

PR-23-037A

PHASE 2 ENVIRONMENTAL SITE ASSESSMENT
of
7302 Kalar Road, Niagara Falls, ON



For:
2131595 Ontario Inc.

January 2024



OAKHILL
ENVIRONMENTAL INC.



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EXECUTIVE SUMMARY

Oakhill Environmental Inc. (Oakhill) was retained by 2131595 Ontario Inc. (Client) to conduct a Phase 2 Environmental Site Assessment (Phase 2 ESA) to support a future Record of Site Condition (RSC) submission for the property located at 7302 Kalar Road in Niagara Falls, Ontario (Site). Oakhill completed this investigation, generally following the guidelines established in: Part XV.1 of the Environmental Protection Act, Ontario Regulation 153/04, as amended.

Oakhill referenced the findings of an Updated Phase 1 Environmental Site Assessment (ESA) completed by Oakhill in January of 2024. Twelve Areas of Potential Environmental Concern (APECs) were identified and recommended for further investigation in the Phase 1 ESA.

Between the dates of November 30th and December 20th, 2023, Oakhill coordinated the advancement of 10 test pits (TP1 to TP16), and 10 boreholes (OBH1 and OBH10), to depths ranging between 0.61 to 7.62 metres below ground surface (mbgs) inclusive of all APECs. Three boreholes were installed as monitoring wells (OBH1-MW1, OBH2-MW2, and OBH3-MW3) by a drilling subcontractor to depths ranging between 6.86 and 7.62 mbgs to address the groundwater condition associated with APECs #1A-1C, #2, #5, #6 and #8.

Oakhill completed an elevation survey of the boreholes and monitoring wells on December 19th, 2023. Elevations data from the monitoring wells was used approximate the groundwater flow direction across the Site. The wells were then inspected, developed, and sampled between December 19th and 20th, 2023, utilizing low flow sampling methods. Based on the elevation survey and well inspection data groundwater flow was determined to flow north across the Site.

Based on both visual and olfactory inspection and field screening readings, a total of 21 soil samples were selected for laboratory analysis of petroleum hydrocarbons (PHCs), polycyclic aromatic hydrocarbons (PAHs), volatile organic compounds (VOCs), polychlorinated biphenyls (PCBs), metals, and general inorganics. Additionally, three groundwater samples were submitted for laboratory analysis of PHCs, VOCs, PAHs, metals and PCBs. Two blind duplicated soil samples and one trip blank sample was submitted with the groundwater samples for QA/QC purposes.

Soil and groundwater samples were compared to Ministry of the Environment, Conservation and Parks O. Reg 153/04 *Table 8: Generic Site Condition Standards for Use within 30 m of a Waterbody in a Potable Groundwater Condition – Residential/Parkland/Institutional/Industrial/Commercial/Community* (Table 8 SCS).

Conclusions and Recommendations

Based on the findings of the Phase 2 ESA, Oakhill concludes that the Site does not meet Table 8 SCS. There were exceedances of various contaminants in the soil condition including petroleum hydrocarbon fraction F2 (sample OBH9-1), petroleum hydrocarbon fraction F4 (samples TP6 and OBH6-1), barium (samples TP7 and OBH2-1), and cobalt (sample TP4 and TP7). The depths of the soil contamination ranged from 0.61 to 1.22 mbgs; however, the maximum vertical extent of the contamination was not confirmed. In addition, groundwater analysis confirmed exceedances of cobalt in OBH2-MW2 and OBH3-MW3.

Oakhill recommends a Supplemental Phase 2 ESA investigation to acquire additional presence / absence data and delineate (define the vertical and lateral extents), and resampling of wells to further verify the legitimacy of elevated COCs in groundwater. Upon completion of the supplemental Phase 2 ESA, Oakhill will develop a plan for remedial mitigation (i.e., remedial efforts or risk assessment) under a separate cover.

The Phase 2 ESA has been completed in accordance with Ontario Regulation 153/04 (as amended) in support of a future submission of a Record of Site Condition (RSC). Based on the current conditions identified, an RSC cannot be filed at this time as further studies and remedial efforts, or risk assessment will be required.

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1.0 INTRODUCTION

Oakhill Environmental Inc. (Oakhill) was retained by 2131595 Ontario Inc. (Client) to conduct a Phase 2 Environmental Site Assessment (Phase 2 ESA) to support a future Record of Site Condition (RSC) submission for the property located at 7302 Kalar Road in Niagara Falls, Ontario (Site). Oakhill completed this investigation, generally following the guidelines established in: Part XV.1 of the Environmental Protection Act, Ontario Regulation 153/04, as amended.

1.1 Site Description

Table 1: Site Information

Municipal Address:	7302 Kalar Road, Niagara Falls, Ontario
Property Identifier:	64263-0062 (LT)
Registered Owner:	2131595 Ontario Inc.
Zoning:	Light Industrial (LI)
Site Area (approximate):	3.28 acres

1.2 Property Ownership

Table 2: Contact Information

Item	Site Contact
Organization	2131595 Ontario Inc.
Contact	Dan Perri
Phone	416-559-4802

1.3 Current and Proposed Future Uses

The Site is currently zoned Light Industrial. The Site is occupied by Coach Canada and Arlington/Pheonix Crane located in the warehouse servicing building on-Site. Pilot Trucking Training is also located on-Site with transport trucks and trailers positioned centrally along the west side of the property. Oakhill's understanding is that the future land use is intended to be redeveloped to residential use.

1.4 Applicable Site Condition Standards

Oakhill has selected the applicable Ministry of the Environment, Conservation and Parks (MECP) Site Condition Standards (SCS) criteria as defined under the *Soil, Groundwater and Sediment Standards for Use*

under Part XV.1 of the Environmental Protection Act, Published March 9, 2004, as amended April 15, 2011 (PIBS #7382e01). The following information was used in this selection process:

- A tributary creek of the Welland River is present directly adjacent along the eastern Site boundary.
- The overburden is not shallow throughout the site, as bedrock was not encountered within two metres below ground surface (mbgs) throughout the course of this investigation;
- The Site is serviced by municipal drinking water; however, domestic wells are registered within the study area;
- A full depth generic criterion is to be used in this investigation;
- The current use of the Site is commercial and industrial with the intention of changing to a more sensitive residential use; and
- The Site was confirmed to be comprised of medium to fine textured silt and clay.

Based on the above evaluation, the following SCS was used:

Table 8: Generic Site Condition Standards for Use within 30 metres of a Water Body in a Potable Groundwater Condition – Residential/Parkland/Institutional/Industrial/Commercial/Community Property Use (Table 8 SCS).

1.5 Limitations and Exceptions of Assessment

Oakhill prepared this report for the account of the Client. The material in it reflects Oakhill's best judgement based on the information discovered at the time of preparation, within the scope of work. The investigative procedures and format of this report generally follow the guidelines established in: CSA Z769-00 Phase II Environmental Site Assessment, Part XV.1 of the Environmental Protection Act, and Ontario Regulation 153, as amended. Any information presented concerning materials at the site is based on information gathered during the site visit only. There may be materials and/or subsurface soil and/or groundwater conditions on-site, which are not represented by these investigations. Any use which a third party makes of this report, or any reliance on or decisions to be made based on it, are the responsibility of such third parties. Oakhill accepts no responsibility for damages, if any, suffered by any third party as a result of decisions made or actions based on this report.

2.0 BACKGROUND INFORMATION

2.1 Physical Setting

The Site is a square-shaped lot, located on the east side of Kalar Road to the south of the Kalar Road and McLeod Road intersection in Niagara Falls, Ontario. A commercial warehouse and servicing building is present along the south side of the Site, encompassing an area of approximately 1,400 m². There are ten doors and various man doors. For the purpose of this investigation, these are referred to as Bays #1 through #10 from west to east for reference of locations within the building. The building is occupied by two tenants including Coach Canada which occupies the majority of the building in Bays #4 through #10, while Arlington/Pheonix Crane is located in the most westerly tenant space in Bay #1 to #3.

The Site grounds consist of a gravel parking lot with various buses, trucks and trailers stored on-Site along the northeastern and northwestern sides of the property. A large 50,000 L diesel containing aboveground storage tank (AST) and a smaller 1,000 L tank and fueling station is positioned near the southern entrance of the Site to the northwest of the warehouse building. A portable trailer associated with Pilot Trucking Training is located along the western boundary of the Site along Kalar Road to the north of the fueling station. The Site is relatively flat with a slight raised elevation to the neighbouring properties to the south and east.

The Site is surrounded by a mix of industrial/commercial and residential use. Niagara Peninsula Energy was noted at 7447 Pin Oak Drive with operational yards are adjacent to the southern property boundary. A commercial plaza is positioned to the North of the Site at 8240 McLeod Road comprising of various tenants including a food market, a deli and a hair salon. The properties located immediately adjacent to the west of Kalar Road appeared to be vacant lots at the time investigation. The property to the east of the Site is a highly vegetated vacant lot. The location of the Site is presented in **Figure 1**, and a zoning map is provided in **Figure 2**.

2.1.1 *Water Bodies and Areas of Natural Significance*

Based on the review of available maps, the nearest water body appears to be a creek which is a tributary of the Chippawa Power Canal Watershed that runs parallel to the eastern property boundary. No areas of natural and scientific interest were noted from the Ministry of Natural Resources and Forestry Natural Heritage Areas map in the area. No well protection areas or drinking water wells were present in the

Study Area. Based on the urban setting of the surrounding area, all properties are expected to be serviced with municipal drinking water systems.

2.1.2 Topography and Drainage

Local topographic information for the Study Area was collected via review of Google Earth OGS Data and Niagara Peninsula Conservation Authority (NPCA) Watershed Explorer. A copy of the Base Map is found in **Figure 3**. The Site and the Study Area present a slight southeast slope. Surface water runoff is expected to drain toward municipal drainage infrastructure along the surrounding roadways.

2.2 Past Investigations

Oakhill concludes that the information obtained during the Phase 2 ESA is consistent with the conclusions of previous studies outlined in the Table below:

Table 3: Summary of Previous Reports and Investigations

Report Title	Date	Author	Prepared For	Description
Phase 1 Environmental Site Assessment Update, 7302 Kalar Road, Niagara Falls, ON	January 19 th 2024	Oakhill	2131595 Ontario Inc.	Phase 1 ESA which identified twelve Areas of Potential Environmental Concern (APECs). A Phase 2 ESA was recommended to determine the presence/absence of contaminants associate with the APECs.

3.0 SCOPE OF THE INVESTIGATION

3.1 Overview of Site Investigation

The project objective was to assist the Client in assessing environmental liabilities associated with the Site. Oakhill's Phase 2 ESA focused on determining the presence/absence of potential contaminants of potential concern (COPCs) in soil and groundwater associated with APECs #1 to #12, identified in Oakhill's previously completed Phase 1 ESA Update. Oakhill's scope of work consisted of the following general tasks:

- Development of a work plan that focused on the investigation of APEC #1 to #12;
- Completion of private and public underground locating services to understand and clear underlying utilities before drilling activities took place;
- Completion of an intrusive investigation of APEC#1 to #12, through the advancement of 12 test-pits, five interior boreholes, one exterior borehole, and three monitoring wells;
- Sampling of the surface/subsurface soils and groundwater to provide presence/absence data;
- Analytical studies incorporating analysis from a third-party Canadian Association for Laboratory Accreditation (CALA) accredited laboratory while comparing results to the applicable provincial regulatory criteria;
- Evaluation of soil and groundwater conditions on-Site based on the applicable regulatory criteria;
- Incorporation of quality assurance and quality control policies through laboratory analysis, field and control blanks and appropriate duplicate samples; and
- Reporting and summarizing the overall findings of the ESA and providing conclusions and recommendations.

3.2 Media Investigated

Soil and groundwater were investigated for the purpose of this Phase 2 ESA.

3.3 Deviations from Sampling and Analysis Plan

Deviations from the sampling plan may be encountered as a result of unexpected field and weather conditions, impediments, equipment failures or other unforeseen limitations. There were no significant deviations during the intrusive investigation.

3.4 Impediments

There were no impediments encountered throughout the course of this investigation.

4.0 INVESTIGATION METHOD

4.1 General

Oakhill's Phase 2 ESA focused on determining the presence/absence of COPCs in the aforementioned APECs. A work plan was developed taking these areas into consideration. The events as they occurred are detailed as follows:

On November 30th, 2023, Oakhill completed the following:

- Advanced 12 test pits (TP1 to TP12), strategically selected at various locations throughout APEC #1A, #1B, #1C, #4, #5, #8, #10A, #10B, #11 and #12 to a depth range of 0.61 to 1.22 mbgs;
- Documented the soil characteristics of each core and sampled each borehole over regular intervals to their extent; and
- Analyzed field screening samples including soil vapour concentrations at all sample core intervals.

On December 12th, 2023, Oakhill completed the following:

- Met with Elements Geo (Elements) for the advancement of three boreholes installed as groundwater monitoring wells (OBH1-MW1 to OBH3-MW3) to address the groundwater condition associated with APEC #1A, #1B, #1C, #5, #6 and #8;
- Conducted interior core drilling to allow access for interior borehole sampling;
- Utilized Oakhill's internal Geoprobe 5410 truck mounted drill to advance five interior boreholes (BH4 to BH8) and one exterior borehole (BH9) at various locations associated with APEC #1A, #1B, #1C, #3, #4, #5, #6, #7 and #9.
- Documented the soil characteristics of each core and sampled each borehole over regular intervals to their extents;
- Analyzed field screening samples including soil vapour concentrations at all sample core intervals; and
- Selected and prepared soil samples from both drilling events to submit for laboratory analyses of various COPCs.

On December 19th & 20st, 2023, Oakhill completed the following:

- Attended the Site for inspection and sampling of the three monitoring wells (OBH1-MW1 to OBH1-MW3);
- Determined well depth measurements using a Heron oil/water interface meter (Heron);
- Utilized a Solinst 407 bladder pump to collect samples through low flow sampling;
- Prepared groundwater samples to submit for laboratory analysis of various COPCs;
- Conducted an elevation survey of all borehole and monitoring well locations; and

Borehole logs are presented in **Appendix A**.

4.2 Drilling Program

Oakhill utilized the services of the Client's and their mini-excavator to conduct the test-pit sampling. Oakhill utilized a Geoprobe 5410 for the advancement of the additional boreholes on-Site. The Geoprobe 5410 used percussive drilling methods from which soil core samples were collected by dual tube liners. Elements Geo utilized a Diedrich D70 for the advancement of three groundwater monitoring wells on-Site. The Diedrich D70 used rotary and percussive drilling methods from which the soil core samples were collected by split spoon casings. Prior to collecting each sample, all sampling equipment was washed with Alconox solution and rinsed with distilled water.

4.2.1 Utility Locates

Prior to initiating subsurface investigations at the Site, Oakhill contacted Ontario One-Call to arrange for clearance of public services. In addition, Oakhill utilized the services of a private locator (Buffalo Locating Inc.) to clear all test pit and borehole locations on-Site.

4.3 Soil Sampling Program– Borehole Placement

The sampling plan was developed based on the findings identified in the Updated Phase 1 ESA. The below sampling program highlights the sampling locations with the corresponding Phase 1 ESA APECs.

APEC #1A, #1B and #1C

Four test pits (TP9 to TP12) two monitoring wells (OBH1-MW1 and OBH2-MW2), and six boreholes (OBH4 to OBH9) were strategically placed to address COPCs related to APEC#1A and #1B. The test pits and boreholes extended to depths ranging from 0.61 to 7.62 mbgs.

APEC #2

One test pit (TP10) and one monitoring well (OBH1/MW1) were strategically placed to address COPCs related to APEC#2. The test pit and borehole extended to depths ranging from 0.61 to 7.62 mbgs.

APEC #3

Two boreholes (OBH5 and OBH6) were strategically placed to address COPCs relating to APEC#3. The boreholes were drilled to depths ranging from 1.22 to 2.44 mbgs.

APEC #4

Four boreholes (OBH7 to OBH9) were strategically placed to address COPCs relating to APEC#4. The boreholes were drilled to depths of 2.44 mbgs

APEC #5

Three test pits (TP9, TP11 and TP12), Five boreholes (OBH4 to OBH9) and one monitoring wells (OBH2-MW2) were strategically placed to address COPCs relating to APEC#5. The boreholes were drilled to depths ranging from 2.44 to 7.62 mbgs.

APEC #6

One test pit (TP10), one borehole (OBH8), and one monitoring well (OBH1-MW1) were strategically placed to address COPCs relating to APEC#6. The boreholes/test pits were drilled to depths ranging from 0.75 to 7.62 mbgs.

APEC #7

One borehole (OBH7) was strategically placed to address COPCs relating to APEC#7. The borehole was drilled to a maximum depth of 2.44 mbgs.

APEC #8

Four test pits (TP1 to TP4) and one monitoring well (OBH3-MW3) were strategically placed to address COPCs relating to APEC#8. The test pits were dug to a maximum depth of 0.75 mbgs and the monitoring well was drilled to depth of 7.62 mbgs.

APEC #9

One borehole (OBH4) was strategically placed to address COPCs relating to APEC#9. The borehole was drilled to a maximum depth r of 1.22 mbgs.

APEC #10A and #10B

Two test pits (TP5 and TP6) were strategically placed to address COPCs relating to APEC10A and 10B. The test pits were dug to a depth ranging from 0.91 to 1.05 mbgs.

APEC #11

Two test pits (TP7 and TP8) were strategically placed to address COPCs relating to APEC#11. The test pits were dug to a depth ranging from 0.75 to 0.91 mbgs.

APEC #12

Two test pits (TP11 and TP12) were strategically placed to address COPCs relating to APEC#12. The test pits were dug to a depth ranging from 0.91 to 1.22 mbgs.

All sampling locations can be referenced in **Figures 5A and 5B**.

4.4 Field Screening Measurements

Soil samples were collected for the purpose of field screening and selection for laboratory analysis. Samples were placed and sealed in plastic bags for vapour concentration screening and allowed to reach ambient temperature. Samples in plastic bags were then screened with a calibrated MiniRAE Lite photoionization detector (PID). The PID was zeroed in ambient air on-Site and the measurements were made by inserting the instruments probe into the plastic bag while churning the sample to ensure volatilization of the soil gases. The readings provided indications of the relevant concentration of organic vapours encountered and are used to guide the selection of soil samples to be submitted to the laboratory.

4.5 Ground Water Investigation

Three groundwater monitoring wells were drilled by Elements Geo Corp., a licensed well drilling contractor, under the direction of Oakhill. The wells were constructed with 50 mm diameter screened polyvinyl chloride (PVC) plastic pipe connected to solid riser pipe. A sand pack consisting of silica sand was used in the borehole annulus surrounding the well screen. The annulus above the sand pack was filled with bentonite. The wells were finished with steel monument casings. The monitoring well installation details are provided on the Borehole Logs in **Appendix A**.

4.5.1 Groundwater Sampling

Prior to monitoring well purging and sampling, water levels were measured within the three monitoring wells utilizing the Heron on December 19th, 2023. Low flow sampling was then conducted in accordance

with the procedures outlined in U.S. Environmental Protection Agency *LOW STRESS (low flow) PURGING AND SAMPLING PROCEDURE FOR THE COLLECTION OF GROUNDWATER SAMPLES FROM MONITORING WELLS* (EQASOP-GW4). This sampling was undertaken with the use of a Solinst 407 Bladder Pump and 464 Electronic Control Unit (with a supply of compressed air). Purging continued until stabilization of the following water quality parameters was achieved, when possible, within acceptable ranges described below for three consecutive readings:

- Turbidity ($\pm 10\%$ or 3 readings < 5 NTU)
- Dissolved Oxygen ($\pm 10\%$ or 3 readings < 0.5 mg/L)
- Specific Conductance ($\pm 3\%$)
- Temperature ($\pm 3\%$)
- pH (± 0.1 unit)
- Oxidation Reduction Potential (± 10 mV)

Table 4 summarizes the field measurements and volumes purged from each well during the low flow sampling from December 19th and December 20th, 2023.

Table 4: Well Measurement and Purge Volumes

Monitoring Well	Depth of Groundwater (mbgs)	Depth of Well (mbgs)	Bladder Pump Intake Depth (mbgs)	Purge Volume (Litres)
MW1	1.62	7.62	7.01	7.75
MW2	1.59	6.86	6.66	2.75
MW3	1.74	7.48	6.16	5.25

Note: Depth of Groundwater (mbgs) refers to measurements collected within all three wells specifically on April 20th, 2023.

4.6 Analytical Testing

All off-site laboratory analyses were provided by AGAT Laboratories (AGAT) for the Phase 2 ESA. AGAT is accredited to the ISO/IEC 17025 standard by both the Standards Council of Canada (SCC) and the Canadian Association for Environmental Analytical Laboratories (CALA). Analytical Results Tables can be referenced in **Appendix B** and Laboratory Certificate of Analysis can be referenced in **Appendix C**.

4.7 Residue Management Procedures

All soil cuttings and purged groundwater were staged for removal in steel drums on-Site, pending the completion of this study and the analytical results to determine the quality of the soil and groundwater.

4.8 Quality Assurance and Quality Control Measures

Soil and groundwater samples were collected in accordance with accepted industry standards according to *MECP Guidance on Sampling and Analytical Methods for use at Contaminated Sites in Ontario* and followed standard chain of custody procedures. All sampling containers were provided by AGAT.

All equipment used for sampling was washed with an Alconox solution and rinsed between samples, and a new pair of nitrile gloves were worn for the collection of each sample. At the time of collection, each soil sample was logged for colour, texture, density, structure, moisture, and visual/olfactory evidence of contamination. Soils were placed in appropriate clear glass containers, and either filled to zero-head space or measured with a syringe, then sealed with a Teflon lined lid. All samples were placed in coolers and kept at approximately 4°C for storage and transportation.

The field quality control measures included the collection of two duplicate soil samples (FD1 and FD2) from sample TP2 and TP7, respectively. The laboratory quality control program included the analysis of laboratory duplicate samples, method blanks, matrix spikes etc., all in accordance with the laboratory QC protocols.

5.0 REVIEW AND EVALUATION

5.1 Geology

5.1.1 Geologic Setting

The local bedrock geology of the Study Area was identified during the Phase 1 ESA. A summary of information can be found in **Table 5**.

Table 5: Geological Setting

Topic	Findings
Grid Co-ordinates	651875 m E, 4770128 m N (WGS84)
Elevation	180 metres (WGS84)
Surficial Geology	Late Wisconsinan: Glaciolacustrine deep water deposits: clay, silt.
Quaternary Geology	Pleistocene: Glaciolacustrine deposits: silt and clay, minor sand, basin and quiet water deposits.
Bedrock Geology	Guelph Formation: Sandstone, shale, dolostone, siltstone.

The geology of the Site was determined from the subsurface conditions and stratigraphic units observed during this Phase 2 ESA.

A general profile of the soil stratigraphy and textural characteristics is described below:

- 0.00 m to 0.61 m: Dry-moist, brown, gravel fill
- 0.61 m to 1.22 m: Dry-moist, brown/grey, poorly sorted gravelly fill
- 1.22 m to 2.44 m: Dry-moist, brown, compact, silty clay w/ gravel
- 2.44 m to 6.10 m: Dry-moist, brown, compact, silty clay
- 6.10 m to 7.62 m: Wet, brown/grey, compact silty clay

5.2 Groundwater Flow Direction

Water depth measurements within the monitoring wells were collected prior to sampling, on December 19th, 2023, for the purpose of an elevation survey. The elevation survey determined that groundwater flows north across the Site.

Oakhill conducted a monitoring well survey in reference to a recoverable geodetic benchmark. For the purpose of this investigation, the elevation survey utilized a geodetic datum (NAD83 CSRS v7), referenced to geodetic benchmark #00819748520. A summary of the survey data is described below in **Table 6**.

Table 6: Well Measurements

Monitoring Well	Ground Surface Elevation (m)	Water Level (mbgs)	Static Water Level Elevation (m)
MW1	182.66	1.67	180.99
MW2	182.77	1.67	181.10
MW3	182.73	1.81	180.92

Notes: m = metres above vertical datum ellipsoid.

The three installed groundwater monitoring wells were utilized to triangulate and subsequently calculate the direction of groundwater flow. Refer to **Figure 5B** which shows the northerly groundwater flow direction.

5.3 Soil Texture

Grain size analysis was performed for this investigation, with grain size characteristics reported to be fine grained. One sample (OBH1-5) passed the 75 µm sieve analysis at 99.36% while a second sample (OBH9-1) passed at 59.90%.

5.4 Soil: Field Screening and Soil Quality

Soil samples were collected for the purpose of screening and selection for laboratory analysis. PID readings were taken for each sample, providing an indication of the relevant concentration of organic vapours encountered, and were used to help the selection of soil samples to be submitted for laboratory analysis.

The laboratory analytical results indicated that there are various exceedances above Table 8 SCS, including the following:

- Petroleum Hydrocarbon Fractions F2 – borehole sample OBH9-1;
- Petroleum Hydrocarbon Fractions F3 – Test pit sample TP6 and borehole soil sample OBH6-1;
- Barium – Test pit soil sample TP7 and borehole sample OBH2-1
- Cobalt – Test pit samples TP4 and TP7

Sampling rationale (including sample depths) and analytical data for soil is presented in **Appendix B**.

5.5 Groundwater Quality

Groundwater data collected as part of this investigation indicated exceedances of cobalt in OB2-MW2 and OB3-MW3. All other parameters tested met Table 8 SCS, without exception. Analytical results for groundwater are included within **Appendix B**. Laboratory Certificates of Analyses are provided in **Appendix C**.

5.6 Sediment Quality

No sediment sampling was conducted as there were no water bodies present on-Site.

5.7 Quality Assurance / Quality Control

All appropriate measures were used to ensure data quality. The laboratory included QA/QC results with the certificate of analysis. Based on the relative percentage difference (RPD), values are within acceptable ranges and are reported in **Appendix C**.

6.0 PHASE TWO CONCEPTUAL SITE MODEL

6.1 Potentially Contaminating Activities & Areas of Potential Environmental Concern

The Phase 2 ESA property was identified to have various historical and current potentially contaminating activities (PCAs) as part of Oakhill’s previously completed Phase 1 ESA. These PCAs led to the conclusions of twelve APECs. The APECs are detailed in **Table 7** below:

Table 7: Areas of Potential Environmental Concern

Area of Potential Environmental Concern	Location of APEC	Potentially contaminating activity	Location of PCA (on-site or off-site)	Contaminants of potential concern	Media potentially Impacted (Groundwater, soil and/or sediment)
APEC #1A	Southern portion of the Site (within the boundaries of the building)	PCA#33 – Metal Treatment, Coating, Plating and Finishing	On-Site	Metals, PHCs, VOC, PAHs	Soil & Groundwater
APEC #1B		PCA#39 – Paints Manufacturing, Processing and Bulk Storage			
APEC #1C		PCA#52 – Storage, maintenance, fuelling and repair of equipment, vehicles, and material used to maintain transportation systems			
APEC #2	West side of the building	PCA #28 – Gasoline and Associated Products Storage in Fixed Tanks	On-Site	Metals, PHCs, VOC, PAHs	Soil & Groundwater
APEC #3	Central portion of the building	PCA #28 – Gasoline and Associated Products Storage in Fixed Tanks	On-Site	Metals, PHCs, VOC, PAHs	Soil

Area of Potential Environmental Concern	Location of APEC	Potentially contaminating activity	Location of PCA (on-site or off-site)	Contaminants of potential concern	Media potentially Impacted (Groundwater, soil and/or sediment)
APEC #4		N/A – Parts and Vehicle Wash Station	On-Site	Metals, PHCs, VOC, PAHs	Soil
APEC #5	Eastern portion of the building (bays #4 through #10)	PCA#52 – Storage, maintenance, fuelling and repair of equipment, vehicles, and material used to maintain transportation systems	On-Site	Metals, PHCs, VOCs and PAHs	Soil & Groundwater
APEC #6	Western portion of the building (bays #1 through #3)	PCA#52 – Storage, maintenance, fuelling and repair of equipment, vehicles, and material used to maintain transportation systems	On-Site	Metals, PHCs, VOCs, and PAHs	Soil & Groundwater
APEC #7	Central portion of the building (Bay #5)	PCA #4 – Antifreeze and De-icing Manufacturing and Bulk Storage	On-Site	Metals, PHCs, VOC and PAHs	Soil
APEC #8	Central to the southern entrance of the property. Northwest of maintenance building	PCA #28 – Gasoline and Associated Products Storage in Fixed Tanks	On-Site	Metals, PHCs, VOC, PAHs, and GI	Soil
APEC #9	Southeast corner of the building	PCA #28 – Gasoline and Associated Products Storage in Fixed Tanks	On-Site	Metals, PHCs, VOC, PAHs	Soil
APEC #10A	Northwest corner of the Site	PCA #30 – Importation of Fill Material of Unknown Quality	On-Site	PHCs, BTEX, Metals and GI	Soil

Area of Potential Environmental Concern	Location of APEC	Potentially contaminating activity	Location of PCA (on-site or off-site)	Contaminants of potential concern	Media potentially Impacted (Groundwater, soil and/or sediment)
APEC #10B	Northwest quadrant of the Site	PCA#52 – Storage, maintenance, fuelling and repair of equipment, vehicles, and material used to maintain transportation systems	On-Site		
APEC #11	Northeast portion of the Site	PCA#52 – Storage, maintenance, fuelling and repair of equipment, vehicles, and material used to maintain transportation systems	On-Site	Metals, PHCs, and GI	Soil
APEC #12	Southern portion of the Site	Transformer Manufacturing, Processing and Use	Off-Site	PHCs, PCBs and GI	Soil

Notes: PAH – Polycyclic Aromatic Hydrocarbons
 BTEX – Benzene, Toluene, Ethylbenzene & Xylenes
 VOCs – Volatile Organic Compounds
 PHCs – Petroleum Hydrocarbons
 GI – General Inorganics
 ABNs – Acid/Base Neutrals

6.2 Subsurface Structures and Utilities

Buried natural gas service, municipal drinking water, sanitary sewer, and communication lines were present on-Site. Natural gas and communication lines exit the west side of the service building and proceed west to Kalar Road. A storm sewer with catch basins was observed to run west to the north of the servicing building.

6.3 Physical Setting & Figure Descriptions

Oakhill has completed seven figures to assist with organizing, presenting and understanding the Site condition within the Phase 2 ESA Study Area by developing a Conceptual Site Model (CSM) which are referenced below and appended to this report.

Table 8: Figure Descriptions

Figures	Description
Figure 1 – Site Location	Site and Study Area Location in Fonthill
Figure 2 – Zoning Map	Municipal zoning designations for the Site and Study Area
Figure 3 – Base Map	Topographical contours for the Site and Study Area
Figure 4A – PCA Locations	PCA summary table and locations
Figure 4B – Phase 1 Conceptual Site Model	APEC boundaries and locations
Figure 5A – Phase 2 Conceptual Site Model (soil)	Sampling locations and data summary tables for soil
Figure 5A – Phase 2 Conceptual Site Model (groundwater)	Sampling locations and data summary tables for groundwater, groundwater elevation contours and calculated groundwater flow direction

6.4 Description and Assessment of Contaminant

There were exceedances of various contaminants in the soil condition including petroleum hydrocarbon fraction F2 (sample OBH9-1), petroleum hydrocarbon fraction F4 (samples TP6 and OBH6-1), barium (samples TP7 and OBH2-1), and cobalt (sample TP4 and TP7). The depths of the soil contamination ranged from 0.61 to 1.22 mbgs; however, vertical depths were not confirmed. In addition, groundwater analysis confirmed exceedances of cobalt in OBH2-MW2 and OBH3-MW3.

Further delineation would be required to determine contamination extents.

6.5 Narrative of Release Mechanisms and Exposure Pathways

The exceedance of PHC fraction F2 in sample OBH9-1 suggests that there may have been associated with APEC #1, APEC #4, and/or APEC #6. The exceedance of PHC fractions F4 in samples OBH5-1 and OBH6-1 could be the result of asphalt inclusions in the samples, but may have also been influenced by APEC #1, APEC #3, and/or APEC #5. The exceedance of PHC fractions F4 in TP6-1 is anticipated to be associated with APEC #10.

Likewise, metals contamination in sample TP4-1 (cobalt) and TP7-1 (cobalt & barium) are likely associated with APEC #8 and APEC#11, respectively. The metals contamination in sample OBH2-1 may have been associated with APEC #1 and/or APEC #5.

The metals contamination in groundwater (MW2 and MW3) condition may be associated with the APECs surrounding the eastern half of the building (APEC #1, APEC #3, APEC #5, and/or APEC #9). The disconnected well locations may have also been influenced individually, such as MW2 being associated with APEC #1 and/or APEC #5, and MW3 being associated with APEC #8.

7.0 DISCUSSION & CONCLUSION

Based on the findings of the Phase 2 ESA, Oakhill concludes that the Site does not meet Table 8 SCS. There were exceedances of various contaminants in the soil condition including petroleum hydrocarbon fraction F2 (sample OBH9-1), petroleum hydrocarbon fraction F4 (samples TP6 and OBH6-1), barium (samples TP7 and OBH2-1), and cobalt (sample TP4 and TP7). The depths of the soil contamination ranged from 0.61 to 1.22 mbgs; however, vertical depths were not confirmed. In addition, groundwater analysis confirmed exceedances of cobalt in OBH2-MW2 and OBH3-MW3.

Oakhill recommends a Supplemental Phase 2 ESA investigation to acquire additional presence / absence data and delineate (define the vertical and lateral extents) on-Site. Upon completion of the supplemental Phase 2 ESA, Oakhill will develop a plan for remedial mitigation (i.e., remedial efforts or risk assessment) under a separate cover.

7.1 Qualifications of Assessor

Oakhill has conducted this Phase 2 Environmental Site Assessment as permitted by Certificate of Authorization (#100073377) from the association of Professional Engineers Ontario, under the direction of Mr. Fil Barillaro, M.A. Sc., P. Eng., a Professional Engineer (#90462870) registered with the association of Professional Engineers Ontario, and a “Qualified Person (ESA)” as per Ontario Regulation 153/04, as amended, having over twenty years of experience in the environmental consulting industry conducting Phase 1 and 2 ESA’s, remedial planning, and site remediation supervision.

7.2 Closing

Oakhill is pleased to present this Phase 2 ESA of 7302 Kalar Road in Niagara Falls, Ontario.

We trust the above satisfies your requirements. Please contact Oakhill if you have any questions or concerns.

8.0 REFERENCES

This Phase 2 ESA generally relied upon or followed the protocol from the following information sources:

- Methods and procedures followed the Canadian Standards Association (CSA) "Z769-00 Phase II Environmental Site Assessment", 2000;
- Evaluation of Site Use Restrictions followed the Ministry of the Environmental, Conservation and Parks (MECP) "Technical Guidance Manual for Phase II Environmental Site Assessments in Ontario", March 2006 and CAN/CSA Z769-00 with modifications as stated in Ontario Regulation 153/04;
- Methods and procedures followed the MECP "Ontario Regulation 153, as amended - Records of Site Condition – Part XV.1 of the Act", 2017;
- Soil sampling procedures followed the MECP "Guidance on Sampling and Analytical Methods for Use at Contaminated Sites in Ontario", 1996;
- Analytical results were compared to "Soil, Ground Water and Sediment Standards for Use Under XV.1 of the Environmental Protection Act", 2011;
- Association of Professional Geoscientists of Ontario "Guidance for Environmental Site Assessments under Ontario Regulation 153/04 (as amended), April 2011";
- USDA Soil Field Texturing Field Flow Chart;
- U.S. Environmental Protection Agency "Low Stress (low flow) Purging and Sampling Procedure for the Collection of Groundwater Samples from Monitoring Wells (eqasop-gw4)"; and
- Phase 1 Environmental Site Assessment Update of 7302 Kalar Road, Niagara Falls, ON conducted by Oakhill Environmental Inc., dated January, 2024.



FIGURES



LEGEND

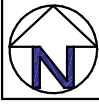
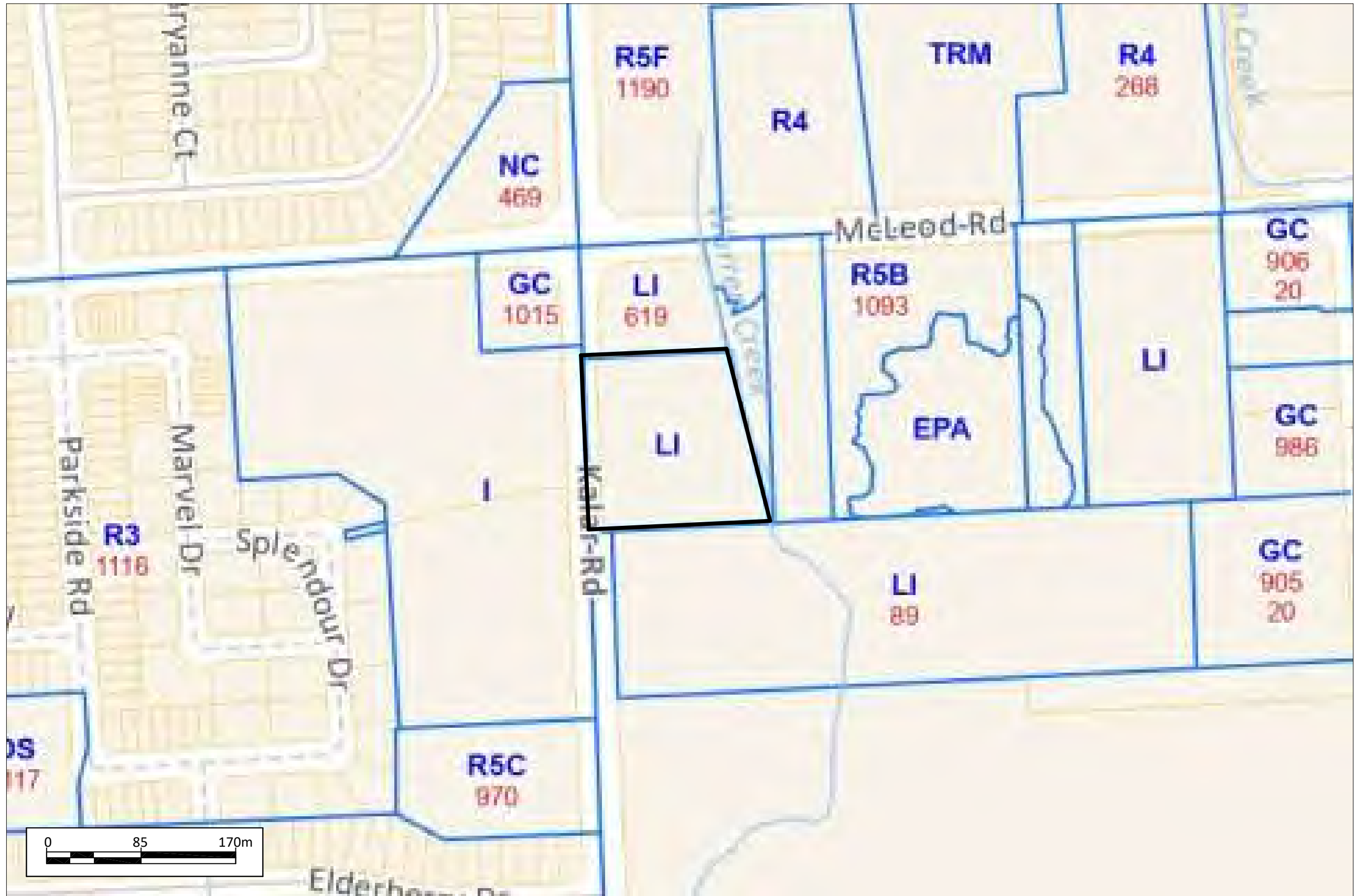
-  SITE
-  STUDY AREA (250M RADIUS)



TITLE	SITE LOCATION	
PROJECT NO.	PR-23-037A	DATE
		JANUARY 2024
PROJECT	PHASE 2 ENVIRONMENTAL SITE ASSESSMENT	
CLIENT	2131595 ONTARIO INC.	
SITE	7302 KALAR ROAD, NIAGARA FALLS, ON	
SCALE	SCALE BAR (m)	SHEET
		FIGURE 1

SOURCE: GOOGLE EARTH © GOOGLE 2023





LEGEND



SITE

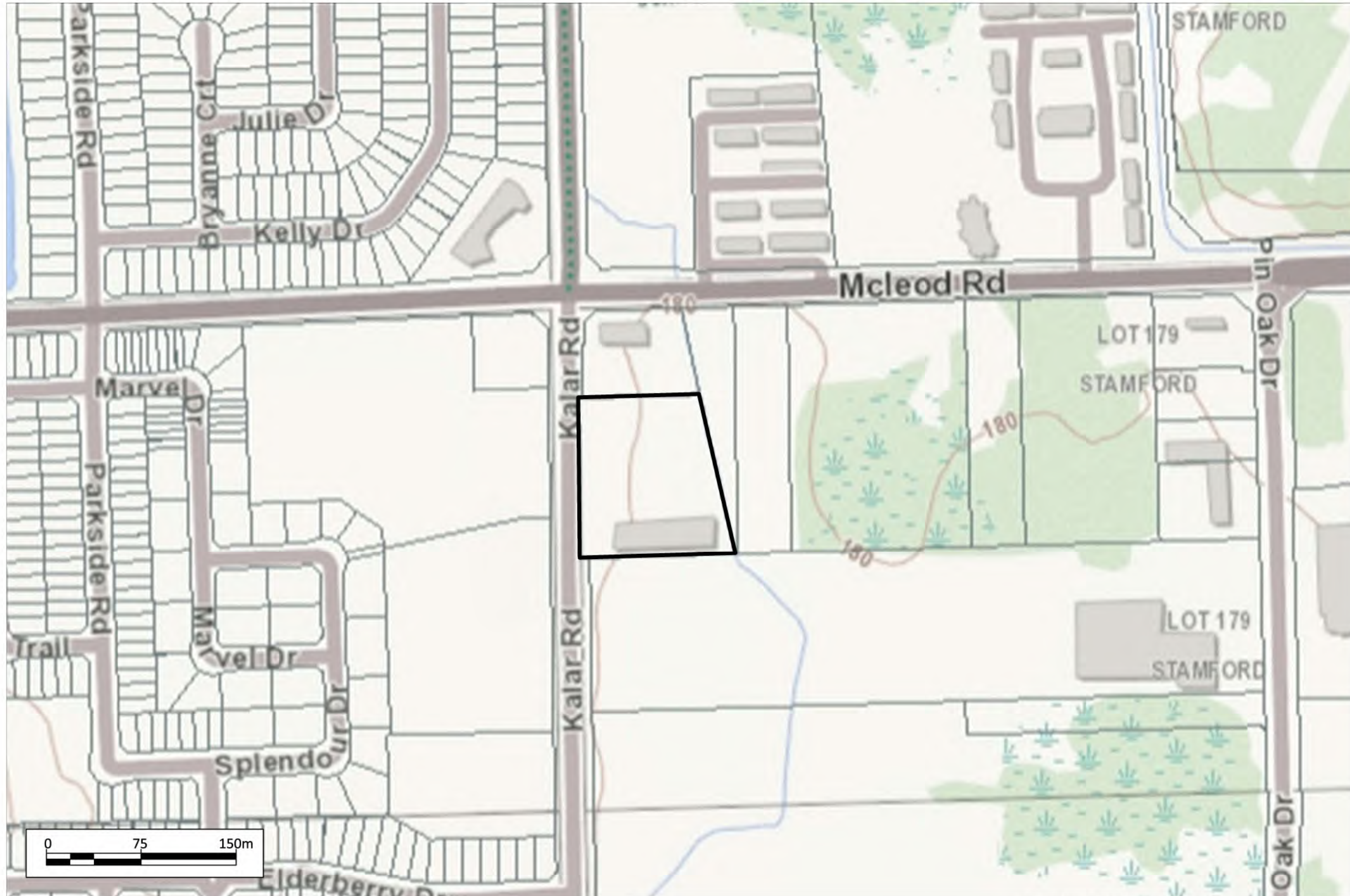
ZONING

- EPA Environmental Protection Area Zone
- GC General Commercial Zone
- I Institutional Zone
- LI Light Industrial Zone
- NC Neighbourhood Commercial Zone
- R3 Residential Mixed Zone
- R4 Residential Low Density, Group Multiple Dwelling Zone
- R5B Residential Apartment 5B Density Zone
- TRM Transition Residential Multiple Zone

TITLE		ZONING	
PROJECT NO.	DATE		
PR-23-037A	JANUARY 2024		
PROJECT			
PHASE 2 ENVIRONMENTAL SITE ASSESSMENT			
CLIENT			
2131595 ONTARIO INC.			
SITE			
7302 KALAR ROAD, NIAGARA FALLS, ON			
SCALE		SHEET	
SCALE BAR (m)		FIGURE 2	



SOURCE: CITY OF NIAGARA FALLS ZONING ZONING BY-LAW No. 79-200 - INTERACTIVE MAP ACCESSED IN DECEMBER 2023 © CITY OF NIAGARA FALLS



LEGEND

 SITE

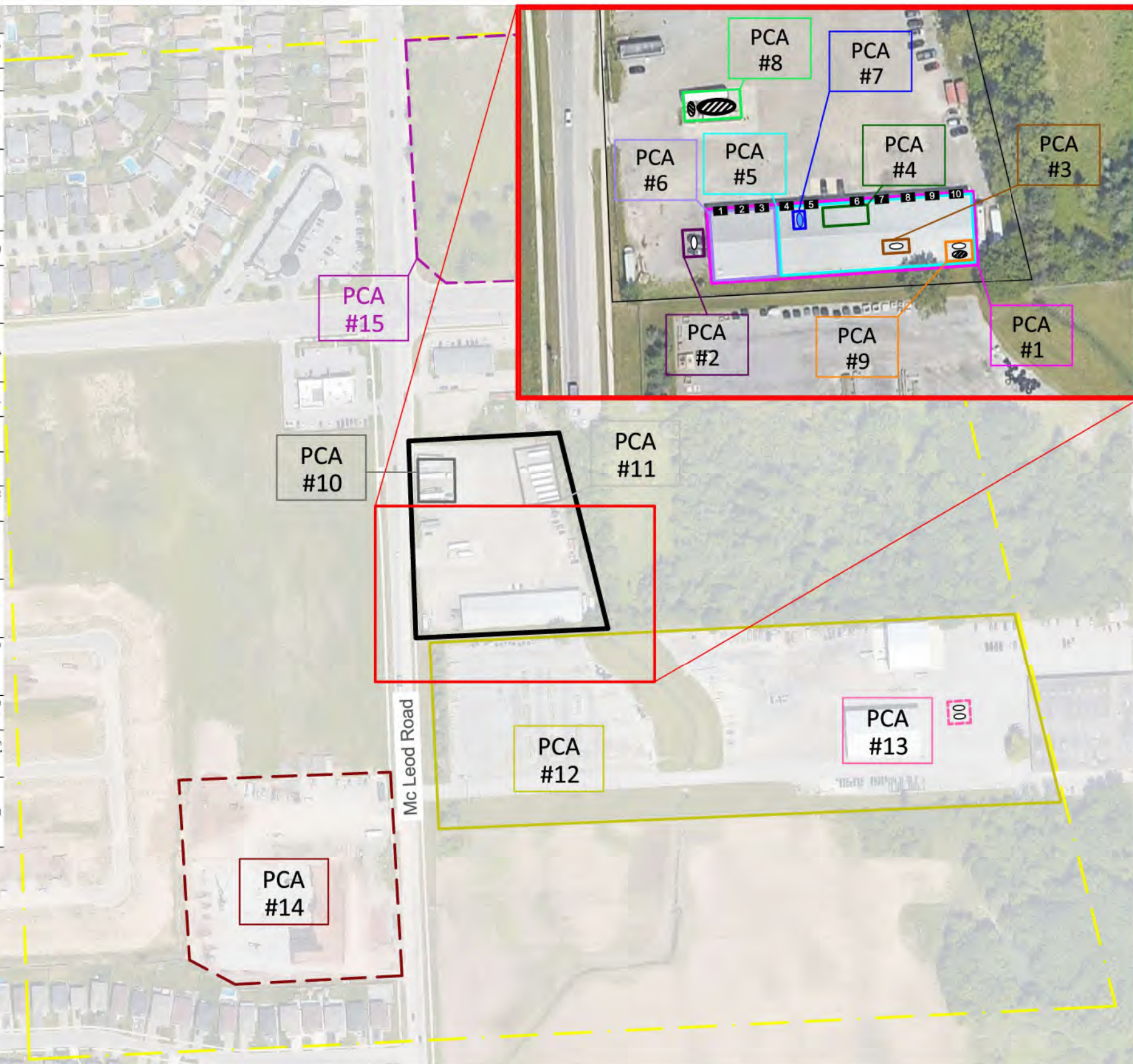


TITLE	BASEMAP	
PROJECT NO.	PR-23-037A	DATE
		JANUARY 2024
PROJECT	PHASE 2 ENVIRONMENTAL SITE ASSESSMENT	
CLIENT	2131595 ONTARIO INC.	
SITE	7302 KALAR ROAD, NIAGARA FALLS, ON	
SCALE	SCALE BAR (m)	SHEET
		FIGURE 3



SOURCE: MINISTRY OF NATURAL RESOURCES & FORESTRY - MAKE A TOPOGRAPHIC MAP
© KING'S PRINTER FOR ONTARIO, 2023

PCA Location	Item Number	Potentially Contaminating Activity	Description
PCA #1A	33	Metal Treatment, Coating, Plating and Finishing	Trillium Lifestyles Industries was located on-Site from 1992 to 1995. Operations included metal furniture manufacturing.
PCA #1B	39	Paints Manufacturing, Processing and Bulk Storage	Trillium Lifestyles Industries generated paint residues on-Site from 1995-2004.
PCA #1C	52	Storage, maintenance, fuelling and repair of equipment, vehicles, and material used to maintain transportation systems	Wajax Power Systems was located on-Site from 2010 to 2019. Operations included automotive repairs and maintenance.
PCA #2	28	Gasoline and Associated Products Storage in Fixed Tanks	Historical Aboveground Storage Tanks (ASTs) were noted on-Site when WAJAX owned the property. One 1,100 litre AST was used for waste oil was noted along the west side of the building.
PCA #3	28	Gasoline and Associated Products Storage in Fixed Tanks	A 1,200 litre engine oil AST was historically located in proximity to service bay #6 & #7 while Wajax was in operation.
PCA #4	N/A	Parts and Vehicle Wash Station	A parts wash station was noted in the centre portion of the building on-Site. There is currently a bus wash station located in bay #4.
PCA #5	52	Storage, maintenance, fuelling and repair of equipment, vehicles, and material used to maintain transportation systems	Coach Canada currently occupies the spaces associated with bay doors #4 through #10 to repair and maintain buses.
PCA #6	52	Storage, maintenance, fuelling and repair of equipment, vehicles, and material used to maintain transportation systems	Arlington Crane and Phoenix Crane currently operate out of bay doors #1 through #3. Operations include the maintenance and servicing of cranes.
PCA #7	4	Antifreeze and De-icing Manufacturing and Bulk Storage	Two 900-litre plastic totes of antifreeze was located in Bay #5.
PCA#8	28	Gasoline and Associated Products Storage in Fixed Tanks	A double walled steel 50,000-litre used diesel fuel AST and 1,100 litre AST was noted near the southern entrance of the property.
PCA#9	28	Gasoline and Associated Products Storage in Fixed Tanks	A 1,100 litre steel used oil AST was noted in the southeast corner of the building. An additional former 1,100 litre AST associated with Wajax was also located in this area.
PCA#10A	30	Importation of Fill Material of Unknown Quality	According to aerial photographs a building was present along the northwest side of the site which would have been in-filled with materials of unknown quality.
PCA#10B	52	Storage, maintenance, fuelling and repair of equipment, vehicles, and material used to maintain transportation systems	Pilot Trucking training stores transport trucks along the northwest corner of the Site property.
PCA#11	52	Storage, maintenance, fuelling and repair of equipment, vehicles, and material used to maintain transportation systems	Coach Canada stores buses along the northeastern portion of the Site property.
PCA#12	55	Transformer Manufacturing, Processing and Use	The Niagara Falls Hydro Electric Commission (currently known as Niagara Peninsula Energy) was noted at 7447 Pin Oak Drive. This property is listed on the Ontario PCB Registry. Operations also include the use of various oils and chemical wastes.
PCA#13	28	Gasoline and Associated Products Storage in Fixed Tanks	The Niagara Falls Hydro Electric Commission (currently known as Niagara Peninsula Energy) has a private fueling station for its Fleet, further to the east of the Site.
PCA#14	49	Salvage Yard including automobile wrecking	an automotive junk yard was noted approximately 138m south southwest of the study site (noted as "Kalar Road junkyard N1" and "AA Auto Parts" according to EDNs Phase 1 ESA).
PCA#15	58	Waste Disposal and Waste Management, including thermal treatment, landfilling and transfer of waste, other than use of biosolids as soil conditioners	Properties to the north of Kalar Road were historically associated with waste disposal. The land has been remediated and redeveloped.



- LEGEND**
- SITE
 - STUDY AREA (250M RADIUS)
 - PCA RESULTING IN AN APEC
 - PCA NOT RESULTING IN AN APEC
 - ENHANCED AREA
 - ABOVEGROUND STORAGE TANK
 - ANTIFREEZE TOTES
 - HISTORICAL ABOVEGROUND STORAGE TANK
 - BAY DOOR NUMBER

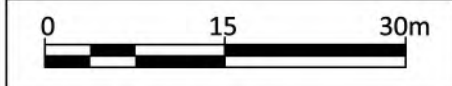


TITLE		PCA LOCATIONS	
PROJECT NO.	PR-23-037A	DATE	JANUARY 2024
PROJECT			
PHASE 2 ENVIRONMENTAL SITE ASSESSMENT			
CLIENT			
2131595 ONTARIO INC.			
SITE			
7302 KALAR ROAD, NIAGARA FALLS, ON			
SCALE	SCALE BAR (m)	SHEET	FIGURE 4A



REFERENCE: NIAGARA NAVIGATOR 2022 © NIAGARA NAVIGATOR

PCA Location	Item	Potentially Contaminating Activity	Description
PCA #1A	33	Metal Treatment, Coating, Plating and Finishing	Trillium Lifestyles Industries was located on-site from 1992 to 1995. Operations included metal furniture manufacturing.
PCA #1B	39	Paints Manufacturing, Processing and Bulk Storage	Trillium Lifestyles Industries generated paint residue waste on site from 1995-2004.
PCA #1C	52	Storage, maintenance, fuelling and repair of equipment, vehicles, and material used to maintain transportation systems	Wajax Power Systems was located on site from 2010 to 2019. Operations included automotive repairs and maintenance.
PCA #2	28	Gasoline and Associated Products Storage in Fixed Tanks	Historical Aboveground Storage Tanks (ASTs) were noted on site when WAJAX owned the property. One 1,100 litre AST was used for waste oil was noted along the west side of the building.
PCA #3	28	Gasoline and Associated Products Storage in Fixed Tanks	A 1,200-litre engine oil AST was historically located in proximity to Bay #6 & #7, while Wajax was in operation.
PCA #4	N/A	Parts and Vehicle Wash Station	A parts wash station was noted in the centre portion of the building on site. There is currently a bus wash station located in Bay #4.
PCA #5	52	Storage, maintenance, fuelling and repair of equipment, vehicles, and material used to maintain transportation systems	Coach Canada currently occupies the spaces associated with Bays #4 through #10 to repair and maintain buses.
PCA #6	52	Storage, maintenance, fuelling and repair of equipment, vehicles, and material used to maintain transportation systems	Arlington Crane and Phoenix Crane currently operate out of Bays #1 through #3. Operations include the maintenance and servicing of cranes.
PCA #7	4	Antifreeze and De-icing Manufacturing and Bulk Storage	Two 900-litre plastic totes of antifreeze was located in Bay #5.
PCA#8	28	Gasoline and Associated Products Storage in Fixed Tanks	A double-walled steel 50,000-litre used diesel fuel AST and 1,100-litre AST was noted near the southern entrance of the property.
PCA#9	28	Gasoline and Associated Products Storage in Fixed Tanks	A 1,100-litre steel waste oil AST was noted in the southeast corner of the building. An additional former 1,100-litre AST associated with Wajax was also located in this area.
PCA#10A	30	Importation of Fill Material of Unknown Quality	According to aerial photographs a building was present along the northwest side of the site which could have been in-filled with materials of unknown quality.
PCA#10B	52	Storage, maintenance, fuelling and repair of equipment, vehicles, and material used to maintain transportation systems	Pilot Trucking Training stores transport trucks along the northwest corner of the site.
PCA#11	52	Storage, maintenance, fuelling and repair of equipment, vehicles, and material used to maintain transportation systems	Coach Canada stores buses along the northeastern portion of the site.
PCA#12	55	Transformer Manufacturing, Processing and Use	The Niagara Falls Hydro Electric Commission (currently known as Niagara Peninsula Energy) was noted at 7447 Pin Oak Drive. This property is listed on the Ontario PCB Registry. Operations also include the use of various oils and chemical wastes.
PCA#13	28	Gasoline and Associated Products Storage in Fixed Tanks	The Niagara Falls Hydro Electric Commission (currently known as Niagara Peninsula Energy) has a private fueling station for its fleet, further to the east of the site.
PCA#14	49	Salvage Yard including automobile wrecking	An automotive junk yard was noted approximately 138m south-southwest of the study site.
PCA#15	58	Waste Disposal and Waste Management, including thermal treatment, landfilling and transfer of waste, other than use of biosolids as soil conditioners	Properties to the north of Kalar Road were historically associated with waste disposal. The land has been remediated and redeveloped.



Kalar Road



- LEGEND**
- SITE
 - PROPERTY BOUNDARY
 - ROADS
 - BUILDING
 - XX PCA
 - APEC #1A, #1B & #1C
 - APEC #2
 - APEC #3
 - APEC #4
 - APEC #5
 - APEC #6
 - APEC #7
 - APEC #8
 - APEC #9
 - APEC #10A & #10B
 - APEC #11
 - APEC #12
 - ABOVEGROUND STORAGE TANK
 - ANTIFREEZE TOTES
 - HISTORICAL ABOVEGROUND STORAGE TANK
 - X BAY DOOR NUMBER

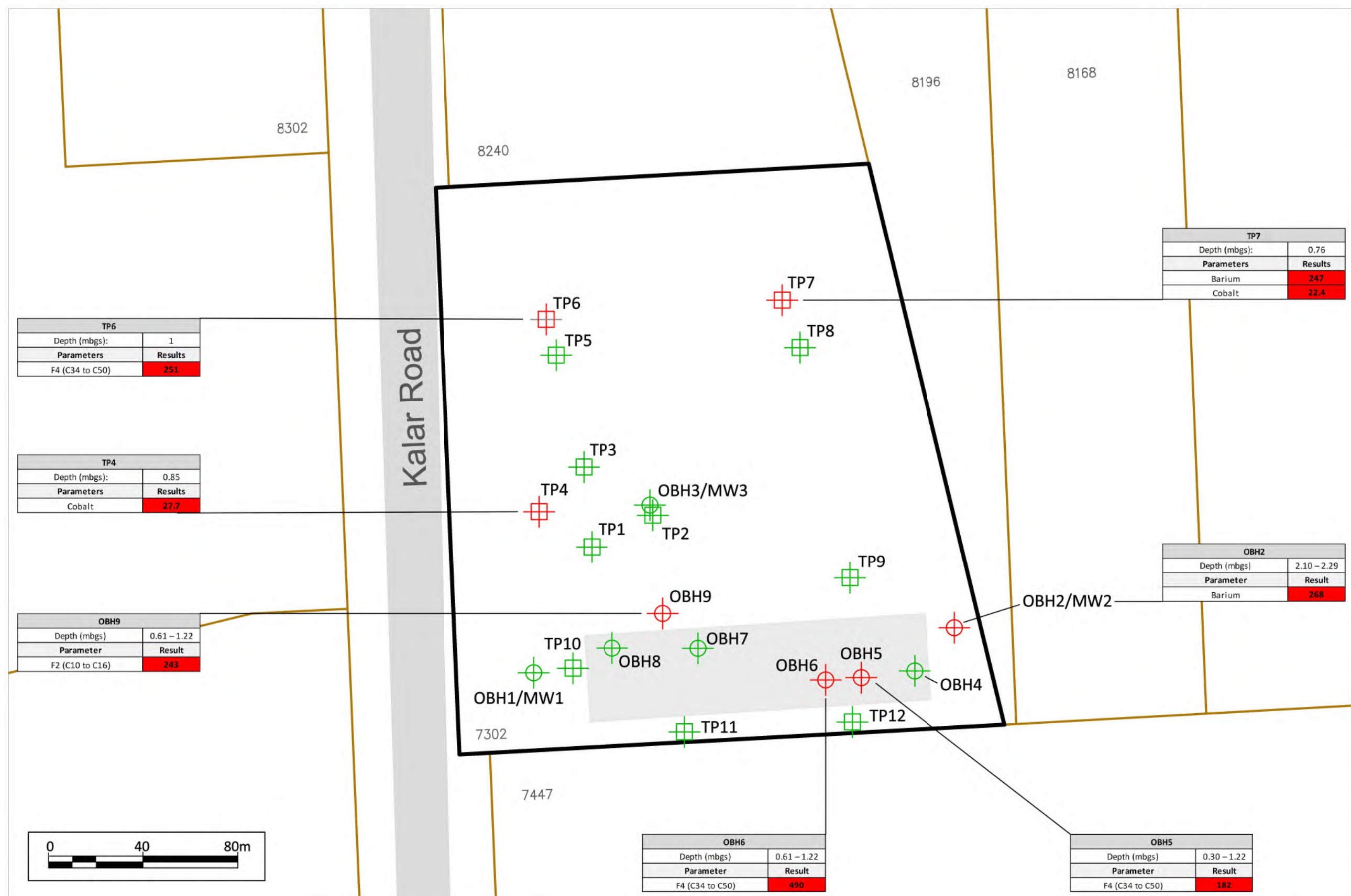
TITLE		PHASE 1 CONCEPTUAL SITE MODEL
PROJECT NO.	PR-23-037A	DATE
		JANUARY 2024
PROJECT		
PHASE 2 ENVIRONMENTAL SITE ASSESSMENT		
CLIENT		
2131595 ONTARIO INC.		
SITE		
7302 KALAR ROAD, NIAGARA FALLS, ON		
SCALE	SCALE BAR (m)	SHEET
		FIGURE 4B





LEGEND

- SITE
- PROPERTY BOUNDARY
- ROADS
- BUILDING
- TEST PIT
- MONITORING WELL
- SAMPLE MET APPLICABLE SCS
- SITE ABOVE APPLICABLE SCS



TP7	
Depth (mbgs):	0.76
Parameters	Results
Barium	247
Cobalt	22.4

TP6	
Depth (mbgs):	1
Parameters	Results
F4 (C34 to C50)	251

TP4	
Depth (mbgs):	0.85
Parameters	Results
Cobalt	27.7

OBH2	
Depth (mbgs)	2.10 – 2.29
Parameter	Result
Barium	268

OBH9	
Depth (mbgs)	0.61 – 1.22
Parameter	Result
F2 (C10 to C16)	243

OBH6	
Depth (mbgs)	0.61 – 1.22
Parameter	Result
F4 (C34 to C50)	490

OBH5	
Depth (mbgs)	0.30 – 1.22
Parameter	Result
F4 (C34 to C50)	182

MECP Table 8 SCS - Residential/Park Use, Fine		
Parameter (SOIL)	Unit	Criteria
Barium	µg/g dry	220
Cobalt	µg/g dry	22
F2 (C10 to C16)	µg/g dry	120
F4 (C34 to C50)	µg/g dry	10

TITLE
PHASE 2 CONCEPTUAL SITE MODEL (SOIL)

PROJECT NO. PR-23-037A **DATE** JANUARY 2024

PROJECT
PHASE 2 ENVIRONMENTAL SITE ASSESSMENT

CLIENT
2131595 ONTARIO INC.

SITE
7302 KALAR ROAD, NIAGARA FALLS, ON

SCALE SCALE BAR (m) **SHEET** FIGURE 5A





LEGEND

- SITE
- PROPERTY BOUNDARY
- ROADS
- BUILDING
- GROUNDWATER FLOW DIRECTION
- GROUNDWATER CONTOUR
- XXX.XX GROUNDWATER ELEVATION
- MONITORING WELL
- SAMPLE MET APPLICABLE SCS
- SITE ABOVE APPLICABLE SCS



MW3	
Sample date	12/20/2023
Parameter	Result
Dissolved Cobalt	4.05

MW2	
Sample date	12/19/2023
Parameter	Result
Dissolved Cobalt	4.94

MECP Table 8 SCS - Groundwater

Parameter (SOIL)	Unit	Criteria
Dissolved Cobalt	µg/L	3.8

TITLE

PHASE 2 CONCEPTUAL SITE MODEL (GROUNDWATER)

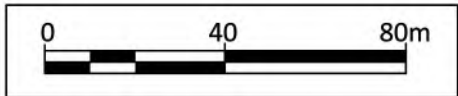
PROJECT NO. PR-23-037A DATE JANUARY 2024

PROJECT PHASE 2 ENVIRONMENTAL SITE ASSESSMENT

CLIENT 2131595 ONTARIO INC.

SITE 7302 KALAR ROAD, NIAGARA FALLS, ON

SCALE SCALE BAR (m) SHEET FIGURE 5B





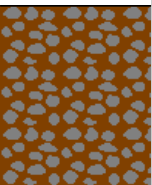
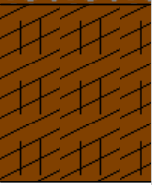
**APPENDIX A:
Borehole Logs**

**Oakhill
Environmental Inc.**
1-218 Martindale Road,
St. Catharines, ON, L2S 0B2
Tel: 905 988 1243 Fax: 905 988 1887

Log of Test Pit: TP1

Project No.: PR-23-037
Project: Phase 2 ESA
Site Location: 7302 Kalar Rd., Niagara Falls
Status: Test pit

Elevation: 182.8 masl
Total Depth: 0.6 m
Project Manager: DM
Logged By: AF

SUBSURFACE PROFILE			SAMPLE				Depth (m)
Depth (m)	Symbol	Description	Elevation	Number	Vapour (ppm)	Type	
0		Ground Surface	182.8				0
		Dry, gravel fill					
			182.5				
		Dry, brown, dense, silty clay		TP1	0.0		
			182.2				
1							1
2							2

Excavated By: Dan Perri
Excavation Method: Mini Escavator
Excavation Date: 2023-11-30

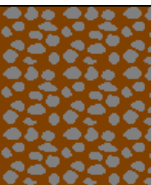
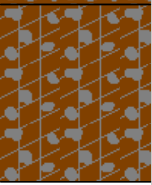
Test Pit Dimensions: 2 x 1 m
Datum: NAD83 CSRS 2010
Sheet: 1 of 1

**Oakhill
Environmental Inc.**
1-218 Martindale Road,
St. Catharines, ON, L2S 0B2
Tel: 905 988 1243 Fax: 905 988 1887

Log of Test Pit: TP2

Project No.: PR-23-037
Project: Phase 2 ESA
Site Location: 7302 Kalar Rd., Niagara Falls
Status: Test pit

Elevation: 182.8 masl
Total Depth: 0.6 m
Project Manager: DM
Logged By: AF

SUBSURFACE PROFILE			SAMPLE				Depth (m)
Depth (m)	Symbol	Description	Elevation	Number	Vapour (ppm)	Type	
0		Ground Surface	182.8				0
		Gravel fill	182.5				
		Dry, brown, dense, silty clay with gravel inclusions	182.2	TP2	0.0		
1							1
2							2

Excavated By: Dan Perri
Excavation Method: Mini Excavator
Excavation Date: 2023-11-30

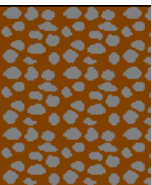
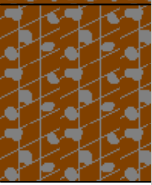
Test Pit Dimensions: 2 x 1 m
Datum: NAD83 CSRS 2010
Sheet: 1 of 1

**Oakhill
Environmental Inc.**
1-218 Martindale Road,
St. Catharines, ON, L2S 0B2
Tel: 905 988 1243 Fax: 905 988 1887

Log of Test Pit: TP3

Project No.: PR-23-037
Project: Phase 2 ESA
Site Location: 7302 Kalar Rd., Niagara Falls
Status: Test pit

Elevation: 182.8 masl
Total Depth: 0.6 m
Project Manager: DM
Logged By: AF

SUBSURFACE PROFILE			SAMPLE				Depth (m)
Depth (m)	Symbol	Description	Elevation	Number	Vapour (ppm)	Type	
0		Ground Surface	182.8				0
		Dry, gravel fill	182.5				
		Dry, brown, dense, silty clay with gravel inclusions	182.2	TP3	0.1		
1							1
2							2

Excavated By: Dan Perri
Excavation Method: Mini Excavator
Excavation Date: 2023-11-30

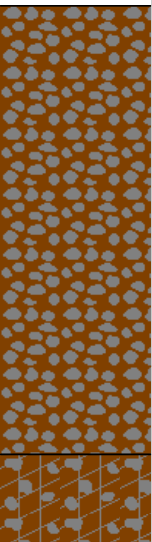

Test Pit Dimensions: 2 x 1 m
Datum: NAD83 CSRS 2010
Sheet: 1 of 1

**Oakhill
Environmental Inc.**
1-218 Martindale Road,
St. Catharines, ON, L2S 0B2
Tel: 905 988 1243 Fax: 905 988 1887

Log of Test Pit: TP4

Project No.: PR-23-037
Project: Phase 2 ESA
Site Location: 7302 Kalar Rd., Niagara Falls
Status: Test pit

Elevation: 182.9 masl
Total Depth: 0.9 m
Project Manager: DM
Logged By: AF

SUBSURFACE PROFILE			SAMPLE				Depth (m)
Depth (m)	Symbol	Description	Elevation	Number	Vapour (ppm)	Type	
0		Ground Surface	182.9				0
		Dry fill, some organic materials, large stones and gravel inclusions					
			182.1				
		Dry, brown, compact, silty clay with gravel inclusions			TP4	0.1	
			182.0				
1							1
2							2

Excavated By: Dan Perri
Excavation Method: Mini Excavator
Excavation Date: 2023-11-30

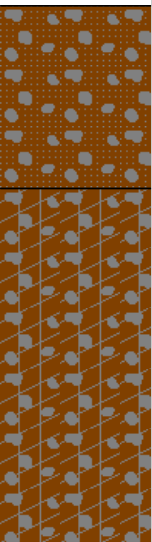
Test Pit Dimensions: 2 x 1 m
Datum: NAD83 CSRS 2010
Sheet: 1 of 1

**Oakhill
Environmental Inc.**
1-218 Martindale Road,
St. Catharines, ON, L2S 0B2
Tel: 905 988 1243 Fax: 905 988 1887

Log of Test Pit: TP5

Project No.: PR-23-037
Project: Phase 2 ESA
Site Location: 7302 Kalar Rd., Niagara Falls
Status: Test pit

Elevation: 183.0 masl
Total Depth: 0.9 m
Project Manager: DM
Logged By: AF

SUBSURFACE PROFILE			SAMPLE				Depth (m)
Depth (m)	Symbol	Description	Elevation	Number	Vapour (ppm)	Type	
0		Ground Surface	183.0				0
		Dry, brown/grey fill with gravel inclusions	182.7				
		Dry-moist, brown/grey, compact, silty clay with gravel inclusions	182.1	TP5	0.0		
1							1
2							2

Excavated By: Dan Perri
Excavation Method: Mini Excavator
Excavation Date: 2023-11-30

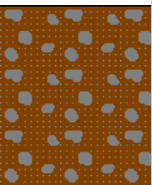
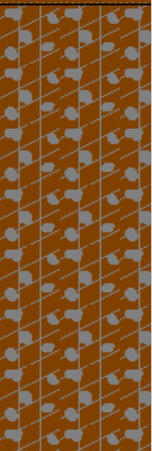
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Datum: NAD83 CSRS 2010
Sheet: 1 of 1

**Oakhill
Environmental Inc.**
1-218 Martindale Road,
St. Catharines, ON, L2S 0B2
Tel: 905 988 1243 Fax: 905 988 1887

Log of Test Pit: TP6

Project No.: PR-23-037
Project: Phase 2 ESA
Site Location: 7302 Kalar Rd., Niagara Falls
Status: Test pit

Elevation: 183.0 masl
Total Depth: 1.1 m
Project Manager: DM
Logged By: AF

SUBSURFACE PROFILE			SAMPLE				
Depth (m)	Symbol	Description	Elevation	Number	Vapour (ppm)	Type	Depth (m)
0		Ground Surface	183.0				0
		Dry, brown/grey fill with gravel inclusions	182.7				
		Moist, brown/grey, compact, silty clay with gravel inclusions					
1				181.9	TP6	0.0	
2							2

Excavated By: Dan Perri
Excavation Method: Mini Excavator
Excavation Date: 2023-11-30

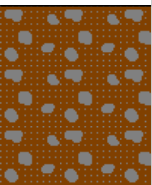
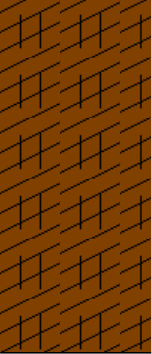
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Datum: NAD83 CSRS 2010
Sheet: 1 of 1

**Oakhill
Environmental Inc.**
1-218 Martindale Road,
St. Catharines, ON, L2S 0B2
Tel: 905 988 1243 Fax: 905 988 1887

Log of Test Pit: TP7

Project No.: PR-23-037
Project: Phase 2 ESA
Site Location: 7302 Kalar Rd., Niagara Falls
Status: Test pit

Elevation: 183.1 masl
Total Depth: 0.9 m
Project Manager: DM
Logged By: AF

SUBSURFACE PROFILE			SAMPLE				Depth (m)
Depth (m)	Symbol	Description	Elevation	Number	Vapour (ppm)	Type	
0		Ground Surface	183.1				0
		Dry, brown fill with some amount of gravel	182.8				
		Dry-moist, brown, compact, silty clay	182.2	TP7	0.0		
1							1
2							2

Excavated By: Dan Perri
Excavation Method: Mini Excavator
Excavation Date: 2023-11-30

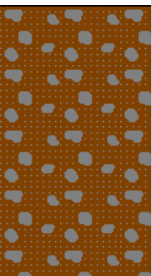
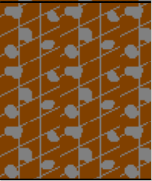
Test Pit Dimensions: 2 x 1 m
Datum: NAD83 CSRS 2010
Sheet: 1 of 1

**Oakhill
Environmental Inc.**
1-218 Martindale Road,
St. Catharines, ON, L2S 0B2
Tel: 905 988 1243 Fax: 905 988 1887

Log of Test Pit: TP8

Project No.: PR-23-037
Project: Phase 2 ESA
Site Location: 7302 Kalar Rd., Niagara Falls
Status: Test pit

Elevation: 182.8 masl
Total Depth: 0.8 m
Project Manager: DM
Logged By: AF

SUBSURFACE PROFILE			SAMPLE				Depth (m)
Depth (m)	Symbol	Description	Elevation	Number	Vapour (ppm)	Type	
0		Ground Surface	182.8				0
		Dry, brown fill with large stones	182.3				
		Dry-moist, brown, compact, silty clay with gravel inclusions	182.0	TP8	0.1		
1							1
2							2

Excavated By: Dan Perri
Excavation Method: Mini Excavator
Excavation Date: 2023-11-30

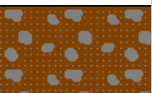

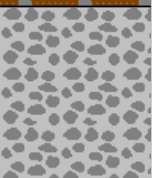
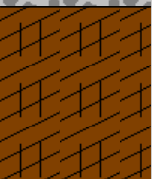
Test Pit Dimensions: 2 x 1 m
Datum: NAD83 CSRS 2010
Sheet: 1 of 1

**Oakhill
Environmental Inc.**
1-218 Martindale Road,
St. Catharines, ON, L2S 0B2
Tel: 905 988 1243 Fax: 905 988 1887

Log of Test Pit: TP9

Project No.: PR-23-037
Project: Phase 2 ESA
Site Location: 7302 Kalar Rd., Niagara Falls
Status: Test pit

Elevation: 182.6 masl
Total Depth: 0.9 m
Project Manager: DM
Logged By: AF

SUBSURFACE PROFILE			SAMPLE				
Depth (m)	Symbol	Description	Elevation	Number	Vapour (ppm)	Type	Depth (m)
0		Ground Surface	182.6				0
		Dry fill with gravel inclusions	182.5				
		Moist fill with gravel inclusions	182.3				
		Gravel and large stones	182.0				
		Dry, brown, compact, silty clay	181.7	TP9	0.0		
1							1
2							2

Excavated By: Dan Perri
Excavation Method: Mini Excavator
Excavation Date: 2023-11-30

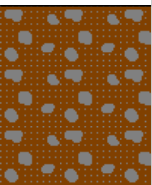
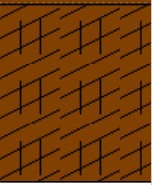
Test Pit Dimensions: 2 x 1 m
Datum: NAD83 CSRS 2010
Sheet: 1 of 1

**Oakhill
Environmental Inc.**
1-218 Martindale Road,
St. Catharines, ON, L2S 0B2
Tel: 905 988 1243 Fax: 905 988 1887

Log of Test Pit: TP10

Project No.: PR-23-037
Project: Phase 2 ESA
Site Location: 7302 Kalar Rd., Niagara Falls
Status: Test pit

Elevation: 182.7 masl
Total Depth: 0.6 m
Project Manager: DM
Logged By: AF

SUBSURFACE PROFILE			SAMPLE				Depth (m)
Depth (m)	Symbol	Description	Elevation	Number	Vapour (ppm)	Type	
0		Ground Surface	182.7				0
		Dry-moist, brown fill with gravel inclusions	182.4				
		Dry-moist, brown, compact, silty clay	182.1	TP10	0.0		
1							1
2							2

Excavated By: Dan Perri
Excavation Method: Mini Excavator
Excavation Date: 2023-11-30

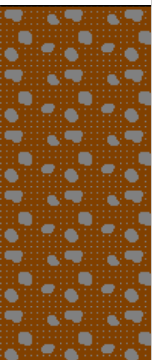
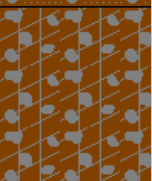
Test Pit Dimensions: 2 x 1 m
Datum: NAD83 CSRS 2010
Sheet: 1 of 1

**Oakhill
Environmental Inc.**
1-218 Martindale Road,
St. Catharines, ON, L2S 0B2
Tel: 905 988 1243 Fax: 905 988 1887

Log of Test Pit: TP11

Project No.: PR-23-037
Project: Phase 2 ESA
Site Location: 7302 Kalar Rd., Niagara Falls
Status: Test pit

Elevation: 182.7 masl
Total Depth: 0.9 m
Project Manager: DM
Logged By: AF

SUBSURFACE PROFILE			SAMPLE				Depth (m)
Depth (m)	Symbol	Description	Elevation	Number	Vapour (ppm)	Type	
0		Ground Surface	182.7				0
		Dry-moist, brown, compact fill with gravel inclusions and some organic materials					
			182.1				
		Dry-moist, brown, compact, silty clay with gravel inclusions			TP11	0.0	
			181.8				
1							1
2							2

Excavated By: Dan Perri
Excavation Method: Mini Excavator
Excavation Date: 2023-11-30

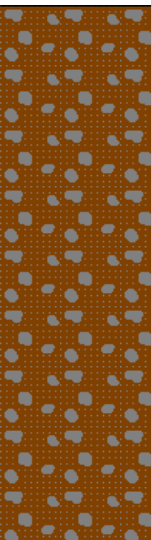
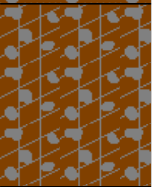
Test Pit Dimensions: 2 x 1 m
Datum: NAD83 CSRS 2010
Sheet: 1 of 1

**Oakhill
Environmental Inc.**
1-218 Martindale Road,
St. Catharines, ON, L2S 0B2
Tel: 905 988 1243 Fax: 905 988 1887

Log of Test Pit: TP12

Project No.: PR-23-037
Project: Phase 2 ESA
Site Location: 7302 Kalar Rd., Niagara Falls
Status: Test pit

Elevation: 183.8 masl
Total Depth: 1.2 m
Project Manager: DM
Logged By: AF

SUBSURFACE PROFILE			SAMPLE				
Depth (m)	Symbol	Description	Elevation	Number	Vapour (ppm)	Type	Depth (m)
0		Ground Surface	183.8				0
		Dry, brown, compact fill with gravel inclusions and some organic materials					
1			182.9				
		Dry, brown, compact, silty clay with gravel inclusions			TP12	0.0	
			182.6				
2							2

Excavated By: Dan Perri
Excavation Method: Mini Excavator
Excavation Date: 2023-11-30

Test Pit Dimensions: 2 x 1 m
Datum: NAD83 CSRS 2010
Sheet: 1 of 1

**Oakhill
Environmental Inc.**
1-218 Martindale Road,
St. Catharines, ON, L2S 0B2
Tel: 905 988 1243 Fax: 905 988 1887

Log of Borehole/Monitoring Well: OBH1/MW1

Project No.: PR-23-037
Project: Phase 2 ESA
Site Location: 7302 Kalar Rd., Niagara Falls
Status: Water well

Elevation: 182.7 masl
Total Depth: 7.6 m
Water Level: 1.6 mbgs
Project Manager: DM
Logged By: AF

SUBSURFACE PROFILE				SAMPLE		DRILL METHOD			Well Completion Details	Depth (m)
Depth (m)	Symbol	Description	Elevation (m)	Number	Vapour (ppm)	Type Symbol	Type	Recovery (%)		
0		Ground Surface								0
		Dry-moist, brown fill with gravel inclusions	182.4				AUG			0.5
		Dry-moist, brown, compact, silty clay with gravel inclusions	181.9							1.0
1		Dry-moist, brown/grey, compact, silty clay with gravel inclusions	181.2	OBH1-1			SS	40		1.5
2		Moist-wet, brown/grey, compact/dense, silty clay					AUG			2.0
										2.5
3			179.6	OBH1-2			SS	50		3.0
4		Moist-wet, brown/grey, compact/dense, silty clay					AUG			3.5
										4.0
5			178.1	OBH1-3			SS	40		4.5
6		Wet, grey/brown, compact/dense, silty clay					AUG		5.0	
									5.5	
7			176.6	OBH1-4			SS	50	6.0	
		Wet, grey/brown, compact/dense, silty clay					AUG		6.5	
									7.0	
			175.1	OBH1-5			SS	99	7.5	

Drilled By: Elements Geo. Corp.

Drill Method: Diedrich D70 - Hollow Stem Auger (AUG), Split Spoon (SS)

Drill Date: 2023-12-12

Hole Size: 15 cm

Datum: NAD83 CSRS 2010

Sheet: 1 of 1

**Oakhill
Environmental Inc.**
1-218 Martindale Road,
St. Catharines, ON, L2S 0B2
Tel: 905 988 1243 Fax: 905 988 1887

Log of Borehole/Monitoring Well: OBH2/MW2

Project No.: PR-23-037
Project: Phase 2 ESA
Site Location: 7302 Kalar Rd., Niagara Falls
Status: Water well

Elevation: 182.8 masl
Total Depth: 7.6 m
Water Level: 1.6 mbgs
Project Manager: DM
Logged By: AF

SUBSURFACE PROFILE				SAMPLE		DRILL METHOD			Well Completion Details	Depth (m)
Depth (m)	Symbol	Description	Elevation (m)	Number	Vapour (ppm)	Type Symbol	Type	Recovery (%)		
0		Ground Surface								0
		Dry-moist, brown fill with gravel inclusions	182.4							0
		Dry-moist, brown, compact, silty clay with gravel inclusions	181.9				AUG			1
1		Dry-moist, brown/grey, compact, silty clay with gravel inclusions	181.2							1
		Dry, brown/grey, compact, silty clay with gravel inclusions					SS	35		2
2			180.4	OBH2-1						2
		Dry, brown/grey, compact/dense, silty clay					AUG			3
3										3
							SS	60		4
4			178.1	OBH2-2						4
		Moist-wet, grey/brown, compact/dense, silty clay					AUG		5	
5									5	
							SS	90	6	
6				OBH2-3					6	
							AUG		7	
7			175.1						7	

Drilled By: Elements Geo. Corp.

Drill Method: Diedrich D70 - Hollow Stem Auger (AUG), Split Spoon (SS)

Drill Date: 2023-12-12

Hole Size: 15 cm

Datum: NAD83 CSRS 2010

Sheet: 1 of 1

**Oakhill
Environmental Inc.**
1-218 Martindale Road,
St. Catharines, ON, L2S 0B2
Tel: 905 988 1243 Fax: 905 988 1887

Log of Borehole/Monitoring Well: OBH3/MW3

Project No.: PR-23-037B
Project: Phase 2 ESA
Site Location: 7302 Kalar Rd., Niagara Falls
Status: Water well

Elevation: 182.7 masl
Total Depth: 7.6 m
Water Level: 1.7 mbgs
Project Manager: DM
Logged By: AF

SUBSURFACE PROFILE				SAMPLE		DRILL METHOD			Well Completion Details	Depth (m)
Depth (m)	Symbol	Description	Elevation (m)	Number	Vapour (ppm)	Type Symbol	Type	Recovery (%)		
0		Ground Surface								0
		Gravel fill	182.4							1
1		Dry, brown and grey, compact, silty clay with gravel inclusions					AUG			2
2			180.4	BH3-1	N/A		SS	20		3
3		Dry-moist, brown/grey, compact/dense, silty clay					AUG			4
4			178.2	BH3-2	0.0		SS	40		5
5		Wet, brown and grey, dense, silty clay					AUG			6
6							SS	80		7
7			175.1	BH3-3	0.2		AUG			

Drilled By: Elements Geo. Corp.

Drill Method: Diedrich D70 - Hollow Stem Auger (AUG), Split Spoon (SS)

Drill Date: 2023-12-12

Hole Size: 15 cm

Datum: NAD83 CSRS 2010

Sheet: 1 of 1

**Oakhill
Environmental Inc.**
1-218 Martindale Road,
St. Catharines, ON, L2S 0B2
Tel: 905 988 1243 Fax: 905 988 1887

Log of Borehole/Monitoring Well: OBH4

Project No.: PR-23-037
Project: Phase 2 ESA
Site Location: 7302 Kalar Rd., Niagara Falls
Status: Borehole

Elevation: N/A
Total Depth: 1.2 m
Water Level: N/A
Project Manager: DM
Logged By: AF

SUBSURFACE PROFILE				SAMPLE		DRILL METHOD			Well Completion Details	Depth (m)
Depth (m)	Symbol	Description	Elevation (m)	Number	Vapour (ppm)	Type Symbol	Type	Recovery (%)		
0		Ground Surface	0.0							0
		Concrete and asphalt	-0.2							
		Moist, brown, loose, poorly sorted, silty clay with gravel inclusions					DT	45		
1			-1.2	OBH4-1	0.0					1
2										2
3										3
4										4
5										5
6										6

Drilled By: Oakhill Environmental Inc.
Drill Method: Geoprobe 5410 Dual Tube (DT)
Drill Date: 2023-12-12

Hole Size: 5.7 cm
Datum: NAD83 CSRS 2010
Sheet: 1 of 1

**Oakhill
Environmental Inc.**
1-218 Martindale Road,
St. Catharines, ON, L2S 0B2
Tel: 905 988 1243 Fax: 905 988 1887

Log of Borehole/Monitoring Well: OBH5

Project No.: PR-23-037
Project: Phase 2 ESA
Site Location: 7302 Kalar Rd., Niagara Falls
Status: Borehole

Elevation: N/A
Total Depth: 1.2 m
Water Level: N/A
Project Manager: DM
Logged By: AF

SUBSURFACE PROFILE				SAMPLE		DRILL METHOD			Well Completion Details	Depth (m)
Depth (m)	Symbol	Description	Elevation (m)	Number	Vapour (ppm)	Type Symbol	Type	Recovery (%)		
0		Ground Surface	0.0							0
		Concrete and asphalt	-0.2							
		Dry-moist, brown, compact, silty clay								
1			-1.2	OBH5-1	0.0		DT	75		1
2										2
3										3
4										4
5										5
6										6

Drilled By: Oakhill Environmental Inc.
Drill Method: Geoprobe 5410 Dual Tube (DT)
Drill Date: 2023-12-12

Hole Size: 5.7 cm
Datum: NAD83 CSRS 2010
Sheet: 1 of 1

**Oakhill
Environmental Inc.**
1-218 Martindale Road,
St. Catharines, ON, L2S 0B2
Tel: 905 988 1243 Fax: 905 988 1887

Log of Borehole/Monitoring Well: OBH6

Project No.: PR-23-037
Project: Phase 2 ESA
Site Location: 7302 Kalar Rd., Niagara Falls
Status: Borehole

Elevation: N/A
Total Depth: 2.4 m
Water Level: N/A
Project Manager: DM
Logged By: AF

SUBSURFACE PROFILE				SAMPLE		DRILL METHOD			Well Completion Details	Depth (m)
Depth (m)	Symbol	Description	Elevation (m)	Number	Vapour (ppm)	Type Symbol	Type	Recovery (%)		
0		Ground Surface	0.0							0
		Concrete	-0.2							
		Dry-moist, brown, compact, silty clay					DT	75		
1			-1.2	OBH6-1	0.0					1
		Dry-moist, brown, very dense, well sorted, silty clay					DT	90		
2			-2.4	OBH6-2	0.0					2
3										3
4										4
5										5
6										6

Drilled By: Oakhill Environmental Inc.
Drill Method: Geoprobe 5410 Dual Tube (DT)
Drill Date: 2023-12-12

Hole Size: 5.7 cm
Datum: NAD83 CSRS 2010
Sheet: 1 of 1

**Oakhill
Environmental Inc.**
1-218 Martindale Road,
St. Catharines, ON, L2S 0B2
Tel: 905 988 1243 Fax: 905 988 1887

Log of Borehole/Monitoring Well: OBH7

Project No.: PR-23-037
Project: Phase 2 ESA
Site Location: 7302 Kalar Rd., Niagara Falls
Status: Borehole

Elevation: N/A
Total Depth: 2.4 m
Water Level: N/A
Project Manager: DM
Logged By: AF

SUBSURFACE PROFILE				SAMPLE		DRILL METHOD			Well Completion Details	Depth (m)
Depth (m)	Symbol	Description	Elevation (m)	Number	Vapour (ppm)	Type Symbol	Type	Recovery (%)		
0		Ground Surface	0.0							0
		Concrete and gravel	-0.2							
		Dry-moist, brown, compact, silty clay								
1			-1.2	OBH7-1	0.0		DT	50		1
		Dry-moist, brown, very dense, well sorted, silty clay								
2			-2.4	OBH7-2	0.0		DT	99		2
3										3
4										4
5										5
6										6

Drilled By: Oakhill Environmental Inc.
Drill Method: Geoprobe 5410 Dual Tube (DT)
Drill Date: 2023-12-12

Hole Size: 5.7 cm
Datum: NAD83 CSRS 2010
Sheet: 1 of 1

**Oakhill
Environmental Inc.**
1-218 Martindale Road,
St. Catharines, ON, L2S 0B2
Tel: 905 988 1243 Fax: 905 988 1887

Log of Borehole/Monitoring Well: OBH8

Project No.: PR-23-037
Project: Phase 2 ESA
Site Location: 7302 Kalar Rd., Niagara Falls
Status: Borehole

Elevation: N/A
Total Depth: 2.1 m
Water Level: N/A
Project Manager: DM
Logged By: AF

SUBSURFACE PROFILE				SAMPLE		DRILL METHOD			Well Completion Details	Depth (m)
Depth (m)	Symbol	Description	Elevation (m)	Number	Vapour (ppm)	Type Symbol	Type	Recovery (%)		
0		Ground Surface	0.0							0
		Concrete	-0.2							
		Dry-moist, brown, very dense, silty clay								
1			-1.2	OBH8-1	0.0		DT	99		1
		Dry, brown, very dense, silty clay								
2			-2.1	OBH8-2	0.0		DT	99		2
3										3
4										4
5										5
6										6

Drilled By: Oakhill Environmental Inc.
Drill Method: Geoprobe 5410 Dual Tube (DT)
Drill Date: 2023-12-12

Hole Size: 5.7 cm
Datum: NAD83 CSRS 2010
Sheet: 1 of 1

**Oakhill
Environmental Inc.**
1-218 Martindale Road,
St. Catharines, ON, L2S 0B2
Tel: 905 988 1243 Fax: 905 988 1887

Log of Borehole/Monitoring Well: OBH9

Project No.: PR-23-037
Project: Phase 2 ESA
Site Location: 7302 Kalar Rd., Niagara Falls
Status: Borehole

Elevation: N/A
Total Depth: 2.4 m
Water Level: N/A
Project Manager: DM
Logged By: AF

SUBSURFACE PROFILE				SAMPLE		DRILL METHOD			Well Completion Details	Depth (m)
Depth (m)	Symbol	Description	Elevation (m)	Number	Vapour (ppm)	Type Symbol	Type	Recovery (%)		
0		Ground Surface	0.0							0
		Concrete	-0.2							
		Dry, dark brown, silty clay								
1			-1.2	OBH9-1	0.0		DT	60		1
		Dry, brown, very dense, silty clay								
2			-2.4	OBH9-2	0.0		DT	99		2
3										3
4										4
5										5
6										6

Drilled By: Oakhill Environmental Inc.
Drill Method: Geoprobe 5410 Dual Tube (DT)
Drill Date: 2023-12-12

Hole Size: 5.7 cm
Datum: NAD83 CSRS 2010
Sheet: 1 of 1

APPENDIX B:
Analytical Results Tables

Table B-1: Field Screening Readings

Sample ID	Result (ppm)	Sample ID	Result (ppm)
TP1	0.0	OBH2-1	0.0
TP2	0.1	OBH2-2	0.0
TP3	0.1	OBH2-3	0.1
TP4	0.0	OBH3-1	0.0
TP5	0.0	OBH3-2	0.0
TP6	0.1	OBH3-3	0.2
TP7	0.0	OBH4-1	0.0
TP8	0.1	OBH5-1	0.0
TP9	0.0	OBH6-1	0.0
TP10	0.0	OBH6-2	0.0
TP11	0.0	OBH7-1	0.0
TP12	0.0	OBH7-2	0.0
OBH1-1	0.1	OBH8-1	0.0
OBH1-2	0.1	OBH8-2	0.0
OBH1-3	0.0	OBH9-1	0.0
OBH1-4	0.2	OBH9-2	0.0
OBH1-5	0.2	-	-
FD1	0.1	-	-
FD2	0.0	-	-

Notes: Highlighted cells indicate samples selected for laboratory analysis

Table B-2: Sampling Rationale

Samples			Parameter											
Sample Type	Sample ID	Sample Depth Range (mbgs)	PHCs (F1-F4)	BTEX	(F2-F4)	VOCs	PAHs	Metals	BTEX	EC/SAR	pH	PCB	Grain Size	Rational/Notes
Soil	TP1	0.46	•					•	•					Samples collected to assess APEC #8
	TP2	0.61	•				•	•	•					
	TP3	0.46	•					•	•					
	TP4	0.85	•					•	•					
	OBH3-1	2.13-2.29	•			•	•	•	•					Samples collected to assess APEC #10A & #10B
	TP5	0.91	•				•	•	•					
	TP6	1	•					•	•	•	•			Samples collected to assess APEC #11
	TP7	0.76	•					•	•	•	•			
	TP8	0.67	•					•	•					Sample collected to assess APEC #1A, #1B, #1C and APEC #5
	TP9	0.76	•				•	•						
	OBH2-1	2.10-2.29	•			•	•	•						Sample collected to assess APEC #1A, #1B, #1C, APEC #2 and APEC #6
	TP10	0.46	•					•						
	OBH1-2	2.67-3.05	•			•	•	•						Samples collected to assess APEC #1A, #1B, #1C, APEC #5 and APEC #12
	TP11	0.76			•			•		•	•	•		
	TP12	0.97			•			•		•	•	•		Grain size analysis
	OBH1-5	7.24-7.62											•	
	OBH4-1	0.3-1.22				•	•	•						Sample collected to assess APEC #9
	OBH5-1	0.3-1.22				•	•	•						
	OBH6-1	0.61-1.22				•	•	•						Samples collected to assess APEC #3
	OBH7-1	0.61-1.22				•	•	•						
OBH8-1	0.3-1.22				•	•	•						Sample collected to assess APEC #1A, #1B, #1C, APEC #4, APEC #5 and APEC #7	
OBH9-1	0.61-1.22				•	•	•							
OBH8-1	0.3-1.22				•	•	•					•	Sample collected to assess APEC #1A, #1B, #1C, APEC #4, APEC #5 and APEC #6	
OBH9-1	0.61-1.22				•	•	•							
OBH9-1	0.61-1.22				•	•	•						Sample collected to assess APEC #1A, #1B, #1C, APEC #4 and APEC #5	
FD1	0.61	•					•	•	•					
FD2	0.76	•					•	•	•	•			Incorporated as a QA/QC sample.	
OBH9-1	0.61-1.22				•	•	•							
Groundwater	MW1	-	•	•	•	•	•					•	Sample collected to assess APEC #1A, #1B, #1C, APEC #6 and APEC #12	
	MW2	-	•	•	•	•	•					•		
	MW3	-	•	•	•	•	•					•	Samples collected to assess APEC #8	

Notes: FD1 is the duplicate of TP2
 FD2 is the duplicate of TP7

Table B-3: Soil Analytical Results – Petroleum Hydrocarbons & BTEX

PR-23-037A	Sampling ID		TP1	TP2	TP3	TP4	TP5	TP6	TP7	TP8	TP11	TP12	FD2	OBH1-2	OBH2-1	OBH3-1	OBH4-1	OBH5-1	OBH6-1	OBH7-1	OBH8-1	OBH9-1	
	Sampling Date		11/30/2023											12/12/2023									
	Field Readings (ppm)		0.1	0.1	0.1	0.0	0.0	0.1	0.0	0.1	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Parameter	Units	Table 8																					
Petroleum Hydrocarbons																							
F1 PHCs (C6-C10)	ug/g	25	<5	<5	<5	<5	<5	<5	<5	<5	N/A	N/A	N/A	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
F2 PHCs (C10-C16)	ug/g	10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	243
F3 PHCs (C16-C34)	ug/g	240	<50	<50	<50	<50	103	154	<50	<50	<50	<50	N/A	<50	<50	<50	<50	91	207	<50	<50	<50	164
F4 PHCs (C34-C50)	ug/g	120	<50	<50	<50	<50	84	251	<50	<50	<50	<50	N/A	<50	68	<50	<50	182	490	<50	<50	<50	<50
BTEX																							
Benzene	ug/g	0.02	<0.02	N/A	N/A	<0.02	<0.02	<0.02	<0.02	<0.02	N/A	N/A	<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	0.2	<0.05	N/A	N/A	<0.05	<0.05	<0.05	<0.05	<0.05	N/A	N/A	<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	0.05	<0.05	N/A	N/A	<0.05	<0.05	<0.05	<0.05	<0.05	N/A	N/A	<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	N/A	<0.05	N/A	N/A	<0.05	<0.05	<0.05	<0.05	<0.05	N/A	N/A	<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	N/A	<0.05	N/A	N/A	<0.05	<0.05	<0.05	<0.05	<0.05	N/A	N/A	<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	0.05	<0.05	N/A	N/A	<0.05	<0.05	<0.05	<0.05	<0.05	N/A	N/A	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05

1. ND = Not detected above method of detection limit
2. ug/g = micrograms per gram
3. Table 8 = Ministry of the Environment, Conservation and Parks (MECP) "Soil, Groundwater, and Sediment Standards, Part XV.1 EPA, as amended 2011"
4. Generic Site Condition Standards for Use within 30 m of a Water Body in a Potable Groundwater Condition
5. Values in bold and highlighted do not meet applicable MECP Standards
6. Values highlighted in blue fall below method of detection limit but have the possibility to not meet applicable MECP Standards
7. N/A – Not analyzed or not applicable

Table B-4: Soil Analytical Results – Volatile Organic Compounds

PR-23-037A	Sampling ID		TP9	TP10	FD1	OBH1-2	OBH2-1	OBH3-1	OBH4-1	OBH5-1	OBH6-1	OBH7-1	OBH8-1	OBH9-1	
	Sampling Date		11/30/2023					12/12/2023							
	Field Readings (ppm)		0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Parameter	Units	Table8													
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	
1,1,1-Trichloroethane	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	
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	
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	
1,1-Dichloroethane	ug/g	0.05	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	
1,1-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	
1,2-Dichlorobenzene	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	
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	
1,2-Dichloropropane	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	
1,3-Dichlorobenzene	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	
1,3-Dichloropropene (Cis + Trans)	ug/g	0.05	<0.04	<0.04	<0.04	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	
1,4-Dichlorobenzene	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	
Acetone	ug/g	0.5	<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	0.02	<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	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	0.05	<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	
Carbon Tetrachloride	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	
Chlorobenzene	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	
Chloroform	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	
Cis-1,2-Dichloroethylene	ug/g	0.05	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	
Dibromochloromethane	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	
Dichlorodifluoromethane	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	
Ethylbenzene	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	
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	
m & p-Xylene	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	
Methyl Ethyl Ketone	ug/g	0.5	<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	0.5	<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	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	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	
n-Hexane	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	
o-Xylene	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	
Styrene	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	
Tetrachloroethylene	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	
Toluene	ug/g	0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	
Trans-1,2-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	
Trichloroethylene	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	
Trichlorofluoromethane	ug/g	0.25	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	
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	
Xylenes (Total)	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	

1. ND = Not detected above method of detection limit
 2. µg/g = micrograms per gram
 3. Table 8 = Ministry of the Environment, Conservation and Parks (MECP) "Soil, Groundwater, and Sediment Standards, Part XV.1 EPA, as amended 2011"
- Generic Site Condition Standards for Use within 30 m of a Water Body in a Potable Groundwater Condition
4. Values in bold and highlighted do not meet applicable MECP Standards
 5. Values highlighted in blue fall below method of detection limit but have the possibility to not meet applicable MECP Standards
 6. N/A – Not analyzed or not applicable

Table B-5: Soil Analytical Results – Polycyclic Aromatic Hydrocarbons & Acid/Base Neutrals

PR-23-037A	Sampling ID	TP2	TP5	TP6	TP9	FD1	OBH1-2	OBH2-1	OBH3-1	OBH4-1	OBH5-1	OBH6-1	OBH7-1	OBH8-1	OBH9-1	
	Sampling Date	11/30/2023					12/12/2023									
	Field Readings (ppm)	0.1	0.0	0.1	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Parameter	Units	Table 8														
1 and 2 Methlynaphthalene	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
1,1-Biphenyl	ug/g	0.05	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
1,2,4-Trichlorobenzene	ug/g	0.05	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
2,4 and 2,6-Dinitrotoluene	ug/g	0.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
2,4,5-Trichlorophenol	ug/g	0.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
2,4,6-Trichlorophenol	ug/g	0.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
2,4-Dichlorophenol	ug/g	0.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
2,4-Dimethylphenol	ug/g	0.2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
2,4-Dinitrophenol	ug/g	2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
2-Chlorophenol	ug/g	0.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
3,3'-Dichlorobenzidine	ug/g	1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Acenaphthene	ug/g	0.072	<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
Acenaphthylene	ug/g	0.093	<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
Anthracene	ug/g	0.22	<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
Benz(a)anthracene	ug/g	0.36	<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
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	<0.05	<0.05	<0.05
Benzo(b)fluoranthene	ug/g	0.47	<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
Benzo(g,h,i)perylene	ug/g	0.68	<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
Benzo(k)fluoranthene	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	<0.05	<0.05	<0.05
Bis(2-chloroethyl)ether	ug/g	0.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Bis(2-chloroisopropyl)ether	ug/g	0.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Bis(2-Ethylhexyl)phthalate	ug/g	5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Chrysene	ug/g	2.8	<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
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	<0.05	<0.05	<0.05
Diethyl Phthalate	ug/g	0.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Dimethyl Phthalate	ug/g	0.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
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	<0.05	<0.05	<0.05
Fluorene	ug/g	0.19	<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
Indeno(1,2,3-cd)pyrene	ug/g	0.23	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Naphthalene	ug/g	0.09	<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
p-Chloroaniline	ug/g	0.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Pentachlorophenol	ug/g	0.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Phenanthrene	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	<0.05	<0.05	<0.05
Phenol	ug/g	0.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Pyrene	ug/g	1	<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. ND = Not detected above method of detection limit
2. ug/g = micrograms per gram
3. Table 8 = Ministry of the Environment, Conservation and Parks (MECP) "Soil, Groundwater, and Sediment Standards, Part XV.1 EPA, as amended 2011"
Generic Site Condition Standards for Use within 30 m of a Water Body in a Potable Groundwater Condition
4. Values in bold and highlighted do not meet applicable MECP Standards
5. Values highlighted in blue fall below method of detection limit but have the possibility to not meet applicable MECP Standards
6. N/A – Not analyzed or not applicable

Table B-6: Soil Analytical Results – Metals & General Inorganics

PR-23-037A	Sampling ID		TP1	TP2	TP3	TP4	TP5	TP6	TP7	TP8	TP9	TP10	TP11	TP12	FD1	FD2	OBH1-2	OBH1-5	OBH2-1	OBH3-1	OBH4-1	OBH5-1	OBH6-1	OBH7-1	OBH8-1	OBH9-1		
	Sampling Date		11/30/2023																									
	Field Readings (ppm)		0.1	0.1	0.1	0.0	0.0	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Parameter	Units	Table 8																										
Metals																												
Antimony	µg/g	1.3	<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	µg/g	18	8	8	8	8	7	5	7	6	6	7	7	6	6	6	6	5	4	6	5	7	5	5	6	6	5	
Barium	µg/g	220	164	186	95.3	203	140	142	247	198	89.7	215	173	185	159	183	184	119	268	145	79.5	46.9	97.5	106	188	49.5		
Beryllium	µg/g	2.5	1.8	1.5	1	1.6	1.1	1	1.7	1.3	0.9	1.6	1.5	1.3	1.5	1.5	1	0.7	0.6	0.9	<0.5	<0.5	0.6	0.7	1.1	<0.5		
Boron	µg/g	36	11	13	9	12	14	10	16	16	9	15	17	11	9	14	16	10	<5	10	6	14	9	9	11	<5		
Boron (Hot Water Soluble)	µg/g	1.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.29	0.27	0.21	0.44	0.75	0.53	0.69	0.64	0.37	1.24		
Cadmium	µg/g	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.7	0.6	<0.5	<0.5	<0.5	<0.5		
Chromium	µg/g	70	46	42	37	44	35	28	52	42	27	49	47	41	36	47	37	25	22	32	16	9	22	26	39	18		
Chromium, Hexavalent	µg/g	0.66	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2		
Cobalt	µg/g	22	19.7	16.8	18.6	27.7	16	9.3	22.4	18.4	9.8	18.6	19.6	14.4	16.7	19.2	17.7	13.2	10.8	16.9	11.9	7.8	10.7	12.7	19.7	9.2		
Copper	µg/g	92	27.7	28.3	17.6	31.6	28	20.8	30.3	29.5	20.2	30.9	28.3	27.3	26.2	27.8	26.1	17.3	20.5	26.2	21.1	12.4	16.6	20.9	30.1	8.4		
Lead	µg/g	120	17	13	16	17	12	21	14	12	8	13	12	10	13	14	10	7	8	12	33	29	29	20	13	15		
Mercury	µg/g	0.27	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10		
Molybdenum	µg/g	2	<0.5	0.5	0.9	0.8	0.7	2	0.5	0.6	0.6	<0.5	0.6	<0.5	0.6	<0.5	0.8	0.6	0.7	0.7	0.7	0.7	0.6	0.6	<0.5	0.9		
Nickel	µg/g	82	41	42	25	50	36	20	51	42	26	46	44	35	36	44	40	29	27	38	17	10	22	28	39	18		
Selenium	µg/g	1.5	<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		
Silver	µg/g	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<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	<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	µg/g	2.5	0.79	0.78	0.89	1.39	0.67	1.19	1.54	1.2	1.09	0.69	1.68	1.74	0.8	1.33	1.02	0.98	0.64	1.1	0.56	<0.50	0.84	0.79	1.05	0.53		
Vanadium	µg/g	86	63	59.7	54.8	65.1	53.6	47.3	70.4	58.9	45.4	66	64.6	56	53.2	63.5	53.4	34.8	37	45.9	24.5	13.7	36.1	40.1	58.1	35.4		
Zinc	µg/g	290	90	82	76	88	76	72	99	82	56	90	86	77	81	91	80	57	50	73	156	132	144	80	78	52		
General Inorganics																												
SAR	N/A	5	N/A	N/A	N/A	N/A	N/A	1.61	0.917	N/A	N/A	N/A	0.781	0.882	N/A	1.01	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Conductivity	mS/cm	0.7	N/A	N/A	N/A	N/A	N/A	0.453	0.444	N/A	N/A	N/A	0.461	0.308	N/A	0.323	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
pH	pH Units		N/A	N/A	N/A	N/A	N/A	7.14	6.98	N/A	N/A	N/A	7.47	7.27	N/A	7.48	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	

1. ND = Not detected above method of detection limit
 2. µg/g = micrograms per gram
 3. Table 8 = Ministry of the Environment, Conservation and Parks (MECP) "Soil, Groundwater, and Sediment Standards, Part XV.1 EPA, as amended 2011"
 Generic Site Condition Standards for Use within 30 m of a Water Body in a Potable Groundwater Condition
 4. Values in bold and highlighted do not meet applicable MECP Standards
 5. Values highlighted in blue fall below method of detection limit but have the possibility to not meet applicable MECP Standards
 6. N/A – Not analyzed or not applicable

Table B-7: Soil Analytical Results – Polychlorinated Biphenyl

PR-23-037A	Sampling ID		TP11	TP12
	Sampling Date		11/30/2023	
	Field Readings (ppm)		0.0	0.0
Parameter	Units	Table 8		
Polychlorinated Biphenyls	ug/g	0.3	<0.1	<0.1

1. ND = Not detected above method of detection limit
2. µg/g = micrograms per gram
3. Table 8 = Ministry of the Environment, Conservation and Parks (MECP) "Soil, Groundwater, and Sediment Standards, Part 473 – Generic Site Condition Standards for Use within 30 m of a Water Body in a Potable Groundwater Condition"
4. Values in bold and highlighted do not meet applicable MECP Standards
5. Values highlighted in blue fall below method of detection limit but have the possibility to not meet applicable MECP Standards
6. N/A – Not analyzed or not applicable

Table B-8: Groundwater Analytical Results – Petroleum Hydrocarbons (PHCs) & Volatile Organic Compounds (VOCs)

PR-22-037A	Sampling ID		MW1	MW2	MW3
	Sampling Date		12/20/2023		
Parameter	Units	Table 8			
PHCs					
F1 PHCs (C6-C10)	ug/L	420	<25	<25	<25
F2 PHCs (C10-C16)	ug/L	150	<100	<100	<100
F3 PHCs (C16-C34)	ug/L	500	<100	<100	<100
F4 PHCs (C34-C50)	ug/L	500	<100	<100	<100
VOCs					
1,1,1,2-Tetrachloroethane	µg/L	1.1	<0.10	<0.10	<0.10
1,1,1-Trichloroethane	µg/L	200	<0.30	<0.30	<0.30
1,1,2,2-Tetrachloroethane	µg/L	1	<0.10	<0.10	<0.10
1,1,2-Trichloroethane	µg/L	4.7	<0.20	<0.20	<0.20
1,1-Dichloroethane	µg/L	5	<0.30	<0.30	<0.30
1,1-Dichloroethylene	µg/L	1.6	<0.30	<0.30	<0.30
1,2-Dichlorobenzene	µg/L	3	<0.10	<0.10	<0.10
1,2-Dichloroethane	µg/L	1.6	<0.20	<0.20	<0.20
1,2-Dichloropropane	µg/L	5	<0.20	<0.20	<0.20
1,3-Dichlorobenzene	µg/L	59	<0.10	<0.10	<0.10
1,3-Dichloropropene	µg/L	0.5	<0.30	<0.30	<0.30
1,4-Dichlorobenzene	µg/L	1	<0.10	<0.10	<0.10
Acetone	µg/L	2700	<1.0	<1.0	<1.0
Benzene	µg/L	5	<0.20	<0.20	<0.20
Bromodichloromethane	µg/L	16	<0.20	<0.20	<0.20
Bromoform	µg/L	25	<0.10	<0.10	<0.10
Bromomethane	µg/L	0.89	<0.20	<0.20	<0.20
Carbon Tetrachloride	µg/L	0.79	<0.20	<0.20	<0.20
Chlorobenzene	µg/L	30	<0.10	<0.10	<0.10
Chloroform	µg/L	2.4	<0.20	<0.20	<0.20
cis- 1,2-Dichloroethylene	µg/L	1.6	<0.20	<0.20	<0.20
Dibromochloromethane	µg/L	25	<0.10	<0.10	<0.10
Dichlorodifluoromethane	µg/L	590	<0.40	<0.40	<0.40
Ethylbenzene	µg/L	2.4	<0.10	0.11	0.11
Ethylene Dibromide	µg/L	0.2	<0.10	<0.10	<0.10
m & p-Xylene	µg/L	N/A	<0.20	0.51	0.49
Methyl Ethyl Ketone	µg/L	1800	<1.0	<1.0	<1.0
Methyl Isobutyl Ketone	µg/L	640	19.8	32.4	2.8
Methyl tert-butyl ether	µg/L	15	<0.20	<0.20	<0.20
Methylene Chloride	µg/L	50	<0.30	<0.30	<0.30
n-Hexane	µg/L	51	<0.20	<0.20	<0.20
o-Xylene	µg/L	N/A	<0.10	0.28	0.25
Styrene	µg/L	5.4	<0.10	<0.10	<0.10
Tetrachloroethylene	µg/L	1.6	<0.20	<0.20	<0.20
Toluene	µg/L	22	0.41	0.78	0.56
trans- 1,2-Dichloroethylene	µg/L	1.6	<0.20	<0.20	<0.20
Trichloroethylene	µg/L	1.6	<0.20	<0.20	<0.20
Trichlorofluoromethane	µg/L	150	<0.40	<0.40	<0.40
Vinyl Chloride	µg/L	0.5	<0.17	<0.17	<0.17
Xylenes (Total)	µg/L	300	<0.20	0.79	0.74

1. ND = Not detected above method of detection limit
2. µg/L = micrograms per litre
3. Table 8 = Ministry of the Environment, Conservation and Parks (MECP) "Soil, Groundwater, and Sediment Standards, Part XV.1 EPA, as amended 2011"
Generic Site Condition Standards for Use within 30 m of a Water Body in a Potable GroundWater Condition
4. Values in bold and highlighted do not meet applicable MECP Standards
5. N/A – Not analyzed or not applicable

Table B-9: Groundwater Analytical Results – Metals & General Inorganics

PR-22-037A	Sampling ID		MW1	MW2	MW3
	Sampling Date		12/20/2023		
Parameter	Units	Table 8			
Metals					
Dissolved Antimony	µg/L	6	<1.0	<1.0	<1.0
Dissolved Arsenic	µg/L	25	1.3	<1.0	1.1
Dissolved Barium	µg/L	1000	60.3	71.2	93.5
Dissolved Beryllium	µg/L	4	<0.50	<0.50	<0.50
Dissolved Boron	µg/L	5000	88.6	72.0	123
Dissolved Cadmium	µg/L	2.1	<0.20	<0.20	<0.20
Dissolved Chromium	µg/L	50	13.3	<2.0	3.5
Dissolved Cobalt	µg/L	3.8	1.26	4.94	4.05
Dissolved Copper	µg/L	69	5.0	2.3	2.8
Dissolved Lead	µg/L	10	<0.50	<0.50	<0.50
Dissolved Molybdenum	µg/L	70	13.4	5.79	8.70
Dissolved Nickel	µg/L	100	2.5	7.5	4.1
Dissolved Selenium	µg/L	10	<1.0	1.0	<1.0
Dissolved Silver	µg/L	1.2	<0.20	<0.20	<0.20
Dissolved Thallium	µg/L	2	<0.30	<0.30	<0.30
Dissolved Uranium	µg/L	20	3.48	3.64	6.20
Dissolved Vanadium	µg/L	6.2	2.90	0.47	0.83
Dissolved Zinc	µg/L	890	<5.0	6.3	<5.0
Mercury	µg/L	0.29	<0.02	<0.02	<0.02
Chromium VI	µg/L	25	11.0	<2.000	<2.000
Dissolved Sodium	µg/L	490000	157000	44900	89400
General Inorganics					
SAR	N/A	N/A	-	-	-
Electrical Conductivity	uS/cm	N/A	1160	1140	1350
Chloride	µg/L	790000	196000	57700	65900
Cyanide, WAD	µg/L	52	<2	<2	<2
pH	pH Units	N/A	8.27	8.12	8.17

1. ND = Not detected above method of detection limit
2. µg/L = micrograms per litre
3. Table 8 = Ministry of the Environment, Conservation and Parks (MECP) "Soil, Groundwater, and Sediment Standards, Part XV.1 EPA, as amended 2011"
Generic Site Condition Standards for Use within 30 m of a Water Body in a Potable GroundWater Condition
4. Values in bold and highlighted do not meet applicable MECP Standards
5. N/A – Not analyzed or not applicable

Table B-10: Groundwater Analytical Results – PAHs

PR-22-037A	Sampling ID		MW1	MW2	MW3
	Sampling Date		12/20/2023		
Parameter	Units	Table 8			
Semi-Volatiles					
2-and 1-methyl Naphthalene	µg/L	3.2	<0.20	<0.20	<0.20
Acenaphthene	µg/L	4.1	<0.20	<0.20	<0.20
Acenaphthylene	µg/L	1	<0.20	<0.20	<0.20
Anthracene	µg/L	1	<0.10	<0.10	<0.10
Benzo(a)anthracene	µg/L	1	<0.20	<0.20	<0.20
Benzo(a)pyrene	µg/L	0.01	<0.01	<0.01	<0.01
Benzo(b)fluoranthene	µg/L	0.1	<0.10	<0.10	<0.10
Benzo(g,h,i)perylene	µg/L	0.2	<0.20	<0.20	<0.20
Benzo(k)fluoranthene	µg/L	0.1	<0.10	<0.10	<0.10
Chrysene	µg/L	0.1	<0.10	<0.10	<0.10
Dibenz(a,h)anthracene	µg/L	0.2	<0.20	<0.20	<0.20
Fluoranthene	µg/L	0.41	<0.20	<0.20	<0.20
Fluorene	µg/L	120	<0.20	<0.20	<0.20
Indeno(1,2,3-cd)pyrene	µg/L	0.2	<0.20	<0.20	<0.20
Naphthalene	µg/L	11	<0.20	<0.20	<0.20
Phenanthrene	µg/L	1	<0.10	<0.10	<0.10
Pyrene	µg/L	4.1	<0.20	<0.20	<0.20

1. ND = Not detected above method of detection limit
2. µg/L = micrograms per litre
3. Table 8 = Ministry of the Environment, Conservation and Parks (MECP) "Soil, Groundwater, and Sediment Standards, Part XV.1 EPA, as amended 2011"
Generic Site Condition Standards for Use within 30 m of a Water Body in a Potable GroundWater Condition
4. Values in bold and highlighted do not meet applicable MECP Standards
5. N/A – Not analyzed or not applicable

Table B-11: Groundwater Analytical Results – Polychlorinated Biphenyl

PR-23-037A	Sampling ID		MW1	MW2	MW3
	Sampling Date		12/20/2023		
	Field Readings (ppm)		-	-	-
Parameter	Units	Table 8			
Polychlorinated Biphenyls	ug/g	0.3	<0.1	<0.1	<0.1

1. ND = Not detected above method of detection limit
2. µg/g = micrograms per gram
3. Table 8 = Ministry of the Environment, Conservation and Parks (MECP) "Soil, Groundwater, and Sediment Standards, Pa
Generic Site Condition Standards for Use within 30 m of a Water Body in a Potable Groundwater Condition
4. Values in bold and highlighted do not meet applicable MECP Standards
5. Values highlighted in blue fall below method of detection limit but have the possibility to not meet applicable MECP Sta
6. N/A – Not analyzed or not applicable

APPENDIX C:
Laboratory Certificates of Analysis



CLIENT NAME: OAKHILL ENVIRONMENTAL
1-218 MARTINDALE ROAD
ST. CATHARINES, ON L2S 0B2
(905) 988-1243

ATTENTION TO: Cody Bonaccorso

PROJECT: PR-23-037

AGAT WORK ORDER: 23H099917

SOIL ANALYSIS REVIEWED BY: Nivine Basily, Inorganic Team Lead

TRACE ORGANICS REVIEWED BY: Radhika Chakraborty, Trace Organics Lab Manager

DATE REPORTED: Dec 11, 2023

PAGES (INCLUDING COVER): 32

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 as specified by ISO/IEC 17025:2017 is available from AGAT Laboratories upon request.
- 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: 23H099917

PROJECT: PR-23-037

5835 COOPERS AVENUE
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CANADA L4Z 1Y2
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<http://www.agatlabs.com>

CLIENT NAME: OAKHILL ENVIRONMENTAL

ATTENTION TO: Cody Bonaccorso

SAMPLING SITE:

SAMPLED BY: Ariane

O. Reg. 153(511) - Metals (Including Hydrides) (Soil)

DATE RECEIVED: 2023-11-30

DATE REPORTED: 2023-12-11

Parameter	Unit	SAMPLE DESCRIPTION:		TP1	TP2	TP3	TP4	TP5	TP6	TP7	TP8
		G / S	RDL	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
		2023-11-30 08:30	2023-11-30 08:50	2023-11-30 09:15	2023-11-30 09:35	2023-11-30 09:55	2023-11-30 10:35	2023-11-30 11:00	2023-11-30 11:20		
				5510869	5510874	5510875	5510876	5510877	5510878	5510879	5510880
Antimony	µg/g	1.3	0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8
Arsenic	µg/g	18	1	8	8	8	8	7	5	7	6
Barium	µg/g	220	2.0	164	186	95.3	203	140	142	247	198
Beryllium	µg/g	2.5	0.5	1.8	1.5	1.0	1.6	1.1	1.0	1.7	1.3
Boron	µg/g	36	5	11	13	9	12	14	10	16	16
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	70	5	46	42	37	44	35	28	52	42
Cobalt	µg/g	22	0.8	19.7	16.8	18.6	27.7	16.0	9.3	22.4	18.4
Copper	µg/g	92	1.0	27.7	28.3	17.6	31.6	28.0	20.8	30.3	29.5
Lead	µg/g	120	1	17	13	16	17	12	21	14	12
Molybdenum	µg/g	2	0.5	<0.5	0.5	0.9	0.8	0.7	2.0	0.5	0.6
Nickel	µg/g	82	1	41	42	25	50	36	20	51	42
Selenium	µg/g	1.5	0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8
Silver	µg/g	0.5	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	2.5	0.50	0.79	0.78	0.89	1.39	0.67	1.19	1.54	1.20
Vanadium	µg/g	86	2.0	63.0	59.7	54.8	65.1	53.6	47.3	70.4	58.9
Zinc	µg/g	290	5	90	82	76	88	76	72	99	82

Certified By:



Nvine Basly



Certificate of Analysis

AGAT WORK ORDER: 23H099917

PROJECT: PR-23-037

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CLIENT NAME: OAKHILL ENVIRONMENTAL

ATTENTION TO: Cody Bonaccorso

SAMPLING SITE:

SAMPLED BY: Ariane

O. Reg. 153(511) - Metals (Including Hydrides) (Soil)

DATE RECEIVED: 2023-11-30

DATE REPORTED: 2023-12-11

Parameter	Unit	SAMPLE DESCRIPTION:		TP9	TP10	TP11	TP12	FD1	FD2
		SAMPLE TYPE:		Soil	Soil	Soil	Soil	Soil	Soil
		DATE SAMPLED:		2023-11-30 11:40	2023-11-30 11:55	2023-11-30 12:15	2023-11-30 12:30	2023-11-30	2023-11-30
		G / S	RDL	5510881	5510882	5510883	5510884	5510885	5510886
Antimony	µg/g	1.3	0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8
Arsenic	µg/g	18	1	6	7	7	6	6	6
Barium	µg/g	220	2.0	89.7	215	173	185	159	183
Beryllium	µg/g	2.5	0.5	0.9	1.6	1.5	1.3	1.5	1.5
Boron	µg/g	36	5	9	15	17	11	9	14
Cadmium	µg/g	1.2	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Chromium	µg/g	70	5	27	49	47	41	36	47
Cobalt	µg/g	22	0.8	9.8	18.6	19.6	14.4	16.7	19.2
Copper	µg/g	92	1.0	20.2	30.9	28.3	27.3	26.2	27.8
Lead	µg/g	120	1	8	13	12	10	13	14
Molybdenum	µg/g	2	0.5	0.6	<0.5	0.6	<0.5	0.6	<0.5
Nickel	µg/g	82	1	26	46	44	35	36	44
Selenium	µg/g	1.5	0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8
Silver	µg/g	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
Uranium	µg/g	2.5	0.50	1.09	0.69	1.68	1.74	0.80	1.33
Vanadium	µg/g	86	2.0	45.4	66.0	64.6	56.0	53.2	63.5
Zinc	µg/g	290	5	56	90	86	77	81	91

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 8: Generic Site Condition Standards for Use within 30 m of a Water Body in a Potable Ground Water Condition - Soil - Residential/Parkland/Institutional/Industrial/Commercial/Community Property Use
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.

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Certified By:



Nvine Basly



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AGAT WORK ORDER: 23H099917

PROJECT: PR-23-037

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CLIENT NAME: OAKHILL ENVIRONMENTAL

ATTENTION TO: Cody Bonaccorso

SAMPLING SITE:

SAMPLED BY: Ariane

O. Reg. 153(511) - ORPs (Soil)

DATE RECEIVED: 2023-11-30

DATE REPORTED: 2023-12-11

Parameter	Unit	SAMPLE DESCRIPTION:						
		G / S	RDL	TP6	TP7	TP11	TP12	FD2
				Soil	Soil	Soil	Soil	Soil
				2023-11-30 10:35	2023-11-30 11:00	2023-11-30 12:15	2023-11-30 12:30	2023-11-30
				5510878	5510879	5510883	5510884	5510886
Electrical Conductivity (2:1)	mS/cm	0.7	0.005	0.453	0.444	0.461	0.308	0.323
pH, 2:1 CaCl ₂ Extraction	pH Units		NA	7.14	6.98	7.47	7.27	7.48
Sodium Adsorption Ratio (2:1) (Calc.)	N/A	5	N/A	1.61	0.917	0.781	0.882	1.01

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 8: Generic Site Condition Standards for Use within 30 m of a Water Body in a Potable Ground Water Condition - Soil - Residential/Parkland/Institutional/Industrial/Commercial/Community Property Use
 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.

5510878-5510886 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 obtained from 2:1 leaching procedure (2 parts extraction fluid:1 part wet soil). SAR is a calculated parameter.

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Certified By:



Ariane Bonaccorso



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CLIENT NAME: OAKHILL ENVIRONMENTAL

ATTENTION TO: Cody Bonaccorso

SAMPLING SITE:

SAMPLED BY: Ariane

O. Reg. 153(511) - BTEX (Soil)

DATE RECEIVED: 2023-11-30

DATE REPORTED: 2023-12-11

SAMPLE DESCRIPTION:		FD2		
SAMPLE TYPE:		Soil		
DATE SAMPLED:		2023-11-30		
Parameter	Unit	G / S	RDL	5510886
Benzene	ug/g		0.02	<0.02
Toluene	ug/g		0.05	<0.05
Ethylbenzene	ug/g		0.05	<0.05
m & p-Xylene	ug/g		0.05	<0.05
o-Xylene	ug/g		0.05	<0.05
Xylenes (Total)	ug/g		0.05	<0.05
Moisture Content	%		0.1	20.9
Surrogate	Unit	Acceptable Limits		
Toluene-d8	% Recovery	50-140		107
4-Bromofluorobenzene	% Recovery	50-140		87

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard

5510886 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. The calculated parameter is non-accredited. The parameters that are components of the calculation are accredited.

Analysis performed at AGAT Toronto (unless marked by *)

Certified By:

R. Chakraborty



Certificate of Analysis

AGAT WORK ORDER: 23H099917

PROJECT: PR-23-037

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CLIENT NAME: OAKHILL ENVIRONMENTAL

ATTENTION TO: Cody Bonaccorso

SAMPLING SITE:

SAMPLED BY: Ariane

O. Reg. 153(511) - PAHs (Soil)

DATE RECEIVED: 2023-11-30

DATE REPORTED: 2023-12-11

Parameter	Unit	SAMPLE DESCRIPTION:		TP2	TP5	TP6	TP9	FD1
		SAMPLE TYPE:		Soil	Soil	Soil	Soil	Soil
		DATE SAMPLED:		2023-11-30 08:50	2023-11-30 09:55	2023-11-30 10:35	2023-11-30 11:40	2023-11-30
	G / S	RDL	5510874	5510877	5510878	5510881	5510885	
Naphthalene	µg/g	0.09	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Acenaphthylene	µg/g	0.093	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Acenaphthene	µg/g	0.072	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Fluorene	µg/g	0.19	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Phenanthrene	µg/g	0.69	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Anthracene	µg/g	0.22	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
Pyrene	µg/g	1	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Benz(a)anthracene	µg/g	0.36	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Chrysene	µg/g	2.8	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Benzo(b)fluoranthene	µg/g	0.47	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Benzo(k)fluoranthene	µg/g	0.48	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
Indeno(1,2,3-cd)pyrene	µg/g	0.23	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
Benzo(g,h,i)perylene	µg/g	0.68	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
1 and 2 Methyl naphthalene	µg/g	0.59	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Moisture Content	%		0.1	18.5	16.3	26.2	13.6	15.7
Surrogate	Unit	Acceptable Limits						
Naphthalene-d8	%	50-140		95	95	70	85	110
Acridine-d9	%	50-140		100	105	100	110	95
Terphenyl-d14	%	50-140		80	80	85	80	95

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 8: Generic Site Condition Standards for Use within 30 m of a Water Body in a Potable Ground Water Condition - Soil - Residential/Parkland/Institutional/Industrial/Commercial/Community Property Use
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.

5510874-5510885 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:

R. Chakraborty



Certificate of Analysis

AGAT WORK ORDER: 23H099917

PROJECT: PR-23-037

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CLIENT NAME: OAKHILL ENVIRONMENTAL

ATTENTION TO: Cody Bonaccorso

SAMPLING SITE:

SAMPLED BY: Ariane

O. Reg. 153(511) - PCBs (Soil)

DATE RECEIVED: 2023-11-30

DATE REPORTED: 2023-12-11

		SAMPLE DESCRIPTION:		TP11	TP12
		SAMPLE TYPE:		Soil	Soil
		DATE SAMPLED:		2023-11-30 12:15	2023-11-30 12:30
Parameter	Unit	G / S	RDL	5510883	5510884
Polychlorinated Biphenyls	µg/g	0.3	0.1	<0.1	<0.1
Moisture Content	%		0.1	16.3	16.8
Surrogate	Unit	Acceptable Limits			
Decachlorobiphenyl	%	50-140		88	92

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 8: Generic Site Condition Standards for Use within 30 m of a Water Body in a Potable Ground Water Condition - Soil - Residential/Parkland/Institutional/Industrial/Commercial/Community Property Use
 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.

5510883-5510884 Results are based on the dry weight of soil extracted.
 PCB total is a calculated parameter. The calculated value is the sum of Aroclor 1242, Aroclor 1248, Aroclor 1254 and Aroclor 1260.
 The calculated parameter is non-accredited. The parameters that are components of the calculation are accredited.

Analysis performed at AGAT Toronto (unless marked by *)

Certified By:

R. Chakraborty



Certificate of Analysis

AGAT WORK ORDER: 23H099917

PROJECT: PR-23-037

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CLIENT NAME: OAKHILL ENVIRONMENTAL

ATTENTION TO: Cody Bonaccorso

SAMPLING SITE:

SAMPLED BY: Ariane

O. Reg. 153(511) - PHCs F1 - F4 (Soil)

DATE RECEIVED: 2023-11-30

DATE REPORTED: 2023-12-11

Parameter	Unit	SAMPLE DESCRIPTION:		TP1	TP4	TP7	TP8
		G / S	RDL	Soil	Soil	Soil	Soil
DATE SAMPLED:		2023-11-30	2023-11-30	2023-11-30	2023-11-30	2023-11-30	2023-11-30
		08:30	09:35	11:00	11:20		
		5510869	5510876	5510879	5510880		
Benzene	µg/g	0.02	0.02	<0.02	<0.02	<0.02	<0.02
Toluene	µg/g	0.2	0.05	<0.05	<0.05	<0.05	<0.05
Ethylbenzene	µg/g	0.05	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	0.05	0.05	<0.05	<0.05	<0.05	<0.05
F1 (C6 to C10)	µg/g		5	<5	<5	<5	<5
F1 (C6 to C10) minus BTEX	µg/g	25	5	<5	<5	<5	<5
F2 (C10 to C16)	µg/g	10	10	<10	<10	<10	<10
F3 (C16 to C34)	µg/g	240	50	<50	<50	<50	<50
F4 (C34 to C50)	µg/g	120	50	<50	<50	<50	<50
Gravimetric Heavy Hydrocarbons	µg/g	120	50	NA	NA	NA	NA
Moisture Content	%		0.1	19.3	21.6	19.4	18.1
Surrogate	Unit	Acceptable Limits					
Toluene-d8	% Recovery	60-140		90	87	83	98
Terphenyl	%	60-140		90	92	99	83

Certified By:

R. Chakraborty



Certificate of Analysis

AGAT WORK ORDER: 23H099917

PROJECT: PR-23-037

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CLIENT NAME: OAKHILL ENVIRONMENTAL

ATTENTION TO: Cody Bonaccorso

SAMPLING SITE:

SAMPLED BY: Ariane

O. Reg. 153(511) - PHCs F1 - F4 (Soil)

DATE RECEIVED: 2023-11-30

DATE REPORTED: 2023-12-11

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 8: Generic Site Condition Standards for Use within 30 m of a Water Body in a Potable Ground Water Condition - Soil - Residential/Parkland/Institutional/Industrial/Commercial/Community Property Use

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.

5510869-5510880 Results are based on sample dry weight.

The C6-C10 fraction is calculated using Toluene response factor.

Xylenes 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 contribution.

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.

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.

Fractions 1-4 are quantified with the contribution of PAHs. Under Ontario Regulation 153, results are considered valid without determining the PAH contribution if not requested by the client.

Quality Control Data is available upon request.

Analysis performed at AGAT Toronto (unless marked by *)

Certified By:

R. Chakraborty



Certificate of Analysis

AGAT WORK ORDER: 23H099917

PROJECT: PR-23-037

5835 COOPERS AVENUE
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CLIENT NAME: OAKHILL ENVIRONMENTAL

ATTENTION TO: Cody Bonaccorso

SAMPLING SITE:

SAMPLED BY: Ariane

O. Reg. 153(511) - PHCs F1 - F4 (with PAHs and VOC) (Soil)

DATE RECEIVED: 2023-11-30

DATE REPORTED: 2023-12-11

SAMPLE DESCRIPTION: TP2
SAMPLE TYPE: Soil
DATE SAMPLED: 2023-11-30
08:50
5510874

Parameter	Unit	G / S	RDL	5510874
F1 (C6 to C10)	µg/g		5	<5
F1 (C6 to C10) minus BTEX	µg/g	25	5	<5
F2 (C10 to C16)	µg/g	10	10	<10
F2 (C10 to C16) minus Naphthalene	µg/g		10	<10
F3 (C16 to C34)	µg/g	240	50	<50
F3 (C16 to C34) minus PAHs	µg/g		50	<50
F4 (C34 to C50)	µg/g	120	50	<50
Gravimetric Heavy Hydrocarbons	µg/g	120	50	NA
Moisture Content	%		0.1	18.5
Surrogate	Unit	Acceptable Limits		
Toluene-d8	%	50-140	104	
Terphenyl	%	60-140	91	

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 8: Generic Site Condition Standards for Use within 30 m of a Water Body in a Potable Ground Water Condition - Soil - Residential/Parkland/Institutional/Industrial/Commercial/Community Property Use
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.

5510874 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:

R. Chakraborty



Certificate of Analysis

AGAT WORK ORDER: 23H099917

PROJECT: PR-23-037

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CLIENT NAME: OAKHILL ENVIRONMENTAL

ATTENTION TO: Cody Bonaccorso

SAMPLING SITE:

SAMPLED BY: Ariane

O. Reg. 153(511) - PHCs F1 - F4 (with PAHs) (Soil)

DATE RECEIVED: 2023-11-30

DATE REPORTED: 2023-12-11

Parameter	Unit	SAMPLE DESCRIPTION:		TP5	TP6
		G / S	RDL	Soil	Soil
		DATE SAMPLED:		2023-11-30 09:55	2023-11-30 10:35
				5510877	5510878
Benzene	µg/g	0.02	0.02	<0.02	<0.02
Toluene	µg/g	0.2	0.05	<0.05	<0.05
Ethylbenzene	µg/g	0.05	0.05	<0.05	<0.05
m & p-Xylene	µg/g		0.05	<0.05	<0.05
o-Xylene	µg/g		0.05	<0.05	<0.05
Xylenes (Total)	µg/g	0.05	0.05	<0.05	<0.05
F1 (C6 to C10)	µg/g		5	<5	<5
F1 (C6 to C10) minus BTEX	µg/g	25	5	<5	<5
F2 (C10 to C16)	µg/g	10	10	<10	<10
F2 (C10 to C16) minus Naphthalene	µg/g		10	<10	<10
F3 (C16 to C34)	µg/g	240	50	103	154
F3 (C16 to C34) minus PAHs	µg/g		50	103	154
F4 (C34 to C50)	µg/g	120	50	84	251
Gravimetric Heavy Hydrocarbons	µg/g	120	50	NA	NA
Moisture Content	%		0.1	16.3	26.2
Surrogate	Unit	Acceptable Limits			
Toluene-d8	% Recovery	60-140		84	76
Terphenyl	%	60-140		100	110

Certified By:

R. Chakraborty



Certificate of Analysis

AGAT WORK ORDER: 23H099917

PROJECT: PR-23-037

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CLIENT NAME: OAKHILL ENVIRONMENTAL

ATTENTION TO: Cody Bonaccorso

SAMPLING SITE:

SAMPLED BY: Ariane

O. Reg. 153(511) - PHCs F1 - F4 (with PAHs) (Soil)

DATE RECEIVED: 2023-11-30

DATE REPORTED: 2023-12-11

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 8: Generic Site Condition Standards for Use within 30 m of a Water Body in a Potable Ground Water Condition - Soil - Residential/Parkland/Institutional/Industrial/Commercial/Community Property Use

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.

5510877-5510878

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:

R. Chakraborty



Certificate of Analysis

AGAT WORK ORDER: 23H099917

PROJECT: PR-23-037

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CLIENT NAME: OAKHILL ENVIRONMENTAL

ATTENTION TO: Cody Bonaccorso

SAMPLING SITE:

SAMPLED BY: Ariane

O. Reg. 153(511) - PHCs F1 - F4 (with VOC) (Soil)

DATE RECEIVED: 2023-11-30

DATE REPORTED: 2023-12-11

SAMPLE DESCRIPTION: TP3
SAMPLE TYPE: Soil
DATE SAMPLED: 2023-11-30
09:15
5510875

Parameter	Unit	G / S	RDL	5510875
F1 (C6 to C10)	µg/g		5	<5
F1 (C6 to C10) minus BTEX	µg/g	25	5	<5
F2 (C10 to C16)	µg/g	10	10	<10
F3 (C16 to C34)	µg/g	240	50	<50
F4 (C34 to C50)	µg/g	120	50	<50
Gravimetric Heavy Hydrocarbons	µg/g	120	50	NA
Moisture Content	%		0.1	19.5
Surrogate	Unit	Acceptable Limits		
Toluene-d8	%		50-140	104
Terphenyl	%		60-140	96

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 8: Generic Site Condition Standards for Use within 30 m of a Water Body in a Potable Ground Water Condition - Soil - Residential/Parkland/Institutional/Industrial/Commercial/Community Property Use
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.

5510875 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 contribution.
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.
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.
Fractions 1-4 are quantified without the contribution of PAHs. Under Ontario Regulation 153, results are considered valid without determining the PAH contribution if not requested by the client.

Analysis performed at AGAT Toronto (unless marked by *)

Certified By:

R. Chakraborty



Certificate of Analysis

AGAT WORK ORDER: 23H099917

PROJECT: PR-23-037

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CLIENT NAME: OAKHILL ENVIRONMENTAL

ATTENTION TO: Cody Bonaccorso

SAMPLING SITE:

SAMPLED BY: Ariane

O. Reg. 153(511) - PHCs F2 - F4 (Soil)

DATE RECEIVED: 2023-11-30

DATE REPORTED: 2023-12-11

Parameter	Unit	SAMPLE DESCRIPTION:		TP11	TP12
		G / S	RDL	Soil	Soil
				2023-11-30	2023-11-30
				12:15	12:30
				5510883	5510884
F2 (C10 to C16)	µg/g	10	10	<10	<10
F3 (C16 to C34)	µg/g	240	50	<50	<50
F4 (C34 to C50)	µg/g	120	50	<50	<50
Gravimetric Heavy Hydrocarbons	µg/g	120	50	NA	NA
Moisture Content	%		0.1	16.3	16.8
Surrogate	Unit	Acceptable Limits			
Terphenyl	%	60-140		83	99

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 8: Generic Site Condition Standards for Use within 30 m of a Water Body in a Potable Ground Water Condition - Soil - Residential/Parkland/Institutional/Industrial/Commercial/Community Property Use
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.

5510883-5510884 Results are based on sample dry weight.
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.
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.
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.
Fractions 1-4 are quantified with the contribution of PAHs. Under Ontario Regulation 153, results are considered valid without determining the PAH contribution if not requested by the client.
Quality Control Data is available upon request.

Analysis performed at AGAT Toronto (unless marked by *)

Certified By:

R. Chakraborty



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AGAT WORK ORDER: 23H099917

PROJECT: PR-23-037

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CLIENT NAME: OAKHILL ENVIRONMENTAL

ATTENTION TO: Cody Bonaccorso

SAMPLING SITE:

SAMPLED BY: Ariane

O. Reg. 153(511) - VOCs (Soil)

DATE RECEIVED: 2023-11-30

DATE REPORTED: 2023-12-11

Parameter	Unit	SAMPLE DESCRIPTION:		TP9	TP10	FD1
		SAMPLE TYPE:		Soil	Soil	Soil
		DATE SAMPLED:		2023-11-30 11:40	2023-11-30 11:55	2023-11-30
	G / S	RDL	5510881	5510882	5510885	
Dichlorodifluoromethane	µg/g	0.05	0.05	<0.05	<0.05	<0.05
Vinyl Chloride	ug/g	0.02	0.02	<0.02	<0.02	<0.02
Bromomethane	ug/g	0.05	0.05	<0.05	<0.05	<0.05
Trichlorofluoromethane	ug/g	0.25	0.05	<0.05	<0.05	<0.05
Acetone	ug/g	0.5	0.50	<0.50	<0.50	<0.50
1,1-Dichloroethylene	ug/g	0.05	0.05	<0.05	<0.05	<0.05
Methylene Chloride	ug/g	0.05	0.05	<0.05	<0.05	<0.05
Trans- 1,2-Dichloroethylene	ug/g	0.05	0.05	<0.05	<0.05	<0.05
Methyl tert-butyl Ether	ug/g	0.05	0.05	<0.05	<0.05	<0.05
1,1-Dichloroethane	ug/g	0.05	0.02	<0.02	<0.02	<0.02
Methyl Ethyl Ketone	ug/g	0.5	0.50	<0.50	<0.50	<0.50
Cis- 1,2-Dichloroethylene	ug/g	0.05	0.02	<0.02	<0.02	<0.02
Chloroform	ug/g	0.05	0.04	<0.04	<0.04	<0.04
1,2-Dichloroethane	ug/g	0.05	0.03	<0.03	<0.03	<0.03
1,1,1-Trichloroethane	ug/g	0.05	0.05	<0.05	<0.05	<0.05
Carbon Tetrachloride	ug/g	0.05	0.05	<0.05	<0.05	<0.05
Benzene	ug/g	0.02	0.02	<0.02	<0.02	<0.02
1,2-Dichloropropane	ug/g	0.05	0.03	<0.03	<0.03	<0.03
Trichloroethylene	ug/g	0.05	0.03	<0.03	<0.03	<0.03
Bromodichloromethane	ug/g	0.05	0.05	<0.05	<0.05	<0.05
Methyl Isobutyl Ketone	ug/g	0.5	0.50	<0.50	<0.50	<0.50
1,1,2-Trichloroethane	ug/g	0.05	0.04	<0.04	<0.04	<0.04
Toluene	ug/g	0.2	0.05	<0.05	<0.05	<0.05
Dibromochloromethane	ug/g	0.05	0.05	<0.05	<0.05	<0.05
Ethylene Dibromide	ug/g	0.05	0.04	<0.04	<0.04	<0.04
Tetrachloroethylene	ug/g	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
Chlorobenzene	ug/g	0.05	0.05	<0.05	<0.05	<0.05
Ethylbenzene	ug/g	0.05	0.05	<0.05	<0.05	<0.05

Certified By:

R. Chakraborty



Certificate of Analysis

AGAT WORK ORDER: 23H099917

PROJECT: PR-23-037

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CLIENT NAME: OAKHILL ENVIRONMENTAL

ATTENTION TO: Cody Bonaccorso

SAMPLING SITE:

SAMPLED BY: Ariane

O. Reg. 153(511) - VOCs (Soil)

DATE RECEIVED: 2023-11-30

DATE REPORTED: 2023-12-11

Parameter	Unit	SAMPLE DESCRIPTION:		TP9	TP10	FD1
		G / S	RDL	Soil	Soil	Soil
		DATE SAMPLED:		2023-11-30 11:40	2023-11-30 11:55	2023-11-30
				5510881	5510882	5510885
m & p-Xylene	ug/g		0.05	<0.05	<0.05	<0.05
Bromoform	ug/g	0.05	0.05	<0.05	<0.05	<0.05
Styrene	ug/g	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
o-Xylene	ug/g		0.05	<0.05	<0.05	<0.05
1,3-Dichlorobenzene	ug/g	0.05	0.05	<0.05	<0.05	<0.05
1,4-Dichlorobenzene	ug/g	0.05	0.05	<0.05	<0.05	<0.05
1,2-Dichlorobenzene	ug/g	0.05	0.05	<0.05	<0.05	<0.05
Xylenes (Total)	ug/g	0.05	0.05	<0.05	<0.05	<0.05
1,3-Dichloropropene (Cis + Trans)	µg/g	0.05	0.04	<0.04	<0.04	<0.04
n-Hexane	µg/g	0.05	0.05	<0.05	<0.05	<0.05
Moisture Content	%		0.1	13.6	23.4	15.7
Surrogate	Unit	Acceptable Limits				
Toluene-d8	% Recovery	50-140		100	104	106
4-Bromofluorobenzene	% Recovery	50-140		88	85	85

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 8: Generic Site Condition Standards for Use within 30 m of a Water Body in a Potable Ground Water Condition - Soil - Residential/Parkland/Institutional/Industrial/Commercial/Community Property Use

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.

5510881-5510885 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:

R. Chakraborty



Certificate of Analysis

AGAT WORK ORDER: 23H099917

PROJECT: PR-23-037

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CLIENT NAME: OAKHILL ENVIRONMENTAL

ATTENTION TO: Cody Bonaccorso

SAMPLING SITE:

SAMPLED BY: Ariane

O. Reg. 153(511) - VOCs (with PHC) (Soil)

DATE RECEIVED: 2023-11-30

DATE REPORTED: 2023-12-11

Parameter	Unit	SAMPLE DESCRIPTION:		TP2	TP3
		G / S	RDL	Soil	Soil
		DATE SAMPLED:		2023-11-30 08:50	2023-11-30 09:15
				5510874	5510875
Dichlorodifluoromethane	µg/g	0.05	0.05	<0.05	<0.05
Vinyl Chloride	ug/g	0.02	0.02	<0.02	<0.02
Bromomethane	ug/g	0.05	0.05	<0.05	<0.05
Trichlorofluoromethane	ug/g	0.25	0.05	<0.05	<0.05
Acetone	ug/g	0.5	0.50	<0.50	<0.50
1,1-Dichloroethylene	ug/g	0.05	0.05	<0.05	<0.05
Methylene Chloride	ug/g	0.05	0.05	<0.05	<0.05
Trans- 1,2-Dichloroethylene	ug/g	0.05	0.05	<0.05	<0.05
Methyl tert-butyl Ether	ug/g	0.05	0.05	<0.05	<0.05
1,1-Dichloroethane	ug/g	0.05	0.02	<0.02	<0.02
Methyl Ethyl Ketone	ug/g	0.5	0.50	<0.50	<0.50
Cis- 1,2-Dichloroethylene	ug/g	0.05	0.02	<0.02	<0.02
Chloroform	ug/g	0.05	0.04	<0.04	<0.04
1,2-Dichloroethane	ug/g	0.05	0.03	<0.03	<0.03
1,1,1-Trichloroethane	ug/g	0.05	0.05	<0.05	<0.05
Carbon Tetrachloride	ug/g	0.05	0.05	<0.05	<0.05
Benzene	ug/g	0.02	0.02	<0.02	<0.02
1,2-Dichloropropane	ug/g	0.05	0.03	<0.03	<0.03
Trichloroethylene	ug/g	0.05	0.03	<0.03	<0.03
Bromodichloromethane	ug/g	0.05	0.05	<0.05	<0.05
Methyl Isobutyl Ketone	ug/g	0.5	0.50	<0.50	<0.50
1,1,2-Trichloroethane	ug/g	0.05	0.04	<0.04	<0.04
Toluene	ug/g	0.2	0.05	<0.05	<0.05
Dibromochloromethane	ug/g	0.05	0.05	<0.05	<0.05
Ethylene Dibromide	ug/g	0.05	0.04	<0.04	<0.04
Tetrachloroethylene	ug/g	0.05	0.05	<0.05	<0.05
1,1,1,2-Tetrachloroethane	ug/g	0.05	0.04	<0.04	<0.04
Chlorobenzene	ug/g	0.05	0.05	<0.05	<0.05
Ethylbenzene	ug/g	0.05	0.05	<0.05	<0.05

Certified By:

R. Chakraborty



Certificate of Analysis

AGAT WORK ORDER: 23H099917

PROJECT: PR-23-037

5835 COOPERS AVENUE
MISSISSAUGA, ONTARIO
CANADA L4Z 1Y2
TEL (905)712-5100
FAX (905)712-5122
<http://www.agatlabs.com>

CLIENT NAME: OAKHILL ENVIRONMENTAL

ATTENTION TO: Cody Bonaccorso

SAMPLING SITE:

SAMPLED BY: Ariane

O. Reg. 153(511) - VOCs (with PHC) (Soil)

DATE RECEIVED: 2023-11-30

DATE REPORTED: 2023-12-11

Parameter	Unit	SAMPLE DESCRIPTION:		TP2	TP3
		G / S	RDL	Soil	Soil
				2023-11-30 08:50	2023-11-30 09:15
				5510874	5510875
m & p-Xylene	ug/g		0.05	<0.05	<0.05
Bromoform	ug/g	0.05	0.05	<0.05	<0.05
Styrene	ug/g	0.05	0.05	<0.05	<0.05
1,1,2,2-Tetrachloroethane	ug/g	0.05	0.05	<0.05	<0.05
o-Xylene	ug/g		0.05	<0.05	<0.05
1,3-Dichlorobenzene	ug/g	0.05	0.05	<0.05	<0.05
1,4-Dichlorobenzene	ug/g	0.05	0.05	<0.05	<0.05
1,2-Dichlorobenzene	ug/g	0.05	0.05	<0.05	<0.05
Xylenes (Total)	ug/g	0.05	0.05	<0.05	<0.05
1,3-Dichloropropene (Cis + Trans)	µg/g	0.05	0.05	<0.05	<0.05
n-Hexane	µg/g	0.05	0.05	<0.05	<0.05
Moisture Content	%		0.1	18.5	19.5
Surrogate	Unit	Acceptable Limits			
Toluene-d8	% Recovery	50-140		104	104
4-Bromofluorobenzene	% Recovery	50-140		84	86

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 8: Generic Site Condition Standards for Use within 30 m of a Water Body in a Potable Ground Water Condition - Soil - Residential/Parkland/Institutional/Industrial/Commercial/Community Property Use

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.

5510874-5510875 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:

R. Chakraborty



Exceedance Summary

AGAT WORK ORDER: 23H099917

PROJECT: PR-23-037

5835 COOPERS AVENUE
 MISSISSAUGA, ONTARIO
 CANADA L4Z 1Y2
 TEL (905)712-5100
 FAX (905)712-5122
<http://www.agatlabs.com>

CLIENT NAME: OAKHILL ENVIRONMENTAL

ATTENTION TO: Cody Bonaccorso

SAMPLEID	SAMPLE TITLE	GUIDELINE	ANALYSIS PACKAGE	PARAMETER	UNIT	GUIDEVALUE	RESULT
5510876	TP4	ON T8 S RPI/ICC	O. Reg. 153(511) - Metals (Including Hydrides) (Soil)	Cobalt	µg/g	22	27.7
5510878	TP6	ON T8 S RPI/ICC	O. Reg. 153(511) - PHCs F1 - F4 (with PAHs) (Soil)	F4 (C34 to C50)	µg/g	120	251
5510879	TP7	ON T8 S RPI/ICC	O. Reg. 153(511) - Metals (Including Hydrides) (Soil)	Barium	µg/g	220	247
5510879	TP7	ON T8 S RPI/ICC	O. Reg. 153(511) - Metals (Including Hydrides) (Soil)	Cobalt	µg/g	22	22.4

Quality Assurance

CLIENT NAME: OAKHILL ENVIRONMENTAL
PROJECT: PR-23-037
SAMPLING SITE:

AGAT WORK ORDER: 23H099917
ATTENTION TO: Cody Bonaccorso
SAMPLED BY: Ariane

Soil Analysis																
RPT Date: Dec 11, 2023			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 (Including Hydrides) (Soil)

Antimony	5507138		<0.8	<0.8	NA	< 0.8	105%	70%	130%	92%	80%	120%	110%	70%	130%
Arsenic	5507138		4	4	NA	< 1	114%	70%	130%	108%	80%	120%	117%	70%	130%
Barium	5507138		90.2	94.3	4.4%	< 2.0	113%	70%	130%	100%	80%	120%	115%	70%	130%
Beryllium	5507138		0.6	0.6	NA	< 0.5	104%	70%	130%	98%	80%	120%	110%	70%	130%
Boron	5507138		6	7	NA	< 5	85%	70%	130%	98%	80%	120%	107%	70%	130%
Cadmium	5507138		<0.5	<0.5	NA	< 0.5	111%	70%	130%	100%	80%	120%	104%	70%	130%
Chromium	5507138		83	87	4.7%	< 5	116%	70%	130%	104%	80%	120%	101%	70%	130%
Cobalt	5507138		15.6	16.2	3.8%	< 0.8	117%	70%	130%	108%	80%	120%	117%	70%	130%
Copper	5507138		33.4	34.5	3.2%	< 1.0	110%	70%	130%	101%	80%	120%	107%	70%	130%
Lead	5507138		10	11	9.5%	< 1	107%	70%	130%	97%	80%	120%	94%	70%	130%
Molybdenum	5507138		<0.5	<0.5	NA	< 0.5	115%	70%	130%	103%	80%	120%	110%	70%	130%
Nickel	5507138		47	48	2.1%	< 1	116%	70%	130%	105%	80%	120%	108%	70%	130%
Selenium	5507138		<0.8	<0.8	NA	< 0.8	103%	70%	130%	103%	80%	120%	120%	70%	130%
Silver	5507138		<0.5	<0.5	NA	< 0.5	110%	70%	130%	100%	80%	120%	101%	70%	130%
Thallium	5507138		<0.5	<0.5	NA	< 0.5	96%	70%	130%	104%	80%	120%	103%	70%	130%
Uranium	5507138		0.85	0.88	NA	< 0.50	104%	70%	130%	102%	80%	120%	104%	70%	130%
Vanadium	5507138		66.9	68.7	2.7%	< 2.0	121%	70%	130%	105%	80%	120%	120%	70%	130%
Zinc	5507138		68	70	2.9%	< 5	122%	70%	130%	106%	80%	120%	109%	70%	130%

Comments: NA Signifies Not Applicable.
 Duplicate NA: results are under 5X the RDL and will not be calculated.

O. Reg. 153(511) - ORPs (Soil)

Electrical Conductivity (2:1)	5510878	5510878	0.453	0.378	17.8%	< 0.005	90%	80%	120%
pH, 2:1 CaCl2 Extraction	5510639		6.91	7.14	3.2%	NA	101%	80%	120%
Sodium Adsorption Ratio (2:1) (Calc.)	5510878	5510878	1.61	1.70	5.1%	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.

O. Reg. 153(511) - ORPs (Soil)

pH, 2:1 CaCl2 Extraction	5510879	5510879	6.98	7.21	3.3%	NA	103%	80%	120%
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Comments: NA signifies Not Applicable.
 pH duplicates QA acceptance criteria was met relative as stated in Table 5-15 of Analytical Protocol document.

Certified By:



Nivine Basily

Quality Assurance

CLIENT NAME: OAKHILL ENVIRONMENTAL
PROJECT: PR-23-037
SAMPLING SITE:

AGAT WORK ORDER: 23H099917
ATTENTION TO: Cody Bonaccorso
SAMPLED BY: Ariane

Trace Organics Analysis															
RPT Date: Dec 11, 2023			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 (Soil)

Benzene	5520806		<0.02	<0.02	NA	< 0.02	80%	60%	140%	105%	60%	140%	94%	60%	140%
Toluene	5520806		<0.05	<0.05	NA	< 0.05	101%	60%	140%	88%	60%	140%	96%	60%	140%
Ethylbenzene	5520806		<0.05	<0.05	NA	< 0.05	73%	60%	140%	86%	60%	140%	104%	60%	140%
m & p-Xylene	5520806		<0.05	<0.05	NA	< 0.05	80%	60%	140%	77%	60%	140%	92%	60%	140%
o-Xylene	5520806		<0.05	<0.05	NA	< 0.05	77%	60%	140%	70%	60%	140%	82%	60%	140%
F1 (C6 to C10)	5520806		<5	<5	NA	< 5	93%	60%	140%	86%	60%	140%	94%	60%	140%
F2 (C10 to C16)	5510847		< 10	< 10	NA	< 10	107%	60%	140%	92%	60%	140%	87%	60%	140%
F3 (C16 to C34)	5510847		< 50	< 50	NA	< 50	109%	60%	140%	107%	60%	140%	116%	60%	140%
F4 (C34 to C50)	5510847		< 50	< 50	NA	< 50	74%	60%	140%	96%	60%	140%	98%	60%	140%

O. Reg. 153(511) - PHCs F1 - F4 (with PAHs and VOC) (Soil)

F1 (C6 to C10)	5511699		<5	<5	NA	< 5	118%	60%	140%	120%	60%	140%	87%	60%	140%
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O. Reg. 153(511) - VOCs (with PHC) (Soil)

Dichlorodifluoromethane	5511699		<0.05	<0.05	NA	< 0.05	92%	50%	140%	83%	50%	140%	87%	50%	140%
Vinyl Chloride	5511699		<0.02	<0.02	NA	< 0.02	108%	50%	140%	106%	50%	140%	107%	50%	140%
Bromomethane	5511699		<0.05	<0.05	NA	< 0.05	110%	50%	140%	104%	50%	140%	114%	50%	140%
Trichlorofluoromethane	5511699		<0.05	<0.05	NA	< 0.05	100%	50%	140%	100%	50%	140%	97%	50%	140%
Acetone	5511699		<0.50	<0.50	NA	< 0.50	100%	50%	140%	97%	50%	140%	95%	50%	140%
1,1-Dichloroethylene	5511699		<0.05	<0.05	NA	< 0.05	99%	50%	140%	89%	60%	130%	100%	50%	140%
Methylene Chloride	5511699		<0.05	<0.05	NA	< 0.05	98%	50%	140%	96%	60%	130%	87%	50%	140%
Trans- 1,2-Dichloroethylene	5511699		<0.05	<0.05	NA	< 0.05	82%	50%	140%	84%	60%	130%	99%	50%	140%
Methyl tert-butyl Ether	5511699		<0.05	<0.05	NA	< 0.05	92%	50%	140%	85%	60%	130%	86%	50%	140%
1,1-Dichloroethane	5511699		<0.02	<0.02	NA	< 0.02	99%	50%	140%	82%	60%	130%	99%	50%	140%
Methyl Ethyl Ketone	5511699		<0.50	<0.50	NA	< 0.50	95%	50%	140%	102%	50%	140%	99%	50%	140%
Cis- 1,2-Dichloroethylene	5511699		<0.02	<0.02	NA	< 0.02	92%	50%	140%	80%	60%	130%	99%	50%	140%
Chloroform	5511699		<0.04	<0.04	NA	< 0.04	90%	50%	140%	76%	60%	130%	90%	50%	140%
1,2-Dichloroethane	5511699		<0.03	<0.03	NA	< 0.03	74%	50%	140%	81%	60%	130%	97%	50%	140%
1,1,1-Trichloroethane	5511699		<0.05	<0.05	NA	< 0.05	106%	50%	140%	90%	60%	130%	97%	50%	140%
Carbon Tetrachloride	5511699		<0.05	<0.05	NA	< 0.05	96%	50%	140%	78%	60%	130%	90%	50%	140%
Benzene	5511699		<0.02	<0.02	NA	< 0.02	93%	50%	140%	78%	60%	130%	96%	50%	140%
1,2-Dichloropropane	5511699		<0.03	<0.03	NA	< 0.03	98%	50%	140%	84%	60%	130%	100%	50%	140%
Trichloroethylene	5511699		<0.03	<0.03	NA	< 0.03	103%	50%	140%	87%	60%	130%	92%	50%	140%
Bromodichloromethane	5511699		<0.05	<0.05	NA	< 0.05	95%	50%	140%	94%	60%	130%	103%	50%	140%
Methyl Isobutyl Ketone	5511699		<0.50	<0.50	NA	< 0.50	106%	50%	140%	98%	50%	140%	102%	50%	140%
1,1,2-Trichloroethane	5511699		<0.04	<0.04	NA	< 0.04	92%	50%	140%	88%	60%	130%	120%	50%	140%
Toluene	5511699		<0.05	<0.05	NA	< 0.05	105%	50%	140%	96%	60%	130%	98%	50%	140%
Dibromochloromethane	5511699		<0.05	<0.05	NA	< 0.05	86%	50%	140%	92%	60%	130%	93%	50%	140%
Ethylene Dibromide	5511699		<0.04	<0.04	NA	< 0.04	91%	50%	140%	95%	60%	130%	73%	50%	140%
Tetrachloroethylene	5511699		<0.05	<0.05	NA	< 0.05	86%	50%	140%	87%	60%	130%	95%	50%	140%

Quality Assurance

CLIENT NAME: OAKHILL ENVIRONMENTAL
AGAT WORK ORDER: 23H099917
PROJECT: PR-23-037
ATTENTION TO: Cody Bonaccorso
SAMPLING SITE:
SAMPLED BY: Ariane

Trace Organics Analysis (Continued)

RPT Date: Dec 11, 2023			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
1,1,1,2-Tetrachloroethane	5511699		<0.04	<0.04	NA	< 0.04	95%	50%	140%	94%	60%	130%	87%	50%	140%
Chlorobenzene	5511699		<0.05	<0.05	NA	< 0.05	90%	50%	140%	88%	60%	130%	103%	50%	140%
Ethylbenzene	5511699		<0.05	<0.05	NA	< 0.05	98%	50%	140%	99%	60%	130%	96%	50%	140%
m & p-Xylene	5511699		<0.05	<0.05	NA	< 0.05	94%	50%	140%	105%	60%	130%	101%	50%	140%
Bromoform	5511699		<0.05	<0.05	NA	< 0.05	100%	50%	140%	97%	60%	130%	100%	50%	140%
Styrene	5511699		<0.05	<0.05	NA	< 0.05	91%	50%	140%	86%	60%	130%	81%	50%	140%
1,1,1,2,2-Tetrachloroethane	5511699		<0.05	<0.05	NA	< 0.05	77%	50%	140%	81%	60%	130%	81%	50%	140%
o-Xylene	5511699		<0.05	<0.05	NA	< 0.05	97%	50%	140%	98%	60%	130%	95%	50%	140%
1,3-Dichlorobenzene	5511699		<0.05	<0.05	NA	< 0.05	103%	50%	140%	86%	60%	130%	91%	50%	140%
1,4-Dichlorobenzene	5511699		<0.05	<0.05	NA	< 0.05	102%	50%	140%	74%	60%	130%	91%	50%	140%
1,2-Dichlorobenzene	5511699		<0.05	<0.05	NA	< 0.05	104%	50%	140%	98%	60%	130%	83%	50%	140%
n-Hexane	5511699		<0.05	<0.05	NA	< 0.05	83%	50%	140%	80%	60%	130%	73%	50%	140%
O. Reg. 153(511) - PAHs (Soil)															
Naphthalene	5510913		<0.05	<0.05	NA	< 0.05	87%	50%	140%	78%	50%	140%	73%	50%	140%
Acenaphthylene	5510913		<0.05	<0.05	NA	< 0.05	75%	50%	140%	73%	50%	140%	75%	50%	140%
Acenaphthene	5510913		<0.05	<0.05	NA	< 0.05	87%	50%	140%	78%	50%	140%	83%	50%	140%
Fluorene	5510913		<0.05	<0.05	NA	< 0.05	88%	50%	140%	80%	50%	140%	78%	50%	140%
Phenanthrene	5510913		0.17	0.19	NA	< 0.05	77%	50%	140%	78%	50%	140%	82%	50%	140%
Anthracene	5510913		0.08	0.08	NA	< 0.05	100%	50%	140%	75%	50%	140%	96%	50%	140%
Fluoranthene	5510913		0.27	0.31	11.5%	< 0.05	87%	50%	140%	73%	50%	140%	84%	50%	140%
Pyrene	5510913		0.29	0.32	11.3%	< 0.05	82%	50%	140%	83%	50%	140%	82%	50%	140%
Benz(a)anthracene	5510913		0.14	0.13	NA	< 0.05	91%	50%	140%	88%	50%	140%	107%	50%	140%
Chrysene	5510913		0.11	0.09	NA	< 0.05	119%	50%	140%	88%	50%	140%	92%	50%	140%
Benzo(b)fluoranthene	5510913		0.12	0.17	NA	< 0.05	81%	50%	140%	80%	50%	140%	84%	50%	140%
Benzo(k)fluoranthene	5510913		0.06	<0.05	NA	< 0.05	116%	50%	140%	83%	50%	140%	83%	50%	140%
Benzo(a)pyrene	5510913		0.06	<0.05	NA	< 0.05	105%	50%	140%	88%	50%	140%	81%	50%	140%
Indeno(1,2,3-cd)pyrene	5510913		<0.05	<0.05	NA	< 0.05	91%	50%	140%	75%	50%	140%	78%	50%	140%
Dibenz(a,h)anthracene	5510913		<0.05	<0.05	NA	< 0.05	74%	50%	140%	75%	50%	140%	85%	50%	140%
Benzo(g,h,i)perylene	5510913		<0.05	<0.05	NA	< 0.05	104%	50%	140%	80%	50%	140%	96%	50%	140%
O. Reg. 153(511) - PHCs F1 - F4 (with VOC) (Soil)															
F1 (C6 to C10)	5511699		<5	<5	NA	< 5	118%	60%	140%	120%	60%	140%	87%	60%	140%
O. Reg. 153(511) - PHCs F1 - F4 (with PAHs) (Soil)															
Benzene	5520806		<0.02	<0.02	NA	< 0.02	80%	60%	140%	105%	60%	140%	94%	60%	140%
Toluene	5520806		<0.05	<0.05	NA	< 0.05	101%	60%	140%	88%	60%	140%	96%	60%	140%
Ethylbenzene	5520806		<0.05	<0.05	NA	< 0.05	73%	60%	140%	86%	60%	140%	104%	60%	140%
m & p-Xylene	5520806		<0.05	<0.05	NA	< 0.05	80%	60%	140%	77%	60%	140%	92%	60%	140%
o-Xylene	5520806		<0.05	<0.05	NA	< 0.05	77%	60%	140%	70%	60%	140%	82%	60%	140%
F1 (C6 to C10)	5520806		<5	<5	NA	< 5	93%	60%	140%	86%	60%	140%	94%	60%	140%

Quality Assurance

CLIENT NAME: OAKHILL ENVIRONMENTAL
AGAT WORK ORDER: 23H099917
PROJECT: PR-23-037
ATTENTION TO: Cody Bonaccorso
SAMPLING SITE:
SAMPLED BY: Ariane

Trace Organics Analysis (Continued)

RPT Date: Dec 11, 2023			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) - VOCs (Soil)

Dichlorodifluoromethane	5511699		<0.05	<0.05	NA	< 0.05	92%	50%	140%	83%	50%	140%	87%	50%	140%
Vinyl Chloride	5511699		<0.02	<0.02	NA	< 0.02	108%	50%	140%	106%	50%	140%	107%	50%	140%
Bromomethane	5511699		<0.05	<0.05	NA	< 0.05	110%	50%	140%	104%	50%	140%	114%	50%	140%
Trichlorofluoromethane	5511699		<0.05	<0.05	NA	< 0.05	100%	50%	140%	100%	50%	140%	97%	50%	140%
Acetone	5511699		<0.50	<0.50	NA	< 0.50	100%	50%	140%	97%	50%	140%	95%	50%	140%
1,1-Dichloroethylene	5511699		<0.05	<0.05	NA	< 0.05	99%	50%	140%	89%	60%	130%	100%	50%	140%
Methylene Chloride	5511699		<0.05	<0.05	NA	< 0.05	98%	50%	140%	96%	60%	130%	87%	50%	140%
Trans- 1,2-Dichloroethylene	5511699		<0.05	<0.05	NA	< 0.05	82%	50%	140%	84%	60%	130%	99%	50%	140%
Methyl tert-butyl Ether	5511699		<0.05	<0.05	NA	< 0.05	92%	50%	140%	85%	60%	130%	86%	50%	140%
1,1-Dichloroethane	5511699		<0.02	<0.02	NA	< 0.02	99%	50%	140%	82%	60%	130%	99%	50%	140%
Methyl Ethyl Ketone	5511699		<0.50	<0.50	NA	< 0.50	95%	50%	140%	102%	50%	140%	99%	50%	140%
Cis- 1,2-Dichloroethylene	5511699		<0.02	<0.02	NA	< 0.02	92%	50%	140%	80%	60%	130%	99%	50%	140%
Chloroform	5511699		<0.04	<0.04	NA	< 0.04	90%	50%	140%	76%	60%	130%	90%	50%	140%
1,2-Dichloroethane	5511699		<0.03	<0.03	NA	< 0.03	74%	50%	140%	81%	60%	130%	97%	50%	140%
1,1,1-Trichloroethane	5511699		<0.05	<0.05	NA	< 0.05	106%	50%	140%	90%	60%	130%	97%	50%	140%
Carbon Tetrachloride	5511699		<0.05	<0.05	NA	< 0.05	96%	50%	140%	78%	60%	130%	90%	50%	140%
Benzene	5511699		<0.02	<0.02	NA	< 0.02	93%	50%	140%	78%	60%	130%	96%	50%	140%
1,2-Dichloropropane	5511699		<0.03	<0.03	NA	< 0.03	98%	50%	140%	84%	60%	130%	100%	50%	140%
Trichloroethylene	5511699		<0.03	<0.03	NA	< 0.03	103%	50%	140%	87%	60%	130%	92%	50%	140%
Bromodichloromethane	5511699		<0.05	<0.05	NA	< 0.05	95%	50%	140%	94%	60%	130%	103%	50%	140%
Methyl Isobutyl Ketone	5511699		<0.50	<0.50	NA	< 0.50	106%	50%	140%	98%	50%	140%	102%	50%	140%
1,1,2-Trichloroethane	5511699		<0.04	<0.04	NA	< 0.04	92%	50%	140%	88%	60%	130%	120%	50%	140%
Toluene	5511699		<0.05	<0.05	NA	< 0.05	105%	50%	140%	96%	60%	130%	98%	50%	140%
Dibromochloromethane	5511699		<0.05	<0.05	NA	< 0.05	86%	50%	140%	92%	60%	130%	93%	50%	140%
Ethylene Dibromide	5511699		<0.04	<0.04	NA	< 0.04	91%	50%	140%	95%	60%	130%	73%	50%	140%
Tetrachloroethylene	5511699		<0.05	<0.05	NA	< 0.05	86%	50%	140%	87%	60%	130%	95%	50%	140%
1,1,1,2-Tetrachloroethane	5511699		<0.04	<0.04	NA	< 0.04	95%	50%	140%	94%	60%	130%	87%	50%	140%
Chlorobenzene	5511699		<0.05	<0.05	NA	< 0.05	90%	50%	140%	88%	60%	130%	103%	50%	140%
Ethylbenzene	5511699		<0.05	<0.05	NA	< 0.05	98%	50%	140%	99%	60%	130%	96%	50%	140%
m & p-Xylene	5511699		<0.05	<0.05	NA	< 0.05	94%	50%	140%	105%	60%	130%	101%	50%	140%
Bromoform	5511699		<0.05	<0.05	NA	< 0.05	100%	50%	140%	97%	60%	130%	100%	50%	140%
Styrene	5511699		<0.05	<0.05	NA	< 0.05	91%	50%	140%	86%	60%	130%	81%	50%	140%
1,1,2,2-Tetrachloroethane	5511699		<0.05	<0.05	NA	< 0.05	77%	50%	140%	81%	60%	130%	81%	50%	140%
o-Xylene	5511699		<0.05	<0.05	NA	< 0.05	97%	50%	140%	98%	60%	130%	95%	50%	140%
1,3-Dichlorobenzene	5511699		<0.05	<0.05	NA	< 0.05	103%	50%	140%	86%	60%	130%	91%	50%	140%
1,4-Dichlorobenzene	5511699		<0.05	<0.05	NA	< 0.05	102%	50%	140%	74%	60%	130%	91%	50%	140%
1,2-Dichlorobenzene	5511699		<0.05	<0.05	NA	< 0.05	104%	50%	140%	98%	60%	130%	83%	50%	140%
n-Hexane	5511699		<0.05	<0.05	NA	< 0.05	83%	50%	140%	80%	60%	130%	73%	50%	140%

Quality Assurance

CLIENT NAME: OAKHILL ENVIRONMENTAL
PROJECT: PR-23-037
SAMPLING SITE:

AGAT WORK ORDER: 23H099917
ATTENTION TO: Cody Bonaccorso
SAMPLED BY: Ariane

Trace Organics Analysis (Continued)

RPT Date: Dec 11, 2023			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) - PCBs (Soil)

Polychlorinated Biphenyls	5509369	< 0.1	< 0.1	NA	< 0.1	99%	50%	140%	106%	50%	140%	80%	50%	140%
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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: R. Chakraborty

Method Summary

CLIENT NAME: OAKHILL ENVIRONMENTAL
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PROJECT: PR-23-037
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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
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
Electrical Conductivity (2:1)	INOR-93-6075	modified from MSA PART 3, CH 14 and SM 2510 B	PC TITRATE
pH, 2:1 CaCl ₂ Extraction	INOR-93-6075	modified from EPA 9045D, MCKEAGUE 3.11 E3137	PC TITRATE
Sodium Adsorption Ratio (2:1) (Calc.)	INOR-93-6007	modified from EPA 6010D & Analytical Protocol	ICP/OES

Method Summary

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PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Trace Organics Analysis			
Benzene	VOL-91-5002	modified from EPA 5035C and EPA 8260D	(P&T)GC/MS
Toluene	VOL-91-5002	modified from EPA 5035C and EPA 8260D	(P&T)GC/MS
Ethylbenzene	VOL-91-5002	modified from EPA 5035C and EPA 8260D	(P&T)GC/MS
m & p-Xylene	VOL-91-5002	modified from EPA 5035C and EPA 8260D	(P&T)GC/MS
o-Xylene	VOL-91-5002	modified from EPA 5035C and EPA 8260D	(P&T)GC/MS
Xylenes (Total)	VOL-91-5002	modified from EPA 5035C and EPA 8260D	(P&T)GC/MS
Toluene-d8	VOL-91-5002	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
4-Bromofluorobenzene	VOL-91-5002	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Moisture Content	VOL-91-5009	modified from CCME Tier 1 Method	BALANCE
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
Benz(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
1 and 2 Methylnaphthalene	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

Method Summary

CLIENT NAME: OAKHILL ENVIRONMENTAL
AGAT WORK ORDER: 23H099917
PROJECT: PR-23-037
ATTENTION TO: Cody Bonaccorso
SAMPLING SITE:
SAMPLED BY: Ariane

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Terphenyl-d14	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Polychlorinated Biphenyls	ORG-91-5113	modified from EPA SW-846 3570 & 8082A	GC/ECD
Decachlorobiphenyl	ORG-91-5113	modified from EPA SW-846 3541 & 8082A	GC/ECD
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
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
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-91-5009	modified from EPA SW-846 5030C & 8260D	(P&T)GC/MS
F2 (C10 to C16)	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
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
Toluene-d8	VOL-91- 5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
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
F1 (C6 to C10) minus BTEX	VOL-91-5009	modified from CCME Tier 1 Method	(P&T)GC/FID
Dichlorodifluoromethane	VOL-91-5002	modified from EPA SW-846 5035 & 8260D	(P&T)GC/MS
Vinyl Chloride	VOL-91-5002	modified from EPA SW-846 5035 & 8260D	(P&T)GC/MS
Bromomethane	VOL-91-5002	modified from EPA SW-846 5035 & 8260D	(P&T)GC/MS
Trichlorofluoromethane	VOL-91-5002	modified from EPA SW-846 5035 & 8260D	(P&T)GC/MS
Acetone	VOL-91-5002	modified from EPA SW-846 5035 & 8260D	(P&T)GC/MS
1,1-Dichloroethylene	VOL-91-5002	modified from EPA SW-846 5035 & 8260D	(P&T)GC/MS
Methylene Chloride	VOL-91-5002	modified from EPA SW-846 5035 & 8260D	(P&T)GC/MS
Trans- 1,2-Dichloroethylene	VOL-91-5002	modified from EPA SW-846 5035 & 8260D	(P&T)GC/MS
Methyl tert-butyl Ether	VOL-91-5002	modified from EPA SW-846 5035 & 8260D	(P&T)GC/MS
1,1-Dichloroethane	VOL-91-5002	modified from EPA SW-846 5035 & 8260D	(P&T)GC/MS
Methyl Ethyl Ketone	VOL-91-5002	modified from EPA SW-846 5035 & 8260D	(P&T)GC/MS
Cis- 1,2-Dichloroethylene	VOL-91-5002	modified from EPA SW-846 5035 & 8260D	(P&T)GC/MS
Chloroform	VOL-91-5002	modified from EPA SW-846 5035 & 8260D	(P&T)GC/MS

Method Summary

CLIENT NAME: OAKHILL ENVIRONMENTAL
AGAT WORK ORDER: 23H099917
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ATTENTION TO: Cody Bonaccorso
SAMPLING SITE:
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PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
1,2-Dichloroethane	VOL-91-5002	modified from EPA SW-846 5035 & 8260D	(P&T)GC/MS
1,1,1-Trichloroethane	VOL-91-5002	modified from EPA SW-846 5035 & 8260D	(P&T)GC/MS
Carbon Tetrachloride	VOL-91-5002	modified from EPA SW-846 5035 & 8260D	(P&T)GC/MS
Benzene	VOL-91-5002	modified from EPA SW-846 5035 & 8260D	(P&T)GC/MS
1,2-Dichloropropane	VOL-91-5002	modified from EPA SW-846 5035 & 8260D	(P&T)GC/MS
Trichloroethylene	VOL-91-5002	modified from EPA SW-846 5035 & 8260D	(P&T)GC/MS
Bromodichloromethane	VOL-91-5002	modified from EPA SW-846 5035 & 8260D	(P&T)GC/MS
Methyl Isobutyl Ketone	VOL-91-5002	modified from EPA SW-846 5035 & 8260D	(P&T)GC/MS
1,1,2-Trichloroethane	VOL-91-5002	modified from EPA SW-846 5035 & 8260D	(P&T)GC/MS
Toluene	VOL-91-5002	modified from EPA SW-846 5035 & 8260D	(P&T)GC/MS
Dibromochloromethane	VOL-91-5002	modified from EPA SW-846 5035 & 8260D	(P&T)GC/MS
Ethylene Dibromide	VOL-91-5002	modified from EPA SW-846 5035 & 8260D	(P&T)GC/MS
Tetrachloroethylene	VOL-91-5002	modified from EPA SW-846 5035 & 8260D	(P&T)GC/MS
1,1,1,2-Tetrachloroethane	VOL-91-5002	modified from EPA SW-846 5035 & 8260D	(P&T)GC/MS
Chlorobenzene	VOL-91-5002	modified from EPA SW-846 5035 & 8260D	(P&T)GC/MS
Ethylbenzene	VOL-91-5002	modified from EPA SW-846 5035 & 8260D	(P&T)GC/MS
m & p-Xylene	VOL-91-5002	modified from EPA SW-846 5035 & 8260D	(P&T)GC/MS
Bromoform	VOL-91-5002	modified from EPA SW-846 5035 & 8260D	(P&T)GC/MS
Styrene	VOL-91-5002	modified from EPA SW-846 5035 & 8260D	(P&T)GC/MS
1,1,2,2-Tetrachloroethane	VOL-91-5002	modified from EPA SW-846 5035 & 8260D	(P&T)GC/MS
o-Xylene	VOL-91-5002	modified from EPA SW-846 5035 & 8260D	(P&T)GC/MS
1,3-Dichlorobenzene	VOL-91-5002	modified from EPA SW-846 5035 & 8260D	(P&T)GC/MS
1,4-Dichlorobenzene	VOL-91-5002	modified from EPA SW-846 5035 & 8260D	(P&T)GC/MS
1,2-Dichlorobenzene	VOL-91-5002	modified from EPA SW-846 5035 & 8260D	(P&T)GC/MS
Xylenes (Total)	VOL-91-5002	modified from EPA SW-846 5035 & 8260D	(P&T)GC/MS
1,3-Dichloropropene (Cis + Trans)	VOL-91-5002	modified from EPA SW-846 5035 & 8260D	(P&T)GC/MS
n-Hexane	VOL-91-5002	modified from EPA SW-846 5035 & 8260D	(P&T)GC/MS
Toluene-d8	VOL-91-5002	modified from EPA SW-846 5035 & 8260D	(P&T)GC/MS

Method Summary

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PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
4-Bromofluorobenzene	VOL-91-5002	modified from EPA SW-846 5035 & 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
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

Method Summary

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SAMPLING SITE:
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PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
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

Have feedback?
Scan here for a quick survey!



5835 Coopers Avenue
Mississauga, Ontario L4Z 1Y2
Ph: 905.712.5100 Fax: 905.712.5122
web@earth.agatlabs.com

Laboratory Use Only

Work Order #: 23H099917
Cooler Quantity: 1 L19
Arrival Temperatures: 6 | 5.4 | 8.3
3.2 | 3.0 | 3.3
Custody Seal Intact: Yes No N/A
Notes: Bagged 1cc

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: Oakhill Environmental Inc.
Contact: Cody Bonaccorso
Address: 1-218 Martindale Road, St. Catharines, ON, L2S 0B2
Phone: 905 988 1243 Fax: _____
Reports to be sent to: cody@dennis@kendrew/mackenzie@oakhillenvironmental.com
1. Email: _____
2. Email: ariane@oakhillenvironmental.com

Regulatory Requirements:

(Please check all applicable boxes)

Regulation 153/04 Regulation 406 Sewer Use
 Sanitary Storm
Table: 8 Indicate One
 Ind/Com Table: _____ Indicate One
 Res/Park Agriculture Region
 Agriculture Regulation 558 Prov. Water Quality Objectives (PWQO)
Soil Texture (Check One) Other
 Coarse CCME Fine
 Fine Indicate One

Is this submission for a Record of Site Condition?

Yes No

Report Guideline on Certificate of Analysis

Yes No

Project Information:

Project: PR-23-037
Site Location: Ariane
Sampled By: 763498
AGAT Quote #: _____ PO: _____
Please note: If quotation number is not provided, client will be billed full price for analysis.

Invoice Information:

Bill To Same: Yes No

Company: _____
Contact: _____
Address: _____
Email: invoice@oakhillenvironmental.com

Sample Matrix Legend

GW Ground Water
O Oil
P Paint
S Soil
SD Sediment
SW Surface Water

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	Potentially Hazardous or High Concentration (Y/N)
								Metals & Inorganics	Landfill Disposal Characterization TCLP: <input type="checkbox"/> M&I <input type="checkbox"/> VOCs <input type="checkbox"/> ABNs <input type="checkbox"/> Biot <input type="checkbox"/> PCBs	
								Metals - <input type="checkbox"/> CrVI, <input type="checkbox"/> Hg, <input type="checkbox"/> HWSB <input type="checkbox"/> ICP	Regulation 406 SPLP Rainwater Leach	
								BTEX, F1-F4, PHOS	SPLP: <input type="checkbox"/> Metals <input type="checkbox"/> VOCs <input type="checkbox"/> SVOCs	
								VOC	Regulation 406 Characterization Package	
								PAHs	pH, IC/PMIS Metals, BTEX, F1-F4	
								PCBs	Corrosivity: <input type="checkbox"/> Moisture <input type="checkbox"/> Sulphide	
								PCBs: Aroclors <input type="checkbox"/>	EC / SAR	
									PH	
									F2-F4	
1. TP1	Nov 30	8:30 AM	3	Soil				<input checked="" type="checkbox"/>		
2. TP2		8:50 AM	3					<input checked="" type="checkbox"/>		
3. TP3		9:15 AM	3					<input checked="" type="checkbox"/>		
4. TP4		9:35 AM	3					<input checked="" type="checkbox"/>		
5. TP5		9:55 AM	3					<input checked="" type="checkbox"/>		
6. TP6		10:35 AM	3					<input checked="" type="checkbox"/>		
7. TP7		11:00 AM	3					<input checked="" type="checkbox"/>		
8. TP8		11:20 AM	3					<input checked="" type="checkbox"/>		
9. TP9		11:40 AM	3					<input checked="" type="checkbox"/>		
10. TP10		11:55 AM	2					<input checked="" type="checkbox"/>		
11. TP11		12:15 PM	2					<input checked="" type="checkbox"/>		

Samples Relinquished By (Print Name and Sign) <u>Kendrew Byers</u>	Date <u>Nov 30</u>	Time <u>4:34</u>	Samples Received By (Print Name and Sign) <u>J. Fernandez</u>	Date <u>Nov 30/23</u>	Time <u>4:43pm</u>
Samples Relinquished By (Print Name and Sign) <u>[Signature]</u>	Date <u>Nov 30</u>	Time <u>4:34</u>	Samples Received By (Print Name and Sign) <u>[Signature]</u>	Date <u>Dec. 1/23</u>	Time <u>5:20 PM</u>
Samples Relinquished By (Print Name and Sign) <u>[Signature]</u>	Date <u>Nov 30</u>	Time <u>4:34</u>	Samples Received By (Print Name and Sign) <u>[Signature]</u>	Date <u>Dec. 1/23</u>	Time <u>5:20 PM</u>

Pink Copy - Client | Yellow Copy - AGAT | White Copy - AGAT



CLIENT NAME: OAKHILL ENVIRONMENTAL
1-218 MARTINDALE ROAD
ST. CATHARINES, ON L2S 0B2
(905) 988-1243

ATTENTION TO: Cody Bonaccorso

PROJECT: PR-23-037

AGAT WORK ORDER: 23H103762

SOIL ANALYSIS REVIEWED BY: Sukhwinder Randhawa, Inorganic Team Lead

TRACE ORGANICS REVIEWED BY: Radhika Chakraborty, Trace Organics Lab Manager

DATE REPORTED: Dec 22, 2023

PAGES (INCLUDING COVER): 18

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 as specified by ISO/IEC 17025:2017 is available from AGAT Laboratories upon request.
- 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: 23H103762

PROJECT: PR-23-037

5835 COOPERS AVENUE
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<http://www.agatlabs.com>

CLIENT NAME: OAKHILL ENVIRONMENTAL

ATTENTION TO: Cody Bonaccorso

SAMPLING SITE:

SAMPLED BY: Ariane/Mackenzie

O. Reg. 153(511) - All Metals (Soil)

DATE RECEIVED: 2023-12-13

DATE REPORTED: 2023-12-22

Parameter	Unit	SAMPLE DESCRIPTION:		OBH1-2	OBH1-5	OBH2-1	OBH3-1	OBH4-1	OBH6-1	OBH7-1	OBH8-1
		G / S	RDL	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
		DATE SAMPLED:		2023-12-12 09:10	2023-12-12 09:40	2023-12-12 14:25	2023-12-12 16:25	2023-12-12 10:40	2023-12-12 11:20	2023-12-12 11:40	2023-12-12 12:00
				5543086	5543091	5543092	5543093	5543094	5543095	5543096	5543097
Antimony	µg/g	1.3	0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8
Arsenic	µg/g	18	1	6	5	4	6	5	5	5	6
Barium	µg/g	220	2.0	184	119	268	145	79.5	97.5	106	188
Beryllium	µg/g	2.5	0.5	1.0	0.7	0.6	0.9	<0.5	0.6	0.7	1.1
Boron	µg/g	36	5	16	10	<5	10	6	9	9	11
Boron (Hot Water Soluble)	µg/g	1.5	0.10	0.29	0.27	0.21	0.44	0.75	0.69	0.64	0.37
Cadmium	µg/g	1.2	0.5	<0.5	<0.5	<0.5	<0.5	0.7	<0.5	<0.5	<0.5
Chromium	µg/g	70	5	37	25	22	32	16	22	26	39
Cobalt	µg/g	22	0.8	17.7	13.2	10.8	16.9	11.9	10.7	12.7	19.7
Copper	µg/g	92	1.0	26.1	17.3	20.5	26.2	21.1	16.6	20.9	30.1
Lead	µg/g	120	1	10	7	8	12	33	29	20	13
Molybdenum	µg/g	2	0.5	0.8	0.6	0.7	0.7	0.7	0.6	0.6	<0.5
Nickel	µg/g	82	1	40	29	27	38	17	22	28	39
Selenium	µg/g	1.5	0.8	<0.8	0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8
Silver	µg/g	0.5	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	2.5	0.50	1.02	0.98	0.64	1.10	0.56	0.84	0.79	1.05
Vanadium	µg/g	86	2.0	53.4	34.8	37.0	45.9	24.5	36.1	40.1	58.1
Zinc	µg/g	290	5	80	57	50	73	156	144	80	78
Chromium, Hexavalent	µg/g	0.66	0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Mercury	µg/g	0.27	0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10

Certified By:





Certificate of Analysis

AGAT WORK ORDER: 23H103762

PROJECT: PR-23-037

5835 COOPERS AVENUE
MISSISSAUGA, ONTARIO
CANADA L4Z 1Y2
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<http://www.agatlabs.com>

CLIENT NAME: OAKHILL ENVIRONMENTAL

ATTENTION TO: Cody Bonaccorso

SAMPLING SITE:

SAMPLED BY: Ariane/Mackenzie

O. Reg. 153(511) - All Metals (Soil)

DATE RECEIVED: 2023-12-13

DATE REPORTED: 2023-12-22

SAMPLE DESCRIPTION: OBH9-1
SAMPLE TYPE: Soil
DATE SAMPLED: 2023-12-12
09:30
5543098

Parameter	Unit	G / S	RDL	5543098
Antimony	µg/g	1.3	0.8	<0.8
Arsenic	µg/g	18	1	5
Barium	µg/g	220	2.0	49.5
Beryllium	µg/g	2.5	0.5	<0.5
Boron	µg/g	36	5	<5
Boron (Hot Water Soluble)	µg/g	1.5	0.10	1.24
Cadmium	µg/g	1.2	0.5	<0.5
Chromium	µg/g	70	5	18
Cobalt	µg/g	22	0.8	9.2
Copper	µg/g	92	1.0	8.4
Lead	µg/g	120	1	15
Molybdenum	µg/g	2	0.5	0.9
Nickel	µg/g	82	1	18
Selenium	µg/g	1.5	0.8	<0.8
Silver	µg/g	0.5	0.5	<0.5
Thallium	µg/g	1	0.5	<0.5
Uranium	µg/g	2.5	0.50	0.53
Vanadium	µg/g	86	2.0	35.4
Zinc	µg/g	290	5	52
Chromium, Hexavalent	µg/g	0.66	0.2	<0.2
Mercury	µg/g	0.27	0.10	<0.10

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 8: Generic Site Condition Standards for Use within 30 m of a Water Body in a Potable Ground Water Condition - Soil - Residential/Parkland/Institutional/Industrial/Commercial/Community Property Use
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.

Analysis performed at AGAT Toronto (unless marked by *)

Certified By:





Certificate of Analysis

AGAT WORK ORDER: 23H103762

PROJECT: PR-23-037

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CLIENT NAME: OAKHILL ENVIRONMENTAL

ATTENTION TO: Cody Bonaccorso

SAMPLING SITE:

SAMPLED BY: Ariane/Mackenzie

Particle Size by Sieve (Wet)

DATE RECEIVED: 2023-12-13

DATE REPORTED: 2023-12-22

		SAMPLE DESCRIPTION:		OBH1-5	OBH9-1
		SAMPLE TYPE:		Soil	Soil
		DATE SAMPLED:		2023-12-12 09:40	2023-12-12 09:30
Parameter	Unit	G / S	RDL	5543091	5543098
Sieve Analysis - 75 µm (retained)	%		NA	0.64	40.10
Sieve Analysis - 75 µm (passing)	%		NA	99.36	59.90
Soil Texture (Toronto)				Fine	Fine

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard

5543091-5543098 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:



SKaur



Certificate of Analysis

AGAT WORK ORDER: 23H103762

PROJECT: PR-23-037

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<http://www.agatlabs.com>

CLIENT NAME: OAKHILL ENVIRONMENTAL

ATTENTION TO: Cody Bonaccorso

SAMPLING SITE:

SAMPLED BY: Ariane/Mackenzie

O. Reg. 153(511) - PAHs (Soil)

DATE RECEIVED: 2023-12-13

DATE REPORTED: 2023-12-22

Parameter	Unit	SAMPLE DESCRIPTION:		OBH1-2	OBH2-1	OBH3-1	OBH4-1	OBH6-1	OBH7-1	OBH8-1	OBH9-1
		SAMPLE TYPE:		Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
		DATE SAMPLED:		2023-12-12 09:10	2023-12-12 14:25	2023-12-12 16:25	2023-12-12 10:40	2023-12-12 11:20	2023-12-12 11:40	2023-12-12 12:00	2023-12-12 09:30
		G / S	RDL	5543086	5543092	5543093	5543094	5543095	5543096	5543097	5543098
Naphthalene	µg/g	0.09	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Acenaphthylene	µg/g	0.093	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Acenaphthene	µg/g	0.072	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Fluorene	µg/g	0.19	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Phenanthrene	µg/g	0.69	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Anthracene	µg/g	0.22	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	1	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Benz(a)anthracene	µg/g	0.36	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Chrysene	µg/g	2.8	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Benzo(b)fluoranthene	µg/g	0.47	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Benzo(k)fluoranthene	µg/g	0.48	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	0.23	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	0.68	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
1 and 2 Methyl naphthalene	µg/g	0.59	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Moisture Content	%		0.1	20.3	13.8	18.7	19.8	8.9	17.4	14.6	19.9
Surrogate	Unit	Acceptable Limits									
Naphthalene-d8	%	50-140		85	90	105	115	80	90	75	80
Acridine-d9	%	50-140		105	95	100	105	105	100	100	95
Terphenyl-d14	%	50-140		70	110	110	90	105	100	80	105

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 8: Generic Site Condition Standards for Use within 30 m of a Water Body in a Potable Ground Water Condition - Soil - Residential/Parkland/Institutional/Industrial/Commercial/Community Property Use
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.

5543086-5543098 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:

R. Chakraborty



Certificate of Analysis

AGAT WORK ORDER: 23H103762

PROJECT: PR-23-037

5835 COOPERS AVENUE
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CLIENT NAME: OAKHILL ENVIRONMENTAL

ATTENTION TO: Cody Bonaccorso

SAMPLING SITE:

SAMPLED BY: Ariane/Mackenzie

O. Reg. 153(511) - PHCs F1 - F4 (with PAHs and VOC) (Soil)

DATE RECEIVED: 2023-12-13

DATE REPORTED: 2023-12-22

Parameter	Unit	G / S	RDL	SAMPLE DESCRIPTION:	OBH1-2	OBH2-1	OBH3-1	OBH4-1	OBH6-1	OBH7-1	OBH8-1	OBH9-1
				SAMPLE TYPE:	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
DATE SAMPLED:				2023-12-12 09:10	2023-12-12 14:25	2023-12-12 16:25	2023-12-12 10:40	2023-12-12 11:20	2023-12-12 11:40	2023-12-12 12:00	2023-12-12 09:30	
				5543086	5543092	5543093	5543094	5543095	5543096	5543097	5543098	
F1 (C6 to C10)	µg/g		5	<5	<5	<5	<5	<5	<5	<5	<5	<5
F1 (C6 to C10) minus BTEX	µg/g	25	5	<5	<5	<5	<5	<5	<5	<5	<5	<5
F2 (C10 to C16)	µg/g	10	10	<10	<10	<10	<10	<10	<10	<10	<10	243
F2 (C10 to C16) minus Naphthalene	µg/g		10	<10	<10	<10	<10	<10	<10	<10	<10	243
F3 (C16 to C34)	µg/g	240	50	<50	<50	<50	<50	207	<50	<50	<50	164
F3 (C16 to C34) minus PAHs	µg/g		50	<50	<50	<50	<50	207	<50	<50	<50	164
F4 (C34 to C50)	µg/g	120	50	<50	68	<50	<50	490	<50	<50	<50	<50
Gravimetric Heavy Hydrocarbons	µg/g	120	50	NA	NA	NA	NA	NA	NA	NA	NA	NA
Moisture Content	%		0.1	20.3	13.8	18.7	19.8	8.9	17.4	14.6	19.9	
Surrogate	Unit	Acceptable Limits										
Toluene-d8	%	50-140		109	109	106	104	108	108	91	110	
Terphenyl	%	60-140		86	80	88	85	92	73	92	93	

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 8: Generic Site Condition Standards for Use within 30 m of a Water Body in a Potable Ground Water Condition - Soil - Residential/Parkland/Institutional/Industrial/Commercial/Community Property Use
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.

5543086-5543098 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:

R. Chakraborty



Certificate of Analysis

AGAT WORK ORDER: 23H103762

PROJECT: PR-23-037

5835 COOPERS AVENUE
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CLIENT NAME: OAKHILL ENVIRONMENTAL

ATTENTION TO: Cody Bonaccorso

SAMPLING SITE:

SAMPLED BY: Ariane/Mackenzie

O. Reg. 153(511) - VOCs (with PHC) (Soil)

DATE RECEIVED: 2023-12-13

DATE REPORTED: 2023-12-22

Parameter	Unit	SAMPLE DESCRIPTION:		OBH1-2	OBH2-1	OBH3-1	OBH4-1	OBH6-1	OBH7-1	OBH8-1	OBH9-1
		G / S	RDL	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
		DATE SAMPLED:		2023-12-12 09:10	2023-12-12 14:25	2023-12-12 16:25	2023-12-12 10:40	2023-12-12 11:20	2023-12-12 11:40	2023-12-12 12:00	2023-12-12 09:30
				5543086	5543092	5543093	5543094	5543095	5543096	5543097	5543098
Dichlorodifluoromethane	µg/g	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
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	0.25	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Acetone	ug/g	0.5	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	0.05	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Trans- 1,2-Dichloroethylene	ug/g	0.05	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Methyl tert-butyl Ether	ug/g	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	0.05	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Methyl Ethyl Ketone	ug/g	0.5	0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Cis- 1,2-Dichloroethylene	ug/g	0.05	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Chloroform	ug/g	0.05	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	0.05	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Carbon Tetrachloride	ug/g	0.05	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Benzene	ug/g	0.02	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
1,2-Dichloropropane	ug/g	0.05	0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
Trichloroethylene	ug/g	0.05	0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
Bromodichloromethane	ug/g	0.05	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Methyl Isobutyl Ketone	ug/g	0.5	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	0.2	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Dibromochloromethane	ug/g	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
Tetrachloroethylene	ug/g	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
Chlorobenzene	ug/g	0.05	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Ethylbenzene	ug/g	0.05	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05

Certified By:

R. Chakraborty



Certificate of Analysis

AGAT WORK ORDER: 23H103762

PROJECT: PR-23-037

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CLIENT NAME: OAKHILL ENVIRONMENTAL

ATTENTION TO: Cody Bonaccorso

SAMPLING SITE:

SAMPLED BY: Ariane/Mackenzie

O. Reg. 153(511) - VOCs (with PHC) (Soil)

DATE RECEIVED: 2023-12-13

DATE REPORTED: 2023-12-22

Parameter	Unit	SAMPLE DESCRIPTION:		OBH1-2	OBH2-1	OBH3-1	OBH4-1	OBH6-1	OBH7-1	OBH8-1	OBH9-1
		SAMPLE TYPE:		Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
		DATE SAMPLED:		2023-12-12 09:10	2023-12-12 14:25	2023-12-12 16:25	2023-12-12 10:40	2023-12-12 11:20	2023-12-12 11:40	2023-12-12 12:00	2023-12-12 09:30
		G / S	RDL	5543086	5543092	5543093	5543094	5543095	5543096	5543097	5543098
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	0.05	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Styrene	ug/g	0.05	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	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	0.05	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
1,2-Dichlorobenzene	ug/g	0.05	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Xylenes (Total)	ug/g	0.05	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	0.05	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
n-Hexane	µg/g	0.05	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Moisture Content	%		0.1	20.3	13.8	18.7	19.8	8.9	17.4	14.6	19.9
Surrogate	Unit	Acceptable Limits									
Toluene-d8	% Recovery	50-140		109	109	106	104	108	108	91	110
4-Bromofluorobenzene	% Recovery	50-140		84	91	87	82	84	90	83	86

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 8: Generic Site Condition Standards for Use within 30 m of a Water Body in a Potable Ground Water Condition - Soil - Residential/Parkland/Institutional/Industrial/Commercial/Community Property Use

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.

5543086-5543098 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:

R. Chakraborty



Exceedance Summary

AGAT WORK ORDER: 23H103762

PROJECT: PR-23-037

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CLIENT NAME: OAKHILL ENVIRONMENTAL

ATTENTION TO: Cody Bonaccorso

SAMPLEID	SAMPLE TITLE	GUIDELINE	ANALYSIS PACKAGE	PARAMETER	UNIT	GUIDEVALUE	RESULT
5543092	OBH2-1	ON T8 S RPI/ICC	O. Reg. 153(511) - All Metals (Soil)	Barium	µg/g	220	268
5543095	OBH6-1	ON T8 S RPI/ICC	O. Reg. 153(511) - PHCs F1 - F4 (with PAHs and VOC) (Soil)	F4 (C34 to C50)	µg/g	120	490
5543098	OBH9-1	ON T8 S RPI/ICC	O. Reg. 153(511) - PHCs F1 - F4 (with PAHs and VOC) (Soil)	F2 (C10 to C16)	µg/g	10	243

Quality Assurance

CLIENT NAME: OAKHILL ENVIRONMENTAL
PROJECT: PR-23-037
SAMPLING SITE:

AGAT WORK ORDER: 23H103762
ATTENTION TO: Cody Bonaccorso
SAMPLED BY: Ariane/Mackenzie

Soil Analysis															
RPT Date: Dec 22, 2023			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)	5543091	5543091	0.64	0.62	3.2%	NA	99%	75%	125%
Sieve Analysis - 75 µm (passing)	5543091	5543091	99.36	99.38	0.0%	NA			

Comments: NA signifies Not Applicable.

O. Reg. 153(511) - All Metals (Soil)

Antimony	5543086	5543086	<0.8	<0.8	NA	< 0.8	110%	70%	130%	107%	80%	120%	105%	70%	130%
Arsenic	5543086	5543086	6	6	0.0%	< 1	114%	70%	130%	106%	80%	120%	113%	70%	130%
Barium	5543086	5543086	184	187	1.6%	< 2.0	99%	70%	130%	102%	80%	120%	103%	70%	130%
Beryllium	5543086	5543086	1.0	1.0	NA	< 0.5	87%	70%	130%	106%	80%	120%	78%	70%	130%
Boron	5543086	5543086	16	15	NA	< 5	72%	70%	130%	115%	80%	120%	78%	70%	130%
Boron (Hot Water Soluble)	5543086	5543086	0.29	0.29	NA	< 0.10	107%	60%	140%	104%	70%	130%	102%	60%	140%
Cadmium	5543086	5543086	<0.5	<0.5	NA	< 0.5	105%	70%	130%	104%	80%	120%	107%	70%	130%
Chromium	5543086	5543086	37	38	2.7%	< 5	97%	70%	130%	105%	80%	120%	120%	70%	130%
Cobalt	5543086	5543086	17.7	18.9	6.6%	< 0.8	105%	70%	130%	107%	80%	120%	117%	70%	130%
Copper	5543086	5543086	26.1	29.0	10.5%	< 1.0	93%	70%	130%	107%	80%	120%	106%	70%	130%
Lead	5543086	5543086	10	10	0.0%	< 1	100%	70%	130%	96%	80%	120%	98%	70%	130%
Molybdenum	5543086	5543086	0.8	0.8	NA	< 0.5	102%	70%	130%	110%	80%	120%	112%	70%	130%
Nickel	5543086	5543086	40	41	2.5%	< 1	106%	70%	130%	112%	80%	120%	113%	70%	130%
Selenium	5543086	5543086	<0.8	<0.8	NA	< 0.8	131%	70%	130%	106%	80%	120%	114%	70%	130%
Silver	5543086	5543086	<0.5	<0.5	NA	< 0.5	97%	70%	130%	107%	80%	120%	106%	70%	130%
Thallium	5543086	5543086	<0.5	<0.5	NA	< 0.5	108%	70%	130%	109%	80%	120%	114%	70%	130%
Uranium	5543086	5543086	1.02	1.00	NA	< 0.50	113%	70%	130%	99%	80%	120%	112%	70%	130%
Vanadium	5543086	5543086	53.4	54.1	1.3%	< 2.0	115%	70%	130%	105%	80%	120%	111%	70%	130%
Zinc	5543086	5543086	80	80	0.0%	< 5	101%	70%	130%	105%	80%	120%	114%	70%	130%
Chromium, Hexavalent	5547011		<0.2	<0.2	NA	< 0.2	94%	70%	130%	90%	80%	120%	76%	70%	130%
Mercury	5543086	5543086	<0.10	<0.10	NA	< 0.10	107%	70%	130%	101%	80%	120%	112%	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.

Certified By:



Subhinder Kaur Randhawa

Quality Assurance

CLIENT NAME: OAKHILL ENVIRONMENTAL

AGAT WORK ORDER: 23H103762

PROJECT: PR-23-037

ATTENTION TO: Cody Bonaccorso

SAMPLING SITE:

SAMPLED BY: Ariane/Mackenzie

Trace Organics Analysis															
RPT Date: Dec 22, 2023			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)	5543098	5543098	<5	<5	NA	< 5	91%	60%	140%	92%	60%	140%	91%	60%	140%
F2 (C10 to C16)	5543096	5543096	<10	<10	NA	< 10	101%	60%	140%	115%	60%	140%	107%	60%	140%
F3 (C16 to C34)	5543096	5543096	<50	<50	NA	< 50	105%	60%	140%	129%	60%	140%	119%	60%	140%
F4 (C34 to C50)	5543096	5543096	<50	<50	NA	< 50	67%	60%	140%	111%	60%	140%	110%	60%	140%

O. Reg. 153(511) - VOCs (with PHC) (Soil)

Dichlorodifluoromethane	5543098	5543098	<0.05	<0.05	NA	< 0.05	89%	50%	140%	86%	50%	140%	108%	50%	140%
Vinyl Chloride	5543098	5543098	<0.02	<0.02	NA	< 0.02	96%	50%	140%	108%	50%	140%	102%	50%	140%
Bromomethane	5543098	5543098	<0.05	<0.05	NA	< 0.05	101%	50%	140%	100%	50%	140%	90%	50%	140%
Trichlorofluoromethane	5543098	5543098	<0.05	<0.05	NA	< 0.05	109%	50%	140%	92%	50%	140%	86%	50%	140%
Acetone	5543098	5543098	<0.50	<0.50	NA	< 0.50	111%	50%	140%	97%	50%	140%	103%	50%	140%
1,1-Dichloroethylene	5543098	5543098	<0.05	<0.05	NA	< 0.05	98%	50%	140%	104%	60%	130%	95%	50%	140%
Methylene Chloride	5543098	5543098	<0.05	<0.05	NA	< 0.05	89%	50%	140%	105%	60%	130%	102%	50%	140%
Trans- 1,2-Dichloroethylene	5543098	5543098	<0.05	<0.05	NA	< 0.05	86%	50%	140%	101%	60%	130%	92%	50%	140%
Methyl tert-butyl Ether	5543098	5543098	<0.05	<0.05	NA	< 0.05	98%	50%	140%	92%	60%	130%	86%	50%	140%
1,1-Dichloroethane	5543098	5543098	<0.02	<0.02	NA	< 0.02	100%	50%	140%	94%	60%	130%	93%	50%	140%
Methyl Ethyl Ketone	5543098	5543098	<0.50	<0.50	NA	< 0.50	86%	50%	140%	92%	50%	140%	105%	50%	140%
Cis- 1,2-Dichloroethylene	5543098	5543098	<0.02	<0.02	NA	< 0.02	90%	50%	140%	97%	60%	130%	87%	50%	140%
Chloroform	5543098	5543098	<0.04	<0.04	NA	< 0.04	100%	50%	140%	89%	60%	130%	83%	50%	140%
1,2-Dichloroethane	5543098	5543098	<0.03	<0.03	NA	< 0.03	88%	50%	140%	76%	60%	130%	95%	50%	140%
1,1,1-Trichloroethane	5543098	5543098	<0.05	<0.05	NA	< 0.05	91%	50%	140%	92%	60%	130%	89%	50%	140%
Carbon Tetrachloride	5543098	5543098	<0.05	<0.05	NA	< 0.05	84%	50%	140%	93%	60%	130%	81%	50%	140%
Benzene	5543098	5543098	<0.02	<0.02	NA	< 0.02	99%	50%	140%	89%	60%	130%	96%	50%	140%
1,2-Dichloropropane	5543098	5543098	<0.03	<0.03	NA	< 0.03	101%	50%	140%	84%	60%	130%	93%	50%	140%
Trichloroethylene	5543098	5543098	<0.03	<0.03	NA	< 0.03	96%	50%	140%	89%	60%	130%	98%	50%	140%
Bromodichloromethane	5543098	5543098	<0.05	<0.05	NA	< 0.05	87%	50%	140%	92%	60%	130%	104%	50%	140%
Methyl Isobutyl Ketone	5543098	5543098	<0.50	<0.50	NA	< 0.50	107%	50%	140%	102%	50%	140%	100%	50%	140%
1,1,2-Trichloroethane	5543098	5543098	<0.04	<0.04	NA	< 0.04	96%	50%	140%	86%	60%	130%	97%	50%	140%
Toluene	5543098	5543098	<0.05	<0.05	NA	< 0.05	74%	50%	140%	90%	60%	130%	97%	50%	140%
Dibromochloromethane	5543098	5543098	<0.05	<0.05	NA	< 0.05	101%	50%	140%	108%	60%	130%	94%	50%	140%
Ethylene Dibromide	5543098	5543098	<0.04	<0.04	NA	< 0.04	84%	50%	140%	85%	60%	130%	93%	50%	140%
Tetrachloroethylene	5543098	5543098	<0.05	<0.05	NA	< 0.05	80%	50%	140%	80%	60%	130%	100%	50%	140%
1,1,1,2-Tetrachloroethane	5543098	5543098	<0.04	<0.04	NA	< 0.04	94%	50%	140%	91%	60%	130%	80%	50%	140%
Chlorobenzene	5543098	5543098	<0.05	<0.05	NA	< 0.05	97%	50%	140%	86%	60%	130%	101%	50%	140%
Ethylbenzene	5543098	5543098	<0.05	<0.05	NA	< 0.05	95%	50%	140%	95%	60%	130%	110%	50%	140%
m & p-Xylene	5543098	5543098	<0.05	<0.05	NA	< 0.05	108%	50%	140%	105%	60%	130%	107%	50%	140%
Bromoform	5543098	5543098	<0.05	<0.05	NA	< 0.05	87%	50%	140%	99%	60%	130%	91%	50%	140%
Styrene	5543098	5543098	<0.05	<0.05	NA	< 0.05	96%	50%	140%	98%	60%	130%	97%	50%	140%
1,1,2,2-Tetrachloroethane	5543098	5543098	<0.05	<0.05	NA	< 0.05	104%	50%	140%	93%	60%	130%	98%	50%	140%
o-Xylene	5543098	5543098	<0.05	<0.05	NA	< 0.05	93%	50%	140%	93%	60%	130%	86%	50%	140%

AGAT QUALITY ASSURANCE REPORT (V1)

Page 11 of 18

AGAT Laboratories is accredited to ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA) and/or Standards Council of Canada (SCC) for specific tests listed on the scope of accreditation. AGAT Laboratories (Mississauga) is also accredited by the Canadian Association for Laboratory Accreditation Inc. (CALA) for specific drinking water tests. Accreditations are location and parameter specific. A complete listing of parameters for each location is available from www.cala.ca and/or www.scc.ca. The tests in this report may not necessarily be included in the scope of accreditation. RPDs calculated using raw data. The RPD may not be reflective of duplicate values shown, due to rounding of final results.

Results relate only to the items tested. Results apply to samples as received.

Quality Assurance

CLIENT NAME: OAKHILL ENVIRONMENTAL
PROJECT: PR-23-037
SAMPLING SITE:

AGAT WORK ORDER: 23H103762
ATTENTION TO: Cody Bonaccorso
SAMPLED BY: Ariane/Mackenzie

Trace Organics Analysis (Continued)

RPT Date: Dec 22, 2023			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	
1,3-Dichlorobenzene	5543098	5543098	<0.05	<0.05	NA	< 0.05	77%	50%	140%	95%	60%	130%	88%	50%	140%	
1,4-Dichlorobenzene	5543098	5543098	<0.05	<0.05	NA	< 0.05	86%	50%	140%	100%	60%	130%	73%	50%	140%	
1,2-Dichlorobenzene	5543098	5543098	<0.05	<0.05	NA	< 0.05	80%	50%	140%	96%	60%	130%	102%	50%	140%	
n-Hexane	5543098	5543098	<0.05	<0.05	NA	< 0.05	99%	50%	140%	104%	60%	130%	94%	50%	140%	
O. Reg. 153(511) - PAHs (Soil)																
Naphthalene	5545296		<0.05	<0.05	NA	< 0.05	107%	50%	140%	103%	50%	140%	75%	50%	140%	
Acenaphthylene	5545296		<0.05	<0.05	NA	< 0.05	88%	50%	140%	78%	50%	140%	88%	50%	140%	
Acenaphthene	5545296		<0.05	<0.05	NA	< 0.05	84%	50%	140%	73%	50%	140%	78%	50%	140%	
Fluorene	5545296		<0.05	<0.05	NA	< 0.05	73%	50%	140%	75%	50%	140%	75%	50%	140%	
Phenanthrene	5545296		<0.05	<0.05	NA	< 0.05	86%	50%	140%	98%	50%	140%	70%	50%	140%	
Anthracene	5545296		<0.05	<0.05	NA	< 0.05	101%	50%	140%	103%	50%	140%	100%	50%	140%	
Fluoranthene	5545296		<0.05	<0.05	NA	< 0.05	76%	50%	140%	83%	50%	140%	80%	50%	140%	
Pyrene	5545296		<0.05	<0.05	NA	< 0.05	69%	50%	140%	73%	50%	140%	90%	50%	140%	
Benz(a)anthracene	5545296		<0.05	<0.05	NA	< 0.05	92%	50%	140%	98%	50%	140%	70%	50%	140%	
Chrysene	5545296		<0.05	<0.05	NA	< 0.05	109%	50%	140%	90%	50%	140%	110%	50%	140%	
Benzo(b)fluoranthene	5545296		<0.05	<0.05	NA	< 0.05	114%	50%	140%	85%	50%	140%	90%	50%	140%	
Benzo(k)fluoranthene	5545296		<0.05	<0.05	NA	< 0.05	97%	50%	140%	93%	50%	140%	113%	50%	140%	
Benzo(a)pyrene	5545296		<0.05	<0.05	NA	< 0.05	83%	50%	140%	78%	50%	140%	83%	50%	140%	
Indeno(1,2,3-cd)pyrene	5545296		<0.05	<0.05	NA	< 0.05	73%	50%	140%	90%	50%	140%	83%	50%	140%	
Dibenz(a,h)anthracene	5545296		<0.05	<0.05	NA	< 0.05	65%	50%	140%	98%	50%	140%	98%	50%	140%	
Benzo(g,h,i)perylene	5545296		<0.05	<0.05	NA	< 0.05	94%	50%	140%	85%	50%	140%	80%	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: _____

R. Chakraborty

QC Exceedance

CLIENT NAME: OAKHILL ENVIRONMENTAL
PROJECT: PR-23-037

AGAT WORK ORDER: 23H103762
ATTENTION TO: Cody Bonaccorso

RPT Date: Dec 22, 2023		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) - All Metals (Soil)

Selenium	5543086	131%	70%	130%	106%	80%	120%	114%	70%	130%
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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: OAKHILL ENVIRONMENTAL

AGAT WORK ORDER: 23H103762

PROJECT: PR-23-037

ATTENTION TO: Cody Bonaccorso

SAMPLING SITE:

SAMPLED BY: Ariane/Mackenzie

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
Mercury	MET-93-6103	modified from EPA 7471B and SM 3112 B	ICP-MS
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: OAKHILL ENVIRONMENTAL
AGAT WORK ORDER: 23H103762
PROJECT: PR-23-037
ATTENTION TO: Cody Bonaccorso
SAMPLING SITE:
SAMPLED BY: Ariane/Mackenzie

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
Benz(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
1 and 2 Methylnaphthalene	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: OAKHILL ENVIRONMENTAL
AGAT WORK ORDER: 23H103762
PROJECT: PR-23-037
ATTENTION TO: Cody Bonaccorso
SAMPLING SITE:
SAMPLED BY: Ariane/Mackenzie

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: OAKHILL ENVIRONMENTAL
PROJECT: PR-23-037
SAMPLING SITE:
AGAT WORK ORDER: 23H103762
ATTENTION TO: Cody Bonaccorso
SAMPLED BY: Ariane/Mackenzie

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

Have feedback?
Scan here for a quick survey!



5835 Coopers Avenue
Mississauga, Ontario L4Z 1Y2
Ph: 905.712.5100 Fax: 905.712.5122
web@earth.agatlabs.com

Laboratory Use Only

Work Order #: 23H103762
Cooler Quantity: 1 LG COOLER
Arrival Temperatures: 8.4 | 8.7 | 9.0
2-1 | 5-0 | 5-1
Custody Seal Intact: Yes No N/A
Notes: 1 LG PKG

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: Oakhill Environmental Inc.
Contact: Cody Bonaccorso
Address: 1-218 Martindale Road, St. Catharines, ON, L2S 0B2
Phone: 905 988 1243 Fax: _____
Reports to be sent to: cody@dennis@kendrew/mackenzie@oakhillenvironmental.com
1. Email: _____
2. Email: ariane@oakhillenvironmental.com

Regulatory Requirements:

(Please check all applicable boxes)

Regulation 153/04 Regulation 406 Sewer Use
 Ind/Com Sanitary Storm
 Res/Park Agriculture Region
 CCME Other
Soil Texture (Check One) Coarse Fine

Project Information:

Project: PR-23-037
Site Location: _____
Sampled By: ARIANE / MACKENZIE
AGAT Quote #: 763498 PO: _____
Please note: If quotation number is not provided, client will be billed full price for analysis.

Is this submission for a Record of Site Condition?

Yes No

Report Guideline on Certificate of Analysis

Yes No

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 CPM

Invoice Information:

Company: _____
Contact: _____
Address: _____
Email: invoice@oakhillenvironmental.com
Bill To Same: Yes No

Sample Matrix Legend

GW Ground Water
O Oil
P Paint
S Soil
SD Sediment
SW Surface Water

Sample Identification	Date Sampled	Time Sampled	# of Containers	Sample Matrix	Comments/ Special Instructions	Y / N	Field Filtered - Metals, Hg, CrVI, DOC										Potentially Hazardous or High Concentration (Y/N)							
							0. Reg 153		0. Reg 406		0. Reg 406		0. Reg 406		0. Reg 406			0. Reg 406						
							Metals & Inorganics	Metals - CrVI, Hg, HWSB	BTEX, FL-F4 PHCs	VOC	PAHs	PCBs	PCBs: Aroclors	Landfill Disposal Characterization TCLP: TOCP, M&I, VOCs, Aqueous Phase	Regulation 406 SPLP Rainwater Leach	Regulation 406 Characterization Package	pH, ICPMS Metals, BTEX, F1-F4	Conductivity	Moisture	Sulphide	grain size			
1. OBH1-2	DEC 12, 23	9:10 AM	3	Soil			✓	✓	✓	✓														
2. OBH1-5		9:40 AM	1				✓	✓	✓	✓														
3. OBH2-1		2:25 PM	3				✓	✓	✓	✓														
4. OBH3-1		4:25 PM	3				✓	✓	✓	✓														
5. OBH4-1		10:40 AM	3				✓	✓	✓	✓														
6. OBH6-1		11:20 AM	3				✓	✓	✓	✓														
7. OBH7-1		11:40 AM	3				✓	✓	✓	✓														
8. OBH8-1		12:00 PM	3				✓	✓	✓	✓														
9. OBH9-1		12:30 AM	3				✓	✓	✓	✓														
10.																								
11.																								

Sample Released By (Print Name and Sign): <u>ARIANE FOGASA</u>	Date: <u>DEC 13, 23</u>	Time: <u>1:20pm</u>	Sample Received By (Print Name and Sign): <u>BIATIC John</u>	Date: <u>Dec 13/23</u>	Time: <u>1:30pm</u>
Sample Released By (Print Name and Sign): <u>BIATIC John</u>	Date: <u>Dec 13/23</u>	Time: <u>3:00pm</u>	Sample Received By (Print Name and Sign): <u>DK</u>	Date: <u>Dec 13</u>	Time: <u>4:39p</u>
Sample Released By (Print Name and Sign): _____	Date: _____	Time: _____	Sample Received By (Print Name and Sign): _____	Date: _____	Time: _____

Yellow Copy - AGAT 1 White Copy - AGAT
Pink Copy - Client



**CLIENT NAME: OAKHILL ENVIRONMENTAL
1-218 MARTINDALE ROAD
ST. CATHARINES, ON L2S 0B2
(905) 988-1243**

ATTENTION TO: Cody Bonaccorso

PROJECT: PR-23-037

AGAT WORK ORDER: 23H103764

SOIL ANALYSIS REVIEWED BY: Sukhwinder Randhawa, Inorganic Team Lead

TRACE ORGANICS REVIEWED BY: Oksana Gushyla, Trace Organics Lab Supervisor

DATE REPORTED: Dec 21, 2023

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 as specified by ISO/IEC 17025:2017 is available from AGAT Laboratories upon request.
- 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: 23H103764

PROJECT: PR-23-037

5835 COOPERS AVENUE
MISSISSAUGA, ONTARIO
CANADA L4Z 1Y2
TEL (905)712-5100
FAX (905)712-5122
<http://www.agatlabs.com>

CLIENT NAME: OAKHILL ENVIRONMENTAL

ATTENTION TO: Cody Bonaccorso

SAMPLING SITE:

SAMPLED BY:

O. Reg. 153(511) - All Metals (Soil)

DATE RECEIVED: 2023-12-13

DATE REPORTED: 2023-12-21

SAMPLE DESCRIPTION: OBH5-1
SAMPLE TYPE: Soil
DATE SAMPLED: 2023-12-12
11:00
5543089

Parameter	Unit	G / S	RDL	5543089
Antimony	µg/g	1.3	0.8	<0.8
Arsenic	µg/g	18	1	7
Barium	µg/g	220	2.0	46.9
Beryllium	µg/g	2.5	0.5	<0.5
Boron	µg/g	36	5	14
Boron (Hot Water Soluble)	µg/g	1.5	0.10	0.53
Cadmium	µg/g	1.2	0.5	0.6
Chromium	µg/g	70	5	9
Cobalt	µg/g	22	0.8	7.8
Copper	µg/g	92	1.0	12.4
Lead	µg/g	120	1	29
Molybdenum	µg/g	2	0.5	0.7
Nickel	µg/g	82	1	10
Selenium	µg/g	1.5	0.8	<0.8
Silver	µg/g	0.5	0.5	<0.5
Thallium	µg/g	1	0.5	<0.5
Uranium	µg/g	2.5	0.50	<0.50
Vanadium	µg/g	86	2.0	13.7
Zinc	µg/g	290	5	132
Chromium, Hexavalent	µg/g	0.66	0.2	<0.2
Mercury	µg/g	0.27	0.10	<0.10

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 8: Generic Site Condition Standards for Use within 30 m of a Water Body in a Potable Ground Water Condition - Soil - Residential/Parkland/Institutional/Industrial/Commercial/Community Property Use
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.

Analysis performed at AGAT Toronto (unless marked by *)

Certified By:





Certificate of Analysis

AGAT WORK ORDER: 23H103764

PROJECT: PR-23-037

5835 COOPERS AVENUE
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CLIENT NAME: OAKHILL ENVIRONMENTAL

ATTENTION TO: Cody Bonaccorso

SAMPLING SITE:

SAMPLED BY:

O. Reg. 153(511) - PAHs (Soil)

DATE RECEIVED: 2023-12-13

DATE REPORTED: 2023-12-21

SAMPLE DESCRIPTION: OBH5-1
SAMPLE TYPE: Soil
DATE SAMPLED: 2023-12-12
11:00
5543089

Parameter	Unit	G / S	RDL	5543089
Naphthalene	µg/g	0.09	0.05	<0.05
Acenaphthylene	µg/g	0.093	0.05	<0.05
Acenaphthene	µg/g	0.072	0.05	<0.05
Fluorene	µg/g	0.19	0.05	<0.05
Phenanthrene	µg/g	0.69	0.05	<0.05
Anthracene	µg/g	0.22	0.05	<0.05
Fluoranthene	µg/g	0.69	0.05	<0.05
Pyrene	µg/g	1	0.05	<0.05
Benz(a)anthracene	µg/g	0.36	0.05	<0.05
Chrysene	µg/g	2.8	0.05	<0.05
Benzo(b)fluoranthene	µg/g	0.47	0.05	<0.05
Benzo(k)fluoranthene	µg/g	0.48	0.05	<0.05
Benzo(a)pyrene	µg/g	0.3	0.05	<0.05
Indeno(1,2,3-cd)pyrene	µg/g	0.23	0.05	<0.05
Dibenz(a,h)anthracene	µg/g	0.1	0.05	<0.05
Benzo(g,h,i)perylene	µg/g	0.68	0.05	<0.05
1 and 2 Methyl naphthalene	µg/g	0.59	0.05	<0.05
Moisture Content	%		0.1	17.6
Surrogate	Unit	Acceptable Limits		
Naphthalene-d8	%	50-140		80
Acridine-d9	%	50-140		105
Terphenyl-d14	%	50-140		70

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 8: Generic Site Condition Standards for Use within 30 m of a Water Body in a Potable Ground Water Condition - Soil - Residential/Parkland/Institutional/Industrial/Commercial/Community Property Use
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.

5543089 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: 23H103764

PROJECT: PR-23-037

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CLIENT NAME: OAKHILL ENVIRONMENTAL

ATTENTION TO: Cody Bonaccorso

SAMPLING SITE:

SAMPLED BY:

O. Reg. 153(511) - PHCs F1 - F4 (with PAHs and VOC) (Soil)

DATE RECEIVED: 2023-12-13

DATE REPORTED: 2023-12-21

SAMPLE DESCRIPTION: OBH5-1
SAMPLE TYPE: Soil
DATE SAMPLED: 2023-12-12
11:00
5543089

Parameter	Unit	G / S	RDL	5543089
F1 (C6 to C10)	µg/g		5	<5
F1 (C6 to C10) minus BTEX	µg/g	25	5	<5
F2 (C10 to C16)	µg/g	10	10	<10
F2 (C10 to C16) minus Naphthalene	µg/g		10	<10
F3 (C16 to C34)	µg/g	240	50	91
F3 (C16 to C34) minus PAHs	µg/g		50	91
F4 (C34 to C50)	µg/g	120	50	182
Gravimetric Heavy Hydrocarbons	µg/g	120	50	NA
Moisture Content	%		0.1	17.6
Surrogate	Unit	Acceptable Limits		
Toluene-d8	%	50-140	104	
Terphenyl	%	60-140	90	

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 8: Generic Site Condition Standards for Use within 30 m of a Water Body in a Potable Ground Water Condition - Soil - Residential/Parkland/Institutional/Industrial/Commercial/Community Property Use
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.

5543089 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: 23H103764

PROJECT: PR-23-037

5835 COOPERS AVENUE
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CLIENT NAME: OAKHILL ENVIRONMENTAL

ATTENTION TO: Cody Bonaccorso

SAMPLING SITE:

SAMPLED BY:

O. Reg. 153(511) - VOCs (with PHC) (Soil)

DATE RECEIVED: 2023-12-13

DATE REPORTED: 2023-12-21

SAMPLE DESCRIPTION: OBH5-1
SAMPLE TYPE: Soil
DATE SAMPLED: 2023-12-12
11:00
5543089

Parameter	Unit	G / S	RDL	5543089
Dichlorodifluoromethane	µg/g	0.05	0.05	<0.05
Vinyl Chloride	ug/g	0.02	0.02	<0.02
Bromomethane	ug/g	0.05	0.05	<0.05
Trichlorofluoromethane	ug/g	0.25	0.05	<0.05
Acetone	ug/g	0.5	0.50	<0.50
1,1-Dichloroethylene	ug/g	0.05	0.05	<0.05
Methylene Chloride	ug/g	0.05	0.05	<0.05
Trans- 1,2-Dichloroethylene	ug/g	0.05	0.05	<0.05
Methyl tert-butyl Ether	ug/g	0.05	0.05	<0.05
1,1-Dichloroethane	ug/g	0.05	0.02	<0.02
Methyl Ethyl Ketone	ug/g	0.5	0.50	<0.50
Cis- 1,2-Dichloroethylene	ug/g	0.05	0.02	<0.02
Chloroform	ug/g	0.05	0.04	<0.04
1,2-Dichloroethane	ug/g	0.05	0.03	<0.03
1,1,1-Trichloroethane	ug/g	0.05	0.05	<0.05
Carbon Tetrachloride	ug/g	0.05	0.05	<0.05
Benzene	ug/g	0.02	0.02	<0.02
1,2-Dichloropropane	ug/g	0.05	0.03	<0.03
Trichloroethylene	ug/g	0.05	0.03	<0.03
Bromodichloromethane	ug/g	0.05	0.05	<0.05
Methyl Isobutyl Ketone	ug/g	0.5	0.50	<0.50
1,1,2-Trichloroethane	ug/g	0.05	0.04	<0.04
Toluene	ug/g	0.2	0.05	<0.05
Dibromochloromethane	ug/g	0.05	0.05	<0.05
Ethylene Dibromide	ug/g	0.05	0.04	<0.04
Tetrachloroethylene	ug/g	0.05	0.05	<0.05
1,1,1,2-Tetrachloroethane	ug/g	0.05	0.04	<0.04
Chlorobenzene	ug/g	0.05	0.05	<0.05
Ethylbenzene	ug/g	0.05	0.05	<0.05

Certified By:



Certificate of Analysis

AGAT WORK ORDER: 23H103764

PROJECT: PR-23-037

5835 COOPERS AVENUE
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<http://www.agatlabs.com>

CLIENT NAME: OAKHILL ENVIRONMENTAL

ATTENTION TO: Cody Bonaccorso

SAMPLING SITE:

SAMPLED BY:

O. Reg. 153(511) - VOCs (with PHC) (Soil)

DATE RECEIVED: 2023-12-13

DATE REPORTED: 2023-12-21

SAMPLE DESCRIPTION: OBH5-1
 SAMPLE TYPE: Soil
 DATE SAMPLED: 2023-12-12
 11:00
 5543089

Parameter	Unit	G / S	RDL	5543089
m & p-Xylene	ug/g		0.05	<0.05
Bromoform	ug/g	0.05	0.05	<0.05
Styrene	ug/g	0.05	0.05	<0.05
1,1,2,2-Tetrachloroethane	ug/g	0.05	0.05	<0.05
o-Xylene	ug/g		0.05	<0.05
1,3-Dichlorobenzene	ug/g	0.05	0.05	<0.05
1,4-Dichlorobenzene	ug/g	0.05	0.05	<0.05
1,2-Dichlorobenzene	ug/g	0.05	0.05	<0.05
Xylenes (Total)	ug/g	0.05	0.05	<0.05
1,3-Dichloropropene (Cis + Trans)	µg/g	0.05	0.05	<0.05
n-Hexane	µg/g	0.05	0.05	<0.05
Moisture Content	%		0.1	17.6
Surrogate	Unit	Acceptable Limits		
Toluene-d8	% Recovery	50-140		104
4-Bromofluorobenzene	% Recovery	50-140		88

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 8: Generic Site Condition Standards for Use within 30 m of a Water Body in a Potable Ground Water Condition - Soil - Residential/Parkland/Institutional/Industrial/Commercial/Community Property Use

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.

5543089 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:



Exceedance Summary

AGAT WORK ORDER: 23H103764

PROJECT: PR-23-037

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CLIENT NAME: OAKHILL ENVIRONMENTAL

ATTENTION TO: Cody Bonaccorso

SAMPLEID	SAMPLE TITLE	GUIDELINE	ANALYSIS PACKAGE	PARAMETER	UNIT	GUIDEVALUE	RESULT
5543089	OBH5-1	ON T8 S RPI/ICC	O. Reg. 153(511) - PHCs F1 - F4 (with PAHs and VOC) (Soil)	F4 (C34 to C50)	µg/g	120	182

Quality Assurance

CLIENT NAME: OAKHILL ENVIRONMENTAL
PROJECT: PR-23-037
SAMPLING SITE:

AGAT WORK ORDER: 23H103764
ATTENTION TO: Cody Bonaccorso
SAMPLED BY:

Soil Analysis															
RPT Date: Dec 21, 2023			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) - All Metals (Soil)

Antimony	5543262		<0.8	<0.8	NA	< 0.8	131%	70%	130%	99%	80%	120%	106%	70%	130%
Arsenic	5543262		9	9	0.0%	< 1	130%	70%	130%	116%	80%	120%	126%	70%	130%
Barium	5543262		68.7	69.6	1.3%	< 2.0	104%	70%	130%	104%	80%	120%	111%	70%	130%
Beryllium	5543262		<0.5	<0.5	NA	< 0.5	102%	70%	130%	106%	80%	120%	111%	70%	130%
Boron	5543262		12	13	NA	< 5	73%	70%	130%	93%	80%	120%	96%	70%	130%
Boron (Hot Water Soluble)	5543262		0.44	0.41	NA	< 0.10	113%	60%	140%	103%	70%	130%	102%	60%	140%
Cadmium	5543262		<0.5	<0.5	NA	< 0.5	113%	70%	130%	99%	80%	120%	98%	70%	130%
Chromium	5543262		8	8	NA	< 5	102%	70%	130%	102%	80%	120%	112%	70%	130%
Cobalt	5543262		5.1	5.1	0.0%	< 0.8	113%	70%	130%	112%	80%	120%	117%	70%	130%
Copper	5543262		50.0	50.3	0.6%	< 1.0	102%	70%	130%	102%	80%	120%	97%	70%	130%
Lead	5543262		12	12	0.0%	< 1	104%	70%	130%	99%	80%	120%	89%	70%	130%
Molybdenum	5543262		0.8	0.8	NA	< 0.5	107%	70%	130%	101%	80%	120%	113%	70%	130%
Nickel	5543262		66	66	0.0%	< 1	108%	70%	130%	106%	80%	120%	102%	70%	130%
Selenium	5543262		<0.8	<0.8	NA	< 0.8	121%	70%	130%	105%	80%	120%	108%	70%	130%
Silver	5543262		<0.5	<0.5	NA	< 0.5	96%	70%	130%	101%	80%	120%	89%	70%	130%
Thallium	5543262		<0.5	<0.5	NA	< 0.5	90%	70%	130%	106%	80%	120%	99%	70%	130%
Uranium	5543262		<0.50	<0.50	NA	< 0.50	97%	70%	130%	102%	80%	120%	94%	70%	130%
Vanadium	5543262		14.0	13.8	1.4%	< 2.0	129%	70%	130%	103%	80%	120%	116%	70%	130%
Zinc	5543262		87	86	1.2%	< 5	107%	70%	130%	109%	80%	120%	108%	70%	130%
Chromium, Hexavalent	5547011		<0.2	<0.2	NA	< 0.2	94%	70%	130%	90%	80%	120%	76%	70%	130%
Mercury	5543262		<0.10	<0.10	NA	< 0.10	106%	70%	130%	100%	80%	120%	101%	70%	130%

Comments: NA signifies Not Applicable.
 Duplicate NA: results are under 5X the RDL and will not be calculated.

Certified By: _____



E. Sublette-Kear-Randall

Quality Assurance

CLIENT NAME: OAKHILL ENVIRONMENTAL
AGAT WORK ORDER: 23H103764
PROJECT: PR-23-037
ATTENTION TO: Cody Bonaccorso
SAMPLING SITE:
SAMPLED BY:

Trace Organics Analysis

RPT Date: Dec 21, 2023			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) - PAHs (Soil)

Naphthalene	5539843		<0.05	<0.05	NA	< 0.05	107%	50%	140%	103%	50%	140%	88%	50%	140%
Acenaphthylene	5539843		<0.05	<0.05	NA	< 0.05	88%	50%	140%	78%	50%	140%	83%	50%	140%
Acenaphthene	5539843		<0.05	<0.05	NA	< 0.05	84%	50%	140%	73%	50%	140%	75%	50%	140%
Fluorene	5539843		<0.05	<0.05	NA	< 0.05	73%	50%	140%	75%	50%	140%	95%	50%	140%
Phenanthrene	5539843		<0.05	<0.05	NA	< 0.05	86%	50%	140%	98%	50%	140%	65%	50%	140%
Anthracene	5539843		<0.05	<0.05	NA	< 0.05	101%	50%	140%	103%	50%	140%	90%	50%	140%
Fluoranthene	5539843		<0.05	<0.05	NA	< 0.05	76%	50%	140%	83%	50%	140%	113%	50%	140%
Pyrene	5539843		<0.05	<0.05	NA	< 0.05	69%	50%	140%	73%	50%	140%	75%	50%	140%
Benz(a)anthracene	5539843		<0.05	<0.05	NA	< 0.05	92%	50%	140%	98%	50%	140%	98%	50%	140%
Chrysene	5539843		<0.05	<0.05	NA	< 0.05	109%	50%	140%	90%	50%	140%	103%	50%	140%
Benzo(b)fluoranthene	5539843		<0.05	<0.05	NA	< 0.05	114%	50%	140%	85%	50%	140%	86%	50%	140%
Benzo(k)fluoranthene	5539843		<0.05	<0.05	NA	< 0.05	97%	50%	140%	93%	50%	140%	85%	50%	140%
Benzo(a)pyrene	5539843		<0.05	<0.05	NA	< 0.05	83%	50%	140%	78%	50%	140%	88%	50%	140%
Indeno(1,2,3-cd)pyrene	5539843		<0.05	<0.05	NA	< 0.05	73%	50%	140%	90%	50%	140%	90%	50%	140%
Dibenz(a,h)anthracene	5539843		<0.05	<0.05	NA	< 0.05	65%	50%	140%	98%	50%	140%	95%	50%	140%
Benzo(g,h,i)perylene	5539843		<0.05	<0.05	NA	< 0.05	94%	50%	140%	85%	50%	140%	83%	50%	140%

O. Reg. 153(511) - PHCs F1 - F4 (with PAHs and VOC) (Soil)

F1 (C6 to C10)	5543407		<5	<5	NA	< 5	114%	60%	140%	115%	60%	140%	87%	60%	140%
F2 (C10 to C16)	5543096		<10	<10	NA	< 10	101%	60%	140%	115%	60%	140%	107%	60%	140%
F3 (C16 to C34)	5543096		<50	<50	NA	< 50	105%	60%	140%	129%	60%	140%	119%	60%	140%
F4 (C34 to C50)	5543096		<50	<50	NA	< 50	67%	60%	140%	111%	60%	140%	110%	60%	140%

O. Reg. 153(511) - VOCs (with PHC) (Soil)

Dichlorodifluoromethane	5543407		<0.05	<0.05	NA	< 0.05	89%	50%	140%	86%	50%	140%	106%	50%	140%
Vinyl Chloride	5543407		<0.02	<0.02	NA	< 0.02	96%	50%	140%	108%	50%	140%	83%	50%	140%
Bromomethane	5543407		<0.05	<0.05	NA	< 0.05	101%	50%	140%	100%	50%	140%	91%	50%	140%
Trichlorofluoromethane	5543407		<0.05	<0.05	NA	< 0.05	109%	50%	140%	92%	50%	140%	90%	50%	140%
Acetone	5543407		<0.50	<0.50	NA	< 0.50	111%	50%	140%	97%	50%	140%	100%	50%	140%
1,1-Dichloroethylene	5543407		<0.05	<0.05	NA	< 0.05	98%	50%	140%	104%	60%	130%	73%	50%	140%
Methylene Chloride	5543407		<0.05	<0.05	NA	< 0.05	89%	50%	140%	105%	60%	130%	103%	50%	140%
Trans- 1,2-Dichloroethylene	5543407		<0.05	<0.05	NA	< 0.05	86%	50%	140%	101%	60%	130%	77%	50%	140%
Methyl tert-butyl Ether	5543407		<0.05	<0.05	NA	< 0.05	98%	50%	140%	92%	60%	130%	72%	50%	140%
1,1-Dichloroethane	5543407		<0.02	<0.02	NA	< 0.02	100%	50%	140%	94%	60%	130%	89%	50%	140%
Methyl Ethyl Ketone	5543407		<0.50	<0.50	NA	< 0.50	86%	50%	140%	92%	50%	140%	97%	50%	140%
Cis- 1,2-Dichloroethylene	5543407		<0.02	<0.02	NA	< 0.02	90%	50%	140%	97%	60%	130%	101%	50%	140%
Chloroform	5543407		<0.04	<0.04	NA	< 0.04	100%	50%	140%	89%	60%	130%	96%	50%	140%
1,2-Dichloroethane	5543407		<0.03	<0.03	NA	< 0.03	88%	50%	140%	76%	60%	130%	89%	50%	140%
1,1,1-Trichloroethane	5543407		<0.05	<0.05	NA	< 0.05	91%	50%	140%	92%	60%	130%	88%	50%	140%
Carbon Tetrachloride	5543407		<0.05	<0.05	NA	< 0.05	84%	50%	140%	93%	60%	130%	93%	50%	140%

Quality Assurance

CLIENT NAME: OAKHILL ENVIRONMENTAL
PROJECT: PR-23-037
SAMPLING SITE:

AGAT WORK ORDER: 23H103764
ATTENTION TO: Cody Bonaccorso
SAMPLED BY:

Trace Organics Analysis (Continued)

RPT Date: Dec 21, 2023			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	5543407		<0.02	<0.02	NA	< 0.02	99%	50%	140%	89%	60%	130%	96%	50%	140%
1,2-Dichloropropane	5543407		<0.03	<0.03	NA	< 0.03	101%	50%	140%	84%	60%	130%	98%	50%	140%
Trichloroethylene	5543407		<0.03	<0.03	NA	< 0.03	96%	50%	140%	89%	60%	130%	85%	50%	140%
Bromodichloromethane	5543407		<0.05	<0.05	NA	< 0.05	87%	50%	140%	92%	60%	130%	104%	50%	140%
Methyl Isobutyl Ketone	5543407		<0.50	<0.50	NA	< 0.50	107%	50%	140%	102%	50%	140%	96%	50%	140%
1,1,2-Trichloroethane	5543407		<0.04	<0.04	NA	< 0.04	96%	50%	140%	86%	60%	130%	95%	50%	140%
Toluene	5543407		<0.05	<0.05	NA	< 0.05	74%	50%	140%	90%	60%	130%	102%	50%	140%
Dibromochloromethane	5543407		<0.05	<0.05	NA	< 0.05	101%	50%	140%	108%	60%	130%	95%	50%	140%
Ethylene Dibromide	5543407		<0.04	<0.04	NA	< 0.04	84%	50%	140%	85%	60%	130%	87%	50%	140%
Tetrachloroethylene	5543407		<0.05	<0.05	NA	< 0.05	100%	50%	140%	89%	60%	130%	96%	50%	140%
1,1,1,2-Tetrachloroethane	5543407		<0.04	<0.04	NA	< 0.04	94%	50%	140%	91%	60%	130%	93%	50%	140%
Chlorobenzene	5543407		<0.05	<0.05	NA	< 0.05	97%	50%	140%	86%	60%	130%	100%	50%	140%
Ethylbenzene	5543407		<0.05	<0.05	NA	< 0.05	95%	50%	140%	95%	60%	130%	90%	50%	140%
m & p-Xylene	5543407		<0.05	<0.05	NA	< 0.05	108%	50%	140%	105%	60%	130%	103%	50%	140%
Bromoform	5543407		<0.05	<0.05	NA	< 0.05	87%	50%	140%	99%	60%	130%	92%	50%	140%
Styrene	5543407		<0.05	<0.05	NA	< 0.05	96%	50%	140%	98%	60%	130%	74%	50%	140%
1,1,2,2-Tetrachloroethane	5543407		<0.05	<0.05	NA	< 0.05	104%	50%	140%	93%	60%	130%	101%	50%	140%
o-Xylene	5543407		<0.05	<0.05	NA	< 0.05	93%	50%	140%	93%	60%	130%	96%	50%	140%
1,3-Dichlorobenzene	5543407		<0.05	<0.05	NA	< 0.05	77%	50%	140%	95%	60%	130%	104%	50%	140%
1,4-Dichlorobenzene	5543407		<0.05	<0.05	NA	< 0.05	86%	50%	140%	100%	60%	130%	100%	50%	140%
1,2-Dichlorobenzene	5543407		<0.05	<0.05	NA	< 0.05	80%	50%	140%	96%	60%	130%	99%	50%	140%
n-Hexane	5543407		<0.05	<0.05	NA	< 0.05	99%	50%	140%	104%	60%	130%	90%	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: OAKHILL ENVIRONMENTAL
PROJECT: PR-23-037

AGAT WORK ORDER: 23H103764
ATTENTION TO: Cody Bonaccorso

RPT Date: Dec 21, 2023		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) - All Metals (Soil)

Antimony	131%	70%	130%	99%	80%	120%	106%	70%	130%
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Comments: NA signifies Not Applicable.
 Duplicate NA: results are under 5X the RDL and will not be calculated.



Method Summary

CLIENT NAME: OAKHILL ENVIRONMENTAL

AGAT WORK ORDER: 23H103764

PROJECT: PR-23-037

ATTENTION TO: Cody Bonaccorso

SAMPLING SITE:

SAMPLED BY:

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
Mercury	MET-93-6103	modified from EPA 7471B and SM 3112 B	ICP-MS

Method Summary

CLIENT NAME: OAKHILL ENVIRONMENTAL
AGAT WORK ORDER: 23H103764
PROJECT: PR-23-037
ATTENTION TO: Cody Bonaccorso
SAMPLING SITE:
SAMPLED BY:

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
Benz(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
1 and 2 Methylnaphthalene	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: OAKHILL ENVIRONMENTAL
AGAT WORK ORDER: 23H103764
PROJECT: PR-23-037
ATTENTION TO: Cody Bonaccorso
SAMPLING SITE:
SAMPLED BY:

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: OAKHILL ENVIRONMENTAL
AGAT WORK ORDER: 23H103764
PROJECT: PR-23-037
ATTENTION TO: Cody Bonaccorso
SAMPLING SITE:
SAMPLED BY:

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

Have feedback?
Scan here for a quick survey!



5935 Coopers Avenue
Mississauga, Ontario L4Z 1Y2
Ph: 905.712.5100 Fax: 905.712.5122
web@earth.agatlabs.com

Laboratory Use Only

Work Order #: 23H103764
Cooler Quantity: 6 COOLER
Arrival Temperatures: 84 | 87 | 90
2-1 | 5-0 | 5-1
Custody Seal Intact: Yes No N/A
Notes: ICE PCS

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: Oakhill Environmental Inc.
Contact: Cody Bonaccorso
Address: 1-218 Martindale Road, St. Catharines, ON, L2S 0B2
Phone: 905 988 1243 Fax: _____
Reports to be sent to: cody@dennis@kendrewmackenzie@oakhillenvironmental.com
1. Email: _____
2. Email: ariane@oakhillenvironmental.com

Regulatory Requirements:

(Please check all applicable boxes)

Regulation 153/04 Regulation 406 Sewer Use
 Int./Com Sanitary Storm
Table 8 Indicate One _____
 Res./Park Agriculture Region _____
Soil Texture (Check One) CCME Other _____
 Coarse Fine Indicate One _____

Project Information:

Project: PR-23-037
Site Location: _____
Sampled By: Mackenzie
AGAT Quote #: 763498 PO: _____
Please note: If quotation number is not provided, client will be billed full price for analysis.

Is this submission for a Record of Site Condition?

Yes No

Report Guideline on Certificate of Analysis

Yes No

Invoice Information:

Bill To Same: Yes No

Company: _____
Contact: _____
Address: _____
Email: invoice@oakhillenvironmental.com

Sample Matrix Legend

GW Ground Water
O Oil
P Paint
S Soil
SD Sediment
SW Surface Water

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	Potentially Hazardous or High Concentration (Y/N)
								Metals & Inorganics	Landfill Disposal Characterization TCLP: <input type="checkbox"/> IM& <input type="checkbox"/> VOCs <input type="checkbox"/> APNS <input type="checkbox"/> BiAP <input type="checkbox"/> PCBs	
								Metals - <input checked="" type="checkbox"/> CrVI, <input checked="" type="checkbox"/> Hg, <input checked="" type="checkbox"/> HWSB	Regulation 406 SPLP Rainwater Leach	
								BTEX, F1-F4 PHCS	SPLP: <input type="checkbox"/> Metals <input type="checkbox"/> VOCs <input type="checkbox"/> SVOCs	
								VOC	Regulation 406 Characterization Package	
								PAHS	pH, IC/PMS Metals, BTEX, F1-F4	
								PCBs	Corrosivity: <input type="checkbox"/> Moisture <input type="checkbox"/> Sulphide	
								PCBs - Aroclors <input type="checkbox"/>		
1. <u>OBH5-1</u>	<u>Dec 12</u>	<u>11:00 AM</u>	<u>2</u>	<u>S</u>				<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
2.		AM								
3.		PM								
4.		AM								
5.		PM								
6.		AM								
7.		PM								
8.		AM								
9.		PM								
10.		AM								
11.		PM								

Samples Relinquished By (Print Name and Sign): <u>ARIANE FOGASA</u> <u>RTAC</u> <u>RTAC</u>	Date: <u>DEC 13, 23</u> Time: <u>1:20pm</u>	Samples Received By (Print Name and Sign): <u>RTAC</u> <u>RTAC</u>	Date: <u>Dec 13</u> Time: <u>1:30pm</u>
Samples Relinquished By (Print Name and Sign): <u>RTAC</u> <u>RTAC</u>	Date: <u>Dec 13/23</u> Time: <u>3:00pm</u>	Samples Received By (Print Name and Sign): <u>RTAC</u>	Date: <u>Dec 13</u> Time: <u>4:39pm</u>

Pink Copy - Client | Yellow Copy - AGAT | White Copy - AGAT



CLIENT NAME: OAKHILL ENVIRONMENTAL
1-218 MARTINDALE ROAD
ST. CATHARINES, ON L2S 0B2
(905) 988-1243

ATTENTION TO: Cody Bonaccorso

PROJECT: PR-23-037

AGAT WORK ORDER: 23H107331

TRACE ORGANICS REVIEWED BY: Oksana Gushyla, Trace Organics Lab Supervisor

WATER ANALYSIS REVIEWED BY: Nivine Basily, Inorganic Team Lead

DATE REPORTED: Jan 11, 2024

PAGES (INCLUDING COVER): 19

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 as specified by ISO/IEC 17025:2017 is available from AGAT Laboratories upon request.
- 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: 23H107331

PROJECT: PR-23-037

5835 COOPERS AVENUE
MISSISSAUGA, ONTARIO
CANADA L4Z 1Y2
TEL (905)712-5100
FAX (905)712-5122
<http://www.agatlabs.com>

CLIENT NAME: OAKHILL ENVIRONMENTAL

ATTENTION TO: Cody Bonaccorso

SAMPLING SITE:

SAMPLED BY:

O. Reg. 153(511) - PAHs (Water)

DATE RECEIVED: 2023-12-22

DATE REPORTED: 2024-01-11

Parameter	Unit	SAMPLE DESCRIPTION:		MW1	MW2	MW3
		SAMPLE TYPE:		Water	Water	Water
		DATE SAMPLED:		2023-12-20 13:30	2023-12-19	2023-12-20 10:45
		G / S	RDL	5566228	5566257	5566258
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	<0.10	<0.10	<0.10
Anthracene	µg/L	1	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				1	1	1
Surrogate	Unit	Acceptable Limits				
Naphthalene-d8	%	50-140		86	84	85
Acridine-d9	%	50-140		72	77	80
Terphenyl-d14	%	50-140		108	76	102

Certified By:



Certificate of Analysis

AGAT WORK ORDER: 23H107331

PROJECT: PR-23-037

5835 COOPERS AVENUE
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CLIENT NAME: OAKHILL ENVIRONMENTAL

ATTENTION TO: Cody Bonaccorso

SAMPLING SITE:

SAMPLED BY:

O. Reg. 153(511) - PAHs (Water)

DATE RECEIVED: 2023-12-22

DATE REPORTED: 2024-01-11

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 8: Generic Site Condition Standards for Use within 30 m of a Water Body in a Potable Ground Water Condition - Ground Water - All Types of Property Uses

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.

5566228-5566258 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 *)

Certified By:



Certificate of Analysis

AGAT WORK ORDER: 23H107331

PROJECT: PR-23-037

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CLIENT NAME: OAKHILL ENVIRONMENTAL

ATTENTION TO: Cody Bonaccorso

SAMPLING SITE:

SAMPLED BY:

O. Reg. 153(511) - PCBs (Water)

DATE RECEIVED: 2023-12-22

DATE REPORTED: 2024-01-11

		SAMPLE DESCRIPTION:		MW1	MW2	MW3
		SAMPLE TYPE:		Water	Water	Water
		DATE SAMPLED:		2023-12-20 13:30	2023-12-19	2023-12-20 10:45
Parameter	Unit	G / S	RDL	5566228	5566257	5566258
Polychlorinated Biphenyls	µg/L	0.2	0.1	<0.1	<0.1	<0.1
Surrogate	Unit	Acceptable Limits				
Decachlorobiphenyl	%	60-140		117	82	111

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 8: Generic Site Condition Standards for Use within 30 m of a Water Body in a Potable Ground Water Condition - Ground Water - All Types of Property Uses
 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.

5566228-5566258 PCB total is a calculated parameter. The calculated value is the sum of Aroclor 1242, Aroclor 1248, Aroclor 1254 and Aroclor 1260.
 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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AGAT WORK ORDER: 23H107331

PROJECT: PR-23-037

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CLIENT NAME: OAKHILL ENVIRONMENTAL

ATTENTION TO: Cody Bonaccorso

SAMPLING SITE:

SAMPLED BY:

O. Reg. 153(511) - PHCs F1 - F4 (with PAHs and VOC) (Water)

DATE RECEIVED: 2023-12-22

DATE REPORTED: 2024-01-11

		SAMPLE DESCRIPTION:		MW1	MW2	MW3
		SAMPLE TYPE:		Water	Water	Water
		DATE SAMPLED:		2023-12-20 13:30	2023-12-19	2023-12-20 10:45
Parameter	Unit	G / S	RDL	5566228	5566257	5566258
F1 (C6 to C10)	µg/L		25	<25	<25	<25
F1 (C6 to C10) minus BTEX	µg/L	420	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				1	1	1
Surrogate	Unit	Acceptable Limits				
Toluene-d8	%	50-140		105	107	102
Terphenyl	% Recovery	60-140		77	88	110

Certified By:



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AGAT WORK ORDER: 23H107331

PROJECT: PR-23-037

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CLIENT NAME: OAKHILL ENVIRONMENTAL

ATTENTION TO: Cody Bonaccorso

SAMPLING SITE:

SAMPLED BY:

O. Reg. 153(511) - PHCs F1 - F4 (with PAHs and VOC) (Water)

DATE RECEIVED: 2023-12-22

DATE REPORTED: 2024-01-11

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 8: Generic Site Condition Standards for Use within 30 m of a Water Body in a Potable Ground Water Condition - Ground Water - All Types of Property Uses

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.

5566228-5566258 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.

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 amounts

Analysis performed at AGAT Toronto (unless marked by *)

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AGAT WORK ORDER: 23H107331

PROJECT: PR-23-037

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CLIENT NAME: OAKHILL ENVIRONMENTAL

ATTENTION TO: Cody Bonaccorso

SAMPLING SITE:

SAMPLED BY:

O. Reg. 153(511) - VOCs (with PHC) (Water)

DATE RECEIVED: 2023-12-22

DATE REPORTED: 2024-01-11

Parameter	Unit	SAMPLE DESCRIPTION:		MW1	MW2	MW3
		SAMPLE TYPE:		Water	Water	Water
		DATE SAMPLED:		2023-12-20 13:30	2023-12-19	2023-12-20 10:45
		G / S	RDL	5566228	5566257	5566258
Dichlorodifluoromethane	µg/L	590	0.40	<0.40	<0.40	<0.40
Vinyl Chloride	µg/L	0.5	0.17	<0.17	<0.17	<0.17
Bromomethane	µg/L	0.89	0.20	<0.20	<0.20	<0.20
Trichlorofluoromethane	µg/L	150	0.40	<0.40	<0.40	<0.40
Acetone	µg/L	2700	1.0	<1.0	<1.0	<1.0
1,1-Dichloroethylene	µg/L	1.6	0.30	<0.30	<0.30	<0.30
Methylene Chloride	µg/L	50	0.30	<0.30	<0.30	<0.30
trans- 1,2-Dichloroethylene	µg/L	1.6	0.20	<0.20	<0.20	<0.20
Methyl tert-butyl ether	µg/L	15	0.20	<0.20	<0.20	<0.20
1,1-Dichloroethane	µg/L	5	0.30	<0.30	<0.30	<0.30
Methyl Ethyl Ketone	µg/L	1800	1.0	<1.0	<1.0	<1.0
cis- 1,2-Dichloroethylene	µg/L	1.6	0.20	<0.20	<0.20	<0.20
Chloroform	µg/L	2.4	0.20	<0.20	<0.20	<0.20
1,2-Dichloroethane	µg/L	1.6	0.20	<0.20	<0.20	<0.20
1,1,1-Trichloroethane	µg/L	200	0.30	<0.30	<0.30	<0.30
Carbon Tetrachloride	µg/L	0.79	0.20	<0.20	<0.20	<0.20
Benzene	µg/L	5	0.20	<0.20	<0.20	<0.20
1,2-Dichloropropane	µg/L	5	0.20	<0.20	<0.20	<0.20
Trichloroethylene	µg/L	1.6	0.20	<0.20	<0.20	<0.20
Bromodichloromethane	µg/L	16	0.20	<0.20	<0.20	<0.20
Methyl Isobutyl Ketone	µg/L	640	1.0	19.8	32.4	2.8
1,1,2-Trichloroethane	µg/L	4.7	0.20	<0.20	<0.20	<0.20
Toluene	µg/L	22	0.20	0.41	0.78	0.56
Dibromochloromethane	µg/L	25	0.10	<0.10	<0.10	<0.10
Ethylene Dibromide	µg/L	0.2	0.10	<0.10	<0.10	<0.10
Tetrachloroethylene	µg/L	1.6	0.20	<0.20	<0.20	<0.20
1,1,1,2-Tetrachloroethane	µg/L	1.1	0.10	<0.10	<0.10	<0.10
Chlorobenzene	µg/L	30	0.10	<0.10	<0.10	<0.10
Ethylbenzene	µg/L	2.4	0.10	<0.10	0.11	0.11

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PROJECT: PR-23-037

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CLIENT NAME: OAKHILL ENVIRONMENTAL

ATTENTION TO: Cody Bonaccorso

SAMPLING SITE:

SAMPLED BY:

O. Reg. 153(511) - VOCs (with PHC) (Water)

DATE RECEIVED: 2023-12-22

DATE REPORTED: 2024-01-11

SAMPLE DESCRIPTION:				MW1	MW2	MW3
SAMPLE TYPE:				Water	Water	Water
DATE SAMPLED:				2023-12-20 13:30	2023-12-19	2023-12-20 10:45
Parameter	Unit	G / S	RDL	5566228	5566257	5566258
m & p-Xylene	µg/L		0.20	<0.20	0.51	0.49
Bromoform	µg/L	25	0.10	<0.10	<0.10	<0.10
Styrene	µg/L	5.4	0.10	<0.10	<0.10	<0.10
1,1,2,2-Tetrachloroethane	µg/L	1	0.10	<0.10	<0.10	<0.10
o-Xylene	µg/L		0.10	<0.10	0.28	0.25
1,3-Dichlorobenzene	µg/L	59	0.10	<0.10	<0.10	<0.10
1,4-Dichlorobenzene	µg/L	1	0.10	<0.10	<0.10	<0.10
1,2-Dichlorobenzene	µg/L	3	0.10	<0.10	<0.10	<0.10
1,3-Dichloropropene	µg/L	0.5	0.30	<0.30	<0.30	<0.30
Xylenes (Total)	µg/L	300	0.20	<0.20	0.79	0.74
n-Hexane	µg/L	51	0.20	<0.20	<0.20	<0.20
Surrogate	Unit	Acceptable Limits				
Toluene-d8	% Recovery	50-140		105	107	102
4-Bromofluorobenzene	% Recovery	50-140		90	94	92

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 8: Generic Site Condition Standards for Use within 30 m of a Water Body in a Potable Ground Water Condition - Ground Water - All Types of Property Uses
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.

5566228-5566258 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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AGAT WORK ORDER: 23H107331

PROJECT: PR-23-037

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CLIENT NAME: OAKHILL ENVIRONMENTAL

ATTENTION TO: Cody Bonaccorso

SAMPLING SITE:

SAMPLED BY:

O. Reg. 153(511) - Metals & Inorganics (Water)

DATE RECEIVED: 2023-12-22

DATE REPORTED: 2024-01-11

Parameter	Unit	SAMPLE DESCRIPTION:		MW1	MW2	MW3
		SAMPLE TYPE:		Water	Water	Water
		DATE SAMPLED:		2023-12-20 13:30	2023-12-19	2023-12-20 10:45
		G / S	RDL	5566228	5566257	5566258
Dissolved Antimony	µg/L	6	1.0	<1.0	<1.0	<1.0
Dissolved Arsenic	µg/L	25	1.0	1.3	<1.0	1.1
Dissolved Barium	µg/L	1000	2.0	60.3	71.2	93.5
Dissolved Beryllium	µg/L	4	0.50	<0.50	<0.50	<0.50
Dissolved Boron	µg/L	5000	10.0	88.6	72.0	123
Dissolved Cadmium	µg/L	2.1	0.20	<0.20	<0.20	<0.20
Dissolved Chromium	µg/L	50	2.0	13.3	<2.0	3.5
Dissolved Cobalt	µg/L	3.8	0.50	1.26	4.94	4.05
Dissolved Copper	µg/L	69	1.0	5.0	2.3	2.8
Dissolved Lead	µg/L	10	0.50	<0.50	<0.50	<0.50
Dissolved Molybdenum	µg/L	70	0.50	13.4	5.79	8.70
Dissolved Nickel	µg/L	100	1.0	2.5	7.5	4.1
Dissolved Selenium	µg/L	10	1.0	<1.0	1.0	<1.0
Dissolved Silver	µg/L	1.2	0.20	<0.20	<0.20	<0.20
Dissolved Thallium	µg/L	2	0.30	<0.30	<0.30	<0.30
Dissolved Uranium	µg/L	20	0.50	3.48	3.64	6.20
Dissolved Vanadium	µg/L	6.2	0.40	2.90	0.47	0.83
Dissolved Zinc	µg/L	890	5.0	<5.0	6.3	<5.0
Mercury	µg/L	0.29	0.02	<0.02	<0.02	<0.02
Chromium VI	µg/L	25	2.000	11.0	<2.000	<2.000
Cyanide, WAD	µg/L	52	2	<2	<2	<2
Dissolved Sodium	µg/L	490000	50	157000	44900	89400
Chloride	µg/L	790000	100	196000	57700	65900
Electrical Conductivity	uS/cm	NA	2	1160	1140	1350
pH	pH Units		NA	8.27	8.12	8.17

Certified By:



Nancy Bonaccorso



AGAT Laboratories

Certificate of Analysis

AGAT WORK ORDER: 23H107331

PROJECT: PR-23-037

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CLIENT NAME: OAKHILL ENVIRONMENTAL

ATTENTION TO: Cody Bonaccorso

SAMPLING SITE:

SAMPLED BY:

O. Reg. 153(511) - Metals & Inorganics (Water)

DATE RECEIVED: 2023-12-22

DATE REPORTED: 2024-01-11

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 8: Generic Site Condition Standards for Use within 30 m of a Water Body in a Potable Ground Water Condition - Ground Water - All Types of Property Uses

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.

5566228-5566258 Metals analysis completed on a filtered sample.

pH is a recommended field analysis taken within 15 minutes of sample collection. Due to the potential for rapid change in sample equilibrium chemistry laboratory results may differ from field measured results

Analysis performed at AGAT Toronto (unless marked by *)

Certified By:



Nancy Basch



Exceedance Summary

AGAT WORK ORDER: 23H107331

PROJECT: PR-23-037

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CLIENT NAME: OAKHILL ENVIRONMENTAL

ATTENTION TO: Cody Bonaccorso

SAMPLEID	SAMPLE TITLE	GUIDELINE	ANALYSIS PACKAGE	PARAMETER	UNIT	GUIDEVALUE	RESULT
5566257	MW2	ON T8 GW	O. Reg. 153(511) - Metals & Inorganics (Water)	Dissolved Cobalt	µg/L	3.8	4.94
5566258	MW3	ON T8 GW	O. Reg. 153(511) - Metals & Inorganics (Water)	Dissolved Cobalt	µg/L	3.8	4.05

Quality Assurance

CLIENT NAME: OAKHILL ENVIRONMENTAL
PROJECT: PR-23-037
SAMPLING SITE:

AGAT WORK ORDER: 23H107331
ATTENTION TO: Cody Bonaccorso
SAMPLED BY:

Trace Organics Analysis

RPT Date: Jan 11, 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) - PAHs (Water)

Naphthalene	5570423		<0.20	<0.20	NA	< 0.20	115%	50%	140%	105%	50%	140%	105%	50%	140%
Acenaphthylene	5570423		<0.20	<0.20	NA	< 0.20	79%	50%	140%	72%	50%	140%	97%	50%	140%
Acenaphthene	5570423		<0.20	<0.20	NA	< 0.20	110%	50%	140%	105%	50%	140%	105%	50%	140%
Fluorene	5570423		<0.20	<0.20	NA	< 0.20	94%	50%	140%	110%	50%	140%	80%	50%	140%
Phenanthrene	5570423		<0.10	<0.10	NA	< 0.10	111%	50%	140%	111%	50%	140%	88%	50%	140%
Anthracene	5570423		<0.10	<0.10	NA	< 0.10	90%	50%	140%	117%	50%	140%	88%	50%	140%
Fluoranthene	5570423		<0.20	<0.20	NA	< 0.20	89%	50%	140%	105%	50%	140%	80%	50%	140%
Pyrene	5570423		<0.20	<0.20	NA	< 0.20	96%	50%	140%	105%	50%	140%	85%	50%	140%
Benzo(a)anthracene	5570423		<0.20	<0.20	NA	< 0.20	74%	50%	140%	101%	50%	140%	101%	50%	140%
Chrysene	5570423		<0.10	<0.10	NA	< 0.10	102%	50%	140%	114%	50%	140%	89%	50%	140%
Benzo(b)fluoranthene	5570423		<0.10	<0.10	NA	< 0.10	89%	50%	140%	115%	50%	140%	82%	50%	140%
Benzo(k)fluoranthene	5570423		<0.10	<0.10	NA	< 0.10	107%	50%	140%	117%	50%	140%	101%	50%	140%
Benzo(a)pyrene	5570423		<0.01	<0.01	NA	< 0.01	71%	50%	140%	112%	50%	140%	75%	50%	140%
Indeno(1,2,3-cd)pyrene	5570423		<0.20	<0.20	NA	< 0.20	73%	50%	140%	103%	50%	140%	79%	50%	140%
Dibenz(a,h)anthracene	5570423		<0.20	<0.20	NA	< 0.20	109%	50%	140%	112%	50%	140%	84%	50%	140%
Benzo(g,h,i)perylene	5570423		<0.20	<0.20	NA	< 0.20	68%	50%	140%	114%	50%	140%	83%	50%	140%

O. Reg. 153(511) - PHCs F1 - F4 (with PAHs and VOC) (Water)

F1 (C6 to C10)	5569356		<25	<25	NA	< 25	96%	60%	140%	106%	60%	140%	84%	60%	140%
F2 (C10 to C16)	5569628		<100	<100	NA	< 100	101%	60%	140%	63%	60%	140%	73%	60%	140%
F3 (C16 to C34)	5569628		<100	<100	NA	< 100	109%	60%	140%	83%	60%	140%	91%	60%	140%
F4 (C34 to C50)	5569628		<100	<100	NA	< 100	80%	60%	140%	95%	60%	140%	104%	60%	140%

O. Reg. 153(511) - VOCs (with PHC) (Water)

Dichlorodifluoromethane	5569356		<0.40	<0.40	NA	< 0.40	75%	50%	140%	90%	50%	140%	88%	50%	140%
Vinyl Chloride	5569356		<0.17	<0.17	NA	< 0.17	84%	50%	140%	109%	50%	140%	101%	50%	140%
Bromomethane	5569356		<0.20	<0.20	NA	< 0.20	77%	50%	140%	99%	50%	140%	109%	50%	140%
Trichlorofluoromethane	5569356		<0.40	<0.40	NA	< 0.40	86%	50%	140%	103%	50%	140%	75%	50%	140%
Acetone	5569356		<1.0	<1.0	NA	< 1.0	99%	50%	140%	98%	50%	140%	81%	50%	140%
1,1-Dichloroethylene	5569356		<0.30	<0.30	NA	< 0.30	107%	50%	140%	111%	60%	130%	75%	50%	140%
Methylene Chloride	5569356		<0.30	<0.30	NA	< 0.30	108%	50%	140%	100%	60%	130%	86%	50%	140%
trans- 1,2-Dichloroethylene	5569356		<0.20	<0.20	NA	< 0.20	93%	50%	140%	86%	60%	130%	86%	50%	140%
Methyl tert-butyl ether	5569356		<0.20	<0.20	NA	< 0.20	73%	50%	140%	72%	60%	130%	75%	50%	140%
1,1-Dichloroethane	5569356		<0.30	<0.30	NA	< 0.30	103%	50%	140%	94%	60%	130%	77%	50%	140%
Methyl Ethyl Ketone	5569356		<1.0	<1.0	NA	< 1.0	104%	50%	140%	90%	50%	140%	100%	50%	140%
cis- 1,2-Dichloroethylene	5569356		<0.20	<0.20	NA	< 0.20	98%	50%	140%	87%	60%	130%	78%	50%	140%
Chloroform	5569356		<0.20	<0.20	NA	< 0.20	88%	50%	140%	81%	60%	130%	70%	50%	140%
1,2-Dichloroethane	5569356		<0.20	<0.20	NA	< 0.20	76%	50%	140%	70%	60%	130%	80%	50%	140%
1,1,1-Trichloroethane	5569356		<0.30	<0.30	NA	< 0.30	104%	50%	140%	84%	60%	130%	72%	50%	140%
Carbon Tetrachloride	5569356		<0.20	<0.20	NA	< 0.20	106%	50%	140%	76%	60%	130%	78%	50%	140%

AGAT Laboratories is accredited to ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA) and/or Standards Council of Canada (SCC) for specific tests listed on the scope of accreditation. AGAT Laboratories (Mississauga) is also accredited by the Canadian Association for Laboratory Accreditation Inc. (CALA) for specific drinking water tests. Accreditations are location and parameter specific. A complete listing of parameters for each location is available from www.cala.ca and/or www.scc.ca. The tests in this report may not necessarily be included in the scope of accreditation. RPDs calculated using raw data. The RPD may not be reflective of duplicate values shown, due to rounding of final results.

Quality Assurance

CLIENT NAME: OAKHILL ENVIRONMENTAL
PROJECT: PR-23-037
SAMPLING SITE:

AGAT WORK ORDER: 23H107331
ATTENTION TO: Cody Bonaccorso
SAMPLED BY:

Trace Organics Analysis (Continued)


RPT Date: Jan 11, 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	5569356		<0.20	<0.20	NA	< 0.20	103%	50%	140%	90%	60%	130%	76%	50%	140%
1,2-Dichloropropane	5569356		<0.20	<0.20	NA	< 0.20	102%	50%	140%	94%	60%	130%	83%	50%	140%
Trichloroethylene	5569356		<0.20	<0.20	NA	< 0.20	100%	50%	140%	86%	60%	130%	104%	50%	140%
Bromodichloromethane	5569356		<0.20	<0.20	NA	< 0.20	96%	50%	140%	82%	60%	130%	73%	50%	140%
Methyl Isobutyl Ketone	5569356		<1.0	<1.0	NA	< 1.0	74%	50%	140%	97%	50%	140%	106%	50%	140%
1,1,2-Trichloroethane	5569356		<0.20	<0.20	NA	< 0.20	110%	50%	140%	100%	60%	130%	91%	50%	140%
Toluene	5569356		<0.20	<0.20	NA	< 0.20	107%	50%	140%	94%	60%	130%	80%	50%	140%
Dibromochloromethane	5569356		<0.10	<0.10	NA	< 0.10	95%	50%	140%	78%	60%	130%	75%	50%	140%
Ethylene Dibromide	5569356		<0.10	<0.10	NA	< 0.10	110%	50%	140%	97%	60%	130%	92%	50%	140%
Tetrachloroethylene	5569356		<0.20	<0.20	NA	< 0.20	103%	50%	140%	85%	60%	130%	65%	50%	140%
1,1,1,2-Tetrachloroethane	5569356		<0.10	<0.10	NA	< 0.10	95%	50%	140%	85%	60%	130%	77%	50%	140%
Chlorobenzene	5569356		<0.10	<0.10	NA	< 0.10	108%	50%	140%	96%	60%	130%	87%	50%	140%
Ethylbenzene	5569356		<0.10	<0.10	NA	< 0.10	102%	50%	140%	87%	60%	130%	80%	50%	140%
m & p-Xylene	5569356		<0.20	<0.20	NA	< 0.20	101%	50%	140%	86%	60%	130%	80%	50%	140%
Bromoform	5569356		<0.10	<0.10	NA	< 0.10	92%	50%	140%	82%	60%	130%	71%	50%	140%
Styrene	5569356		<0.10	<0.10	NA	< 0.10	96%	50%	140%	86%	60%	130%	80%	50%	140%
1,1,2,2-Tetrachloroethane	5569356		<0.10	<0.10	NA	< 0.10	104%	50%	140%	93%	60%	130%	79%	50%	140%
o-Xylene	5569356		<0.10	<0.10	NA	< 0.10	105%	50%	140%	90%	60%	130%	119%	50%	140%
1,3-Dichlorobenzene	5569356		<0.10	<0.10	NA	< 0.10	106%	50%	140%	94%	60%	130%	83%	50%	140%
1,4-Dichlorobenzene	5569356		<0.10	<0.10	NA	< 0.10	108%	50%	140%	94%	60%	130%	83%	50%	140%
1,2-Dichlorobenzene	5569356		<0.10	<0.10	NA	< 0.10	109%	50%	140%	96%	60%	130%	88%	50%	140%
n-Hexane	5569356		<0.20	<0.20	NA	< 0.20	111%	50%	140%	88%	60%	130%	72%	50%	140%

O. Reg. 153(511) - PCBs (Water)

Polychlorinated Biphenyls	5569315		< 0.1	< 0.1	NA	< 0.1	106%	50%	140%	109%	50%	140%	112%	50%	140%
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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: _____



Quality Assurance

CLIENT NAME: OAKHILL ENVIRONMENTAL
PROJECT: PR-23-037
SAMPLING SITE:

AGAT WORK ORDER: 23H107331
ATTENTION TO: Cody Bonaccorso
SAMPLED BY:

Water Analysis															
RPT Date: Jan 11, 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 (Water)

Dissolved Antimony	5566528		<1.0	<1.0	NA	< 1.0	98%	70%	130%	102%	80%	120%	102%	70%	130%
Dissolved Arsenic	5566528		<1.0	<1.0	NA	< 1.0	99%	70%	130%	106%	80%	120%	110%	70%	130%
Dissolved Barium	5566528		276	278	0.7%	< 2.0	93%	70%	130%	98%	80%	120%	104%	70%	130%
Dissolved Beryllium	5566528		<0.50	<0.50	NA	< 0.50	97%	70%	130%	103%	80%	120%	113%	70%	130%
Dissolved Boron	5566528		53.3	51.8	2.9%	< 10.0	99%	70%	130%	100%	80%	120%	108%	70%	130%
Dissolved Cadmium	5566528		<0.20	<0.20	NA	< 0.20	98%	70%	130%	101%	80%	120%	94%	70%	130%
Dissolved Chromium	5566528		<2.0	<2.0	NA	< 2.0	99%	70%	130%	99%	80%	120%	116%	70%	130%
Dissolved Cobalt	5566528		0.89	0.72	NA	< 0.50	97%	70%	130%	106%	80%	120%	115%	70%	130%
Dissolved Copper	5566528		3.6	1.2	NA	< 1.0	100%	70%	130%	100%	80%	120%	105%	70%	130%
Dissolved Lead	5566528		<0.50	<0.50	NA	< 0.50	104%	70%	130%	98%	80%	120%	90%	70%	130%
Dissolved Molybdenum	5566528		2.41	2.17	NA	< 0.50	108%	70%	130%	111%	80%	120%	130%	70%	130%
Dissolved Nickel	5566528		7.8	7.5	3.9%	< 1.0	99%	70%	130%	107%	80%	120%	110%	70%	130%
Dissolved Selenium	5566528		1.1	1.4	NA	< 1.0	102%	70%	130%	111%	80%	120%	111%	70%	130%
Dissolved Silver	5566528		<0.20	<0.20	NA	< 0.20	105%	70%	130%	109%	80%	120%	102%	70%	130%
Dissolved Thallium	5566528		<0.30	<0.30	NA	< 0.30	101%	70%	130%	99%	80%	120%	94%	70%	130%
Dissolved Uranium	5566528		0.78	0.78	NA	< 0.50	99%	70%	130%	105%	80%	120%	107%	70%	130%
Dissolved Vanadium	5566528		<0.40	0.40	NA	< 0.40	94%	70%	130%	110%	80%	120%	121%	70%	130%
Dissolved Zinc	5566528		<5.0	<5.0	NA	< 5.0	96%	70%	130%	114%	80%	120%	96%	70%	130%
Mercury	5566228	5566228	<0.02	<0.02	NA	< 0.02	101%	70%	130%	98%	80%	120%	98%	70%	130%
Chromium VI	5561353		11.3	11.5	1.8%	< 2	99%	70%	130%	98%	80%	120%	87%	70%	130%
Cyanide, WAD	5566228	5566228	<2	<2	NA	< 2	105%	70%	130%	98%	80%	120%	91%	70%	130%
Dissolved Sodium Chloride	5566528		1330000	1330000	0.0%	< 50	106%	70%	130%	102%	80%	120%	NA	70%	130%
Electrical Conductivity	5564959		70200	69900	0.4%	< 100	91%	70%	130%	102%	80%	120%	96%	70%	130%
pH	5564959		243	237	2.6%	< 2	106%	90%	110%						
	5564959		6.59	6.59	0.0%	NA	102%	90%	110%						

Comments: NA signifies Not Applicable.
 Duplicate NA: results are under 5X the RDL and will not be calculated.

Matrix spike NA: Spike level < native concentration. Matrix spike acceptance limits do not apply and are not calculated.

Certified By:



Nivine Basily

Method Summary

CLIENT NAME: OAKHILL ENVIRONMENTAL
AGAT WORK ORDER: 23H107331
PROJECT: PR-23-037
ATTENTION TO: Cody Bonaccorso
SAMPLING SITE:
SAMPLED BY:

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
Polychlorinated Biphenyls	ORG-91-5112	modified from EPA SW-846 3510 & 8082A	GC/ECD
Decachlorobiphenyl	ORG-91-5112	modified from EPA SW-846 3510 & 8082A	GC/ECD
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- 5001	modified from EPA 5030B & EPA 8260D	(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
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

Method Summary

CLIENT NAME: OAKHILL ENVIRONMENTAL
AGAT WORK ORDER: 23H107331
PROJECT: PR-23-037
ATTENTION TO: Cody Bonaccorso
SAMPLING SITE:
SAMPLED BY:

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Gravimetric Heavy Hydrocarbons	VOL-91-5010	modified from MOE PHC-E3421	BALANCE
Terphenyl	VOL-91-5010	modified from MOE PHC-E3421	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
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

Method Summary

CLIENT NAME: OAKHILL ENVIRONMENTAL
AGAT WORK ORDER: 23H107331
PROJECT: PR-23-037
ATTENTION TO: Cody Bonaccorso
SAMPLING SITE:
SAMPLED BY:

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
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

Method Summary

CLIENT NAME: OAKHILL ENVIRONMENTAL
AGAT WORK ORDER: 23H107331
PROJECT: PR-23-037
ATTENTION TO: Cody Bonaccorso
SAMPLING SITE:
SAMPLED BY:

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Water Analysis			
Dissolved Antimony	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Arsenic	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Barium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Beryllium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Boron	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Cadmium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Chromium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Cobalt	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Copper	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Lead	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Molybdenum	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Nickel	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Selenium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Silver	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Thallium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Uranium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Vanadium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Zinc	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Mercury	MET-93-6100	modified from EPA 245.2 and SM 3112 B	CVAAS
Chromium VI	INOR-93-6073	modified from SM 3500-CR B	LACHAT FIA
Cyanide, WAD	INOR-93-6052	modified from ON MOECC E3015, SM 4500-CN- I, G-387	SEGMENTED FLOW ANALYSIS
Dissolved Sodium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP/MS
Chloride	INOR-93-6004	modified from SM 4110 B	ION CHROMATOGRAPH
Electrical Conductivity	INOR-93-6000	SM 2510 B	PC TITRATE
pH	INOR-93-6000	modified from SM 4500-H+ B	PC TITRATE

Have feedback?
Scan here for a quick survey!



5835 Coopers Avenue
Mississauga, Ontario L4Z 1Y2
Ph: 905.712.5100 Fax: 905.712.5122
web@earth.agatlabs.com

Laboratory Use Only

Work Order #: 234107331

Cooler Quantity: 26 cooler

Arrival Temperatures: 4.7 7.0 7.2
6.5 5.8 5.7

Custody Seal Intact: Yes No N/A

Notes: ICE PKS

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: Oakhill Environmental Inc.

Contact: Cody Bonaccorso

Address: 1-218 Martindale Road, St. Catharines, ON, L2S 0B2

Phone: 905 988 1243 Fax: _____

Reports to be sent to:
1. Email: cody@dennis@kendrewmackenzie@oakhillenvironmental.com

2. Email: ariane@oakhillenvironmental.com

Regulatory Requirements:
(Please check all applicable boxes)

Regulation 153/04 Regulation 406 Sewer Use
 Sanitary Storm

Table 8 Indicate One: Ind/Com Res/Park Agriculture

Table _____ Indicate One: _____ Region _____

Regulation 558 Prov. Water Quality Objectives (PWQO)

Soil Texture *(Check One)*: Coarse CCME Other

Fine Indicate One _____

Is this submission for a Record of Site Condition? Yes No

Report Guideline on Certificate of Analysis Yes No

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 CPM

Project Information:

Project: PR-23-037

Site Location: _____

Sampled By: _____

AGAT Quote #: 763498 PO: _____

Please note: If quotation number is not provided, client will be billed full price for analysis.

Invoice Information: Bill To Same: Yes No

Company: _____

Contact: _____

Address: _____

Email: invoice@oakhillenvironmental.com

Sample Matrix Legend

GW Ground Water
O Oil
P Paint
S Soil
SD Sediment
SW Surface Water





Y / N	Reg 153				Reg 406				Potentially Hazardous or High Concentration (Y/N)
	Metals & Inorganics	Metals	Hg	HWSB	VOC	PAHs	PCBs	PCBs, Aroclors	
	✓	✓	✓	✓	✓	✓	✓		
	✓	✓	✓	✓	✓	✓	✓		
	✓	✓	✓	✓	✓	✓	✓		

Sample Identification	Date Sampled	Time Sampled	# of Containers	Sample Matrix	Comments/ Special Instructions
<u>MW1</u>	<u>DEC 20</u>	<u>1:30 PM</u>	<u>14</u>	<u>GW</u>	
<u>MW2</u>	<u>DEC 19</u>	<u>3:30 PM</u>	<u>14</u>	<u>↓</u>	
<u>MW3</u>	<u>DEC 20/23</u>	<u>10:45 AM</u>	<u>14</u>	<u>↓</u>	
<u>TRIP BLANK</u>					

Samples Relinquished By (Print Name and Sign): <u>ARIANE FOGACIA</u>	Date: <u>DEC 22, 23</u>	Time: <u>1:36</u>	Samples Received By (Print Name and Sign): <u>DTRC [Signature]</u>	Date: <u>Dec 2/23</u>	Time: <u>1:36 pm</u>
Samples Relinquished By (Print Name and Sign): <u>[Signature]</u>	Date: <u>DEC 22, 23</u>	Time: <u>1:36</u>	Samples Received By (Print Name and Sign): <u>GMNET [Signature]</u>	Date: <u>2/2/23</u>	Time: <u>11:34</u>
Samples Relinquished By (Print Name and Sign): <u>[Signature]</u>	Date: <u>DEC 22/23</u>	Time: <u>3PM</u>	Samples Received By (Print Name and Sign): <u>[Signature]</u>	Date:	Time:

Pink Copy: Client | Yellow Copy: AGAT | White Copy: AGAT

**APPENDIX D:
Site Photographs**

PHOTOGRAPH	DESCRIPTION
	<p>A view of the digging operations at the location of TP1 on November 30th, 2023</p>
	<p>A view of test pit TP7 on November 30th, 2023.</p>
	<p>A view of the drilling operations at the location of location of OBH1-MW1 on December 12th, 2023. This borehole was installed as a monitoring well.</p>
	<p>A view of the monitoring well installation of MW3 activities on December 12th, 2023.</p>



A view of the interior drilling operations at the location of BH4 on December 12th, 2023.