogram has returned to baseline by the retention time of nC50.
Total C6 - C50 results are corrected for BTEX and PAH contributions.
C>10 - C16 (F2- Naphthalene) is a calculated parameter. The calculated value is F2 - Naphthalene.
C>16 - C34 (F3-PAH) is a calculated parameter. The calculated value is F3-PAH (PAH: sum of Phenanthrene, Benzo(a)anthracene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Benzo(a)pyrene, Fluoranthene, Dibenzo(a,h)anthracene, Indeno(1,2,3-c,d)pyrene and Pyrene).
This method complies with the Reference Method for the CWS PHC and is validated for use in the laboratory.
nC10, nC16 and nC34 response factors are within 10% of their average.
C50 response factor is within 70% of nC10 + nC16 + nC34 average.
Linearity is within 15%.
Extraction and holding times were met for this sample.

Analysis performed at AGAT Toronto (unless marked by *)

Certified By:



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AGAT WORK ORDER: 24T230918

PROJECT: CA0040928.5498 Task 3000

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CLIENT NAME: WSP CANADA INC.

ATTENTION TO: Rica Esmirna Maliwat

SAMPLING SITE: 86 Burnhamthorpe Rd.

SAMPLED BY: Mohammad

O. Reg. 153(511) - PHCs F1 - F4 (with PAHs) (Soil)

DATE RECEIVED: 2024-12-11

DATE REPORTED: 2024-12-19

		SAMPLE DESCRIPTION:		BH24-1-SS5	BH24-2-SS6	BH24-3-SS6	BH24-4-SS6
		SAMPLE TYPE:		Soil	Soil	Soil	Soil
		DATE SAMPLED:		2024-12-09 14:10	2024-12-09 14:50	2024-12-09 10:15	2024-12-10 15:15
Parameter	Unit	G / S	RDL	6400618	6400624	6400635	6400638
Benzene	µg/g	0.17	0.02	<0.02	<0.02	<0.02	<0.02
Toluene	µg/g	6	0.05	<0.05	<0.05	<0.05	<0.05
Ethylbenzene	µg/g	1.6	0.05	<0.05	<0.05	<0.05	<0.05
m & p-Xylene	µg/g		0.05	<0.05	<0.05	<0.05	<0.05
o-Xylene	µg/g		0.05	<0.05	<0.05	<0.05	<0.05
Xylenes (Total)	µg/g	25	0.05	<0.05	<0.05	<0.05	<0.05
F1 (C6 to C10)	µg/g	65	5	<5	<5	<5	<5
F1 (C6 to C10) minus BTEX	µg/g	65	5	<5	<5	<5	<5
F2 (C10 to C16)	µg/g	150	10	<10	<10	<10	<10
F2 (C10 to C16) minus Naphthalene	µg/g		10	<10	<10	<10	<10
F3 (C16 to C34)	µg/g	1300	50	<50	<50	<50	<50
F3 (C16 to C34) minus PAHs	µg/g		50	<50	<50	<50	<50
F4 (C34 to C50)	µg/g	5600	50	<50	<50	<50	<50
Gravimetric Heavy Hydrocarbons	µg/g	5600	50	NA	NA	NA	NA
Moisture Content	%		0.1	14.8	9.4	8.3	10.4
Surrogate	Unit	Acceptable Limits					
Toluene-d8	% Recovery	60-140		108	97	96	88
Terphenyl	%	60-140		120	110	120	110

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AGAT WORK ORDER: 24T230918

PROJECT: CA0040928.5498 Task 3000

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CLIENT NAME: WSP CANADA INC.

ATTENTION TO: Rica Esmirna Maliwat

SAMPLING SITE: 86 Burnhamthorpe Rd.

SAMPLED BY: Mohammad

O. Reg. 153(511) - PHCs F1 - F4 (with PAHs) (Soil)

DATE RECEIVED: 2024-12-11

DATE REPORTED: 2024-12-19

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition - Soil - Residential/Parkland/Institutional Property Use - Medium and Fine Textured Soils **pH range listed applies to surface soil only**
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

6400618-6400638 Results are based on sample dry weight.
The C6-C10 fraction is calculated using toluene response factor.
Xylenes total is a calculated parameter. The calculated value is the sum of m&p-Xylene and o-Xylene.
C6-C10 (F1 minus BTEX) is a calculated parameter. The calculated value is F1 minus BTEX.
The calculated parameters are non-accredited. The parameters that are components of the calculation are accredited.
The C10 - C16, C16 - C34, and C34 - C50 fractions are calculated using the average response factor for n-C10, n-C16, and n-C34.
Gravimetric Heavy Hydrocarbons are not included in the Total C16-C50 and are only determined if the chromatogram of the C34 - C50 hydrocarbons indicates that hydrocarbons >C50 are present.
The chromatogram has returned to baseline by the retention time of nC50.
Total C6 - C50 results are corrected for BTEX and PAH contributions.
C>10 - C16 (F2- Naphthalene) is a calculated parameter. The calculated value is F2 - Naphthalene.
C>16 - C34 (F3-PAH) is a calculated parameter. The calculated value is F3-PAH (PAH: sum of Phenanthrene, Benzo(a)anthracene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Benzo(a)pyrene, Fluoranthene, Dibenzo(a,h)anthracene, Indeno(1,2,3-c,d)pyrene and Pyrene).
This method complies with the Reference Method for the CWS PHC and is validated for use in the laboratory.
nC10, nC16 and nC34 response factors are within 10% of their average.
C50 response factor is within 70% of nC10 + nC16 + nC34 average.
Linearity is within 15%.
Extraction and holding times were met for this sample.

Analysis performed at AGAT Toronto (unless marked by *)

Certified By:



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CLIENT NAME: WSP CANADA INC.

ATTENTION TO: Rica Esmirna Maliwat

SAMPLING SITE: 86 Burnhamthorpe Rd.

SAMPLED BY: Mohammad

O. Reg. 153(511) - VOCs (with PHC) (Soil)

DATE RECEIVED: 2024-12-11

DATE REPORTED: 2024-12-19

SAMPLE DESCRIPTION:				BH24-5-SS1	BH24-6-SS1	BH24-7-SS1	BH24-8-SS1	BH24-9-SS1	BH24-10-SS1	BH24-11-SS1	BH24-12-SS1
SAMPLE TYPE:				Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
DATE SAMPLED:				2024-12-10 08:30	2024-12-10 09:35	2024-12-10 09:30	2024-12-10 08:55	2024-12-10 08:45	2024-12-10 10:05	2024-12-10 10:15	2024-12-10 10:25
Parameter	Unit	G / S	RDL	6400640	6400642	6400645	6400647	6400650	6400652	6400654	6400656
Dichlorodifluoromethane	µg/g	25	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Vinyl Chloride	ug/g	0.022	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Bromomethane	ug/g	0.05	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Trichlorofluoromethane	ug/g	5.8	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Acetone	ug/g	28	0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
1,1-Dichloroethylene	ug/g	0.05	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Methylene Chloride	ug/g	0.96	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Trans- 1,2-Dichloroethylene	ug/g	0.75	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Methyl tert-butyl Ether	ug/g	1.4	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
1,1-Dichloroethane	ug/g	0.6	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Methyl Ethyl Ketone	ug/g	44	0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Cis- 1,2-Dichloroethylene	ug/g	2.5	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Chloroform	ug/g	0.18	0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04
1,2-Dichloroethane	ug/g	0.05	0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
1,1,1-Trichloroethane	ug/g	3.4	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Carbon Tetrachloride	ug/g	0.12	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Benzene	ug/g	0.17	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
1,2-Dichloropropane	ug/g	0.085	0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
Trichloroethylene	ug/g	0.52	0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
Bromodichloromethane	ug/g	1.9	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Methyl Isobutyl Ketone	ug/g	4.3	0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
1,1,2-Trichloroethane	ug/g	0.05	0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04
Toluene	ug/g	6	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Dibromochloromethane	ug/g	2.9	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Ethylene Dibromide	ug/g	0.05	0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04
Tetrachloroethylene	ug/g	2.3	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
1,1,1,2-Tetrachloroethane	ug/g	0.05	0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04
Chlorobenzene	ug/g	2.7	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Ethylbenzene	ug/g	1.6	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05

Certified By:



Certificate of Analysis

AGAT WORK ORDER: 24T230918

PROJECT: CA0040928.5498 Task 3000

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CLIENT NAME: WSP CANADA INC.

ATTENTION TO: Rica Esmirna Maliwat

SAMPLING SITE: 86 Burnhamthorpe Rd.

SAMPLED BY: Mohammad

O. Reg. 153(511) - VOCs (with PHC) (Soil)

DATE RECEIVED: 2024-12-11

DATE REPORTED: 2024-12-19

SAMPLE DESCRIPTION:				BH24-5-SS1	BH24-6-SS1	BH24-7-SS1	BH24-8-SS1	BH24-9-SS1	BH24-10-SS1	BH24-11-SS1	BH24-12-SS1
SAMPLE TYPE:				Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
DATE SAMPLED:				2024-12-10 08:30	2024-12-10 09:35	2024-12-10 09:30	2024-12-10 08:55	2024-12-10 08:45	2024-12-10 10:05	2024-12-10 10:15	2024-12-10 10:25
Parameter	Unit	G / S	RDL	6400640	6400642	6400645	6400647	6400650	6400652	6400654	6400656
m & p-Xylene	ug/g		0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Bromoform	ug/g	0.26	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Styrene	ug/g	2.2	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
1,1,2,2-Tetrachloroethane	ug/g	0.05	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
o-Xylene	ug/g		0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
1,3-Dichlorobenzene	ug/g	6	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
1,4-Dichlorobenzene	ug/g	0.097	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
1,2-Dichlorobenzene	ug/g	1.7	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Xylenes (Total)	ug/g	25	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
1,3-Dichloropropene (Cis + Trans)	µg/g	0.081	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
n-Hexane	µg/g	34	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Moisture Content	%		0.1	15.8	10.9	15.1	12.1	12.2	15.6	26.6	26.7
Surrogate	Unit	Acceptable Limits									
Toluene-d8	% Recovery	50-140		92	94	102	98	103	95	105	106
4-Bromofluorobenzene	% Recovery	50-140		107	109	102	108	106	107	102	103

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SAMPLING SITE: 86 Burnhamthorpe Rd.

SAMPLED BY: Mohammad

O. Reg. 153(511) - VOCs (with PHC) (Soil)

DATE RECEIVED: 2024-12-11

DATE REPORTED: 2024-12-19

SAMPLE DESCRIPTION:				BH24-13-SS1	BH24-14-SS1	DUP1	DUP2
SAMPLE TYPE:				Soil	Soil	Soil	Soil
DATE SAMPLED:				2024-12-10 10:35	2024-12-10 10:45	2024-12-10	2024-12-10
Parameter	Unit	G / S	RDL	6400658	6400660	6400662	6400663
Dichlorodifluoromethane	µg/g	25	0.05	<0.05	<0.05	<0.05	<0.05
Vinyl Chloride	ug/g	0.022	0.02	<0.02	<0.02	<0.02	<0.02
Bromomethane	ug/g	0.05	0.05	<0.05	<0.05	<0.05	<0.05
Trichlorofluoromethane	ug/g	5.8	0.05	<0.05	<0.05	<0.05	<0.05
Acetone	ug/g	28	0.50	<0.50	<0.50	<0.50	<0.50
1,1-Dichloroethylene	ug/g	0.05	0.05	<0.05	<0.05	<0.05	<0.05
Methylene Chloride	ug/g	0.96	0.05	<0.05	<0.05	<0.05	<0.05
Trans- 1,2-Dichloroethylene	ug/g	0.75	0.05	<0.05	<0.05	<0.05	<0.05
Methyl tert-butyl Ether	ug/g	1.4	0.05	<0.05	<0.05	<0.05	<0.05
1,1-Dichloroethane	ug/g	0.6	0.02	<0.02	<0.02	<0.02	<0.02
Methyl Ethyl Ketone	ug/g	44	0.50	<0.50	<0.50	<0.50	<0.50
Cis- 1,2-Dichloroethylene	ug/g	2.5	0.02	<0.02	<0.02	<0.02	<0.02
Chloroform	ug/g	0.18	0.04	<0.04	<0.04	<0.04	<0.04
1,2-Dichloroethane	ug/g	0.05	0.03	<0.03	<0.03	<0.03	<0.03
1,1,1-Trichloroethane	ug/g	3.4	0.05	<0.05	<0.05	<0.05	<0.05
Carbon Tetrachloride	ug/g	0.12	0.05	<0.05	<0.05	<0.05	<0.05
Benzene	ug/g	0.17	0.02	<0.02	<0.02	<0.02	<0.02
1,2-Dichloropropane	ug/g	0.085	0.03	<0.03	<0.03	<0.03	<0.03
Trichloroethylene	ug/g	0.52	0.03	<0.03	<0.03	<0.03	<0.03
Bromodichloromethane	ug/g	1.9	0.05	<0.05	<0.05	<0.05	<0.05
Methyl Isobutyl Ketone	ug/g	4.3	0.50	<0.50	<0.50	<0.50	<0.50
1,1,2-Trichloroethane	ug/g	0.05	0.04	<0.04	<0.04	<0.04	<0.04
Toluene	ug/g	6	0.05	<0.05	<0.05	<0.05	<0.05
Dibromochloromethane	ug/g	2.9	0.05	<0.05	<0.05	<0.05	<0.05
Ethylene Dibromide	ug/g	0.05	0.04	<0.04	<0.04	<0.04	<0.04
Tetrachloroethylene	ug/g	2.3	0.05	<0.05	<0.05	<0.05	<0.05
1,1,1,2-Tetrachloroethane	ug/g	0.05	0.04	<0.04	<0.04	<0.04	<0.04
Chlorobenzene	ug/g	2.7	0.05	<0.05	<0.05	<0.05	<0.05
Ethylbenzene	ug/g	1.6	0.05	<0.05	<0.05	<0.05	<0.05

Certified By:



Certificate of Analysis

AGAT WORK ORDER: 24T230918

PROJECT: CA0040928.5498 Task 3000

5835 COOPERS AVENUE
MISSISSAUGA, ONTARIO
CANADA L4Z 1Y2
TEL (905)712-5100
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CLIENT NAME: WSP CANADA INC.

ATTENTION TO: Rica Esmirna Maliwat

SAMPLING SITE: 86 Burnhamthorpe Rd.

SAMPLED BY: Mohammad

O. Reg. 153(511) - VOCs (with PHC) (Soil)

DATE RECEIVED: 2024-12-11

DATE REPORTED: 2024-12-19

SAMPLE DESCRIPTION:				BH24-13-SS1	BH24-14-SS1	DUP1	DUP2
SAMPLE TYPE:				Soil	Soil	Soil	Soil
DATE SAMPLED:				2024-12-10 10:35	2024-12-10 10:45	2024-12-10	2024-12-10
Parameter	Unit	G / S	RDL	6400658	6400660	6400662	6400663
m & p-Xylene	ug/g		0.05	<0.05	<0.05	<0.05	<0.05
Bromoform	ug/g	0.26	0.05	<0.05	<0.05	<0.05	<0.05
Styrene	ug/g	2.2	0.05	<0.05	<0.05	<0.05	<0.05
1,1,2,2-Tetrachloroethane	ug/g	0.05	0.05	<0.05	<0.05	<0.05	<0.05
o-Xylene	ug/g		0.05	<0.05	<0.05	<0.05	<0.05
1,3-Dichlorobenzene	ug/g	6	0.05	<0.05	<0.05	<0.05	<0.05
1,4-Dichlorobenzene	ug/g	0.097	0.05	<0.05	<0.05	<0.05	<0.05
1,2-Dichlorobenzene	ug/g	1.7	0.05	<0.05	<0.05	<0.05	<0.05
Xylenes (Total)	ug/g	25	0.05	<0.05	<0.05	<0.05	<0.05
1,3-Dichloropropene (Cis + Trans)	µg/g	0.081	0.05	<0.05	<0.05	<0.05	<0.05
n-Hexane	µg/g	34	0.05	<0.05	<0.05	<0.05	<0.05
Moisture Content	%		0.1	25.3	10.0	12.8	14.8
Surrogate	Unit	Acceptable Limits					
Toluene-d8	% Recovery	50-140		97	104	96	105
4-Bromofluorobenzene	% Recovery	50-140		102	109	109	100

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition - Soil - Residential/Parkland/Institutional Property Use - Medium and Fine Textured Soils **pH range listed applies to surface soil only**
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

6400640-6400663 The sample was analyzed using the high level technique. The sample was extracted using methanol, a small amount of the methanol extract was diluted in water and the purge & trap GC/MS analysis was performed. Results are based on the dry weight of the soil.
Xylenes total is a calculated parameter. The calculated value is the sum of m&p-Xylene + o-Xylene.
1,3-Dichloropropene total is a calculated parameter. The calculated value is the sum of Cis-1,3-Dichloropropene and Trans-1,3-Dichloropropene.
The calculated parameters are non-accredited. The parameters that are components of the calculation are accredited.

Analysis performed at AGAT Toronto (unless marked by *)

Certified By:

Quality Assurance

CLIENT NAME: WSP CANADA INC.

AGAT WORK ORDER: 24T230918

PROJECT: CA0040928.5498 Task 3000

ATTENTION TO: Rica Esmirna Maliwat

SAMPLING SITE: 86 Burnhamthorpe Rd.

SAMPLED BY: Mohammad

Soil Analysis															
RPT Date: Dec 19, 2024			DUPLICATE			Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD		Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper

Particle Size by Sieve (Wet)

Sieve Analysis - 75 µm (retained)	6400620	6400620	38.60	36.78	4.8%	NA	101%	75%	125%
Sieve Analysis - 75 µm (passing)	6400620	6400620	61.40	63.22	2.9%	NA	NA		

Comments: NA signifies Not Applicable.

O. Reg. 153(511) - Metals & Inorganics (Soil)

Antimony	6400667		<0.8	<0.8	NA	< 0.8	110%	70%	130%	96%	80%	120%	75%	70%	130%
Arsenic	6400667		4	4	NA	< 1	121%	70%	130%	101%	80%	120%	102%	70%	130%
Barium	6400667		90.0	89.5	0.6%	< 2.0	98%	70%	130%	105%	80%	120%	120%	70%	130%
Beryllium	6400667		0.8	0.9	NA	< 0.5	119%	70%	130%	102%	80%	120%	135%	70%	130%
Boron	6400667		<5	<5	NA	< 5	90%	70%	130%	89%	80%	120%	103%	70%	130%
Boron (Hot Water Soluble)	6400640	6400640	0.20	0.20	NA	< 0.10	102%	60%	140%	100%	70%	130%	96%	60%	140%
Cadmium	6400667		<0.5	<0.5	NA	< 0.5	99%	70%	130%	102%	80%	120%	113%	70%	130%
Chromium	6400667		19	20	NA	< 5	103%	70%	130%	91%	80%	120%	104%	70%	130%
Cobalt	6400667		11.0	11.0	0.0%	< 0.8	107%	70%	130%	108%	80%	120%	112%	70%	130%
Copper	6400667		13.8	14.2	2.9%	< 1.0	98%	70%	130%	102%	80%	120%	109%	70%	130%
Lead	6400667		16	16	0.0%	< 1	112%	70%	130%	100%	80%	120%	107%	70%	130%
Molybdenum	6400667		0.7	0.6	NA	< 0.5	99%	70%	130%	96%	80%	120%	98%	70%	130%
Nickel	6400667		20	20	0.0%	< 1	105%	70%	130%	107%	80%	120%	108%	70%	130%
Selenium	6400667		<0.8	<0.8	NA	< 0.8	101%	70%	130%	100%	80%	120%	107%	70%	130%
Silver	6400667		<0.5	<0.5	NA	< 0.5	109%	70%	130%	101%	80%	120%	101%	70%	130%
Thallium	6400667		<0.5	<0.5	NA	< 0.5	106%	70%	130%	107%	80%	120%	124%	70%	130%
Uranium	6400667		0.87	0.90	NA	< 0.50	112%	70%	130%	107%	80%	120%	125%	70%	130%
Vanadium	6400667		31.1	31.8	2.2%	< 2.0	111%	70%	130%	98%	80%	120%	98%	70%	130%
Zinc	6400667		113	130	14.0%	< 5	121%	70%	130%	105%	80%	120%	111%	70%	130%
Chromium, Hexavalent	6420973		<0.2	<0.2	NA	< 0.2	93%	70%	130%	89%	80%	120%	71%	70%	130%
Cyanide, WAD	6400658	6400658	<0.040	<0.040	NA	< 0.040	97%	70%	130%	95%	80%	120%	109%	70%	130%
Mercury	6400667		<0.10	<0.10	NA	< 0.10	96%	70%	130%	101%	80%	120%	94%	70%	130%
Electrical Conductivity (2:1)	6400640	6400640	0.202	0.231	13.4%	< 0.005	102%	80%	120%						
Sodium Adsorption Ratio (2:1) (Calc.)	6400640	6400640	0.292	0.304	4.0%	NA	NA								

Comments: NA signifies Not Applicable.

Duplicate NA: results are under 5X the RDL and will not be calculated.

More than 90% of the elements met acceptance limits and overall data quality is acceptable for use. For a multi-element scan up to 10% of analytes may exceed the quoted limits by up to 10% absolute.

O. Reg. 153(511) - Metals & Inorganics (Soil)

Antimony	6400375		<0.8	<0.8	NA	< 0.8	110%	70%	130%	81%	80%	120%	82%	70%	130%
Arsenic	6400375		6	6	0.0%	< 1	124%	70%	130%	90%	80%	120%	100%	70%	130%
Barium	6400375		119	118	0.8%	< 2.0	106%	70%	130%	99%	80%	120%	88%	70%	130%
Beryllium	6400375		0.6	0.6	NA	< 0.5	92%	70%	130%	94%	80%	120%	101%	70%	130%

Quality Assurance

CLIENT NAME: WSP CANADA INC.

AGAT WORK ORDER: 24T230918

PROJECT: CA0040928.5498 Task 3000

ATTENTION TO: Rica Esmirna Maliwat

SAMPLING SITE: 86 Burnhamthorpe Rd.

SAMPLED BY: Mohammad

Soil Analysis (Continued)

RPT Date: Dec 19, 2024			DUPLICATE			Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD		Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
Boron	6400375		16	15	NA	< 5	73%	70%	130%	89%	80%	120%	85%	70%	130%
Cadmium	6400375		<0.5	<0.5	NA	< 0.5	91%	70%	130%	103%	80%	120%	100%	70%	130%
Chromium	6400375		17	16	NA	< 5	100%	70%	130%	82%	80%	120%	80%	70%	130%
Cobalt	6400375		9.5	9.2	3.2%	< 0.8	85%	70%	130%	82%	80%	120%	81%	70%	130%
Copper	6400375		13.8	13.9	0.7%	< 1.0	117%	70%	130%	98%	80%	120%	92%	70%	130%
Lead	6400375		17	18	5.7%	< 1	116%	70%	130%	87%	80%	120%	85%	70%	130%
Molybdenum	6400375		1.0	1.0	NA	< 0.5	111%	70%	130%	98%	80%	120%	105%	70%	130%
Nickel	6400375		24	23	4.3%	< 1	104%	70%	130%	92%	80%	120%	91%	70%	130%
Selenium	6400375		<0.8	<0.8	NA	< 0.8	96%	70%	130%	96%	80%	120%	100%	70%	130%
Silver	6400375		<0.5	<0.5	NA	< 0.5	119%	70%	130%	94%	80%	120%	97%	70%	130%
Thallium	6400375		<0.5	<0.5	NA	< 0.5	94%	70%	130%	105%	80%	120%	113%	70%	130%
Uranium	6400375		0.59	0.55	NA	< 0.50	94%	70%	130%	80%	80%	120%	87%	70%	130%
Vanadium	6400375		21.5	20.5	4.8%	< 2.0	111%	70%	130%	94%	80%	120%	72%	70%	130%
Zinc	6400375		109	109	0.0%	< 5	120%	70%	130%	95%	80%	120%	95%	70%	130%
Mercury	6400375		<0.10	<0.10	NA	< 0.10	100%	70%	130%	93%	80%	120%	91%	70%	130%

Comments: NA signifies Not Applicable.

Duplicate NA: results are under 5X the RDL and will not be calculated.

O. Reg. 153(511) - Metals & Inorganics (Soil)

Antimony	6403372		<0.8	<0.8	NA	< 0.8	123%	70%	130%	82%	80%	120%	79%	70%	130%
Arsenic	6403372		2	2	NA	< 1	128%	70%	130%	105%	80%	120%	108%	70%	130%
Barium	6403372		10.8	10.8	0.0%	< 2.0	101%	70%	130%	102%	80%	120%	105%	70%	130%
Beryllium	6403372		<0.5	<0.5	NA	< 0.5	104%	70%	130%	112%	80%	120%	123%	70%	130%
Boron	6403372		<5	<5	NA	< 5	83%	70%	130%	99%	80%	120%	104%	70%	130%
Cadmium	6403372		<0.5	<0.5	NA	< 0.5	113%	70%	130%	97%	80%	120%	103%	70%	130%
Chromium	6403372		6	5	NA	< 5	106%	70%	130%	93%	80%	120%	89%	70%	130%
Cobalt	6403372		1.8	1.8	NA	< 0.8	90%	70%	130%	89%	80%	120%	89%	70%	130%
Copper	6403372		4.3	4.2	NA	< 1.0	122%	70%	130%	100%	80%	120%	100%	70%	130%
Lead	6403372		6	6	0.0%	< 1	114%	70%	130%	100%	80%	120%	95%	70%	130%
Molybdenum	6403372		<0.5	<0.5	NA	< 0.5	109%	70%	130%	99%	80%	120%	107%	70%	130%
Nickel	6403372		4	4	NA	< 1	106%	70%	130%	112%	80%	120%	108%	70%	130%
Selenium	6403372		<0.8	<0.8	NA	< 0.8	134%	70%	130%	98%	80%	120%	105%	70%	130%
Silver	6403372		<0.5	<0.5	NA	< 0.5	105%	70%	130%	102%	80%	120%	99%	70%	130%
Thallium	6403372		<0.5	<0.5	NA	< 0.5	101%	70%	130%	120%	80%	120%	118%	70%	130%
Uranium	6403372		<0.50	<0.50	NA	< 0.50	85%	70%	130%	81%	80%	120%	78%	70%	130%
Vanadium	6403372		11.9	12.2	2.5%	< 2.0	119%	70%	130%	80%	80%	120%	81%	70%	130%
Zinc	6403372		16	17	NA	< 5	125%	70%	130%	99%	80%	120%	101%	70%	130%
Mercury	6403372		<0.10	<0.10	NA	< 0.10	102%	70%	130%	100%	80%	120%	108%	70%	130%

Quality Assurance

CLIENT NAME: WSP CANADA INC.

PROJECT: CA0040928.5498 Task 3000

SAMPLING SITE: 86 Burnhamthorpe Rd.

AGAT WORK ORDER: 24T230918

ATTENTION TO: Rica Esmirna Maliwat

SAMPLED BY: Mohammad

Soil Analysis (Continued)

RPT Date: Dec 19, 2024			DUPLICATE			Method Blank	REFERENCE MATERIAL		METHOD BLANK SPIKE			MATRIX SPIKE			
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD		Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper

Comments: NA signifies Not Applicable.

Duplicate NA: results are under 5X the RDL and will not be calculated.

More than 90% of the elements met acceptance limits and overall data quality is acceptable for use. For a multi-element scan up to 10% of analytes may exceed the quoted limits by up to 10% absolute.

Certified By:



Quality Assurance

CLIENT NAME: WSP CANADA INC.

AGAT WORK ORDER: 24T230918

PROJECT: CA0040928.5498 Task 3000

ATTENTION TO: Rica Esmirna Maliwat

SAMPLING SITE: 86 Burnhamthorpe Rd.

SAMPLED BY: Mohammad

Trace Organics Analysis

RPT Date: Dec 19, 2024			DUPLICATE			Method Blank	REFERENCE MATERIAL		METHOD BLANK SPIKE			MATRIX SPIKE			
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD		Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper

O. Reg. 153(511) - PHCs F1 - F4 (with PAHs) (Soil)

Benzene	6396072		<0.02	<0.02	NA	< 0.02	74%	60%	140%	63%	60%	140%	63%	60%	140%
Toluene	6396072		<0.05	<0.05	NA	< 0.05	89%	60%	140%	83%	60%	140%	88%	60%	140%
Ethylbenzene	6396072		<0.05	<0.05	NA	< 0.05	93%	60%	140%	77%	60%	140%	107%	60%	140%
m & p-Xylene	6396072		<0.05	<0.05	NA	< 0.05	91%	60%	140%	80%	60%	140%	108%	60%	140%
o-Xylene	6396072		<0.05	<0.05	NA	< 0.05	90%	60%	140%	77%	60%	140%	104%	60%	140%
F1 (C6 to C10)	6396072		<5	<5	NA	< 5	115%	60%	140%	109%	60%	140%	94%	60%	140%
F2 (C10 to C16)	6403719		776	618	22.7%	< 10	124%	60%	140%	90%	60%	140%	115%	60%	140%
F3 (C16 to C34)	6403719		372	253	38.1%	< 50	126%	60%	140%	99%	60%	140%	106%	60%	140%
F4 (C34 to C50)	6403719		122	150	NA	< 50	67%	60%	140%	89%	60%	140%	98%	60%	140%

O. Reg. 153(511) - PAHs (Soil)

Naphthalene	6400618 6400618		<0.05	<0.05	NA	< 0.05	82%	50%	140%	80%	50%	140%	90%	50%	140%
Acenaphthylene	6400618 6400618		<0.05	<0.05	NA	< 0.05	90%	50%	140%	75%	50%	140%	83%	50%	140%
Acenaphthene	6400618 6400618		<0.05	<0.05	NA	< 0.05	92%	50%	140%	95%	50%	140%	88%	50%	140%
Fluorene	6400618 6400618		<0.05	<0.05	NA	< 0.05	101%	50%	140%	98%	50%	140%	93%	50%	140%
Phenanthrene	6400618 6400618		<0.05	<0.05	NA	< 0.05	104%	50%	140%	103%	50%	140%	93%	50%	140%
Anthracene	6400618 6400618		<0.05	<0.05	NA	< 0.05	83%	50%	140%	78%	50%	140%	83%	50%	140%
Fluoranthene	6400618 6400618		<0.05	<0.05	NA	< 0.05	112%	50%	140%	113%	50%	140%	108%	50%	140%
Pyrene	6400618 6400618		<0.05	<0.05	NA	< 0.05	113%	50%	140%	113%	50%	140%	105%	50%	140%
Benzo(a)anthracene	6400618 6400618		<0.05	<0.05	NA	< 0.05	104%	50%	140%	90%	50%	140%	75%	50%	140%
Chrysene	6400618 6400618		<0.05	<0.05	NA	< 0.05	103%	50%	140%	85%	50%	140%	85%	50%	140%
Benzo(b)fluoranthene	6400618 6400618		<0.05	<0.05	NA	< 0.05	106%	50%	140%	75%	50%	140%	80%	50%	140%
Benzo(k)fluoranthene	6400618 6400618		<0.05	<0.05	NA	< 0.05	107%	50%	140%	93%	50%	140%	100%	50%	140%
Benzo(a)pyrene	6400618 6400618		<0.05	<0.05	NA	< 0.05	99%	50%	140%	75%	50%	140%	73%	50%	140%
Indeno(1,2,3-cd)pyrene	6400618 6400618		<0.05	<0.05	NA	< 0.05	93%	50%	140%	73%	50%	140%	73%	50%	140%
Dibenz(a,h)anthracene	6400618 6400618		<0.05	<0.05	NA	< 0.05	97%	50%	140%	75%	50%	140%	78%	50%	140%
Benzo(g,h,i)perylene	6400618 6400618		<0.05	<0.05	NA	< 0.05	95%	50%	140%	80%	50%	140%	75%	50%	140%

O. Reg. 153(511) - PAHs (Soil)

Naphthalene	6402482		<0.05	<0.05	NA	< 0.05	82%	50%	140%	80%	50%	140%	75%	50%	140%
Acenaphthylene	6402482		<0.05	<0.05	NA	< 0.05	90%	50%	140%	75%	50%	140%	88%	50%	140%
Acenaphthene	6402482		<0.05	<0.05	NA	< 0.05	92%	50%	140%	95%	50%	140%	73%	50%	140%
Fluorene	6402482		<0.05	<0.05	NA	< 0.05	101%	50%	140%	98%	50%	140%	70%	50%	140%
Phenanthrene	6402482		0.15	0.17	NA	< 0.05	104%	50%	140%	103%	50%	140%	103%	50%	140%
Anthracene	6402482		<0.05	<0.05	NA	< 0.05	83%	50%	140%	78%	50%	140%	68%	50%	140%
Fluoranthene	6402482		0.34	0.38	12.6%	< 0.05	112%	50%	140%	113%	50%	140%	134%	50%	140%
Pyrene	6402482		0.29	0.32	9.3%	< 0.05	113%	50%	140%	113%	50%	140%	128%	50%	140%
Benzo(a)anthracene	6402482		0.15	0.14	NA	< 0.05	104%	50%	140%	90%	50%	140%	85%	50%	140%
Chrysene	6402482		0.16	0.19	NA	< 0.05	103%	50%	140%	85%	50%	140%	88%	50%	140%
Benzo(b)fluoranthene	6402482		0.18	0.17	NA	< 0.05	106%	50%	140%	75%	50%	140%	89%	50%	140%

Quality Assurance

CLIENT NAME: WSP CANADA INC.

AGAT WORK ORDER: 24T230918

PROJECT: CA0040928.5498 Task 3000

ATTENTION TO: Rica Esmirna Maliwat

SAMPLING SITE: 86 Burnhamthorpe Rd.

SAMPLED BY: Mohammad

Trace Organics Analysis (Continued)

RPT Date: Dec 19, 2024			DUPLICATE			Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD		Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
Benzo(k)fluoranthene	6402482		0.09	0.10	NA	< 0.05	107%	50%	140%	93%	50%	140%	62%	50%	140%
Benzo(a)pyrene	6402482		0.11	0.11	NA	< 0.05	99%	50%	140%	75%	50%	140%	77%	50%	140%
Indeno(1,2,3-cd)pyrene	6402482		0.06	0.06	NA	< 0.05	93%	50%	140%	73%	50%	140%	71%	50%	140%
Dibenz(a,h)anthracene	6402482		<0.05	<0.05	NA	< 0.05	97%	50%	140%	75%	50%	140%	83%	50%	140%
Benzo(g,h,i)perylene	6402482		0.08	0.07	NA	< 0.05	95%	50%	140%	80%	50%	140%	67%	50%	140%
O. Reg. 153(511) - PHCs F1 - F4 (with PAHs and VOC) (Soil)															
F1 (C6 to C10)	6417696		<5	<5	NA	< 5	111%	60%	140%	90%	60%	140%	87%	60%	140%
O. Reg. 153(511) - VOCs (with PHC) (Soil)															
Dichlorodifluoromethane	6417696		<0.05	<0.05	NA	< 0.05	120%	50%	140%	80%	50%	140%	118%	50%	140%
Vinyl Chloride	6417696		<0.02	<0.02	NA	< 0.02	117%	50%	140%	125%	50%	140%	99%	50%	140%
Bromomethane	6417696		<0.05	<0.05	NA	< 0.05	86%	50%	140%	120%	50%	140%	94%	50%	140%
Trichlorofluoromethane	6417696		<0.05	<0.05	NA	< 0.05	83%	50%	140%	120%	50%	140%	85%	50%	140%
Acetone	6417696		<0.50	<0.50	NA	< 0.50	114%	50%	140%	112%	50%	140%	103%	50%	140%
1,1-Dichloroethylene	6417696		<0.05	<0.05	NA	< 0.05	91%	50%	140%	103%	60%	130%	100%	50%	140%
Methylene Chloride	6417696		<0.05	<0.05	NA	< 0.05	100%	50%	140%	86%	60%	130%	103%	50%	140%
Trans- 1,2-Dichloroethylene	6417696		<0.05	<0.05	NA	< 0.05	89%	50%	140%	103%	60%	130%	103%	50%	140%
Methyl tert-butyl Ether	6417696		<0.05	<0.05	NA	< 0.05	106%	50%	140%	65%	60%	130%	101%	50%	140%
1,1-Dichloroethane	6417696		<0.02	<0.02	NA	< 0.02	98%	50%	140%	101%	60%	130%	110%	50%	140%
Methyl Ethyl Ketone	6417696		<0.50	<0.50	NA	< 0.50	112%	50%	140%	107%	50%	140%	118%	50%	140%
Cis- 1,2-Dichloroethylene	6417696		<0.02	<0.02	NA	< 0.02	103%	50%	140%	93%	60%	130%	95%	50%	140%
Chloroform	6417696		<0.04	<0.04	NA	< 0.04	109%	50%	140%	76%	60%	130%	103%	50%	140%
1,2-Dichloroethane	6417696		<0.03	<0.03	NA	< 0.03	98%	50%	140%	66%	60%	130%	100%	50%	140%
1,1,1-Trichloroethane	6417696		<0.05	<0.05	NA	< 0.05	86%	50%	140%	90%	60%	130%	104%	50%	140%
Carbon Tetrachloride	6417696		<0.05	<0.05	NA	< 0.05	113%	50%	140%	97%	60%	130%	90%	50%	140%
Benzene	6417696		<0.02	<0.02	NA	< 0.02	87%	50%	140%	103%	60%	130%	110%	50%	140%
1,2-Dichloropropane	6417696		<0.03	<0.03	NA	< 0.03	76%	50%	140%	87%	60%	130%	81%	50%	140%
Trichloroethylene	6417696		<0.03	<0.03	NA	< 0.03	92%	50%	140%	99%	60%	130%	104%	50%	140%
Bromodichloromethane	6417696		<0.05	<0.05	NA	< 0.05	79%	50%	140%	83%	60%	130%	66%	50%	140%
Methyl Isobutyl Ketone	6417696		<0.50	<0.50	NA	< 0.50	96%	50%	140%	94%	50%	140%	99%	50%	140%
1,1,2-Trichloroethane	6417696		<0.04	<0.04	NA	< 0.04	83%	50%	140%	94%	60%	130%	83%	50%	140%
Toluene	6417696		<0.05	<0.05	NA	< 0.05	90%	50%	140%	88%	60%	130%	102%	50%	140%
Dibromochloromethane	6417696		<0.05	<0.05	NA	< 0.05	65%	50%	140%	70%	60%	130%	70%	50%	140%
Ethylene Dibromide	6417696		<0.04	<0.04	NA	< 0.04	71%	50%	140%	84%	60%	130%	64%	50%	140%
Tetrachloroethylene	6417696		<0.05	<0.05	NA	< 0.05	87%	50%	140%	90%	60%	130%	78%	50%	140%
1,1,1,2-Tetrachloroethane	6417696		<0.04	<0.04	NA	< 0.04	74%	50%	140%	75%	60%	130%	80%	50%	140%
Chlorobenzene	6417696		<0.05	<0.05	NA	< 0.05	102%	50%	140%	99%	60%	130%	103%	50%	140%
Ethylbenzene	6417696		<0.05	<0.05	NA	< 0.05	88%	50%	140%	93%	60%	130%	91%	50%	140%
m & p-Xylene	6417696		<0.05	<0.05	NA	< 0.05	93%	50%	140%	99%	60%	130%	104%	50%	140%

Quality Assurance

CLIENT NAME: WSP CANADA INC.

AGAT WORK ORDER: 24T230918

PROJECT: CA0040928.5498 Task 3000

ATTENTION TO: Rica Esmirna Maliwat

SAMPLING SITE: 86 Burnhamthorpe Rd.

SAMPLED BY: Mohammad

Trace Organics Analysis (Continued)

RPT Date: Dec 19, 2024			DUPLICATE				REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Method Blank	Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
Bromoform	6417696		<0.05	<0.05	NA	< 0.05	68%	50%	140%	62%	60%	130%	106%	50%	140%
Styrene	6417696		<0.05	<0.05	NA	< 0.05	91%	50%	140%	97%	60%	130%	101%	50%	140%
1,1,2,2-Tetrachloroethane	6417696		<0.05	<0.05	NA	< 0.05	72%	50%	140%	77%	60%	130%	83%	50%	140%
o-Xylene	6417696		<0.05	<0.05	NA	< 0.05	96%	50%	140%	99%	60%	130%	107%	50%	140%
1,3-Dichlorobenzene	6417696		<0.05	<0.05	NA	< 0.05	96%	50%	140%	98%	60%	130%	101%	50%	140%
1,4-Dichlorobenzene	6417696		<0.05	<0.05	NA	< 0.05	90%	50%	140%	96%	60%	130%	100%	50%	140%
1,2-Dichlorobenzene	6417696		<0.05	<0.05	NA	< 0.05	97%	50%	140%	95%	60%	130%	102%	50%	140%
n-Hexane	6417696		<0.05	<0.05	NA	< 0.05	93%	50%	140%	62%	60%	130%	83%	50%	140%

Comments: When the average of the sample and duplicate results is less than 5x the RDL, the Relative Percent Difference (RPD) will be indicated as Not Applicable (NA).

Certified By:



QC Exceedance

CLIENT NAME: WSP CANADA INC.

AGAT WORK ORDER: 24T230918

PROJECT: CA0040928.5498 Task 3000

ATTENTION TO: Rica Esmirna Maliwat

RPT Date: Dec 19, 2024										
PARAMETER				Sample Id	REFERENCE MATERIAL			METHOD BLANK SPIKE		
					Measured Value	Acceptable Limits		Recovery	Acceptable Limits	
						Lower	Upper		Lower	Upper
									Recovery	Acceptable Limits
									Lower	Upper

O. Reg. 153(511) - Metals & Inorganics (Soil)

Beryllium

119% 70% 130% 102% 80% 120% 135% 70% 130%

Comments: NA signifies Not Applicable.

Duplicate NA: results are under 5X the RDL and will not be calculated.

More than 90% of the elements met acceptance limits and overall data quality is acceptable for use. For a multi-element scan up to 10% of analytes may exceed the quoted limits by up to 10% absolute.

O. Reg. 153(511) - Metals & Inorganics (Soil)

Selenium

134% 70% 130% 98% 80% 120% 105% 70% 130%

Comments: NA signifies Not Applicable.

Duplicate NA: results are under 5X the RDL and will not be calculated.

More than 90% of the elements met acceptance limits and overall data quality is acceptable for use. For a multi-element scan up to 10% of analytes may exceed the quoted limits by up to 10% absolute.

Method Summary

CLIENT NAME: WSP CANADA INC.

PROJECT: CA0040928.5498 Task 3000

SAMPLING SITE: 86 Burnhamthorpe Rd.

AGAT WORK ORDER: 24T230918

ATTENTION TO: Rica Esmirna Maliwat

SAMPLED BY: Mohammad

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Soil Analysis			
Antimony	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Arsenic	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Barium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Beryllium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Boron	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Boron (Hot Water Soluble)	MET-93-6104	modified from EPA 6010D and MSA PART 3, CH 21	ICP/OES
Cadmium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Chromium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Cobalt	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Copper	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Lead	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Molybdenum	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Nickel	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Selenium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Silver	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Thallium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Uranium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Vanadium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Zinc	MET 93 -6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Chromium, Hexavalent	INOR-93-6068	modified from EPA 3060 and EPA 7196	SPECTROPHOTOMETER
Cyanide, WAD	INOR-93-6052	modified from ON MOECC E3015, SM 4500-CN- I, G-387	SEGMENTED FLOW ANALYSIS
Mercury	MET-93-6103	modified from EPA 7471B and SM 3112 B	ICP-MS
Electrical Conductivity (2:1)	INOR-93-6075	modified from MSA PART 3, CH 14 and SM 2510 B	PC TITRATE
Sodium Adsorption Ratio (2:1) (Calc.)	INOR-93-6007	modified from EPA 6010D & Analytical Protocol	ICP/OES
Sieve Analysis - 75 µm (retained)	INOR-93-6065	Modified from ASTM D1140-17	SIEVE
Sieve Analysis - 75 µm (passing)	INOR-93-6065	Modified from ASTM D1140-17	SIEVE

Method Summary

CLIENT NAME: WSP CANADA INC.

PROJECT: CA0040928.5498 Task 3000

SAMPLING SITE: 86 Burnhamthorpe Rd.

AGAT WORK ORDER: 24T230918

ATTENTION TO: Rica Esmirna Maliwat

SAMPLED BY: Mohammad

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Trace Organics Analysis			
Naphthalene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Acenaphthylene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Acenaphthene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Fluorene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Phenanthrene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Anthracene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Fluoranthene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Pyrene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Benzo(a)anthracene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Chrysene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Benzo(b)fluoranthene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Benzo(k)fluoranthene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Benzo(a)pyrene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Indeno(1,2,3-cd)pyrene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Dibenz(a,h)anthracene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Benzo(g,h,i)perylene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
2-and 1-methyl Naphthalene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Naphthalene-d8	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Acridine-d9	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Terphenyl-d14	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Moisture Content	VOL-91-5009	modified from CCME Tier 1 Method	BALANCE
F1 (C6 to C10)	VOL-91-5009	modified from CCME Tier 1 Method	(P&T)GC/FID
F1 (C6 to C10) minus BTEX	VOL-91-5009	modified from CCME Tier 1 Method	P&T GC/FID
Toluene-d8	VOL-91- 5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
F2 (C10 to C16)	VOL-91-5009	modified from CCME Tier 1 Method	GC/FID
F2 (C10 to C16) minus Naphthalene	VOL-91-5009	modified from CCME Tier 1 Method	GC/FID
F3 (C16 to C34)	VOL-91-5009	modified from CCME Tier 1 Method	GC/FID
F3 (C16 to C34) minus PAHs	VOL-91-5009	modified from CCME Tier 1 Method	GC/FID
F4 (C34 to C50)	VOL-91-5009	modified from CCME Tier 1 Method	GC/FID
Gravimetric Heavy Hydrocarbons	VOL-91-5009	modified from CCME Tier 1 Method	BALANCE
Terphenyl	VOL-91-5009	modified from CCME Tier 1 Method	GC/FID
Benzene	VOL-91-5009	modified from CCME Tier 1 Method	(P&T)GC/MS
Toluene	VOL-91-5009	modified from CCME Tier 1 Method	(P&T)GC/MS

Method Summary

CLIENT NAME: WSP CANADA INC.

PROJECT: CA0040928.5498 Task 3000

SAMPLING SITE: 86 Burnhamthorpe Rd.

AGAT WORK ORDER: 24T230918

ATTENTION TO: Rica Esmirna Maliwat

SAMPLED BY: Mohammad

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Ethylbenzene	VOL-91-5009	modified from CCME Tier 1 Method	(P&T)GC/MS
m & p-Xylene	VOL-91-5009	modified from CCME Tier 1 Method	(P&T)GC/MS
o-Xylene	VOL-91-5009	modified from CCME Tier 1 Method	(P&T)GC/MS
Xylenes (Total)	VOL-91-5009	modified from CCME Tier 1 Method	(P&T)GC/MS
Toluene-d8	VOL-91-5009	modified from EPA SW-846 5030C & 8260D	(P&T)GC/MS
Dichlorodifluoromethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Vinyl Chloride	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Bromomethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Trichlorofluoromethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Acetone	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,1-Dichloroethylene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Methylene Chloride	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Trans- 1,2-Dichloroethylene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Methyl tert-butyl Ether	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,1-Dichloroethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Methyl Ethyl Ketone	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Cis- 1,2-Dichloroethylene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Chloroform	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,2-Dichloroethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,1,1-Trichloroethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Carbon Tetrachloride	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Benzene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,2-Dichloropropane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Trichloroethylene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Bromodichloromethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Methyl Isobutyl Ketone	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,1,2-Trichloroethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Toluene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Dibromochloromethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Ethylene Dibromide	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS

Method Summary

CLIENT NAME: WSP CANADA INC.

PROJECT: CA0040928.5498 Task 3000

SAMPLING SITE: 86 Burnhamthorpe Rd.

AGAT WORK ORDER: 24T230918

ATTENTION TO: Rica Esmirna Maliwat

SAMPLED BY: Mohammad

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Tetrachloroethylene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,1,1,2-Tetrachloroethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Chlorobenzene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Ethylbenzene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
m & p-Xylene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Bromoform	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Styrene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,1,2,2-Tetrachloroethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
o-Xylene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,3-Dichlorobenzene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,4-Dichlorobenzene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,2-Dichlorobenzene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Xylenes (Total)	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,3-Dichloropropene (Cis + Trans)	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
n-Hexane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Toluene-d8	VOL-91-5002	modified from EPA 5035A & EPA 8260D	(P&T)GC/MS
4-Bromofluorobenzene	VOL-91-5002	modified from EPA 5035A & EPA 8260D	(P&T)GC/MS



Chain of Custody Record

If this is a Drinking Water sample, please use Drinking Water Chain of Custody Form (potable water consumed by humans)

Report Information:

Company: WSP
Contact: Rica Esmirna Maliwat
Address: 100 Scotia Court Whitby ON.
Phone: _____ Fax: _____
Reports to be sent to:
1. Email: rica.esmirna.maliwat@wsp.com
2. Email: _____

Regulatory Requirements:

(Please check all applicable boxes)

☒ Regulation 153/04

☐ Regulation 406

☐ Sewer Use

☐ Sanitary ☐ Storm

Table Indicate One

☐ Ind/Com

☒ Res/Park

☐ Agriculture

Table Indicate One

☐ Ind/Com

☐ Res/Park

☐ Agriculture

Region _____

☐ Prov. Water Quality Objectives (PWQO)

☐ Other

Soil Texture (Check One)

☐ Fine

☒ Fine

☐ Regulation 558

☐ CCME

Indicate One

Project Information:

Project: CA00 40 928 5498 Task 3000
Site Location: 86 Burnhamthorpe Rd
Sampled By: _____
AGAT Quote #: _____ PO: competitive

Please note: If quotation number is not provided, client will be billed full price for analysis.

Invoice Information:

Bill To Same: Yes ☐ No ☐

Company: CA Payables Invoice@WSP.com
Contact: _____
Address: _____
Email: _____

Is this submission for a Record of Site Condition (RSC)?

☒ Yes ☐ No

Report Guideline on Certificate of Analysis

☒ Yes ☐ No

Legal Sample ☐

Sample Matrix Legend

GW Ground Water SD Sediment
O Oil SW Surface Water
P Paint R Rock/Shale
S Soil

Laboratory Use Only

Work Order #: 24T230918

Cooler Quantity: 3 large

Arrival Temperatures: 1.6 1.1 1.9

Depot Temperatures: 2.1 1.8 2.3

Custody Seal Intact: ☐ Yes ☐ No ☐ N/A

Notes: F/I (3.6, 2.8, 2.3)

Turnaround Time (TAT) Required:

Regular TAT ☒ 5 to 7 Business Days

Rush TAT (Rush Surcharges Apply)

☐ 3 Business Days ☐ 2 Business Days ☐ Next Business Day

OR Date Required (Rush Surcharges May Apply):

Please provide prior notification for rush TAT
*TAT is exclusive of weekends and statutory holidays

For 'Same Day' analysis, please contact your AGAT CSR

Sample Identification	Date Sampled	Time Sampled	# of Containers	Sample Matrix	Comments/ Special Instructions	Y / N	Field Filtered - Metals, Hg, CrVI, DOC	0. Reg 153	0. Reg 406	0. Reg 558	Potentially Hazardous or High Concentration (Y/N)
1. BH 24-1-SS5	9 Dec 2024	14:10 AM	3	Soil							
2. BH 24-1-SS6		14:10 AM	3	Soil							
3. BH 24-1-SS8		14:15 AM	3	Soil	Sample on hold						
4. BH 24-2-SS6		14:50 AM	3	Soil							
5. BH 24-2-SS8		14:55 AM	3	Soil	Sample on hold						
6. BH 24-2-SS12	10 Dec 2024	13:05 AM	3	Soil	Sample on hold						
7. BH 24-2-SS14	10 Dec 2024	13:10 AM	3	Soil	Sample on hold						
8. BH 24-2-SS10	9 Dec 2024	15:00 AM	3	Soil	Sample on hold						
9. BH 24-3-SS1		10:05 AM	3	Soil							
10. BH 24-3-SS6		10:15 AM	3	Soil							
11. BH 24-3-SS8		10:20 AM	3	Soil	Sample on hold						

Samples Relinquished By (Print Name and Sign): <u>Mohammad Janghorban</u>	Date: <u>11 Dec 2024</u>	Time: <u>15:30</u>	Samples Received By (Print Name and Sign): <u>JFB</u>	Date:	Time:
Samples Relinquished By (Print Name and Sign):	Date:	Time:	Samples Received By (Print Name and Sign):	Date:	Time:
Samples Relinquished By (Print Name and Sign):	Date:	Time:	Samples Received By (Print Name and Sign):	Date:	Time:

Page 1 of 4

No: T-161878



Laboratory Use Only

Work Order #: 24T230918

Cooler Quantity: see pg 1
Arrival Temperatures: _____
Depot Temperatures: _____
Custody Seal Intact: ☐ Yes ☐ No ☐ N/A
Notes: _____

Turnaround Time (TAT) Required:

Regular TAT ☒ 5 to 7 Business Days

Rush TAT (Rush Surcharges Apply)

☐ 3 Business Days ☐ 2 Business Days ☐ Next Business Day

OR Date Required (Rush Surcharges May Apply): _____

Please provide prior notification for rush TAT
*TAT is exclusive of weekends and statutory holidays

For 'Same Day' analysis, please contact your AGAT CSR

Chain of Custody Record

If this is a Drinking Water sample, please use Drinking Water Chain of Custody Form (potable water consumed by humans)

Report Information:

Company: WSP
Contact: Rica Esmirna Malimat
Address: 100 Scotia Court Whitby ON.
Phone: _____ Fax: _____
Reports to be sent to: _____
1. Email: rica.esmirna.malimat@wsp.com
2. Email: _____

Regulatory Requirements:

(Please check all applicable boxes)

☒ Regulation 153/04

Table 2 Indicate One

☐ Ind/Com

☒ Res/Park

☐ Agriculture

Soil Texture (Check One)

☐ Fine

☒ Fine

☐ Regulation 406

Table Indicate One

☐ Ind/Com

☐ Res/Park

☐ Agriculture

☐ Regulation 558

☐ CCME

☐ Sewer Use

☐ Sanitary ☐ Storm

Region

☐ Prov. Water Quality Objectives (PWQO)

☐ Other

Indicate One

Project Information:

Project: CA00 40928.5498 Task 3000
Site Location: 86 Burnhamthorpe Rd.
Sampled By: Mohammad
AGAT Quote #: _____ PO: competitive

Please note: If quotation number is not provided, client will be billed full price for analysis.

Invoice Information:

Bill To Same: Yes ☐ No ☐

Company: CA Payables Invoice@WSP.com
Contact: _____
Address: _____
Email: _____

Is this submission for a Record of Site Condition (RSC)?

☒ Yes ☐ No

Report Guideline on Certificate of Analysis

☒ Yes ☐ No

Legal Sample ☐

Sample Matrix Legend

GW Ground Water SD Sediment
O Oil SW Surface Water
P Paint R Rock/Shale
S Soil

Sample Identification	Date Sampled	Time Sampled	# of Containers	Sample Matrix	Comments/ Special Instructions	Y/N	Field Filtered - Metals, Hg, CrVI, DOC	O. Reg 153	O. Reg 406	O. Reg 558	Potentially Hazardous or High Concentration (Y/N)
1. BH24-4-SS3	10 Dec 2024	15:10 AM	3	Soil							
2. BH24-4-SS6		15:15 AM									
3. BH24-4-SS8		15:20 AM			sample on hold						
4. BH24-5-SS1		8:30 AM	4								
5. BH24-5-SS2		8:30 AM			sample on hold						
6. BH24-6-SS1		9:35 AM									
7. BH24-6-SS2		9:35 AM			sample on hold						
8. BH24-7-SS1		9:30 AM									
9. BH24-7-SS2		9:30 AM			sample on hold						
10. BH24-8-SS1		8:55 AM									
11. BH24-8-SS2		8:55 AM			sample on hold						

Samples Relinquished By (Print Name and Sign):

Mohammad Janghorban

Date

11 Dec 2024 15:30

Time

Samples Received By (Print Name and Sign):

FB

Date

Time

Samples Relinquished By (Print Name and Sign):

Date

Time

Samples Received By (Print Name and Sign):

Date

Time

Samples Relinquished By (Print Name and Sign):

Date

Time

Samples Received By (Print Name and Sign):

Date

Time

Page 2 of 4

N: T-165494



Laboratory Use Only

Work Order #: 24T230918

Cooler Quantity: see pg 1
Arrival Temperatures: _____
Depot Temperatures: _____
Custody Seal Intact: ☐ Yes ☐ No ☐ N/A
Notes: _____

Turnaround Time (TAT) Required:

Regular TAT ☒ 5 to 7 Business Days

Rush TAT (Rush Surcharges Apply)

☐ 3 Business Days ☐ 2 Business Days ☐ Next Business Day

OR Date Required (Rush Surcharges May Apply): _____

Please provide prior notification for rush TAT
*TAT is exclusive of weekends and statutory holidays

For 'Same Day' analysis, please contact your AGAT CSR

Chain of Custody Record

If this is a Drinking Water sample, please use Drinking Water Chain of Custody Form (potable water consumed by humans)

Report Information:

Company: WSP
Contact: Rica Esmirna Maliwat
Address: 100 Scotia Court Whitby ON
Phone: _____ Fax: _____
Reports to be sent to:
1. Email: rica.esmirna.maliwat@wsp.com
2. Email: _____

Regulatory Requirements:

(Please check all applicable boxes)

☒ Regulation 153/04

☐ Regulation 406

☐ Sewer Use

☐ Sanitary ☐ Storm

Table Indicate One

☐ Ind/Com

☒ Res/Park

☐ Agriculture

Table Indicate One

☐ Ind/Com

☐ Res/Park

☐ Agriculture

Region _____

☐ Prov. Water Quality Objectives (PWQO)

☐ Other

Indicate One

Soil Texture (Check One)

clay

☐ Regulation 558

☐ CCME

Is this submission for a Record of Site Condition (RSC)?

☒ Yes

☐ No

Report Guideline on Certificate of Analysis

☒ Yes

☐ No

Project Information:

Project: CA0040928 5498 Task 3000
Site Location: 86 Burnhamthorpe rd.
Sampled By: Mohammed
AGAT Quote #: _____ PO: competitive
Please note: If quotation number is not provided, client will be billed full price for analysis.

Invoice Information:

Bill To Same: Yes ☐ No ☐

Company: CA Payables Invoice@WSP.com
Contact: _____
Address: _____
Email: _____

Legal Sample ☐

Sample Matrix Legend

GW Ground Water SD Sediment
O Oil SW Surface Water
P Paint R Rock/Shale
S Soil

Sample Identification	Date Sampled	Time Sampled	# of Containers	Sample Matrix	Comments/ Special Instructions	Y/N	Metals & Inorganics (No pH)	Metals - ☐ CrVI, ☐ Hg, ☐ HWSB	BTEX, FL-F4 PHCs	VOC	PAHs	PCBs: Aroclors ☐	Regulation 406 Characterization Package pH, Metals, BTEX, FL-F4	EC, SAR	Regulation 406 SPLP Rainwater Leach mSPLP: ☐ Metals ☐ VOCs ☐ SVOCs ☐ OC	Landfill Disposal Characterization TCLP: TCLP: ☐ Metals ☐ VOCs ☐ ABNs ☐ BAP ☐ PCBs	Corrosivity: ☐ Moisture ☐ Sulphide	Potentially Hazardous or High Concentration (Y/N)
1. BH24-9-SS1	10 Dec 2024	8:45 AM	4	Soil			X	X	X	X								
2. BH24-9-SS2		8:45 AM		Soil	sample on hold		X	X	X	X								
3. BH24-10-SS1		10:05 AM					X	X	X	X								
4. BH24-10-SS2		10:05 AM			sample on hold		X	X	X	X								
5. BH24-11-SS1		10:15 AM					X	X	X	X								
6. BH24-11-SS2		10:15 AM			sample on hold		X	X	X	X								
7. BH24-12-SS1		10:25 AM					X	X	X	X								
8. BH24-12-SS2		10:25 AM			sample on hold		X	X	X	X								
9. BH24-13-SS1		10:35 AM					X	X	X	X								
10. BH24-13-SS2		10:35 AM			sample on hold		X	X	X	X								
11. BH24-14-SS1		10:45 AM					X	X	X	X								

Samples Relinquished By (Print Name and Sign): Mohammed Janghorban

Date: 11 Dec 2024 Time: 15:30

Samples Received By (Print Name and Sign): fb

Date: _____ Time: _____
Date: _____ Time: _____
Date: _____ Time: _____

Page 3 of 4

Nº: T-161877



Chain of Custody Record

If this is a Drinking Water sample, please use Drinking Water Chain of Custody Form (potable water consumed by humans)

Report Information:

Company: WSP
Contact: Rica Esmirna Maliwat
Address: 100 Scotia Court Whitby ON.
Phone: _____ Fax: _____
Reports to be sent to:
1. Email: ricaesmirna.maliwat@wsp.com
2. Email: _____

Regulatory Requirements:

(Please check all applicable boxes)

☒ Regulation 153/04 ☐ Regulation 406

Table 2 Indicate One

☐ Ind/Com

☒ Res/Park

☐ Agriculture

Soil Trace (Check One)

Trace

Trace

Table _____ Indicate One

☐ Ind/Com

☐ Res/Park

☐ Agriculture

☐ Regulation 558

☐ CCME

☐ Sewer Use
☐ Sanitary ☐ Storm

☐ Prov. Water Quality Objectives (PWQO)

☐ Other

Indicate One

Project Information:

Project: CA 00 40 928 5498 Task 3000
Site Location: 84 Burnhamthorpe Road
Sampled By: Mohammad
AGAT Quote #: _____ PO: competitive
Please note: If quotation number is not provided, client will be billed full price for analysis.

Invoice Information:

Bill To Same: Yes ☐ No ☐

Company: CA Payables Invoice@wsp.com
Contact: _____
Address: _____
Email: _____

Is this submission for a Record of Site Condition (RSC)?

☒ Yes ☐ No

Report Guideline on Certificate of Analysis

☒ Yes ☐ No

Legal Sample ☐

Sample Matrix Legend

GW Ground Water SD Sediment
O Oil SW Surface Water
P Paint R Rock/Shale
S Soil

Sample Identification	Date Sampled	Time Sampled	# of Containers	Sample Matrix	Comments/ Special Instructions	Y/N	Field Filtered - Metals, Hg, CrVI, DOC	Metals & Inorganics (No P)	Metals - ☐ CrVI ☐ Hg ☐ HWSB	BTEX, F1-F4 PHCs	VOC	PAHs	PCBs, Aroclors ☐	Regulation 406 Characterization Package pH, Metals, BTEX, F1-F4	EC, SAR	Regulation 406 SPLP Rainwater Leach msPLP: ☐ Metals ☐ VOCs ☐ SVOCs ☐ OC	Landfill Disposal Characterization TCLP: TCLP: ☐ Metals ☐ VOCs ☐ Aroclors ☐ PCBs	Corrosivity: ☐ Moisture ☐ Sulphide	Potentially Hazardous or High Concentration (Y/N)
1. <u>RH24-14-SS2</u>	<u>Dec 2024</u>	<u>10:45 AM</u>	<u>4</u>	<u>Soil</u>	<u>Sample on hold</u>			☒		☒		☒							
2. <u>Dup1</u>	<u>↓</u>	<u>—</u>	<u>↓</u>	<u>↓</u>				☒		☒		☒							
3. <u>Dup2</u>	<u>↓</u>	<u>—</u>	<u>↓</u>	<u>↓</u>				☒		☒		☒							
4.																			
5.																			
6.																			
7.																			
8.																			
9.																			
10.																			
11.																			

Samples Relinquished By (Print Name and Sign):

Mohammad J. J. J.

Samples Relinquished By (Print Name and Sign):

Samples Relinquished By (Print Name and Sign):

Date

11 Dec 2024

Date

Date

Time

15:30

Time

Time

Samples Received By (Print Name and Sign):

AB

Samples Received By (Print Name and Sign):

Samples Received By (Print Name and Sign):

Date

Date

Date

Date

Time

Time

Time

Time

Page 4 of 4

Nº: T-161879

CLIENT NAME: WSP CANADA INC.
2 INTERNATIONAL BLVD SUITE 201
ETOBICOKE, ON M9W1A2
(416) 798-0065

ATTENTION TO: Rica Esmirna Maliwat

PROJECT: CA0040928.5498

AGAT WORK ORDER: 24T234053

SOIL ANALYSIS REVIEWED BY: Nivine Basily, Inorganic Team Lead

TRACE ORGANICS REVIEWED BY: Neli Popnikolova, Senior Chemist

DATE REPORTED: Dec 30, 2024

PAGES (INCLUDING COVER): 16

VERSION*: 1

Should you require any information regarding this analysis please contact your client services representative at (905) 712-5100

*Notes

Disclaimer:

- All work conducted herein has been done using accepted standard protocols, and generally accepted practices and methods. AGAT test methods may incorporate modifications from the specified reference methods to improve performance.
- All samples will be disposed of within 30 days after receipt unless a Long Term Storage Agreement is signed and returned. Some specialty analysis may be exempt, please contact your Client Project Manager for details.
- AGAT's liability in connection with any delay, performance or non-performance of these services is only to the Client and does not extend to any other third party. Unless expressly agreed otherwise in writing, AGAT's liability is limited to the actual cost of the specific analysis or analyses included in the services.
- This Certificate shall not be reproduced except in full, without the written approval of the laboratory.
- The test results reported herewith relate only to the samples as received by the laboratory.
- Application of guidelines is provided "as is" without warranty of any kind, either expressed or implied, including, but not limited to, warranties of merchantability, fitness for a particular purpose, or non-infringement. AGAT assumes no responsibility for any errors or omissions in the guidelines contained in this document.
- All reportable information is available on request from AGAT Laboratories, in accordance with ISO/IEC 17025:2017, ISO/IEC 17025:2005 (Quebec), DR-12-PALA and/or NELAP Standards.
- This document is signed by an authorized signatory who meets the requirements of the MELCCFP, CALA, CCN and NELAP.
- For environmental samples in the Province of Quebec: The analysis is performed on and results apply to samples as received. A temperature above 6°C upon receipt, as indicated in the Sample Reception Notification (SRN), could indicate the integrity of the samples has been compromised if the delay between sampling and submission to the laboratory could not be minimized.



Certificate of Analysis

AGAT WORK ORDER: 24T234053

PROJECT: CA0040928.5498

5835 COOPERS AVENUE
MISSISSAUGA, ONTARIO
CANADA L4Z 1Y2
TEL (905)712-5100
FAX (905)712-5122
<http://www.agatlabs.com>

CLIENT NAME: WSP CANADA INC.

ATTENTION TO: Rica Esmirna Maliwat

SAMPLING SITE:

SAMPLED BY: S.U.

O. Reg. 153(511) - Metals & Inorganics (Soil)

DATE RECEIVED: 2024-12-20

DATE REPORTED: 2024-12-30

				SAMPLE DESCRIPTION: BH24-17-SS1 BH24-16-SS1 BH24-15-SS1 DUP1			
				SAMPLE TYPE: Soil Soil Soil Soil			
				DATE SAMPLED: 2024-12-19 15:30 2024-12-19 15:40 2024-12-19 16:00 2024-12-19 16:01			
Parameter	Unit	G / S	RDL	6426259	6426263	6426264	6426265
Antimony	µg/g	7.5	0.8	<0.8	<0.8	<0.8	<0.8
Arsenic	µg/g	18	1	5	4	5	5
Barium	µg/g	390	2.0	91.0	74.5	93.5	86.0
Beryllium	µg/g	5	0.5	0.6	0.6	0.7	0.6
Boron	µg/g	120	5	9	11	11	9
Boron (Hot Water Soluble)	µg/g	1.5	0.10	0.21	0.25	0.15	0.19
Cadmium	µg/g	1.2	0.5	<0.5	<0.5	<0.5	<0.5
Chromium	µg/g	160	5	19	18	21	20
Cobalt	µg/g	22	0.8	11.2	8.4	10.4	11.2
Copper	µg/g	180	1.0	28.4	26.9	31.5	41.1
Lead	µg/g	120	1	14	13	13	13
Molybdenum	µg/g	6.9	0.5	<0.5	0.5	<0.5	<0.5
Nickel	µg/g	130	1	22	20	23	23
Selenium	µg/g	2.4	0.8	<0.8	<0.8	<0.8	<0.8
Silver	µg/g	25	0.5	<0.5	<0.5	<0.5	<0.5
Thallium	µg/g	1	0.5	<0.5	<0.5	<0.5	<0.5
Uranium	µg/g	23	0.50	0.58	0.57	0.61	0.63
Vanadium	µg/g	86	2.0	26.5	23.5	28.5	27.4
Zinc	µg/g	340	5	65	55	59	62
Chromium, Hexavalent	µg/g	10	0.2	<0.2	<0.2	<0.2	<0.2
Cyanide, WAD	µg/g	0.051	0.040	<0.040	<0.040	<0.040	<0.040
Mercury	µg/g	1.8	0.10	<0.10	<0.10	<0.10	<0.10
Electrical Conductivity (2:1)	mS/cm	0.7	0.005	0.375	0.484	0.286	0.349
Sodium Adsorption Ratio (2:1) (Calc.)	N/A	5	N/A	1.05	0.871	0.821	0.835

Certified By:



Nivine Dasly



Certificate of Analysis

AGAT WORK ORDER: 24T234053

PROJECT: CA0040928.5498

5835 COOPERS AVENUE
MISSISSAUGA, ONTARIO
CANADA L4Z 1Y2
TEL (905)712-5100
FAX (905)712-5122
<http://www.agatlabs.com>

CLIENT NAME: WSP CANADA INC.

ATTENTION TO: Rica Esmirna Maliwat

SAMPLING SITE:

SAMPLED BY: S.U.

O. Reg. 153(511) - Metals & Inorganics (Soil)

DATE RECEIVED: 2024-12-20

DATE REPORTED: 2024-12-30

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition - Soil - Residential/Parkland/Institutional Property Use - Medium and Fine Textured Soils **pH range listed applies to surface soil only**
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.
6426259-6426265 EC was determined on the DI water extract obtained from the 2:1 leaching procedure (2 parts DI water:1 part soil). pH was determined on the 0.01M CaCl₂ extract prepared at 2:1 ratio. SAR is a calculated parameter.
Analysis performed at AGAT Toronto (unless marked by *)

Certified By:





Certificate of Analysis

AGAT WORK ORDER: 24T234053

PROJECT: CA0040928.5498

5835 COOPERS AVENUE
MISSISSAUGA, ONTARIO
CANADA L4Z 1Y2
TEL (905)712-5100
FAX (905)712-5122
<http://www.agatlabs.com>

CLIENT NAME: WSP CANADA INC.

SAMPLING SITE:

ATTENTION TO: Rica Esmirna Maliwat

SAMPLED BY: S.U.

O. Reg. 153(511) - PAHs (Soil)

DATE RECEIVED: 2024-12-20

DATE REPORTED: 2024-12-30

SAMPLE DESCRIPTION:				BH24-17-SS1	BH24-16-SS1	BH24-15-SS1	DUP1
SAMPLE TYPE:				Soil	Soil	Soil	Soil
DATE SAMPLED:				2024-12-19 15:30	2024-12-19 15:40	2024-12-19 16:00	2024-12-19 16:01
Parameter	Unit	G / S	RDL	6426259	6426263	6426264	6426265
Naphthalene	µg/g	0.75	0.05	<0.05	<0.05	<0.05	<0.05
Acenaphthylene	µg/g	0.17	0.05	<0.05	<0.05	<0.05	<0.05
Acenaphthene	µg/g	29	0.05	<0.05	<0.05	<0.05	<0.05
Fluorene	µg/g	69	0.05	<0.05	<0.05	<0.05	<0.05
Phenanthrene	µg/g	7.8	0.05	<0.05	<0.05	<0.05	<0.05
Anthracene	µg/g	0.74	0.05	<0.05	<0.05	<0.05	<0.05
Fluoranthene	µg/g	0.69	0.05	<0.05	<0.05	<0.05	<0.05
Pyrene	µg/g	78	0.05	<0.05	<0.05	<0.05	<0.05
Benzo(a)anthracene	µg/g	0.63	0.05	<0.05	<0.05	<0.05	<0.05
Chrysene	µg/g	7.8	0.05	<0.05	<0.05	<0.05	<0.05
Benzo(b)fluoranthene	µg/g	0.78	0.05	<0.05	<0.05	<0.05	<0.05
Benzo(k)fluoranthene	µg/g	0.78	0.05	<0.05	<0.05	<0.05	<0.05
Benzo(a)pyrene	µg/g	0.3	0.05	<0.05	<0.05	<0.05	<0.05
Indeno(1,2,3-cd)pyrene	µg/g	0.48	0.05	<0.05	<0.05	<0.05	<0.05
Dibenz(a,h)anthracene	µg/g	0.1	0.05	<0.05	<0.05	<0.05	<0.05
Benzo(g,h,i)perylene	µg/g	7.8	0.05	<0.05	<0.05	<0.05	<0.05
2-and 1-methyl Naphthalene	µg/g	3.4	0.05	<0.05	<0.05	<0.05	<0.05
Moisture Content	%		0.1	15.6	16.0	11.3	18.5
Surrogate	Unit	Acceptable Limits					
Naphthalene-d8	%	50-140		75	80	75	85
Acridine-d9	%	50-140		75	100	100	85
Terphenyl-d14	%	50-140		85	85	80	85

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition - Soil - Residential/Parkland/Institutional Property Use - Medium and Fine Textured Soils **pH range listed applies to surface soil only**
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

6426259-6426265 Results are based on the dry weight of the soil.

Note: The result for Benzo(b)Fluoranthene is the total of the Benzo(b)&j)Fluoranthene isomers because the isomers co-elute on the GC column.

2- and 1-Methyl Naphthalene is a calculated parameter. The calculated value is the sum of 2-Methyl Naphthalene and 1-Methyl Naphthalene.

Analysis performed at AGAT Toronto (unless marked by *)

Certified By:



Certificate of Analysis

AGAT WORK ORDER: 24T234053

PROJECT: CA0040928.5498

5835 COOPERS AVENUE
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CLIENT NAME: WSP CANADA INC.

ATTENTION TO: Rica Esmirna Maliwat

SAMPLING SITE:

SAMPLED BY: S.U.

O. Reg. 153(511) - PHCs F1 - F4 (with PAHs and VOC) (Soil)

DATE RECEIVED: 2024-12-20

DATE REPORTED: 2024-12-30

		SAMPLE DESCRIPTION:		BH24-17-SS1	BH24-16-SS1	BH24-15-SS1	DUP1
		SAMPLE TYPE:		Soil	Soil	Soil	Soil
		DATE SAMPLED:		2024-12-19 15:30	2024-12-19 15:40	2024-12-19 16:00	2024-12-19 16:01
Parameter	Unit	G / S	RDL	6426259	6426263	6426264	6426265
F1 (C6 to C10)	µg/g	65	5	<5	<5	<5	<5
F1 (C6 to C10) minus BTEX	µg/g	65	5	<5	<5	<5	<5
F2 (C10 to C16)	µg/g	150	10	<10	<10	<10	<10
F2 (C10 to C16) minus Naphthalene	µg/g		10	<10	<10	<10	<10
F3 (C16 to C34)	µg/g	1300	50	<50	<50	<50	<50
F3 (C16 to C34) minus PAHs	µg/g		50	<50	<50	<50	<50
F4 (C34 to C50)	µg/g	5600	50	<50	<50	<50	<50
Gravimetric Heavy Hydrocarbons	µg/g	5600	50	NA	NA	NA	NA
Moisture Content	%		0.1	15.6	16.0	11.3	18.5
Surrogate	Unit	Acceptable Limits					
Toluene-d8	%	50-140	100	102	100	102	102
Terphenyl	%	60-140	103	104	92	92	92

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition - Soil - Residential/Parkland/Institutional Property Use - Medium and Fine Textured Soils **pH range listed applies to surface soil only**
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

6426259-6426265 Results are based on sample dry weight.
The C6-C10 fraction is calculated using toluene response factor.
C6-C10 (F1 minus BTEX) is a calculated parameter. The calculated value is F1 minus BTEX. The calculated parameter is non-accredited. The parameters that are components of the calculation are accredited.
The C10 - C16, C16 - C34, and C34 - C50 fractions are calculated using the average response factor for n-C10, n-C16, and n-C34.
Gravimetric Heavy Hydrocarbons are not included in the Total C16-C50 and are only determined if the chromatogram of the C34 - C50 hydrocarbons indicates that hydrocarbons >C50 are present.
The chromatogram has returned to baseline by the retention time of nC50.
Total C6 - C50 results are corrected for BTEX and PAH contributions.
C>10 - C16 (F2- Naphthalene) is a calculated parameter. The calculated value is F2 - Naphthalene.
C>16 - C34 (F3-PAH) is a calculated parameter. The calculated value is F3-PAH (PAH: sum of Phenanthrene, Benzo(a)anthracene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Benzo(a)pyrene, Fluoranthene, Dibenzo(a,h)anthracene, Indeno(1,2,3-c,d)pyrene and Pyrene).
This method complies with the Reference Method for the CWS PHC and is validated for use in the laboratory.
nC10, nC16 and nC34 response factors are within 10% of their average.
C50 response factor is within 70% of nC10 + nC16 + nC34 average.
Linearity is within 15%.
Extraction and holding times were met for this sample.

Analysis performed at AGAT Toronto (unless marked by *)

Certified By:



Certificate of Analysis

AGAT WORK ORDER: 24T234053

PROJECT: CA0040928.5498

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CLIENT NAME: WSP CANADA INC.

ATTENTION TO: Rica Esmirna Maliwat

SAMPLING SITE:

SAMPLED BY: S.U.

O. Reg. 153(511) - VOCs (with PHC) (Soil)

DATE RECEIVED: 2024-12-20

DATE REPORTED: 2024-12-30

SAMPLE DESCRIPTION:				BH24-17-SS1	BH24-16-SS1	BH24-15-SS1	DUP1
SAMPLE TYPE:				Soil	Soil	Soil	Soil
DATE SAMPLED:				2024-12-19 15:30	2024-12-19 15:40	2024-12-19 16:00	2024-12-19 16:01
Parameter	Unit	G / S	RDL	6426259	6426263	6426264	6426265
Dichlorodifluoromethane	µg/g	25	0.05	<0.05	<0.05	<0.05	<0.05
Vinyl Chloride	ug/g	0.022	0.02	<0.02	<0.02	<0.02	<0.02
Bromomethane	ug/g	0.05	0.05	<0.05	<0.05	<0.05	<0.05
Trichlorofluoromethane	ug/g	5.8	0.05	<0.05	<0.05	<0.05	<0.05
Acetone	ug/g	28	0.50	<0.50	<0.50	<0.50	<0.50
1,1-Dichloroethylene	ug/g	0.05	0.05	<0.05	<0.05	<0.05	<0.05
Methylene Chloride	ug/g	0.96	0.05	<0.05	<0.05	<0.05	<0.05
Trans- 1,2-Dichloroethylene	ug/g	0.75	0.05	<0.05	<0.05	<0.05	<0.05
Methyl tert-butyl Ether	ug/g	1.4	0.05	<0.05	<0.05	<0.05	<0.05
1,1-Dichloroethane	ug/g	0.6	0.02	<0.02	<0.02	<0.02	<0.02
Methyl Ethyl Ketone	ug/g	44	0.50	<0.50	<0.50	<0.50	<0.50
Cis- 1,2-Dichloroethylene	ug/g	2.5	0.02	<0.02	<0.02	<0.02	<0.02
Chloroform	ug/g	0.18	0.04	<0.04	<0.04	<0.04	<0.04
1,2-Dichloroethane	ug/g	0.05	0.03	<0.03	<0.03	<0.03	<0.03
1,1,1-Trichloroethane	ug/g	3.4	0.05	<0.05	<0.05	<0.05	<0.05
Carbon Tetrachloride	ug/g	0.12	0.05	<0.05	<0.05	<0.05	<0.05
Benzene	ug/g	0.17	0.02	<0.02	<0.02	<0.02	<0.02
1,2-Dichloropropane	ug/g	0.085	0.03	<0.03	<0.03	<0.03	<0.03
Trichloroethylene	ug/g	0.52	0.03	<0.03	<0.03	<0.03	<0.03
Bromodichloromethane	ug/g	1.9	0.05	<0.05	<0.05	<0.05	<0.05
Methyl Isobutyl Ketone	ug/g	4.3	0.50	<0.50	<0.50	<0.50	<0.50
1,1,2-Trichloroethane	ug/g	0.05	0.04	<0.04	<0.04	<0.04	<0.04
Toluene	ug/g	6	0.05	<0.05	<0.05	<0.05	<0.05
Dibromochloromethane	ug/g	2.9	0.05	<0.05	<0.05	<0.05	<0.05
Ethylene Dibromide	ug/g	0.05	0.04	<0.04	<0.04	<0.04	<0.04
Tetrachloroethylene	ug/g	2.3	0.05	<0.05	<0.05	<0.05	<0.05
1,1,1,2-Tetrachloroethane	ug/g	0.05	0.04	<0.04	<0.04	<0.04	<0.04
Chlorobenzene	ug/g	2.7	0.05	<0.05	<0.05	<0.05	<0.05
Ethylbenzene	ug/g	1.6	0.05	<0.05	<0.05	<0.05	<0.05

Certified By:



Certificate of Analysis

AGAT WORK ORDER: 24T234053

PROJECT: CA0040928.5498

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CLIENT NAME: WSP CANADA INC.

ATTENTION TO: Rica Esmirna Maliwat

SAMPLING SITE:

SAMPLED BY: S.U.

O. Reg. 153(511) - VOCs (with PHC) (Soil)

DATE RECEIVED: 2024-12-20

DATE REPORTED: 2024-12-30

SAMPLE DESCRIPTION:				BH24-17-SS1	BH24-16-SS1	BH24-15-SS1	DUP1
SAMPLE TYPE:				Soil	Soil	Soil	Soil
DATE SAMPLED:				2024-12-19 15:30	2024-12-19 15:40	2024-12-19 16:00	2024-12-19 16:01
Parameter	Unit	G / S	RDL	6426259	6426263	6426264	6426265
m & p-Xylene	ug/g		0.05	<0.05	<0.05	<0.05	<0.05
Bromoform	ug/g	0.26	0.05	<0.05	<0.05	<0.05	<0.05
Styrene	ug/g	2.2	0.05	<0.05	<0.05	<0.05	<0.05
1,1,2,2-Tetrachloroethane	ug/g	0.05	0.05	<0.05	<0.05	<0.05	<0.05
o-Xylene	ug/g		0.05	<0.05	<0.05	<0.05	<0.05
1,3-Dichlorobenzene	ug/g	6	0.05	<0.05	<0.05	<0.05	<0.05
1,4-Dichlorobenzene	ug/g	0.097	0.05	<0.05	<0.05	<0.05	<0.05
1,2-Dichlorobenzene	ug/g	1.7	0.05	<0.05	<0.05	<0.05	<0.05
Xylenes (Total)	ug/g	25	0.05	<0.05	<0.05	<0.05	<0.05
1,3-Dichloropropene (Cis + Trans)	µg/g	0.081	0.05	<0.05	<0.05	<0.05	<0.05
n-Hexane	µg/g	34	0.05	<0.05	<0.05	<0.05	<0.05
Moisture Content	%		0.1	15.6	16.0	11.3	18.5
Surrogate	Unit	Acceptable Limits					
Toluene-d8	% Recovery	50-140		100	102	100	102
4-Bromofluorobenzene	% Recovery	50-140		94	92	93	96

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition - Soil - Residential/Parkland/Institutional Property Use - Medium and Fine Textured Soils **pH range listed applies to surface soil only**
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

6426259-6426265 The sample was analyzed using the high level technique. The sample was extracted using methanol, a small amount of the methanol extract was diluted in water and the purge & trap GC/MS analysis was performed. Results are based on the dry weight of the soil.
Xylenes total is a calculated parameter. The calculated value is the sum of m&p-Xylene + o-Xylene.
1,3-Dichloropropene total is a calculated parameter. The calculated value is the sum of Cis-1,3-Dichloropropene and Trans-1,3-Dichloropropene.
The calculated parameters are non-accredited. The parameters that are components of the calculation are accredited.

Analysis performed at AGAT Toronto (unless marked by *)

Certified By:

Quality Assurance

CLIENT NAME: WSP CANADA INC.

PROJECT: CA0040928.5498

SAMPLING SITE:

AGAT WORK ORDER: 24T234053

ATTENTION TO: Rica Esmirna Maliwat

SAMPLED BY: S.U.

Soil Analysis

RPT Date: Dec 30, 2024			DUPLICATE			Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD		Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
O. Reg. 153(511) - Metals & Inorganics (Soil)															
Antimony	6426441		<0.8	<0.8	NA	< 0.8	138%	70%	130%	88%	80%	120%	71%	70%	130%
Arsenic	6426441		3	2	NA	< 1	106%	70%	130%	110%	80%	120%	97%	70%	130%
Barium	6426441		50.1	49.2	1.8%	< 2.0	106%	70%	130%	115%	80%	120%	108%	70%	130%
Beryllium	6426441		<0.5	<0.5	NA	< 0.5	94%	70%	130%	120%	80%	120%	105%	70%	130%
Boron	6426441		8	7	NA	< 5	77%	70%	130%	111%	80%	120%	92%	70%	130%
Boron (Hot Water Soluble)	6427631		0.11	0.11	NA	< 0.10	112%	60%	140%	97%	70%	130%	97%	60%	140%
Cadmium	6426441		<0.5	<0.5	NA	< 0.5	106%	70%	130%	115%	80%	120%	106%	70%	130%
Chromium	6426441		13	12	NA	< 5	91%	70%	130%	113%	80%	120%	96%	70%	130%
Cobalt	6426441		3.6	3.5	NA	< 0.8	90%	70%	130%	106%	80%	120%	90%	70%	130%
Copper	6426441		10.4	9.5	9.0%	< 1.0	85%	70%	130%	109%	80%	120%	85%	70%	130%
Lead	6426441		17	13	26.7%	< 1	108%	70%	130%	117%	80%	120%	93%	70%	130%
Molybdenum	6426441		0.5	0.6	NA	< 0.5	115%	70%	130%	111%	80%	120%	114%	70%	130%
Nickel	6426441		9	9	0.0%	< 1	90%	70%	130%	107%	80%	120%	87%	70%	130%
Selenium	6426441		<0.8	<0.8	NA	< 0.8	114%	70%	130%	100%	80%	120%	99%	70%	130%
Silver	6426441		<0.5	<0.5	NA	< 0.5	96%	70%	130%	114%	80%	120%	101%	70%	130%
Thallium	6426441		<0.5	<0.5	NA	< 0.5	103%	70%	130%	107%	80%	120%	96%	70%	130%
Uranium	6426441		<0.50	0.51	NA	< 0.50	98%	70%	130%	107%	80%	120%	97%	70%	130%
Vanadium	6426441		19.2	19.0	1.0%	< 2.0	98%	70%	130%	111%	80%	120%	95%	70%	130%
Zinc	6426441		42	45	6.9%	< 5	97%	70%	130%	111%	80%	120%	94%	70%	130%
Chromium, Hexavalent	6431019		<0.2	<0.2	NA	< 0.2	100%	70%	130%	107%	80%	120%	96%	70%	130%
Cyanide, WAD	6426259	6426259	<0.040	<0.040	NA	< 0.040	102%	70%	130%	101%	80%	120%	91%	70%	130%
Mercury	6426441		<0.10	<0.10	NA	< 0.10	95%	70%	130%	109%	80%	120%	93%	70%	130%
Electrical Conductivity (2:1)	6431019		0.199	0.231	14.9%	< 0.005	98%	80%	120%						
Sodium Adsorption Ratio (2:1) (Calc.)	6431019		0.458	0.426	7.2%	NA									

Comments: NA signifies Not Applicable.

pH duplicates QA acceptance criteria was met relative as stated in Table 5-15 of Analytical Protocol document.

Duplicate NA: results are under 5X the RDL and will not be calculated.

More than 90% of the elements met acceptance limits and overall data quality is acceptable for use. For a multi-element scan up to 10% of analytes may exceed the quoted limits by up to 10% absolute.

Certified By:


Nivine Basly

Quality Assurance

CLIENT NAME: WSP CANADA INC.

AGAT WORK ORDER: 24T234053

PROJECT: CA0040928.5498

ATTENTION TO: Rica Esmirna Maliwat

SAMPLING SITE:

SAMPLED BY: S.U.

Trace Organics Analysis

RPT Date: Dec 30, 2024			DUPLICATE			Method Blank	REFERENCE MATERIAL		METHOD BLANK SPIKE			MATRIX SPIKE			
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD		Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper

O. Reg. 153(511) - PHCs F1 - F4 (with PAHs and VOC) (Soil)

F1 (C6 to C10)	6427642		<5	<5	NA	< 5	95%	60%	140%	121%	60%	140%	90%	60%	140%
F2 (C10 to C16)	6426259	6426259	< 10	< 10	NA	< 10	107%	60%	140%	106%	60%	140%	119%	60%	140%
F3 (C16 to C34)	6426259	6426259	< 50	< 50	NA	< 50	106%	60%	140%	120%	60%	140%	126%	60%	140%
F4 (C34 to C50)	6426259	6426259	< 50	< 50	NA	< 50	62%	60%	140%	108%	60%	140%	85%	60%	140%

O. Reg. 153(511) - PAHs (Soil)

Naphthalene	6426259	6426259	<0.05	<0.05	NA	< 0.05	76%	50%	140%	75%	50%	140%	90%	50%	140%
Acenaphthylene	6426259	6426259	<0.05	<0.05	NA	< 0.05	77%	50%	140%	83%	50%	140%	83%	50%	140%
Acenaphthene	6426259	6426259	<0.05	<0.05	NA	< 0.05	85%	50%	140%	78%	50%	140%	80%	50%	140%
Fluorene	6426259	6426259	<0.05	<0.05	NA	< 0.05	90%	50%	140%	75%	50%	140%	78%	50%	140%
Phenanthrene	6426259	6426259	<0.05	<0.05	NA	< 0.05	101%	50%	140%	78%	50%	140%	80%	50%	140%

Anthracene	6426259	6426259	<0.05	<0.05	NA	< 0.05	76%	50%	140%	80%	50%	140%	75%	50%	140%
Fluoranthene	6426259	6426259	<0.05	<0.05	NA	< 0.05	112%	50%	140%	75%	50%	140%	75%	50%	140%
Pyrene	6426259	6426259	<0.05	<0.05	NA	< 0.05	114%	50%	140%	73%	50%	140%	75%	50%	140%
Benzo(a)anthracene	6426259	6426259	<0.05	<0.05	NA	< 0.05	108%	50%	140%	113%	50%	140%	80%	50%	140%
Chrysene	6426259	6426259	<0.05	<0.05	NA	< 0.05	104%	50%	140%	75%	50%	140%	73%	50%	140%

Benzo(b)fluoranthene	6426259	6426259	<0.05	<0.05	NA	< 0.05	76%	50%	140%	98%	50%	140%	83%	50%	140%
Benzo(k)fluoranthene	6426259	6426259	<0.05	<0.05	NA	< 0.05	95%	50%	140%	93%	50%	140%	78%	50%	140%
Benzo(a)pyrene	6426259	6426259	<0.05	<0.05	NA	< 0.05	72%	50%	140%	80%	50%	140%	93%	50%	140%
Indeno(1,2,3-cd)pyrene	6426259	6426259	<0.05	<0.05	NA	< 0.05	80%	50%	140%	78%	50%	140%	73%	50%	140%
Dibenz(a,h)anthracene	6426259	6426259	<0.05	<0.05	NA	< 0.05	85%	50%	140%	78%	50%	140%	85%	50%	140%

Benzo(g,h,i)perylene	6426259	6426259	<0.05	<0.05	NA	< 0.05	95%	50%	140%	95%	50%	140%	85%	50%	140%
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O. Reg. 153(511) - VOCs (with PHC) (Soil)

Dichlorodifluoromethane	6427642		<0.05	<0.05	NA	< 0.05	82%	50%	140%	131%	50%	140%	78%	50%	140%
Vinyl Chloride	6427642		<0.02	<0.02	NA	< 0.02	116%	50%	140%	114%	50%	140%	112%	50%	140%
Bromomethane	6427642		<0.05	<0.05	NA	< 0.05	93%	50%	140%	90%	50%	140%	90%	50%	140%
Trichlorofluoromethane	6427642		<0.05	<0.05	NA	< 0.05	123%	50%	140%	115%	50%	140%	84%	50%	140%
Acetone	6427642		<0.50	<0.50	NA	< 0.50	112%	50%	140%	114%	50%	140%	85%	50%	140%

1,1-Dichloroethylene	6427642		<0.05	<0.05	NA	< 0.05	81%	50%	140%	117%	60%	130%	102%	50%	140%
Methylene Chloride	6427642		<0.05	<0.05	NA	< 0.05	84%	50%	140%	100%	60%	130%	105%	50%	140%
Trans- 1,2-Dichloroethylene	6427642		<0.05	<0.05	NA	< 0.05	102%	50%	140%	104%	60%	130%	87%	50%	140%
Methyl tert-butyl Ether	6427642		<0.05	<0.05	NA	< 0.05	96%	50%	140%	84%	60%	130%	109%	50%	140%
1,1-Dichloroethane	6427642		<0.02	<0.02	NA	< 0.02	91%	50%	140%	111%	60%	130%	71%	50%	140%

Methyl Ethyl Ketone	6427642		<0.50	<0.50	NA	< 0.50	82%	50%	140%	116%	50%	140%	100%	50%	140%
Cis- 1,2-Dichloroethylene	6427642		<0.02	<0.02	NA	< 0.02	95%	50%	140%	102%	60%	130%	74%	50%	140%
Chloroform	6427642		<0.04	<0.04	NA	< 0.04	106%	50%	140%	104%	60%	130%	94%	50%	140%
1,2-Dichloroethane	6427642		<0.03	<0.03	NA	< 0.03	104%	50%	140%	75%	60%	130%	80%	50%	140%
1,1,1-Trichloroethane	6427642		<0.05	<0.05	NA	< 0.05	113%	50%	140%	106%	60%	130%	64%	50%	140%

Carbon Tetrachloride	6427642		<0.05	<0.05	NA	< 0.05	94%	50%	140%	101%	60%	130%	72%	50%	140%
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Quality Assurance

CLIENT NAME: WSP CANADA INC.

PROJECT: CA0040928.5498

SAMPLING SITE:

AGAT WORK ORDER: 24T234053

ATTENTION TO: Rica Esmirna Maliwat

SAMPLED BY: S.U.

Trace Organics Analysis (Continued)

RPT Date: Dec 30, 2024			DUPLICATE			Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD		Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
Benzene	6427642		<0.02	<0.02	NA	< 0.02	96%	50%	140%	105%	60%	130%	73%	50%	140%
1,2-Dichloropropane	6427642		<0.03	<0.03	NA	< 0.03	96%	50%	140%	99%	60%	130%	72%	50%	140%
Trichloroethylene	6427642		<0.03	<0.03	NA	< 0.03	99%	50%	140%	86%	60%	130%	96%	50%	140%
Bromodichloromethane	6427642		<0.05	<0.05	NA	< 0.05	96%	50%	140%	90%	60%	130%	99%	50%	140%
Methyl Isobutyl Ketone	6427642		<0.50	<0.50	NA	< 0.50	92%	50%	140%	90%	50%	140%	96%	50%	140%
1,1,2-Trichloroethane	6427642		<0.04	<0.04	NA	< 0.04	100%	50%	140%	98%	60%	130%	97%	50%	140%
Toluene	6427642		<0.05	<0.05	NA	< 0.05	106%	50%	140%	110%	60%	130%	107%	50%	140%
Dibromochloromethane	6427642		<0.05	<0.05	NA	< 0.05	85%	50%	140%	85%	60%	130%	75%	50%	140%
Ethylene Dibromide	6427642		<0.04	<0.04	NA	< 0.04	85%	50%	140%	83%	60%	130%	78%	50%	140%
Tetrachloroethylene	6427642		<0.05	<0.05	NA	< 0.05	78%	50%	140%	90%	60%	130%	88%	50%	140%
1,1,1,2-Tetrachloroethane	6427642		<0.04	<0.04	NA	< 0.04	91%	50%	140%	101%	60%	130%	87%	50%	140%
Chlorobenzene	6427642		<0.05	<0.05	NA	< 0.05	106%	50%	140%	107%	60%	130%	97%	50%	140%
Ethylbenzene	6427642		<0.05	<0.05	NA	< 0.05	95%	50%	140%	109%	60%	130%	89%	50%	140%
m & p-Xylene	6427642		<0.05	<0.05	NA	< 0.05	125%	50%	140%	114%	60%	130%	96%	50%	140%
Bromoform	6427642		<0.05	<0.05	NA	< 0.05	90%	50%	140%	89%	60%	130%	60%	50%	140%
Styrene	6427642		<0.05	<0.05	NA	< 0.05	105%	50%	140%	93%	60%	130%	98%	50%	140%
1,1,2,2-Tetrachloroethane	6427642		<0.05	<0.05	NA	< 0.05	91%	50%	140%	71%	60%	130%	66%	50%	140%
o-Xylene	6427642		<0.05	<0.05	NA	< 0.05	103%	50%	140%	102%	60%	130%	99%	50%	140%
1,3-Dichlorobenzene	6427642		<0.05	<0.05	NA	< 0.05	106%	50%	140%	105%	60%	130%	98%	50%	140%
1,4-Dichlorobenzene	6427642		<0.05	<0.05	NA	< 0.05	104%	50%	140%	104%	60%	130%	97%	50%	140%
1,2-Dichlorobenzene	6427642		<0.05	<0.05	NA	< 0.05	109%	50%	140%	106%	60%	130%	97%	50%	140%
n-Hexane	6427642		<0.05	<0.05	NA	< 0.05	72%	50%	140%	109%	60%	130%	86%	50%	140%

Comments: When the average of the sample and duplicate results is less than 5x the RDL, the Relative Percent Difference (RPD) will be indicated as Not Applicable (NA).

Certified By:



QC Exceedance

CLIENT NAME: WSP CANADA INC.

AGAT WORK ORDER: 24T234053

PROJECT: CA0040928.5498

ATTENTION TO: Rica Esmirna Maliwat

RPT Date: Dec 30, 2024		REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Sample Id	Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
			Lower	Upper		Lower	Upper		Lower	Upper

O. Reg. 153(511) - Metals & Inorganics (Soil)

Antimony

138% 70% 130% 88% 80% 120% 71% 70% 130%

Comments: NA signifies Not Applicable.

pH duplicates QA acceptance criteria was met relative as stated in Table 5-15 of Analytical Protocol document.

Duplicate NA: results are under 5X the RDL and will not be calculated.

More than 90% of the elements met acceptance limits and overall data quality is acceptable for use. For a multi-element scan up to 10% of analytes may exceed the quoted limits by up to 10% absolute.

Method Summary

CLIENT NAME: WSP CANADA INC.

PROJECT: CA0040928.5498

SAMPLING SITE:

AGAT WORK ORDER: 24T234053

ATTENTION TO: Rica Esmirna Maliwat

SAMPLED BY: S.U.

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Soil Analysis			
Antimony	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Arsenic	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Barium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Beryllium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Boron	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Boron (Hot Water Soluble)	MET-93-6104	modified from EPA 6010D and MSA PART 3, CH 21	ICP/OES
Cadmium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Chromium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Cobalt	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Copper	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Lead	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Molybdenum	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Nickel	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Selenium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Silver	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Thallium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Uranium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Vanadium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Zinc	MET 93 -6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Chromium, Hexavalent	INOR-93-6068	modified from EPA 3060 and EPA 7196	SPECTROPHOTOMETER
Cyanide, WAD	INOR-93-6052	modified from ON MOECC E3015, SM 4500-CN- I, G-387	SEGMENTED FLOW ANALYSIS
Mercury	MET-93-6103	modified from EPA 7471B and SM 3112 B	ICP-MS
Electrical Conductivity (2:1)	INOR-93-6075	modified from MSA PART 3, CH 14 and SM 2510 B	PC TITRATE
Sodium Adsorption Ratio (2:1) (Calc.)	INOR-93-6007	modified from EPA 6010D & Analytical Protocol	ICP/OES

Method Summary

CLIENT NAME: WSP CANADA INC.

PROJECT: CA0040928.5498

SAMPLING SITE:

AGAT WORK ORDER: 24T234053

ATTENTION TO: Rica Esmirna Maliwat

SAMPLED BY: S.U.

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Trace Organics Analysis			
Naphthalene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Acenaphthylene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Acenaphthene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Fluorene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Phenanthrene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Anthracene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Fluoranthene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Pyrene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Benzo(a)anthracene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Chrysene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Benzo(b)fluoranthene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Benzo(k)fluoranthene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Benzo(a)pyrene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Indeno(1,2,3-cd)pyrene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Dibenz(a,h)anthracene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Benzo(g,h,i)perylene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
2-and 1-methyl Naphthalene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Naphthalene-d8	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Acridine-d9	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Terphenyl-d14	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Moisture Content	VOL-91-5009	modified from CCME Tier 1 Method	BALANCE
F1 (C6 to C10)	VOL-91-5009	modified from CCME Tier 1 Method	(P&T)GC/FID
F1 (C6 to C10) minus BTEX	VOL-91-5009	modified from CCME Tier 1 Method	P&T GC/FID
Toluene-d8	VOL-91- 5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
F2 (C10 to C16)	VOL-91-5009	modified from CCME Tier 1 Method	GC/FID
F2 (C10 to C16) minus Naphthalene	VOL-91-5009	modified from CCME Tier 1 Method	GC/FID
F3 (C16 to C34)	VOL-91-5009	modified from CCME Tier 1 Method	GC/FID
F3 (C16 to C34) minus PAHs	VOL-91-5009	modified from CCME Tier 1 Method	GC/FID
F4 (C34 to C50)	VOL-91-5009	modified from CCME Tier 1 Method	GC/FID
Gravimetric Heavy Hydrocarbons	VOL-91-5009	modified from CCME Tier 1 Method	BALANCE
Terphenyl	VOL-91-5009	modified from CCME Tier 1 Method	GC/FID
Dichlorodifluoromethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS

Method Summary

CLIENT NAME: WSP CANADA INC.

PROJECT: CA0040928.5498

SAMPLING SITE:

AGAT WORK ORDER: 24T234053

ATTENTION TO: Rica Esmirna Maliwat

SAMPLED BY: S.U.

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Vinyl Chloride	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Bromomethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Trichlorofluoromethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Acetone	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,1-Dichloroethylene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Methylene Chloride	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Trans- 1,2-Dichloroethylene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Methyl tert-butyl Ether	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,1-Dichloroethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Methyl Ethyl Ketone	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Cis- 1,2-Dichloroethylene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Chloroform	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,2-Dichloroethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,1,1-Trichloroethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Carbon Tetrachloride	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Benzene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,2-Dichloropropane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Trichloroethylene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Bromodichloromethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Methyl Isobutyl Ketone	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,1,2-Trichloroethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Toluene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Dibromochloromethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Ethylene Dibromide	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Tetrachloroethylene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,1,1,2-Tetrachloroethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Chlorobenzene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Ethylbenzene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS

Method Summary

CLIENT NAME: WSP CANADA INC.

PROJECT: CA0040928.5498

SAMPLING SITE:

AGAT WORK ORDER: 24T234053

ATTENTION TO: Rica Esmirna Maliwat

SAMPLED BY: S.U.

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
m & p-Xylene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Bromoform	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Styrene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,1,2,2-Tetrachloroethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
o-Xylene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,3-Dichlorobenzene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,4-Dichlorobenzene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,2-Dichlorobenzene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Xylenes (Total)	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,3-Dichloropropene (Cis + Trans)	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
n-Hexane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Toluene-d8	VOL-91-5002	modified from EPA 5035A & EPA 8260D	(P&T)GC/MS
4-Bromofluorobenzene	VOL-91-5002	modified from EPA 5035A & EPA 8260D	(P&T)GC/MS



Chain of Custody Record

If this is a Drinking Water sample, please use Drinking Water Chain of Custody Form (potable water consumed by humans)

Report Information:

Company: WS? CANADA
Contact: _____
Address: 2 International Blvd
Etobicoke, ON M9W 1A2
Phone: _____ Fax: _____
Reports to be sent to: Rica Esmirna-Malinat@Wsp.com
1. Email: _____
2. Email: _____

Project Information:

Project: CA00409285498
Site Location: SU
Sampled By: Competitive
AGAT Quote #: _____ PO: _____
Please note: If quotation number is not provided, client will be billed full price for analysis.

Invoice Information:

Company: _____
Contact: _____
Address: _____
Email: _____
Bill To Same: Yes ☐ No ☐

Regulatory Requirements:

(Please check all applicable boxes)

☒ Regulation 153/04 ☐ Regulation 406
Table Indicate One Table Indicate One
☐ Ind/Com ☐ Ind/Com
☒ Res/Park ☐ Res/Park
☐ Agriculture ☐ Agriculture
Soil Texture (Check One) ☐ Regulation 558
☐ Coarse ☐ CCME
☒ Fine
☐ Sewer Use
☐ Sanitary ☐ Storm
Region _____
☐ Prov. Water Quality Objectives (PWQO)
☐ Other
Indicate One _____

Is this submission for a Record of Site Condition (RSC)?

☒ Yes ☐ No

Report Guideline on Certificate of Analysis

☒ Yes ☐ No

Legal Sample ☐

Sample Matrix Legend

GW Ground Water SD Sediment
O Oil SW Surface Water
P Paint R Rock/Shale
S Soil

Laboratory Use Only

Work Order #: 247234053
Cooler Quantity: 1Lg
Arrival Temperatures: 3.1 | 2.1 | 2.0
Depot Temperatures: _____
Custody Seal Intact: ☐ Yes ☐ No ☒ N/A
Notes: L I

Turnaround Time (TAT) Required:

Regular TAT ☒ 5 to 7 Business Days

Rush TAT (Rush Surcharges Apply)

☐ 3 Business Days ☐ 2 Business Days ☐ Next Business Day

OR Date Required (Rush Surcharges May Apply):

Please provide prior notification for rush TAT
*TAT is exclusive of weekends and statutory holidays

For 'Same Day' analysis, please contact your AGAT CSR

Sample Identification	Date Sampled	Time Sampled	# of Containers	Sample Matrix	Comments/ Special Instructions	Y / N	Field Filtered - Metals, Hg, CrVI, DOC	Metals & Inorganics	Metals - ☐ CrVI, ☐ Hg, ☐ HWSB	BTEX, F1-F4, PHCs	VOC	PAHs	PCBs: Aroclors ☐	Regulation 406 Characterization Package pH, Metals, BTEX, F1-F4 EC, SAR	Regulation 406 SPLP Rainwater Leach mSPLP: ☐ Metals ☐ VOCs ☐ SVOCs ☐ IOC	Landfill Disposal Characterization TCLP: TCLP: ☐ Mtl ☐ VOCs ☐ ABNs ☐ BialP ☐ PCBs	Corrosivity: ☐ Moisture ☐ Sulphide	Potentially Hazardous or High Concentration (Y/N)
1. BH04-17-0-0.5	Dec 19, 2024	15:30 AM	4	S		2		X		X	X	X						
2. BH04-16-0-0.5	Dec 19, 2024	15:40 AM	4	S		2		X		X	X	X						
3. BH04-15-0-0.5	Dec 19, 2024	16:00 AM	4	S		2		X		X	X	X						
4. DUP1	Dec 19, 2024	16:01 AM	4	S		2		X		X	X	X						
5.		AM																
6.		AM																
7.		AM																
8.		AM																
9.		AM																
10.		AM																
11.		AM																

Samples Relinquished By (Print Name and Sign):

Sean Weber Sean Weber

Samples Relinquished By (Print Name and Sign):

Samples Relinquished By (Print Name and Sign):

Date:

19/12/24 17:30

Date:

Date:

Samples Received By (Print Name and Sign):

Tyler

Samples Received By (Print Name and Sign):

Samples Received By (Print Name and Sign):

Date:

Dec 20 12:45 PM

Date:

Date:

Time:

Time:

Time:

Page 1 of 1

N#: T-165855

CLIENT NAME: WSP CANADA INC.
2 INTERNATIONAL BLVD SUITE 201
ETOBICOKE, ON M9W1A2
(416) 798-0065

ATTENTION TO: Rica Esmirna Maliwat

PROJECT: CA0040928.5498

AGAT WORK ORDER: 24T234059

TRACE ORGANICS REVIEWED BY: Neli Popnikolova, Senior Chemist

DATE REPORTED: Dec 31, 2024

PAGES (INCLUDING COVER): 16

VERSION*: 1

Should you require any information regarding this analysis please contact your client services representative at (905) 712-5100

*Notes

Disclaimer:

- All work conducted herein has been done using accepted standard protocols, and generally accepted practices and methods. AGAT test methods may incorporate modifications from the specified reference methods to improve performance.
- All samples will be disposed of within 30 days after receipt unless a Long Term Storage Agreement is signed and returned. Some specialty analysis may be exempt, please contact your Client Project Manager for details.
- AGAT's liability in connection with any delay, performance or non-performance of these services is only to the Client and does not extend to any other third party. Unless expressly agreed otherwise in writing, AGAT's liability is limited to the actual cost of the specific analysis or analyses included in the services.
- This Certificate shall not be reproduced except in full, without the written approval of the laboratory.
- The test results reported herewith relate only to the samples as received by the laboratory.
- Application of guidelines is provided "as is" without warranty of any kind, either expressed or implied, including, but not limited to, warranties of merchantability, fitness for a particular purpose, or non-infringement. AGAT assumes no responsibility for any errors or omissions in the guidelines contained in this document.
- All reportable information is available on request from AGAT Laboratories, in accordance with ISO/IEC 17025:2017, ISO/IEC 17025:2005 (Quebec), DR-12-PALA and/or NELAP Standards.
- This document is signed by an authorized signatory who meets the requirements of the MELCCFP, CALA, CCN and NELAP.
- For environmental samples in the Province of Quebec: The analysis is performed on and results apply to samples as received. A temperature above 6°C upon receipt, as indicated in the Sample Reception Notification (SRN), could indicate the integrity of the samples has been compromised if the delay between sampling and submission to the laboratory could not be minimized.



Certificate of Analysis

AGAT WORK ORDER: 24T234059

PROJECT: CA0040928.5498

5835 COOPERS AVENUE
MISSISSAUGA, ONTARIO
CANADA L4Z 1Y2
TEL (905)712-5100
FAX (905)712-5122
<http://www.agatlabs.com>

CLIENT NAME: WSP CANADA INC.

ATTENTION TO: Rica Esmirna Maliwat

SAMPLING SITE:

SAMPLED BY: S.U.

O. Reg. 153(511) - PAHs (Water)

DATE RECEIVED: 2024-12-20

DATE REPORTED: 2024-12-31

		SAMPLE DESCRIPTION:		BH24-3	DUP A	BH24-2
		SAMPLE TYPE:		Water	Water	Water
		DATE SAMPLED:		2024-12-19 12:10	2024-12-19 12:11	2024-12-19 13:00
Parameter	Unit	G / S	RDL	6426226	6426229	6426230
Naphthalene	µg/L	11	0.20	<0.20	<0.20	<0.20
Acenaphthylene	µg/L	1	0.20	<0.20	<0.20	<0.20
Acenaphthene	µg/L	4.1	0.20	<0.20	<0.20	<0.20
Fluorene	µg/L	120	0.20	<0.20	<0.20	<0.20
Phenanthrene	µg/L	1	0.10	0.22	0.22	<0.10
Anthracene	µg/L	2.4	0.10	<0.10	<0.10	<0.10
Fluoranthene	µg/L	0.41	0.20	<0.20	<0.20	<0.20
Pyrene	µg/L	4.1	0.20	<0.20	<0.20	<0.20
Benzo(a)anthracene	µg/L	1	0.20	<0.20	<0.20	<0.20
Chrysene	µg/L	0.1	0.10	<0.10	<0.10	<0.10
Benzo(b)fluoranthene	µg/L	0.1	0.10	<0.10	<0.10	<0.10
Benzo(k)fluoranthene	µg/L	0.1	0.10	<0.10	<0.10	<0.10
Benzo(a)pyrene	µg/L	0.01	0.01	<0.01	<0.01	<0.01
Indeno(1,2,3-cd)pyrene	µg/L	0.2	0.20	<0.20	<0.20	<0.20
Dibenz(a,h)anthracene	µg/L	0.2	0.20	<0.20	<0.20	<0.20
Benzo(g,h,i)perylene	µg/L	0.2	0.20	<0.20	<0.20	<0.20
2-and 1-methyl Naphthalene	µg/L	3.2	0.20	<0.20	<0.20	<0.20
Sediment				3	3	3
Surrogate	Unit	Acceptable Limits				
Naphthalene-d8	%	50-140		84	81	72
Acridine-d9	%	50-140		80	71	109
Terphenyl-d14	%	50-140		85	71	72

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PROJECT: CA0040928.5498

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CLIENT NAME: WSP CANADA INC.

SAMPLING SITE:

ATTENTION TO: Rica Esmirna Maliwat

SAMPLED BY: S.U.

O. Reg. 153(511) - PAHs (Water)

DATE RECEIVED: 2024-12-20

DATE REPORTED: 2024-12-31

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition - Potable Ground Water - All Types of Property Uses - Medium and Fine Textured Soils
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

6426226-6426230 Sediment parameter is comment only based on visual inspection of the sample prior to extraction and is not an accredited test.
Legend: 1 = no sediment present; 2 = sediment present; 3 = sediment present in trace amount
Note: The result for Benzo(b)Fluoranthene is the total of the Benzo(b)&(j)Fluoranthene isomers because the isomers co-elute on the GC column.
2- and 1-Methyl Naphthalene is a calculated parameter. The calculated value is the sum of 2-Methyl Naphthalene and 1-Methyl Naphthalene. The calculated parameter is non-accredited. The parameters that are components of the calculation are accredited.

Analysis performed at AGAT Toronto (unless marked by *)

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CLIENT NAME: WSP CANADA INC.

ATTENTION TO: Rica Esmirna Maliwat

SAMPLING SITE:

SAMPLED BY: S.U.

O. Reg. 153(511) - PHCs F1 - F4 (with PAHs) (Water)

DATE RECEIVED: 2024-12-20

DATE REPORTED: 2024-12-31

		SAMPLE DESCRIPTION:		BH24-3	DUP A	BH24-2
		SAMPLE TYPE:		Water	Water	Water
		DATE SAMPLED:		2024-12-19 12:10	2024-12-19 12:11	2024-12-19 13:00
Parameter	Unit	G / S	RDL	6426226	6426229	6426230
Benzene	µg/L	5.0	0.20	<0.20	<0.20	<0.20
Toluene	µg/L	24	0.20	0.21	0.27	0.36
Ethylbenzene	µg/L	2.4	0.10	<0.10	<0.10	<0.10
m & p-Xylene	µg/L		0.20	<0.20	<0.20	<0.20
o-Xylene	µg/L		0.10	<0.10	<0.10	<0.10
Xylenes (Total)	µg/L	300	0.20	<0.20	<0.20	<0.20
F1 (C6 to C10)	µg/L	750	25	<25	<25	<25
F1 (C6 to C10) minus BTEX	µg/L	750	25	<25	<25	<25
F2 (C10 to C16)	µg/L	150	100	<100	<100	<100
F2 (C10 to C16) minus Naphthalene	µg/L		100	<100	<100	<100
F3 (C16 to C34)	µg/L	500	100	<100	<100	<100
F3 (C16 to C34) minus PAHs	µg/L		100	<100	<100	<100
F4 (C34 to C50)	µg/L	500	100	<100	<100	<100
Gravimetric Heavy Hydrocarbons	µg/L		500	NA	NA	NA
Sediment				3	3	3
Surrogate	Unit	Acceptable Limits				
Toluene-d8	% Recovery	60-140				
Terphenyl	% Recovery	60-140				

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CLIENT NAME: WSP CANADA INC.

ATTENTION TO: Rica Esmirna Maliwat

SAMPLING SITE:

SAMPLED BY: S.U.

O. Reg. 153(511) - PHCs F1 - F4 (with PAHs) (Water)

DATE RECEIVED: 2024-12-20

DATE REPORTED: 2024-12-31

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition - Potable Ground Water - All Types of Property Uses - Medium and Fine Textured Soils
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

6426226-6426230 Sediment parameter is comment only based on visual inspection of the sample prior to extraction and is not an accredited test.
Legend: 1 = no sediment present; 2 = sediment present; 3 = sediment present in trace amount
The C6-C10 fraction is calculated using toluene response factor.
Xylenes total is a calculated parameter. The calculated value is the sum of m&p-Xylene and o-Xylene.
C6-C10 (F1 minus BTEX) is a calculated parameter. The calculated value is F1 minus BTEX.
The calculated parameters are non-accredited. The parameters that are components of the calculation are accredited.
The C10 - C16, C16 - C34, and C34 - C50 fractions are calculated using the average response factor for n-C10, n-C16, and n-C34.
Gravimetric Heavy Hydrocarbons are not included in the Total C16-C50 and are only determined if the chromatogram of the C34 - C50 hydrocarbons indicates that hydrocarbons >C50 are present.
The chromatogram has returned to baseline by the retention time of nC50.
Total C6 - C50 results are corrected for BTEX and PAH contributions.
C>10 - C16 (F2- Naphthalene) is a calculated parameter. The calculated value is F2 - Naphthalene.
C>16 - C34 (F3-PAH) is a calculated parameter. The calculated value is F3-PAH (PAH: sum of Phenanthrene, Benzo(a)anthracene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Benzo(a)pyrene, Fluoranthene, Dibenzo(a,h)anthracene, Indeno(1,2,3-c,d)pyrene and Pyrene).
This method complies with the Reference Method for the CWS PHC and is validated for use in the laboratory.
nC10, nC16 and nC34 response factors are within 10% of their average.
C50 response factor is within 70% of nC10 + nC16 + nC34 average.
Linearity is within 15%.
Extraction and holding times were met for this sample.

Analysis performed at AGAT Toronto (unless marked by *)

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AGAT WORK ORDER: 24T234059

PROJECT: CA0040928.5498

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CLIENT NAME: WSP CANADA INC.

ATTENTION TO: Rica Esmirna Maliwat

SAMPLING SITE:

SAMPLED BY: S.U.

O. Reg. 153(511) - PHCs F1/BTEX (Water)

DATE RECEIVED: 2024-12-20

DATE REPORTED: 2024-12-31

		SAMPLE DESCRIPTION:		Trip Blank
		SAMPLE TYPE:		Water
		DATE SAMPLED:		2024-12-19
Parameter	Unit	G / S	RDL	6426236
Benzene	µg/L	5.0	0.20	<0.20
Toluene	µg/L	24	0.20	<0.20
Ethylbenzene	µg/L	2.4	0.10	<0.10
m & p-Xylene	µg/L		0.20	<0.20
o-Xylene	µg/L		0.10	<0.10
Xylenes (Total)	µg/L	300	0.20	<0.20
F1 (C6 to C10)	µg/L	750	25	<25
F1 (C6 to C10) minus BTEX	µg/L	750	25	<25
Surrogate	Unit	Acceptable Limits		
Toluene-d8	% Recovery	60-140	82.5	

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition - Potable Ground Water - All Types of Property Uses - Medium and Fine Textured Soils
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

6426236 The C6-C10 fraction is calculated using Toluene response factor.
Total C6-C10 results are corrected for BTEX contributions.
Xylenes total is a calculated parameter. The calculated value is the sum of m&p-Xylene and o-Xylene.
C6-C10 (F1 minus BTEX) is a calculated parameter. The calculated value is F1 minus BTEX.
The calculated parameters are non-accredited. The parameters that are components of the calculation are accredited.
This method complies with the Reference Method for the CWS PHC and is validated for use in the laboratory.
nC6 and nC10 response factors are within 30% of Toluene response factor.
Extraction and holding times were met for this sample.
NA = Not Applicable

Analysis performed at AGAT Toronto (unless marked by *)

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CLIENT NAME: WSP CANADA INC.

SAMPLING SITE:

ATTENTION TO: Rica Esmirna Maliwat

SAMPLED BY: S.U.

O. Reg. 153(511) - VOCs (Water)

DATE RECEIVED: 2024-12-20

DATE REPORTED: 2024-12-31

		SAMPLE DESCRIPTION:		Trip Blank
		SAMPLE TYPE:		Water
		DATE SAMPLED:		2024-12-19
Parameter	Unit	G / S	RDL	6426236
Dichlorodifluoromethane	µg/L	590	0.40	<0.40
Vinyl Chloride	µg/L	1.7	0.17	<0.17
Bromomethane	µg/L	0.89	0.20	<0.20
Trichlorofluoromethane	µg/L	150	0.40	<0.40
Acetone	µg/L	2700	1.0	<1.0
1,1-Dichloroethylene	µg/L	14	0.30	<0.30
Methylene Chloride	µg/L	50	0.30	<0.30
trans- 1,2-Dichloroethylene	µg/L	17	0.20	<0.20
Methyl tert-butyl ether	µg/L	15	0.20	<0.20
1,1-Dichloroethane	µg/L	5	0.30	<0.30
Methyl Ethyl Ketone	µg/L	1800	1.0	<1.0
cis- 1,2-Dichloroethylene	µg/L	17	0.20	<0.20
Chloroform	µg/L	22	0.20	<0.20
1,2-Dichloroethane	µg/L	5	0.20	<0.20
1,1,1-Trichloroethane	µg/L	200	0.30	<0.30
Carbon Tetrachloride	µg/L	5.0	0.20	<0.20
Benzene	µg/L	5.0	0.20	<0.20
1,2-Dichloropropane	µg/L	5	0.20	<0.20
Trichloroethylene	µg/L	5	0.20	<0.20
Bromodichloromethane	µg/L	16	0.20	<0.20
Methyl Isobutyl Ketone	µg/L	640	1.0	<1.0
1,1,2-Trichloroethane	µg/L	5	0.20	<0.20
Toluene	µg/L	24	0.20	<0.20
Dibromochloromethane	µg/L	25	0.10	<0.10
Ethylene Dibromide	µg/L	0.2	0.10	<0.10
Tetrachloroethylene	µg/L	17	0.20	<0.20
1,1,1,2-Tetrachloroethane	µg/L	1.1	0.10	<0.10
Chlorobenzene	µg/L	30	0.10	<0.10
Ethylbenzene	µg/L	2.4	0.10	<0.10
m & p-Xylene	µg/L		0.20	<0.20

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Certificate of Analysis

AGAT WORK ORDER: 24T234059

PROJECT: CA0040928.5498

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CLIENT NAME: WSP CANADA INC.

SAMPLING SITE:

ATTENTION TO: Rica Esmirna Maliwat

SAMPLED BY: S.U.

O. Reg. 153(511) - VOCs (Water)

DATE RECEIVED: 2024-12-20

DATE REPORTED: 2024-12-31

		SAMPLE DESCRIPTION:		Trip Blank
		SAMPLE TYPE:		Water
		DATE SAMPLED:		2024-12-19
Parameter	Unit	G / S	RDL	6426236
Bromoform	µg/L	25	0.10	<0.10
Styrene	µg/L	5.4	0.10	<0.10
1,1,2,2-Tetrachloroethane	µg/L	1	0.10	<0.10
o-Xylene	µg/L		0.10	<0.10
1,3-Dichlorobenzene	µg/L	59	0.10	<0.10
1,4-Dichlorobenzene	µg/L	1	0.10	<0.10
1,2-Dichlorobenzene	µg/L	3	0.10	<0.10
1,3-Dichloropropene	µg/L	0.5	0.30	<0.30
Xylenes (Total)	µg/L	300	0.20	<0.20
n-Hexane	µg/L	520	0.20	<0.20
Surrogate	Unit	Acceptable Limits		
Toluene-d8	% Recovery	50-140		102
4-Bromofluorobenzene	% Recovery	50-140		85

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition - Potable Ground Water - All Types of Property Uses - Medium and Fine Textured Soils
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

6426236 Xylenes total is a calculated parameter. The calculated value is the sum of m&p-Xylene and o-Xylene.
1,3-Dichloropropene total is a calculated parameter. The calculated value is the sum of Cis-1,3-Dichloropropene and Trans-1,3-Dichloropropene.
The calculated parameter is non-accredited. The parameters that are components of the calculation are accredited.

Analysis performed at AGAT Toronto (unless marked by *)

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Quality Assurance

CLIENT NAME: WSP CANADA INC.

AGAT WORK ORDER: 24T234059

PROJECT: CA0040928.5498

ATTENTION TO: Rica Esmirna Maliwat

SAMPLING SITE:

SAMPLED BY: S.U.

Trace Organics Analysis

RPT Date: Dec 31, 2024			DUPLICATE			Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD		Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper

O. Reg. 153(511) - PHCs F1 - F4 (with PAHs) (Water)

Benzene	6426230	6426230	<0.20	<0.20	NA	< 0.20	94%	60%	140%	90%	60%	140%	76%	60%	140%
Toluene	6426230	6426230	0.36	0.32	NA	< 0.20	79%	60%	140%	74%	60%	140%	73%	60%	140%
Ethylbenzene	6426230	6426230	<0.10	<0.10	NA	< 0.10	87%	60%	140%	79%	60%	140%	74%	60%	140%
m & p-Xylene	6426230	6426230	<0.20	<0.20	NA	< 0.20	84%	60%	140%	79%	60%	140%	76%	60%	140%
o-Xylene	6426230	6426230	<0.10	<0.10	NA	< 0.10	92%	60%	140%	86%	60%	140%	79%	60%	140%
F1 (C6 to C10)	6426230	6426230	<25	<25	NA	< 25	68%	60%	140%	95%	60%	140%	91%	60%	140%
F2 (C10 to C16)	6428002		< 100	< 100	NA	< 100	118%	60%	140%	79%	60%	140%	79%	60%	140%
F3 (C16 to C34)	6428002		< 100	< 100	NA	< 100	120%	60%	140%	75%	60%	140%	82%	60%	140%
F4 (C34 to C50)	6428002		< 100	< 100	NA	< 100	94%	60%	140%	92%	60%	140%	83%	60%	140%

O. Reg. 153(511) - PAHs (Water)

Naphthalene	6427178		< 0.20	< 0.20	NA	< 0.20	87%	50%	140%	86%	50%	140%	85%	50%	140%
Acenaphthylene	6427178		< 0.20	< 0.20	NA	< 0.20	89%	50%	140%	81%	50%	140%	80%	50%	140%
Acenaphthene	6427178		< 0.20	< 0.20	NA	< 0.20	92%	50%	140%	79%	50%	140%	93%	50%	140%
Fluorene	6427178		< 0.20	< 0.20	NA	< 0.20	95%	50%	140%	94%	50%	140%	104%	50%	140%
Phenanthrene	6427178		< 0.10	< 0.10	NA	< 0.10	101%	50%	140%	113%	50%	140%	111%	50%	140%
Anthracene	6427178		< 0.10	< 0.10	NA	< 0.10	77%	50%	140%	77%	50%	140%	75%	50%	140%
Fluoranthene	6427178		< 0.20	< 0.20	NA	< 0.20	105%	50%	140%	111%	50%	140%	116%	50%	140%
Pyrene	6427178		< 0.20	< 0.20	NA	< 0.20	104%	50%	140%	111%	50%	140%	114%	50%	140%
Benzo(a)anthracene	6427178		< 0.20	< 0.20	NA	< 0.20	86%	50%	140%	91%	50%	140%	83%	50%	140%
Chrysene	6427178		< 0.10	< 0.10	NA	< 0.10	101%	50%	140%	89%	50%	140%	78%	50%	140%
Benzo(b)fluoranthene	6427178		< 0.10	< 0.10	NA	< 0.10	98%	50%	140%	93%	50%	140%	100%	50%	140%
Benzo(k)fluoranthene	6427178		< 0.10	< 0.10	NA	< 0.10	122%	50%	140%	96%	50%	140%	94%	50%	140%
Benzo(a)pyrene	6427178		< 0.01	< 0.01	NA	< 0.01	91%	50%	140%	98%	50%	140%	76%	50%	140%
Indeno(1,2,3-cd)pyrene	6427178		< 0.20	< 0.20	NA	< 0.20	82%	50%	140%	77%	50%	140%	82%	50%	140%
Dibenz(a,h)anthracene	6427178		< 0.20	< 0.20	NA	< 0.20	85%	50%	140%	72%	50%	140%	79%	50%	140%
Benzo(g,h,i)perylene	6427178		< 0.20	< 0.20	NA	< 0.20	87%	50%	140%	75%	50%	140%	81%	50%	140%

O. Reg. 153(511) - VOCs (Water)

Dichlorodifluoromethane	6423397		<0.40	<0.40	NA	< 0.40	97%	50%	140%	103%	50%	140%	99%	50%	140%
Vinyl Chloride	6423397		<0.17	<0.17	NA	< 0.17	84%	50%	140%	108%	50%	140%	114%	50%	140%
Bromomethane	6423397		<0.20	<0.20	NA	< 0.20	98%	50%	140%	107%	50%	140%	97%	50%	140%
Trichlorofluoromethane	6423397		<0.40	<0.40	NA	< 0.40	103%	50%	140%	112%	50%	140%	109%	50%	140%
Acetone	6423397		<1.0	<1.0	NA	< 1.0	98%	50%	140%	109%	50%	140%	96%	50%	140%
1,1-Dichloroethylene	6423397		<0.30	<0.30	NA	< 0.30	70%	50%	140%	120%	60%	130%	117%	50%	140%
Methylene Chloride	6423397		<0.30	<0.30	NA	< 0.30	109%	50%	140%	98%	60%	130%	103%	50%	140%
trans- 1,2-Dichloroethylene	6423397		<0.20	<0.20	NA	< 0.20	66%	50%	140%	89%	60%	130%	105%	50%	140%
Methyl tert-butyl ether	6423397		<0.20	<0.20	NA	< 0.20	86%	50%	140%	69%	60%	130%	104%	50%	140%
1,1-Dichloroethane	6423397		<0.30	<0.30	NA	< 0.30	64%	50%	140%	89%	60%	130%	107%	50%	140%
Methyl Ethyl Ketone	6423397		<1.0	<1.0	NA	< 1.0	96%	50%	140%	97%	50%	140%	87%	50%	140%

Quality Assurance

CLIENT NAME: WSP CANADA INC.

AGAT WORK ORDER: 24T234059

PROJECT: CA0040928.5498

ATTENTION TO: Rica Esmirna Maliwat

SAMPLING SITE:

SAMPLED BY: S.U.

Trace Organics Analysis (Continued)

RPT Date: Dec 31, 2024			DUPLICATE			Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD		Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
cis- 1,2-Dichloroethylene	6423397		<0.20	<0.20	NA	< 0.20	64%	50%	140%	79%	60%	130%	104%	50%	140%
Chloroform	6423397		<0.20	<0.20	NA	< 0.20	67%	50%	140%	77%	60%	130%	110%	50%	140%
1,2-Dichloroethane	6423397		<0.20	<0.20	NA	< 0.20	63%	50%	140%	82%	60%	130%	92%	50%	140%
1,1,1-Trichloroethane	6423397		<0.30	<0.30	NA	< 0.30	75%	50%	140%	87%	60%	130%	100%	50%	140%
Carbon Tetrachloride	6423397		<0.20	<0.20	NA	< 0.20	72%	50%	140%	99%	60%	130%	96%	50%	140%
Benzene	6423397		<0.20	<0.20	NA	< 0.20	63%	50%	140%	79%	60%	130%	94%	50%	140%
1,2-Dichloropropane	6423397		<0.20	<0.20	NA	< 0.20	64%	50%	140%	68%	60%	130%	93%	50%	140%
Trichloroethylene	6423397		<0.20	<0.20	NA	< 0.20	75%	50%	140%	90%	60%	130%	102%	50%	140%
Bromodichloromethane	6423397		<0.20	<0.20	NA	< 0.20	66%	50%	140%	73%	60%	130%	99%	50%	140%
Methyl Isobutyl Ketone	6423397		<1.0	<1.0	NA	< 1.0	105%	50%	140%	94%	50%	140%	90%	50%	140%
1,1,2-Trichloroethane	6423397		<0.20	<0.20	NA	< 0.20	76%	50%	140%	68%	60%	130%	106%	50%	140%
Toluene	6423397		<0.20	<0.20	NA	< 0.20	82%	50%	140%	89%	60%	130%	113%	50%	140%
Dibromochloromethane	6423397		<0.10	<0.10	NA	< 0.10	73%	50%	140%	78%	60%	130%	112%	50%	140%
Ethylene Dibromide	6423397		<0.10	<0.10	NA	< 0.10	66%	50%	140%	73%	60%	130%	119%	50%	140%
Tetrachloroethylene	6423397		<0.20	<0.20	NA	< 0.20	89%	50%	140%	94%	60%	130%	110%	50%	140%
1,1,1,2-Tetrachloroethane	6423397		<0.10	<0.10	NA	< 0.10	84%	50%	140%	87%	60%	130%	90%	50%	140%
Chlorobenzene	6423397		<0.10	<0.10	NA	< 0.10	86%	50%	140%	81%	60%	130%	99%	50%	140%
Ethylbenzene	6423397		<0.10	<0.10	NA	< 0.10	79%	50%	140%	76%	60%	130%	113%	50%	140%
m & p-Xylene	6423397		<0.20	<0.20	NA	< 0.20	80%	50%	140%	74%	60%	130%	114%	50%	140%
Bromoform	6423397		<0.10	<0.10	NA	< 0.10	71%	50%	140%	70%	60%	130%	119%	50%	140%
Styrene	6423397		<0.10	<0.10	NA	< 0.10	62%	50%	140%	65%	60%	130%	112%	50%	140%
1,1,2,2-Tetrachloroethane	6423397		<0.10	<0.10	NA	< 0.10	69%	50%	140%	79%	60%	130%	113%	50%	140%
o-Xylene	6423397		<0.10	<0.10	NA	< 0.10	77%	50%	140%	69%	60%	130%	117%	50%	140%
1,3-Dichlorobenzene	6423397		<0.10	<0.10	NA	< 0.10	83%	50%	140%	80%	60%	130%	107%	50%	140%
1,4-Dichlorobenzene	6423397		<0.10	<0.10	NA	< 0.10	81%	50%	140%	77%	60%	130%	105%	50%	140%
1,2-Dichlorobenzene	6423397		<0.10	<0.10	NA	< 0.10	75%	50%	140%	66%	60%	130%	109%	50%	140%
n-Hexane	6423397		<0.20	<0.20	NA	< 0.20	102%	50%	140%	78%	60%	130%	77%	50%	140%

Comments: When the average of the sample and duplicate results is less than 5x the RDL, the Relative Percent Difference (RPD) will be indicated as Not Applicable (NA).

O. Reg. 153(511) - PHCs F1/BTEX (Water)

Benzene	6426230	6426230	<0.20	<0.20	NA	< 0.20	94%	60%	140%	90%	60%	140%	76%	60%	140%
Toluene	6426230	6426230	0.36	0.32	NA	< 0.20	79%	60%	140%	74%	60%	140%	73%	60%	140%
Ethylbenzene	6426230	6426230	<0.10	<0.10	NA	< 0.10	87%	60%	140%	79%	60%	140%	74%	60%	140%
m & p-Xylene	6426230	6426230	<0.20	<0.20	NA	< 0.20	84%	60%	140%	79%	60%	140%	76%	60%	140%
o-Xylene	6426230	6426230	<0.10	<0.10	NA	< 0.10	92%	60%	140%	86%	60%	140%	79%	60%	140%
F1 (C6 to C10)	6423397	6426230	<25	<25	NA	< 25	85%	60%	140%	83%	60%	140%	-7%	60%	140%

Quality Assurance

CLIENT NAME: WSP CANADA INC.

PROJECT: CA0040928.5498

SAMPLING SITE:

AGAT WORK ORDER: 24T234059

ATTENTION TO: Rica Esmirna Maliwat

SAMPLED BY: S.U.

Trace Organics Analysis (Continued)

RPT Date: Dec 31, 2024			DUPLICATE			Method Blank	REFERENCE MATERIAL		METHOD BLANK SPIKE			MATRIX SPIKE			
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD		Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper

Certified By:



QC Exceedance

CLIENT NAME: WSP CANADA INC.

AGAT WORK ORDER: 24T234059

PROJECT: CA0040928.5498

ATTENTION TO: Rica Esmirna Maliwat

RPT Date: Dec 31, 2024										
PARAMETER				Sample Id	REFERENCE MATERIAL			METHOD BLANK SPIKE		
					Measured Value	Acceptable Limits		Recovery	Acceptable Limits	
						Lower	Upper		Lower	Upper
O. Reg. 153(511) - PHCs F1/BTEX (Water)										
F1 (C6 to C10)				6426230	85%	60%	140%	83%	60%	140%
									-7%	60%
										140%

Method Summary

CLIENT NAME: WSP CANADA INC.

PROJECT: CA0040928.5498

SAMPLING SITE:

AGAT WORK ORDER: 24T234059

ATTENTION TO: Rica Esmirna Maliwat

SAMPLED BY: S.U.

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Trace Organics Analysis			
Naphthalene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Acenaphthylene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Acenaphthene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Fluorene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Phenanthrene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Anthracene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Fluoranthene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Pyrene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Benzo(a)anthracene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Chrysene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Benzo(b)fluoranthene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Benzo(k)fluoranthene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Benzo(a)pyrene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Indeno(1,2,3-cd)pyrene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Dibenz(a,h)anthracene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Benzo(g,h,i)perylene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
2-and 1-methyl Naphthalene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Naphthalene-d8	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Acridine-d9	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Terphenyl-d14	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Sediment			N/A
Benzene	VOL-91-5010	modified from MOE PHC-E3421	(P&T)GC/MS
Toluene	VOL-91-5010	modified from MOE PHC-E3421	(P&T)GC/MS
Ethylbenzene	VOL-91-5010	modified from MOE PHC-E3421	(P&T)GC/MS
m & p-Xylene	VOL-91-5010	modified from MOE PHC-E3421	(P&T)GC/MS
o-Xylene	VOL-91-5010	modified from MOE PHC-E3421	(P&T)GC/MS
Xylenes (Total)	VOL-91-5010	modified from MOE PHC-E3421	(P&T)GC/MS
F1 (C6 to C10)	VOL-91- 5010	modified from MOE PHC-E3421	(P&T)GC/FID
F1 (C6 to C10) minus BTEX	VOL-91-5010	modified from MOE PHC-E3421	P&T GC/FID
Toluene-d8	VOL-91-5010	modified from MOE PHC-E3421	(P&T)GC/MS
F2 (C10 to C16)	VOL-91-5010	modified from MOE PHC-E3421	GC/FID
F2 (C10 to C16) minus Naphthalene	VOL-91-5010	modified from MOE PHC-E3421	GC/FID
F3 (C16 to C34)	VOL-91-5010	modified from MOE PHC-E3421	GC/FID

Method Summary

CLIENT NAME: WSP CANADA INC.

PROJECT: CA0040928.5498

SAMPLING SITE:

AGAT WORK ORDER: 24T234059

ATTENTION TO: Rica Esmirna Maliwat

SAMPLED BY: S.U.

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
F3 (C16 to C34) minus PAHs	VOL-91-5010	modified from MOE PHC-E3421	GC/FID
F4 (C34 to C50)	VOL-91-5010	modified from MOE PHC-E3421	GC/FID
Gravimetric Heavy Hydrocarbons	VOL-91-5010	modified from MOE PHC-E3421	BALANCE
Terphenyl	VOL-91-5010	modified from MOE PHC-E3421	GC/FID
Benzene	VOL-91-5010	modified from EPA SW-846 5030C & 8260D	(P&T)GC/MS
Toluene	VOL-91-5010	modified from EPA SW-846 5030C & 8260D	(P&T)GC/MS
Ethylbenzene	VOL-91-5010	modified from EPA SW-846 5030C & 8260D	(P&T)GC/MS
m & p-Xylene	VOL-91-5010	modified from EPA SW-846 5030C & 8260D	(P&T)GC/MS
o-Xylene	VOL-91-5010	modified from EPA SW-846 5030C & 8260D	(P&T)GC/MS
Xylenes (Total)	VOL-91-5010	modified from EPA SW-846 5030C & 8260D	(P&T)GC/MS
F1 (C6 to C10)	VOL-91-5010	modified from MOE E3421	(P&T)GC/FID
F1 (C6 to C10) minus BTEX	VOL-91-5010	modified from MOE E3421	(P&T)GC/FID
Dichlorodifluoromethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Vinyl Chloride	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Bromomethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Trichlorofluoromethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Acetone	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1-Dichloroethylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Methylene Chloride	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
trans- 1,2-Dichloroethylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Methyl tert-butyl ether	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1-Dichloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Methyl Ethyl Ketone	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
cis- 1,2-Dichloroethylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Chloroform	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,2-Dichloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1,1-Trichloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Carbon Tetrachloride	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Benzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,2-Dichloropropane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Trichloroethylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS

Method Summary

CLIENT NAME: WSP CANADA INC.

PROJECT: CA0040928.5498

SAMPLING SITE:

AGAT WORK ORDER: 24T234059

ATTENTION TO: Rica Esmirna Maliwat

SAMPLED BY: S.U.

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Bromodichloromethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Methyl Isobutyl Ketone	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1,2-Trichloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Toluene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Dibromochloromethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Ethylene Dibromide	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Tetrachloroethylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1,1,2-Tetrachloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Chlorobenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Ethylbenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
m & p-Xylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Bromoform	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Styrene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1,2,2-Tetrachloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
o-Xylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,3-Dichlorobenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,4-Dichlorobenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,2-Dichlorobenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,3-Dichloropropene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Xylenes (Total)	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
n-Hexane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Toluene-d8	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
4-Bromofluorobenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS



Chain of Custody Record

If this is a Drinking Water sample, please use Drinking Water Chain of Custody Form (potable water consumed by humans)

Report Information:

Company: WSP CANADA
Contact: 2 International Blvd
Address: Etobicoke, ON M9W 1A2
Phone: _____ Fax: _____
Reports to be sent to: Rica Esmerina-Maliwat@wsp.com
1. Email: _____
2. Email: _____

Project Information:

Project: CA0040928.5498
Site Location: S.U.
Sampled By: Competitive
AGAT Quote #: _____ PO: _____
Please note: If quotation number is not provided, client will be billed full price for analysis.

Invoice Information:

Company: _____
Contact: _____
Address: _____
Email: _____
Bill To Same: Yes ☐ No ☐

Regulatory Requirements:

(Please check all applicable boxes)

☒ Regulation 153/04 ☐ Regulation 406
Table Indicate One Table Indicate One
☐ Ind/Com ☐ Ind/Com
☒ Res/Park ☐ Res/Park
☐ Agriculture ☐ Agriculture
Soil Texture (Check One) ☐ Regulation 558
☐ Coarse ☐ CCME
☒ Fine
☐ Sewer Use
☐ Sanitary ☐ Storm
Region _____
☐ Prov. Water Quality Objectives (PWQO)
☐ Other
Indicate One

Is this submission for a Record of Site Condition (RSC)?

☒ Yes ☐ No

Report Guideline on Certificate of Analysis

☒ Yes ☐ No

Legal Sample ☐

Sample Matrix Legend

GW Ground Water SD Sediment
O Oil SW Surface Water
P Paint R Rock/Shale
S Soil

Laboratory Use Only

Work Order #: 247234059
Cooler Quantity: 1lg
Arrival Temperatures: 3.2 3.1 1.4
Depot Temperatures: _____
Custody Seal Intact: ☐ Yes ☐ No ☒ N/A
Notes: LI

Turnaround Time (TAT) Required:

Regular TAT ☒ 5 to 7 Business Days

Rush TAT (Rush Surcharges Apply)

☐ 3 Business Days ☐ 2 Business Days ☐ Next Business Day

OR Date Required (Rush Surcharges May Apply):

Please provide prior notification for rush TAT
*TAT is exclusive of weekends and statutory holidays

For 'Same Day' analysis, please contact your AGAT CSR

Sample Identification	Date Sampled	Time Sampled	# of Containers	Sample Matrix	Comments/ Special Instructions	Y / N	Metals	Metals	BTEX, F	VOC	PAHs	PCBs: Aroclor	Regulation pH, Metals	EC, SAR	Regulation mSPLP: ☐	Landfill Disposal TCLP: ☐	Corrosivity	PH	Potential
1. BH24-3	Dec 19, 2024	12:10 AM PM	7	GW		N			X		X								
2. DUBA	Dec 19, 2024	12:11 AM PM	7	GW		N			X		X								
3. BH24-2	Dec 19, 2024	13:00 AM PM	3	GW		N			X		X								
4. Trip Blank	Dec 19, 2024	— AM PM	3	GW		N				X							X		
5.		AM PM																	
6.		AM PM																	
7.		AM PM																	
8.		AM PM																	
9.		AM PM																	
10.		AM PM																	
11.		AM PM																	

Samples Relinquished By (Print Name and Sign): <u>Sean Usher Sean Usher</u>	Date: <u>19/12/24</u>	Time: <u>17:30</u>	Samples Received By (Print Name and Sign): <u>RLH</u>	Date: <u>Dec 20</u>	Time: <u>12:45h</u>
Samples Relinquished By (Print Name and Sign):	Date:	Time:	Samples Received By (Print Name and Sign):	Date:	Time:
Samples Relinquished By (Print Name and Sign):	Date:	Time:	Samples Received By (Print Name and Sign):	Date:	Time:

