# PHASE TWO ENVIRONMENTAL SITE ASSESSMENT

# 149-153 DUNLOP STREET EAST BARRIE, ONTARIO

WATTERS ENVIRONMENTAL GROUP INC.

**CONFIDENTIAL**

# PHASE TWO ENVIRONMENTAL SITE ASSESSMENT

## 149-153 DUNLOP STREET EAST BARRIE, ONTARIO

Prepared for:

**DUNLOP DEVELOPMENTS (BARRIE) INC.**
129 Rowntree Dairy Road, Unit 4
Woodbridge, Ontario
L4L 6C9

CITY OF BARRIE FILE NO. D28-011-2022

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# TABLE OF CONTENTS

**SECTION** **PAGE**

TABLE OF CONTENTS ..... i
1.0 EXECUTIVE SUMMARY ..... 1
2.0 INTRODUCTION ..... 5
2.1 Phase Two Property Information ..... 5
2.2 Property Ownership ..... 7
2.3 Current and Proposed Future Uses ..... 7
2.4 Applicable Site Condition Standard ..... 8
3.0 BACKGROUND INFORMATION ..... 10
3.1 Physical Setting ..... 10
3.2 Past Investigations ..... 11
4.0 SCOPE OF THE INVESTIGATION ..... 20
4.1 Overview of Site Investigation ..... 20
4.2 Media Investigated ..... 21
4.3 Phase One Conceptual Site Model ..... 21
4.4 Deviations from Sampling and Analysis Plan ..... 37
4.5 Impediments ..... 37
5.0 INVESTIGATION METHOD ..... 38
5.1 General Method of Investigation ..... 38
5.2 Drilling and Excavating ..... 38
5.3 Soil: Sampling ..... 42
5.4 Field Screening Measurements ..... 43
5.5 Ground Water: Monitoring Well Installation ..... 45
5.6 Ground Water: Field Measurement of Water Quality Parameters ..... 47
5.7 Ground Water: Sampling ..... 47
5.8 Sediment: Sampling ..... 49
5.9 Analytical Testing ..... 50
5.10 Residue Management Procedures ..... 50

## TABLE OF CONTENTS (Continued)

**SECTION** **PAGE**

5.11 Elevation Surveying....50
5.12 Quality Assurance and Quality Control Measures (QA/QC) ....50
6.0 REVIEW AND EVALUATION ....53
6.1 Geology....53
6.2 Ground Water: Elevations and Flow Direction ....54
6.3 Ground Water: Hydraulic Gradients and Conductivity ....55
6.4 Fine – Medium Soil Texture....55
6.5 Soil: Field Screening....56
6.6 Soil Quality ....58
6.7 Ground Water Quality....74
6.8 Sediment Quality ....91
6.9 Quality Assurance and Quality Control Results ....91
6.9.1 Soil QA/QC Results ....91
6.9.2 Groundwater QA/QC Results....93
6.10 Soil Remediation....95
6.11 Phase Two Conceptual Site Model....96
7.0 CONCLUSIONS....129
7.1 Summary of Findings....129
7.2 Signatures....130
8.0 REFERENCES ....131
9.0 QUALIFICATIONS AND LIMITATIONS....132
10.0 QUALIFICATIONS OF CONSULTANT ....133

## TABLE OF CONTENTS (Continued)

LIST OF FIGURES

Figure 1: Phase Two Property Location Map

Figure 2: Phase One Study Area Land Use Map

Figure 3: Phase Two Property Layout Plan

Figure 4: Topographical Map

Figure 5: Phase One Conceptual Site Model

Figure 6: Phase One Conceptual Site Model – Expanded View

Figure 7: Borehole / Monitoring Well Location Plan

Figure 8: Groundwater Contours

Figure 9A: Analytic Results in Soil – PHCs

Figure 9B: Analytic Results in Soil – VOCs, THMs, BTEX

Figure 9C: Analytic Results in Soil – Metals, Hydride-Forming Metals, and ORPs

Figure 9D: Analytic Results in Soil – PAHs

Figure 9E: Analytic Results in Soil – PCBs

Figure 10: Cross Section Location Plan

Figure 11A: PHC Exceedances in Soil – Cross Section A-A'

Figure 11B: PHC Exceedances in Soil – Cross Section B-B'

Figure 11C: PHC Exceedances in Soil – Cross Section C-C'

Figure 11D: PHC Exceedances in Soil – Cross Section D-D'

Figure 12A: PAH Exceedances in Soil – Cross Section A-A'

Figure 12B: PAH Exceedances in Soil – Cross Section B-B'

Figure 12C: PAH Exceedances in Soil – Cross Section C-C'

Figure 12D: PAH Exceedances in Soil – Cross Section D-D'

Figure 13A: Analytic Results in Groundwater – PHCs

Figure 13B: Analytic Results in Groundwater – VOCs, THMs, BTEX

Figure 13C: Analytic Results in Groundwater – Metals, Hydride-Forming Metals, and ORPs

Figure 13D: Analytic Results in Groundwater – PAHs

Figure 14A: Metals, Hydride-Forming Metals, and ORP Exceedances in Groundwater – Cross Section A-A'

## TABLE OF CONTENTS (Continued)

LIST OF FIGURES (Continued)

Figure 14B: Metals, Hydride-Forming Metals, and ORP Exceedances in Groundwater – Cross Section B-B'

Figure 14C: Metals, Hydride-Forming Metals, and ORP Exceedances in Groundwater – Cross Section C-C'

Figure 14D: Metals, Hydride-Forming Metals, and ORP Exceedances in Groundwater – Cross Section D-D'

Figure 15: Soil Remediation – PHCs

Figure 16A: Soil Remediation – PHCs – Cross Section A-A'

Figure 16B: Soil Remediation – PHCs – Cross Section D-D'

Figure 17: Phase Two Conceptual Site Model

LIST OF APPENDICES

Appendix A: Sampling and Analysis Plan

Appendix B: Plan of Survey

Appendix C: Borehole Logs

Appendix D: Laboratory Certificates-of-Analyses

Appendix E: Summary of Soil Analytical Data Before Remediation

Appendix F: Summary of Groundwater Analytical Data

Appendix G: Remediation Report

## 1.0 EXECUTIVE SUMMARY

Watters Environmental Group Inc. (Watters Environmental) was retained by Dunlop Developments (Barrie) Inc. (the "Client") to conduct a Phase Two Environmental Site Assessment (ESA) of a commercial property located at 149-153 Dunlop Street East, in Barrie, Ontario (hereafter the "Phase Two Property" or "Site").

The Phase Two Property is located on the southeast corner of the intersection of Dunlop Street East and Mulcaster Street, in an area of mixed residential, commercial, and parkland uses (see Figure 2).

The Phase Two Property was formerly known as municipal addresses 149-153 Dunlop Street East and 5 Mulcaster Street. The Phase Two Property is currently owned by the Client and covers an area of approximately 0.15 hectares (0.38 acres). The Phase Two Property contains a multi-unit commercial building (hereafter the "Site building") in the centre of the Site with asphalt paved parking north of the Site building and some landscaping, an interlock stone walkway, and asphalt paved parking south of the Site building. The Site building is one level at the north side and two levels at the south side due to the steep southward slope of the Phase Two Property and surrounding lands. A partial basement is present beneath the west side of the Site building. At the time of the Site reconnaissance, three units were undergoing renovations by new businesses: Endo, a cannabis retailer, Late Apex Simulators, a gaming arcade, and a restaurant. One unit was occupied by Noah's African & Caribbean Tropical Food Inc. and was open to the public, and the fifth unit was vacant.

Watters Environmental understands that the Phase Two Property is planned to be redeveloped with a mixed commercial and residential 25-storey building, and a Record of Site Condition (RSC) is required for that process. As such, the Phase Two ESA was conducted in accordance with Ontario Regulation (O. Reg.) 153/04 (i.e., Records of Site Condition – Part XV.1 of the Act, made under the Ontario Environmental Protection Act, R.S.O. 1990), as amended (hereafter referred to as "O. Reg. 153/04").

A Phase One ESA completed by Watters Environmental (report dated April 2024) identified the following potentially contaminating activities (PCAs) on the Phase Two Property and within the Phase One Study Area, which resulted in areas of potential environmental concern (APECs).

| PCA | Location of Activity | Table 2 PCA No. & Description* | Discussion |
|---|---|---|---|
| 1 | On-Site, Northwest side of the Phase One Property | #39 – Paints Manufacturing, Processing and Bulk Storage | A former carriage paint shop operated on the northwest side of the Phase One Property. |
| 2A | On-Site, Northwest side of the Phase One Property | #28 – Gasoline and Associated Products Storage in Fixed Tanks | A former gasoline service station operated on the northwest side of the Phase One Property. |
| 2B | On-Site, Northwest side of the Phase One Property | #27 – Garages and Maintenance and Repair of Railcars, Marine Vehicles and Aviation Vehicles | A former automotive repair garage operated on the northwest side of the Phase One Property. |
| 3 | On-Site, East side of the Phase One Property | #27 – Garages and Maintenance and Repair of Railcars, Marine Vehicles and Aviation Vehicles | A former automotive repair garage operated on the east side of the Phase One Property. |
| 4 | On-Site, Southwest side of the Phase One Property | #27 – Garages and Maintenance and Repair of Railcars, Marine Vehicles and Aviation Vehicles | A former small engine repair garage operated on the southwest side of the Phase One Property. |
| 5 | On-Site, Northeast side of the Phase One Property | #28 – Gasoline and Associated Products Storage in Fixed Tanks | A former gasoline service station operated on the northeast side of the Phase One Property. |
| 6 | On-Site, Southeast side of the Phase One Property | #28 – Gasoline and Associated Products Storage in Fixed Tanks | Former heating oil AST was present along the southeast exterior of the building. |
| 7 | On-Site, North side of the Phase One Property | #30 – Importation of Fill Material of Unknown Quality | Fill was identified in boreholes on the north side of the Phase One Property. |
| 8 | Off-Site, South of the Phase One Property | #46 – Rail Yards, Tracks and Spurs | Former rail spur and tracks were present immediately south of the Phase One Property. |
| 9 | Off-Site, Southeast of the Phase One Property | #55 – Transformer Manufacturing, Processing and Use | A pad-mounted transformer is present southeast of the Phase One Property. |
| 10A | Off-Site, 45 metres north of the Phase One Property | #34 – Metal Fabrication | A former machine shop was present at 17 Mulcaster Street. |

| PCA | Location of Activity | Table 2 PCA No. & Description* | Discussion |
|---|---|---|---|
| 10B | Off-Site, 45 metres north of the Phase One Property | #31 – Ink Manufacturing, Processing and Bulk Storage | A former commercial printing service and associated hazardous waste (photo processing wastes) generation was present at 17 Mulcaster Street. |
| 10C | | #58 – Waste Disposal and Waste Management, including thermal treatment, landfilling and transfer of waste, other than use of biosoils as soil conditioners | |
| 11 | On-Site, Exterior Areas of the Phase One Property | Not Applicable – Road Salt Application | Road salt may have been applied to the exterior paved areas for the safety of vehicular and pedestrian traffic. |

* O. Reg. 153/04, Schedule D, Table 2: Potentially Contaminating Activities

Based on the APECs identified, Watters Environmental stated that a Phase Two ESA would be required before an RSC application can be submitted, as per O. Reg. 153/04.

The analytical results for soil and groundwater were compared to the Table 1 Full Depth Background Site Condition Standards (SCS) for residential / parkland / institutional / industrial / commercial / community property use contained in the document by the Ontario Ministry of the Environment [MOE – now MECP] entitled, "*Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act*" (dated April 15, 2011). These generic standards are hereafter referred to as the "Table 1 SCS".

Based on the results of this Phase Two ESA, Watters Environmental presents the following findings:

- The Phase Two ESA was conducted in accordance with Ontario Regulation 153/04 (i.e., Records of Site Condition – Part XV.1 of the Act, made under the Ontario Environmental Protection Act, R.S.O. 1990 Regulation");
- Soil containing PHC F4 exceeding the Table 1 SCS was identified on the northwest side of the Phase Two Property;

- Fill containing fluoranthene (a PAH) exceeding the Table 1 SCS was identified on the southeast side of the Phase Two Property;

- The concentrations of petroleum hydrocarbons (PHCs F1-F4), volatile organic compounds (VOCs), Trihalomethanes (THMs), benzene, toluene, ethylbenzene, and xylenes (collectively BTEX), hydride-forming metals (As, Sb, Se), other regulated parameters [i.e., boron-hot water soluble (B-HWS), hexavalent chromium [Cr(VI)], cyanide (CN-), mercury (Hg), electrical conductivity (EC) and sodium adsorption ratio (SAR)], and polychlorinated biphenyls (PCBs) in all other soil samples collected throughout the Phase Two Property meet the Table 1 SCS;

- Groundwater containing concentrations of metals parameters (i.e., barium, copper, and/or silver) exceeding the Table 1 SCS was identified on the northwest side of the Phase Two Property and groundwater containing concentrations of a hydride-forming metal (i.e., antimony) exceeding the Table 1 SCS was identified on the southeast side of the Phase Two Property; and

- The concentrations of PHCs, VOCs, THMs, BTEX, PAHs, and other regulated parameters [i.e., Cr(VI), CN-, Hg, sodium, and chloride] in all other groundwater samples on the Phase Two Property meet the Table 1 SCS.

Based on the results of this Phase Two ESA, further investigation (i.e., vertical delineation of groundwater exceedances) and risk assessment will be required prior to filing a Record of Site Condition.

## 2.0 INTRODUCTION

Watters Environmental Group Inc. (Watters Environmental) was retained by Dunlop Developments (Barrie) Inc. (the "Client") to conduct a Phase Two Environmental Site Assessment (ESA) of a commercial property located at 149-153 Dunlop Street East, in Barrie, Ontario (hereafter the "Phase Two Property" or "Site"; see Figure 1).

Watters Environmental understands that the Phase Two Property is planned to be redeveloped with a mixed commercial and residential 25-storey building, and a Record of Site Condition (RSC) is required for that process. As such, the Phase Two ESA was conducted in accordance with Ontario Regulation (O. Reg.) 153/04 (i.e., Records of Site Condition – Part XV.1 of the Act, made under the Ontario Environmental Protection Act, R.S.O. 1990), as amended (hereafter referred to as "O. Reg. 153/04").

A Phase One ESA completed by Watters Environmental (report dated April 2024) identified potentially contaminating activities (PCAs) on the Phase Two Property and on surrounding properties, which resulted in areas of potential environmental concern (APECs) on the Phase Two Property. Therefore, a Phase Two ESA was considered necessary, as it is required when PCAs are present on a Phase Two Property or off-Site PCAs result in APECs on the Site, as per O. Reg. 153/04.

In order to adequately assess the APECs, a sampling and analysis plan was prepared for the investigation (see Appendix A). The Phase Two ESA was conducted in accordance with the requirements of O. Reg. 153/04.

### 2.1 Phase Two Property Information

The Phase Two Property is located on the southeast corner of the intersection of Dunlop Street East and Mulcaster Street, in an area of mixed residential, commercial, and parkland uses (see Figure 2).

The Phase Two Property was formerly known as municipal addresses 149-153 Dunlop Street East and 5 Mulcaster Street. The Phase Two Property is currently owned by the Client and covers an area of approximately 0.15 hectares (0.38 acres). The Phase Two Property contains a multi-unit commercial building (hereafter the "Site building") in the centre of the Site with asphalt-paved parking north of the Site building and some landscaping, an interlock stone walkway, and asphalt paved parking south of the Site building. The Site building is one level at the north side and two levels at the south side due to the steep southward slope of the Phase Two Property and surrounding

lands. A partial basement is present beneath the west side of the Site building. At the time of the Site reconnaissance, three units were undergoing renovations by new businesses: Endo, a cannabis retailer, Late Apex Simulators, a gaming arcade, and a restaurant. One unit was occupied by Noah's African & Caribbean Tropical Food Inc. and was open to the public, and the fifth unit was vacant.

A signed plan of survey of the Phase Two Property is provided in Appendix B.

The property information of the Phase Two Property is summarized in the following table.

**Table 1: Phase Two Property Information**

| | |
|---|---|
| **Municipal Address** | 149-153 Dunlop Street East, Barrie, Ontario |
| **Property Identifier Numbers (PINs)** | PIN 58795-0648 (LT) |
| **Size of the Property** | 0.15 hectares (0.38 acres) |
| **Legal Description** | PART DUNLOP STREET, PLAN 2 BARRIE, (CLOSED BY LT507517), AND PART WATER LOTS 17 & 18 SOUTH SIDE OF DUNLOP STREET, PLAN 2 BARRIE, PART 1 51R44261; CITY OF BARRIE. |
| **Geo-Referencing Coordinates** | Latitude/Longitude: 44˚ 23' 20.79" North, -79˚ 41′ 05.98" East<br>Universal Transverse Mercator (UTM) Coordinates: Zone 17T, 604738 m East, 4915932 m North |

## 2.2 Property Ownership

The Phase Two Property is owned by the Client. Contact information for the property owner who commissioned this Phase Two ESA is provided below:

**Table 2: Phase Two Property Contact Information**

| | |
|---|---|
| **Name and Address of Current Owner of The Phase Two Property** | Dunlop Developments (Barrie) Inc.<br>129 Rowntree Dairy Road, Unit 4<br>Woodbridge, Ontario L4L 6C9 |
| **Property Owner Contact Information who Engaged the Qualified Person (QP) to Conduct the Phase Two ESA** | Company Name: Dunlop Developments (Barrie) Inc.<br>Name: Frank Crocco<br>Address: 129 Rowntree Dairy Road, Unit 4, Woodbridge, Ontario L4L 6C9<br>Tel: 416-577-1525<br>Email: frankc@circontracting.com |
| **$QP_{ESA}$ from Watters Environmental Group Inc. that Supervised the Phase Two ESA** | Name: Natalie Wright, P.Eng., $QP_{ESA}$<br>Title: Project Manager<br>Address: 9135 Keele Street, Unit A1, Concord, Ontario L4K 0J4<br>Tel: 416-361-2407 ext. 258<br>Fax: 416-361-2410<br>Email: nwright@wattersenvironmental.com |

## 2.3 Current and Proposed Future Uses

The Phase Two Property is currently occupied by a multi-unit commercial (retail) building.

Watters Environmental understands that the Phase Two Property is planned to be redeveloped for mixed commercial and residential use.

**Table 3: Phase Two Property Current and Proposed Future Land Use**

| | |
|---|---|
| **Current Property Use** | Commercial |
| **Proposed Property Use** | Commercial and Residential |
| **If the proposed use is undertaken, would section 168.3.1 of the *Environmental Protection Act* prohibit the new use unless a Record of Site Condition is filed?** | Yes |

## 2.4 Applicable Site Condition Standard

The results of the soil and groundwater chemical analyses were evaluated using the Standards prescribed in the Ministry of the Environment [MOE – now the Ministry of the Environment, Conservation and Parks (MECP)] document entitled, *"Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act"* (dated April 15, 2011). These Standards were used to determine whether soil and groundwater quality complied with the MECP Standards and to determine whether additional investigations or remedial actions to reduce the concentrations are required. These Standards are applied as per O. Reg. 153/04.

The Phase Two Property is currently used for commercial purposes but will be redeveloped for residential and commercial purposes in the future. The use of the Table 1 Full Depth Background Site Condition Standards (SCS) for Residential / Parkland / Institutional / Industrial / Commercial / Community Property Use, was considered appropriate by Watters Environmental based on the following:

- The Phase Two Property, and all other properties located within the Phase One Study Area (i.e., within 250 metres from the boundaries of the Site), are supplied by a municipal drinking water system (i.e., from the City of Barrie);
- The RSC will not be specifying agricultural or other use as the type of property use for which the RSC is filed;
- The Phase Two Property is located in an area designated in the municipal official plan as a well-head protection area and significant groundwater recharge area;
- There is a municipal water supply well within the Phase One Study Area, approximately 100 metres southwest of the Phase Two Property;

- The soil samples analyzed at the Phase Two Property were within a pH range of 5 to 9 for surface soils (i.e., soils that are no more than 1.5 metres below the soil surface) and 5 to 11 for subsurface soils (i.e., soils that are more than 1.5 metres below the soil surface);

- Kempenfelt Bay (Lake Simcoe) is approximately 20 metres southeast of the Phase Two Property at its closest point; therefore, the Phase Two Property is located within 30 metres of a water body;

- The Phase Two Property is located within 30 metres of an area of natural significance, as land south and east of the Phase Two Property is identified as an Environmental Protection Area (Level 3) in the City of Barrie Official Plan (Adopted April 2023) and the Phase Two Property is located within 30 metres of Lake Simcoe where Black Redhorse, a threatened fish species in Ontario, is identified as being present;

- The Phase Two Property is not located within areas where the Niagara Escarpment Planning and Development Act or Oak Ridge's Moraine Conservation Act, 2001 applies;

- The Phase Two Property is not a "shallow soil property," as defined in O. Reg. 153/04 as bedrock is not present within 2.0 metres below ground surface (mbgs). Watters Environmental did not encounter bedrock in the deepest borehole drilled in this Phase Two ESA, which was at a depth of approximately 9.14 mbgs; and

- Grain size analysis indicated that the soil is predominantly coarse textured (see Section 6.4 of this report).

Based on the above, Watters Environmental compared the soil and groundwater sample analytical data from the Phase Two Property to the Table 1 Full Depth Background SCS for Residential/ Parkland/Institutional/Industrial/Commercial/Community Property Use as contained in the MECP publication "Soil, Ground Water and Sediment Standards for *Use Under Part XV.1 of the Environmental Protection Act*", April 15, 2011. These soil and groundwater quality standards are hereafter referred to as the "Table 1 SCS".

# 3.0 BACKGROUND INFORMATION

## 3.1 Physical Setting

Based on a review of an elevation map for the Phase Two Property and properties to the east titled, "*Sketch Showing Elevation for Engineer's Use*", prepared by R-PE Surveying Ltd., dated December 4, 2020, the north side of the Phase Two Property is situated at an elevation of approximately 225 metres above mean sea level (mamsl) and slopes down to the south, with the south side of the Phase Two Property situated at an elevation of approximately 221 mamsl. The properties to the east and west are at a similar grade as the Phase Two Property, sloping down to the south approximately 4 to 5 metres.

Based on a review of the online topographic map from Natural Resources Canada (NRC), properties within the Phase One Study Area range in elevation from approximately 240 mamsl to the north, sloping down to the south to 210 mamsl, and properties to the east and west are at a similar grade with the Phase Two Property. Kempenfelt Bay (Lake Simcoe) is located approximately 20 metres southeast of the Phase Two Property at the closest point, and approximately 130 metes south of the Phase Two Property at the furthest point. Based on the topography in the Phase One Study Area and the presence of Kempenfelt Bay south of the Phase Two Property, shallow groundwater was inferred to flow in a southerly direction.

A review of the Ministry of Northern Development and Mines (MNDM) Surficial Geology map on the Google Earth Database indicates that the overburden in the area of the Phase Two Property consists of coarse-textured glaciolacustrine deposits of sand and gravel, with minor silt and clay.

Bedrock in the vicinity of the Phase Two Property is expected to be limestone, dolostone, shale, arkose, and sandstone of the Ottawa Group, Simcoe Group, and Shadow Lake Formation.

Bedrock was not encountered in the deepest borehole that has been drilled on the Phase Two Property (i.e., 9.14 mbgs). Watters Environmental reviewed the well logs in the MECP's well record website to determine the depth to bedrock within the Phase One Study Area. A well record (Well ID 5700288) for a test hole advanced approximately 50 metres east of the Phase Two Property indicated cemented sand and gravel or bedrock was encountered at approximately 97 mbgs. Additionally, the Oak Ridges Moraine Groundwater Program website indicates that bedrock in the vicinity of the Phase Two Property is 129.6 mamsl. The Phase Two Property is at an elevation of approximately 225 mamsl on the north side and approximately 221 on the south side. As such, the depth to bedrock is expected to be approximately 91.4 to 95.4 mbgs.

As noted in the Phase One ESA report, the ERIS report provides a map of Areas of Natural and Scientific Interest (ANSIs) within 2.0 kilometres of the Phase Two Property. The report indicated that there are no ANSIs present within the Phase One Study Area.

The City of Barrie Official Plan (Adopted April 2023) designated lands within 30 metres to the south and east of the Phase Two Property as an Environmental Protection Area – Level 3. Additionally, the Phase Two Property is located within 30 metres of Lake Simcoe where Black Redhorse, a threatened fish species in Ontario, is identified as being present. As a result, the Phase Two Property is considered to be located within 30 metres of an area of natural significance.

## 3.2 Past Investigations

The following previous environmental reports prepared for the Phase Two Property were reviewed by Watters Environmental:

- "*Draft Report on Phase I Environmental Site Assessment and Groundwater Sampling, 149-153 Dunlop Street East and 5 Mulcaster Street, Barrie, Ontario*", prepared by Toronto Inspection Ltd. (TIL) for 2476703 Ontario Inc., dated November 3, 2017 (the "2017 TIL Phase I ESA Report");

- "*Phase II Environmental Site Assessment, 149-153 Dunlop Street East & 5 Mulcaster Street, Barrie, Ontario"*, prepared by Watters Environmental for Dunlop Developments (Barrie) Inc., dated June 2020 (the "2020 Watters Phase II ESA Report");

- "*Environmental Impact Study, 149 Dunlop Street East, City of Barrie*", prepared by Palmer for Mr. Frank Crocco, dated June 23, 2023 (the "2023 Palmer EIS Report"); and

- *"Phase One Environmental Site Assessment, 149-153 Dunlop Street East, Barrie, Ontario*", prepared by Watters Environmental for the Client, dated April 2024 (the "2024 Watters Environmental Phase One ESA Report").

The reports that were made available for review to Watters Environmental have been referenced or incorporated in this report, as necessary. Watters Environmental has not been given authorization to rely on the 2017 TIL Phase I ESA Report or the 2023 EIS Report by the firms that prepared them. The information provided below is a summary of their findings. Watters Environmental has provided interpretation within the context of this assessment but has not independently verified the findings.

2017 TIL Phase I ESA Report

Based on a review of this report, Watters Environmental notes the following in reference to the Phase Two Property:

- The Site contained a multi-tenant commercial building (constructed in the 1960s) that was occupied by a convenience store (i.e., Circle K), e-cigarette store (i.e., Butt Out and Vape), psychiatric clinic (i.e., The Brain Behaviour Centre), commercial offices (i.e., Perfect Choice Employment), and a restaurant (i.e., Hooters);

- The Site was developed with a slab-on-grade commercial building with one level in the north portion and two levels in the southern portion (the second level in the south side of the building was an outdoor rooftop patio), and a partial basement beneath the southeast portion of the building [*Watters Environmental notes that, based on Watters Environmental's Site reconnaissance, the partial basement is beneath the west portion of the Site building];*

- TIL reviewed a report entitled, "*Further Environmental Assessment: Phase 2, Hooters Restaurant/Bar, 143 [sic] Dunlop Street East, City of Barrie, Ontario*" prepared by Terraprobe Limited for Mr. John Trecapelli, dated May 27, 2009, and provided the following information for the Site [*Watters Environmental notes that this report was not available for review*]:

    - In 2009, one borehole was advanced at the Site and instrumented as a groundwater monitoring well;

    - One soil sample was submitted for laboratory analysis of petroleum hydrocarbons (PHCs F1-F4), volatile organic compounds (VOCs), and metals and inorganics, and one groundwater sample was submitted for laboratory analysis of PHCs (F1-F4), VOCs, and metals; and

    - TIL reported that the soil and groundwater results met the Table 8 generic site condition standards for use within 30 metres of a water body in a potable groundwater condition for all types of property use, as referenced in the Ontario MOE (now MECP) document entitled, "*Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act*", dated April 15, 2011.

- A groundwater sample was collected from one existing on-Site monitoring well on the southeast side of the Site on October 30, 2017, and submitted for laboratory analysis of benzene, toluene, ethylbenzene, and xylenes (BTEX), PHCs (F1-F4), VOCs, metals, hydride-forming metals, and other regulated parameters (ORPs) [i.e., mercury (Hg), cyanide (CN-), hexavalent chromium [Cr(VI)], sodium, and chloride]; and

- The groundwater results met the Table 8 generic site condition standards for use within 30 metres of a water body in a potable groundwater condition for all types of property use, as referenced in the Ontario MOE (now MECP) document entitled, "*Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act*", dated April 15, 2011.

*Watters Environmental notes that a comparison of the reported results against the Table 1 SCS indicated the concentration of antimony in the groundwater sample collected in 2017 exceeded the Table 1 SCS. Based on a review of the figure in the 2017 TIL Phase I ESA Report which identified the location of the monitoring well and well record 7124832, Watters Environmental has inferred the groundwater sample was collected from the well identified by Watters Environmental as EW1.*

- Based on the Phase I ESA completed, TIL identified the following potential environmental concerns at the Site:

    - The presence of a former on-Site gas station, former on-Site tire storage and engine repair services, and detectable concentrations of PHC F3 and F4 (but meeting the Table 8 SCS) in an on-Site groundwater sample collected in 2017 by TIL from an existing monitoring well on the southeast side of the Site;

    - The potential presence of fill material of unknown quality placed at the Site during development;

    - The presence of a former railway line immediately south of the Site;

    - The historical generation of waste oils, lubricants, and gases at 155 Dunlop Street East;

    - The presence of a historical underground storage tank (UST) at 147 Dunlop Street East, and former platemaking and commercial printing activities at 143 Dunlop Street East, approximately 30 metres west of the Site;

- The presence of a former machine shop and former commercial printing operations at 17 Mulcaster Street, approximately 45 metres north the Site; and

- The application of de-icing agents on adjacent roadways.

*Watters Environmental notes that the historical generation of waste oils, lubricants, and gases from 2004 to 2008 was for 155 Dunlop Street West but had been listed at 155 Dunlop Street East in error by ERIS. The property at 155 Dunlop Street West was owned by the City of Barrie and occupied by an arena in the 2000s.*

2020 Watters Phase II ESA Report

Based on a review of this report, Watters Environmental notes the following in reference to the Phase Two Property:

- The Site contained a multi-tenant commercial building (constructed in approximately the 1960s) that was occupied by a convenience store (i.e., Circle K), e-cigarette store (i.e., Butt Out and Vape), psychiatric clinic (i.e., The Brain Behaviour Centre), restaurant (i.e., Hooters), and a vacant unit;

- As part of the investigation, Watters Environmental completed a review of historical documentation (i.e., fire insurance plans, ERIS database report), a review of the 2017 TIL Phase I ESA Report, a Site reconnaissance, and a review of surrounding land uses, and identified the following potential environmental concerns at the Site:

    - A former gasoline service station on the northwest portion of the Site (PCA #28 – Gasoline and Associated Products Storage in Fixed Tanks);

    - A former automotive repair shop and former tire storage in the west portion of the Site (PCA #27 – Garages and Maintenance and Repair of Railcars, Marine Vehicles and Aviation Vehicles);

    - The possible presence of fill of unknown quality due to the significant change in elevation of the Site from the north side to the south side (PCA #30 – Importation of Fill of Unknown Quality);

    - A former railway line located adjacent to the southern Site boundary (PCA #46 – Rail Yards, Tracks and Spurs); and

  - A former off-Site machine shop (PCA #34 – Metal Fabrication) and auto shed (PCA #27 – Garages and Maintenance and Repair of Railcars, Marine Vehicles and Aviation Vehicles) located at 17 Mulcaster Street, approximately 45 metres to the north of the Site and inferred upgradient.

- To investigate the environmental concerns noted above, Watters Environmental directed the drilling of two boreholes on the north side of the Site to a maximum depth of 9.14 metres below ground surface (mbgs), and one borehole on the south side of the Site, which was terminated at 0.3 mbgs due to refusal;

- The stratigraphy in the north boreholes consisted of asphalt or topsoil underlain with sand to silty sand fill to depths ranging from 4.11 to 4.57 mbgs, above sand and gravel and/or sand;

- Monitoring wells were installed in the two boreholes advanced on the upper portion of the Site (i.e., north side along Dunlop Street East). Refusal was encountered at approximately 0.3 mbgs in the lower portion of the Site (i.e., south side) so a monitoring well was not installed in this borehole;

- Groundwater levels were measured at 1.96 and 2.10 mbgs in May 2020 in existing monitoring wells located on the south side of the Site, and groundwater water levels were measured at 6.33 and 6.44 mbgs in June 2020 in the newly installed monitoring wells on the north side of the Site. Watters Environmental noted that the north side of the Site is located at approximately 3 to 4 metres higher elevation than the south side of the Site;

- Soil samples were submitted for analysis of BTEX, PHC (F1-F4), VOCs, polycyclic aromatic hydrocarbons (PAHs), metals, hydride-forming metals, and/or ORPs [i.e., Hg, CN-, CrVI, boron-hot water soluble (B-HWS), sodium adsorption ratio (SAR), and electrical conductivity (EC)];

- Groundwater samples were collected from the two newly installed monitoring wells and two existing monitoring wells and submitted for analysis of BTEX, PHCs (F1-F4), and VOCs;

- The soil and groundwater results were compared to the Table 8 SCS for use within 30 metres of a water body in a potable groundwater condition for residential/parkland/institutional property use (hereafter referred to the "Table 8 SCS") as referenced in the Ontario Ministry of Environment (now MECP) document entitled, "*Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act*", dated April 15, 2011. *Watters Environmental notes that the data in this initial 2020 Phase II ESA were compared to the Table 8 SCS (due to the use of groundwater in the area for potable purposes and being within 30 metres of a water body); however, Watters Environmental was recently informed that an area of natural significance is within 30 metres of the Site, as land south and east of the Phase Two Property is identified as an Environmental Protection Area (Level 3) in the City of Barrie Official Plan (Adopted April 2023). As such, the more appropriate standards that now apply to the Phase Two Property is the Table 1 SCS*;

- The concentration of PHC F4 exceeded the Table 8 SCS in a soil sample collected at BH1(MW) from 2.29-2.90 mbgs located on the northwest side of the Site. The concentration of PHC F4 in a deeper sample collected at BH1(MW) from 7.62-8.23 mbgs met the Table 8 SCS; and

- With the exception of salt-related parameters in soil, all other soil and groundwater results met the Table 8 SCS.

*Watters Environmental notes that a comparison of the reported results against the Table 1 SCS indicated the concentration of chloroform in the groundwater sample collected in 2020 from EW2 exceeded the Table 1 SCS.*

<u>2023 Palmer EIS Report</u>

Based on a review of this report, Watters Environmental notes the following in reference to the Phase Two Property:

- The vegetation and floral considerations for the Phase Two Property are very low as the majority of the property exists as urbanized landscape with only a few portions of planted gardens or manicured lawn. The significance of the vegetation communities of the property is considered low, and no significant vegetation features (ex. Woodlands or wetlands) exists on the Phase Two Property;

- Sam Cancilla Park is immediately east of the Phase Two Property with a manicured lawn and planted trees, and the Lake Simcoe shoreline is located to the southeast;

- Due to the limited availability if habitat, there were no species at risk identified as having potential to occur within the Phase Two Property. There is potential for the following species to occur adjacent to the Phase Two Property within Lake Simcoe and associated parkland: Black Redhorse (Threatened), Midland Painted Turtle (Special Concern), Snapping Turtle (Special Concern), and Yellow-banded Bumblebee (Special Concern); and

- No habitat features suitable for bat maternal roosting activities were identified within or adjacent to the Phase Two Property.

2024 Watters Environmental Phase One ESA Report

Based on the Phase One ESA completed, it was Watters Environmental's opinion that there were PCAs from historical or current operations on the Phase One Property and within the Phase One Study Area, as defined in O. Reg. 153/04, which resulted in APECs on the Phase One Property.

The on-Site and off-Site PCAs that resulted in APECs on the Phase One Property are summarized as follows:

| PCA | Location of Activity | Table 2 PCA No. & Description* | Discussion |
|---|---|---|---|
| 1 | On-Site, Northwest side of the Phase One Property | #39 – Paints Manufacturing, Processing and Bulk Storage | A former carriage paint shop operated on the northwest side of the Phase One Property. |
| 2A | On-Site, Northwest side of the Phase One Property | #28 – Gasoline and Associated Products Storage in Fixed Tanks | A former gasoline service station operated on the northwest side of the Phase One Property. |
| 2B | On-Site, Northwest side of the Phase One Property | #27 – Garages and Maintenance and Repair of Railcars, Marine Vehicles and Aviation Vehicles | A former automotive repair garage operated on the northwest side of the Phase One Property. |
| 3 | On-Site, East side of the Phase One Property | #27 – Garages and Maintenance and Repair of Railcars, Marine Vehicles and Aviation Vehicles | A former automotive repair garage operated on the east side of the Phase One Property. |

| PCA | Location of Activity | Table 2 PCA No. & Description* | Discussion |
|---|---|---|---|
| 4 | On-Site, Southwest side of the Phase One Property | #27 – Garages and Maintenance and Repair of Railcars, Marine Vehicles and Aviation Vehicles | A former small engine repair garage operated on the southwest side of the Phase One Property. |
| 5 | On-Site, Northeast side of the Phase One Property | #28 – Gasoline and Associated Products Storage in Fixed Tanks | A former gasoline service station operated on the northeast side of the Phase One Property. |
| 6 | On-Site, Southeast side of the Phase One Property | #28 – Gasoline and Associated Products Storage in Fixed Tanks | Former heating oil AST was present along the southeast exterior of the building. |
| 7 | On-Site, North side of the Phase One Property | #30 – Importation of Fill Material of Unknown Quality | Fill was identified in boreholes on the north side of the Phase One Property. |
| 8 | Off-Site, South of the Phase One Property | #46 – Rail Yards, Tracks and Spurs | Former rail spur and tracks were present immediately south of the Phase One Property. |
| 9 | Off-Site, Southeast of the Phase One Property | #55 – Transformer Manufacturing, Processing and Use | A pad-mounted transformer is present southeast of the Phase One Property. |
| 10A | Off-Site, 45 metres north of the Phase One Property | #34 – Metal Fabrication | A former machine shop was present at 17 Mulcaster Street. |
| 10B | Off-Site, 45 metres north of the Phase One Property | #31 – Ink Manufacturing, Processing and Bulk Storage | A former commercial printing service and associated hazardous waste (photo processing wastes) generation was present at 17 Mulcaster Street. |
| 10C | | #58 – Waste Disposal and Waste Management, including thermal treatment, landfilling and transfer of waste, other than use of biosoils as soil conditioners | |
| 11 | On-Site, Exterior Areas of the Phase One Property | Not Applicable – Road Salt Application | Road salt may have been applied to the exterior paved areas for the safety of vehicular and pedestrian traffic. |

* O. Reg. 153/04, Schedule D, Table 2: Potentially Contaminating Activities

Based on the APECs identified, Watters Environmental stated that a Phase Two ESA would be required before an RSC application can be submitted, as per O. Reg. 153/04.

*Watters Environmental notes that fill material was identified on the north and southeast sides of the Site during drilling as part of the Phase Two ESA. Accordingly, the APEC for fill of unknown material on the Site was expanded to include the southeast portion of the Phase Two Property.*

Reports Summary

The Watters Environmental Phase One ESA was conducted in accordance with O. Reg. 153/04, under the supervision of Ms. Wright who is a Project Manager and $QP_{ESA}$ with Watters Environmental. Senior technical oversight was provided by Mr. Basil Wong, M.Eng., P.Eng., Vice President of Technical Services, who has been an environmental consultant for over 31 years and is a $QP_{ESA}$. As such, the information used from this investigation was considered adequate and can be relied upon to develop the Phase Two ESA program.

# 4.0 SCOPE OF THE INVESTIGATION

## 4.1 Overview of Site Investigation

In order to address the APECs, subsurface investigations were conducted for the purpose of characterization and contamination identification on the Phase Two Property. This work included the preparation of the formal Phase One and Two ESA reports for the Phase Two Property.

The objective of the Phase Two ESA was to evaluate the environmental condition of the soil and groundwater at the Phase Two Property and address the potential environmental issues identified in the Phase One ESA conducted by Watters Environmental. The tasks carried out are summarized below:

- Development of a sampling and analysis plan (see Appendix A), including quality assurance/quality control (QA/QC) measures to be followed during this investigation;
- Clearance of the proposed borehole locations of any public or private underground or above ground utility lines;
- Advancement of three initial boreholes on the Phase Two Property. The boreholes were advanced to a maximum depth of 9.14 mbgs (below the higher elevation portion of the Site at the north end);
- Installation of monitoring wells in two of the boreholes [i.e., BH1(MW) and BH2(MW)];
- Advancement of five additional boreholes on the Phase Two Property. The boreholes were advanced to a maximum depth of 9.14 mbgs (below the higher elevation portion of the Site at the north end);
- Installation of monitoring wells in four of the boreholes [i.e., BH23-1(MW), BH23-2(MW), BH23-3(MW), and BH23-4(MW)];
- Collection of soil and groundwater samples for chemical analyses of the contaminants of potential concern (COPCs); and
- Comparison of the results of the chemical analyses of soil and groundwater samples to the MECP Table 1 SCS for the Phase Two Property.

## 4.2 Media Investigated

The Phase One ESA identified potential impacts to the soil and groundwater at the Phase Two Property and therefore, the media that was planned to be sampled as part of the Phase Two ESA included both soil and groundwater. No sediment sampling was conducted as part of this investigation as there are no water bodies on the Phase Two Property, as defined by O. Reg. 153/04.

## 4.3 Phase One Conceptual Site Model

The Phase One Conceptual Site Model (CSM) was presented in the Phase One ESA report and is summarized below and shown on Figures 5 and 6 of the Phase One ESA report (which corresponds to Figures 5 and 6 of this Phase Two ESA report). Figures 1 to 4 in the Phase One ESA report (which corresponds to Figures 1 to 4 of this Phase Two ESA report) show features on the Phase One Property (as referenced in that report) and Phase One Study Area.

**1. Provide one or more figures of the phase one study area that,**

*i. shows any existing building and structures,*

Figures attached include:

- Figure 1 – Phase One Property Location Map;
- Figure 2 – Phase One Study Area Map;
- Figure 3 – Phase One Property Layout Plan;
- Figure 4 – Topographical Map;
- Figure 5 – Phase One Conceptual Site Model; and
- Figure 6 – Phase One Conceptual Site Model – Expanded View.

As shown on Figure 3, the Site building occupies the central area of the Phase One Property. The Phase One Property can be accessed via Dunlop Street East on the north side or via Mulcaster Street on the west side.

*ii. identify and locate water bodies located in whole or in part on the phase one study area;*

Figure 4 is a topographic map showing the topography of the Phase One Property and the Phase One Study Area. As shown, Kempenfelt Bay (Lake Simcoe) is located approximately 20 metres southeast of the Phase One Property at its closest point; therefore, the Phase One Property is located within 30 metres of a surface water body.

*iii. identify and locate any areas of natural significance located in whole or in part on the phase one study area;*

The City of Barrie Official Plan designated lands within 30 metres to the south and east of the Phase One Property as an Environmental Protection Area – Level 3 and the Phase One Property is located within 30 metres of Lake Simcoe where Black Redhorse, a threatened fish species in Ontario, is identified as being present. As a result, the Phase One Property is considered to be located within 30 metres of an area of natural significance.

*iv. locate any drinking water wells at the phase one property;*

Watters Environmental obtained database information provided in the ERIS report and conducted a search of the MECP Well Records database to determine the presence of current and former water supply wells on the Phase One Property.

No current or former water supply wells were noted to be present on the Phase One Property.

*v. show roads, including names, within the phase one study area;*

Figure 2 shows roads within the Phase One Study Area, including Dunlop Street East and Collier Street to north, Simcoe Street to the south, Poyntz Street to the east, and Mulcaster Street and Owen Street to the west.

*vi. show uses of properties adjacent to the phase one property;*

As shown on Figure 2, the Phase One Property is bordered by Dunlop Street East to the north with multi-tenant commercial and residential properties beyond, Sam Cancilla Park to the east, Barrie North Shore Trail to the south with a municipal parking lot and Heritage Park beyond, and Mulcaster Street to the west with multi-tenant commercial and residential properties beyond.

*vii. identify and locate areas where any potentially contaminating activity has occurred, and show tanks in such areas; and*

As shown on the Phase Conceptual Site Model (Figures 5 and 6), PCAs on the Phase One Property and on surrounding properties that result in APECs on the Phase One Property are as follows:

- #27 – Garages and Maintenance and Repair of Railcars, Marine Vehicles and Aviation Vehicles (on-Site);
- #28 – Gasoline and Associated Products Storage in Fixed Tanks (on-Site);
- #30 – Importation of Fill Material of Unknown Quality (on-Site);
- #31 – Ink Manufacturing, Processing and Bulk Storage (off-Site);
- #34 – Metal Fabrication (off-Site);
- #39 – Paints Manufacturing, Processing and Bulk Storage (on-Site);
- #46 – Rail Yards, Tracks and Spurs (off-Site);
- #55 – Transformer Manufacturing, Processing and Use (off-Site);
- #58 – Waste Disposal and Waste Management, including thermal treatment, landfilling and transfer of waste, other than use of biosoils as soil conditioners (off-Site); and
- Not Applicable – Road salt application for the safety of vehicular and pedestrian traffic (on-Site).

As shown in Figure 5, there are other PCAs within the Phase One Study Area that do not result in APECs on the Phase One Property, due to their distances and/or inferred downgradient/transgradient direction from the Phase One Property. These include:

- #7 – Boat Manufacturing;
- #27 – Garages and Maintenance and Repair of Railcars, Marine Vehicles and Aviation Vehicles;
- #28 – Gasoline and Associated Products Storage in Fixed Tanks;

- #30 – Importation of Fill Material of Unknown Quality;
- #31 – Ink Manufacturing, Processing and Bulk Storage;
- #37 – Operation of Dry-Cleaning Equipment (where chemicals are used);
- #44 – Port Activities, including Operation and Maintenance of Wharves and Docks;
- #53 – Tannery;
- #58 – Waste Disposal and Waste Management, including Thermal Treatment, Landfilling, and Transfer of Waste, Other than use of Biosoils as Soil Conditioners; and
- Not Applicable – Spill.

*viii. identify and locate any areas of potential environmental concern.*

As shown on Figure 6, the APECs on the Phase One Property are as follows:

- APEC 1 – Northwest side of the Phase One Property (PCA #39);
- APEC 2A – Northwest side of the Phase One Property (PCA #28);
- APEC 2B – Northwest side of the Phase One Property (PCA #27);
- APEC 3 – East side of the Phase One Property (PCA #27);
- APEC 4 – Southwest side of the Phase One Property (PCA #27);
- APEC 5 – Northeast side of the Phase One Property (PCA #28);
- APEC 6 – Southeast side of the Phase One Property (PCA #28);
- APEC 7 – North side of the Phase One Property (PCA #30);
- APEC 8 – South side of the Phase One Property (PCA #46);
- APEC 9 – Southeast corner of the Phase One Property (PCA #55);
- APEC 10A – North side of the Phase One Property (PCA #34);

- APEC 10B – North side of the Phase One Property (PCA #31);
- APEC 10C – North side of the Phase One Property (PCA #58); and
- APEC 11 – Exterior Paved & Interlock Brick Areas of the Phase One Property (PCA # - Not Applicable).

**2. Provide a description of and assessment of,**

*i. any areas where potentially contaminating activity on or potentially affecting the phase one property has occurred;*

PCAs identified on the Phase One Property or within the Phase One Study Area that contribute to APECs are summarized in the following table. These PCAs are presented in Figure 5 and the APECs are shown on Figure 6.

| PCA / APEC | Location of Activity | Table 2 PCA No. & Description | Discussion |
|---|---|---|---|
| 1 | On-Site, Northwest side of the Phase One Property | #39 – Paints Manufacturing, Processing and Bulk Storage | A former carriage paint shop operated on the northwest side of the Phase One Property. |
| 2A | On-Site, Northwest side of the Phase One Property | #28 – Gasoline and Associated Products Storage in Fixed Tanks | A former gasoline service station operated on the northwest side of the Phase One Property. |
| 2B | On-Site, Northwest side of the Phase One Property | #27 – Garages and Maintenance and Repair of Railcars, Marine Vehicles and Aviation Vehicles | A former automotive repair garage operated on the northwest side of the Phase One Property. |
| 3 | On-Site, East side of the Phase One Property | #27 – Garages and Maintenance and Repair of Railcars, Marine Vehicles and Aviation Vehicles | A former automotive repair garage operated on the east side of the Phase One Property. |
| 4 | On-Site, Southwest side of the Phase One Property | #27 – Garages and Maintenance and Repair of Railcars, Marine Vehicles and Aviation Vehicles | A former small engine repair garage operated on the southwest side of the Phase One Property. |
| 5 | On-Site, Northeast side of the Phase One Property | #28 – Gasoline and Associated Products Storage in Fixed Tanks | A former gasoline service station operated on the northeast side of the Phase One Property. |

| PCA / APEC | Location of Activity | Table 2 PCA No. & Description | Discussion |
|---|---|---|---|
| 6 | On-Site, Southeast side of the Phase One Property | #28 – Gasoline and Associated Products Storage in Fixed Tanks | Former heating oil AST was present along the southeast exterior of the building. |
| 7 | On-Site, North side of the Phase One Property | #30 – Importation of Fill Material of Unknown Quality | Fill was identified in boreholes advanced on the north side of the Phase One Property. |
| 8 | Off-Site, South of the Phase One Property | #46 – Rail Yards, Tracks and Spurs | Former rail spur and tracks were present immediately south of the Phase One Property. |
| 9 | Off-Site, Southeast of the Phase One Property | #55 – Transformer Manufacturing, Processing and Use | A pad-mounted transformer is present southeast of the Phase One Property. |
| 10A | Off-Site, 45 metres north of the Phase One Property | #34 – Metal Fabrication | A former machine shop was present at 17 Mulcaster Street. |
| 10B | Off-Site, 45 metres north of the Phase One Property | #31 – Ink Manufacturing, Processing and Bulk Storage | A former commercial printing service was present at 17 Mulcaster Street. |
| 10C | Off-Site, 45 metres north of the Phase One Property | #58 – Waste Disposal and Waste Management, including thermal treatment, landfilling and transfer of waste, other than use of biosoils as soil conditioners | Hazardous waste (photo processing wastes) generation associated with the former commercial printing service at 17 Mulcaster Street. |
| 11 | On-Site, Exterior Areas of the Phase One Property | Not Applicable – Road Salt Application | Road salt may have been applied to the exterior paved areas for the safety of vehicular and pedestrian traffic. |

* O. Reg. 153/04, Schedule D, Table 2: Potentially Contaminating Activities

*Watters Environmental notes that fill material was identified on the north and southeast sides of the Site during drilling as part of the Phase Two ESA. Accordingly, APEC 7 for fill of unknown material on the Site was expanded to include the southeast portion of the Phase Two Property.*

Several other off-Site PCAs were identified within the Phase One Study Area. However, it is the opinion of the Qualified Person for Environmental Site Assessment ($QP_{ESA}$) that these off-Site PCAs do not result in APECs on the Phase One Property (see Figure 5). These PCAs and the rationale for why they do not contribute to APECs on the Phase One Property are discussed in the following table.

| O. Reg. 153/04 Table 2 PCA No. & Description* | Approximate PCA Location from the Phase Two Property | Rationale for Off-Site PCA to not Result in an APEC on the Phase Two Property |
|---|---|---|
| #44 – Port Activities, including Operation and Maintenance of Wharves and Docks<br>#30 – Importation of Fill Material of Unknown Quality | 30 metres south in an inferred downgradient direction | The former wharf and subsequent infilling of the former shoreline are not considered to result in APECs on the Phase One Property due to their distances and inferred downgradient direction from the Phase One Property. |
| #7 – Boat Manufacturing | Mulcaster Street at the bay<br>45 metres southwest in an inferred downgradient direction | The former boat building operation is not considered to result in an APEC on the Phase One Property due to its distance and inferred downgradient direction from the Phase One Property. |
| #28 – Gasoline and Associated Products Storage in Fixed Tanks | Heritage Park Pumping Station<br>90 metres southwest in an inferred downgradient direction | The diesel AST associated with a standby generator is not considered to result in an APEC on the Phase One Property due to its distance and inferred downgradient direction from the Phase One Property. |
| N/A - Spill | Intersection of Dunlop Street East & Mulcaster Street<br>5 metres northwest in an inferred transgradient direction | The spill of motor oil is not considered to result in an APEC on the Phase One Property as the spill was captured and cleaned from an off-Site catch basin. Therefore, any product that was not cleaned would have entered the sewer system, not onto the Phase One Property. |
| #27 – Garages and Maintenance and Repair of Railcars, Marine Vehicles and Aviation Vehicles<br>#28 – Gasoline and Associated Products Storage in Fixed Tanks<br>N/A - Spill | 147 Dunlop Street East<br>30 metres west (across Mulcaster Street) in an inferred transgradient direction | The former commercial automotive garage, UST, and spill of stucco wash water to a catch basin, are not considered to result in APECs on the Phase One Property due to their distances (across Mulcaster Street) and inferred transgradient direction from the Phase One Property. |

| O. Reg. 153/04 Table 2 PCA No. & Description* | Approximate PCA Location from the Phase Two Property | Rationale for Off-Site PCA to not Result in an APEC on the Phase Two Property |
|---|---|---|
| #31 – Ink Manufacturing, Processing and Bulk Storage<br>#58 – Waste Disposal and Waste Management, including thermal treatment, landfilling and transfer of waste, other than use of biosoils as soil conditioners | 143 Dunlop Street East<br>30 metres west in an inferred transgradient direction | The former commercial printing service and associated hazardous waste (photo processing wastes) generation are not considered to result in APECs on the Phase One Property due to their distances and inferred transgradient direction from the Phase One Property. |
| #28 – Gasoline and Associated Products Storage in Fixed Tanks | 116 Dunlop Street East<br>60 metres northwest in an inferred transgradient direction | The former UST is not considered to result in an APEC on the Phase One Property due to its distance and inferred transgradient direction from the Phase One Property. |
| #27 – Garages and Maintenance and Repair of Railcars, Marine Vehicles and Aviation Vehicles<br>#28 – Gasoline and Associated Products Storage in Fixed Tanks | 114 Dunlop Street East<br>65 metres northwest in an inferred transgradient direction | The former commercial automotive garage and UST are not considered to result in APECs on the Phase One Property due to their distances and inferred transgradient direction from the Phase One Property. |
| #37 – Operation of Dry-Cleaning Equipment (where chemicals are used) | 109-113 Dunlop Street East<br>100 metres west in an inferred transgradient direction | The former dry cleaner (Cotty's Cleaners) is not considered to result in an APEC on the Phase One Property due to its distance and inferred transgradient direction from the Phase One Property. |
| #37 – Operation of Dry-Cleaning Equipment (where chemicals are used)<br>#28 – Gasoline and Associated Products Storage in Fixed Tanks | 88 Dunlop Street East<br>135 metres northwest in an inferred transgradient direction | The former dry cleaner (Wright Cleaners) and UST are not considered to result in APECs on the Phase One Property due to their distances and inferred transgradient direction from the Phase One Property. |

| O. Reg. 153/04 Table 2 PCA No. & Description* | Approximate PCA Location from the Phase Two Property | Rationale for Off-Site PCA to not Result in an APEC on the Phase Two Property |
|---|---|---|
| #58 – Waste Disposal and Waste Management, including thermal treatment, landfilling and transfer of waste, other than use of biosoils as soil conditioners | 84 Dunlop Street East 140 metres northwest in an inferred transgradient direction | The former hazardous waste (photo processing wastes) generation is not considered to result in an APEC on the Phase One Property due to its distance and inferred transgradient direction from the Phase One Property. |
| N/A – Spill | 55 Collier Street 165 metres northwest in an inferred transgradient direction | The spill of hydraulic fluid from a truck is not considered to result in an APEC on the Phase One Property due to its distance and inferred transgradient direction from the Phase One Property. |
| #58 – Waste Disposal and Waste Management, including thermal treatment, landfilling and transfer of waste, other than use of biosoils as soil conditioners | 57 Collier Street 165 metres northwest in an inferred transgradient direction | The former hazardous waste (alkaline wastes - metals) generation is not considered to result in an APEC on the Phase One Property due to its distance and inferred transgradient direction from the Phase One Property. |
| #27 – Garages and Maintenance and Repair of Railcars, Marine Vehicles and Aviation Vehicles | 65 Collier Street 150 metres northwest in an inferred transgradient direction | The former commercial automotive garage is not considered to result in an APEC on the Phase One Property due to its distance and inferred transgradient direction from the Phase One Property. |
| #27 – Garages and Maintenance and Repair of Railcars, Marine Vehicles and Aviation Vehicles | Southwest corner of Collier Street & Mulcaster Street 115 metres northwest in a transgradient direction | The former fire station, where vehicle maintenance is inferred to have occurred, is not considered to result in an APEC on the Phase One Property due to its distance and transgradient direction from the Phase One Property. |

| O. Reg. 153/04 Table 2 PCA No. & Description* | Approximate PCA Location from the Phase Two Property | Rationale for Off-Site PCA to not Result in an APEC on the Phase Two Property |
|---|---|---|
| #58 – Waste Disposal and Waste Management, including thermal treatment, landfilling and transfer of waste, other than use of biosoils as soil conditioners.<br>#28 – Gasoline and Associated Products Storage in Fixed Tanks<br>N/A – Spill | 70 Collier Street<br>160 metres northwest in an inferred transgradient direction | The hazardous waste generation, diesel AST associated with a standby generator, and the gasoline spill in the underground garage, are not considered to result in APECs on the Phase One Property due to their distances and inferred transgradient direction from the Phase One Property. |
| #27 – Garages and Maintenance and Repair of Railcars, Marine Vehicles and Aviation Vehicles | 56 Mulcaster Street<br>210 metres northwest in an inferred transgradient direction | This former commercial automotive garage is not considered to result in an APEC on the Phase One Property due to its distance and inferred transgradient direction from the Phase One Property. |
| #37 – Operation of Dry-Cleaning Equipment (where chemicals are used) | 55 Mulcaster Street<br>215 metres north in an inferred upgradient direction | The former dry cleaner (Bareck Dry Cleaners) is not considered to result in an APEC on the Phase One Property due to its distance from the Phase One Property. |
| N/A – Spill | Intersection of Collier Street & Mulcaster Street<br>130 metres north in an inferred upgradient direction | The spill of gasoline to the road is not considered to result in an APEC on the Phase One Property due to its distance from the Phase One Property. |
| #28 – Gasoline and Associated Products Storage in Fixed Tanks<br>N/A - Spill | 90 Collier Street<br>150 metres north in an inferred upgradient direction | The former oil AST and spill are not considered to result in APECs on the Phase One Property due to their distances from the Phase One Property. |
| #58 – Waste Disposal and Waste Management, including thermal treatment, landfilling and transfer of waste, other than use of biosoils as soil conditioners | 108 Collier Street<br>160 metres northeast in an inferred transgradient direction | The former hazardous waste (light fuels) generation is not considered to result in an APEC on the Phase One Property due to its distance and inferred transgradient direction from the Phase One Property. |

| O. Reg. 153/04 Table 2 PCA No. & Description* | Approximate PCA Location from the Phase Two Property | Rationale for Off-Site PCA to not Result in an APEC on the Phase Two Property |
|---|---|---|
| #58 – Waste Disposal and Waste Management, including thermal treatment, landfilling and transfer of waste, other than use of biosoils as soil conditioners.<br>#28 – Gasoline and Associated Products Storage in Fixed Tanks | 37 Mulcaster Street<br>80 metres north in an inferred upgradient direction | The hazardous waste (light fuels, aromatic solvents, and waste oils/sludges) generation and diesel AST associated with a standby generator are not considered to result in APECs on the Phase One Property due to their distances from the Phase One Property. |
| #28 – Gasoline and Associated Products Storage in Fixed Tanks | 168 Dunlop Street East<br>150 metres east in an inferred transgradient direction | The former gasoline service station (Canco Petroleum) and fuel oil UST are not considered to result in APECs on the Phase One Property due to their distances and inferred transgradient direction from the Phase One Property. |
| #53 – Tannery<br>#28 – Gasoline and Associated Products Storage in Fixed Tanks<br>N/A – Spill | 185-205 Dunlop Street East<br>200 metres east in an inferred transgradient direction | The former boot and shoe factory, gasoline UST, and spill of transformer oil (contained in a vault) are not considered to result in APECs on the Phase One Property due to their distances and inferred transgradient direction from the Phase One Property. |
| #58 – Waste Disposal and Waste Management, including thermal treatment, landfilling and transfer of waste, other than use of biosoils as soil conditioners.<br>#28 – Gasoline and Associated Products Storage in Fixed Tanks | Bayview Park Pumping Station<br>157 Dunlop Street East<br>80 metres east in an inferred transgradient direction | The hazardous waste (halogenated solvents) generation and diesel AST associated with a standby generator are not considered to result in APECs on the Phase One Property due to their distances and inferred transgradient direction from the Phase One Property.<br>The hazardous waste generation of halogenated solvents are inferred to have resulted from a former dry cleaner east, beyond the limits of the Phase One Study Area. The former pumping station caused a radial groundwater flow direction into the pumping station. As such, the contamination identified at the pumping station is not considered to result in an APEC on the Phase One Property. |

| O. Reg. 153/04 Table 2 PCA No. & Description* | Approximate PCA Location from the Phase Two Property | Rationale for Off-Site PCA to not Result in an APEC on the Phase Two Property |
|---|---|---|
| #58 – Waste Disposal and Waste Management, including thermal treatment, landfilling and transfer of waste, other than use of biosoils as soil conditioners.<br>N/A – Spill | 150 Dunlop Street East 45 metres northeast in an inferred transgradient direction | The former hazardous waste (aliphatic solvents) generation and oil spill to the roadway from a vehicle collision, are not considered to result in APECs on the Phase One Property due to their distances and inferred transgradient direction from the Phase One Property. |
| #31 – Ink Manufacturing, Processing and Bulk Storage | Present-day parking lot north of Simcoe Street and west of Meridian Plan 230 metres west in an inferred transgradient direction | The former Barrie Examiner Printing Office is not considered to result in an APEC on the Phase One Property due to its distance and inferred transgradient direction from the Phase One Property. |

* O. Reg. 153/04, Schedule D, Table 2: Potentially Contaminating Activities

*ii. any contaminants of potential concern;*

The contaminants of potential concern for each APEC, for each applicable media, are summarized in the following table. The APECs are presented in Figure 6.

| Area of Potential Environmental Concern | Potentially Contaminating Activity | Contaminants of Potential Concern | Media Potentially Impacted (Groundwater, Soil and/or Sediment) |
|---|---|---|---|
| APEC 1 | #39 – Paints Manufacturing, Processing and Bulk Storage | PHCs, VOCs, BTEX, THMs, metals, CR (VI), Hg | Soil and Groundwater |
| APEC 2A | #28 – Gasoline and Associated Products Storage in Fixed Tanks | PHCs, VOCs, BTEX, THMs, PAHs, Metals | Soil and Groundwater |
| APEC 2B | #27 – Garages and Maintenance and Repair of Railcars, Marine Vehicles and Aviation Vehicles | PHCs, VOCs, BTEX, THMs, PAHs, Metals, As, Sb, Se, B-HWS, CN-, CR (VI), Hg | Soil and Groundwater |

| Area of Potential Environmental Concern | Potentially Contaminating Activity | Contaminants of Potential Concern | Media Potentially Impacted (Groundwater, Soil and/or Sediment) |
|---|---|---|---|
| APEC 3 | #27 – Garages and Maintenance and Repair of Railcars, Marine Vehicles and Aviation Vehicles | PHCs, VOCs, BTEX, THMs, PAHs, Metals, As, Sb, Se, B-HWS, CN-, CR (VI), Hg | Soil and Groundwater |
| APEC 4 | #27 – Garages and Maintenance and Repair of Railcars, Marine Vehicles and Aviation Vehicles | PHCs, VOCs, BTEX, THMs, PAHs, Metals, As, Sb, Se, B-HWS, CN-, CR (VI), Hg | Soil and Groundwater |
| APEC 5 | #28 – Gasoline and Associated Products Storage in Fixed Tanks | PHCs, VOCs, BTEX, THMs, PAHs, Metals | Soil and Groundwater |
| APEC 6 | #28 – Gasoline and Associated Products Storage in Fixed Tanks | PHCs, BTEX, PAHs | Soil |
| APEC 7 | #30 – Importation of Fill Material of Unknown Quality | PAHs, Metals, As, Sb, Se, B-HWS, CN-, CR (VI), Hg | Soil |
| APEC 8 | #46 – Rail Yards, Tracks and Spurs | PHCs, VOCs, BTEX, THMs, PAHs, Metals, As, Sb, Se, B-HWS, CN-, CR (VI), Hg | Soil |
| APEC 9 | PCA #55 – Transformer Manufacturing, Processing and Use | PHCs, PCBs | Soil |
| APEC 10A | #34 – Metal Fabrication | PHCs, VOCs, BTEX, THMs, Metals, As, Sb, Se, CN-, CR (VI), Hg | Groundwater |
| APEC 10B | #31 – Ink Manufacturing, Processing and Bulk Storage | PHCs, VOCs, BTEX, THMs, Metals, As, Sb, Se, CN-, CR (VI), Hg | Groundwater |

| Area of Potential Environmental Concern | Potentially Contaminating Activity | Contaminants of Potential Concern | Media Potentially Impacted (Groundwater, Soil and/or Sediment) |
|---|---|---|---|
| APEC 10C | #58 – Waste Disposal and Waste Management, including thermal treatment, landfilling and transfer of waste, other than use of biosoils as soil conditioners | PHCs, VOCs, BTEX, THMs, Metals, As, Sb, Se, CN-, CR (VI), Hg | Groundwater |
| APEC 11 | Not Applicable – Road Salt Application | Per paragraph 1 of Section 49.1 of O. Reg. 153/04, testing for EC and SAR in soil or sodium and chloride in groundwater is not necessary on the Phase One Property. | Not Applicable |

Notes: VOCs = Volatile Organic Compounds
BTEX = Benzene, Toluene, Ethylbenzene and Xylenes
THMs = Trihalomethanes
PHCs = Petroleum Hydrocarbons in the F1 to F4 ranges
PAHs = Polycyclic aromatic hydrocarbons
PCBs = polychlorinated biphenyls

*iii. the potential for underground utilities, if any present, to affect contaminant distribution and transport;*

Watters Environmental was not provided with any underground utility drawings for the Phase One Property; however, Watters Environmental anticipates that the underground utilities at the Phase One Property would be between 2 to 3 mbgs. The depth to groundwater was measured at approximately 1.96 and 2.10 mbgs in monitoring wells on the south side of the Phase One Property and 6.33 and 6.44 mbgs in monitoring wells on the north side of the Phase One Property. As such, Watters Environmental anticipates that subsurface utilities on the south side of the Phase One Property could act as preferential pathways for the migration of contaminated groundwater (if any exists).

*iv. available regional or site specific geological and hydrogeological information; and*

Based on a review of the 2020 Elevation Survey, the north side of the Phase One Property is situated at an elevation of approximately 225 mamsl and slopes down to the south, with the south side of the of the Phase One Property situated at an elevation of approximately 221 mamsl. The properties to the east and west are at a similar grade as the Phase One Property, sloping down to the south approximately 4 metres.

Based on a review of the online topographic map from Natural Resources Canada (NRC), the properties within the Phase One Study Area ranged from approximately 240 mamsl to the north, sloping down to the south to 210 mamsl and are at a relatively similar grade with the Phase One Property. Kempenfelt Bay (Lake Simcoe) is located approximately 20 metres southeast of the Phase One Property at the closest point, and approximately 130 metes south of the Phase One Property at the furthest point. Based on the topography in the Phase One Study Area and the presence of Kempenfelt Bay south of the Phase One Property, shallow groundwater was inferred to flow in a southerly direction.

A review of the Ministry of Northern Development and Mines (MNDM) Surficial Geology map on the Google Earth Database indicates that the overburden in the area of the Phase One Property consists of coarse-textured glaciolacustrine deposits of sand and gravel, with minor silt and clay.

Bedrock in the vicinity of the Phase One Property is expected to be limestone, dolostone, shale, arkose, and sandstone of the Ottawa Group, Simcoe Group, and Shadow Lake Formation.

Bedrock was not encountered in the deepest borehole that has been drilled on the Phase One Property (i.e., 9.14 mbgs). Watters Environmental reviewed the well logs in the MECP's well record website to determine the depth to bedrock within the Phase One Study Area. A well record (Well ID 5700288) for a test hole advanced approximately 50 metres east of the Phase One Property indicated cemented sand and gravel or bedrock was encountered at approximately 97 mbgs. Additionally, the Oak Ridges Moraine Groundwater Program website indicates that bedrock in the vicinity of the Phase One Property is at a depth of approximately 129.6 mamsl. The Phase One Property is at an elevation of approximately 225 mamsl on the north side and approximately 221 on the south side. Therefore, the depth to bedrock is expected to be approximately 91.4 to 95.4 mbgs.

*v. how any uncertainty or absence of information obtained in each of the components of the phase one environmental site assessment could affect the validity of the model.*

There is no uncertainty or absence of information in the completion of this Phase One Environmental Site Assessment that could affect the validity of the Phase One CSM.

**3. If the exemption set out in paragraph 1, 1.1 or 2 of section 49.1 of the regulation is being relied upon, document the rationale for relying upon the exemption, which may be based on information gathered during one or more of the records review, interviews, and site reconnaissance,**

The north exterior portion of the Phase One Property is covered by asphalt paved parking and the south exterior portion contains an interlock stone walkway and asphalt paved parking. The paved areas and interlock walkway on the Phase One Property and adjacent roadways and sidewalks have likely had road salt applied to them for the safety of vehicular and pedestrian traffic under conditions of snow or ice or both. Neither the Phase One Property nor any property within the Phase One Study Area have ever been used for commercial bulk storage of salt for use at multiple properties or used as a municipal snow dump. As provided for under paragraph 1 of Section 49.1 of O. Reg. 153/04, the presence of EC or SAR in soil, or sodium or chloride in groundwater, at concentrations above the applicable Site Condition Standards (if any exists) would be deemed to not exceed the applicable Site Condition Standards.

With respect to paragraph 1.1 of Section 49.1 of O. Reg. 154/04, no excess soil has been deposited on the Phase One Property for final placement at this time.

Paragraph 2 of Section 49.1 of O. Reg. 153/04 is not applicable for the Phase One Property.

**4. If there is an intention to rely upon the exemption set out in paragraph 3 of section 49.1 of the regulation, set out the intention to rely upon the exemption and provide a brief explanation as to why the exemption may apply, which may be based on information gathered during one or more of the records review, interviews, and site reconnaissance.**

This section is not applicable for the Phase One Property.

## 4.4 Deviations from Sampling and Analysis Plan

The sampling and analysis plan is provided in Appendix A. The sampling and analysis of soil and groundwater samples were generally completed according to the sampling and analysis plan developed for this investigation. No deviations from the sampling and analysis plan were noted during the completion of the Phase Two ESA.

## 4.5 Impediments

No physical impediments or denial of access were encountered during the investigation.

# 5.0 INVESTIGATION METHOD

## 5.1 General Method of Investigation

Watters Environmental retained Profile Drilling Inc. (Profile) of Mississauga, Ontario to conduct the initial borehole drilling and monitoring well installation activities. Watters Environmental retained Strata Drilling Group (Strata) of Stouffville, Ontario (an MECP-licenced well drilling contractor) to conduct the additional borehole drilling and monitoring well installation activities. Profile used a truck-mounted Mobile B-45 drilling rig, while Strata utilized a track-mounted Geoprobe 7822DT drilling rig to advance the boreholes.

The soil and groundwater sampling and analysis plan is provided in Appendix A.

## 5.2 Drilling and Excavating

Underground services were cleared by the public utility agencies and a private utility locating contractor, All Clear Locates of Mississauga, Ontario. Upon completion of utility locates, a total of 3 boreholes were initially advanced on July 11 and 23, 2020. Following the clearance of underground services, a total of 5 additional boreholes were drilled on October 2 and 3, 2023.

The initial drilling program was completed using a Mobile B-45 drilling rig equipped with 0.61-metre (2-foot) long split-spoon samplers to collect soil samples and hollow-stemmed augers to advance the boreholes. The additional drilling was completed using a Geoprobe 7822DT drilling rig and boreholes were advanced using 1.52-metre (5-foot) long dual-tube sleeve liners. Soil samples were retrieved continuously in 1.52-metre intervals. Additional details of the drilling are provided in the table below and on the borehole logs in Appendix C.

**Table 4: Summary of the Drilling Investigation Method**

| Contractor | Equipment | Boreholes Drilled | Frequency of Samples |
|---|---|---|---|
| Profile Drilling Inc. MECP Well Licence #7215 | Truck-Mounted Mobile B-45 | BH1(MW), BH2(MW), and BH3 | Regular sampling (i.e., every 0.76 metres using 0.61-metre-long split - spoon samplers) |

**Table 4: Summary of the Drilling Investigation Method (Continued)**

| Contractor | Equipment | Boreholes Drilled | Frequency of Samples |
|---|---|---|---|
| Strata Drilling Group MECP Well Licence #7241 | Track-Mounted Geoprobe 7822DT | BH23-1(MW), BH23-2(MW), BH23-3(MW), BH23-4(MW), and BH23-5 | Continuous sampling (i.e., every 1.52 metres using 1.52-metre long dual-tube sleeve liners) |

The locations of the boreholes and groundwater monitoring wells drilled at the Phase Two Property are shown on Figure 7.

The following table summarizes the sampling plan and rationale for the borehole/groundwater monitoring wells drilled and installed at the Phase Two Property as part of the Phase Two ESA. A detailed sampling and analysis plan for this assessment is presented in Appendix A and the rationale is summarized in Table 5 below.

**Table 5: Boreholes Soil Sampling Rationale**

| Sample Collection Location | Sample Type | Rationale |
|---|---|---|
| BH1(MW) | Borehole / Monitoring Well | To assess the soil and groundwater quality in the vicinity of a former on-Site paint shop (APEC 1)<br>To assess the soil and groundwater quality in the vicinity of a former on-Site gasoline service station (APEC 2A) and former automotive garage (APEC 2B) in the northwestern portion of the Phase Two Property.<br>To assess the fill quality in the northern portion of the Phase Two Property (APEC 7)<br>To assess the soil and groundwater quality in the vicinity of a former off-Site machine shop (APEC 10A), commercial printer (APEC 10B), and waste generation (APEC 10C0 on properties located north of the Phase Two Property and inferred upgradient.<br>Soil samples were analyzed for one or more of PHCs, VOCs, BTEX, THMs, PAHs, metals, As, Sb, Se, B-HWS, CN-, CR (VI), and Hg. |

## Table 5: Boreholes Soil Sampling Rationale (Continued)

| Sample Collection Location | Sample Type | Rationale |
|---|---|---|
| BH2(MW) | Borehole / Monitoring Well | To assess the fill quality in the northern portion of the Phase Two Property (APEC 7)<br>To assess the soil and groundwater quality in the vicinity of a former off-Site machine shop (APEC 10A), commercial printer (APEC 10B), and waste generation (APEC 10C0 on properties located north of the Phase Two Property and inferred upgradient.<br>Soil samples were analyzed for one or more of PHCs, VOCs, BTEX, THMs, PAHs, metals, As, Sb, Se, B-HWS, CN-, CR (VI), and Hg. |
| BH3 | Borehole | To assess soil quality in the vicinity of the former off-Site railway line that was adjacent to the southern property boundary.<br>Soil samples were analyzed for one or more of PHCs, VOCs, BTEX, THMs, PAHs, metals, As, Sb, Se, B-HWS, CN-, CR (VI), and Hg. |
| BH23-1(MW) | Borehole / Monitoring Well | To assess the soil quality due to the former automotive repair garage that operated on the east side of the Phase Two Property (APEC 3), the former gasoline service station that operated on the northeast side of the Phase Two Property (APEC 5), and the presence of fill of unknown quality (APEC 7). Soil samples were analyzed for one or more of PHCs, VOCs, BTEX, THMs, PAHs, metals, As, Sb, Se, B-HWS, CN-, CR (VI), and Hg. |
| BH23-2(MW) | Borehole / Monitoring Well | To assess the soil quality due to the former automotive repair garage that operated on the east side of the Phase Two Property (APEC 3), the former gasoline service station that operated on the northeast side of the Phase Two Property (APEC 5), and the presence of fill of unknown quality (APEC 7). Soil samples were analyzed for one or more of PHCs, VOCs, BTEX, THMs, PAHs, metals, As, Sb, Se, B-HWS, CN-, CR (VI), and Hg. |
| BH23-3(MW) | Borehole / Monitoring Well | To assess the soil quality due to the former automotive repair garage that operated on the east side of the Phase Two Property (APEC 3), the former heating oil AST (APEC 6), and the presence of fill of unknown quality (APEC 7). Soil samples were analyzed for one or more of PHCs, VOCs, BTEX, THMs, PAHs, metals, As, Sb, Se, B-HWS, CN-, CR (VI), and Hg. |

**Table 5: Boreholes Soil Sampling Rationale (Continued)**

| Sample Collection Location | Sample Type | Rationale |
|---|---|---|
| BH23-4(MW) | Borehole / Monitoring Well | To assess the soil quality due to the former small engine repair garage that operated on the southwest side of the Phase Two Property (APEC 4) and the former rail spur and tracks immediately south of the Phase Two Property (APEC 8). Soil samples were analyzed for one or more of PHCs, VOCs, BTEX, THMs, PAHs, metals, As, Sb, Se, B-HWS, CN-, CR (VI), and Hg. |
| BH23-5 | Borehole | To assess the soil quality due to the former rail spur and tracks immediately south of the Phase Two Property (APEC 8) and the transformer immediately southeast of the Phase Two Property (APEC 9). Soil samples were analyzed for one or more of PHCs, VOCs, BTEX, THMs, PAHs, metals, As, Sb, Se, B-HWS, CN-, CR (VI), Hg, and PCBs. |

Drilling supervision and field sampling activities were conducted by Watters Environmental personnel following the requirements of O. Reg. 153/04. A description of the stratigraphy encountered in the boreholes is presented in the borehole logs in Appendix C and summarized in Section 6.1.

Standard field drilling and sampling protocols for environmental sampling programs were undertaken during the Phase Two ESA to prevent the potential of cross-contamination of the soil and groundwater samples obtained from the Phase Two Property. These measures included the following:

- Using a new liner in the dual tubes for each soil sampling interval;
- Using clean augers between each borehole location;
- The wearing of new, sterile nitrile gloves during the collection of each soil and groundwater sample;
- Using dedicated methanol preservation kits for the collection of soil samples using a disposable Terra Core® Soil Sampler for each sample set;

- Construction of groundwater monitoring wells using new, sterile, pre-wrapped polyvinyl chloride (PVC) well screens, risers and caps, and commercially-available silica sand and bentonite pellets;

- Decontaminating of the water level meter using potable water, laboratory-grade non-phosphate detergent and VOC-free de-ionized distilled water rinses in between each groundwater monitoring well;

- Using dedicated down-hole groundwater sampling equipment at each groundwater monitoring well location;

- Collecting each groundwater sample in new, sterile sampling containers supplied by the analytical laboratory; and

- Using watertight J-plugs and flush-mount casings at each groundwater monitoring well location to prevent cross-contamination of the groundwater from surface water.

### 5.3 Soil: Sampling

Soil samples collected with the Mobile B-45 drilling rig were obtained using 0.61-metre (2-foot) long stainless-steel split-spoon samplers.

Soil samples collected with the Geoprobe 7822DT drilling rig were obtained using 1.52-metre (5-foot) long dual-tube sleeve liners.

Representative soil samples were collected at continuous intervals in each of the boreholes. Between sampling events, a new plastic liner was placed inside the dual tube.

New disposable nitrile gloves were used for each soil sample handled and the soil samples were logged in the field.

In accordance with MECP sample container requirements, soil samples for potential environmental analysis were placed directly into laboratory-supplied glass jars and vials at the time of sampling. Soil samples collected for potential volatile organic analysis were packed in jars with minimal headspace to reduce the volatilization of organic compounds. Soil samples for potential analysis of VOCs, BTEX, THMs, and PHCs (F1 fraction) were collected using a laboratory-supplied Terra Core® Soil Sampler and placed directly into vials pre-charged with methanol preservative. The sample containers were kept in a cooler with ice during field storage

and transportation to the laboratory. The samples were kept out of direct sunlight during field storage.

Field screening for total organic vapours (TOVs) in the collected soil samples was completed utilizing an RKI Eagle 2 portable gas detection instrument, which includes both a catalytic combustible gas (CCG) sensor and a photoionization detector (PID). The RKI Eagle 2 used is capable of detecting vapours typically emitted by fuels, oils, and solvents (i.e., including chlorinated solvents). The instrument was operated with the methane elimination mode on.

The soil samples were also examined in the field for visual and/or olfactory indications of potential environmental impact. Selected soil samples were retained for potential laboratory analyses. Additional details regarding the field screening measurements are provided below in Section 5.4.

The first soil sample selected from each borehole for laboratory analysis by Watters Environmental generally represented the "worst-case" samples. Worst-case samples were those that appeared most likely to be environmentally impacted, based on field visual and olfactory observations, TOV readings and/or sampling location/depth. A second soil sample collected from most of the boreholes was submitted for vertical delineation. A summary of the field observations recorded for soil samples collected from the Phase Two Property is presented in the borehole logs attached in Appendix C.

The soil samples collected from the Phase Two Property for laboratory analyses were recorded on Chain-of-Custody forms, copies of which were retained within Watters Environmental's files upon sample submission. The samples were packed in ice-chilled coolers, with the Chain-of-Custody forms inside, and picked up by the laboratory.

## 5.4 Field Screening Measurements

Field screening of collected soil samples was undertaken from the boreholes advanced. TOV measurements were taken inside plastic bags on the day of the drilling and sampling using an RKI Eagle 2 portable gas detection instrument. Details of the instrument are provided below.

i. RKI Eagle 2 is manufactured by RKI Instruments;

ii. RKI Eagle 2 is a portable gas-detector which includes both a CCG sensor and a PID, and operates by photoionization and ion current measurement of VOC gases such as hydrocarbon fuels, solvents and semiconductor gases;

iii. The RKI Eagle 2 is capable of detecting combustible soil vapours and was operated in methane elimination mode;

iv. The detection limit of the apparatus was between 0 to 50,000 parts per million by volume ($ppm_v$), with an accuracy of ±50 $ppm_v$ or 5% of the reading, whichever is greater. The RKI Eagle 2 is also capable of detecting vapours typically emitted by chlorinated solvents, with a detection limit of between 0 to 4,000 $ppm_v$ with an accuracy of ± 15% of the reading;

v. The RKI Eagle 2 is calibrated to 100 ppm isobutylene (for the PID) and 1,650 ppm hexane (for the CCG sensor). During Watters Environmental investigation calibration of the unit to isobutylene was +/- 1 ppm; and

vi. The RKI Eagle 2 was calibrated according to the manufacturer's instructions and Watters Environmental's Standard Operating Procedures, prior to collecting field measurements.

In accordance with Watters Environmental's sampling protocols, the samples were kept out of direct sunlight during field storage and the headspace measurements were made after bags reached approximately 15 degrees Celsius to allow for volatilization. To measure the combustible vapours, the tip of the probe was inserted into the sealable plastic bag containing the soil and the maximum reading registered by the PID and CCG sensor during the first 15 seconds of measurement was recorded. This procedure is consistent with the recommended field screening procedures contained in the MECP publication "*Guidance on sampling and Analytical Methods for Use at Contaminated Sites in Ontario*", dated December 1996.

A summary of the field observations (i.e., soil stratigraphy, staining and odours, if any, etc.) and CCG/PID readings recorded for soil samples collected from the Phase Two Property is presented in the borehole logs attached in Appendix C. The geological profile is summarized in Section 6.1.

The TOV measurements, along with field observations (e.g., visual, or olfactory evidence of impacts) and sample depth, were used to determine worst-case soil samples for laboratory analysis. A second soil sample in each borehole was also analyzed for vertical delineation, where applicable.

## 5.5 Ground Water: Monitoring Well Installation

As noted, monitoring wells were installed in four boreholes drilled during the recent Phase Two ESA [i.e., BH23-1(MW) to BH23-4(MW)]. The monitoring wells were constructed with 50-mm diameter Schedule 40 PVC pipes, including a 3.05-metre-long screened section with a factory machined slot width of 0.25 mm. Two monitoring wells [i.e., BH1(MW) and BH2(MW)] installed during the 2020 Phase II ESA completed by Watters Environmental, were also sampled as part of this Phase Two ESA. These wells were also constructed with 50-mm diameter Schedule 40 PVC pipes, including a 3.05-metre-long screened section with a factory machined slot width of 0.25 mm. All solid pipe and screen sections were wrapped in plastic prior to being installed in order to minimize the potential for contamination. At the base of each monitoring well, a PVC slip cap was attached to prevent the influx of sediment.

Clean silica sand and bentonite were supplied by the driller and placed in the annular space between the pipe and the sides of the borehole. The monitoring wells were constructed by extending the sand filter pack approximately 0.3 metres above the top of the well screen and then placing a layer of bentonite on top of the sand filter pack to approximately 0.3 mbgs. A flushmount protective steel casing was installed in each monitoring well. Two monitoring wells installed by others [i.e., EW1 and EW2] were also sampled as part of this Phase Two ESA. Information regarding the installation details of these wells were obtained from well records, if available, and field measurements completed by Watters Environmental. Table 6 below provides the details of the monitoring well installation and construction.

**Table 6: Summary of Monitoring Well Construction**

| MW ID | Well Diameter (mm) | Bottom Depth (mbgs) | Well Construction | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Screen Length (m) | Depth of Screen (mbgs) | | Sand Filter Pack (mbgs) | | Bentonite (mbgs) | | Cement (mbgs) | |
| BH23-1(MW) | 50 | 9.14 | 3.05 | 5.49 | 8.53 | 5.18 | 8.53 | 0.3 | 5.18 | Flushmount Casing | 0.3 |
| BH23-2(MW) | 50 | 9.14 | 3.05 | 5.49 | 8.53 | 5.18 | 8.53 | 0.3 | 5.18 | Flushmount Casing | 0.3 |
| BH23-3(MW) | 50 | 4.57 | 3.05 | 1.52 | 4.57 | 1.22 | 4.57 | 0.3 | 1.22 | Flushmount Casing | 0.3 |

## Table 6: Summary of Monitoring Well Construction (Continued)

| MW ID | Well Diameter (mm) | Bottom Depth (mbgs) | Well Construction | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Screen Length (m) | Depth of Screen (mbgs) | | Sand Filter Pack (mbgs) | | Bentonite (mbgs) | | Cement (mbgs) | |
| BH23-4(MW) | 50 | 3.96 | 3.05 | 0.91 | 3.96 | 0.61 | 3.96 | 0.3 | 0.61 | Flushmount Casing | 0.3 |
| BH1(MW)[1] | 50 | 9.14 | 3.05 | 6.10 | 9.14 | 5.79 | 9.14 | 0.30 | 5.79 | Flushmount Casing | 0.3 |
| BH2(MW)[1] | 50 | 9.14 | 3.05 | 6.10 | 9.14 | 5.79 | 9.14 | 0.30 | 5.79 | Flushmount Casing | 0.3 |
| EW1[2] | 50 | 3.96 | 3.05 | 0.91 | 3.96 | 0.76 | 3.96 | 0.24 | 0.76 | Flushmount Casing | 0.24 |
| EW2[3] | 25 | 6.47 | 3.05[4] | 3.42[4] | 6.47[4] | - | - | - | - | Flushmount Casing | - |

1 - Installed during the 2020 Phase II ESA

2 – Information obtained from Well Record 7124832

3 – Information obtained from measurements collected on-Site

4 – Screen length and screen interval are inferred based on the measured depth of the well as no well record is available

Seven monitoring wells were developed using dedicated low-density polyethylene tubing and a Waterra® foot valve sampling device [i.e., BH23-1(MW), BH23-2(MW), BH23-3(MW), BH23-4(MW), BH1(MW), BH2(MW), and EW1]. EW2 was developed using dedicated tubing and a peristaltic pump. The monitoring wells were developed to allow for the influx of representative groundwater into the well. The volume of water in the well, including the borehole annulus, was calculated and then a minimum of three well volumes of groundwater was purged from the monitoring well (or the well was purged until dry three consecutive times).

## 5.6 Ground Water: Field Measurement of Water Quality Parameters

Before collecting the groundwater samples, Watters Environmental measured various parameters in the groundwater, including water temperature, pH, oxidation-reduction potential, conductivity, turbidity, and dissolved oxygen (DO) using a multi-parameter meter (e.g., Hanna HI9828). Due to the low well recovery in EW1 and EW2, these measurements could not be collected prior to sampling the groundwater.

## 5.7 Ground Water: Sampling

In the initial groundwater sampling program, the existing monitoring wells (i.e., EW1 and EW2) were purged on May 20, 2020 and sampled on May 22, 2020. The initial wells installed by Watters Environmental [i.e., BH1(MW) and BH2(MW)] were purged on June 12, 2020 and sampled on June 15, 2020. One duplicate groundwater sample, BH100(MW) [collected from BH1(MW)], was collected on June 15, 2020. One trip blank sample was also submitted for laboratory analysis for VOCs.

The recently installed monitoring wells [i.e., BH23-1(MW) to BH23-4(MW)] were purged/developed on October 3, 2023, and then sampled on October 4, 2023. BH2(MW) and EW1 were sampled again on February 21, 2024. Groundwater sampling was conducted using a low flow peristaltic pump and dedicated tubing installed in each of the groundwater monitoring wells.

One duplicate groundwater sample, BH23-1000 [collected from BH23-1(MW)], was collected on October 4, 2023. One trip blank sample was also submitted for laboratory analysis for VOCs.

The groundwater samples collected at the Phase Two Property were placed directly into the appropriate laboratory-prepared sterile sample containers for the parameters of interest and the laboratory supplied pre-charged sample containers with preservatives for the required parameters. New nitrile disposable gloves were used for each monitoring well to prevent cross-contamination.

The groundwater samples collected at the Phase Two Property were recorded on Chain-of-Custody forms, copies of which were retained within Watters Environmental's files upon sample submission. The samples were packed by Watters Environmental in ice-chilled coolers, with the Chain-of-Custody forms, and transported directly to the laboratory.

Table 7 below summarizes the sampling plan and rationale for groundwater monitoring of all monitoring wells at the Phase Two Property as part of the Phase Two ESA. A detailed sampling and analysis plan for this assessment is presented in Appendix A.

## Table 7: Groundwater Monitoring Wells Sampling Rationale

| Sample Collection Location | Sample Type | Rationale |
|---|---|---|
| BH1(MW) | Monitoring Well | To assess the groundwater quality due to the former carriage paint shop (APEC 1), the former gasoline service station that operated on the northwest side of the Phase Two Property (APEC 2A), the former automotive repair garage that operated on the northwest side of the Phase Two Property (APEC 2B), and the former off-Site operations north of the Phase Two Property: a former machine shop (APEC 10A), and a former commercial printing service (APEC 10B) and the generation of associated hazardous wastes (APEC 10C). A groundwater sample was analyzed for PAHs, metals, As, Sb, Se, CN-, CR (VI), and Hg. |
| BH2(MW) | Monitoring Well | To assess the groundwater quality due to the former off-Site operations north of the Phase Two Property: a former machine shop (APEC 10A), and a former commercial printing service (APEC 10B) and the generation of associated hazardous wastes (APEC 10C). A groundwater samples was analyzed for PAHs, metals, As, Sb, Se, CN-, CR (VI), and Hg. |
| BH23-1(MW) | Monitoring Well | To assess the groundwater quality due to the former automotive repair garage that operated on the east side of the Phase Two Property (APEC 3), the former gasoline service station that operated on the northeast side of the Phase Two Property (APEC 5), and the former off-Site operations north of the Phase Two Property: a former machine shop (APEC 10A), and a former commercial printing service (APEC 10B) and the generation of associated hazardous wastes (APEC 10C). A groundwater sample was analyzed for PHCs, VOCs, BTEX, THMs, PAHs, metals, As, Sb, Se, CN-, CR (VI), and Hg. |
| BH23-2(MW) | Monitoring Well | To assess the groundwater quality due to the former automotive repair garage that operated on the east side of the Phase Two Property (APEC 3) and the former gasoline service station that operated on the northeast side of the Phase Two Property (APEC 5). A groundwater sample was analyzed for PHCs, VOCs, BTEX, THMs, PAHs, metals, As, Sb, Se, CN-, CR (VI), and Hg. |

**Table 7: Groundwater Monitoring Wells Sampling Rationale (Continued)**

| Sample Collection Location | Sample Type | Rationale |
|---|---|---|
| BH23-3(MW) | Monitoring Well | To assess the groundwater quality due to the former automotive repair garage that operated on the east side of the Phase Two Property (APEC 3). A groundwater sample was analyzed for PHCs, VOCs, BTEX, THMs, PAHs, metals, As, Sb, Se, CN-, CR (VI), and Hg. |
| BH23-4(MW) | Monitoring Well | To assess the groundwater quality due to the former small engine repair garage that operated on the southwest side of the Phase Two Property (APEC 4). A groundwater sample was analyzed for PHCs, VOCs, BTEX, THMs, PAHs, metals, As, Sb, Se, CN-, CR (VI), and Hg. |
| EW1 | Monitoring Well | To assess groundwater quality due to an elevated antimony result reported in the 2017 TIL Phase I ESA Report. A groundwater sample was analyzed for metals, As, Sb, Se, CN-, CR (VI), and Hg. |
| EW2 | Monitoring Well | To assess groundwater quality due to an elevated chloroform result reported in the 2020 Watters Phase II ESA Report. A groundwater sample was analyzed for VOCs. |

The groundwater quality within the footprint of the former carriage paint shop (APEC 1), the former gasoline service station that operated on the northwest side of the Phase Two Property (APEC 2A), the former automotive repair garage that operated on the northwest side of the Phase Two Property (APEC 2B) had been partially assessed at sample location BH1(MW) during the 2020 Phase II ESA completed by Watters Environmental (refer to Section 3.2). Additionally, groundwater quality due to the former off-Site operations north of the Phase Two Property [i.e., a former machine shop (APEC 10A), and a former commercial printing service (APEC 10B) and the generation of associated hazardous wastes (APEC 10C)] had been partially assessed at sample locations BH1(MW) and BH2(MW) during the 2020 Phase II ESA completed by Watters Environmental (refer to Section 3.2).

### 5.8 Sediment: Sampling

No sediment sampling was completed as part of this investigation, as there are no water bodies or sediment on the Phase Two Property.

## 5.9 Analytical Testing

The soil and groundwater samples were analyzed by SGS Canada Inc. (SGS) of Lakefield, Ontario. SGS is accredited by the Canadian Association of Laboratory Accreditation Inc. (CALA) (Accreditation No. 1001999) and meets the requirements of Section 47 of O. Reg. 153/04 certifying that the analytical laboratory be accredited in accordance with the International Standard ISO/IEC 17025 and with standards developed by CALA. The laboratory certificates-of-analysis are provided in Appendix D.

SGS's contact information is provided as follows:

SGS Canada Inc.
185 Concession Street
Lakefield, Ontario
K0L 2H0
Contact Person During the Phase Two ESA:
Brad Moore
brad.moore@sgs.com
(705) 652-2143

## 5.10 Residue Management Procedures

Soil cuttings and purge water were contained in a 205-litre drum. The drum will be removed by the remediation contractor during Site remediation activities.

## 5.11 Elevation Surveying

The elevations of all monitoring wells installed at the Phase Two Property will be surveyed prior to the submission of an application for a Record of Site Condition.

## 5.12 Quality Assurance and Quality Control Measures (QA/QC)

Watters Environmental collected soil and groundwater samples and transferred them immediately into laboratory-supplied sampling containers. Details of the QA/QC measures for the sampling containers are summarized below:

## Table 8: QA/QC Measures for Soil and Groundwater Sampling

| Parameter | Sample Bottle | Preservative | Handling & Custody of Samples |
|---|---|---|---|
| **Soil** | | | |
| Metals, As, Sb, Se, CN-, CR(VI), Hg, pH, PHCs (F2-F4), PAHs, PCBs, Reg. 347/558 TCLP | Amber glass Teflon lined lid | No Preservative | Field staff collected soil samples and placed them directly into labelled jars and vials, prior to transferring them to SGS. All soil samples were kept in a cooler with ice from the time of collection until the time they were transferred to the laboratory's control under Chain of Custody procedures. |
| VOCs, BTEX, THMs, PHCs (F1) | Vial | Methanol | Field staff collected soil samples and placed them directly into labelled jars and vials, prior to transferring them to SGS. All soil samples were kept in a cooler with ice from the time of collection until the time they were transferred to the laboratory's control under Chain of Custody procedures. |
| **Groundwater** | | | |
| PHCs (F2-F4) | Amber Glass Bottle | Hydrogen Chloride | Field staff collected groundwater samples and placed them directly into labelled bottles, prior to transferring them to SGS. All groundwater samples were kept in a cooler with ice from the time of collection until the time they were transferred to the laboratory's control under Chain of Custody procedures. |
| PAH | Amber Glass Bottle | No Preservative | |
| Dissolved Metals | Plastic Bottle | Nitric Acid | |
| Mercury | Amber Glass | Hydrogen Chloride | |
| Cr(VI) | Plastic Bottle | Ammonium sulphate/hydroxide | |
| CN- | Plastic Bottle | Sodium Hydroxide | |
| General Analysis | Plastic Bottle | No Preservative | |
| VOCs, BTEX, THMs, PHCs (F1) | Vials | Sodium Bisulfate | |

Field investigations and sample handling procedures were conducted in accordance with Watters Environmental's Standard Operating Procedures for Phase Two ESAs. To minimize the potential for cross-contamination of samples at differing locations, the following procedures were used by Watters Environmental field staff:

- New disposable gloves were used for each sample collected;
- Non-dedicated tools and equipment were cleaned between sample collections using distilled water and phosphate-free detergent;
- Soil and groundwater samples were placed in laboratory-supplied containers suitable for the analysis;
- Groundwater monitoring wells were purged with dedicated, Waterra® tubing, for each well; and
- Groundwater samples were retrieved with dedicated, low flow tubing, for each well.

Samples were labelled and stored in a cooler with ice while in the field and during transportation to the office and/or laboratory.

All soil samples submitted for chemical analysis were contained in laboratory-supplied glass containers. Samples to be analyzed for metals, hydride-forming metals (As, Sb, Se), CN-, CR(VI), Hg, pH, PAHs, PCBs, and PHCs in the F2 to F4 fractions were submitted in glass jars with Teflon-lined lids. Soil samples submitted for analysis of VOCs, BTEX, THMs, and PHCs in the F1 fraction were collected using TerraCore® samplers and placed in vials containing a pre-measured amount of methanol, both of which were provided by the laboratory. A new TerraCore® sampler was used for each soil sample collected for potential analysis of VOCs, BTEX, THMs, and PHCs in the F1 fraction.

The field instruments used in the Phase Two ESA, including the RKI Eagle 2, were calibrated before using in the field to ensure that they were operating properly.

O. Reg. 153/04 requires at least one field duplicate sample to be collected for every ten (10) soil and groundwater samples submitted for laboratory analysis. Additionally, a trip blank is required to be submitted with groundwater samples submitted for analysis of VOCs, THMs, and BTEX.

Watters Environmental did not note any deviations from the procedures set out in the quality assurance and quality control program set out in the sampling and analysis plan.

# 6.0 REVIEW AND EVALUATION

## 6.1 Geology

As part of this Phase Two ESA, Watters Environmental advanced 5 boreholes on the Phase Two Property, 4 of which were completed as monitoring wells [i.e., BH23-1(MW) to BH23-4(MW) and BH23-5]. In addition, Watters Environmental advanced 3 boreholes at the Phase Two Property during the 2020 Phase II ESA, two of which were completed as monitoring wells [i.e., BH1(MW), BH2(MW), and BH3]. Borehole and monitoring well locations are shown on Figure 7. The information obtained from this drilling programs was used to interpret the general soil stratigraphy on the Phase Two Property.

Fill material was encountered beneath the asphalt parking areas on the north and south sides of the Phase Two Property and beneath the topsoil on the southeast corner of the Phase Two Property [i.e., BH1(MW), BH2(MW), BH23-1(MW), BH23-2(MW), BH23-3(MW), and BH23-5]. The depth of the fill material ranged from 1.52 to 4.57 mbgs and consisted of sand to silty sand, with trace gravel and cobbles. Trace coal and brick was identified in the fill at BH23-1(MW), trace coal was identified in the fill at BH23-2(MW), and trace wood was identified in the fill at BH23-5.

At BH3, drilled during the 2020 Watters Phase II ESA, the material encountered was primarily topsoil with trace sand and trace gravel to the depth of refusal at 0.3 mbgs. Due to overhead wires, BH3 was drilled using a Pionjar.

Underlying the fill material or beneath the interlock stone on the southwest side of the Phase Two Property was native sand to sandy silt with cobbles and trace gravel to the maximum depth investigated, 9.14 mbgs. No obvious fill material was identified beneath the interlock stone at BH23-4(MW). A layer of sand and gravel was observed in borehole BH2(MW) on the north side of the Phase Two Property.

Bedrock was not encountered in the deepest borehole drilled on the Phase Two Property (i.e., 9.14 mbgs). Watters Environmental reviewed the well logs in the MECP's well record website to determine the depth to bedrock within the Phase One Study Area. A well record (Well ID 5700288) for a test hole advanced approximately 50 metres east of the Phase One Property indicated cemented sand and gravel or bedrock was encountered at approximately 97 mbgs. Additionally, the Oak Ridges Moraine Groundwater Program website indicates that bedrock in the vicinity of the Phase One Property is 129.6 mamsl. The Phase One Property is at an elevation of approximately 225 mamsl on the north side and approximately 221 on the south side. As such, the depth to bedrock is expected to be approximately 91.4 to 95.4 mbgs.

Details of the boreholes are provided in the borehole logs in Appendix C.

## 6.2 Ground Water: Elevations and Flow Direction

Watters Environmental installed a groundwater monitoring well in four of boreholes BH23-1(MW) to BH23-4(MW). Additionally, there were two on-Site monitoring wells, BH1(MW) and BH2(WM), installed by Watters Environmental in 2020 and two on-Site monitoring wells, EW1 and EW2, installed by others prior to the Watters Environmental 2020 Phase II ESA.

Groundwater levels were measured by Watters Environmental in all eight monitoring wells on October 3, 2023, prior to purging / developing the wells and on October 4, 2023, prior to purging and sampling the wells. The measurements are summarized in Table 9 below.

**Table 9: Groundwater Level Monitoring Data**

| Monitoring Well | Approximate Ground Surface Elevation (masl)* | October 3, 2023 | | October 4, 2023 | |
|---|---|---|---|---|---|
| | | Groundwater Depth (mbtp) | Groundwater Depth (mbgs) | Groundwater Depth (mbtp) | Groundwater Depth (mbgs) |
| BH23-1(MW) | 225.50 | 6.41 | 6.53 | 6.41 | 6.53 |
| BH23-2(MW) | | 6.40 | 6.50 | 6.41 | 6.51 |
| BH1(MW) | 225.60 | 6.46 | 6.57 | 6.46 | 6.57 |
| BH2(MW) | | 6.57 | 6.65 | 6.56 | 6.64 |
| BH23-3(MW) | 221.25 | 2.15 | 2.28 | 2.15 | 2.28 |
| BH23-4(MW) | | 2.24 | 2.36 | 2.21 | 2.33 |
| EW1 | 221.15 | 2.20 | 2.26 | 2.15 | 2.21 |
| EW2 | 221.16 | 2.18 | 2.27 | 2.16 | 2.25 |

Notes:
* – approximate elevation obtained from "Sketch Showing Elevation for Engineer's Use", prepared by R-PE Surveying Ltd., December 4, 2020
masl – metres above sea level
mbtp – metres below top of pipe
mbgs – metres below ground surface

The inferred shallow groundwater flow direction is shown on Figure 3. Based on the topography of the Phase Two Property and the Phase One Study Area, and the location of Kempenfelt Bay (Lake Simcoe) located approximately 20 to 130 metres south of the Phase Two Property, shallow groundwater was inferred to flow in a southerly direction.

Watters Environmental did not detect the presence of free phase product or sheen during the measurements of water levels in the monitoring wells or during the purging and sampling activities.

### 6.3 Ground Water: Hydraulic Gradients and Conductivity

Groundwater was measured between 6.50 and 6.65 mbgs on the north side of the Phase Two Property, which was in the native sand to sandy silt unit; and between 2.21 and 2.36 mbgs on the south side of the Phase Two Property, which was also generally within the native sand unit. As such, the native sand to sandy silt unit was considered an aquifer. Based on published literature (Freeze and Cherry, 1979), the sand unit is expected to have a hydraulic conductivity ranging between $10^{-5}$ to $10^{-7}$ metres/second.

The hydraulic gradient and groundwater flow velocity will be calculated prior to the submission of an application for a Record of Site Condition.

### 6.4 Fine – Medium Soil Texture

According to O. Reg. 153/04, Section 42(2), a soil is classified as coarse-textured if more than 50% of the soil particles that compose the sample are 75 micrometres (µm) or larger in mean diameter. Conversely, a soil is classified as medium to fine-textured if more than 50% of the soil particles is smaller than 75 µm in mean diameter. If at least one-third of the soil at the property, measured by volume, consists of coarse textured soil, the standards for coarse textured soil shall apply. Otherwise, the standards for medium and fine textured soils can be applied.

Grain size distribution (GSD) analysis was conducted on 2 representative soil samples collected from BH1(MW) and BH2(MW) as part of the 2020 Watters Phase II ESA. The grain size analysis result for the soil samples collected from the Phase Two Property are provided in the table below.

**Table 10: Soil Particle Size and Classification**

| Soil Sample Identification | Particle Size (% < 75 µm Diameter) | Particle Size Classification |
|---|---|---|
| BH1(MW)-SS8 | 14.4 | Coarse textured soil |
| BH2(MW)-SS6 | 12.6 | Coarse textured soil |

Based on samples collected and visual observations during borehole drilling, the majority of the soil at the Phase Two Property consists of coarse-textured soils (i.e., greater than 2/3 of the property, measured by volume, as per Section 42(1) of O. Reg. 153/04).

Due to the presence of an area of natural significance within 30 metres of the Phase Two Property, the analytical results of submitted soil and groundwater samples were compared to the Table 1 SCS (for residential/parkland/institutional/industrial/commercial/community land use), which do not provide different standards based on the texture of the soil.

## 6.5 Soil: Field Screening

The soil samples from all boreholes were examined in the field for lithology as well as for aesthetic evidence of impacts (debris, staining and odours). Trace coal and brick was identified in the fill at BH23-1(MW), trace coal was identified in the fill at BH23-2(MW), and trace wood was identified in the fill at BH23-5.

The headspace (TOV) measurements from soil samples collected during this Phase Two ESA and from the 2020 Watters Phase II ESA are shown in Table 11 presented below.

**Table 11: Summary of the Total Organic Vapour Readings**

| Borehole ID | Sample ID | Depth (mbgs) | Total Organic Vapour (TOV) Reading (ppm) | |
|---|---|---|---|---|
| | | | CCG | PID |
| BH23-1(MW) | 1 | 0.00 – 1.52 | 0 | 0 |
| | 2 | 1.52 – 3.05 | 0 | 0 |
| | 3 | 3.05 – 4.57 | 0 | 0 |
| | 4 | 4.57 – 6.10 | 0 | 0 |
| | 5 | 6.10 – 7.62 | 0 | 0 |
| | 6 | 7.62 – 9.14 | 0 | 0 |
| BH23-2(MW) | 1 | 0.00 – 1.52 | 0 | 0 |
| | 2 | 1.52 – 3.05 | 0 | 0 |
| | 3 | 3.05 – 4.57 | 0 | 0 |
| | 4 | 4.57 – 6.10 | 0 | 0 |
| | 5 | 6.10 – 7.62 | 0 | 0 |
| | 6 | 7.62 – 9.14 | 0 | 0 |

## Table 11: Summary of the Total Organic Vapour Readings (Continued)

| Borehole ID | Sample ID | Depth (mbgs) | Total Organic Vapour (TOV) Reading (ppm) | |
|---|---|---|---|---|
| | | | CCG | PID |
| BH23-3(MW) | 1 | 0.00 – 1.52 | 0 | 0 |
| | 2 | 1.52 – 3.05 | 0 | 0 |
| | 3 | 3.05 – 4.57 | 0 | 0 |
| BH23-4(MW) | 1 | 0.00 – 1.52 | 25 | 0 |
| | 2 | 1.52 – 3.05 | 25 | 0 |
| | 3 | 3.05 – 4.57 | 0 | 0 |
| BH23-5 | 1 | 0.00 – 1.52 | 20 | 1 |
| | 2 | 1.52 – 3.05 | 20 | 1 |
| BH1(MW) | 1 | 0.01 – 0.61 | 0 | 0 |
| | 2 | 0.76 – 1.37 | - | - |
| | 3 | 1.52 – 2.13 | 0 | 0 |
| | 4 | 2.29 – 2.90 | 0 | 0 |
| | 5 | 3.05 – 3.66 | 0 | 0 |
| | 6 | 3.81 – 4.42 | 0 | 0 |
| | 7 | 4.57 – 5.18 | 0 | 0 |
| | 8 | 5.33 – 5.94 | 0 | 0 |
| | 9 | 6.10 – 6.70 | 0 | 0 |
| | 10 | 6.86 – 7.47 | 0 | 0 |
| | 11 | 7.62 – 8.23 | 0 | 0 |
| | 12 | 8.38 – 8.99 | 0 | 0 |
| BH2(MW) | 1 | 0.01 – 0.61 | 0 | 0 |
| | 2 | 0.76 – 1.37 | 0 | 0 |
| | 3 | 1.52 – 2.13 | 0 | 0 |
| | 4 | 2.29 – 2.90 | 0 | 0 |
| | 5 | 3.05 – 3.66 | 0 | 0 |
| | 6 | 3.81 – 4.42 | 0 | 0 |
| | 7 | 4.57 – 5.18 | 0 | 0 |
| | 8 | 5.33 – 5.94 | 0 | 0 |
| | 9 | 6.10 – 6.70 | 0 | 0 |
| | 10 | 6.86 – 7.47 | 0 | 0 |
| | 11 | 7.62 – 8.23 | 0 | 0 |
| | 12 | 8.38 – 8.99 | 0 | 0 |
| BH3 | 1 | 0.00 – 0.30 | 0 | 0 |

mbgs – metres below ground surface

TOV readings were not taken where there was insufficient soil volume after jarring

## 6.6 Soil Quality

The COPCs in soil associated with the PCAs and APECs included the following:

- PCA 1 (APEC 1) – PHCs, VOCs, BTEX, THMs, metals, Cr(VI), and Hg;
- PCA 2A (APEC 2A) – PHCs, VOCs, BTEX, THMs, PAHs, and metals;
- PCA 2B (APEC 2B) – PHCs, VOCs, BTEX, THMs, PAHs, metals, hydride-forming metals (As, Sb, Se), B-HWS, Cr(VI), Hg, and CN-;
- PCA 3 (APEC 3) – PHCs, VOCs, BTEX, THMs, PAHs, metals, hydride-forming metals (As, Sb, Se), B-HWS, Cr(VI), Hg, and CN-;
- PCA 4 (APEC 4) – PHCs, VOCs, BTEX, THMs, PAHs, metals, hydride-forming metals (As, Sb, Se), B-HWS, Cr(VI), Hg, and CN-;
- PCA 5 (APEC 5) – PHCs, VOCs, BTEX, THMs, PAHs, and metals;
- PCA 6 (APEC 6) – PHCs, BTEX, and PAHs;
- PCA 7 (APEC 7) –PAHs, metals, hydride-forming metals (As, Sb, Se), B-HWS, Cr(VI), Hg, and CN-;
- PCA 8 (APEC 8) – PHCs, VOCs, BTEX, THMs, PAHs, metals, hydride-forming metals (As, Sb, Se), B-HWS, Cr(VI), Hg, and CN-; and
- PCA 9 (APEC 9) – PHCs and PCBs.

The environmental quality of the soil at the Phase Two Property was assessed using the Table 1 SCS for residential/parkland/institutional/industrial/commercial/community property use. The following table provides a summary of the soil samples collected from the boreholes drilled by Watters Environmental at the Phase Two Property that were submitted for laboratory analysis as part of the 2020 Watters Phase II ESA and this Phase Two ESA (not including the soil remediation confirmation samples, which are discussed in Section 6.10).

## Table 12: Soil Sample Submission for Laboratory Analytical Testing

| Borehole | Sample ID | Approx. Depth (mbgs) | Date Sampled | Chemical Analysis | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | PHCs | VOCs | Metals | ORPs | PAHs | PCBs |
| BH1(MW) | BH1(MW)-SS3 | 1.52 – 2.13 | June 11, 2020 | - | - | ✓ | ✓ | - | - |
| | BH1(MW)-SS4 | 2.29 – 2.90 | June 11, 2020 | ✓ | ✓ | - | - | ✓ | - |
| | BH1(MW)-SS11 | 7.62 – 8.23 | June 11, 2020 | ✓ | ✓ | - | - | - | - |
| BH2(MW) | BH2(MW)-SS1 | 0.01 – 0.61 | June 12, 2020 | - | - | ✓ | ✓ | - | - |
| | BH200-1 [dup of BH2(MW)-SS1) | 0.01 – 0.61 | June 12, 2020 | - | - | ✓ | ✓ | - | - |
| | BH2(MW)-SS2 | 0.76 – 1.37 | June 12, 2020 | ✓ | ✓ | - | - | - | - |
| | BH200-2 [dup of BH2(MW)-SS2] | 0.76 – 1.37 | June 12, 2020 | ✓ | ✓ | - | - | - | - |
| | BH2(MW)-SS3 | 1.52 – 2.13 | June 12, 2020 | - | - | - | - | ✓ | - |
| | BH200-3 [dup of BH2(MW)-SS3] | 1.52 – 2.13 | June 12, 2020 | - | - | - | - | ✓ | - |

## Table 12: Soil Sample Submission for Laboratory Analytical Testing (Continued)

| Borehole | Sample ID | Approx. Depth (mbgs) | Date Sampled | Chemical Analysis | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | PHCs | VOCs | Metals | ORPs | PAHs | PCBs |
| BH2(MW) | BH2(MW)-SS10 | 6.86 – 7.47 | June 12, 2020 | ✓ | ✓ | - | - | - | - |
| BH3 | BH3-SS1 | 0.0 – 0.30 | June 12, 2020 | ✓ | ✓ | ✓ | ✓ | ✓ | - |
| BH23-1 (MW) | BH23-1 (MW)-1 | 0.01 – 1.52 | October 2, 2023 | ✓ | ✓ | ✓ | ✓ | ✓ | - |
| | BH1000-1 [dup of BH23-1 (MW)-1] | 0.01 – 1.52 | October 2, 2023 | ✓ | ✓ | ✓ | ✓ | ✓ | - |
| | BH23-1 (MW)-5 | 6.10 – 7.62 | October 2, 2023 | ✓ | ✓ | ✓ | ✓ | ✓ | - |
| BH23-2 (MW) | BH23-2 (MW)-2 | 1.52 – 3.05 | October 2, 2023 | - | - | ✓ | ✓ | ✓ | - |
| | BH23-2 (MW)-5 | 6.10 – 7.62 | October 2, 2023 | ✓ | ✓ | ✓ | ✓ | ✓ | - |
| BH23-3 (MW) | BH23-3 (MW)-1 | 0.01 – 1.52 | October 3, 2023 | - | - | ✓ | ✓ | ✓ | - |
| | BH23-3 (MW)-2 | 1.52 – 3.05 | October 3, 2023 | ✓ | ✓ | ✓ | ✓ | ✓ | - |
| BH23-4 (MW) | BH23-4 (MW)-2 | 1.52 – 3.05 | October 3, 2023 | ✓ | ✓ | ✓ | ✓ | ✓ | - |
| BH23-5 | BH23-5-1 | 0.0 – 1.52 | October 2, 2023 | ✓ | - | - | - | - | ✓ |
| | BH23-5000-1 [dup of BH23-5-1] | 0.0 – 1.52 | October 2, 2023 | - | - | - | - | - | ✓ |

**Table 12: Soil Sample Submission for Laboratory Analytical Testing (Continued)**

| Borehole | Sample ID | Approx. Depth (mbgs) | Date Sampled | Chemical Analysis | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | PHCs | VOCs | Metals | ORPs | PAHs | PCBs |
| BH23-5 | BH23-5-2 | 1.52 – 3.05 | October 2, 2023 | ✓ | ✓ | ✓ | ✓ | ✓ | - |

Notes:
PHCs – petroleum hydrocarbons
VOCs – volatile organic compounds – includes BTEX (benzene, toluene, ethylbenzene, and xylenes) and THMs (trihalomethanes)
PAHs – polycyclic aromatic hydrocarbons
Metals – includes hydride-forming metals [arsenic (As), antimony (Sb), and selenium (Se)]
ORPs – other regulated parameters [boron-hot water soluble (B-HWS), hexavalent chromium (CrVI), cyanide (CN-), mercury (Hg), electrical conductivity (EC) and sodium adsorption ratio (SAR)]
PCBs – polychlorinated biphenyls

As summarized in the table above, the following chemical analyses were conducted:

- 12 samples plus 2 duplicate samples analyzed for PHC F1-F4;
- 11 samples plus 2 duplicate samples analyzed for VOCs, THMs, and BTEX;
- 11 samples plus 2 duplicate samples analyzed for metals, hydride-forming metals, and ORPs;
- 11 samples plus 2 duplicate samples analyzed for PAHs; and
- 1 sample plus 1 duplicate sample analyzed for PCBs.

As shown, the number of duplicate samples meet the O. Reg. 153/04 requirement of one field duplicate sample for every ten soil samples submitted for laboratory analysis.

The laboratory certificates-of-analysis are provided in Appendix D, while all soil analytical data, including the maximum values for each parameter tested (prior to remediation), are summarized in a table in Appendix E.

PHCs

The rationale and results for the selected soil samples submitted for PHCs laboratory analysis are shown in Table 13A below:

**Table 13A: Soil Analytical Results for PHCs**

| Borehole | Sample ID | Rationale | APEC No. | LNAPL/ DNAPL indication? | Result |
|---|---|---|---|---|---|
| BH1(MW) | BH1(MW)-SS4 | To assess the soil quality due to the former carriage paint shop, the former gasoline service station on the northwest side of the Phase Two Property, the former automotive repair garage on the northwest side of the Phase Two Property and fill of unknown quality. | 1, 2A, 2B, 7 | None | **Exceedance of Table 1 SCS for PHC F4 (843 µg/g vs. the Table 1 SCS of 120 µg/g).** |
| | BH1(MW)-SS11 | | | None | All parameter concentrations meet the Table 1 SCS. |
| BH2(MW) | BH2(MW)-SS2 | To assess the soil quality due to fill of unknown quality. | 7 | None | All parameter concentrations meet the Table 1 SCS. |
| | BH200-2 [dup of BH2(MW)-SS2] | | | None | All parameter concentrations meet the Table 1 SCS. |
| | BH2(MW) -SS10 | | | None | All parameter concentrations meet the Table 1 SCS. |
| BH3 | BH3-SS1 | To assess the soil quality due to the former off-Site rail spur and tracks. | 8 | None | All parameter concentrations meet the Table 1 SCS. |

## Table 13A: Soil Analytical Results for PHCs (Continued)

| Borehole | Sample ID | Rationale | APEC No. | LNAPL/ DNAPL indication? | Result |
|---|---|---|---|---|---|
| BH23-1 (MW) | BH23-1 (MW)-1 | To assess the soil quality due to due to the former automotive repair garage on the east side of the Phase Two Property, the former gasoline service station on the northeast side of the Phase Two Property, and the presence of fill of unknown quality. | 3, 5, 7 | None | All parameter concentrations meet the Table 1 SCS. |
| | BH1000-1 [dup of BH23-1 (MW)-1] | | | None | All parameter concentrations meet the Table 1 SCS. |
| | BH23-1 (MW)-5 | | | None | All parameter concentrations meet the Table 1 SCS. |
| BH23-2 (MW) | BH23-2 (MW)-5 | To assess the soil quality due to due to the former automotive repair garage on the east side of the Phase Two Property, the former gasoline service station on the northeast side of the Phase Two Property, and the presence of fill of unknown quality. | 3, 5, 7 | None | All parameter concentrations meet the Table 1 SCS. |
| BH23-3 (MW) | BH23-3 (MW)-2 | To assess the soil quality due to the former automotive repair garage on the east side of the Phase Two Property, the former heating oil AST, and the presence of fill of unknown quality. | 3, 6, 7 | None | All parameter concentrations meet the Table 1 SCS. |
| BH23-4 (MW) | BH23-4 (MW)-2 | To assess the soil quality due to the former small engine repair garage on the southwest side of the Phase Two Property and the former off-Site rail spur and tracks. | 4, 8 | None | All parameter concentrations meet the Table 1 SCS. |

**Table 13A: Soil Analytical Results for PHCs (Continued)**

| Borehole | Sample ID | Rationale | APEC No. | LNAPL/ DNAPL indication? | Result |
|---|---|---|---|---|---|
| BH23-5 | BH23-5-1 | To assess the soil quality due to the former off-Site rail spur and tracks and the off-Site transformer. | 8, 9 | None | All parameter concentrations meet the Table 1 SCS. |
| | BH23-5-2 | | | None | All parameter concentrations meet the Table 1 SCS. |

VOCs, THMs, and BTEX

The rationale and results for the selected soil samples submitted for VOCs, THMs, and BTEX laboratory analysis are shown in Table 13B below.

**Table 13B: Soil Analytical Results for VOCs, THMs, and BTEX**

| Borehole | Sample ID | Rationale | APEC No. | LNAPL/ DNAPL indication? | Result |
|---|---|---|---|---|---|
| BH1(MW) | BH1(MW)-SS4 | To assess the soil quality due to the former carriage paint shop, the former gasoline service station on the northwest side of the Phase Two Property, the former automotive repair garage that also operated on the northwest side of the Phase Two Property and fill of unknown quality. | 1, 2A, 2B, 7 | None | All parameter concentrations meet the Table 1 SCS. |
| | BH1(MW)-SS11 | | | None | All parameter concentrations meet the Table 1 SCS. |

## Table 13B: Soil Analytical Results for VOCs, THMs, and BTEX (Continued)

| Borehole | Sample ID | Rationale | APEC No. | LNAPL/ DNAPL indication? | Result |
|---|---|---|---|---|---|
| BH2(MW) | BH2(MW)-SS2 | To assess the soil quality due to fill of unknown quality. | 7 | None | All parameter concentrations meet the Table 1 SCS. |
| | BH200-2 [dup of BH2(MW)-SS2] | | | None | All parameter concentrations meet the Table 1 SCS. |
| | BH2(MW) -SS10 | | | None | All parameter concentrations meet the Table 1 SCS. |
| BH3 | BH3-SS1 | To assess the soil quality due to the former off-Site rail spur and tracks. | 8 | None | All parameter concentrations meet the Table 1 SCS. |
| BH23-1 (MW) | BH23-1 (MW)-1 | To assess the soil quality due to due to the former automotive repair garage on the east side of the Phase Two Property, the former gasoline service station on the northeast side of the Phase Two Property, and the presence of fill of unknown quality. | 3, 5, 7 | None | All parameter concentrations meet the Table 1 SCS. |
| | BH1000-1 [dup of BH23-1 (MW)-1] | | | None | All parameter concentrations meet the Table 1 SCS. |
| | BH23-1 (MW)-5 | | | None | All parameter concentrations meet the Table 1 SCS. |

## Table 13B: Soil Analytical Results for VOCs, THMs, and BTEX (Continued)

| Borehole | Sample ID | Rationale | APEC No. | LNAPL/ DNAPL indication? | Result |
|---|---|---|---|---|---|
| BH23-2 (MW) | BH23-2 (MW)-5 | To assess the soil quality due to due to the former automotive repair garage on the east side of the Phase Two Property, the former gasoline service station on the northeast side of the Phase Two Property, and the presence of fill of unknown quality. | 3, 5, 7 | None | All parameter concentrations meet the Table 1 SCS. |
| BH23-3 (MW) | BH23-3 (MW)-2 | To assess the soil quality due to the former automotive repair garage on the east side of the Phase Two Property, the former heating oil AST, and the presence of fill of unknown quality. | 3, 6, 7 | None | All parameter concentrations meet the Table 1 SCS. |
| BH23-4 (MW) | BH23-4 (MW)-2 | To assess the soil quality due to the former small engine repair garage on the southwest side of the Phase Two Property and the former off-Site rail spur and tracks. | 4, 8 | None | All parameter concentrations meet the Table 1 SCS. |
| BH23-5 | BH23-5-2 | To assess the soil quality due to the former off-Site rail spur and tracks. | 8 | None | All parameter concentrations meet the Table 1 SCS. |

Metals, Hydride-Forming Metals and ORPs

The rationale and results for the selected soil samples submitted for metals, hydride-forming metals and ORPs laboratory analysis are shown in Table 13C below:

**Table 13C: Soil Analytical Results for Metals, Hydride-Forming Metals, and ORPs**

| Borehole | Sample ID | Rationale | APEC No. | LNAPL/ DNAPL indication? | Result |
|---|---|---|---|---|---|
| BH1(MW) | BH1(MW)-SS3 | To assess the soil quality due to the former carriage paint shop, the former gasoline service station on the northwest side of the Phase Two Property, the former automotive repair garage that also operated on the northwest side of the Phase Two Property and fill of unknown quality. | 1, 2A, 2B, 7 | None | All parameter concentrations meet the Table 1 SCS, **with the exception of SAR (5.6 µg/g) and EC (1 µg/g).** |
| BH2(MW) | BH2(MW)-SS1 | To assess the soil quality due to fill of unknown quality. | 7 | None | All parameter concentrations meet the Table 1 SCS, **with the exception of SAR (7.2 µg/g).** |
| | BH200-1 [dup of BH2(MW)-SS1) | | | None | All parameter concentrations meet the Table 1 SCS, **with the exception of SAR (4.1 µg/g).** |

## Table 13C: Soil Analytical Results for Metals, Hydride-Forming Metals, and ORPs (Continued)

| Borehole | Sample ID | Rationale | APEC No. | LNAPL/ DNAPL indication? | Result |
|---|---|---|---|---|---|
| BH3 | BH3-SS1 | To assess the soil quality due to the former off-Site rail spur and tracks. | 8 | None | All parameter concentrations meet the Table 1 SCS. |
| BH23-1 (MW) | BH23-1 (MW)-1 | To assess the soil quality due to due to the former automotive repair garage on the east side of the Phase Two Property, the former gasoline service station on the northeast side of the Phase Two Property, and the presence of fill of unknown quality. | 3, 5, 7 | None | All parameter concentrations meet the Table 1 SCS, **with the exception of SAR (6.6 µg/g) and EC (0.84 µg/g).** |
| | BH1000-1 [dup of BH23-1 (MW)-1] | | | None | All parameter concentrations meet the Table 1 SCS, **with the exception of SAR (7.1 µg/g) and EC (0.87 µg/g).** |
| BH23-1 (MW) | BH23-1 (MW)-5 | To assess the soil quality due to due to the former automotive repair garage on the east side of the Phase Two Property, the former gasoline service station on the northeast side of the Phase Two Property, and the presence of fill of unknown quality. | 3, 5, 7 | None | All parameter concentrations meet the Table 1 SCS, **with the exception of SAR (10.5 µg/g) and EC (1.2 µg/g).** |

## Table 13C: Soil Analytical Results for Metals, Hydride-Forming Metals, and ORPs (Continued)

| Borehole | Sample ID | Rationale | APEC No. | LNAPL/ DNAPL indication? | Result |
|---|---|---|---|---|---|
| BH23-2 (MW) | BH23-2 (MW)-2 | To assess the soil quality due to due to the former automotive repair garage on the east side of the Phase Two Property, the former gasoline service station on the northeast side of the Phase Two Property, and the presence of fill of unknown quality. | 3, 5, 7 | None | All parameter concentrations meet the Table 1 SCS, **with the exception of SAR (9.6 µg/g).** |
| BH23-2 (MW) | BH23-2 (MW)-5 | | | None | All parameter concentrations meet the Table 1 SCS, **with the exception of SAR (9.9 µg/g).** |
| BH23-3 (MW) | BH23-3 (MW)-1 | To assess the soil quality due to the former automotive repair garage on the east side of the Phase Two Property, the former heating oil AST, and the presence of fill of unknown quality. | 3, 6, 7 | None | All parameter concentrations meet the Table 1 SCS. |
| | BH23-3 (MW)-2 | | | None | All parameter concentrations meet the Table 1 SCS. |
| BH23-4 (MW) | BH23-4 (MW)-2 | To assess the soil quality due to the former small engine repair garage on the southwest side of the Phase Two Property and the former off-Site rail spur and tracks. | 4, 8 | None | All parameter concentrations meet the Table 1 SCS, **with the exception of SAR (5.8 µg/g).** |
| BH23-5 | BH23-5-2 | To assess the soil quality due to the former off-Site rail spur and tracks. | 8 | None | All parameter concentrations meet the Table 1 SCS. |

PAHs

The rationale and results for the selected soil samples submitted for PAHs laboratory analysis are shown in Table 13D below.

**Table 13D: Soil Analytical Results for PAHs**

| Borehole | Sample ID | Rationale | APEC No. | LNAPL/ DNAPL indication? | Result |
|---|---|---|---|---|---|
| BH1(MW) | BH1(MW)-SS4 | To assess the soil quality due to the former carriage paint shop, the former gasoline service station on the northwest side of the Phase Two Property, the former automotive repair garage that also operated on the northwest side of the Phase Two Property and fill of unknown quality. | 1, 2A, 2B, 7 | None | All parameter concentrations meet the Table 1 SCS. |
| BH2(MW) | BH2(MW)-SS3 | To assess the soil quality due to fill of unknown quality. | 7 | None | All parameter concentrations meet the Table 1 SCS. |
| | BH200-3 [dup of BH2(MW)-SS3] | | | None | All parameter concentrations meet the Table 1 SCS. |
| BH3 | BH3-SS1 | To assess the soil quality due to the former off-Site rail spur and tracks. | 8 | None | All parameter concentrations meet the Table 1 SCS. |

## Table 13D: Soil Analytical Results for PAHs (Continued)

| Borehole | Sample ID | Rationale | APEC No. | LNAPL/ DNAPL indication? | Result |
|---|---|---|---|---|---|
| BH23-1 (MW) | BH23-1 (MW)-1 | To assess the soil quality due to due to the former automotive repair garage on the east side of the Phase Two Property, the former gasoline service station on the northeast side of the Phase Two Property, and the presence of fill of unknown quality. | 3, 5, 7 | None | All parameter concentrations meet the Table 1 SCS. |
| | BH1000-1 [dup of BH23-1 (MW)-1] | | | None | All parameter concentrations meet the Table 1 SCS. |
| | BH23-1 (MW)-5 | | | None | All parameter concentrations meet the Table 1 SCS. |
| BH23-2 (MW) | BH23-2 (MW)-2 | To assess the soil quality due to due to the former automotive repair garage on the east side of the Phase Two Property, the former gasoline service station on the northeast side of the Phase Two Property, and the presence of fill of unknown quality. | 3, 5, 7 | None | All parameter concentrations meet the Table 1 SCS. |
| | BH23-2 (MW)-5 | | | None | All parameter concentrations meet the Table 1 SCS. |
| BH23-3 (MW) | BH23-3 (MW)-1 | To assess the soil quality due to the former automotive repair garage on the east side of the Phase Two Property, the former heating oil AST, and the presence of fill of unknown quality. | 3, 6, 7 | None | **Exceedance of Table 1 SCS for fluoranthene (0.59 µg/g vs. the Table 1 SCS of 0.56 µg/g).** |
| | BH23-3 (MW)-2 | | | None | All parameter concentrations meet the Table 1 SCS. |

**Table 13D: Soil Analytical Results for PAHs (Continued)**

| Borehole | Sample ID | Rationale | APEC No. | LNAPL/ DNAPL indication? | Result |
|---|---|---|---|---|---|
| BH23-4 (MW) | BH23-4 (MW)-2 | To assess the soil quality due to the former small engine repair garage on the southwest side of the Phase Two Property and the former off-Site rail spur and tracks. | 4, 8 | None | All parameter concentrations meet the Table 1 SCS. |
| BH23-5 | BH23-5-2 | To assess the soil quality due to the former off-Site rail spur and tracks. | 8 | None | All parameter concentrations meet the Table 1 SCS. |

PCBs

The rationale and results for the selected soil samples submitted for PCBs laboratory analysis are shown in Table 13E below:

**Table 13E: Soil Analytical Results for PCBs**

| Borehole | Sample ID | Rationale | APEC No. | LNAPL/ DNAPL indication? | Result |
|---|---|---|---|---|---|
| BH23-5 | BH23-5-1 | To assess the soil quality due to the off-Site transformer. | 9 | None | All parameter concentrations meet the Table 1 SCS. |
| | BH23-5000-1 [dup of BH23-5-1] | | | None | All parameter concentrations meet the Table 1 SCS. |

Summary of Soil Analytical Results from the Borehole Drilling (Before Soil Remediation)

The concentrations of contaminants in soil samples collected by Watters Environmental as part of this drilling program and the 2020 Watters Phase II ESA are presented in Figures 9A (PHCs), 9B (VOCs, THMs, BTEX), 9C (Metals, Hydride-Forming Metals, and ORPs), 9D (PAHs), and 9E (PCBs). The concentrations of these parameters are presented in a table in Appendix E.

As shown on Figure 9A, soil containing PHC F4 that exceeded the Table 1 SCS was identified on the northwest side of the Phase Two Property [i.e., BH1(MW)-SS4 (2.29 – 2.90 mbgs)] and was likely a result of former automotive repair activities. The concentrations of PHC F1-F4 in a deeper soil sample [i.e., BH1(MW)-SS11 (7.62 – 8.23 mbgs)], met the Table 1 SCS. This parameter is not expected to undergo chemical or biological transformation.

The estimated lateral extent of PHC F4 impacts prior to remediation is shown on Figure 9A, while the estimated vertical extent is shown on Figures 11A to 11D. The estimated lateral and vertical extent of PHC F4-impacted soil (prior to soil remediation activities) is shown with a purple dashed line.

Soil remediation to remove PHC F4-impacted soil was subsequently attempted, and this is discussed further in Section 6.10.

As shown on Figure 9D, soil containing fluoranthene (a PAH) that exceeded the Table 1 SCS was identified on the southeast side of the Phase Two Property [i.e., BH23-3(MW)-1 (0.01 – 1.52 mbgs)] and was likely a result of poor-quality fill. The concentrations of PAHs in a deeper soil sample [i.e., BH23-3(MW)-2 (1.52 – 3.05 mbgs)], met the Table 1 SCS. This parameter does not result in chemical or biological transformation.

The estimated lateral extent of PAH impacts is shown on Figure 9D, while the estimated vertical extent is shown on Figures 12A to 12D. The lateral and vertical extent of PAH-impacted soil is shown with a purple dashed line.

No evidence of free phase product was observed by Watters Environmental during the borehole drilling and sampling activities in 2020 or 2023. The PHC, VOC, THMs, and BTEX concentrations do not indicate the presence of light or dense non-aqueous phase liquids.

Exceedances of electrical conductivity (EC) and/or sodium adsorption ratio (SAR) were present in samples BH1(MW)-SS3, BH2(MW)-SS1, BH200-1 [duplicate of BH2(MW)-SS1], BH23-1(MW)-1, BH1000-1 [duplicate of BH23-1(MW)-1], BH23-1(MW)-5, BH23-2(MW)-5, and BH23-4(MW)-2.

The north and south sides of the Site exterior consist of asphalt-paved parking and concrete or interlock stone walkways. It is the $QP_{ESA}$'s opinion that these impacts are attributed to salting activities on the paved surfaces on the Site for de-icing purposes for the safety of vehicular and pedestrian traffic under conditions of snow or ice or both. As provided for under Section 49.1 of O. Reg. 153/04, the concentrations of EC and SAR in soil are believed to be present in excess of the table 1 SCS solely because a substance (e.g., road salt) has been applied to surfaces for the safety of vehicular or pedestrian traffic under conditions of snow or ice or both. Neither the Phase Two Property nor any properties within the Phase One Study Area have ever been used for commercial bulk storage of salt for use at multiple properties or used as a municipal snow dump. Therefore, the applicable Table 1 SCS is deemed not to be exceeded for the purpose of Part XV.1 of the Act. As such, all soil samples with elevated EC and/or SAR concentrations meet the applicable Table 1 SCS for the Phase Two Property, and EC and SAR are not considered as contaminants of concern. Thus, no further delineation or investigation is required.

## 6.7 Ground Water Quality

The COPCs in groundwater associated with the PCAs and APECs included the following:

- PCA 1 (APEC 1) – PHCs, VOCs, BTEX, THMs, metals, Cr(VI), and Hg;
- PCA 2A (APEC 2A) – PHCs, VOCs, BTEX, THMs, PAHs, and metals;
- PCA 2B (APEC 2B) – PHCs, VOCs, BTEX, THMs, PAHs, metals, hydride-forming metals (As, Sb, Se), Cr(VI), Hg, and CN-;
- PCA 3 (APEC 3) – PHCs, VOCs, BTEX, THMs, PAHs, metals, hydride-forming metals (As, Sb, Se), Cr(VI), Hg, and CN-;
- PCA 4 (APEC 4) – PHCs, VOCs, BTEX, THMs, PAHs, metals, hydride-forming metals (As, Sb, Se), Cr(VI), Hg, and CN-;
- PCA 5 (APEC 5) – PHCs, VOCs, BTEX, THMs, PAHs, and metals;
- PCA 10A (APEC 10A) – PHCs, VOCs, BTEX, THMs, metals, hydride-forming metals (As, Sb, Se), Cr(VI), Hg, and CN-;
- PCA 10B (APEC 10B) – PHCs, VOCs, BTEX, THMs, metals, hydride-forming metals (As, Sb, Se), Cr(VI), Hg, and CN-; and

- PCA 10C (APEC 10C) – PHCs, VOCs, BTEX, THMs, metals, hydride-forming metals (As, Sb, Se), Cr(VI), Hg, and CN-.

The environmental quality of the groundwater at the Phase Two Property was assessed using the Table 1 SCS for residential/parkland/institutional/industrial/commercial/community property use. Watters Environmental conducted a Phase Two ESA which involved the installation and sampling of groundwater monitoring wells in four of the boreholes [i.e., BH23-1(MW), BH23-2(MW), BH23-3(MW), and BH23-4(MW)]. Additionally, Watters Environmental sampled four existing on-Site monitoring wells [i.e., BH1(MW), BH2(MW), EW1, and EW2]. BH1(MW) and BH2(MW) were installed by Watters Environmental as part of the 2020 Watters Phase II ESA. EW1 and EW2 were installed by others prior to Watters Environmental's 2020 Phase II ESA. The following table provides a summary of the groundwater samples collected by Watters Environmental from monitoring wells at the Phase Two Property and submitted for laboratory analysis as part of the Phase Two ESA and the previous 2020 Watters Phase II ESA.

**Table 14: Groundwater Sample Submission for Laboratory Analytical Testing**

| Monitoring Well | Well Screen (sample depth interval) | Date Sampled | Chemical Analysis | | | | |
|---|---|---|---|---|---|---|---|
| | | | PHCs | VOCs | Metals[1] | ORPs[1] | PAHs |
| BH1(MW) | 6.10 – 9.14 | June 15, 2020 | ✓ | ✓ | - | - | - |
| BH100(MW) [dup of BH1(MW)] | | June 15, 2020 | ✓ | ✓ | - | - | - |
| BH1(MW) | 6.10 – 9.14 | October 4, 2023 | - | - | ✓ | ✓ | ✓ |
| BH2(MW) | 6.10 – 9.14 | June 15, 2020 | ✓ | ✓ | - | - | - |
| | | October 4, 2023 | - | - | ✓ | ✓ | ✓ |
| | | February 21, 2024 | - | - | ✓ | - | - |

## Table 14: Groundwater Sample Submission for Laboratory Analytical Testing (Continued)

| Monitoring Well | Well Screen (sample depth interval) | Date Sampled | Chemical Analysis | | | | |
|---|---|---|---|---|---|---|---|
| | | | PHCs | VOCs | Metals[1] | ORPs[1] | PAHs |
| BH23-1(MW) | 5.49 – 8.53 | October 4, 2023 | ✓ | ✓ | ✓ | ✓ | ✓ |
| BH23-1000 [dup of BH23-1(MW)] | | October 4, 2023 | ✓ | ✓ | ✓ | ✓ | ✓ |
| BH23-2(MW) | 5.49 – 8.53 | October 4, 2023 | ✓ | ✓ | ✓ | ✓ | ✓ |
| BH23-3(MW) | 1.52 – 4.57 | October 4, 2023 | ✓ | ✓ | ✓ | ✓ | ✓ |
| BH23-4(MW) | 0.91 – 3.96 | October 4, 2023 | ✓ | ✓ | ✓ | ✓ | ✓ |
| EW1 | 0.91 – 3.96 | May 22, 2020 | ✓ | ✓ | - | - | - |
| | | October 4, 2023 | - | - | ✓ | ✓ | - |
| | | February 21, 2024 | - | - | ✓[3] | - | - |
| EW2 | 3.42 – 6.47[2] | May 22, 2020 | ✓ | ✓ | - | - | - |
| | | October 4, 2023 | - | ✓ | - | - | - |

Notes:

1 - Indicates that the groundwater was field filtered prior to collection in the hexavalent chromium (CrVI), mercury, and ICPMS Metals sampling containers.

2 - Screen interval is inferred based on the measured depth of the well as no well record is available

3 – The sample was submitted for analysis of hydride-forming metals [arsenic (As), antimony (Sb), and selenium (Se)] only.

PHCs – petroleum hydrocarbons

VOCs – volatile organic compounds – includes BTEX (benzene, toluene, ethylbenzene, and xylenes) and THMs (trihalomethanes)

PAHs – polycyclic aromatic hydrocarbons

Metals – includes hydride-forming metals [arsenic (As), antimony (Sb), and selenium (Se)]

ORPs – other regulated parameters [hexavalent chromium (CrVI), cyanide (CN-), mercury (Hg), chloride and sodium]

As summarized in the table above, the following chemical analyses were conducted as part of Watters Environmental's groundwater sampling program:

- 8 groundwater samples plus 2 duplicate samples were analyzed for PHCs;
- 9 groundwater samples plus 2 duplicate samples were analyzed for VOCs, THMs, and BTEX;
- 8 groundwater samples plus 1 duplicate sample were analyzed for metals including hydride-forming metals;
- 1 groundwater sample was analyzed for hydride-forming metals only;
- 7 groundwater samples plus 1 duplicate sample were analyzed for ORPs; and
- 6 groundwater samples plus 1 duplicate sample analyzed for PAHs.

As shown, the number of duplicate samples meet the O. Reg. 153/04 requirement of one field duplicate sample for every ten groundwater samples submitted for laboratory analysis. In addition, 1 trip blank was analyzed for VOCs for QA/QC purposes during the groundwater sampling event completed as part of this Phase Two ESA, as required by O. Reg. 153/04. A trip blank was also analyzed for VOCs for QA/QC purposes during the June 15, 2020 groundwater sampling event completed as part of the 2020 Watters Phase II ESA.

The laboratory certificates-of-analysis are provided in Appendix D, while all groundwater analytical data, including the maximum values for each parameter tested (prior to remediation), are summarized in a table in Appendix F.

PHCs

The rationale and results for the selected groundwater samples submitted for PHCs laboratory analysis are shown in Table 15A below.

## Table 15A: Groundwater Analytical Results for PHCs

| Well ID | Sample ID | Rationale | APEC No. | LNAPL/ DNAPL indication? | Result |
|---|---|---|---|---|---|
| BH1(MW) | BH1(MW) | To assess the groundwater quality due to the former carriage paint shop, the former gasoline service station on the northwest side of the Phase Two Property, the former automotive repair garage on the northwest side of the Phase Two Property, and the former off-Site operations north of the Phase Two Property: a former machine shop, and a former commercial printing service and the generation of associated hazardous wastes. | 1, 2A, 2B, 10A, 10B, 10C | None | All parameter concentrations meet the Table 1 SCS. |
| | BH100(MW) [Dup of BH1(MW)] | | | None | All parameter concentrations meet the Table 1 SCS. |
| BH2(MW) | BH2(MW) | To assess the groundwater quality due to the former off-Site operations north of the Phase Two Property: a former machine shop, and a former commercial printing service and the generation of associated hazardous wastes. | 10A, 10B, 10C | None | All parameter concentrations meet the Table 1 SCS. |
| BH23-1 (MW) | BH23-1 (MW) | To assess the groundwater quality due to the former automotive repair garage on the east side of the Phase Two Property, the former gasoline service station on the northeast side of the Phase Two Property, and the former off-Site operations north of the Phase Two Property: a former machine shop, and a former commercial printing service, and the generation of associated hazardous wastes. | 3, 5, 10A, 10B, 10C | None | All parameter concentrations meet the Table 1 SCS. |
| | BH23-1000 [Dup of BH23-1 (MW)] | | | None | All parameter concentrations meet the Table 1 SCS. |

## Table 15A: Groundwater Analytical Results for PHCs

| Well ID | Sample ID | Rationale | APEC No. | LNAPL/ DNAPL indication? | Result |
|---|---|---|---|---|---|
| BH23-2 (MW) | BH23-2 (MW) | To assess the groundwater quality due to the former automotive repair garage on the east side of the Phase Two Property and the former gasoline service station on the northeast side of the Phase Two Property. | 3, 5 | None | All parameter concentrations meet the Table 1 SCS. |
| BH23-3 (MW) | BH23-3 (MW) | To assess the groundwater quality due to the former automotive repair garage on the east side of the Phase Two Property. | 3 | None | All parameter concentrations meet the Table 1 SCS. |
| BH23-4 (MW) | BH23-4 (MW) | To assess the groundwater quality due to the former small engine repair garage on the southwest side of the Phase Two Property. | 4 | None | All parameter concentrations meet the Table 1 SCS. |
| EW1 | EW1 | To assess groundwater quality at the Phase Two Property. | N/A | None | All parameter concentrations meet the Table 1 SCS. |
| EW2 | EW2 | To assess groundwater quality at the Phase Two Property. | N/A | None | All parameter concentrations meet the Table 1 SCS. |

VOCs, THMs, and BTEX

The rationale and results for the selected groundwater samples submitted for VOCs, BTEX and THMs laboratory analyses are shown in Table 15B below.

## Table 15B: Groundwater Analytical Results for VOCs, THMs, and BTEX

| Well ID | Sample ID | Rationale | APEC No. | LNAPL/ DNAPL indication? | Result |
|---|---|---|---|---|---|
| BH1(MW) | BH1(MW) | To assess the groundwater quality due to the former carriage paint shop, the former gasoline service station on the northwest side of the Phase Two Property, the former automotive repair garage on the northwest side of the Phase Two Property, and the former off-Site operations north of the Phase Two Property: a former machine shop, and a former commercial printing service and the generation of associated hazardous wastes. | 1, 2A, 2B, 10A, 10B, 10C | None | All parameter concentrations meet the Table 1 SCS. |
| | BH100 (MW) [Duplicate of BH1(MW)] | | | None | All parameter concentrations meet the Table 1 SCS. |
| BH2(MW) | BH2(MW) | To assess the groundwater quality due to the former off-Site operations north of the Phase Two Property: a former machine shop, and a former commercial printing service and the generation of associated hazardous wastes. | 10A, 10B, 10C | None | All parameter concentrations meet the Table 1 SCS. |

## Table 15B: Groundwater Analytical Results for VOCs, THMs, and BTEX (Continued)

| Well ID | Sample ID | Rationale | APEC No. | LNAPL/ DNAPL indication? | Result |
|---|---|---|---|---|---|
| BH23-1 (MW) | BH23-1 (MW) | To assess the groundwater quality due to the former automotive repair garage on the east side of the Phase Two Property, the former gasoline service station on the northeast side of the Phase Two Property, and the former off-Site operations north of the Phase Two Property: a former machine shop, and a former commercial printing service, and the generation of associated hazardous wastes. | 3, 5, 10A, 10B, 10C | None | All parameter concentrations meet the Table 1 SCS. |
| | BH23-1000 [Duplicate of BH23-1 (MW)] | | | None | All parameter concentrations meet the Table 1 SCS. |
| BH23-2 (MW) | BH23-2 (MW) | To assess the groundwater quality due to the former automotive repair garage on the east side of the Phase Two Property and the former gasoline service station on the northeast side of the Phase Two Property. | 3, 5 | None | All parameter concentrations meet the Table 1 SCS. |
| BH23-3 (MW) | BH23-3 (MW) | To assess the groundwater quality due to the former automotive repair garage on the east side of the Phase Two Property. | 3 | None | All parameter concentrations meet the Table 1 SCS. |
| BH23-4 (MW) | BH23-4 (MW) | To assess the groundwater quality due to the former small engine repair garage on the southwest side of the Phase Two Property. | 4 | None | All parameter concentrations meet the Table 1 SCS. |
| EW1 | EW1 | To assess groundwater quality at the Phase Two Property. | N/A | None | All parameter concentrations meet the Table 1 SCS. |

## Table 15B: Groundwater Analytical Results for VOCs, THMs, and BTEX (Continued)

| Well ID | Sample ID | Rationale | APEC No. | LNAPL/ DNAPL indication? | Result |
|---|---|---|---|---|---|
| EW2 | EW2 | To assess groundwater quality at the Phase Two Property. | N/A | None | **Exceedance of Table 1 SCS for chloroform (2.4 µg/L vs. the Table 1 SCS of 2 µg/L) in 2020.** All parameter concentrations meet the Table 1 SCS in 2023. |

Metals, Hydride-Forming Metals and ORPs

The rationale and results for the selected groundwater samples submitted for metals, hydride-forming metals and ORPs laboratory analysis are shown in Table 15C below:

**Table 15C: Groundwater Analytical Results for Metals, Hydride-Forming Metals, and ORPs**

| Well ID | Sample ID | Rationale | APEC No. | LNAPL/ DNAPL indication? | Result |
|---|---|---|---|---|---|
| BH1(MW) | BH1(MW) | To assess the groundwater quality due to the former carriage paint shop, the former gasoline service station on the northwest side of the Phase Two Property, the former automotive repair garage on the northwest side of the Phase Two Property, and the former off-Site operations north of the Phase Two Property: a former machine shop, and a former commercial printing service and the generation of associated hazardous wastes. | 1, 2A, 2B, 10A, 10B, 10C | None | **Exceedances of Table 1 SCS for barium (963 µg/L vs. the Table 1 SCS of 610 µg/L), copper (5.5 µg/L vs. the Table 1 SCS of 5 µg/L), silver (0.39 µg/L vs. the Table 1 SCS of 0.3 µg/L), chloride (7,200,000 µg/L vs. the Table 1 SCS of 790,000 µg/L), and sodium (3,910,000 µg/L vs. the Table 1 SCS of 490,000 µg/L).** |

## Table 15C: Groundwater Analytical Results for Metals, Hydride-Forming Metals, and ORPs (Continued)

| Well ID | Sample ID | Rationale | APEC No. | LNAPL/ DNAPL indication? | Result |
|---|---|---|---|---|---|
| BH2(MW) | BH2(MW) | To assess the groundwater quality due to the former off-Site operations north of the Phase Two Property: a former machine shop, and a former commercial printing service and the generation of associated hazardous wastes. | 10A, 10B, 10C | None | **Exceedances of Table 1 SCS for barium (915 and 680 µg/L vs. the Table 1 SCS of 610 µg/L), copper (5.2 µg/L vs. the Table 1 SCS of 5 µg/L), chloride (6,900,000 µg/L vs. the Table 1 SCS of 790,000 µg/L), and sodium (3,350,000 µg/L vs. the Table 1 SCS of 490,000 µg/L).** |

## Table 15C: Groundwater Analytical Results for Metals, Hydride-Forming Metals, and ORPs (Continued)

| Well ID | Sample ID | Rationale | APEC No. | LNAPL/ DNAPL indication? | Result |
|---|---|---|---|---|---|
| BH23-1 (MW) | BH23-1 (MW) | To assess the groundwater quality due to the former automotive repair garage on the east side of the Phase Two Property, the former gasoline service station on the northeast side of the Phase Two Property, and the former off-Site operations north of the Phase Two Property: a former machine shop, and a former commercial printing service, and the generation of associated hazardous wastes. | 3, 5, 10A, 10B, 10C | None | All parameter concentrations meet the Table 1 SCS, **with the exception of chloride (1,600,000 µg/L vs. the Table 1 SCS of 790,000 µg/L) and sodium (909,000 µg/L vs. the Table 1 SCS of 490,000 µg/L).** |
| | BH23-1000 [Dup of BH23-1 (MW)] | | | None | All parameter concentrations meet the Table 1 SCS, **with the exception of chloride (1,600,000 µg/L vs. the Table 1 SCS of 790,000 µg/L) and sodium (907,000 µg/L vs. the Table 1 SCS of 490,000 µg/L).** |

## Table 15C: Groundwater Analytical Results for Metals, Hydride-Forming Metals, and ORPs (Continued)

| Well ID | Sample ID | Rationale | APEC No. | LNAPL/ DNAPL indication? | Result |
|---|---|---|---|---|---|
| BH23-2 (MW) | BH23-2 (MW) | To assess the groundwater quality due to the former automotive repair garage on the east side of the Phase Two Property and the former gasoline service station on the northeast side of the Phase Two Property. | 3, 5 | None | All parameter concentrations meet the Table 1 SCS, **with the exception of chloride (1,600,000 µg/L vs. the Table 1 SCS of 790,000 µg/L) and sodium (664,000 µg/L vs. the Table 1 SCS of 490,000 µg/L).** |
| BH23-3 (MW) | BH23-3 (MW) | To assess the groundwater quality due to the former automotive repair garage on the east side of the Phase Two Property. | 3 | None | **Exceedances of Table 1 SCS for antimony (2.2 µg/L vs. the Table SCS of 1.5 µg/L), chloride (2,500,000 µg/L vs. the Table 1 SCS of 790,000 µg/L), and sodium (10,200,000 µg/L vs. the Table 1 SCS of 490,000 µg/L).** |

## Table 15C: Groundwater Analytical Results for Metals, Hydride-Forming Metals, and ORPs (Continued)

| Well ID | Sample ID | Rationale | APEC No. | LNAPL/ DNAPL indication? | Result |
|---|---|---|---|---|---|
| BH23-4 (MW) | BH23-4 (MW) | To assess the groundwater quality due to the former small engine repair garage on the southwest side of the Phase Two Property. | 4 | None | All parameter concentrations meet the Table 1 SCS. |
| EW1 | EW1 | To assess groundwater quality at the Phase Two Property. | N/A | None | **Exceedance of Table 1 SCS for antimony (3.5 and 2.6 µg/L vs. the Table 1 SCS of 1.5 µg/L).** |

PAHs

The rationale and results for the selected groundwater samples submitted for PAHs laboratory analyses are shown in Table 15D below.

**Table 15D: Groundwater Analytical Results for PAHs**

| Well ID | Sample ID | Rationale | APEC No. | LNAPL/ DNAPL indication? | Result |
|---|---|---|---|---|---|
| BH1(MW) | BH1(MW) | To assess the groundwater quality due to the former carriage paint shop, the former gasoline service station on the northwest side of the Phase Two Property, the former automotive repair garage on the northwest side of the Phase Two Property, and the former off-Site operations north of the Phase Two Property: a former machine shop, and a former commercial printing service and the generation of associated hazardous wastes. | 1, 2A, 2B, 10A, 10B, 10C | None | All parameter concentrations meet the Table 1 SCS. |
| BH2(MW) | BH2(MW) | To assess the groundwater quality due to the former off-Site operations north of the Phase Two Property: a former machine shop, and a former commercial printing service and the generation of associated hazardous wastes. | 10A, 10B, 10C | None | All parameter concentrations meet the Table 1 SCS. |

## Table 15D: Groundwater Analytical Results for PAHs (Continued)

| Well ID | Sample ID | Rationale | APEC No. | LNAPL/ DNAPL indication? | Result |
|---|---|---|---|---|---|
| BH23-1 (MW) | BH23-1 (MW) | To assess the groundwater quality due to the former automotive repair garage on the east side of the Phase Two Property, the former gasoline service station on the northeast side of the Phase Two Property, and the former off-Site operations north of the Phase Two Property: a former machine shop, and a former commercial printing service, and the generation of associated hazardous wastes. | 3, 5, 10A, 10B, 10C | None | All parameter concentrations meet the Table 1 SCS. |
| | BH23-1000 [Dup of BH23-1 (MW)] | | | None | All parameter concentrations meet the Table 1 SCS. |
| BH23-2 (MW) | BH23-2 (MW) | To assess the groundwater quality due to the former automotive repair garage on the east side of the Phase Two Property and the former gasoline service station on the northeast side of the Phase Two Property. | 3, 5 | None | All parameter concentrations meet the Table 1 SCS. |
| BH23-3 (MW) | BH23-3 (MW) | To assess the groundwater quality due to the former automotive repair garage on the east side of the Phase Two Property. | 3 | None | All parameter concentrations meet the Table 1 SCS. |
| BH23-4 (MW) | BH23-4 (MW) | To assess the groundwater quality due to the former small engine repair garage on the southwest side of the Phase Two Property. | 4 | None | All parameter concentrations meet the Table 1 SCS. |

Summary of Groundwater Analytical Results

The concentrations of contaminants in groundwater samples collected by Watters Environmental as part of this sampling program and the 2020 Watters Phase II ESA are presented in Figures 13A (PHCs), 13B (VOCs, THMs, BTEX), 13C (Metals, Hydride-Forming Metals, and ORPs), and 13D (PAHs). The concentrations of these parameters are presented in a table in Appendix F.

As shown on Figure 13C, exceedances of metals and hydride-forming metals parameters (i.e., antimony, barium, copper, and/or silver) were identified in groundwater samples collected at BH1(MW) and BH2(MW) on the northwest side of the Phase Two Property and in the groundwater, samples collected at BH23-3(MW) and EW1 on the southeast side of the Phase Two Property. The exceedances in groundwater on the northwest side of the Phase Two Property are attributed to former on-Site carriage painting, former on-Site automotive repair operations, and possibly a former machine shop and former commercial printing operations off-Site to the north. The exceedances in groundwater on the southeast side of the Phase Two Property are attributed to former on-Site automotive repair operations. These parameters do not result in chemical or biological transformation.

The estimated lateral extent of metals and hydride-forming metals impacts is shown with a purple dashed line on Figure 13C. The vertical extent of metals and hydride-forming metals impacts will be determined during additional investigation.

No evidence of free phase product was observed by Watters Environmental during the groundwater monitoring, purging, or sampling activities in 2020, 2023, or 2024. The PHC, VOC, THMs, and BTEX concentrations do not indicate the presence of light or dense non-aqueous phase liquids.

An exceedance of chloroform was identified in the groundwater sample collected at EW2 as part of the 2020 Watters Phase II ESA. The concentrations of VOCs including chloroform, in the groundwater sample collected at EW2 in 2023 met the Table 1 SCS. EW2 is located on a grassed median on the south side of Phase Two Property. In 2020, this area of the Phase Two Property was occupied by a restaurant (i.e., Hooters). The restaurant closed in 2021 and since that time, the south side of the Site has been unoccupied. As provided for under Section 49.1 of O. Reg. 153/04, the concentration of chloroform in the groundwater sample collected at EW2 in 2020 is believed to be present in excess of the Table 1 SCS solely due to a discharge of drinking water within the meaning of the Safe Drinking Water Act, 2002 (i.e., watering of grass). Therefore, the applicable Table 1 SCS is deemed not to be exceeded for the purpose of Part XV.1 of the Act. As such, the groundwater sample with an elevated chloroform concentration meets the applicable Table 1 SCS

for the Phase Two Property, and chloroform is not considered a contaminant of concern. Thus, no further delineation or investigation is required.

Exceedances of chloride and/or sodium were present in groundwater samples collect at BH1(MW), BH2(MW), BH23-1(MW), BH23-2(MW), and BH23-3(MW). The north and south sides of the Site exterior consist of asphalt paved parking and concrete or interlock stone walkways. It is the $QP_{ESA}$'s opinion that these impacts are attributed to salting activities on the paved surfaces on the Site and surrounding properties and roadways for de-icing purposes for the safety of vehicular and pedestrian traffic under conditions of snow or ice or both. As provided for under Section 49.1 of O. Reg. 153/04, the concentrations of chloride and sodium in groundwater are believed to be present in excess of the Table 1 SCS solely because a substance (e.g., road salt) has been applied to surfaces for the safety of vehicular or pedestrian traffic under conditions of snow or ice or both. Neither the Phase Two Property nor any properties within the Phase One Study Area have ever been used for commercial bulk storage of salt for use at multiple properties or used as a municipal snow dump. Therefore, the applicable Table 1 SCS is deemed not to be exceeded for the purpose of Part XV.1 of the Act. As such, all groundwater samples with elevated chloride and/or sodium concentrations meet the applicable Table 1 SCS for the Phase Two Property, and chloride and sodium are not considered as contaminants of concern. Thus, no further delineation or investigation is required.

## 6.8 Sediment Quality

No sediment sampling was conducted as part of this investigation, as there are no water bodies or sediment on the Phase Two Property.

## 6.9 Quality Assurance and Quality Control Results

### 6.9.1 Soil QA/QC Results

The duplicate soil samples collected as part of this Phase Two ESA sampling program and the 2020 Phase II ESA sampling program are summarized as follows:

- Soil sample BH200-1 was collected as a duplicate soil sample of BH2(MW)-SS1, and was submitted to the laboratory for analysis of metals, hydride-forming metals, and ORPs;
- Soil sample BH200-2 was collected as a duplicate soil sample of BH2(MW)-SS2, and was submitted to the laboratory for analysis of PHCs, VOCs, THMs, and BTEX;

- Soil sample BH200-3 was collected as a duplicate soil sample of BH2(MW)-SS3, and was submitted to the laboratory for analysis of PAHs;
- Soil sample BH1000-1 was collected as a duplicate soil sample of BH23-1(MW)-1, and was submitted to the laboratory for analysis of PHCs, VOCs, THMs, BTEX, PAHs, metals, hydride-forming metals, and ORPs; and
- Soil sample BH23-5000-1 was collected as a duplicate soil sample of BH23-5-1, and was submitted to the laboratory for analysis of PCBs.

Section 3.(3).5 of Schedule E of O. Reg. 153/04 requires at least one field duplicate to be submitted for every ten samples submitted for laboratory analysis. The submission of the following duplicate samples versus the number of original samples meets this QA/QC requirement:

- 12 samples plus 2 duplicate samples analyzed for PHCs (F1 to F4);
- 11 samples plus 2 duplicate samples analyzed for VOCs, THMs, and BTEX;
- 9 samples plus 2 duplicate sample analyzed for metals, hydride-forming metals, and ORPs;
- 9 samples plus 2 duplicate sample analyzed for PAHs; and
- 1 sample plus 1 duplicate sample analyzed for PCBs.

Watters Environmental retained SGS, a laboratory that is accredited by CALA, to conduct the analyses on soil samples. All analyses were conducted in accordance with the MECP document entitled, "*Protocol for Analytical Methods Used in the Assessment of Properties Under Part XV.1 of the Environmental Protection Act*", dated February 19, 2021 (the "Analytical Protocol"). There were no instances where the samples were not handled in accordance with the Analytical Protocol with respect to holding time, preservation method and storage requirement or container type. Chain-of-custodies, completed by Watters Environmental's field investigation team, accompanied the sample submission, and are included in Appendix D. The certificates-of-analyses issued by SGS (pursuant to clause 47 (2) (b) of the regulation) comply with subsection 47(3) of O. Reg. 153/04. Certificates-of-analysis have been received for each sample submitted, and are included in Appendix D.

The Relative Percentage Difference (RPD) was calculated for all parameters on samples where a field duplicate was taken and compared with the criteria from the Analytical Protocol. The RPD was determined only for parameters where the concentrations were above the laboratory detection

limits (DLs). Where both the original sample and duplicate contained concentrations that were less than the DLs, the parameters were considered to have met the allowable RPD percentages.

The RPDs between soil sample BH2(MW)-SS1 and its field duplicate BH200-1 (analyzed for metals, hydride-forming metals, and ORPs) were below the allowable ranges for most parameters, with a few exceptions: molybdenum (67% > 30%); uranium (34% > 30%); and vanadium (43% > 30%). These isolated higher RPD ranges are a result of the low concentrations (i.e., slight differences in low concentrations can result in high variances).

The RPDs between soil sample BH23-1(MW)-1 and its field duplicate BH1000-1 (analyzed for PHCs, VOCs, THMs, BTEX, PAHs, metals, hydride-forming metals, and ORPs) were below the allowable ranges for most parameters, with a few exceptions: boron (67% > 30%); chromium (42% > 30%); molybdenum (50% > 30%); and vanadium (32% > 30%). These isolated higher RPD ranges are a result of the low concentrations (i.e., slight differences in low concentrations can result in high variances).

For soil sample BH2(MW)-SS2 and its field duplicate BH200-2; soil sample BH2(MW)-SS3 and its field duplicate BH200-3; and, soil sample BH23-5-1 and its field duplicate BH23-5000-1, all parameters were less than the DLs in both samples. As such, the results essentially meet the allowable RPD ranges for the parameters analyzed and thus, the RPDs were not calculated.

SGS conducted its own QA/QC testing, including matrix spike, spiked blank, method blank, laboratory duplicates and surrogates. Comments regarding the QA/QC testing were provided at the end of the certificates of analysis. SGS did not qualify any results presented in the certificates of analyses, based on the collection, handling, submission and testing.

Given the overall quality of the field data (with respect to the data quality objectives) obtained during the Phase Two ESA, Watters Environmental is confident that decision making was not affected, and that the overall objectives of the investigation and the assessment were met.

### 6.9.2 Groundwater QA/QC Results

The duplicate groundwater samples collected as part of this Phase Two ESA sampling program and the 2020 Phase II ESA sampling program are summarized as follows:

- Groundwater sample BH100(MW) was collected as a duplicate groundwater sample of BH1(MW), and was submitted to the laboratory for analysis of PHCs, VOCs, THMs, and BTEX; and

- Groundwater sample BH23-1000 was collected as a duplicate groundwater sample of BH23-1(MW), and was submitted to the laboratory for analysis of PHCs, VOCs, THMs, BTEX, PAHs, metals, hydride-forming metals, and ORPs.

Watters Environmental retained SGS, a laboratory accredited by CALA, to conduct the analysis of groundwater samples. All analyses were conducted in accordance with the Analytical Protocol. There were no instances where the samples were not handled in accordance with the Analytical Protocol with respect to holding time, preservation method, and storage requirement or container type. The certificates-of-analyses issued by SGS (pursuant to clause 47 (2) (b) of the regulation) comply with subsection 47(3) of O. Reg. 153/04. Certificates-of-analysis are included in Appendix D.

One trip blank was submitted with the groundwater samples collected on June 15, 2020 and analyzed as part of the groundwater sampling for VOCs. One trip blank was also submitted with the groundwater samples collected on October 4, 2023 and analyzed as part of the groundwater sampling for VOCs. The trip blanks, prepared by SGS, accompanied the sample containers and samples during groundwater sampling and transportation of the samples to the SGS laboratory.

The RPDs were calculated for all parameters on samples where a field duplicate was taken, and for parameters that were detected (i.e., not less than the laboratory DLs).

For groundwater sample BH1(MW) and its field duplicate BH100(MW) (analyzed for PHCs, VOCs, THMs, and BTEX), the RPDs could not be calculated since both the original and duplicate samples were less than the DLs, with the exception of chloroform which was below the allowable range. In instances where both the original and duplicate samples were less than the DLs, they are considered to be within the allowable ranges.

For groundwater sample BH23-1(MW) and its field duplicate BH23-1000 (analyzed for PHCs, VOCs, THMs, BTEX, PAHs, metals, hydride-forming metals, and ORPs), the RPDs could not be calculated for PHCs, VOCs, THMs, BTEX, and PAHs since both the original and duplicate samples were less than the DLs. This essentially means the RPDs are within the allowable ranges. The RPDs for metals, hydride-forming metals, and ORPs were below the allowable ranges for all parameters that could be calculated.

The analytical results of the trip blanks submitted for analysis of VOCs indicated that all parameters were less than the laboratory's reporting DLs, which met the criteria. This information is important in ensuring that the data is useful, appropriate, and accurate in the determination of whether the Phase Two Property meets the applicable SCS.

SGS conducted its own QA/QC testing, including matrix spike, spiked blank, method blank, laboratory duplicates and surrogates. Comments regarding the QA/QC testing were provided at the end of the certificates of analysis. SGS did not qualify any results presented in the certificates of analyses, based on the collection, handling and submission and testing.

Given the overall quality of the field data (with respect to the data quality objectives) obtained during the Phase Two ESA, Watters Environmental is confident that decision making was not affected, and that the overall objectives of the investigation and the assessment were met.

### 6.10 Soil Remediation

On August 22, 2023, a total of 39.02 tonnes of impacted soil, based on weigh scale tickets, was excavated from around BH1(MW) and disposed of at NRK Remediation Facility in Orillia, Ontario.

On August 23, 2023, Watters Environmental was on-Site when additional soil surrounding BH1(MW) was excavated from 2.29 to 3.05 mbgs and stockpiled adjacent to the excavation in preparation for off-Site disposal.

The final excavation measured approximately 3.96 metres by 4.88 metres at the top of the excavation and was 3.05 metres deep. Due to the sand to silty sand stratigraphy of the soil, the walls of the excavation had a slight slope down to the base of the excavation which was slightly less than 3.96 metres by 4.88 metres in area. The lateral and vertical extent of the excavation is shown on Figures 15, 16A, and 16B.

Two confirmatory soil samples were collected from the floor and four confirmatory soil samples were collected from the walls of the excavation (i.e., one on each wall), plus one duplicate sample was collected for QA/QC purposes and were submitted to an accredited laboratory for analytical testing as per Table 3 of Schedule E in O. Reg. 153/04. All confirmatory soil samples meet the Table 1 SCS. The base of the excavation was dry upon completion. Additionally, the concentration of PHCs in the groundwater sample collected from BH1(MW) located within the excavation, meet the Table 1 SCS. Details are provided in the Soil Remediation report (see Appendix G).

Soil excavated and stockpiled adjacent to the excavation was placed back into the excavation on August 23, 2023 following collection of the confirmation soil samples, for safety reasons as the walls of the excavation began to cave in. As such, not all PHC F4 impacted soil was removed from the Phase Two Property.

The excavation was also backfilled with 40.71 tonnes of 2-inch crushed material from Natural Stone Source Ontario Ltd., in Ramara, Ontario, and 2.06 tonnes of 14 mm material from Lafarge in Barrie, Ontario, based on weigh scale tickets. A composite sample plus a duplicate sample of the material brought to the Phase Two Property was collected on August 23, 2023 and submitted to an accredited laboratory for analytical testing. The soil samples meet the Table 1 SCS with the exception of EC.

Details of these remedial activities are summarized in a Soil Remediation report (see Appendix G).

## 6.11 Phase Two Conceptual Site Model

Watters Environmental Group Inc. (Watters Environmental) was retained by Dunlop Developments (Barrie) Inc. (the "Client") to conduct a Phase Two Environmental Site Assessment (ESA) of a commercial property located at 149-153 Dunlop Street East, in Barrie, Ontario (hereafter the "Phase Two Property" or "Site"; see Figure 1).

Watters Environmental understands that the Phase Two Property is planned to be redeveloped with a mixed commercial and residential 25-storey building, and a Record of Site Condition (RSC) is required for that process. As such, the Phase Two ESA was conducted in accordance with Ontario Regulation (O. Reg.) 153/04 (i.e., Records of Site Condition – Part XV.1 of the Act, made under the Ontario Environmental Protection Act, R.S.O. 1990), as amended (hereafter referred to as "O. Reg. 153/04").

The findings from the Phase Two ESA conducted at the Phase Two Property are summarized in the following Phase Two Conceptual Site Model (CSM).

The Phase Two Property is located on the southeast corner of the intersection of Dunlop Street East and Mulcaster Street, in an area of mixed residential, commercial, and parkland uses (see Figure 2).

The Phase Two Property was formerly known as municipal addresses 149-153 Dunlop Street East and 5 Mulcaster Street. The Phase Two Property is currently owned by the Client and covers an area of approximately 0.15 hectares (0.38 acres). The Phase Two Property contains a multi-unit commercial building (hereafter the "Site building") in the centre of the Site with asphalt-paved parking north of the Site building and some landscaping, an interlock stone walkway, and asphalt paved parking south of the Site building. The Site building is one level at the north side and two levels at the south side due to the steep southward slope of the Phase Two Property and surrounding lands. A partial basement is present beneath the west side of the Site building. At the time of the

Site reconnaissance, three units were undergoing renovations by new businesses: Endo, a cannabis retailer, Late Apex Simulators, a gaming arcade, and a restaurant. One unit was occupied by Noah's African & Caribbean Tropical Food Inc. and was open to the public, and the fifth unit was vacant.

To identify potentially contaminating activities (PCAs), which would result in areas of potential environmental concern (APECs), Watters Environmental conducted a review of readily available historical documents, including: the Atlas of the Township of Vespra (dated 1881); fire insurance plans (FIPs – 1907, 1917, 1931, 1946, and 1971); aerial photographs (dating back to 1946); historical photographs (dated 1956, 1963, 1968, and 1977) available on the Barrie Historical Archive website, street directories (dating back to 1927); and property underwriters' reports and plans (PURs dated 1982, 1983, 1988, 1991, and 1999, and PUPs dated 1982 and 1988). In addition, Watters Environmental conducted the following: obtained an environmental database report for properties within 300 metres of the boundaries of the Phase Two Property (i.e., ERIS); reviewed previous reports prepared by others; conducted an inspection of the Phase Two Property and surrounding lands within 250 metres from the boundaries of the Site; conducted interviews with representatives of the Phase Two Property; and requested for file information from the regulatory bodies, including the Ministry of the Environment, Conservation and Parks (MECP) and Technical Standards and Safety Authority (TSSA).

Based on the historical information reviewed, the Phase Two Property was first developed for mixed residential and commercial use (a carriage paint shop, livery, and offices) around 1879. The Site was also occupied by mixed residential and commercial operations including a gasoline service station, commercial automotive repair garage, taxi service, and restaurant, until approximately 1956. From 1956 until approximately 1968, the Phase Two Property was occupied by a gasoline service station and automotive sales and service centre. In approximately 1968, the present-day multi-tenant commercial building was constructed. Occupants have included restaurants, professional services, a convenience store, an automotive repair centre (Barrie Small Engine Centre), retail stores, and salons.

A Phase One ESA completed by Watters Environmental identified fourteen PCAs on the Phase Two Property and within the Phase One Study Area that resulted in APECs on the Phase Two Property. These PCAs included: a former on-Site carriage paint shop; two former on-Site gasoline service stations; two former on-Site automotive repair garages; a former on-Site small engine repair garage; a former on-Site heating oil aboveground storage tank (AST); on-Site fill of unknown quality; former off-Site rail spur and tracks; an off-Site transformer; a former off-Site machine shop; a former off-Site commercial printing operation and associated hazardous waste

generation; and the potential on-Site application of road salt to the exterior paved area of the Phase Two Property. Therefore, a Phase Two ESA was considered necessary to investigate the APECs, as per O. Reg. 153/04.

Due to the former on-Site gasoline service stations and commercial automotive repair garages the Phase Two Property is defined as an "enhanced investigation property" as per O. Reg. 153/04. No operating records were available for review and there was no one knowledgeable about the former gasoline service stations and automotive repair garages during the Phase One ESA, as the last on-Site fuel service station ceased operation in the 1960s (i.e., over 50 years ago) and the last operation interpreted as providing automotive repair services (Barrie Small Engine Centre) ceased operation prior to 1982 (i.e., over 40 years ago). Based on a search online, it appears that these businesses do not exist anymore. As noted above, Watters Environmental obtained and reviewed all reasonably and readily available historical documents (i.e., FIPs, PUPs, PURs, street directories, aerial photographs, historical photographs, environmental database [ERIS] report, etc.) to understand the historical operations on the Phase Two Property and surrounding properties. The 1946 FIP identified a fuel service station on the northwest corner of the Phase One Property and the 1956, and 1963 photographs showed fuel pumps on the north-central area of the Phase One Property. No further information regarding the fuel service stations was provided. Commercial automotive garages were identified based on street directory listings from 1937 and 1980, and the 1956 photograph. No further information regarding to the fuel service stations was provided.

No evidence of the former fuel service stations or commercial automotive garages were observed during the Phase One ESA Site visit. The current owner purchased the Phase One Property in 2020 and has no information regarding the former fuel service stations or automotive garages.

The Phase Two ESA consisted of drilling five boreholes [i.e., BH23-1(MW) to BH23-4(MW) and BH23-5], four of which were completed as groundwater monitoring wells [i.e., BH23-1(MW) to BH23-4(MW))]. Watters Environmental also drilled three boreholes, two of which were completed as monitoring wells, at the Phase Two Property in 2020 as part of a Phase II ESA. Soil and groundwater samples from these investigations were submitted for chemical analyses of one or more of the following chemicals of potential concern (COPCs): petroleum hydrocarbons (PHC F1-F4); volatile organic compounds (VOCs); trihalomethanes (THMs); benzene, toluene, ethylbenzene and xylenes (collectively "BTEX"); metals; hydride-forming metals [arsenic (As), antimony (Sb), selenium (Se)]; other regulated parameters (ORPs) [i.e., pH, boron-hot water soluble (B-HWS) (for soil only), hexavalent chromium (CrVI), mercury (Hg), cyanide (CN-), electrical conductivity (EC) (for soil only), sodium adsorption ratio (SAR) (for soil only), and/or chloride (for groundwater only)]; sodium (for groundwater only); polycyclic aromatic

hydrocarbons (PAHs); and/or polychlorinated biphenyls (PCBs). The details regarding which COPC was applicable in each APEC, for each medium, are provided in the sections below.

The Phase Two Property is located within 30 metres of an area of natural significance as land south and east of the Phase Two Property is identified as an Environmental Protection Area (Level 3) in the City of Barrie Official Plan (Adopted April 2023) and the Phase Two Property is located within 30 metres of Lake Simcoe where Black Redhorse, a threatened fish species in Ontario, is identified as being present. Therefore, Watters Environmental compared the soil and groundwater sample analytical data from the Phase Two Property to the Table 1 Full Depth Background Site Condition Standards (SCS) for Residential / Parkland / Institutional / Industrial / Commercial / Community property use as contained in the Ministry of the Environment, Conservation and Parks (MECP) publication entitled, "Soil, Ground Water and Sediment Standards for *Use Under Part XV.1 of the Environmental Protection Act*", dated April 15, 2011. These soil and groundwater quality standards are hereafter referred to as the "Table 1 SCS".

Watters Environmental identified a PHC F4 exceedance of the Table 1 SCS in a soil sample collected from 2.29 – 2.90 mbgs on the northwest side of the Site and was likely a result of former automotive repair activities. The concentration of PHC F1-F4 in a deeper sample collected from 7.62 – 8.23 mbgs met the Table 1 SCS.

Watters Environmental identified a PAH (fluoranthene) exceedance of the Table 1 SCS in a soil sample collected from 0.01 – 1.52 mbgs on the southeast side of the Site and was likely a result of poor-quality fill. The concentrations of PAHs in a deeper soil sample collected from 1.52 – 3.05 mbgs met the Table 1 SCS.

Watters Environmental identified metals and hydride-forming metals parameters exceeding the Table 1 SCS in groundwater samples collected from four monitoring wells, two on the northwest side of the Phase Two Property [i.e., BH1(MW) and BH2(MW)], and two on the southeast side of the Phase Two Property [i.e., BH23-3(MW), and EW1]. The exceedances in groundwater on the northwest side of the Phase Two Property are likely the result of former on-Site carriage painting, former on-Site automotive repair operations, and possibly a former machine shop and former commercial printing operations off-Site to the north. The exceedances in groundwater on the southeast side of the Phase Two Property are likely the result of former on-Site automotive repair operations.

The following Phase Two CSM consists of the text in the sections below and the attached figures. Figures 1 to 6 present the layout and physical conditions of the Phase Two Property and other properties within the Phase One Study Area. Figure 7 shows the borehole and monitoring well locations. Figures 9A to 9E show the soil analytical data in plan view. The cross-sectional alignments are presented on Figure 10. Figures 11A to 11D (for PHCs) and 12A to 12D (for PAHs) are cross sections in the direction of groundwater flow, and perpendicular to it, showing soil exceedances and samples that met the Table 1 SCS. The groundwater data is presented in plan view in Figures 13A to 13D. Figures 14A to 14D (for metals, hydride-forming metals, and ORPs) are cross sections showing groundwater exceedances and samples that met the Table 1 SCS.

The plan view of the soil remediation for PHCs is shown on Figure 15, while cross sections of the soil excavation are shown on Figures 16A and 16B. While the extent of the PHC F4 contamination was confirmed during soil remediation activities, not all the PHC F4 impacted soil was removed from the Site. As a result, the soil remediation activities did not result in a reduction in the maximum on-Site PHC concentrations in soil. The Phase Two CSM is presented as Figure 17.

**1. Provide a narrative description and assessment of,**

*i. areas where potentially contaminating activity has occurred,*

PCAs identified on the Phase Two Property and within the Phase One Study Area, as defined in O. Reg. 153/04, which contributed to APECs on the Phase Two Property are summarized as follows:

| PCA | Location of Activity | Table 2 PCA No. & Description* | Discussion |
|---|---|---|---|
| 1 | On-Site, Northwest side of the Phase Two Property | #39 – Paints Manufacturing, Processing and Bulk Storage | A former carriage paint shop operated on the northwest side of the Phase Two Property. The carriage paint shop was noted on the 1907 and 1917 FIPs and was listed in the 1927 to 1942 street directories. |
| 2A | On-Site, Northwest side of the Phase Two Property | #28 – Gasoline and Associated Products Storage in Fixed Tanks | A former gasoline service station operated on the northwest side of the Phase Two Property from the 1930s to the 1950s. The gasoline service station was noted on the 1946 FIP and listed in the 1937 to 1950 street directories. |

| PCA | Location of Activity | Table 2 PCA No. & Description* | Discussion |
|---|---|---|---|
| 2B | On-Site, Northwest side of the Phase Two Property | #27 – Garages and Maintenance and Repair of Railcars, Marine Vehicles and Aviation Vehicles | A former automotive repair garage is inferred to have operated on the northwest side of the Phase Two Property in the 1930s. Auto repairs was listed in conjunction with the service station at 149 Dunlop Street in the 1937 street directory. |
| 3 | On-Site, East side of the Phase Two Property | #27 – Garages and Maintenance and Repair of Railcars, Marine Vehicles and Aviation Vehicles | A former automotive repair garage operated on the east side of the Phase Two Property in the 1950s and 1960s. Jackson Motors was listed in the 1961 street directories and a 1956 historical photograph showed the Jackson dealership with an automotive repair garage on the east side of the Phase Two Property. |
| 4 | On-Site, Southwest side of the Phase Two Property | #27 – Garages and Maintenance and Repair of Railcars, Marine Vehicles and Aviation Vehicles | A former small engine repair garage operated on the southwest side of the Phase Two Property in the 1980s. Barrie Small Engine Centre was listed at 5 Mulcaster Street in the 1980 street directory. |
| 5 | On-Site, Northeast side of the Phase Two Property | #28 – Gasoline and Associated Products Storage in Fixed Tanks | A former gasoline service station operated on the northeast side of the Phase Two Property in the 1950s and 1960s. 1956 and 1963 historical photographs showed two fuel pumps north of the Jackson dealership building. |
| 6 | On-Site, Southeast side of the Phase Two Property | #28 – Gasoline and Associated Products Storage in Fixed Tanks | A former heating oil AST was present in the 1980s and 1990s. The 1991 PUR noted the fuel oil AST was located outside the building. Based on aerial imagery and historical photographs, the AST was inferred to have been along the southeast side of the building. |
| 7 | On-Site, North, and southeast sides of the Phase Two Property | #30 – Importation of Fill Material of Unknown Quality | Fill was identified in boreholes drilled on the north and southeast sides of the Phase Two Property. |

| PCA | Location of Activity | Table 2 PCA No. & Description* | Discussion |
|---|---|---|---|
| 8 | Off-Site, South of the Phase Two Property | #46 – Rail Yards, Tracks and Spurs | Former rail spur and tracks were present immediately south of the Phase Two Property from prior to 1881 to 1990s. |
| 9 | Off-Site, Southeast of the Phase Two Property | #55 – Transformer Manufacturing, Processing and Use | A pad-mounted transformer is present southeast of the Phase Two Property. |
| 10A | Off-Site, 45 metres north of the Phase Two Property | #34 – Metal Fabrication | A former machine shop was present at 17 Mulcaster Street, located in an inferred upgradient direction. |
| 10B | Off-Site, 45 metres north of the Phase Two Property | #31 – Ink Manufacturing, Processing and Bulk Storage | A former commercial printing service and associated hazardous waste (photo processing wastes) generation was present at 17 Mulcaster Street, located in an inferred upgradient direction. |
| 10C | | #58 – Waste Disposal and Waste Management, including thermal treatment, landfilling and transfer of waste, other than use of biosoils as soil conditioners | |
| 11 | On-Site, Exterior Areas of the Phase One Property | Not Applicable – Road Salt Application | Road salt may have been applied to the exterior paved areas for the safety of vehicular and pedestrian traffic. |

* O. Reg. 153/04, Schedule D, Table 2: Potentially Contaminating Activities

These PCAs are presented in Figure 5.

Several other off-Site PCAs were identified within the Phase One Study Area. However, it is the opinion of the Qualified Person for Environmental Site Assessment ($QP_{ESA}$) that these off-Site PCAs do not result in APECs on the Phase One Property (see Figure 5). These PCAs and the rationale for why they do not contribute to APECs on the Phase One Property are discussed in the following table.

| O. Reg. 153/04 Table 2 PCA No. & Description* | Approximate PCA Location from the Phase Two Property | Rationale for Off-Site PCA to not Result in an APEC on the Phase Two Property |
|---|---|---|
| #44 – Port Activities, including Operation and Maintenance of Wharves and Docks<br>#30 – Importation of Fill Material of Unknown Quality | 30 metres south in an inferred downgradient direction | The former wharf and subsequent infilling of the former shoreline are not considered to result in APECs on the Phase One Property due to their distances and inferred downgradient direction from the Phase One Property. |
| #7 – Boat Manufacturing | Mulcaster Street at the bay<br>45 metres southwest in an inferred downgradient direction | The former boat building operation is not considered to result in an APEC on the Phase One Property due to its distance and inferred downgradient direction from the Phase One Property. |
| #28 – Gasoline and Associated Products Storage in Fixed Tanks | Heritage Park Pumping Station<br>90 metres southwest in an inferred downgradient direction | The diesel AST associated with a standby generator is not considered to result in an APEC on the Phase One Property due to its distance and inferred downgradient direction from the Phase One Property. |
| N/A - Spill | Intersection of Dunlop Street East & Mulcaster Street<br>5 metres northwest in an inferred transgradient direction | The spill of motor oil is not considered to result in an APEC on the Phase One Property as the spill was captured and cleaned from an off-Site catch basin. Therefore, any product that was not cleaned would have entered the sewer system, not onto the Phase One Property. |
| #27 – Garages and Maintenance and Repair of Railcars, Marine Vehicles and Aviation Vehicles<br>#28 – Gasoline and Associated Products Storage in Fixed Tanks<br>N/A - Spill | 147 Dunlop Street East<br>30 metres west (across Mulcaster Street) in an inferred transgradient direction | The former commercial automotive garage, UST, and spill of stucco wash water to a catch basin, are not considered to result in APECs on the Phase One Property due to their distances (across Mulcaster Street) and inferred transgradient direction from the Phase One Property. |

| O. Reg. 153/04 Table 2 PCA No. & Description* | Approximate PCA Location from the Phase Two Property | Rationale for Off-Site PCA to not Result in an APEC on the Phase Two Property |
|---|---|---|
| #31 – Ink Manufacturing, Processing and Bulk Storage<br>#58 – Waste Disposal and Waste Management, including thermal treatment, landfilling and transfer of waste, other than use of biosoils as soil conditioners | 143 Dunlop Street East 30 metres west in an inferred transgradient direction | The former commercial printing service and associated hazardous waste (photo processing wastes) generation are not considered to result in APECs on the Phase One Property due to their distances and inferred transgradient direction from the Phase One Property. |
| #28 – Gasoline and Associated Products Storage in Fixed Tanks | 116 Dunlop Street East 60 metres northwest in an inferred transgradient direction | The former UST is not considered to result in an APEC on the Phase One Property due to its distance and inferred transgradient direction from the Phase One Property. |
| #27 – Garages and Maintenance and Repair of Railcars, Marine Vehicles and Aviation Vehicles<br>#28 – Gasoline and Associated Products Storage in Fixed Tanks | 114 Dunlop Street East 65 metres northwest in an inferred transgradient direction | The former commercial automotive garage and UST are not considered to result in APECs on the Phase One Property due to their distances and inferred transgradient direction from the Phase One Property. |
| #37 – Operation of Dry-Cleaning Equipment (where chemicals are used) | 109-113 Dunlop Street East 100 metres west in an inferred transgradient direction | The former dry cleaner (Cotty's Cleaners) is not considered to result in an APEC on the Phase One Property due to its distance and inferred transgradient direction from the Phase One Property. |
| #37 – Operation of Dry-Cleaning Equipment (where chemicals are used)<br>#28 – Gasoline and Associated Products Storage in Fixed Tanks | 88 Dunlop Street East 135 metres northwest in an inferred transgradient direction | The former dry cleaner (Wright Cleaners) and UST are not considered to result in APECs on the Phase One Property due to their distances and inferred transgradient direction from the Phase One Property. |

| O. Reg. 153/04 Table 2 PCA No. & Description* | Approximate PCA Location from the Phase Two Property | Rationale for Off-Site PCA to not Result in an APEC on the Phase Two Property |
|---|---|---|
| #58 – Waste Disposal and Waste Management, including thermal treatment, landfilling and transfer of waste, other than use of biosoils as soil conditioners | 84 Dunlop Street East<br>140 metres northwest in an inferred transgradient direction | The former hazardous waste (photo processing wastes) generation is not considered to result in an APEC on the Phase One Property due to its distance and inferred transgradient direction from the Phase One Property. |
| N/A – Spill | 55 Collier Street<br>165 metres northwest in an inferred transgradient direction | The spill of hydraulic fluid from a truck is not considered to result in an APEC on the Phase One Property due to its distance and inferred transgradient direction from the Phase One Property. |
| #58 – Waste Disposal and Waste Management, including thermal treatment, landfilling and transfer of waste, other than use of biosoils as soil conditioners | 57 Collier Street<br>165 metres northwest in an inferred transgradient direction | The former hazardous waste (alkaline wastes - metals) generation is not considered to result in an APEC on the Phase One Property due to its distance and inferred transgradient direction from the Phase One Property. |
| #27 – Garages and Maintenance and Repair of Railcars, Marine Vehicles and Aviation Vehicles | 65 Collier Street<br>150 metres northwest in an inferred transgradient direction | The former commercial automotive garage is not considered to result in an APEC on the Phase One Property due to its distance and inferred transgradient direction from the Phase One Property. |
| #27 – Garages and Maintenance and Repair of Railcars, Marine Vehicles and Aviation Vehicles | Southwest corner of Collier Street & Mulcaster Street<br>115 metres northwest in a transgradient direction | The former fire station, where vehicle maintenance is inferred to have occurred, is not considered to result in an APEC on the Phase One Property due to its distance and transgradient direction from the Phase One Property. |

| O. Reg. 153/04 Table 2 PCA No. & Description* | Approximate PCA Location from the Phase Two Property | Rationale for Off-Site PCA to not Result in an APEC on the Phase Two Property |
|---|---|---|
| #58 – Waste Disposal and Waste Management, including thermal treatment, landfilling and transfer of waste, other than use of biosoils as soil conditioners.<br>#28 – Gasoline and Associated Products Storage in Fixed Tanks<br>N/A – Spill | 70 Collier Street<br>160 metres northwest in an inferred transgradient direction | The hazardous waste generation, diesel AST associated with a standby generator, and the gasoline spill in the underground garage, are not considered to result in APECs on the Phase One Property due to their distances and inferred transgradient direction from the Phase One Property. |
| #27 – Garages and Maintenance and Repair of Railcars, Marine Vehicles and Aviation Vehicles | 56 Mulcaster Street<br>210 metres northwest in an inferred transgradient direction | This former commercial automotive garage is not considered to result in an APEC on the Phase One Property due to its distance and inferred transgradient direction from the Phase One Property. |
| #37 – Operation of Dry-Cleaning Equipment (where chemicals are used) | 55 Mulcaster Street<br>215 metres north in an inferred upgradient direction | The former dry cleaner (Bareck Dry Cleaners) is not considered to result in an APEC on the Phase One Property due to its distance from the Phase One Property. |
| N/A – Spill | Intersection of Collier Street & Mulcaster Street<br>130 metres north in an inferred upgradient direction | The spill of gasoline to the road is not considered to result in an APEC on the Phase One Property due to its distance from the Phase One Property. |
| #28 – Gasoline and Associated Products Storage in Fixed Tanks<br>N/A - Spill | 90 Collier Street<br>150 metres north in an inferred upgradient direction | The former oil AST and spill are not considered to result in APECs on the Phase One Property due to their distances from the Phase One Property. |
| #58 – Waste Disposal and Waste Management, including thermal treatment, landfilling and transfer of waste, other than use of biosoils as soil conditioners | 108 Collier Street<br>160 metres northeast in an inferred transgradient direction | The former hazardous waste (light fuels) generation is not considered to result in an APEC on the Phase One Property due to its distance and inferred transgradient direction from the Phase One Property. |

| O. Reg. 153/04 Table 2 PCA No. & Description* | Approximate PCA Location from the Phase Two Property | Rationale for Off-Site PCA to not Result in an APEC on the Phase Two Property |
|---|---|---|
| #58 – Waste Disposal and Waste Management, including thermal treatment, landfilling and transfer of waste, other than use of biosoils as soil conditioners.<br>#28 – Gasoline and Associated Products Storage in Fixed Tanks | 37 Mulcaster Street<br>80 metres north in an inferred upgradient direction | The hazardous waste (light fuels, aromatic solvents, and waste oils/sludges) generation and diesel AST associated with a standby generator are not considered to result in APECs on the Phase One Property due to their distances from the Phase One Property. |
| #28 – Gasoline and Associated Products Storage in Fixed Tanks | 168 Dunlop Street East<br>150 metres east in an inferred transgradient direction | The former gasoline service station (Canco Petroleum) and fuel oil UST are not considered to result in APECs on the Phase One Property due to their distances and inferred transgradient direction from the Phase One Property. |
| #53 – Tannery<br>#28 – Gasoline and Associated Products Storage in Fixed Tanks<br>N/A – Spill | 185-205 Dunlop Street East<br>200 metres east in an inferred transgradient direction | The former boot and shoe factory, gasoline UST, and spill of transformer oil (contained in a vault) are not considered to result in APECs on the Phase One Property due to their distances and inferred transgradient direction from the Phase One Property. |
| #58 – Waste Disposal and Waste Management, including thermal treatment, landfilling and transfer of waste, other than use of biosoils as soil conditioners.<br>#28 – Gasoline and Associated Products Storage in Fixed Tanks | Bayview Park Pumping Station<br>157 Dunlop Street East<br>80 metres east in an inferred transgradient direction | The hazardous waste (halogenated solvents) generation and diesel AST associated with a standby generator are not considered to result in APECs on the Phase One Property due to their distances and inferred transgradient direction from the Phase One Property.<br>The hazardous waste generation of halogenated solvents are inferred to have resulted from a former dry cleaner east of the Phase One Study Area. The former pumping station caused a westerly groundwater flow direction, west of 157 Dunlop Street East, when the pumping station was in operation. |

| O. Reg. 153/04 Table 2 PCA No. & Description* | Approximate PCA Location from the Phase Two Property | Rationale for Off-Site PCA to not Result in an APEC on the Phase Two Property |
|---|---|---|
| #58 – Waste Disposal and Waste Management, including thermal treatment, landfilling and transfer of waste, other than use of biosoils as soil conditioners.<br>N/A – Spill | 150 Dunlop Street East 45 metres northeast in an inferred transgradient direction | The former hazardous waste (aliphatic solvents) generation and oil spill to the roadway from a vehicle collision, are not considered to result in APECs on the Phase One Property due to their distances and inferred transgradient direction from the Phase One Property. |
| #31 – Ink Manufacturing, Processing and Bulk Storage | Present-day parking lot north of Simcoe Street and west of Meridian Plan 230 metres west in an inferred transgradient direction | The former Barrie Examiner Printing Office is not considered to result in an APEC on the Phase One Property due to its distance and inferred transgradient direction from the Phase One Property. |

* O. Reg. 153/04, Schedule D, Table 2: Potentially Contaminating Activities

*ii. areas of potential environmental concern, and*

As shown on Figure 6, and summarized in the table below, the following APECs were identified at the Phase Two Property:

| Area of Potential Environmental Concern | Potentially Contaminating Activity | Contaminants of Potential Concern | Media Potentially Impacted (Groundwater, Soil and/or Sediment) |
|---|---|---|---|
| APEC 1 | #39 – Paints Manufacturing, Processing and Bulk Storage | PHCs, VOCs, BTEX, THMs, metals, CR (VI), Hg | Soil and Groundwater |
| APEC 2A | #28 – Gasoline and Associated Products Storage in Fixed Tanks | PHCs, VOCs, BTEX, THMs, PAHs, Metals | Soil and Groundwater |
| APEC 2B | #27 – Garages and Maintenance and Repair of Railcars, Marine Vehicles and Aviation Vehicles | PHCs, VOCs, BTEX, THMs, PAHs, Metals, As, Sb, Se, B-HWS, CN-, CR (VI), Hg | Soil and Groundwater |

| Area of Potential Environmental Concern | Potentially Contaminating Activity | Contaminants of Potential Concern | Media Potentially Impacted (Groundwater, Soil and/or Sediment) |
|---|---|---|---|
| APEC 3 | #27 – Garages and Maintenance and Repair of Railcars, Marine Vehicles and Aviation Vehicles | PHCs, VOCs, BTEX, THMs, PAHs, Metals, As, Sb, Se, B-HWS, CN-, CR (VI), Hg | Soil and Groundwater |
| APEC 4 | #27 – Garages and Maintenance and Repair of Railcars, Marine Vehicles and Aviation Vehicles | PHCs, VOCs, BTEX, THMs, PAHs, Metals, As, Sb, Se, B-HWS, CN-, CR (VI), Hg | Soil and Groundwater |
| APEC 5 | #28 – Gasoline and Associated Products Storage in Fixed Tanks | PHCs, VOCs, BTEX, THMs, PAHs, Metals | Soil and Groundwater |
| APEC 6 | #28 – Gasoline and Associated Products Storage in Fixed Tanks | PHCs, BTEX, PAHs | Soil |
| APEC 7 | #30 – Importation of Fill Material of Unknown Quality | PAHs, Metals, As, Sb, Se, B-HWS, CN-, CR (VI), Hg | Soil |
| APEC 8 | #46 – Rail Yards, Tracks and Spurs | PHCs, VOCs, BTEX, THMs, PAHs, Metals, As, Sb, Se, B-HWS, CN-, CR (VI), Hg | Soil |
| APEC 9 | PCA #55 – Transformer Manufacturing, Processing and Use | PHCs, PCBs | Soil |
| APEC 10A | #34 – Metal Fabrication | PHCs, VOCs, BTEX, THMs, Metals, As, Sb, Se, CN-, CR (VI), Hg | Groundwater |
| APEC 10B | #31 – Ink Manufacturing, Processing and Bulk Storage | PHCs, VOCs, BTEX, THMs, Metals, As, Sb, Se, CN-, CR (VI), Hg | Groundwater |

| Area of Potential Environmental Concern | Potentially Contaminating Activity | Contaminants of Potential Concern | Media Potentially Impacted (Groundwater, Soil and/or Sediment) |
|---|---|---|---|
| APEC 10C | #58 – Waste Disposal and Waste Management, including thermal treatment, landfilling and transfer of waste, other than use of biosoils as soil conditioners | PHCs, VOCs, BTEX, THMs, Metals, As, Sb, Se, CN-, CR (VI), Hg | Groundwater |
| APEC 11 | Not Applicable – Road Salt Application | Per paragraph 1 of Section 49.1 of O. Reg. 153/04, testing for EC and SAR in soil or sodium and chloride in groundwater is not necessary on the Phase One Property. | Not Applicable |

Notes: VOCs = Volatile Organic Compounds
BTEX = Benzene, Toluene, Ethylbenzene and Xylenes
THMs = Trihalomethanes
PHCs = Petroleum Hydrocarbons in the F1 to F4 ranges
PAHs = Polycyclic aromatic hydrocarbons
PCBs = polychlorinated biphenyls

*iii. any subsurface structures and utilities on, in or under the phase two property that may affect contaminant distribution and transport.*

Watters Environmental anticipates that the underground utilities at the Phase Two Property would be about 2 to 3 metres below ground surface (mbgs). The depth to groundwater was measured at depths ranging from 6.50 to 6.65 mbgs on the north side of the Phase Two Property and at depths ranging from 2.21 to 2.36 mbgs on the south side of the Phase Two Property. As such, Watters Environmental anticipates that subsurface utilities on the Phase Two Property could act as preferential pathways for the migration of contaminated groundwater.

**2. Provide a narrative description of and, as appropriate, figures illustrating, the physical setting of the phase two property and any areas under it including,**

*i. stratigraphy from ground surface to the deepest aquifer or aquitard investigated,*

As part of this Phase Two ESA, Watters Environmental advanced 5 boreholes on the Phase Two Property, 4 of which were completed as monitoring wells [i.e., BH23-1(MW) to BH23-4(MW) and BH23-5]. In addition, Watters Environmental advanced 3 boreholes at the Phase Two Property during the 2020 Phase II ESA, two of which were completed as monitoring wells [i.e., BH1(MW), BH2(MW), and BH3]. Borehole and monitoring well locations are shown on Figure 7. The information obtained from this drilling programs was used to interpret the general soil stratigraphy on the Phase Two Property. The soil stratigraphy is presented on cross sectional Figures 11A to 11D (for PHCs in soil), and is repeated in similar cross sectional figures for other parameter groups in soil and groundwater (see Figure 10 for the cross-section locations and alignments).

**Fill**

Fill material was encountered beneath the asphalt parking areas on the north and south sides of the Phase Two Property and beneath the topsoil on the southeast corner of the Phase Two Property [i.e., BH1(MW), BH2(MW), BH23-1(MW), BH23-2(MW), BH23-3(MW), and BH23-5]. The depth of the fill material ranged from 1.52 to 4.57 mbgs and consisted of sand to silty sand, with trace gravel and cobbles. Trace coal and brick was identified in the fill at BH23-1(MW), trace coal was identified in the fill at BH23-2(MW), and trace wood was identified in the fill at BH23-5.

**Native Sand to Sandy Silt (Aquifer)**

Underlying the fill material or beneath the interlock stone on the southwest side of the Phase Two Property was native sand to sandy silt with cobbles and trace gravel to the maximum depth investigated, 9.14 mbgs. No obvious fill material was identified beneath the interlock stone at BH23-4(MW). A layer of sand and gravel was observed in borehole BH2(MW) on the north side of the Phase Two Property.

No aesthetic impacts (i.e., staining or odours) were encountered in the native sand to sandy silt unit in any of the boreholes drilled.

**Bedrock**

Bedrock was not encountered in the deepest borehole drilled on the Phase Two Property (i.e., 9.14 mbgs). Watters Environmental reviewed the well logs in the MECP's well record website to determine the depth to bedrock within the Phase One Study Area. A well record (Well ID 5700288) for a test hole advanced approximately 50 metres east of the Phase One Property indicated cemented sand and gravel or bedrock was encountered at approximately 97 mbgs. Additionally, the Oak Ridges Moraine Groundwater Program website indicates that bedrock in the vicinity of the Phase One Property is 129.6 mamsl. The Phase One Property is at an elevation of approximately 225 mamsl on the north side and approximately 221 on the south side. As such, the depth to bedrock is expected to be approximately 91.4 to 95.4 mbgs.

*ii. hydrogeological characteristics, including aquifers, aquitards and, in each hydrostratigraphic unit where one or more contaminants are present at concentrations above the applicable site condition standards, lateral and vertical hydraulic gradients,*

Groundwater was measured between 6.50 and 6.65 mbgs on the north side of the Phase Two Property, which was in the native sand to sandy silt unit; and between 2.21 and 2.36 mbgs on the south side of the Phase Two Property, which was also generally within the native sand unit. As such, the native sand to sandy silt unit was considered an aquifer. As discussed below, metals and hydride-forming metals-contaminated groundwater was present in this aquifer. Based on published literature (Freeze and Cherry, 1979), the sand unit is expected to have a hydraulic conductivity ranging between $10^{-5}$ to $10^{-7}$ metres/second.

Based on the topography in the Phase One Study Area and the location of presence of Kempenfelt Bay (Lake Simcoe) located approximately 20 metres southeast of the Phase One Property at the closest point, and approximately 130 metes south of the Phase One Property at the furthest point., shallow groundwater was inferred to flow in a southerly direction.

*iii. approximate depth to bedrock,*

As noted above, bedrock was not encountered in the deepest borehole drilled (i.e., 9.14 mbgs). However, based on Oak Ridges Moraine Groundwater Program website, bedrock in the vicinity of the Phase Two Property is anticipated to be at a depth of approximately 91.4 to 95.4 mbgs.

*iv. approximate depth to water table,*

On October 3 and 4, 2023, the groundwater levels measured in the four monitoring wells on the north side of the Phase Two Property [i.e., BH1(MW), BH2(MW), BH23-1(MW), and BH23-2(MW)] ranged from 6.50 to 6.64 mbgs; and, the groundwater levels measured in the four monitoring wells on the south side of the Phase Two Property [i.e., BH23-3(MW), and BH23-4(MW), EX1, and EX2] ranged from 2.21 to 2.36 mbgs.

*v. any respect in which section 35, 41 or 43.1 of the regulation applies to the property,*

Section 35 of O. Reg. 153/04 is not applicable to the Phase Two Property.

Section 41 of O. Reg. 153/04 is applicable as the Phase Two Property is located within 30 metres of an area of natural significance. Land south and east of the Phase Two Property is identified as an Environmental Protection Area (Level 3) in the City of Barrie Official Plan (Adopted April 2023) and the Phase Two Property is located within 30 metres of Lake Simcoe where Black Redhorse, a threatened fish species in Ontario, is identified as being present.

Section 43.1 of O. Reg. 153/04 is applicable as the Phase Two Property is located within 30 metres of Kempenfelt Bay (Lake Simcoe).

Based on the above, Watters Environmental compared the soil and groundwater sample analytical data from the Phase Two Property to the Table 1 Full Depth Background SCS for Residential/ Parkland/Institutional/Industrial/Commercial/Community Property Use as contained in the MECP publication "Soil, Ground Water and Sediment Standards for *Use Under Part XV.1 of the Environmental Protection Act*", April 15, 2011.

*vi. areas where soil has been brought from another property and placed on, in or under the phase two property, and*

O. Reg. 153/04 defines soil as unconsolidated naturally occurring mineral particles and other naturally occurring material resulting from the natural breakdown of rock or organic matter by physical, chemical, or biological processes that are smaller than 2 millimetres in size. No soil was brought to the Phase Two Property after soil was excavated and disposed of off-Site on August 22, 2023.

The excavation was backfilled with 40.71 tonnes of 2" crushed material from Natural Stone Source Ontario Ltd., in Ramara, Ontario, and 2.06 tonnes of 14 mm material from Lafarge in Barrie, Ontario, based on weigh scale tickets. Although this material is not defined as soil in O. Reg. 153/04, a composite sample plus a duplicate sample of the material brought to the Phase Two Property was collected on August 23, 2023 and submitted to an accredited laboratory for analytical testing. The soil sample meets the Table 1 SCS with the exception of EC.

*vii. approximate locations, if known, of any proposed buildings and other structures.*

The proposed redevelopment is a 25-storey mixed commercial and residential building with two levels of parking. The proposed building generally extends the footprint of the Phase Two Property. The proposed grade of the Phase Two Property will remain similar to current grade, sloping down approximately 4.5 metres from the north to the south side of the Site. The lower level of parking is proposed to be underground, and the upper level of parking is proposed to be at grade at the south side of the Phase Two Property.

**3. Provide, where a contaminant is present on, in or under the phase two property at a concentration greater than the applicable site condition standard, identification of,**

*i. each area where a contaminant is present on, in or under the phase two property at a concentration greater than the applicable site condition standard,*

**Soil Quality**

Soil that exceeded the Table 1 SCS for PHC F4 was identified on the northwest side of the Phase Two Property.

Soil that exceeded the Table 1 SCS for PAHs was identified on the fill material on the southeast side of the Phase Two Property.

EC and/or SAR in soil exceeded the Table 1 SCS in boreholes advanced within the asphalt-paved parking areas on the north and south sides of the Phase Two Property. It is the $QP_{ESA}$'s opinion that these impacts are attributed to road salting activities, for de-icing purposes, to keep the paved surfaces of the Phase Two Property safe for vehicular traffic and pedestrians under conditions of snow or ice or both. As provided for under Section 49.1 of O. Reg. 153/04, the concentrations of EC and SAR in soil are believed to be present in excess of the Table 1 SCS solely because a substance (e.g., road salt) has been applied to surfaces for the safety of vehicular or pedestrian traffic under conditions of snow or ice or both. Neither the Phase Two Property nor any of the properties within the Phase One Study Area have ever been used for commercial bulk storage of

salt for use at multiple properties or used as a municipal snow dump. Therefore, the applicable Table 1 SCS is deemed not to be exceeded for the purpose of Part XV.1 of the Act. As such, all soil samples with elevated EC and SAR concentrations met the applicable Table 1 SCS for the Phase Two Property and are not considered as contaminants of concern. Thus, no further delineation or investigation is required.

**Groundwater Quality**

Exceedances of metals parameters (i.e., barium, copper, and/or silver) were identified in groundwater samples collected at BH1(MW) and BH2(MW) on the northwest side of the Phase Two Property and exceedances of a hydride-forming metal (i.e., antimony) was identified in the groundwater samples collected at BH23-3(MW) and EW1 on the southeast side of the Phase Two Property.

An exceedance of chloroform was identified in the groundwater sample collected at EW2 as part of the 2020 Watters Phase II ESA. The concentrations of VOCs including chloroform, in the groundwater sample collected at EW2 in 2023 met the Table 1 SCS. EW2 is located on a grassed median on the south side of Phase Two Property. In 2020, this area of the Phase Two Property was occupied by a restaurant (i.e., Hooters). The restaurant closed in 2021 and since that time, the south side of the Site has been unoccupied. As provided for under Section 49.1 of O. Reg. 153/04, the concentration of chloroform in the groundwater sample collected at EW2 in 2020 is believed to be present in excess of the Table 1 SCS solely due to a discharge of drinking water within the meaning of the Safe Drinking Water Act, 2002 (i.e., watering of grass). Therefore, the applicable Table 1 SCS is deemed not to be exceeded for the purpose of Part XV.1 of the Act. As such, the groundwater sample with an initial elevated chloroform concentration meets the applicable Table 1 SCS for the Phase Two Property, and chloroform is not considered a contaminant of concern. Thus, no further delineation or investigation is required.

Chloride and/or sodium in groundwater collected from monitoring wells installed within the asphalt paved parking areas on the north and south sides of the Phase Two Property exceeded the Table 1 SCS. It is the $QP_{ESA}$'s opinion that these impacts are attributed to road salting activities, for de-icing purposes, to keep the paved surfaces of the Phase Two Property safe for vehicular traffic and pedestrians under conditions of snow or ice or both. As provided for under Section 49.1 of O. Reg. 153/04, the concentrations of chloride and sodium in groundwater are believed to be present in excess of the Table 1 SCS solely because a substance (e.g., road salt) has been applied to surfaces for the safety of vehicular or pedestrian traffic under conditions of snow or ice or both. Neither the Phase Two Property nor any properties within the Phase One Study Area have ever been used for commercial bulk storage of salt for use at multiple properties or used as a municipal

snow dump. Therefore, the applicable Table 1 SCS is deemed not to be exceeded for the purpose of Part XV.1 of the Act. As such, all groundwater samples with elevated chloride and/or sodium concentrations meet the applicable Table 1 SCS for the Phase Two Property, and chloride and sodium are not considered as contaminants of concern. Thus, no further delineation or investigation is required.

*ii. the contaminants associated with each of the areas referred to in subparagraph i,*

The COPCs analyzed in soil that exceeded the Table 1 SCS were PHCs and PAHs. The concentration of PHC F4 analyzed in one soil sample collected on the northwest side of the Phase Two Property [i.e., BH1(MW)-SS4 (2.29 – 2.90 mbgs)] exceeded the Table 1 SCS. The concentration of fluoranthene (a PAH) analyzed in one soil sample collected on the southeast side of the Phase Two Property [i.e., BH23-3(MW)-1 (0.01 – 1.52 mbgs)] exceeded the Table 1 SCS.

The COPCs analyzed in groundwater that exceeded the Table 1 SCS were metals and hydride-forming metals .Exceedances of metals parameters (i.e., barium, copper, and/or silver) were identified in groundwater samples collected at BH1(MW) and BH2(MW) on the northwest side of the Phase Two Property and exceedances of a hydride-forming metal (i.e., antimony) was identified in the groundwater samples collected at BH23-3(MW) and EW1 on the southeast side of the Phase Two Property.

*iii. each medium in which a contaminant associated with an area referred to in subparagraph i is present,*

Soil on the northwest side of the Phase Two Property beneath the asphalt parking lot contained a concentration of PHC F4 that exceeded the Table 1 SCS.

Soil on the southeast side of the Phase Two Property beneath the asphalt driveway contained a concentration of a PAH parameter (i.e., fluoranthene) that exceeded the Table 1 SCS.

Groundwater on the northwest and southeast sides of the Phase Two Property beneath the asphalt parking areas contained concentrations of metals or hydride-forming metals that exceeded the Table 1 SCS.

*iv. a description and assessment of what is known about each of the areas referred to in subparagraph i,*

The PHC F4 exceedance in soil on the northwest side of the Phase Two Property was likely a result of former automotive repair activities.

The PAH exceedance in soil on the southeast side of the Phase Two Property was likely a result of poor-quality fill.

Groundwater with elevated concentrations of metals and/or a hydride-forming metal may have been a result of bias caused by sediment. The exceedances in groundwater on the northwest side of the Phase Two Property were likely a result of former on-Site carriage painting, former on-Site automotive repair operations, and possibly a former machine shop and former commercial printing operations off-Site to the north. The exceedances in groundwater on the southeast side of the Phase Two Property were likely a result of former on-Site automotive repair operations.

*v. for each parameter group as defined in the Analytical Protocol for which a contaminant has been analysed, the distribution, in each of the areas referred to in subparagraph i, of each contaminant present in the area at a concentration greater than the applicable site condition standard, for each medium in which the contaminant is present, together with figures showing the distribution,*

**Soil**

Watters Environmental drilled 5 boreholes to investigate the soil quality as part of this Phase Two ESA. Watters Environmental also drilled 3 boreholes to investigate the soil quality at the Phase Two Property as part of the 2020 Watters Phase II ESA.

PHCs

Soil samples from each of the boreholes Watters Environmental drilled at the Phase Two Property in 2020 and 2023 were submitted for analysis of PHCs (F1-F4) to investigate the soil quality at the Phase Two Property.

As shown on Figure 9A, soil containing PHC F4 that exceeded the Table 1 SCS was identified on the northwest side of the Phase Two Property [i.e., BH1(MW)-SS4 (2.29 – 2.90 mbgs)] and was likely a result of former automotive repair activities. The concentrations of PHC F1-F4 in a deeper soil sample [i.e., BH1(MW)-SS11 (7.62 – 8.23 mbgs)] meet the Table 1 SCS. The estimated lateral extent of PHC F4 impacts prior to remediation is shown on Figure 9A, while the estimated vertical extent is shown on Figures 11A to 11D. The estimated lateral and vertical extent of PHC F4-impacted soil (prior to soil remediation activities) is shown with a purple dashed line.

On August 22, 2023, soil surrounding BH1(MW) was excavated to 2.29 mbgs and a total of 39.02 tonnes of impacted soil, based on weigh scale tickets, was disposed of at NRK Remediation Facility in Orillia, Ontario. On August 23, 2023, additional soil surrounding BH1(MW) was excavated from 2.29 to 3.05 mbgs and stockpiled adjacent to the excavation in preparation for off-Site disposal. The final excavation measured approximately 3.96 metres by 4.88 metres at the top of the excavation and was 3.05 metres deep. The lateral and vertical extent of the excavation is shown on Figures 15, 16A, and 16B.

Table 3 in Schedule E of O. Reg. 153/04 states that excavations with a floor area less than 25 square metres requires a minimum of 2 confirmation floor samples and 2 confirmation sidewall samples. A total of 2 confirmation floor samples and 4 confirmation sidewall samples (i.e., one from each sidewall of the excavation) were collected and submitted for analysis of PHCs (as well as VOCs, THMs, and BTEX). All the confirmation soil samples meet the Table 1 SCS. Therefore, the number of confirmation floor samples meet the regulatory requirements.

The base of the excavation was dry upon completion. Additionally, the concentration of PHCs in the groundwater sample collected from BH1(MW) located within the excavation, meet the Table 1 SCS.

Soil excavated and stockpiled adjacent to the excavation was placed back into the excavation on August 23, 2023 following collection of the confirmation soil samples, for safety reasons as the walls of the excavation had begun to cave in. As such, not all PHC F4 impacted soil was removed from the Phase Two Property.

The excavation was also backfilled with 40.71 tonnes of 2” crushed material from Natural Stone Source Ontario Ltd., in Ramara, Ontario, and 2.06 tonnes of 14 mm material from Lafarge in Barrie, Ontario, based on weigh scale tickets. Although this material is not defined as soil in O. Reg. 153/04, a composite sample plus a duplicate sample of the material brought to the Phase Two Property was collected on August 23, 2023 and submitted to an accredited laboratory for analysis of PAHs, metals, hydride-forming metals, and other regulated parameters [boron-hot water soluble (B-HWS), hexavalent chromium (CrVI), cyanide (CN-), mercury (Hg), electrical conductivity (EC) and sodium adsorption ratio (SAR)]. The soil samples meet the Table 1 SCS with the exception of EC.

VOCs, THMs, and BTEX

Soil samples from each of the boreholes Watters Environmental drilled at the Phase Two Property in 2020 and 2023 were submitted for analysis of VOCs, THMs, and BTEX to investigate the soil quality at the Phase Two Property.

The concentrations of VOCs, THMs, and BTEX in all samples analyzed meet the applicable Table 1 SCS. The soil sampling locations for VOCs, THMs, and BTEX are shown on Figure 9B.

Metals, Hydride-Forming Metals, and ORPs

Soil samples from each of the boreholes Watters Environmental drilled at the Phase Two Property in 2020 and 2023 were submitted for analysis of metals, hydride-forming metals, and ORPs to investigate the soil quality at the Phase Two Property.

The concentrations of metals, hydride-forming metals, and ORPs in all samples analyzed meet the applicable Table 1 SCS. The soil sampling locations for metals, hydride-forming metals, and ORPs are shown on Figure 9C.

PAHs

Soil samples from each of the boreholes Watters Environmental drilled at the Phase Two Property in 2020 and 2023 were submitted for analysis of PAHs to investigate the soil quality at the Phase Two Property.

As shown on Figure 9D, soil containing fluoranthene (a PAH) that exceeded the Table 1 SCS was identified on the southeast side of the Phase Two Property [i.e., BH23-3(MW)-1 (0.01 – 1.52 mbgs)] and was likely a result of poor-quality fill. The concentrations of PAHs in a deeper soil sample [i.e., BH23-3(MW)-2 (1.52 – 3.05 mbgs)] meet the Table 1 SCS. The estimated lateral extent of PAH impacts is shown on Figure 9D, while the estimated vertical extent is shown on Figures 12A to 12D. The estimated lateral and vertical extent of PAH-impacted soil is shown with a purple dashed line.

PCBs

A soil sample from BH23-5 drilled in 2023 was submitted for analysis of PCBs to investigate soil quality within APEC 9 due to the off-Site transformer.

The concentration of PCBs in the sample analyzed meets the applicable Table 1 SCS. The soil sample sampling location for PCBs is shown on Figure 9E.

**Groundwater**

Watters Environmental installed 4 monitoring wells on the Phase Two Property to investigate the groundwater quality as part of this Phase Two ESA and Watters Environmental installed 2 monitoring wells to investigate the groundwater quality at the Phase Two Property as part of the 2020 Watters Phase II ESA. Watters Environmental also sampled two monitoring wells installed by other at the Phase Two Property prior to 2020.

PHCs

Groundwater samples from the eight monitoring wells on the Phase Two Property were submitted for analysis of PHCs (F1-F4) as part of this Phase Two ESA or as part of the 2020 Watters Phase II ESA to investigate groundwater quality at the Phase Two Property.

The concentrations of PHCs in all samples analyzed meet the applicable Table 1 SCS. The groundwater sampling locations for PHCs are shown on Figure 13A.

VOCs, THMs, and BTEX

Groundwater samples from the eight monitoring wells on the Phase Two Property were submitted for analysis of VOCs, THMs, and BTEX as part of this Phase Two ESA or as part of the 2020 Watters Phase II ESA to investigate groundwater quality at the Phase Two Property.

The concentrations of VOCs, THMs, and BTEX in all samples analyzed meet the applicable Table 1 SCS. The groundwater sampling locations for PHCs are shown on Figure 13B.

Metals, Hydride-Forming Metals, and ORPs

Groundwater samples from six monitoring wells on the Phase Two Property [i.e., BH1(MW), BH2(MW), BH23-1(MW), BH23-2(MW), BH23-3(MW), and BH23-4(MW)] were submitted for analysis of metals, hydride-forming metals, and ORPs as part of this Phase Two ESA to investigate groundwater quality due to a former on-Site carriage paint shop (APEC 1), former on-Site gasoline service stations (APEC 2A and 5), former on-Site automotive repair garages (APEC 2B, 3, and 4), a former off-Site machine shop (APEC 10A), a former off-Site commercial printing service (APEC 10B), and former hazardous wastes associated with the off-Site commercial printing service (APEC 10C). Additionally, a groundwater sample from an on-Site monitoring well installed by others [i.e., EW1] was submitted for analysis of metals, hydride-forming metals, and ORPs to assess an elevated antimony concentration reported in a 2017 investigation at the Phase Two Property by another consultant.

Exceedances of metals parameters (i.e., barium, copper, and/or silver) were identified in groundwater samples collected at BH1(MW) and BH2(MW) on the northwest side of the Phase Two Property and exceedances of a hydride-forming metal (i.e., antimony) was identified in the groundwater samples collected at BH23-3(MW) and EW1 on the southeast side of the Phase Two Property. The estimated lateral extent of metals and hydride-forming metals impacts is shown with a purple dashed line on Figure 13C.

PAHs

Groundwater samples from six monitoring wells on the Phase Two Property [i.e., BH1(MW), BH2(MW), BH23-1(MW), BH23-2(MW), BH23-3(MW), and BH23-4(MW)] were submitted for analysis of PAHs as part of this Phase Two ESA to investigate groundwater quality due to a former on-Site carriage paint shop (APEC 1), former on-Site gasoline service stations (APEC 2A and 5), former on-Site automotive repair garages (APEC 2B, 3, and 4), a former off-Site machine shop (APEC 10A), a former off-Site commercial printing service (APEC 10B), and former hazardous wastes associated with the off-Site commercial printing service (APEC 10C).

The concentrations of PAHs in all samples analyzed meet the applicable Table 1 SCS. The groundwater sampling locations for PAHs are shown on Figure 13D.

The Phase Two CSM is presented graphically on Figure 17.

*vi. anything known about the reason for the discharge into the natural environment of the contaminants present on, in or under the phase two property at a concentration greater than the applicable site condition standard,*

The presence of PHC F4-impacted soil on the northwest side of the Phase Two Property was likely a result of a former automotive repair garage present on the northwest side of the Phase Two Property.

The presence of PAH-impacted soil on the southeast side of the Phase Two Property was likely a result of poor-quality fill placed on the southeast side of the Phase Two Property during redevelopment and/or resurfacing activities.

The presence of metals-impacted groundwater on the northwest side of the Phase Two Property was likely a result of former on-Site carriage painting, former on-Site automotive repair operations, and possibly a former machine shop and former commercial printing operations off-Site to the north. The presence of hydride-forming metals exceedances in groundwater on the southeast side of the Phase Two Property were likely a result of former on-Site automotive repair operations.

*vii. anything known about migration away from any area of potential environmental concern of the contaminants present on, in or under the phase two property at a concentration greater than the applicable site condition standard, including the identification of any preferential pathways,*

The PHC F4 impacts are present only in soils in a localized area of the Phase Two Property above 3.05 mbgs. PHC concentrations in soil samples collected at 3.05 and 7.62 – 8.23 mbgs meet the Table 1 SCS. Additionally, the groundwater is situated below the impacts at approximately 6.5 mbgs and the concentrations of PHCs in the groundwater sample collected from BH1(MW) meets the Table 1 SCS. As such, there was no migration of contaminants away from the location of the soil impacts.

The PAH impacts are present in soils on the southeast side of the Phase Two Property above 1.52 mbgs. PAH concentrations in the soil sample collected at 1.52 mbgs meet the Table 1 SCS. Additionally, the groundwater is situated below the impacts at roughly 2.3 mbgs.

The elevated metals concentrations in groundwater were observed on the northwest side of the Phase Two Property. Metals concentrations in groundwater on the south side of the Phase Two Property meet the Table 1 SCS. Given the near-surface groundwater flow is inferred to be southerly, the metals exceedances in groundwater on the northwest side of the Phase Two Property are not expected to be migrating off-Site.

The hydride-forming metals (i.e., antimony) exceedances in groundwater were observed on the southeast side of the Phase Two Property. Given the near-surface groundwater flow is inferred to be southerly, the hydride-forming metals exceedances in groundwater may be migrating off-Site.

*viii. climatic or meteorological conditions that may have influenced distribution and migration of the contaminants, such as temporal fluctuations in ground water levels, and*

The north side of the Phase Two Property is situated at an elevation of approximately 225 metres above mean sea level (mamsl) and slopes down to the south, with the south side of the Phase Two Property situated at an elevation of approximately 221 mamsl. The properties to the east and west are at a similar grade as the Phase One Property, sloping down to the south approximately 4 to 5 metres. Given the steep southerly slope of the Phase Two Property and surrounding lands, climatic or meteorological conditions, such as temporal fluctuations in groundwater levels are not expected to affect the distribution and migration of the contaminants (i.e., the groundwater flow direction is expected to flow southerly and not change with seasons).

*ix. if applicable, information concerning soil vapour intrusion of the contaminants into buildings including,*

A. Relevant construction features of a building such as a basement or crawl space;

The current Site building contains one partial basement level. Soil vapour intrusion into the Site building is not considered a concern as there were no volatile contaminants on the Phase Two Property [i.e., the concentrations of the volatile parameters PHCs (F1 and F2), VOCs, THMs, and BTEX in soil and groundwater meet the Table 1 SCS].

B. Building heating, ventilating and air conditioning design and operation; and

The current heating for the Site building located on the Phase Two Property is provided by a natural gas-powered heating, ventilation, and air conditioning (HVAC) systems.

The heating and cooling system(s) for the future Site building is also expected to be powered by natural gas.

C. Subsurface utilities.

As noted above, there are underground utilities associated with the Site building on the Phase Two Property. However, these utility lines are not acting as conduits to vapour migration into the Site building as there is no VOC, THM, BTEX, or PHC (F1 or F2) contamination in the soil or groundwater at the Phase Two Property.

**4. Provide, where contaminants on, in or under the phase two property are present at concentrations greater than the applicable site condition standard, two or more cross-sections showing, by parameter group as defined in the Analytical Protocol for which a contaminant has been analysed,**

*i. the lateral and vertical distribution of each contaminant in each area where the contaminant is present at a concentration greater than the applicable site condition standard in soil, ground water and sediment,*

PHCs in Soil

The estimated lateral extent of PHC F4 impacts in soil on the northwest side of the Phase Two Property (prior to remediation) is presented in plan view on Figure 9A, while the estimated vertical extent based on borehole sample data (prior to remediation) is shown on cross sections on Figures 11A to 11D.

The actual lateral extent of PHC F4 impacts in soil as determined by the excavation activities and confirmation soil sampling is presented in plan view on Figure 15, while the actual vertical extent is shown on cross sections on Figures 16A and 16B.

PAHs in Soil

The estimated lateral extent of PAH impacts in soil is presented in plan view on Figure 9D, while the estimated vertical extent based on borehole sample data is shown on cross sections on Figures 12A to 12D.

Metals and Hydride-Forming Metals in Groundwater

The estimated lateral extent of metals and hydride-forming metals impacts in groundwater is presented in plan view on Figure 13A. The vertical extent of metals and hydride-forming metals impacts in groundwater will be determined during additional investigation.

*ii. approximate depth to water table in each area referred to in subparagraph i,*

The depth to groundwater ranged from 6.50 and 6.65 mbgs on the north side of the Phase Two Property and ranged from 2.21 and 2.36 mbgs on the south side of the Phase Two Property. The water levels in the wells measured on this date are shown in the cross-sections with an inverted blue triangle.

*iii. stratigraphy from ground surface to the deepest aquifer or aquitard investigated, and*

The cross-sectional figures referenced above show the stratigraphy from the ground surface to the deepest depths drilled, including the fill and sand to sandy silt aquifer.

*iv. any subsurface structures and utilities that may affect contaminant distribution and transport in each area referred to in subparagraph i.*

Watters Environmental anticipates that the underground utilities at the Phase Two Property would be no greater than about 2 to 3 metres below ground surface (mbgs). The depth to groundwater ranged from 6.50 and 6.65 mbgs on the north side of the Phase Two Property and ranged from 2.21 and 2.36 mbgs on the south side of the Phase Two Property.

As such, Watters Environmental anticipates that subsurface utilities on the south side of the Phase Two Property may act as preferential pathways for the migration of contaminated groundwater.

**5. Provide, for each area where a contaminant is present on, in or under the property at a concentration greater than the applicable site condition standard for the contaminant, a diagram identifying, with narrative explanatory notes,**

The Phase Two Conceptual Site Model for the Phase Two Property is presented graphically in Figure 17.

*i. the release mechanisms,*

The PHC F4 impact in soil on the northwest side of the Phase Two Property was likely released into the subsurface during former automotive repair activities.

The PAH impact soil on the southeast side of the Phase Two Property was likely released into the subsurface as a result of fill materials brought to the Site during the development and/or redevelopment of the Phase Two Property.

The metals impacts in groundwater on the northwest side of the Phase Two Property were likely released into the subsurface during former on-Site carriage painting, former on-Site automotive repair operations, and possibly a former machine shop and former commercial printing operations off-Site to the north. The hydride-forming metal impacts in groundwater on the southeast side of the Phase Two Property were likely released into the subsurface during former automotive repair operations.

*ii. contaminant transport pathway,*

Potential contaminant transport pathways include direct dermal contact, inhalation of dust (soil particles), ingestion of groundwater, incidental ingestion (soil and groundwater) and discharge of contaminated groundwater to surface water as Lake Simcoe located approximately 20 metres to the southeast. Contaminant transport pathways for ecological receptors may include direct contact uptake in worms and/or aquatic receptors and root uptake by plants in the few landscaped areas. Worms, fish, and plants could then be passed on as a food source for birds, mice and other small animals.

*iii. the human and ecological receptors located on, in or under the phase two property,*

The Phase Two Property is currently used for commercial purposes and will be used for commercial and residential purposes following the proposed redevelopment. As such, there are human receptors on the Phase Two Property.

Potential on-Site ecological receptors may include worms, birds, dogs, small rodents (mice), and other small animals.

*iv. receptor exposure points, and*

Potential human and ecological receptor points are present on the northwest and southeast sides of the Phase Two Property. The majority of the Phase Two Property is capped with asphalt or the building foundation; however, small landscaped areas exist on the south side of the Phase Two Property.

Aquatic receptors in Lake Simcoe could be exposed to contaminated groundwater migrating from the Phase Two Property and discharging to the lake.

*v. routes of exposure.*

Potential exposure routes to human and ecological receptors consist of dermal absorption, incidental ingestion, and inhalation of impacted soil particles. Additionally, groundwater is used as a potable water source in the City of Barrie; however, the Phase Two Property is municipally supplied with potable groundwater and no groundwater wells are present on the Site.

Lake Simcoe is located approximately 20 metres from the Phase Two Property, therefore absorption or ingestion of contaminated groundwater discharging to lake is also a potential route of exposure for human, ecological and aquatic receptors.

**6. If a non-standard delineation was conducted in accordance with section 7.1 of this Schedule as part of preparing the phase two environmental site assessment report, provide a narrative description of how the non-standard delineation satisfies the requirements in that section.**

Not applicable.

**7. If the exemption set out in paragraph 1, 1.1 or 2 of section 49.1 of the regulation is being relied upon, provide a statement as to the reliance upon the exemption and a narrative description of the rationale for relying upon the exemption, which may be based on information gathered during the site investigation.**

With respect to paragraph 1 in Section 49.1, concentrations of EC and/or SAR in soil and chloride and/or sodium in groundwater were greater than the Table 1 SCS in boreholes and/or monitoring wells within asphalted or interlock paved areas of the Phase Two Property. It is the opinion of the $QP_{ESA}$ that these impacts are attributed to salting activities on the paved surfaces on the Phase Two Property for de-icing purposes for the safety of vehicular and pedestrian traffic under conditions of snow or ice or both. As provided for under Section 49.1 of O. Reg. 153/04, the concentrations of EC and SAR in soil, and sodium and chloride in groundwater, are believed to be present in excess of the Table 1 SCS solely because a substance (e.g., road salt) has been applied to surfaces for the safety of vehicular or pedestrian traffic under conditions of snow or ice or both. Neither the Phase Two Property nor any properties within the Phase One Study Area have ever been used for commercial bulk storage of salt for use at multiple properties or used as a municipal snow dump. Therefore, the applicable Table 1 SCS is deemed not to be exceeded for the purpose of Part XV.1 of the Act. As such, all soil samples with elevated EC and/or SAR concentrations and all groundwater samples with elevated sodium and chloride concentrations meet the applicable Table 1 SCS for the Phase Two Property, and are not considered as contaminants of concern. Thus, no further delineation or investigation is required.

With respect to paragraph 1.1 in Section 49.1, the excavation completed on the northwest side of the Phase Two Property in August 2023 was backfilled with 40.71 tonnes of 2-inch crushed material from Natural Stone Source Ontario Ltd., in Ramara, Ontario, and 2.06 tonnes of 14 mm material from Lafarge in Barrie, Ontario, based on weigh scale tickets. Although this material is not defined as soil in O. Reg. 153/04, a composite sample plus a duplicate sample of the material brought to the Phase Two Property was collected on August 23, 2023 and submitted to an accredited laboratory for analytical testing. The soil samples meet the Table 1 SCS with the exception of EC.

With respect to paragraph 2 in Section 49.1, the concentration of chloroform in the groundwater sample collected at EW2 as part of the 2020 Watters Phase II ESA was greater than the Table 1 SCS. The concentrations of VOCs including chloroform, in the groundwater sample collected at EW2 in 2023 met the Table 1 SCS. EW2 is located on a grassed median on the south side of Phase Two Property. In 2020, this area of the Phase Two Property was occupied by a restaurant (i.e., Hooters). The restaurant closed in 2021 and since that time, the south side of the Site has been

unoccupied. As provided for under Section 49.1 of O. Reg. 153/04, the concentration of chloroform in the groundwater sample collected at EW2 in 2020 is believed to be present in excess of the Table 1 SCS solely due to a discharge of drinking water within the meaning of the Safe Drinking Water Act, 2002 (i.e., watering of grass). Therefore, the applicable Table 1 SCS is deemed not to be exceeded for the purpose of Part XV.1 of the Act. As such, the groundwater sample with an elevated chloroform concentration meets the applicable Table 1 SCS for the Phase Two Property, and chloroform is not considered a contaminant of concern. Thus, no further delineation or investigation is required.

**8. If the exemption set out in paragraph 3 of section 49.1 of the regulation is being relied upon, provide,**

*i. a statement as to the reliance upon the exemption,*

Not Applicable.

*ii. a narrative description of the rationale for relying upon the exemption, which may be based on information gathered during the site investigation, and*

Not Applicable.

*iii. one or more cross-sections and one or more figures in plan view of the phase two property that demonstrate, through identification of sample locations, sample depths and contaminant concentrations, the distribution of the contaminant in question laterally and vertically and the range of concentrations of that contaminant on, in or under the phase two property.*

Not Applicable.

**9. If the exemption is subsection 6(2) of this Schedule is being relied upon, provide a narrative description in accordance with subsections 43(3) and (4) of this Schedule.**

Not Applicable.

# 7.0 CONCLUSIONS

## 7.1 Summary of Findings

Based on the results of this Phase Two ESA, Watters Environmental presents the following findings:

- The Phase Two ESA was conducted in accordance with Ontario Regulation 153/04 (i.e., Records of Site Condition – Part XV.1 of the Act, made under the Ontario Environmental Protection Act, R.S.O. 1990 Regulation");

- Soil containing PHC F4 exceeding the Table 1 SCS was identified on the northwest side of the Phase Two Property;

- Fill containing fluoranthene (a PAH) exceeding the Table 1 SCS was identified on the southeast side of the Phase Two Property;

- The concentrations of petroleum hydrocarbons (PHCs F1-F4), volatile organic compounds (VOCs), Trihalomethanes (THMs), benzene, toluene, ethylbenzene, and xylenes (collectively BTEX), hydride-forming metals (As, Sb, Se), other regulated parameters [i.e., boron-hot water soluble (B-HWS), hexavalent chromium [Cr(VI)], cyanide (CN-), mercury (Hg), electrical conductivity (EC) and sodium adsorption ratio (SAR)], and polychlorinated biphenyls (PCBs) in all other soil samples collected throughout the Phase Two Property meet the Table 1 SCS;

- Groundwater containing concentrations of metals parameters (i.e., barium, copper, and/or silver) exceeding the Table 1 SCS was identified on the northwest side of the Phase Two Property and groundwater containing concentrations of a hydride-forming metal (i.e., antimony) exceeding the Table 1 SCS was identified on the southeast side of the Phase Two Property; and

- The concentrations of PHCs, VOCs, THMs, BTEX, PAHs, and other regulated parameters [i.e., Cr(VI), CN-, Hg, sodium, and chloride] in all other groundwater samples on the Phase Two Property meet the Table 1 SCS.

Based on the results of this Phase Two ESA, further investigation (i.e., vertical delineation of groundwater exceedances) and risk assessment will be required prior to filing a Record of Site Condition.

## 7.2 Signatures

I, Natalie Wright, P.Eng., $QP_{ESA}$, confirm that I supervised the completion of the Phase Two ESA, in accordance with Ontario Regulation 153/04. I reviewed all the data and information gathered from the Phase Two ESA and used it to formulate the findings and conclusions.

For and on behalf of Watters Environmental Group Inc.

Prepared by



Natalie Wright, P.Eng., $QP_{ESA}$
Project Manager



Basil Wong, M.Eng., P.Eng., $QP_{ESA}$
Vice President, Technical Services

## 8.0 REFERENCES

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11. Watters Environmental. *Phase II Environmental Site Assessment, 149-153 Dunlop Street East & 5 Mulcaster Street, Barrie, Ontario*. June 2020.

12. Watters Environmental. *Phase One Environmental Site Assessment, 149-153 Dunlop Street East, Barrie, Ontario*. April 2024.

## 9.0 QUALIFICATIONS AND LIMITATIONS

Watters Environmental has prepared this report at the request of, and for the exclusive use of Dunlop Developments (Barrie) Inc. Watters Environmental will not be responsible for the use of this report by any other party, or reliance on or any decision to be made based on it by any such other party without the prior written consent of Watters Environmental. Watters Environmental accepts no responsibility for damages, if any, by any other party as a result of decisions or actions based on this report.

This Phase Two ESA was conducted in accordance with Watters Environmental's proposed scope of work, verbal requests from the client and generally accepted environmental assessment practices in Ontario at the time of the assessment. No other warranty, expressed or implied, is made.

This Phase Two ESA was designed to determine the soil and groundwater quality present in the APECs identified at the Phase Two Property. This report alone should in no way be construed as a definitive representation of any and all environmental impacts that may be present at the Phase Two Property resulting from past or current practices. This assessment was conducted using representative borehole and monitoring well investigation data. Data interpolations between physical testing points are open to interpretation. As such, it is not feasible to conclude absolutely the conditions that may exist in the subsurface. Inferred conditions assume that homogeneous conditions exist, when in fact they may not. Subsurface conditions will vary between testing points and are likely to change with time. No assurance is made regarding changes in conditions subsequent to the time of the investigation. The findings contained in this report may be based, in part, upon information provided by others. No assurance is made regarding the accuracy of the information not generated by Watters Environmental. This report is complete only as an entire document, and no section is intended to be used separately.

## 10.0 QUALIFICATIONS OF CONSULTANT

### NATALIE WRIGHT, P.ENG., QPESA – PROJECT MANAGER

Natalie is a Project Manager with Watters Environmental and holds a Bachelor of Engineering from the University of Western Ontario. Natalie has over 9 years of consulting experience completing environmental site assessments, remediations, brownfield monitoring, and excess soils management. Natalie is a licensed professional engineer in the Province of Ontario and provides technical support on environmental site assessments and remediations for due diligence and property redevelopment.

### BASIL WONG, M.ENG., P.ENG., QPESA – VICE PRESIDENT, TECHNICAL SERVICES

Mr. Basil Wong, M.Eng., P.Eng. is the Vice President, Technical Services with Watters Environmental Group Inc. and is a $QP_{ESA}$. Mr. Wong obtained his B.A.Sc. in Civil Engineering (Water Resources Option) at the University of Waterloo in 1992. In the course of obtaining this degree, he studied hydrogeology and contaminant transport in the Waterloo Earth Sciences Department (Institute for Groundwater Research). Mr. Wong furthered his studies in hydrogeology and other aspects of environmental engineering and obtained a Master of Engineering at the University of Guelph in 1998. He has been a Professional Engineer in Ontario for over 28 years, and is also licensed in British Columbia, Alberta, Nova Scotia, and New Brunswick. Mr. Wong has over 31 years of environmental consulting experience in Phase I and II ESAs, hydrogeological assessments, soil and groundwater remediation, asbestos surveys, designated substances surveys, asbestos abatement, mould assessments, mould abatement, human health and ecological risk assessments, and environmental compliance audits. Basil has conducted or managed hundreds of these projects in various land uses, such as hotels, commercial buildings, large industrial properties, residential dwellings, federally-owned properties, and First Nation reserves.

# FIGURES




N

**LEGEND:**

APPROXIMATE EXTENT OF THE PHASE TWO PROPERTY

0m 200m
SCALE

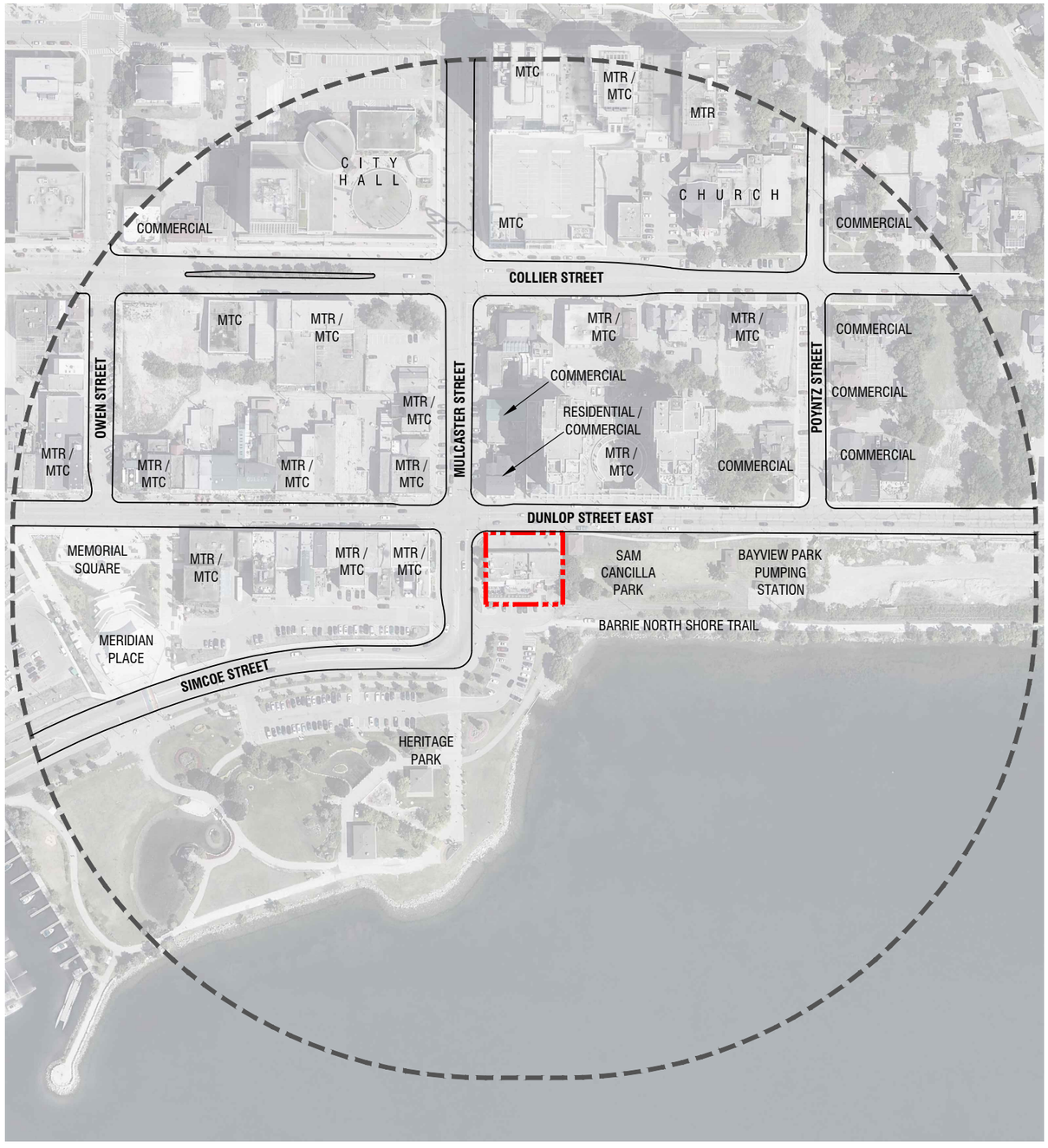
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F 416 361 2410

DRAWN: B. CALDERONE
CHECKED: N. WRIGHT
DATE: APRIL 2024

CLIENT: DUNLOP DEVELOPMENTS (BARRIE) INC.
SITE ADDRESS: 149-153 DUNLOP ST EAST, BARRIE, ONTARIO

REPORT NAME: PHASE TWO ENVIRONMENTAL SITE ASSESSMENT

FIGURE NAME: PHASE TWO PROPERTY LOCATION MAP
PROJECT No: 20-0052.04
FIGURE No: 1




**LEGEND:**

APPROXIMATE EXTENT OF THE PHASE ONE PROPERTY

250m AREA OF ASSESSMENT

**MTC** MULTI-TENANT COMMERCIAL

**MTR** MULTI-TENANT RESIDENTIAL

0m 100m

SCALE

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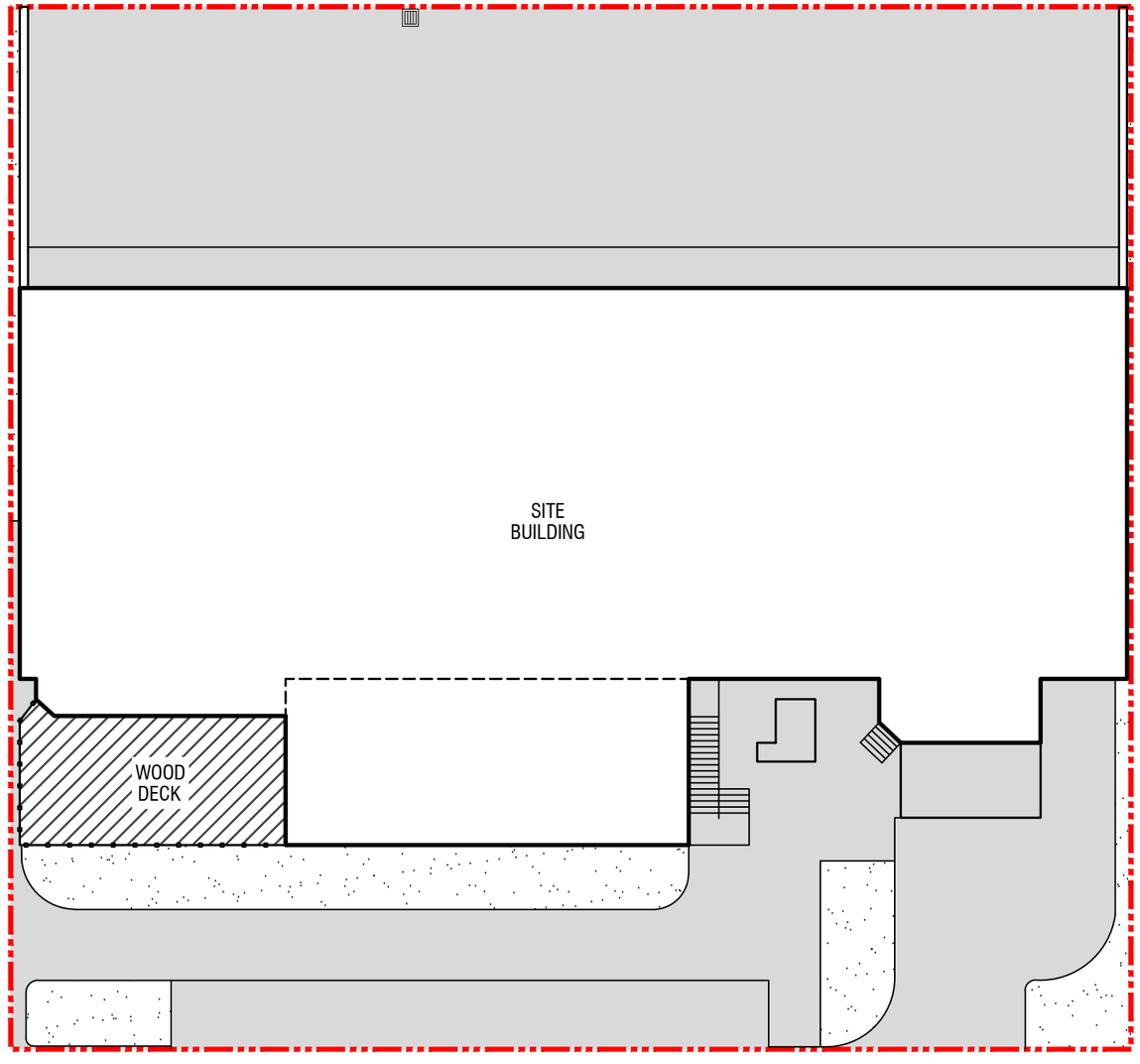
FIGURE NAME: PHASE ONE STUDY AREA LAND USE MAP
PROJECT No: 20-0052.04
FIGURE No: 2

DUNLOP STREET EAST

INFERRED NEAR-SURFACE GROUNDWATER FLOW DIRECTION

N

MULCASTER STREET




**LEGEND:**

- APPROXIMATE EXTENT OF THE PHASE TWO PROPERTY
- CATCH BASIN
- LANDSCAPED AREA
- PAVED AREA

0m 10m
SCALE

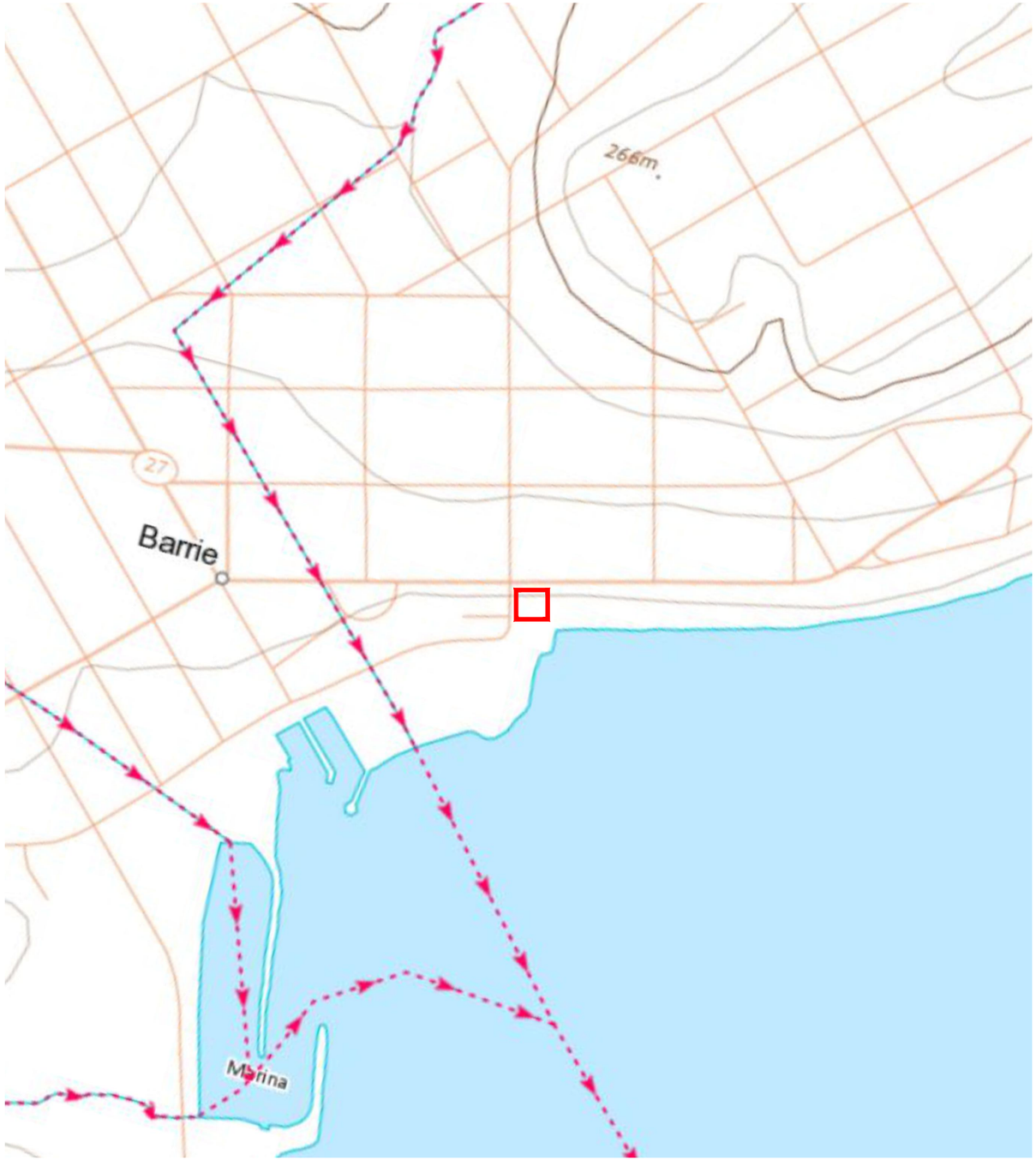
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SITE ADDRESS: 149-153 DUNLOP ST EAST, BARRIE, ONTARIO

REPORT NAME: PHASE TWO ENVIRONMENTAL SITE ASSESSMENT

FIGURE NAME: PHASE TWO PROPERTY LAYOUT PLAN
PROJECT No: 20-0052.04
FIGURE No: 3




INFERRED NEAR-SURFACE GROUNDWATER FLOW DIRECTION

N

**LEGEND:**

APPROXIMATE EXTENT OF THE PHASE TWO PROPERTY

0m 200m

SCALE

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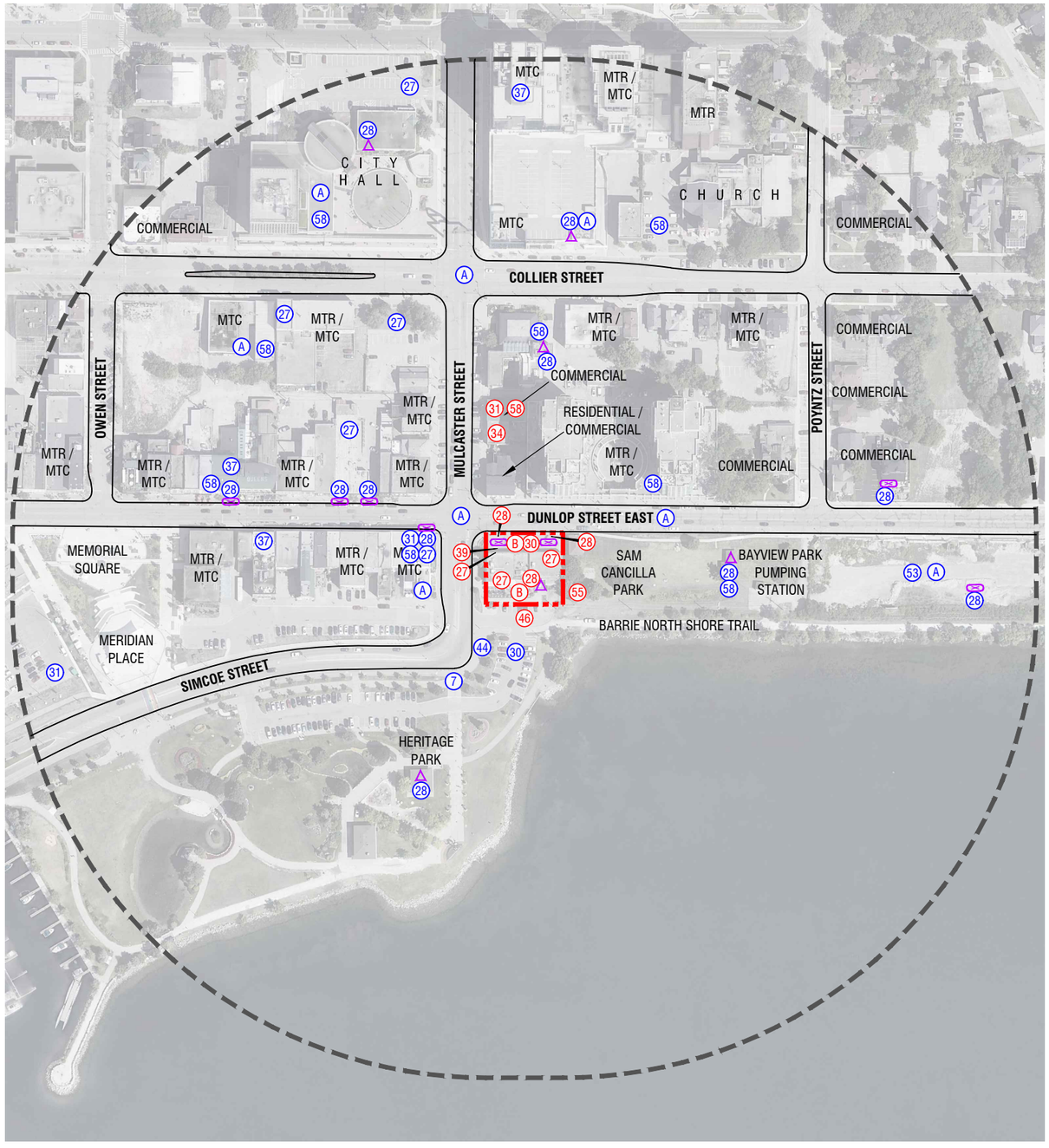
CLIENT: DUNLOP DEVELOPMENTS (BARRIE) INC.
SITE ADDRESS: 149-153 DUNLOP ST EAST, BARRIE, ONTARIO

REPORT NAME: PHASE TWO ENVIRONMENTAL SITE ASSESSMENT

FIGURE NAME: TOPOGRAPHICAL MAP

PROJECT No: 20-0052.04
FIGURE No: 4

| PCA TABLE | |
|---|---|
| **PCA #** | **DESCRIPTIONS** |
| #7 | BOAT MANUFACTURING |
| #27 | GARAGES AND MAINTENANCE AND REPAIR OF RAILCARS, MARINE VEHICLES AND AVIATION VEHICLES |
| #28 | GASOLINE AND ASSOCIATED PRODUCTS STORAGE IN FIXED TANKS |
| #30 | IMPORTATION OF FILL MATERIAL OF UNKNOWN QUALITY |
| #31 | INK MANUFACTURING, PROCESSING AND BULK STORAGE |
| #34 | METAL FABRICATION |
| #37 | OPERATION OF DRY CLEANING EQUIPMENT (WHERE CHEMICALS ARE USED) |
| #39 | PAINTS MANUFACTURING, PROCESSING AND BULK STORAGE |
| #44 | PORT ACTIVITIES, INCLUDING OPERATION AND MAINTENANCE OF WHARVES AND DOCKS |
| #46 | RAIL YARDS, TRACKS AND SPURS |
| #53 | TANNERY |
| #55 | TRANSFORMER MANUFACTURING, PROCESSING AND USE |
| #58 | WASTE DISPOSAL AND WASTE MANAGEMENT, INCLUDING THERMAL TREATMENT, LANDFILLING AND TRANSFER OF WASTE, OTHER THAN USE OF BIOSOILS AS SOIL CONDITIONERS |
| A | NOT APPLICABLE - SPILL |
| B | NOT APPLICABLE - ROAD SALT APPLICATION |




**LEGEND:**

- APPROXIMATE EXTENT OF THE PHASE ONE PROPERTY
- 250m AREA OF ASSESSMENT
- **MTC** MULTI-TENANT COMMERCIAL
- **MTR** MULTI-TENANT RESIDENTIAL
- (00) IDENTIFIED PCA CONTRIBUTING TO AN APEC AT THE SITE
- (00) IDENTIFIED PCA NOT CONTRIBUTING TO AN APEC AT THE SITE
- △ ABOVE GROUND STORAGE TANK
- UNDER GROUND STORAGE TANK

0m — 100m
SCALE


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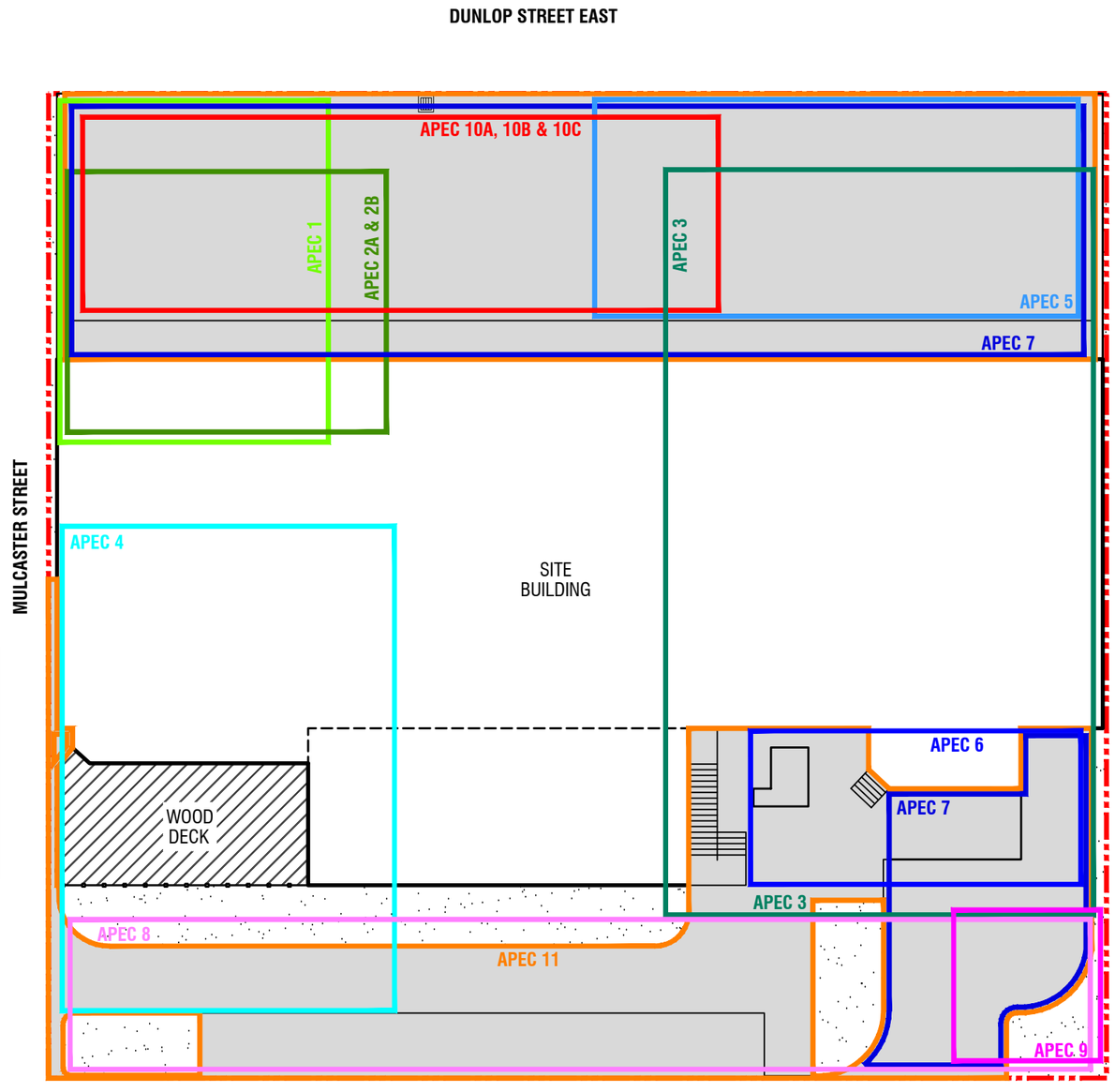

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CHECKED: N. WRIGHT
DATE: APRIL 2024

CLIENT: DUNLOP DEVELOPMENTS (BARRIE) INC.
SITE ADDRESS: 149-153 DUNLOP ST EAST, BARRIE, ONTARIO

REPORT NAME: PHASE TWO ENVIRONMENTAL SITE ASSESSMENT

FIGURE NAME: PHASE ONE CONCEPTUAL SITE MODEL
PROJECT No: 20-0052.04
FIGURE No: 5

| Report PCA # / APEC # | O. Reg. 153/04 PCA # and Description | Location | Description | Potential Media Impacted |
|---|---|---|---|---|
| 1 | #39 – Paints Manufacturing, Processing and Bulk Storage | On-Site PCA. APEC on the northwest side. | Former carriage paint shop | Soil, Groundwater |
| 2A | #28 - Gasoline and Associated Products Storage in Fixed Tanks | On-Site PCA. APEC on the northwest side. | Former gasoline service station | Soil, Groundwater |
| 2B | #27 - Garages and Maintenance and Repair of Railcars, Marine Vehicles and Aviation Vehicles | On-Site PCA. APEC on the northwest side. | Former automotive repair garage | Soil, Groundwater |
| 3 | #27 - Garages and Maintenance and Repair of Railcars, Marine Vehicles and Aviation Vehicles | On-Site PCA. APEC on the east side. | Former automotive repair garage | Soil, Groundwater |
| 4 | #27 - Garages and Maintenance and Repair of Railcars, Marine Vehicles and Aviation Vehicles | On-Site PCA. APEC on the southwest side. | Former small engine repair garage | Soil, Groundwater |
| 5 | #28 - Gasoline and Associated Products Storage in Fixed Tanks | On-Site PCA. APEC on the northeast side. | Former gasoline service station | Soil, Groundwater |
| 6 | #28 – Gasoline and Associated Products Storage in Fixed Tanks | On-Site PCA. APEC on the southeast side. | Former heating oil AST | Soil |
| 7 | #30 – Importation of Fill Material of Unknown Quality | On-Site PCA. APEC on the north side. | Presence of fill of unknown quality | Soil |
| 8 | #46 - Rail Yards, Tracks and Spurs | Off-Site PCA. APEC on south side. | Former rail spur and tracks to the south | Soil |
| 9 | #55 - Transformer Manufacturing, Processing and Use | Off-Site PCA. APEC on southeast side. | Pad-mounted transformer to the southwest | Soil |
| 10A | #34 – Metal Fabrication | Off-Site PCA. APEC on north side. | Former machine shop to the north | Groundwater |
| 10B | #31 - Ink Manufacturing, Processing and Bulk Storage | Off-Site PCA. APEC on north side. | Former commercial printing service and associated hazardous waste generation | Groundwater |
| 10C | #58 - Waste Disposal and Waste Management, including thermal treatment, landfilling and transfer of waste, other than use of biosoils as soil conditioners | Off-Site PCA. APEC on north side. | | Groundwater |
| 11 | Not Applicable – Road Salt Application | On-Site PCA. APEC on exterior areas. | Road salt may have been applied to exterior paved areas | Not Applicable |




INFERRED NEAR-SURFACE GROUNDWATER FLOW DIRECTION

N

**LEGEND:**

- APPROXIMATE EXTENT OF THE PHASE ONE PROPERTY
- CATCH BASIN
- LANDSCAPED AREA
- PAVED AREA

0m 10m
SCALE

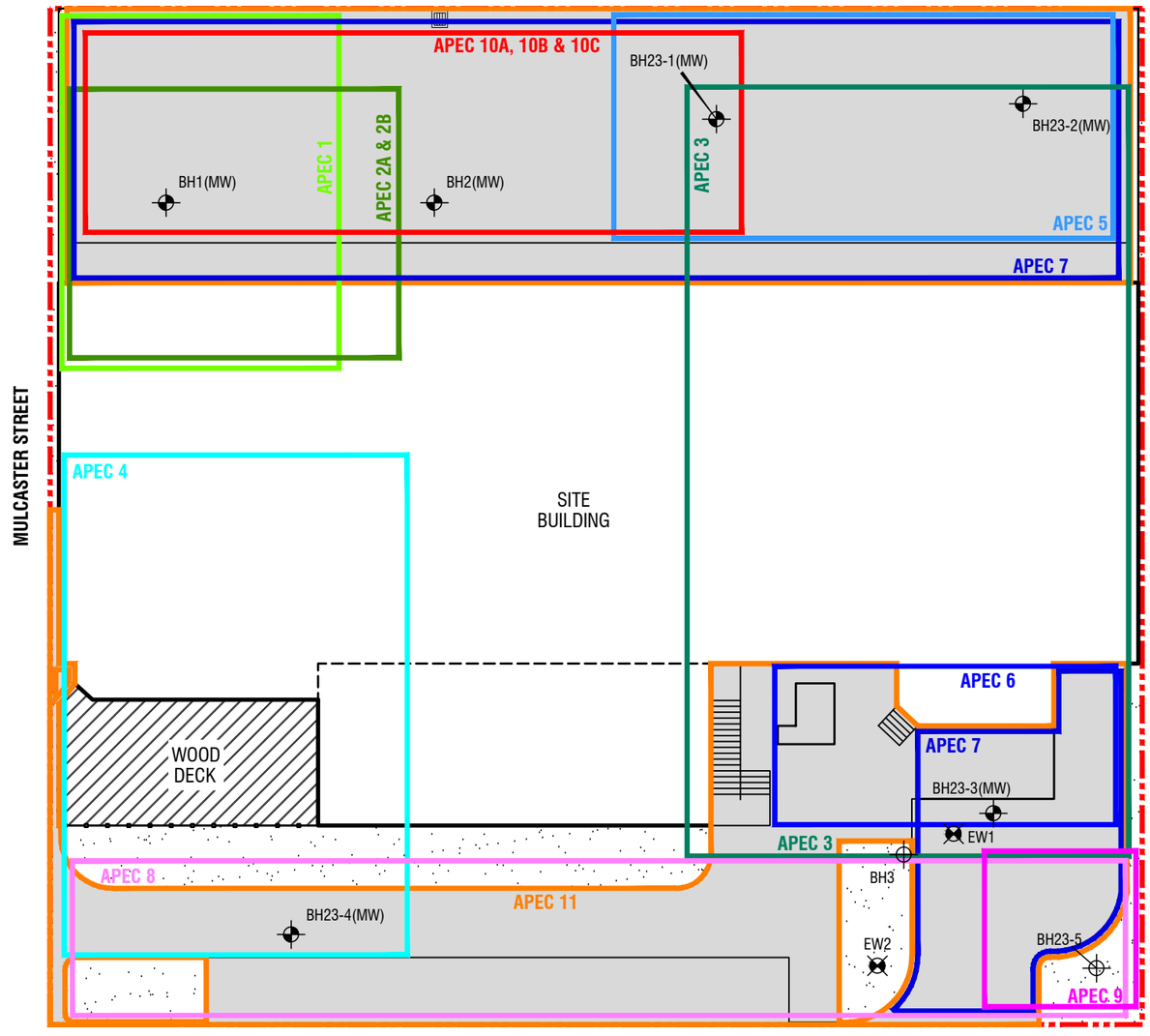

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DATE: APRIL 2024

CLIENT: DUNLOP DEVELOPMENTS (BARRIE) INC.
SITE ADDRESS: 149-153 DUNLOP ST EAST, BARRIE, ONTARIO

REPORT NAME: PHASE TWO ENVIRONMENTAL SITE ASSESSMENT

FIGURE NAME: PHASE ONE CONCEPTUAL SITE MODEL – EXPANDED VIEW
PROJECT No: 20-0052.04
FIGURE No: 6




**LEGEND:**

- APPROXIMATE EXTENT OF THE PHASE TWO PROPERTY
- CATCH BASIN
- LANDSCAPED AREA
- PAVED AREA
- MONITORING WELL BY OTHERS
- WATTERS ENVIRONMENTAL MONITORING WELL LOCATION
- WATTERS ENVIRONMENTAL BOREHOLE LOCATION

0m — 10m
SCALE

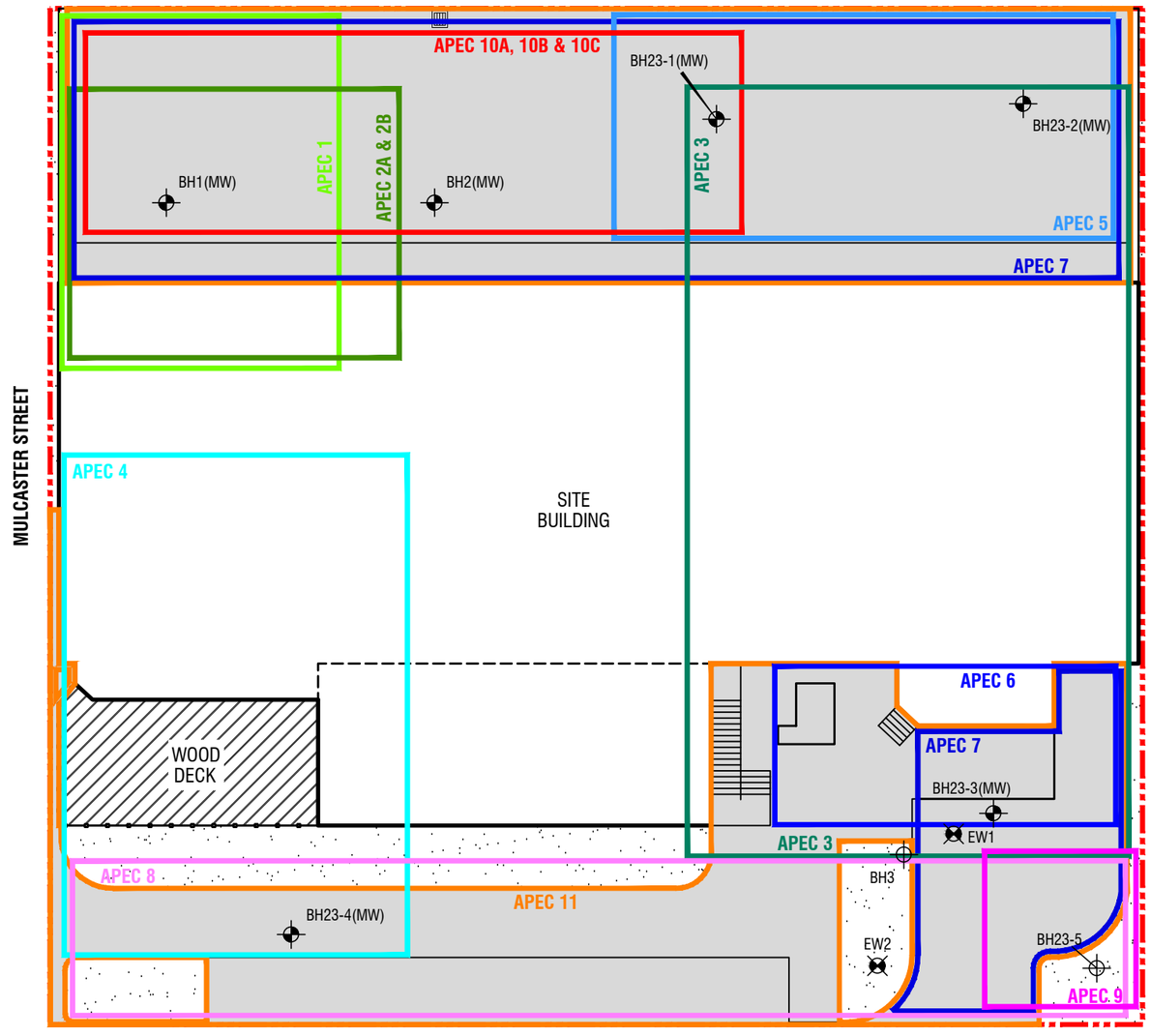
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SITE ADDRESS: 149-153 DUNLOP ST EAST, BARRIE, ONTARIO

REPORT NAME: PHASE TWO ENVIRONMENTAL SITE ASSESSMENT

FIGURE NAME: BOREHOLE / MONITORING WELL LOCATION PLAN
PROJECT No: 20-0052.04
FIGURE No: 7




**LEGEND:**

- APPROXIMATE EXTENT OF THE PHASE TWO PROPERTY
- CATCH BASIN
- LANDSCAPED AREA
- PAVED AREA
- MONITORING WELL BY OTHERS
- WATTERS ENVIRONMENTAL MONITORING WELL LOCATION
- WATTERS ENVIRONMENTAL BOREHOLE LOCATION

0m 10m
SCALE

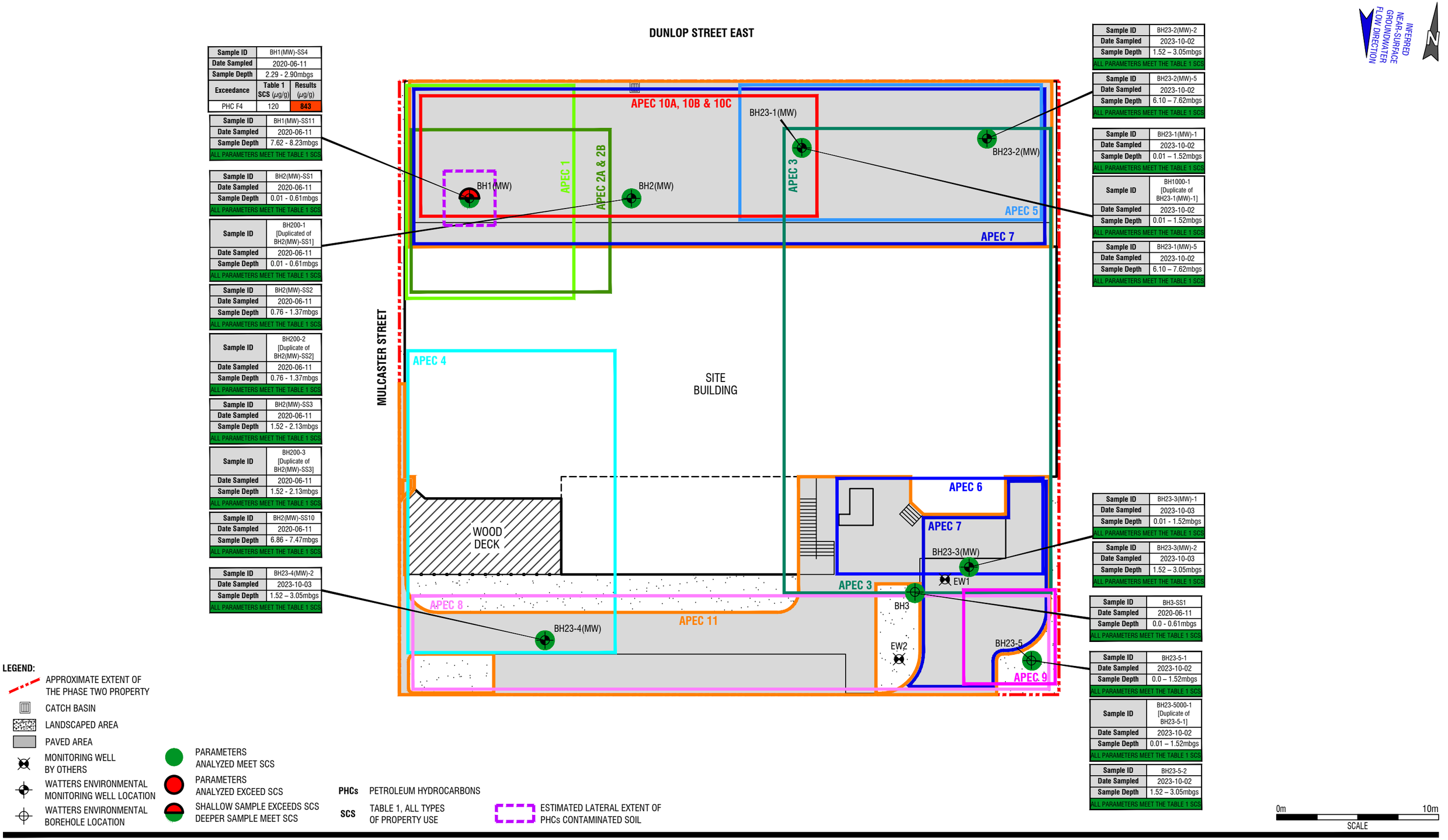
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SITE ADDRESS: 149-153 DUNLOP ST EAST, BARRIE, ONTARIO

REPORT NAME: PHASE TWO ENVIRONMENTAL SITE ASSESSMENT

FIGURE NAME: GROUNDWATER CONTOURS
PROJECT No: 20-0052.04
FIGURE No: 8




| Sample ID | BH1(MW)-SS4 | |
|---|---|---|
| Date Sampled | 2020-06-11 | |
| Sample Depth | 2.29 - 2.90mbgs | |
| Exceedance | Table 1 SCS (µg/g) | Results (µg/g) |
| PHC F4 | 120 | 843 |

| Sample ID | BH1(MW)-SS11 |
|---|---|
| Date Sampled | 2020-06-11 |
| Sample Depth | 7.62 - 8.23mbgs |
| ALL PARAMETERS MEET THE TABLE 1 SCS | |

| Sample ID | BH2(MW)-SS1 |
|---|---|
| Date Sampled | 2020-06-11 |
| Sample Depth | 0.01 - 0.61mbgs |
| ALL PARAMETERS MEET THE TABLE 1 SCS | |

| Sample ID | BH200-1 [Duplicated of BH2(MW)-SS1] |
|---|---|
| Date Sampled | 2020-06-11 |
| Sample Depth | 0.01 - 0.61mbgs |
| ALL PARAMETERS MEET THE TABLE 1 SCS | |

| Sample ID | BH2(MW)-SS2 |
|---|---|
| Date Sampled | 2020-06-11 |
| Sample Depth | 0.76 - 1.37mbgs |
| ALL PARAMETERS MEET THE TABLE 1 SCS | |

| Sample ID | BH200-2 [Duplicate of BH2(MW)-SS2] |
|---|---|
| Date Sampled | 2020-06-11 |
| Sample Depth | 0.76 - 1.37mbgs |
| ALL PARAMETERS MEET THE TABLE 1 SCS | |

| Sample ID | BH2(MW)-SS3 |
|---|---|
| Date Sampled | 2020-06-11 |
| Sample Depth | 1.52 - 2.13mbgs |
| ALL PARAMETERS MEET THE TABLE 1 SCS | |

| Sample ID | BH200-3 [Duplicate of BH2(MW)-SS3] |
|---|---|
| Date Sampled | 2020-06-11 |
| Sample Depth | 1.52 - 2.13mbgs |
| ALL PARAMETERS MEET THE TABLE 1 SCS | |

| Sample ID | BH2(MW)-SS10 |
|---|---|
| Date Sampled | 2020-06-11 |
| Sample Depth | 6.86 - 7.47mbgs |
| ALL PARAMETERS MEET THE TABLE 1 SCS | |

| Sample ID | BH23-4(MW)-2 |
|---|---|
| Date Sampled | 2023-10-03 |
| Sample Depth | 1.52 – 3.05mbgs |
| ALL PARAMETERS MEET THE TABLE 1 SCS | |

| Sample ID | BH23-2(MW)-2 |
|---|---|
| Date Sampled | 2023-10-02 |
| Sample Depth | 1.52 – 3.05mbgs |
| ALL PARAMETERS MEET THE TABLE 1 SCS | |

| Sample ID | BH23-2(MW)-5 |
|---|---|
| Date Sampled | 2023-10-02 |
| Sample Depth | 6.10 – 7.62mbgs |
| ALL PARAMETERS MEET THE TABLE 1 SCS | |

| Sample ID | BH23-1(MW)-1 |
|---|---|
| Date Sampled | 2023-10-02 |
| Sample Depth | 0.01 – 1.52mbgs |
| ALL PARAMETERS MEET THE TABLE 1 SCS | |

| Sample ID | BH1000-1 [Duplicate of BH23-1(MW)-1] |
|---|---|
| Date Sampled | 2023-10-02 |
| Sample Depth | 0.01 – 1.52mbgs |
| ALL PARAMETERS MEET THE TABLE 1 SCS | |

| Sample ID | BH23-1(MW)-5 |
|---|---|
| Date Sampled | 2023-10-02 |
| Sample Depth | 6.10 – 7.62mbgs |
| ALL PARAMETERS MEET THE TABLE 1 SCS | |

| Sample ID | BH23-3(MW)-1 |
|---|---|
| Date Sampled | 2023-10-03 |
| Sample Depth | 0.01 - 1.52mbgs |
| ALL PARAMETERS MEET THE TABLE 1 SCS | |

| Sample ID | BH23-3(MW)-2 |
|---|---|
| Date Sampled | 2023-10-03 |
| Sample Depth | 1.52 – 3.05mbgs |
| ALL PARAMETERS MEET THE TABLE 1 SCS | |

| Sample ID | BH3-SS1 |
|---|---|
| Date Sampled | 2020-06-11 |
| Sample Depth | 0.0 - 0.61mbgs |
| ALL PARAMETERS MEET THE TABLE 1 SCS | |

| Sample ID | BH23-5-1 |
|---|---|
| Date Sampled | 2023-10-02 |
| Sample Depth | 0.0 – 1.52mbgs |
| ALL PARAMETERS MEET THE TABLE 1 SCS | |

| Sample ID | BH23-5000-1 [Duplicate of BH23-5-1] |
|---|---|
| Date Sampled | 2023-10-02 |
| Sample Depth | 0.01 – 1.52mbgs |
| ALL PARAMETERS MEET THE TABLE 1 SCS | |

| Sample ID | BH23-5-2 |
|---|---|
| Date Sampled | 2023-10-02 |
| Sample Depth | 1.52 – 3.05mbgs |
| ALL PARAMETERS MEET THE TABLE 1 SCS | |

**LEGEND:**

- APPROXIMATE EXTENT OF THE PHASE TWO PROPERTY
- CATCH BASIN
- LANDSCAPED AREA
- PAVED AREA
- MONITORING WELL BY OTHERS
- WATTERS ENVIRONMENTAL MONITORING WELL LOCATION
- WATTERS ENVIRONMENTAL BOREHOLE LOCATION
- PARAMETERS ANALYZED MEET SCS
- PARAMETERS ANALYZED EXCEED SCS
- SHALLOW SAMPLE EXCEEDS SCS DEEPER SAMPLE MEET SCS

**PHCs** PETROLEUM HYDROCARBONS

**SCS** TABLE 1, ALL TYPES OF PROPERTY USE

ESTIMATED LATERAL EXTENT OF PHCs CONTAMINATED SOIL

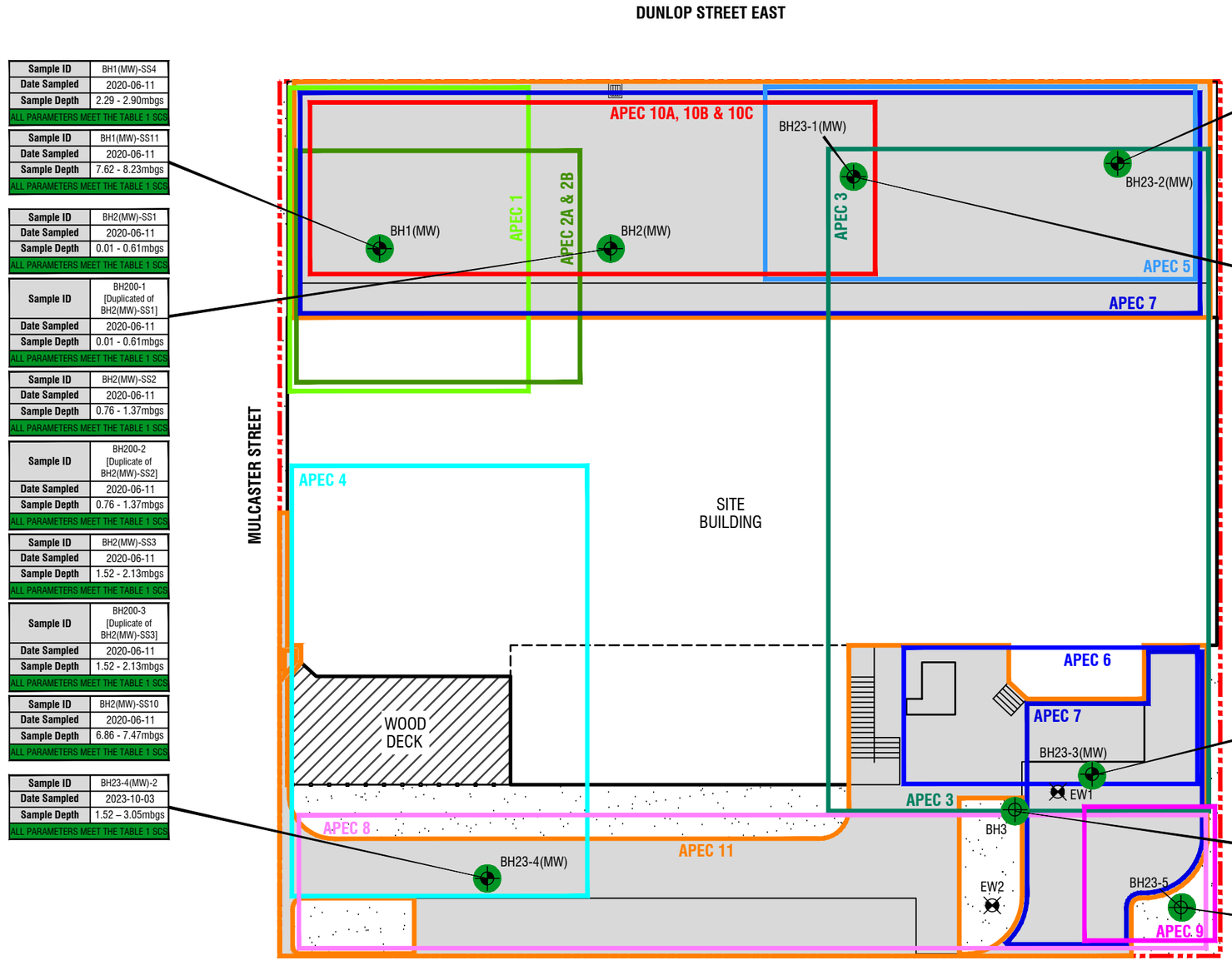
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CLIENT: DUNLOP DEVELOPMENTS (BARRIE) INC.
SITE ADDRESS: 149-153 DUNLOP ST EAST, BARRIE, ONTARIO

REPORT NAME: PHASE TWO ENVIRONMENTAL SITE ASSESSMENT

FIGURE NAME: ANALYTIC RESULTS IN SOIL - PHCs
PROJECT No: 20-0052.04
FIGURE No: 9A




| Sample ID | BH1(MW)-SS4 |
|---|---|
| Date Sampled | 2020-06-11 |
| Sample Depth | 2.29 - 2.90mbgs |
| ALL PARAMETERS MEET THE TABLE 1 SCS | |

| Sample ID | BH1(MW)-SS11 |
|---|---|
| Date Sampled | 2020-06-11 |
| Sample Depth | 7.62 - 8.23mbgs |
| ALL PARAMETERS MEET THE TABLE 1 SCS | |

| Sample ID | BH2(MW)-SS1 |
|---|---|
| Date Sampled | 2020-06-11 |
| Sample Depth | 0.01 - 0.61mbgs |
| ALL PARAMETERS MEET THE TABLE 1 SCS | |

| Sample ID | BH200-1 [Duplicated of BH2(MW)-SS1] |
|---|---|
| Date Sampled | 2020-06-11 |
| Sample Depth | 0.01 - 0.61mbgs |
| ALL PARAMETERS MEET THE TABLE 1 SCS | |

| Sample ID | BH2(MW)-SS2 |
|---|---|
| Date Sampled | 2020-06-11 |
| Sample Depth | 0.76 - 1.37mbgs |
| ALL PARAMETERS MEET THE TABLE 1 SCS | |

| Sample ID | BH200-2 [Duplicate of BH2(MW)-SS2] |
|---|---|
| Date Sampled | 2020-06-11 |
| Sample Depth | 0.76 - 1.37mbgs |
| ALL PARAMETERS MEET THE TABLE 1 SCS | |

| Sample ID | BH2(MW)-SS3 |
|---|---|
| Date Sampled | 2020-06-11 |
| Sample Depth | 1.52 - 2.13mbgs |
| ALL PARAMETERS MEET THE TABLE 1 SCS | |

| Sample ID | BH200-3 [Duplicate of BH2(MW)-SS3] |
|---|---|
| Date Sampled | 2020-06-11 |
| Sample Depth | 1.52 - 2.13mbgs |
| ALL PARAMETERS MEET THE TABLE 1 SCS | |

| Sample ID | BH2(MW)-SS10 |
|---|---|
| Date Sampled | 2020-06-11 |
| Sample Depth | 6.86 - 7.47mbgs |
| ALL PARAMETERS MEET THE TABLE 1 SCS | |

| Sample ID | BH23-4(MW)-2 |
|---|---|
| Date Sampled | 2023-10-03 |
| Sample Depth | 1.52 – 3.05mbgs |
| ALL PARAMETERS MEET THE TABLE 1 SCS | |

| Sample ID | BH23-2(MW)-2 |
|---|---|
| Date Sampled | 2023-10-02 |
| Sample Depth | 1.52 – 3.05mbgs |
| ALL PARAMETERS MEET THE TABLE 1 SCS | |

| Sample ID | BH23-2(MW)-5 |
|---|---|
| Date Sampled | 2023-10-02 |
| Sample Depth | 6.10 – 7.62mbgs |
| ALL PARAMETERS MEET THE TABLE 1 SCS | |

| Sample ID | BH23-1(MW)-1 |
|---|---|
| Date Sampled | 2023-10-02 |
| Sample Depth | 0.01 – 1.52mbgs |
| ALL PARAMETERS MEET THE TABLE 1 SCS | |

| Sample ID | BH1000-1 [Duplicate of BH23-1(MW)-1] |
|---|---|
| Date Sampled | 2023-10-02 |
| Sample Depth | 0.01 – 1.52mbgs |
| ALL PARAMETERS MEET THE TABLE 1 SCS | |

| Sample ID | BH23-1(MW)-5 |
|---|---|
| Date Sampled | 2023-10-02 |
| Sample Depth | 6.10 – 7.62mbgs |
| ALL PARAMETERS MEET THE TABLE 1 SCS | |

| Sample ID | BH23-3(MW)-1 |
|---|---|
| Date Sampled | 2023-10-03 |
| Sample Depth | 0.01 - 1.52mbgs |
| ALL PARAMETERS MEET THE TABLE 1 SCS | |

| Sample ID | BH23-3(MW)-2 |
|---|---|
| Date Sampled | 2023-10-03 |
| Sample Depth | 1.52 – 3.05mbgs |
| ALL PARAMETERS MEET THE TABLE 1 SCS | |

| Sample ID | BH3-SS1 |
|---|---|
| Date Sampled | 2020-06-11 |
| Sample Depth | 0.0 - 0.61mbgs |
| ALL PARAMETERS MEET THE TABLE 1 SCS | |

| Sample ID | BH23-5-1 |
|---|---|
| Date Sampled | 2023-10-02 |
| Sample Depth | 0.0 – 1.52mbgs |
| ALL PARAMETERS MEET THE TABLE 1 SCS | |

| Sample ID | BH23-5000-1 [Duplicate of BH23-5-1] |
|---|---|
| Date Sampled | 2023-10-02 |
| Sample Depth | 0.01 – 1.52mbgs |
| ALL PARAMETERS MEET THE TABLE 1 SCS | |

| Sample ID | BH23-5-2 |
|---|---|
| Date Sampled | 2023-10-02 |
| Sample Depth | 1.52 – 3.05mbgs |
| ALL PARAMETERS MEET THE TABLE 1 SCS | |

INFERRED NEAR-SURFACE GROUNDWATER FLOW DIRECTION

N

**LEGEND:**

- APPROXIMATE EXTENT OF THE PHASE TWO PROPERTY
- CATCH BASIN
- LANDSCAPED AREA
- PAVED AREA
- MONITORING WELL BY OTHERS
- WATTERS ENVIRONMENTAL MONITORING WELL LOCATION
- WATTERS ENVIRONMENTAL BOREHOLE LOCATION
- PARAMETERS ANALYZED MEET SCS
- PARAMETERS ANALYZED EXCEED SCS
- SHALLOW SAMPLE EXCEEDS SCS DEEPER SAMPLE MEET SCS

| | |
|---|---|
| VOCs | VOLATILE ORGANIC COMPOUNDS |
| BTEX | BENZENE, TOLUENE, ETHYLBENZENE, XYLENES |
| THMs | TRIHALOMETHANES |
| SCS | TABLE 1, ALL TYPES OF PROPERTY USE |

0m 10m
SCALE

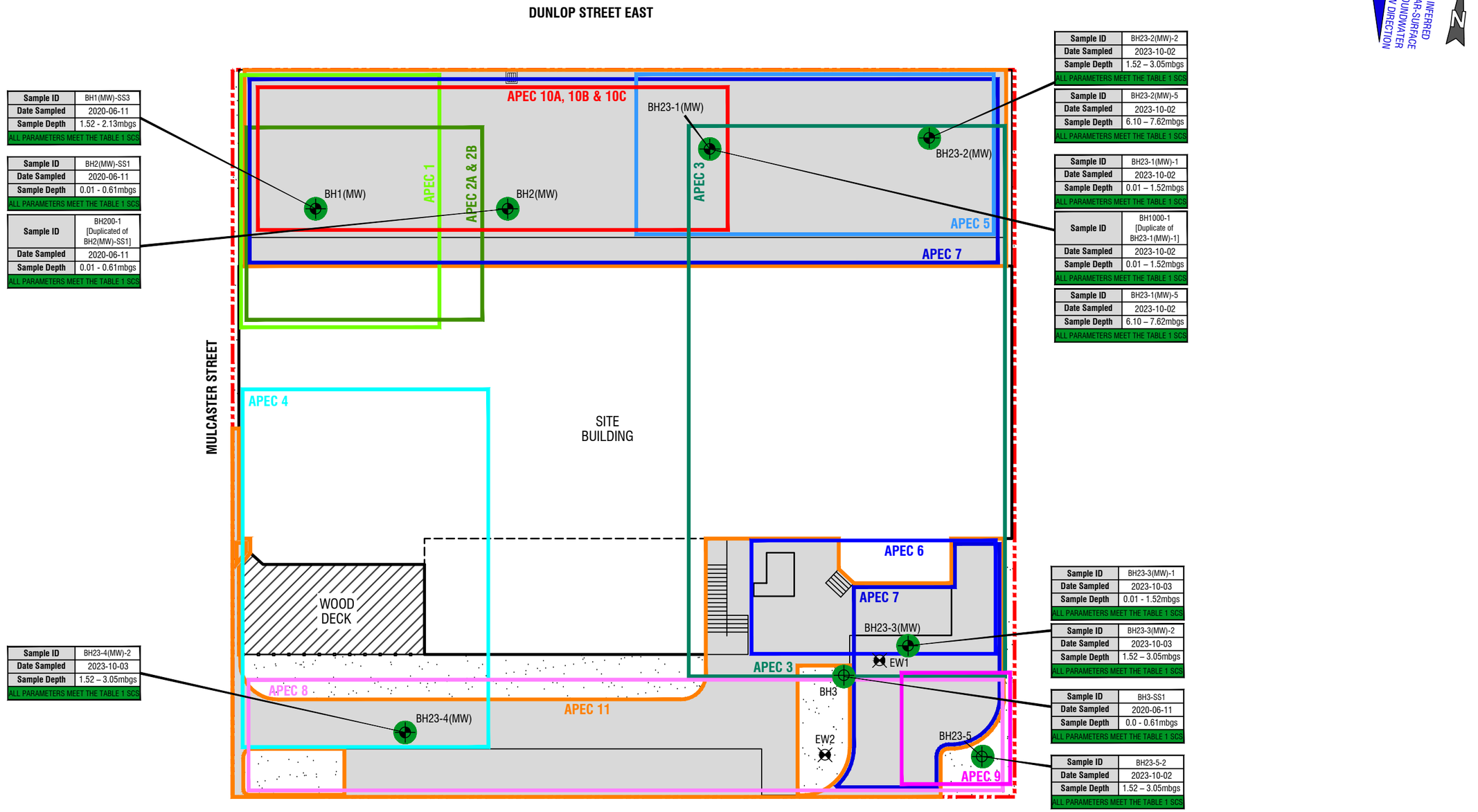

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DRAWN: B. CALDERONE
CHECKED: N. WRIGHT
DATE: APRIL 2024

CLIENT: DUNLOP DEVELOPMENTS (BARRIE) INC.
SITE ADDRESS: 149-153 DUNLOP ST EAST, BARRIE, ONTARIO

REPORT NAME: PHASE TWO ENVIRONMENTAL SITE ASSESSMENT

FIGURE NAME: ANALYTIC RESULTS IN SOIL - VOCs, THMs, BTEX
PROJECT No: 20-0052.04
FIGURE No: 9B




**LEGEND:**

- APPROXIMATE EXTENT OF THE PHASE TWO PROPERTY
- CATCH BASIN
- LANDSCAPED AREA
- PAVED AREA
- MONITORING WELL BY OTHERS
- WATTERS ENVIRONMENTAL MONITORING WELL LOCATION
- WATTERS ENVIRONMENTAL BOREHOLE LOCATION
- PARAMETERS ANALYZED MEET SCS
- PARAMETERS ANALYZED EXCEED SCS
- SHALLOW SAMPLE EXCEEDS SCS DEEPER SAMPLE MEET SCS

**ORPs** OTHER REGULATED PARAMETERS (BORON (HWS), CYANIDE, HEXAVALENT CHROMIUM, MERCURY, ELECTRICAL CONDUCTIVITY, SODIUM ADSORPTION RATIO, pH)

**METALS** INCLUDES: METALS AND HYDRIDE-FORMING METALS (ARSENIC, ANTIMONY, SELENIUM)

**SCS** TABLE 1, ALL TYPES OF PROPERTY USE

0m 10m
SCALE

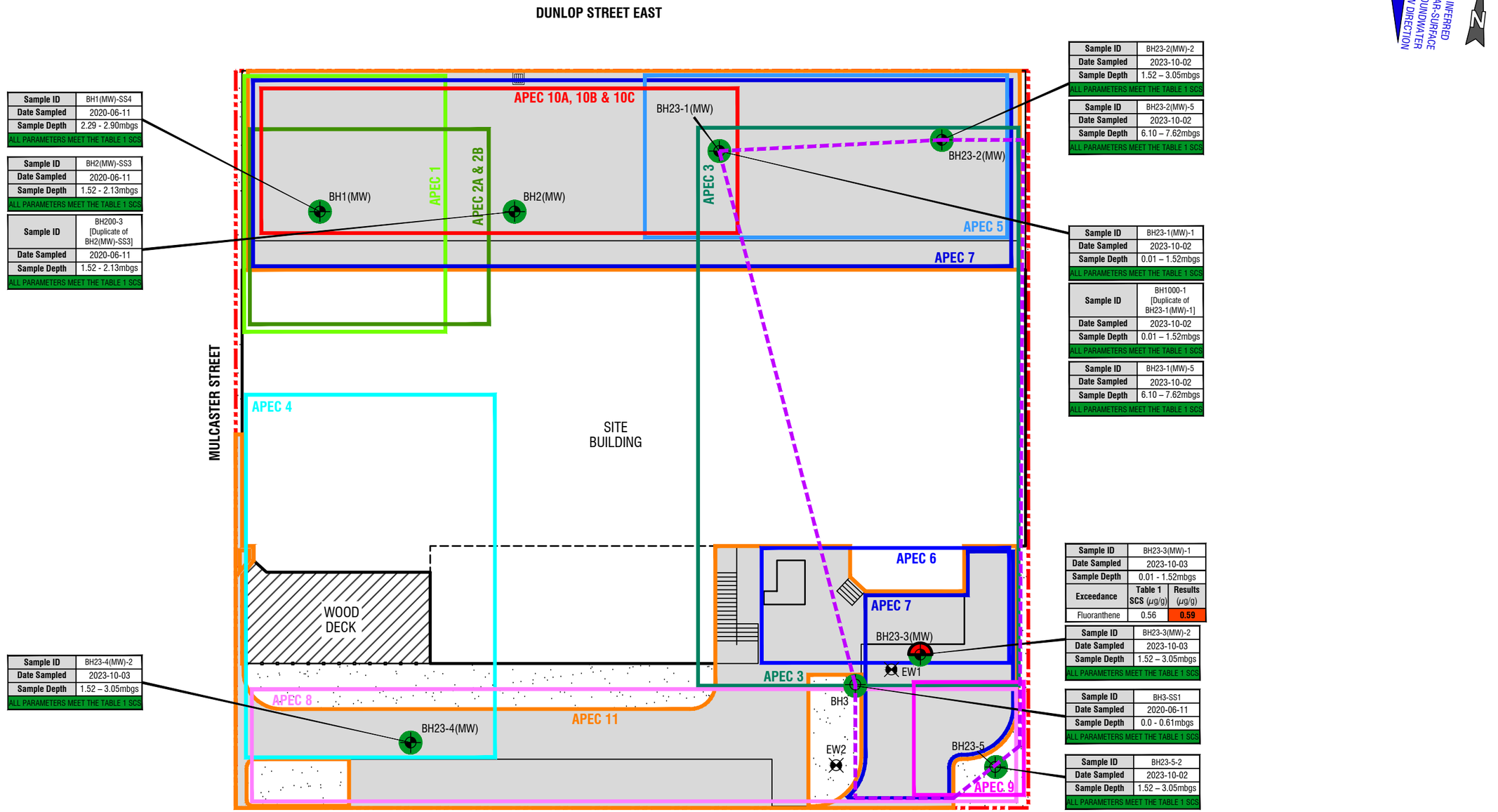
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CLIENT: DUNLOP DEVELOPMENTS (BARRIE) INC.
SITE ADDRESS: 149-153 DUNLOP ST EAST, BARRIE, ONTARIO

REPORT NAME: PHASE TWO ENVIRONMENTAL SITE ASSESSMENT

FIGURE NAME: ANALYTIC RESULTS IN SOIL - METALS, HYDRIDE-FORMING METALS, AND ORPs
PROJECT No: 20-0052.04
FIGURE No: 9C




**LEGEND:**

- APPROXIMATE EXTENT OF THE PHASE TWO PROPERTY
- CATCH BASIN
- LANDSCAPED AREA
- PAVED AREA
- MONITORING WELL BY OTHERS
- WATTERS ENVIRONMENTAL MONITORING WELL LOCATION
- WATTERS ENVIRONMENTAL BOREHOLE LOCATION
- PARAMETERS ANALYZED MEET SCS
- PARAMETERS ANALYZED EXCEED SCS
- SHALLOW SAMPLE EXCEEDS SCS DEEPER SAMPLE MEET SCS

**PAHs** POLYCYCLIC AROMATIC HYDROCARBONS

**SCS** TABLE 1, ALL TYPES OF PROPERTY USE

ESTIMATED LATERAL EXTENT OF PAHs CONTAMINATED SOIL

0m 10m
SCALE

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SITE ADDRESS: 149-153 DUNLOP ST EAST, BARRIE, ONTARIO

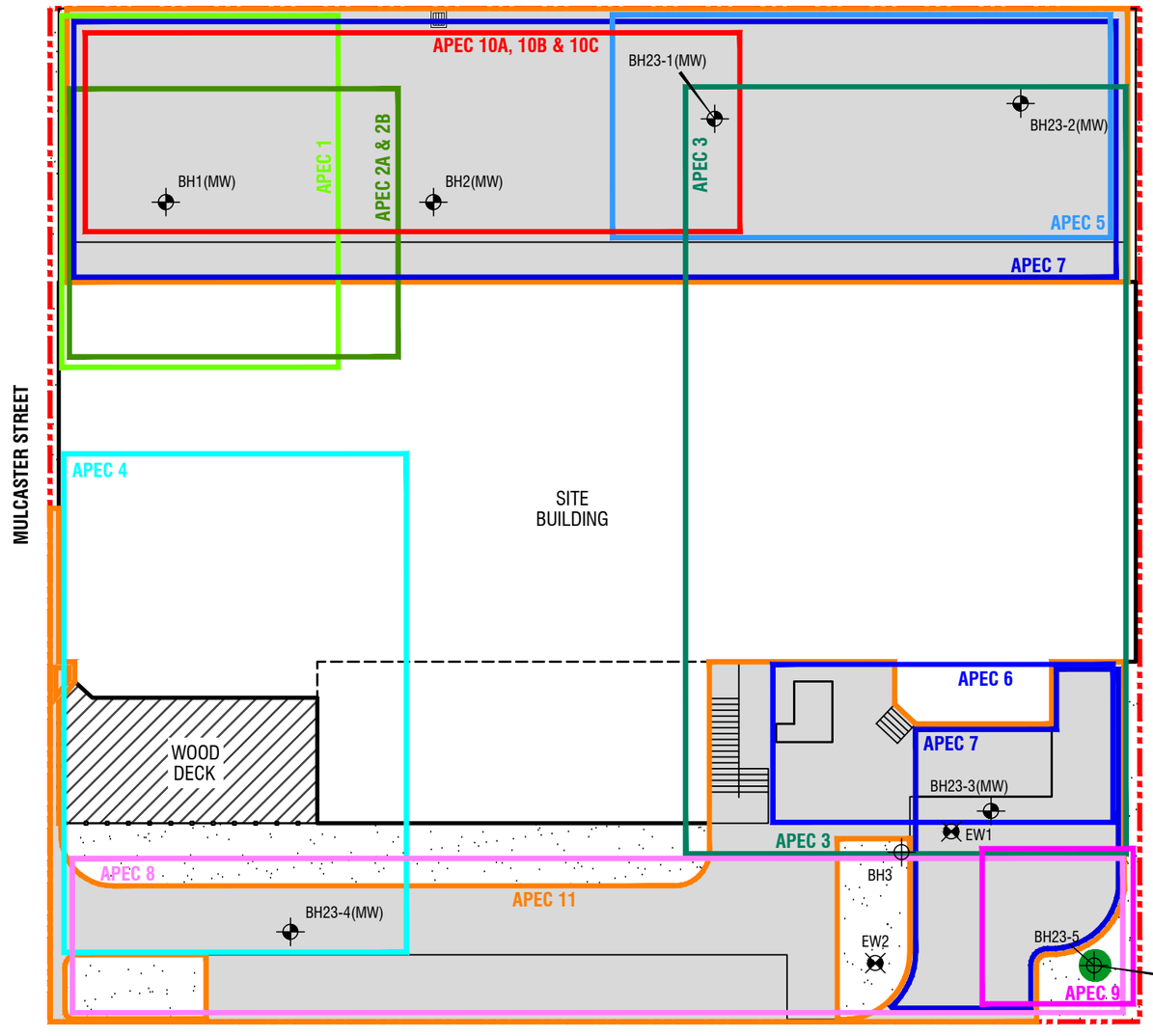
REPORT NAME: PHASE TWO ENVIRONMENTAL SITE ASSESSMENT

FIGURE NAME: ANALYTIC RESULTS IN SOIL - PAHs
PROJECT No: 20-0052.04
FIGURE No: 9D

INFERRED NEAR-SURFACE GROUNDWATER FLOW DIRECTION

N

DUNLOP STREET EAST




| Sample ID | BH23-5-1 |
|---|---|
| Date Sampled | 2023-10-02 |
| Sample Depth | 0.0 – 1.52mbgs |
| ALL PARAMETERS MEET THE TABLE 1 SCS | |

| Sample ID | BH23-5000-1 [Duplicate of BH23-5-1] |
|---|---|
| Date Sampled | 2023-10-02 |
| Sample Depth | 0.01 – 1.52mbgs |
| ALL PARAMETERS MEET THE TABLE 1 SCS | |

**LEGEND:**

- APPROXIMATE EXTENT OF THE PHASE TWO PROPERTY
- CATCH BASIN
- LANDSCAPED AREA
- PAVED AREA
- MONITORING WELL BY OTHERS
- WATTERS ENVIRONMENTAL MONITORING WELL LOCATION
- WATTERS ENVIRONMENTAL BOREHOLE LOCATION
- PARAMETERS ANALYZED MEET SCS
- PARAMETERS ANALYZED EXCEED SCS
- SHALLOW SAMPLE EXCEEDS SCS DEEPER SAMPLE MEET SCS

**PCBs** POLYCHLORINATED BIPHENYLS

**SCS** TABLE 1, ALL TYPES OF PROPERTY USE

0m 10m
SCALE

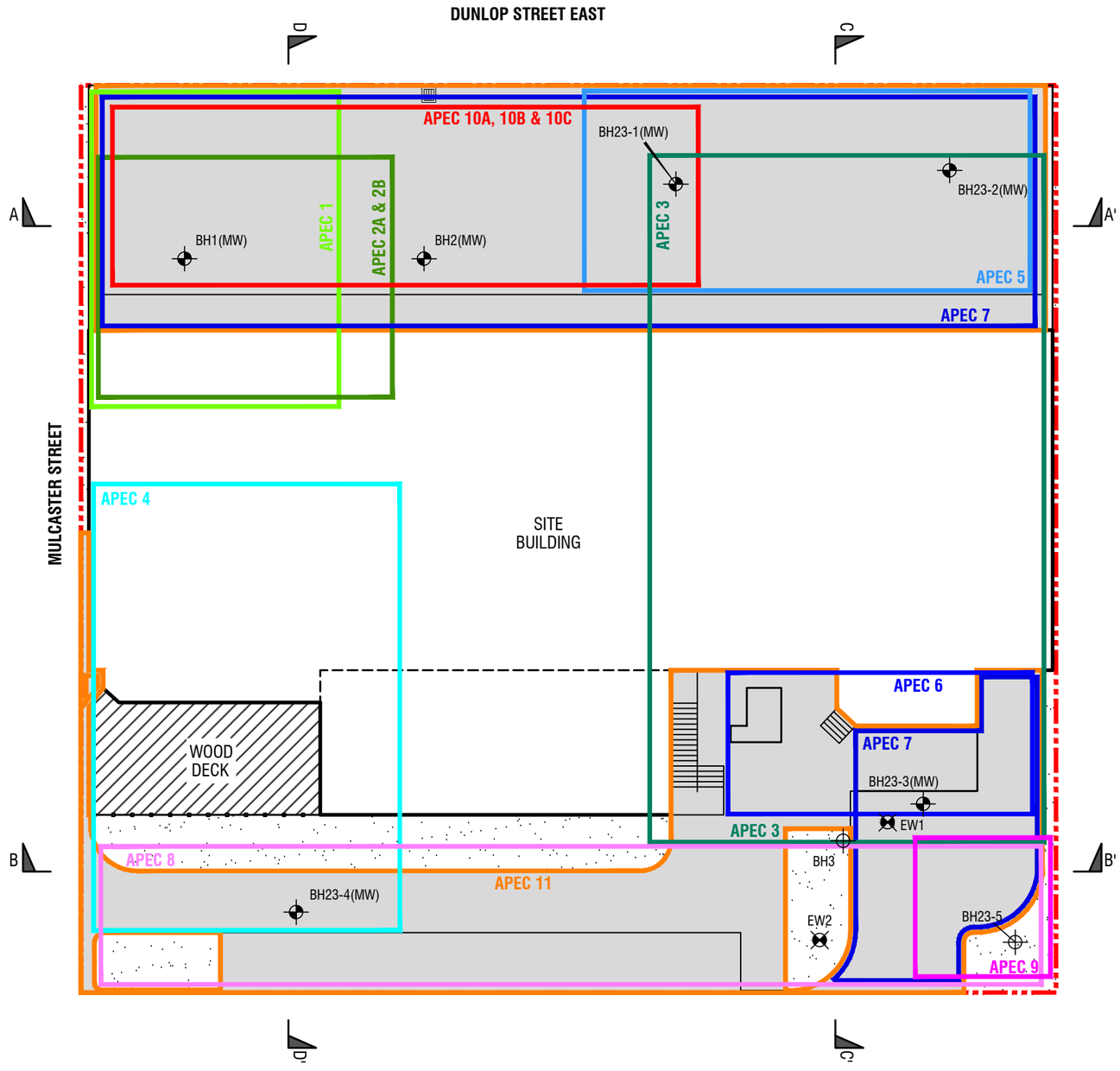

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DATE: APRIL 2024

CLIENT: DUNLOP DEVELOPMENTS (BARRIE) INC.
SITE ADDRESS: 149-153 DUNLOP ST EAST, BARRIE, ONTARIO

REPORT NAME: PHASE TWO ENVIRONMENTAL SITE ASSESSMENT

FIGURE NAME: ANALYTIC RESULTS IN SOIL - PCBs
PROJECT No: 20-0052.04
FIGURE No: 9E




**LEGEND:**

- APPROXIMATE EXTENT OF THE PHASE TWO PROPERTY
- CATCH BASIN
- LANDSCAPED AREA
- PAVED AREA
- MONITORING WELL BY OTHERS
- WATTERS ENVIRONMENTAL MONITORING WELL LOCATION
- WATTERS ENVIRONMENTAL BOREHOLE LOCATION

0m 10m
SCALE

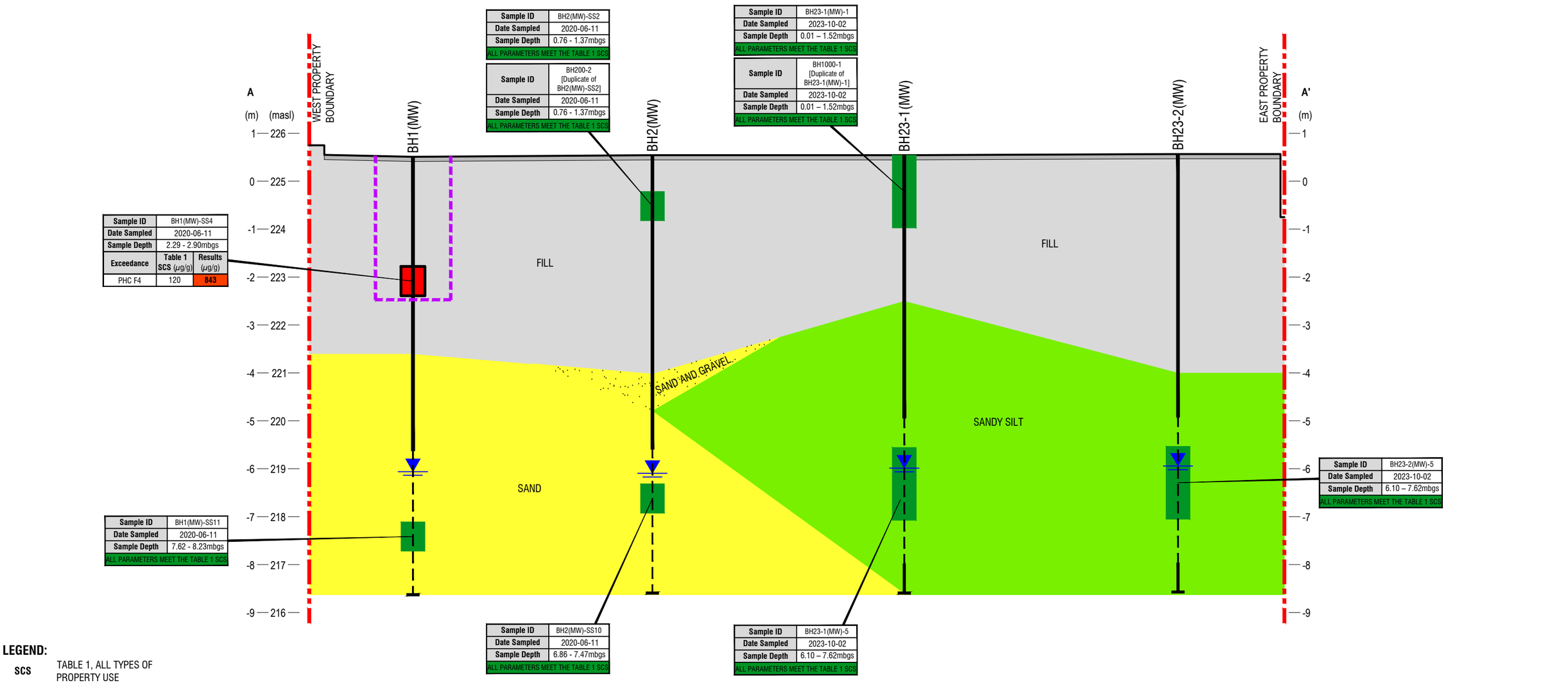
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SITE ADDRESS: 149-153 DUNLOP ST EAST, BARRIE, ONTARIO

REPORT NAME: PHASE TWO ENVIRONMENTAL SITE ASSESSMENT

FIGURE NAME: CROSS SECTION LOCATION PLAN
PROJECT No: 20-0052.04
FIGURE No: 10




**LEGEND:**

- **SCS** — TABLE 1, ALL TYPES OF PROPERTY USE
- MONITORING WELL
- SCREENED SECTION OF MONITORING WELL
- GROUNDWATER LEVEL
- **masl** — METRES ABOVE SEA LEVEL
- **mbgs** — METRES BELOW GROUND SURFACE
- **PHCs** — PETROLEUM HYDROCARBONS
- PARAMETERS ANALYZED MEET SCS
- PARAMETERS ANALYZED EXCEED SCS
- ESTIMATED VERTICAL EXTENT OF PHCs CONTAMINATED SOIL

(H) 0m — 5m
(V) 0m — 10m
SCALE

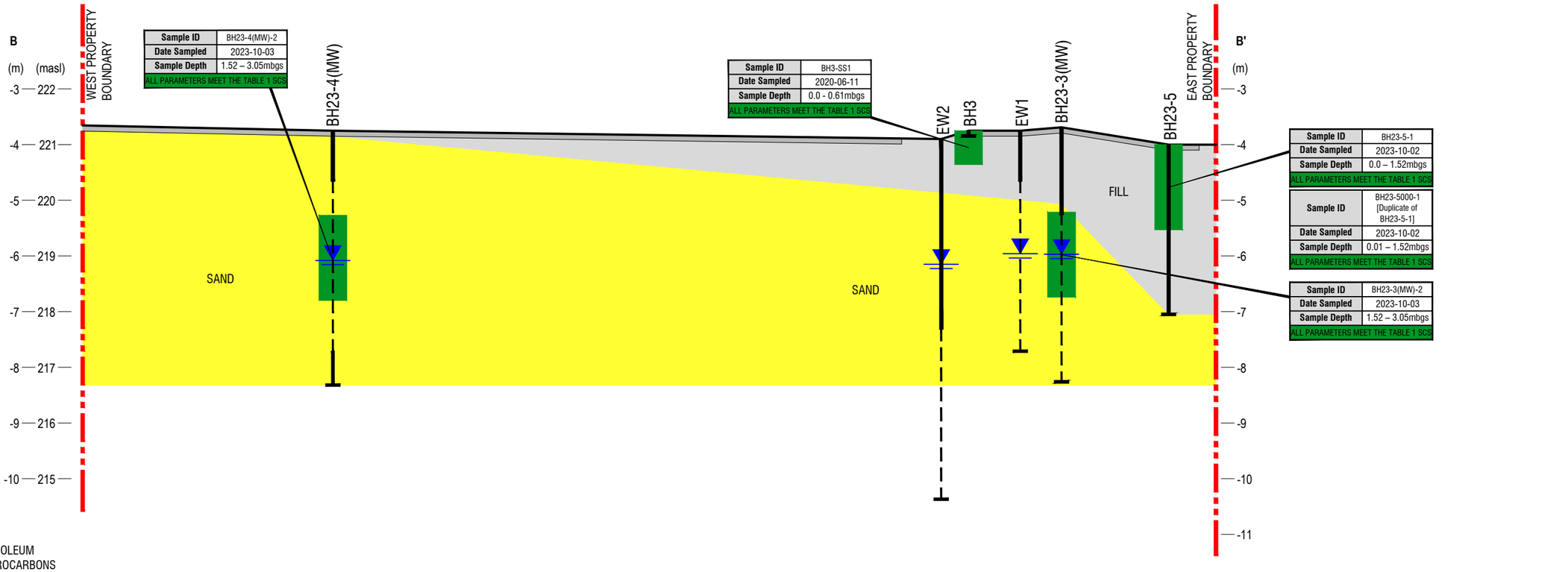

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SITE ADDRESS: 149-153 DUNLOP ST EAST, BARRIE, ONTARIO

REPORT NAME: PHASE TWO ENVIRONMENTAL SITE ASSESSMENT

FIGURE NAME: PHC EXCEEDANCES IN SOIL - CROSS SECTION A-A'
PROJECT No: 20-0052.04
FIGURE No: 11A




**LEGEND:**

- **SCS** — TABLE 1, ALL TYPES OF PROPERTY USE
- MONITORING WELL
- SCREENED SECTION OF MONITORING WELL
- GROUNDWATER LEVEL
- **masl** — METRES ABOVE SEA LEVEL
- **mbgs** — METRES BELOW GROUND SURFACE
- **PHCs** — PETROLEUM HYDROCARBONS
- PARAMETERS ANALYZED MEET SCS
- PARAMETERS ANALYZED EXCEED SCS
- **EW1** — MONITORING WELL DETAILS OBTAINED FROM WELL RECORD 7124832
- **EW2** — MONITORING WELL DEPTH OBTAINED FROM THE FIELD MEASUREMENT AND THE SCREEN LENGTH WAS INFERRED TO BE 3.05m

(H) 0m – 5m
(V) 0m – 10m
SCALE

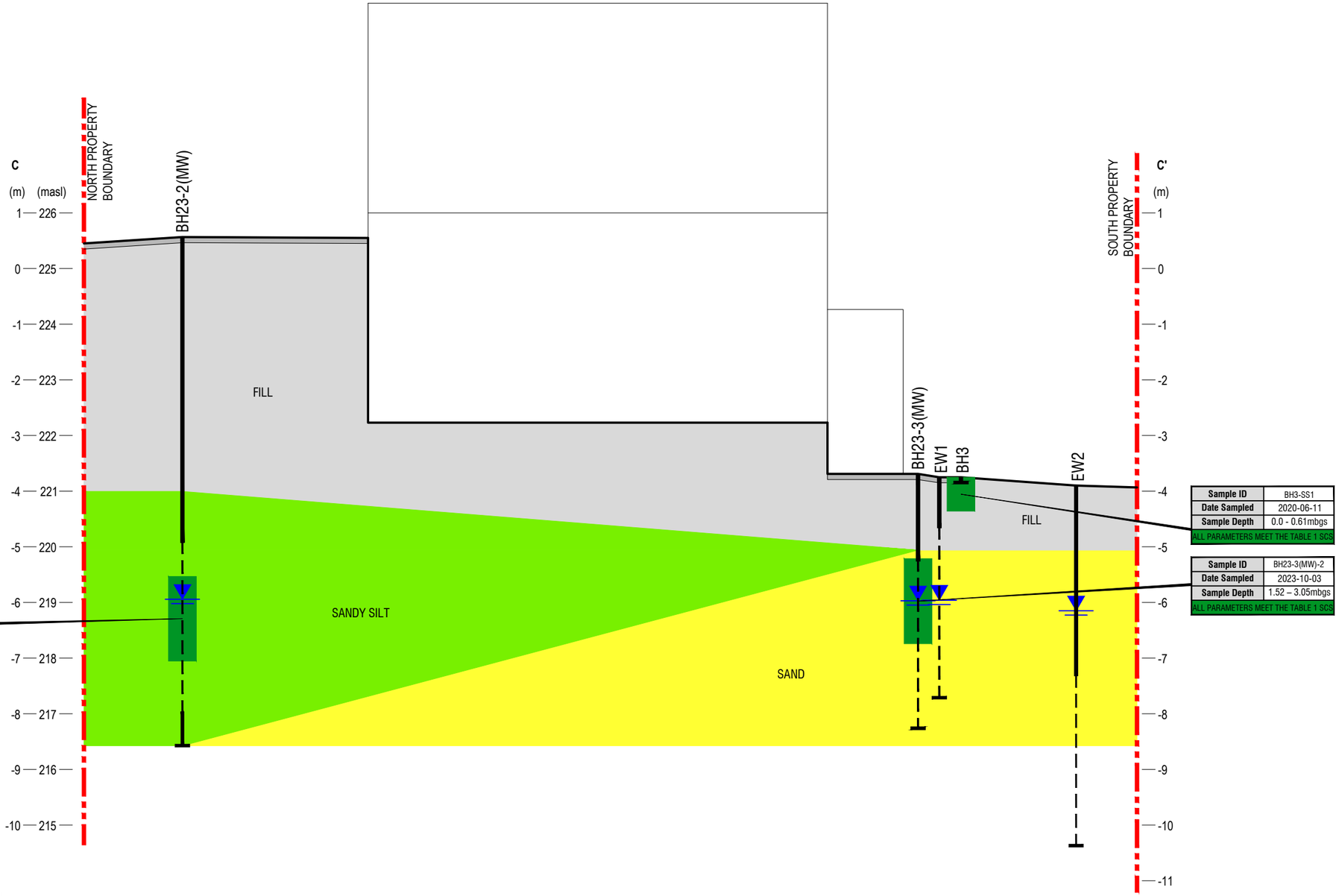
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SITE ADDRESS: 149-153 DUNLOP ST EAST, BARRIE, ONTARIO

REPORT NAME: PHASE TWO ENVIRONMENTAL SITE ASSESSMENT

FIGURE NAME: PHC EXCEEDANCES IN SOIL - CROSS SECTION B-B'
PROJECT No: 20-0052.04
FIGURE No: 11B




**LEGEND:**

- **SCS** — TABLE 1, ALL TYPES OF PROPERTY USE
- MONITORING WELL
- SCREENED SECTION OF MONITORING WELL
- GROUNDWATER LEVEL
- **masl** — METRES ABOVE SEA LEVEL
- **mbgs** — METRES BELOW GROUND SURFACE
- **PHCs** — PETROLEUM HYDROCARBONS
- PARAMETERS ANALYZED MEET SCS
- PARAMETERS ANALYZED EXCEED SCS
- **EW1** — MONITORING WELL DETAILS OBTAINED FROM WELL RECORD 7124832
- **EW2** — MONITORING WELL DEPTH OBTAINED FROM THE FIELD MEASUREMENT AND THE SCREEN LENGTH WAS INFERRED TO BE 3.05m

(H) 0m 5m
(V) 0m 10m
SCALE

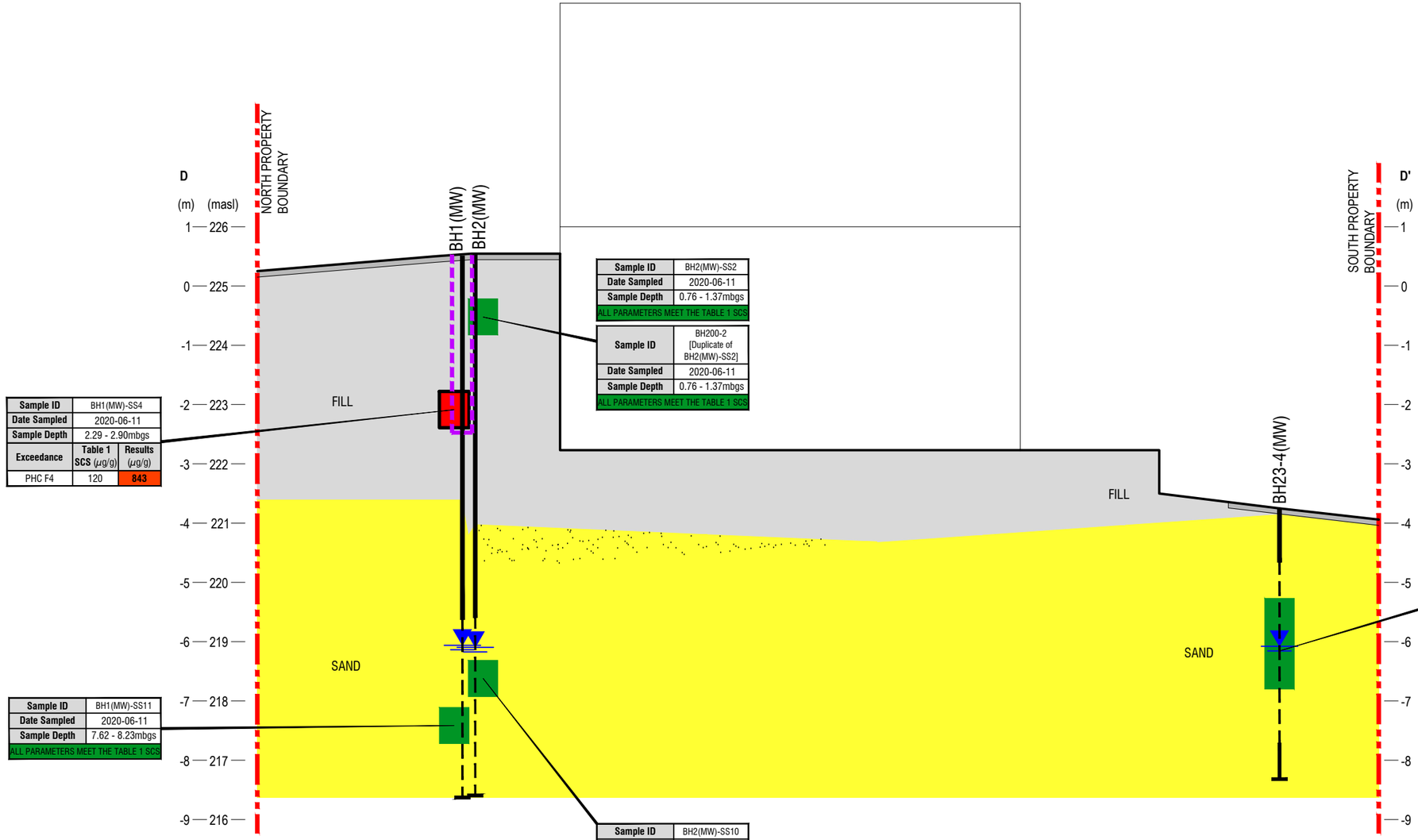
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SITE ADDRESS: 149-153 DUNLOP ST EAST, BARRIE, ONTARIO

REPORT NAME: PHASE TWO ENVIRONMENTAL SITE ASSESSMENT

FIGURE NAME: PHC EXCEEDANCES IN SOIL - CROSS SECTION C-C'
PROJECT No: 20-0052.04
FIGURE No: 11C




**LEGEND:**

- **SCS** — TABLE 1, ALL TYPES OF PROPERTY USE
- MONITORING WELL
- SCREENED SECTION OF MONITORING WELL
- GROUNDWATER LEVEL
- **masl** — METRES ABOVE SEA LEVEL
- **mbgs** — METRES BELOW GROUND SURFACE
- **PHCs** — PETROLEUM HYDROCARBONS
- PARAMETERS ANALYZED MEET SCS
- PARAMETERS ANALYZED EXCEED SCS
- ESTIMATED VERTICAL EXTENT OF PHCs CONTAMINATED SOIL

(H) 0m — 5m
(V) 0m — 10m
SCALE

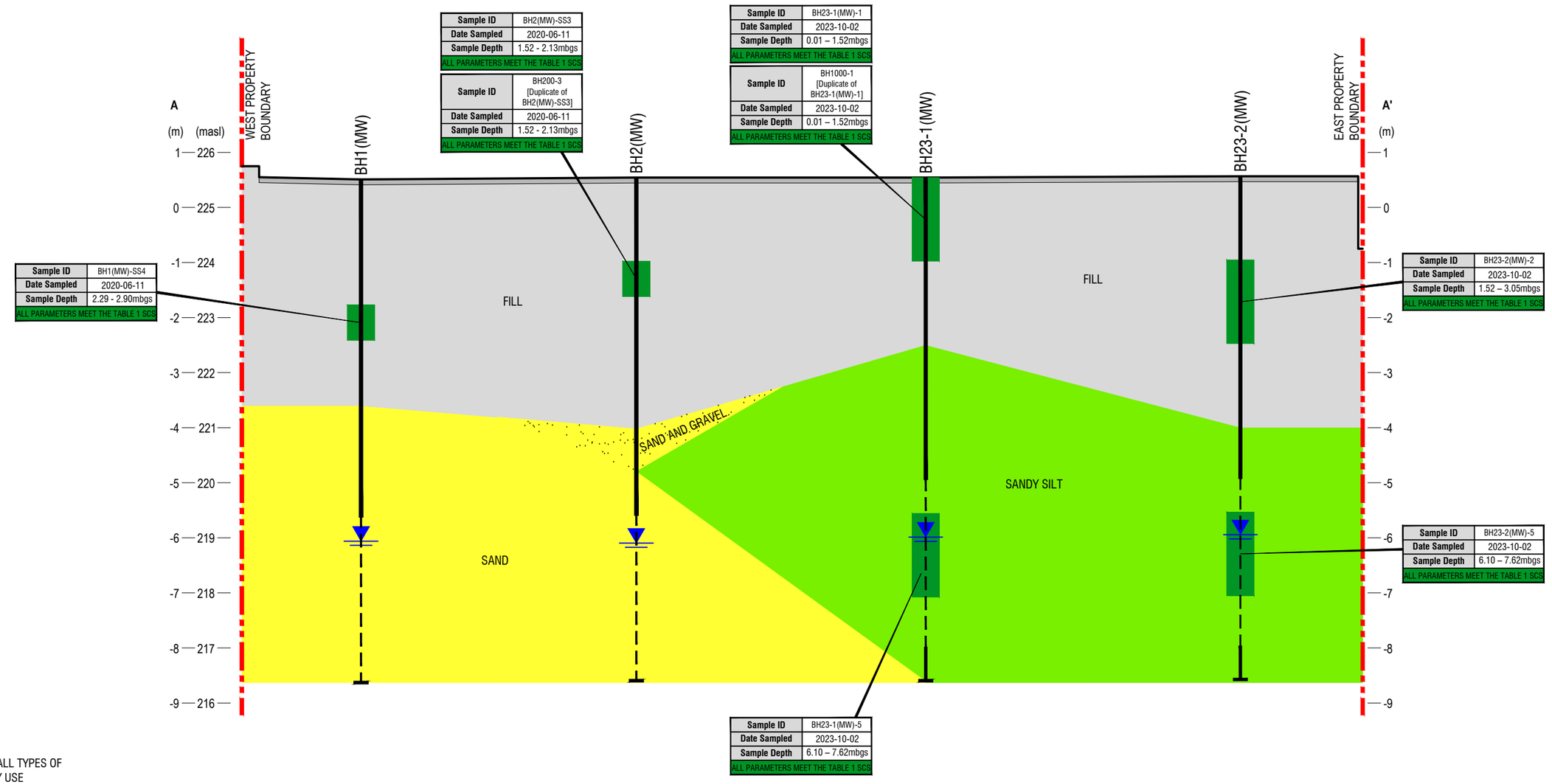

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SITE ADDRESS: 149-153 DUNLOP ST EAST, BARRIE, ONTARIO

REPORT NAME: PHASE TWO ENVIRONMENTAL SITE ASSESSMENT

FIGURE NAME: PHC EXCEEDANCES IN SOIL - CROSS SECTION D-D'
PROJECT No: 20-0052.04
FIGURE No: 11D




**LEGEND:**

- SCS — TABLE 1, ALL TYPES OF PROPERTY USE
- MONITORING WELL
- SCREENED SECTION OF MONITORING WELL
- GROUNDWATER LEVEL
- masl — METRES ABOVE SEA LEVEL
- mbgs — METRES BELOW GROUND SURFACE
- PAHs — POLYCYCLIC AROMATIC HYDROCARBONS
- PARAMETERS ANALYZED MEET SCS
- PARAMETERS ANALYZED EXCEED SCS

(H) 0m — 5m
(V) 0m — 10m
SCALE

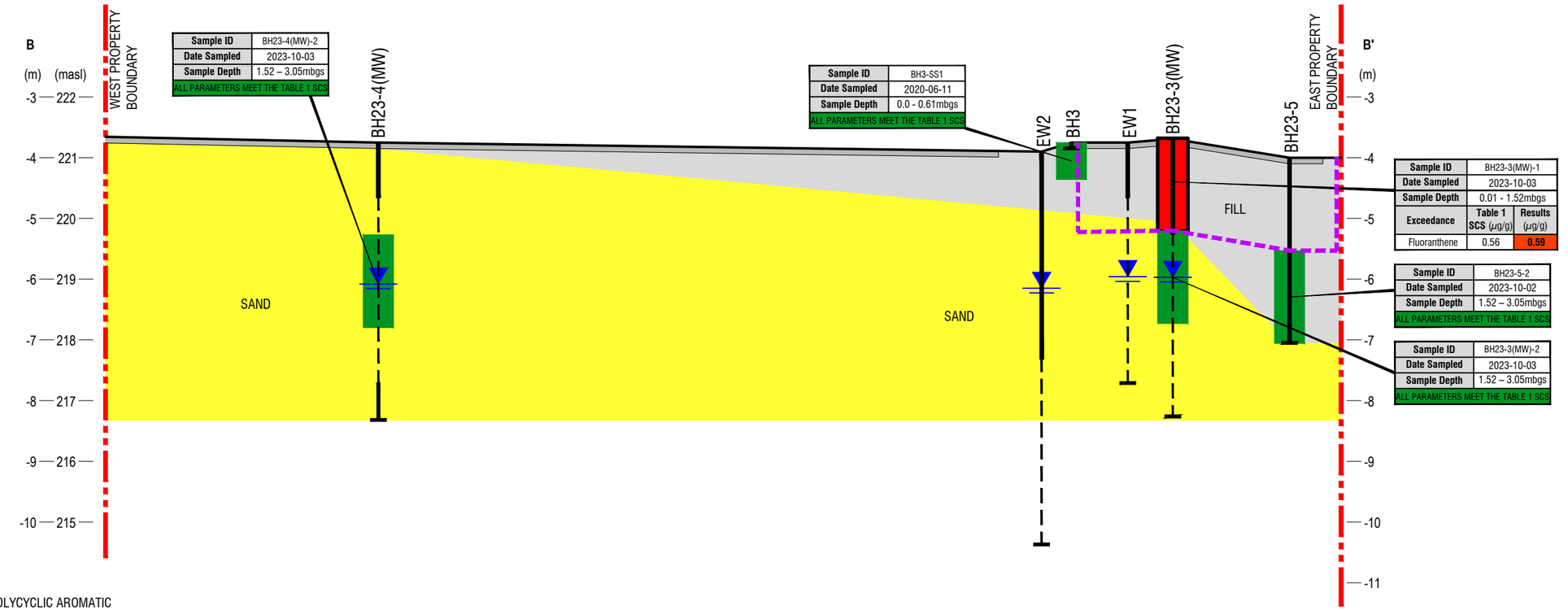

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SITE ADDRESS: 149-153 DUNLOP ST EAST, BARRIE, ONTARIO

REPORT NAME: PHASE TWO ENVIRONMENTAL SITE ASSESSMENT

FIGURE NAME: PAH EXCEEDANCES IN SOIL - CROSS SECTION A-A'
PROJECT No: 20-0052.04
FIGURE No: 12A




**LEGEND:**

- **SCS** — TABLE 1, ALL TYPES OF PROPERTY USE
- MONITORING WELL
- SCREENED SECTION OF MONITORING WELL
- GROUNDWATER LEVEL
- **masl** — METRES ABOVE SEA LEVEL
- **mbgs** — METRES BELOW GROUND SURFACE
- **PAHs** — POLYCYCLIC AROMATIC HYDROCARBONS
- PARAMETERS ANALYZED MEET SCS
- PARAMETERS ANALYZED EXCEED SCS
- **EW1** — MONITORING WELL DETAILS OBTAINED FROM WELL RECORD 7124832
- **EW2** — MONITORING WELL DEPTH OBTAINED FROM THE FIELD MEASUREMENT AND THE SCREEN LENGTH WAS INFERRED TO BE 3.05m
- ESTIMATED VERTICAL EXTENT OF PAH CONTAMINATED SOIL

(H) 0m 5m
(V) 0m 10m
SCALE

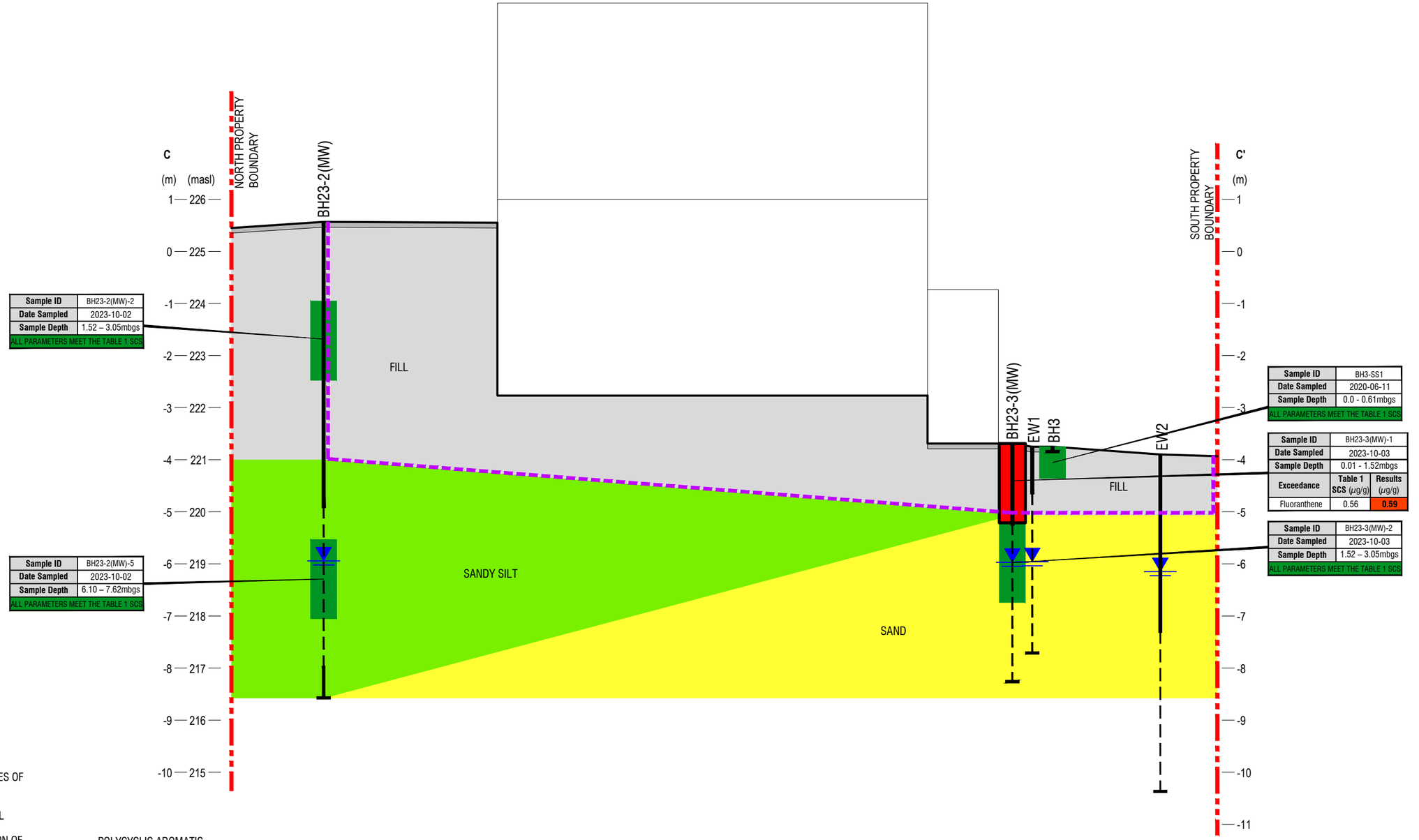
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SITE ADDRESS: 149-153 DUNLOP ST EAST, BARRIE, ONTARIO

REPORT NAME: PHASE TWO ENVIRONMENTAL SITE ASSESSMENT

FIGURE NAME: PAH EXCEEDANCES IN SOIL - CROSS SECTION B-B'
PROJECT No: 20-0052.04
FIGURE No: 12B




**LEGEND:**

- **SCS** — TABLE 1, ALL TYPES OF PROPERTY USE
- MONITORING WELL
- SCREENED SECTION OF MONITORING WELL
- GROUNDWATER LEVEL
- **masl** — METRES ABOVE SEA LEVEL
- **mbgs** — METRES BELOW GROUND SURFACE
- **PAHs** — POLYCYCLIC AROMATIC HYDROCARBONS
- PARAMETERS ANALYZED MEET SCS
- PARAMETERS ANALYZED EXCEED SCS
- **EW1** — MONITORING WELL DETAILS OBTAINED FROM WELL RECORD 7124832
- **EW2** — MONITORING WELL DEPTH OBTAINED FROM THE FIELD MEASUREMENT AND THE SCREEN LENGTH WAS INFERRED TO BE 3.05m
- ESTIMATED VERTICAL EXTENT OF PAH CONTAMINATED SOIL

(H) 0m — 5m
(V) 0m — 10m
SCALE

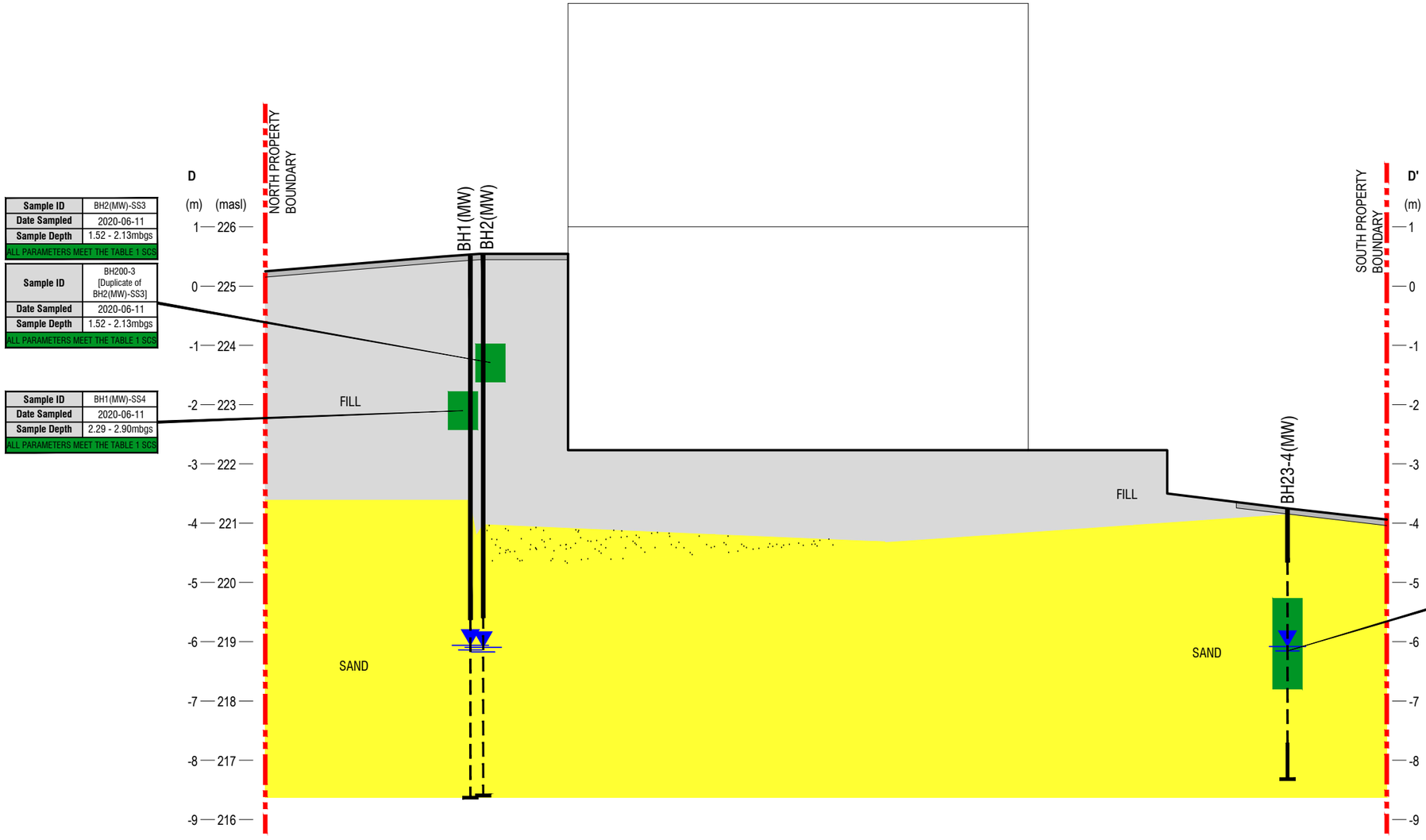
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REPORT NAME: PHASE TWO ENVIRONMENTAL SITE ASSESSMENT

FIGURE NAME: PAH EXCEEDANCES IN SOIL - CROSS SECTION C-C'
PROJECT No: 20-0052.04
FIGURE No: 12C




**LEGEND:**

- **SCS** — TABLE 1, ALL TYPES OF PROPERTY USE
- MONITORING WELL
- SCREENED SECTION OF MONITORING WELL
- GROUNDWATER LEVEL
- **masl** — METRES ABOVE SEA LEVEL
- **mbgs** — METRES BELOW GROUND SURFACE
- **PAHs** — POLYCYCLIC AROMATIC HYDROCARBONS
- PARAMETERS ANALYZED MEET SCS
- PARAMETERS ANALYZED EXCEED SCS

(H) 0m — 5m
(V) 0m — 10m
SCALE

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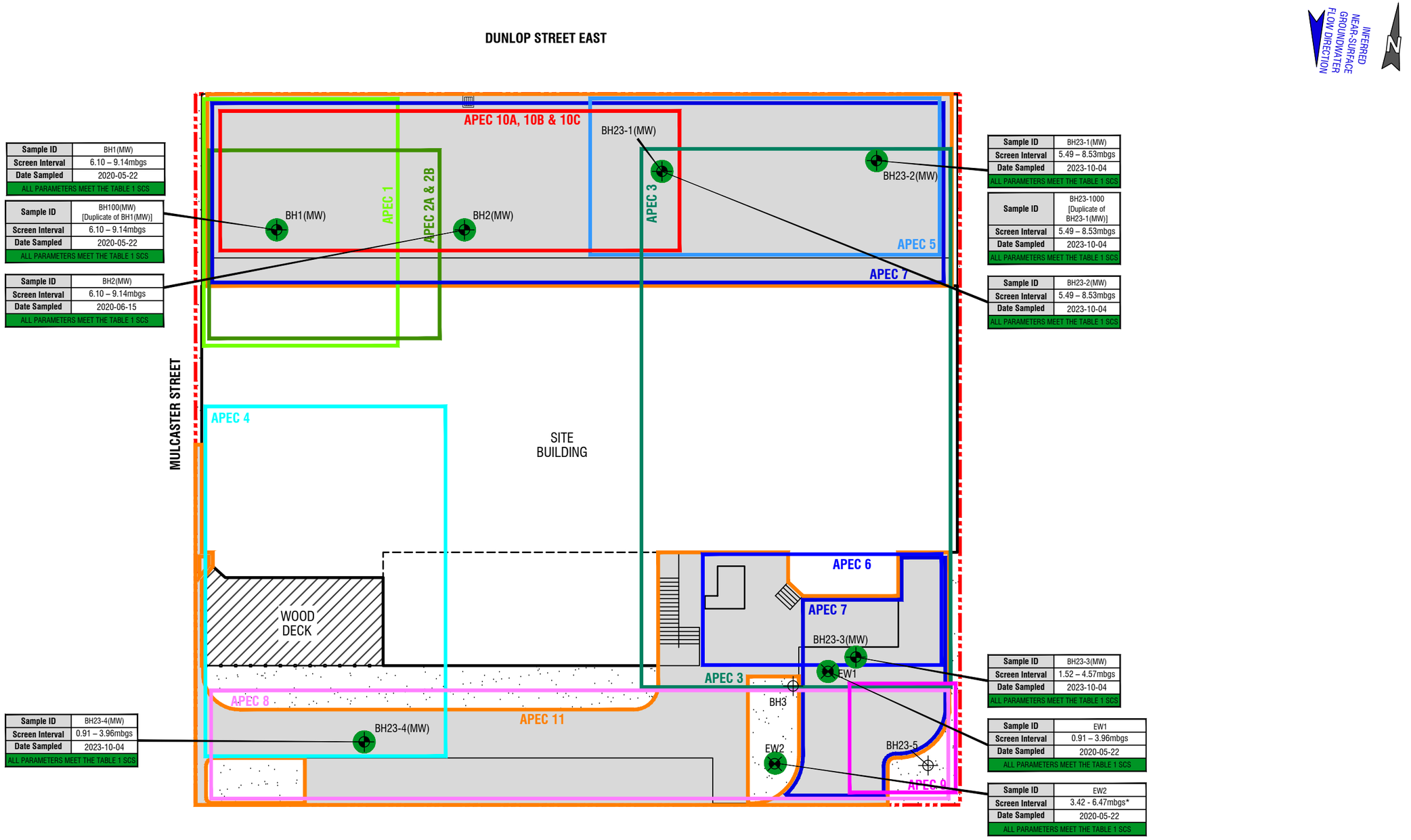
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CHECKED: N. WRIGHT
DATE: APRIL 2024

CLIENT: DUNLOP DEVELOPMENTS (BARRIE) INC.
SITE ADDRESS: 149-153 DUNLOP ST EAST, BARRIE, ONTARIO

REPORT NAME: PHASE TWO ENVIRONMENTAL SITE ASSESSMENT

FIGURE NAME: PAH EXCEEDANCES IN SOIL - CROSS SECTION D-D'

PROJECT No: 20-0052.04
FIGURE No: 12D



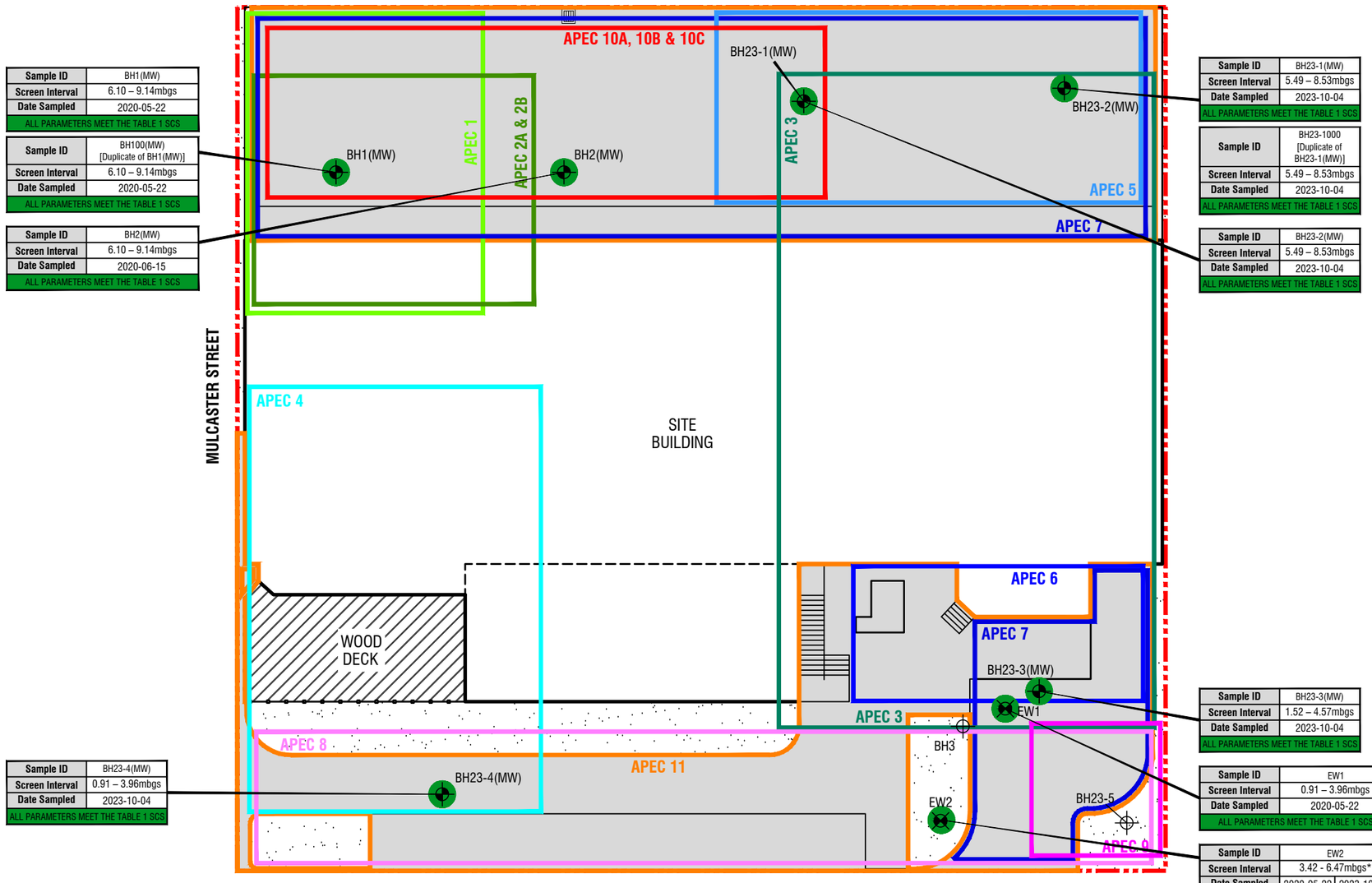

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SITE ADDRESS: 149-153 DUNLOP ST EAST, BARRIE, ONTARIO

REPORT NAME: PHASE TWO ENVIRONMENTAL SITE ASSESSMENT

FIGURE NAME: ANALYTIC RESULTS IN GROUNDWATER - PHCs
PROJECT No: 20-0052.04
FIGURE No: 13A



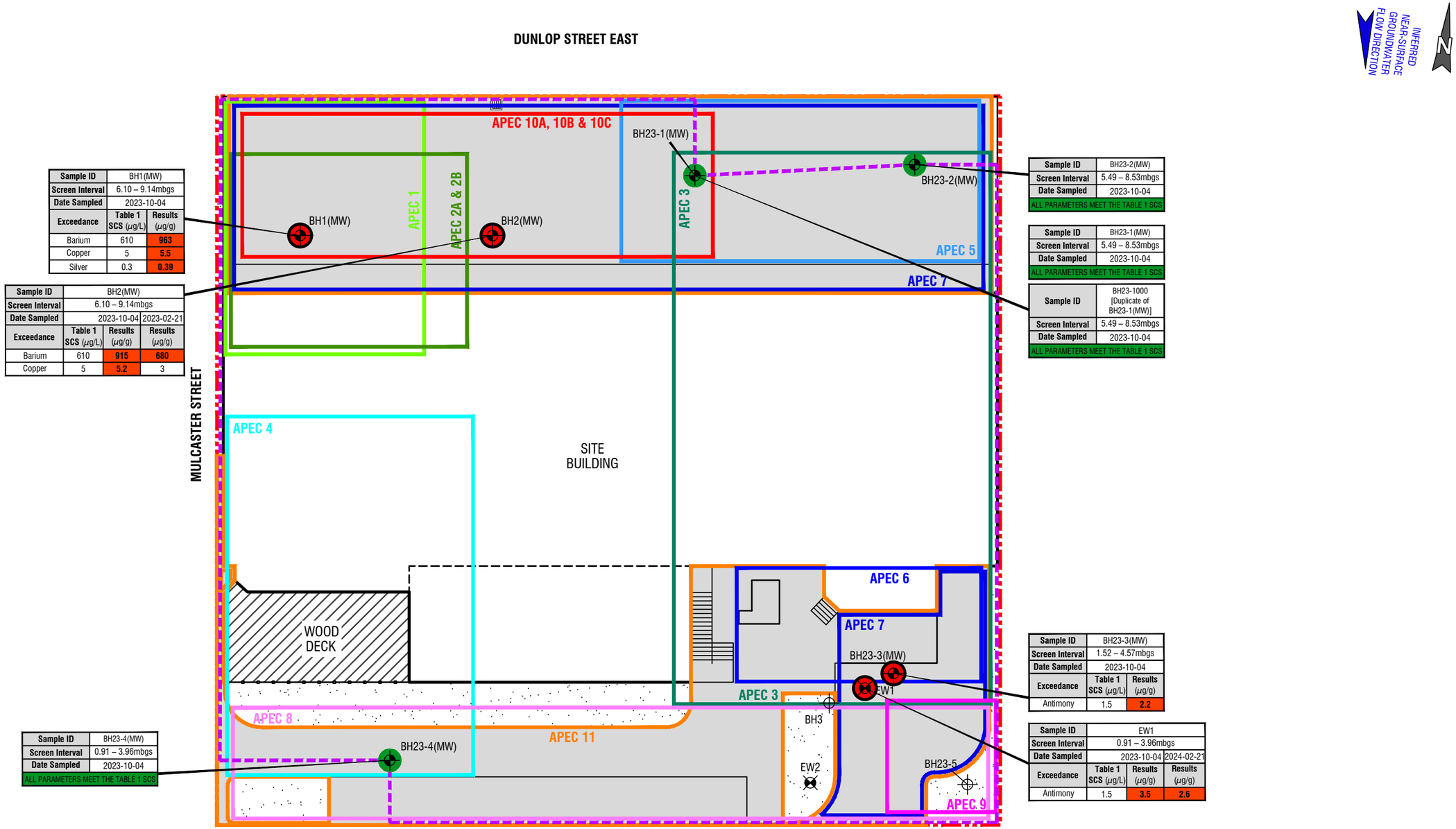

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CHECKED: N. WRIGHT
DATE: APRIL 2024

CLIENT: DUNLOP DEVELOPMENTS (BARRIE) INC.
SITE ADDRESS: 149-153 DUNLOP ST EAST, BARRIE, ONTARIO

REPORT NAME: PHASE TWO ENVIRONMENTAL SITE ASSESSMENT

FIGURE NAME: ANALYTIC RESULTS IN GROUNDWATER - VOCs, THMs, BTEX
PROJECT No: 20-0052.04
FIGURE No: 13B




| Sample ID | BH1(MW) | |
|---|---|---|
| Screen Interval | 6.10 – 9.14mbgs | |
| Date Sampled | 2023-10-04 | |
| Exceedance | Table 1 SCS (µg/L) | Results (µg/g) |
| Barium | 610 | 963 |
| Copper | 5 | 5.5 |
| Silver | 0.3 | 0.39 |

| Sample ID | BH2(MW) | | |
|---|---|---|---|
| Screen Interval | 6.10 – 9.14mbgs | | |
| Date Sampled | 2023-10-04 | | 2023-02-21 |
| Exceedance | Table 1 SCS (µg/L) | Results (µg/g) | Results (µg/g) |
| Barium | 610 | 915 | 680 |
| Copper | 5 | 5.2 | 3 |

| Sample ID | BH23-2(MW) |
|---|---|
| Screen Interval | 5.49 – 8.53mbgs |
| Date Sampled | 2023-10-04 |
| ALL PARAMETERS MEET THE TABLE 1 SCS | |

| Sample ID | BH23-1(MW) |
|---|---|
| Screen Interval | 5.49 – 8.53mbgs |
| Date Sampled | 2023-10-04 |
| ALL PARAMETERS MEET THE TABLE 1 SCS | |

| Sample ID | BH23-1000 [Duplicate of BH23-1(MW)] |
|---|---|
| Screen Interval | 5.49 – 8.53mbgs |
| Date Sampled | 2023-10-04 |
| ALL PARAMETERS MEET THE TABLE 1 SCS | |

| Sample ID | BH23-3(MW) | |
|---|---|---|
| Screen Interval | 1.52 – 4.57mbgs | |
| Date Sampled | 2023-10-04 | |
| Exceedance | Table 1 SCS (µg/L) | Results (µg/g) |
| Antimony | 1.5 | 2.2 |

| Sample ID | EW1 | | |
|---|---|---|---|
| Screen Interval | 0.91 – 3.96mbgs | | |
| Date Sampled | 2023-10-04 | | 2024-02-21 |
| Exceedance | Table 1 SCS (µg/L) | Results (µg/g) | Results (µg/g) |
| Antimony | 1.5 | 3.5 | 2.6 |

| Sample ID | BH23-4(MW) |
|---|---|
| Screen Interval | 0.91 – 3.96mbgs |
| Date Sampled | 2023-10-04 |
| ALL PARAMETERS MEET THE TABLE 1 SCS | |

**LEGEND:**

- APPROXIMATE EXTENT OF THE PHASE TWO PROPERTY
- CATCH BASIN
- LANDSCAPED AREA
- PAVED AREA
- MONITORING WELL BY OTHERS
- WATTERS ENVIRONMENTAL MONITORING WELL LOCATION
- WATTERS ENVIRONMENTAL BOREHOLE LOCATION
- PARAMETERS ANALYZED MEET SCS
- PARAMETERS ANALYZED EXCEED SCS
- SHALLOW SAMPLE EXCEEDS SCS / DEEPER SAMPLE MEET SCS
- ESTIMATED LATERAL EXTENT OF METALS AND HYDRIDE-FORMING METALS CONTAMINATED GROUNDWATER

**ORPs** OTHER REGULATED PARAMETERS (BORON (HWS), CYANIDE, HEXAVALENT CHROMIUM, MERCURY, ELECTRICAL CONDUCTIVITY, SODIUM ADSORPTION RATIO, pH)

**METALS** INCLUDES: METALS AND HYDRIDE-FORMING METALS (ARSENIC, ANTIMONY, SELENIUM)

**SCS** TABLE 1, ALL TYPES OF PROPERTY USE

0m 10m
SCALE

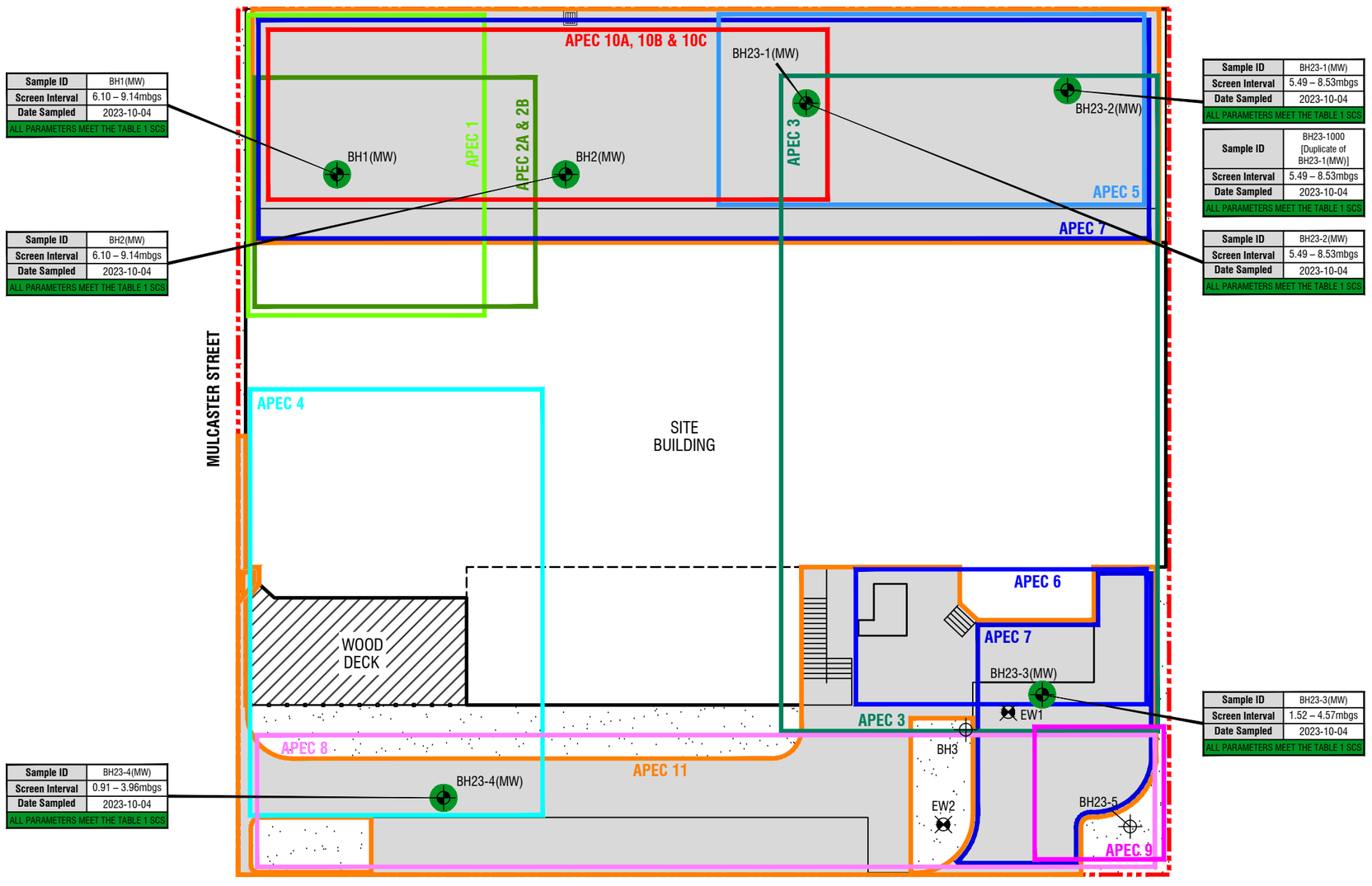

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DRAWN: B. CALDERONE
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DATE: APRIL 2024

CLIENT: DUNLOP DEVELOPMENTS (BARRIE) INC.
SITE ADDRESS: 149-153 DUNLOP ST EAST, BARRIE, ONTARIO

REPORT NAME: PHASE TWO ENVIRONMENTAL SITE ASSESSMENT

FIGURE NAME: ANALYTIC RESULTS IN GROUNDWATER - METALS, HYDRIDE-FORMING METALS, AND ORPs
PROJECT No: 20-0052.04
FIGURE No: 13C




**LEGEND:**

- APPROXIMATE EXTENT OF THE PHASE TWO PROPERTY
- CATCH BASIN
- LANDSCAPED AREA
- PAVED AREA
- MONITORING WELL BY OTHERS
- WATTERS ENVIRONMENTAL MONITORING WELL LOCATION
- WATTERS ENVIRONMENTAL BOREHOLE LOCATION
- PARAMETERS ANALYZED MEET SCS
- PARAMETERS ANALYZED EXCEED SCS
- SHALLOW SAMPLE EXCEEDS SCS DEEPER SAMPLE MEET SCS

**PAHs** POLYCYCLIC AROMATIC HYDROCARBONS

**SCS** TABLE 1, ALL TYPES OF PROPERTY USE

0m 10m
SCALE

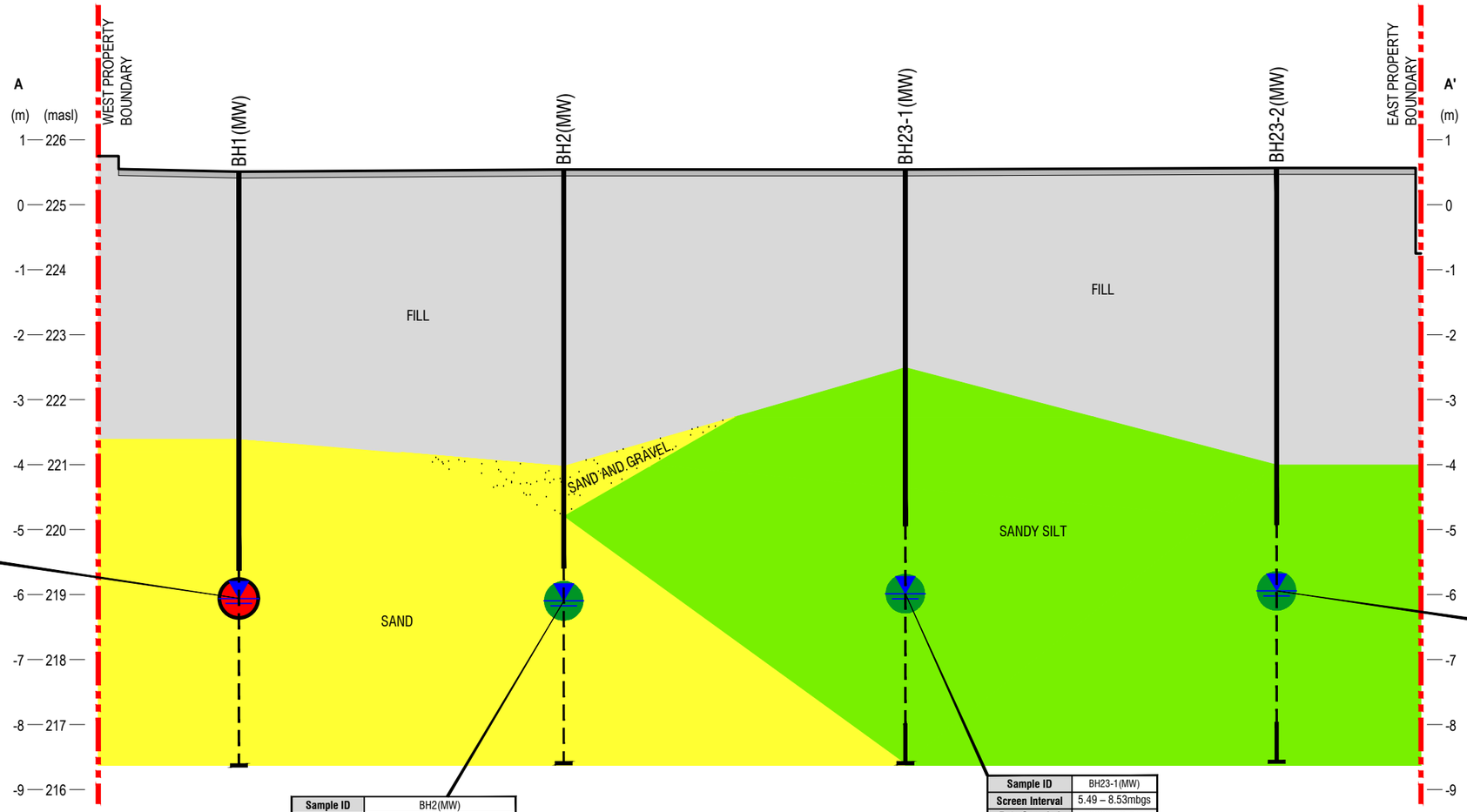

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DATE: APRIL 2024

CLIENT: DUNLOP DEVELOPMENTS (BARRIE) INC.
SITE ADDRESS: 149-153 DUNLOP ST EAST, BARRIE, ONTARIO

REPORT NAME: PHASE TWO ENVIRONMENTAL SITE ASSESSMENT

FIGURE NAME: ANALYTIC RESULTS IN GROUNDWATER - PAHs
PROJECT No: 20-0052.04
FIGURE No: 13D




| Sample ID | BH1(MW) | |
|---|---|---|
| Screen Interval | 6.10 – 9.14mbgs | |
| Date Sampled | 2023-10-04 | |
| Exceedance | Table 1 SCS (µg/L) | Results (µg/g) |
| Barium | 610 | 963 |
| Copper | 5 | 5.5 |
| Silver | 0.3 | 0.39 |

| Sample ID | BH2(MW) | | |
|---|---|---|---|
| Screen Interval | 6.10 – 9.14mbgs | | |
| Date Sampled | 2023-10-04 | | 2023-02-21 |
| Exceedance | Table 1 SCS (µg/L) | Results (µg/g) | Results (µg/g) |
| Barium | 610 | 915 | 680 |
| Copper | 5 | 5.2 | 3 |

| Sample ID | BH23-1(MW) |
|---|---|
| Screen Interval | 5.49 – 8.53mbgs |
| Date Sampled | 2023-10-04 |
| ALL PARAMETERS MEET THE TABLE 1 SCS | |

| Sample ID | BH23-1000 [Duplicate of BH23-1(MW)] |
|---|---|
| Screen Interval | 5.49 – 8.53mbgs |
| Date Sampled | 2023-10-04 |
| ALL PARAMETERS MEET THE TABLE 1 SCS | |

| Sample ID | BH23-2(MW) |
|---|---|
| Screen Interval | 5.49 – 8.53mbgs |
| Date Sampled | 2023-10-04 |
| ALL PARAMETERS MEET THE TABLE 1 SCS | |

**LEGEND:**

**SCS** TABLE 1, ALL TYPES OF PROPERTY USE

MONITORING WELL

SCREENED SECTION OF MONITORING WELL

GROUNDWATER LEVEL

**masl** METRES ABOVE SEA LEVEL

**mbgs** METRES BELOW GROUND SURFACE

**ORPs** OTHER REGULATED PARAMETERS (BORON (HWS), CYANIDE, HEXAVALENT CHROMIUM, MERCURY, ELECTRICAL CONDUCTIVITY, SODIUM ADSORPTION RATIO, pH)

**METALS** INCLUDES: METALS AND HYDRIDE-FORMING METALS (ARSENIC, ANTIMONY, SELENIUM)

PARAMETERS ANALYZED MEET SCS

PARAMETERS ANALYZED EXCEED SCS

(H) 0m 5m
(V) 0m 10m
SCALE


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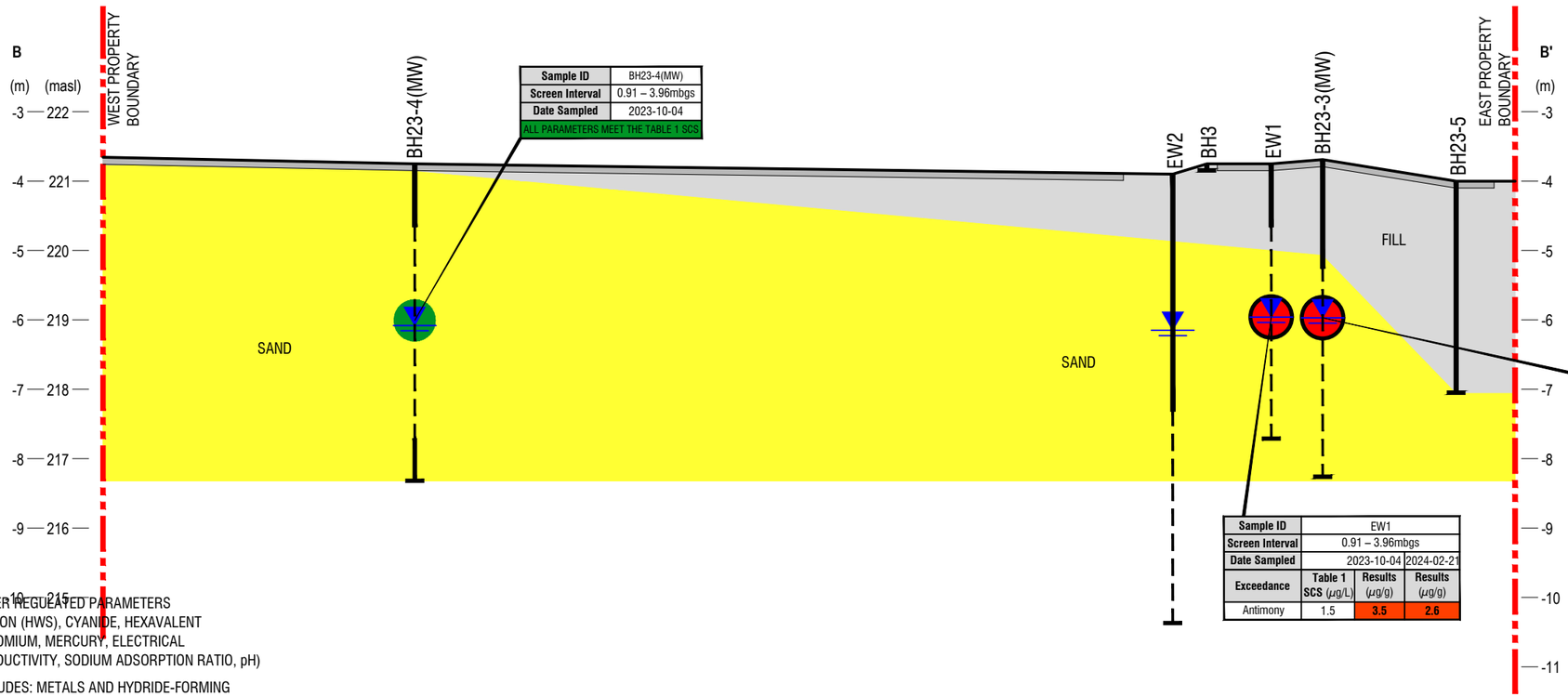
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SITE ADDRESS: 149-153 DUNLOP ST EAST, BARRIE, ONTARIO

REPORT NAME: PHASE TWO ENVIRONMENTAL SITE ASSESSMENT

FIGURE NAME: METALS, HYDRIDE-FORMING METALS, AND ORP EXCEEDANCES IN GROUNDWATER – CROSS SECTION A-A'

PROJECT No: 20-0052.04

FIGURE No: 14A




**LEGEND:**

**SCS** TABLE 1, ALL TYPES OF PROPERTY USE

MONITORING WELL

SCREENED SECTION OF MONITORING WELL

GROUNDWATER LEVEL

**masl** METRES ABOVE SEA LEVEL

**mbgs** METRES BELOW GROUND SURFACE

**ORPs** OTHER REGULATED PARAMETERS (BORON (HWS), CYANIDE, HEXAVALENT CHROMIUM, MERCURY, ELECTRICAL CONDUCTIVITY, SODIUM ADSORPTION RATIO, pH)

**METALS** INCLUDES: METALS AND HYDRIDE-FORMING METALS (ARSENIC, ANTIMONY, SELENIUM)

PARAMETERS ANALYZED MEET SCS

PARAMETERS ANALYZED EXCEED SCS

**EW1** MONITORING WELL DETAILS OBTAINED FROM WELL RECORD 7124832

**EW2** MONITORING WELL DEPTH OBTAINED FROM THE FIELD MEASUREMENT AND THE SCREEN LENGTH WAS INFERRED TO BE 3.05m

(H) 0m 5m
(V) 0m 10m
SCALE

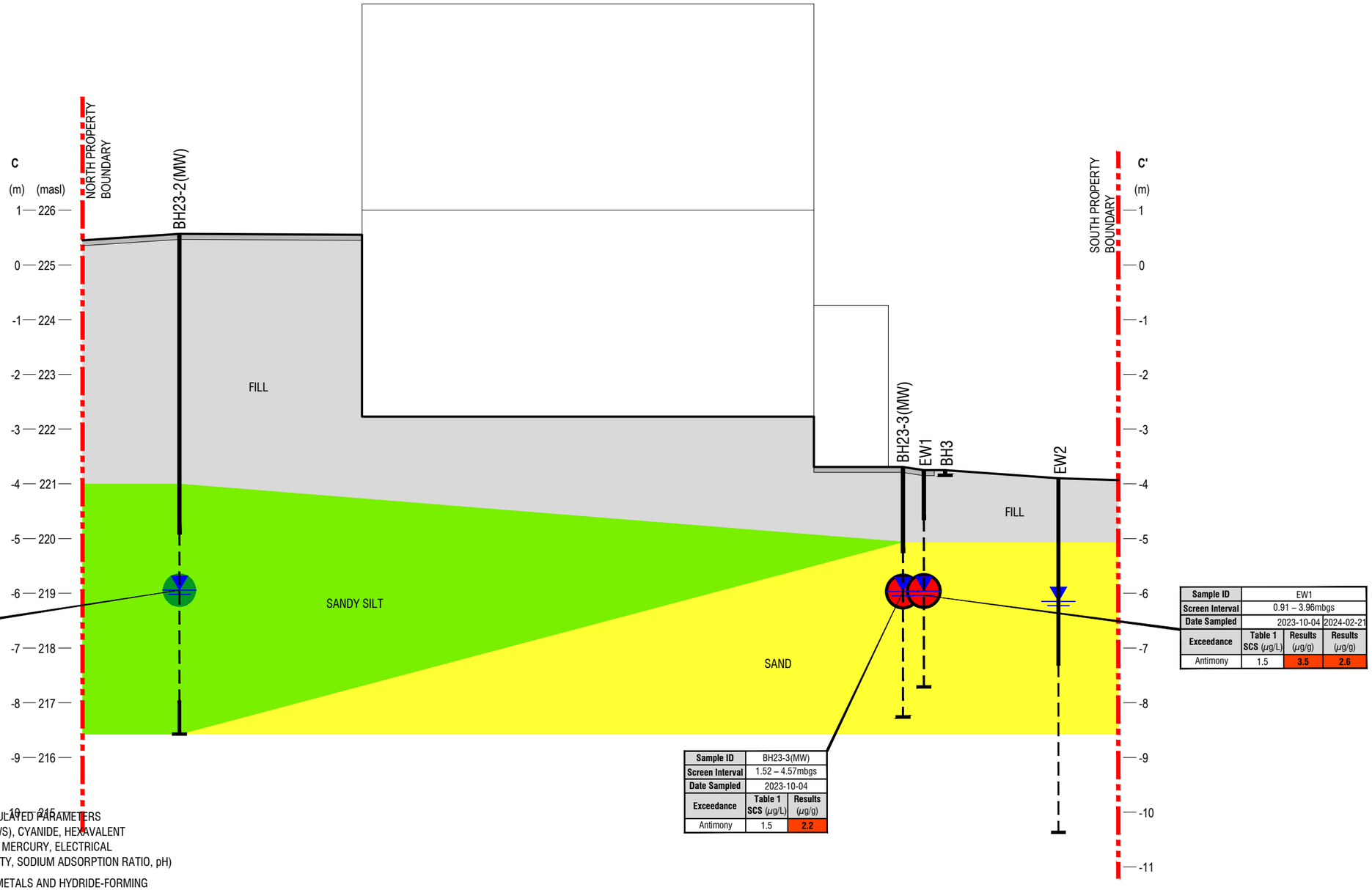
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DATE: APRIL 2024

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SITE ADDRESS: 149-153 DUNLOP ST EAST, BARRIE, ONTARIO

REPORT NAME: PHASE TWO ENVIRONMENTAL SITE ASSESSMENT

FIGURE NAME: METALS, HYDRIDE-FORMING METALS, AND ORP EXCEEDANCES IN GROUNDWATER – CROSS SECTION B-B'
PROJECT No: 20-0052.04
FIGURE No: 14B




**LEGEND:**

**SCS** TABLE 1, ALL TYPES OF PROPERTY USE

MONITORING WELL

SCREENED SECTION OF MONITORING WELL

GROUNDWATER LEVEL

**masl** METRES ABOVE SEA LEVEL

**mbgs** METRES BELOW GROUND SURFACE

**ORPs** OTHER REGULATED PARAMETERS (BORON (HWS), CYANIDE, HEXAVALENT CHROMIUM, MERCURY, ELECTRICAL CONDUCTIVITY, SODIUM ADSORPTION RATIO, pH)

**METALS** INCLUDES: METALS AND HYDRIDE-FORMING METALS (ARSENIC, ANTIMONY, SELENIUM)

PARAMETERS ANALYZED MEET SCS

PARAMETERS ANALYZED EXCEED SCS

**EW1** MONITORING WELL DETAILS OBTAINED FROM WELL RECORD 7124832

**EW2** MONITORING WELL DEPTH OBTAINED FROM THE FIELD MEASUREMENT AND THE SCREEN LENGTH WAS INFERRED TO BE 3.05m

(H) 0m 5m
(V) 0m 10m
SCALE

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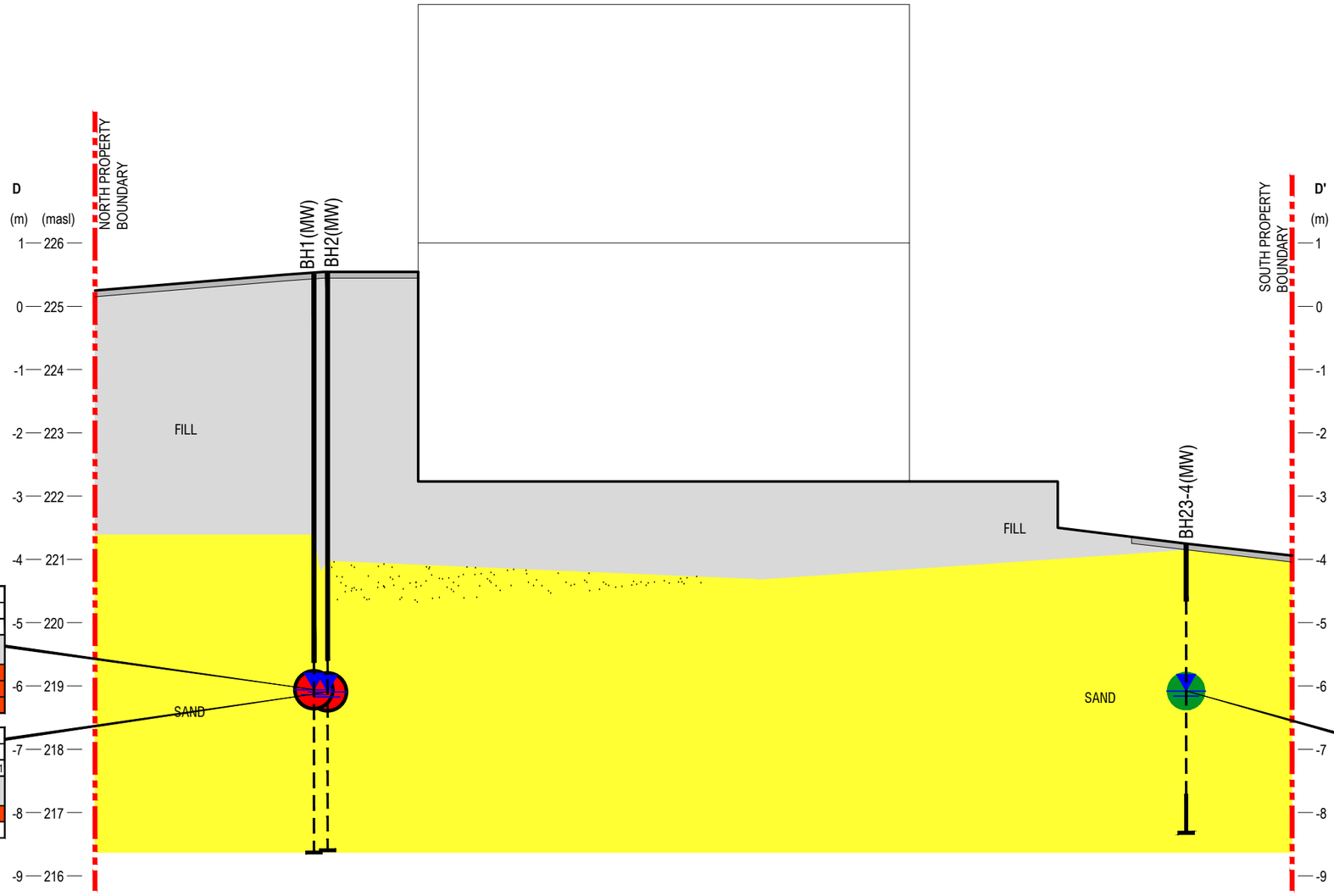
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SITE ADDRESS: 149-153 DUNLOP ST EAST, BARRIE, ONTARIO

REPORT NAME: PHASE TWO ENVIRONMENTAL SITE ASSESSMENT

FIGURE NAME: METALS, HYDRIDE-FORMING METALS, AND ORP EXCEEDANCES IN GROUNDWATER – CROSS SECTION C-C'

PROJECT No: 20-0052.04

FIGURE No: 14C




| Sample ID | BH1(MW) | |
|---|---|---|
| Screen Interval | 6.10 – 9.14mbgs | |
| Date Sampled | 2023-10-04 | |
| Exceedance | Table 1 SCS (µg/L) | Results (µg/g) |
| Barium | 610 | **963** |
| Copper | 5 | **5.5** |
| Silver | 0.3 | **0.39** |

| Sample ID | BH2(MW) | | |
|---|---|---|---|
| Screen Interval | 6.10 – 9.14mbgs | | |
| Date Sampled | 2023-10-04 | | 2023-02-21 |
| Exceedance | Table 1 SCS (µg/L) | Results (µg/g) | Results (µg/g) |
| Barium | 610 | **915** | **680** |
| Copper | 5 | **5.2** | 3 |

| Sample ID | BH23-4(MW) |
|---|---|
| Screen Interval | 0.91 – 3.96mbgs |
| Date Sampled | 2023-10-04 |
| ALL PARAMETERS MEET THE TABLE 1 SCS | |

**LEGEND:**

**SCS** TABLE 1, ALL TYPES OF PROPERTY USE

MONITORING WELL

SCREENED SECTION OF MONITORING WELL

GROUNDWATER LEVEL

**masl** METRES ABOVE SEA LEVEL

**mbgs** METRES BELOW GROUND SURFACE

**ORPs** OTHER REGULATED PARAMETERS (BORON (HWS), CYANIDE, HEXAVALENT CHROMIUM, MERCURY, ELECTRICAL CONDUCTIVITY, SODIUM ADSORPTION RATIO, pH)

**METALS** INCLUDES: METALS AND HYDRIDE-FORMING METALS (ARSENIC, ANTIMONY, SELENIUM)

PARAMETERS ANALYZED MEET SCS

PARAMETERS ANALYZED EXCEED SCS

(H) 0m 5m
(V) 0m 10m
SCALE


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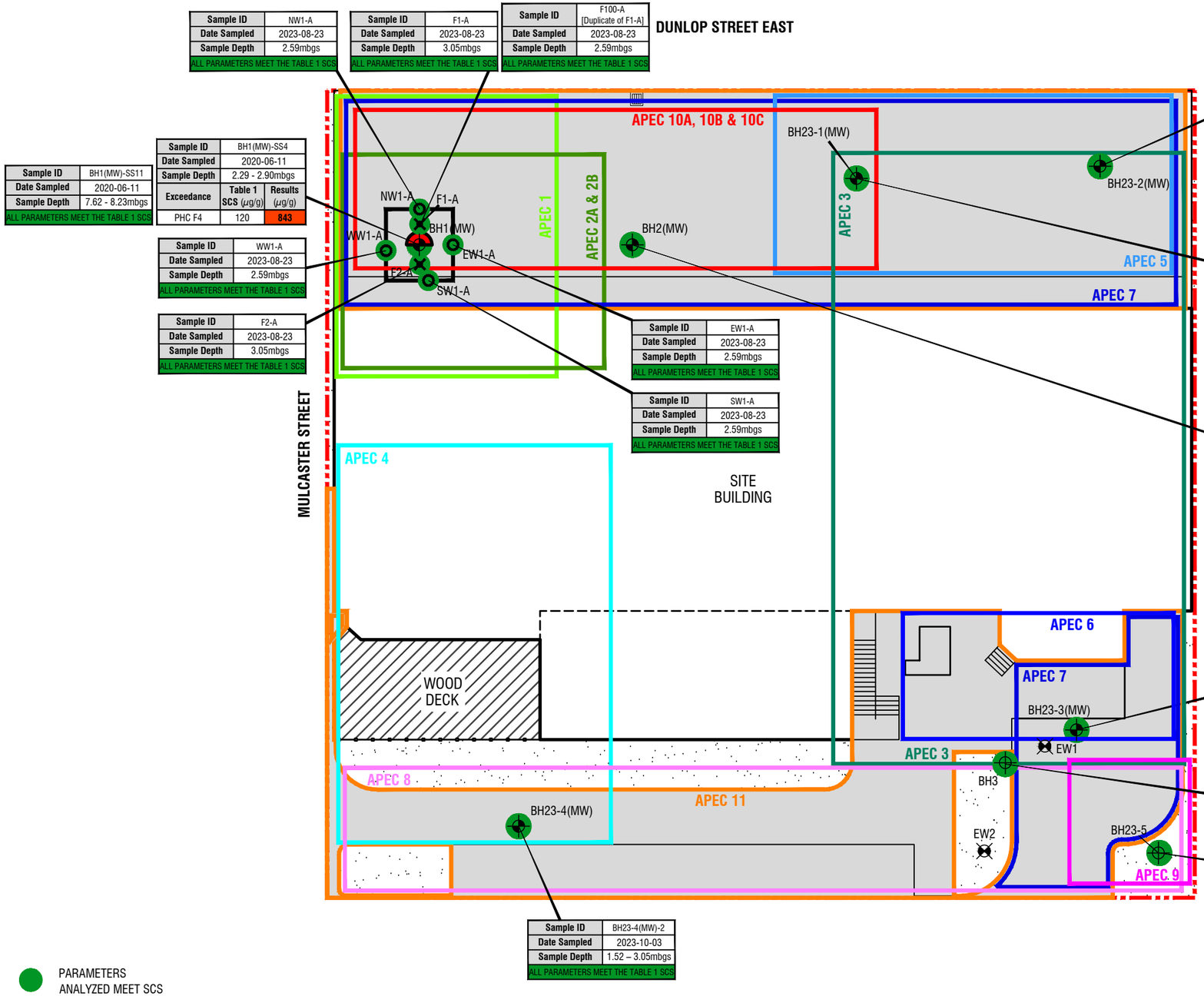

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SITE ADDRESS: 149-153 DUNLOP ST EAST, BARRIE, ONTARIO

REPORT NAME: PHASE TWO ENVIRONMENTAL SITE ASSESSMENT

FIGURE NAME: METALS, HYDRIDE-FORMING METALS, AND ORP EXCEEDANCES IN GROUNDWATER – CROSS SECTION D-D'

PROJECT No: 20-0052.04
FIGURE No: 14D




| Sample ID | NW1-A |
|---|---|
| Date Sampled | 2023-08-23 |
| Sample Depth | 2.59mbgs |
| ALL PARAMETERS MEET THE TABLE 1 SCS | |

| Sample ID | F1-A |
|---|---|
| Date Sampled | 2023-08-23 |
| Sample Depth | 3.05mbgs |
| ALL PARAMETERS MEET THE TABLE 1 SCS | |

| Sample ID | F100-A [Duplicate of F1-A] |
|---|---|
| Date Sampled | 2023-08-23 |
| Sample Depth | 2.59mbgs |
| ALL PARAMETERS MEET THE TABLE 1 SCS | |

| Sample ID | BH1(MW)-SS11 |
|---|---|
| Date Sampled | 2020-06-11 |
| Sample Depth | 7.62 - 8.23mbgs |
| ALL PARAMETERS MEET THE TABLE 1 SCS | |

| Sample ID | BH1(MW)-SS4 | | |
|---|---|---|---|
| Date Sampled | 2020-06-11 | | |
| Sample Depth | 2.29 - 2.90mbgs | | |
| Exceedance | Table 1 SCS (µg/g) | Results (µg/g) | |
| PHC F4 | 120 | 843 | |

| Sample ID | WW1-A |
|---|---|
| Date Sampled | 2023-08-23 |
| Sample Depth | 2.59mbgs |
| ALL PARAMETERS MEET THE TABLE 1 SCS | |

| Sample ID | F2-A |
|---|---|
| Date Sampled | 2023-08-23 |
| Sample Depth | 3.05mbgs |
| ALL PARAMETERS MEET THE TABLE 1 SCS | |

| Sample ID | EW1-A |
|---|---|
| Date Sampled | 2023-08-23 |
| Sample Depth | 2.59mbgs |
| ALL PARAMETERS MEET THE TABLE 1 SCS | |

| Sample ID | SW1-A |
|---|---|
| Date Sampled | 2023-08-23 |
| Sample Depth | 2.59mbgs |
| ALL PARAMETERS MEET THE TABLE 1 SCS | |

| Sample ID | BH23-4(MW)-2 |
|---|---|
| Date Sampled | 2023-10-03 |
| Sample Depth | 1.52 – 3.05mbgs |
| ALL PARAMETERS MEET THE TABLE 1 SCS | |

| Sample ID | BH23-2(MW)-2 |
|---|---|
| Date Sampled | 2023-10-02 |
| Sample Depth | 1.52 – 3.05mbgs |
| ALL PARAMETERS MEET THE TABLE 1 SCS | |

| Sample ID | BH23-2(MW)-5 |
|---|---|
| Date Sampled | 2023-10-02 |
| Sample Depth | 6.10 – 7.62mbgs |
| ALL PARAMETERS MEET THE TABLE 1 SCS | |

| Sample ID | BH23-1(MW)-1 |
|---|---|
| Date Sampled | 2023-10-02 |
| Sample Depth | 0.01 – 1.52mbgs |
| ALL PARAMETERS MEET THE TABLE 1 SCS | |

| Sample ID | BH1000-1 [Duplicate of BH23-1(MW)-1] |
|---|---|
| Date Sampled | 2023-10-02 |
| Sample Depth | 0.01 – 1.52mbgs |
| ALL PARAMETERS MEET THE TABLE 1 SCS | |

| Sample ID | BH23-1(MW)-5 |
|---|---|
| Date Sampled | 2023-10-02 |
| Sample Depth | 6.10 – 7.62mbgs |
| ALL PARAMETERS MEET THE TABLE 1 SCS | |

| Sample ID | BH23-3(MW)-1 |
|---|---|
| Date Sampled | 2023-10-03 |
| Sample Depth | 0.01 - 1.52mbgs |
| ALL PARAMETERS MEET THE TABLE 1 SCS | |

| Sample ID | BH23-3(MW)-2 |
|---|---|
| Date Sampled | 2023-10-03 |
| Sample Depth | 1.52 – 3.05mbgs |
| ALL PARAMETERS MEET THE TABLE 1 SCS | |

| Sample ID | BH3-SS1 |
|---|---|
| Date Sampled | 2020-06-11 |
| Sample Depth | 0.0 - 0.61mbgs |
| ALL PARAMETERS MEET THE TABLE 1 SCS | |

| Sample ID | BH23-5-1 |
|---|---|
| Date Sampled | 2023-10-02 |
| Sample Depth | 0.0 – 1.52mbgs |
| ALL PARAMETERS MEET THE TABLE 1 SCS | |

| Sample ID | BH23-5000-1 [Duplicate of BH23-5-1] |
|---|---|
| Date Sampled | 2023-10-02 |
| Sample Depth | 0.01 – 1.52mbgs |
| ALL PARAMETERS MEET THE TABLE 1 SCS | |

| Sample ID | BH23-5-2 |
|---|---|
| Date Sampled | 2023-10-02 |
| Sample Depth | 1.52 – 3.05mbgs |
| ALL PARAMETERS MEET THE TABLE 1 SCS | |

| Sample ID | BH2(MW)-SS1 |
|---|---|
| Date Sampled | 2020-06-11 |
| Sample Depth | 0.01 - 0.61mbgs |
| ALL PARAMETERS MEET THE TABLE 1 SCS | |

| Sample ID | BH200-1 [Duplicated of BH2(MW)-SS1] |
|---|---|
| Date Sampled | 2020-06-11 |
| Sample Depth | 0.01 - 0.61mbgs |
| ALL PARAMETERS MEET THE TABLE 1 SCS | |

| Sample ID | BH2(MW)-SS2 |
|---|---|
| Date Sampled | 2020-06-11 |
| Sample Depth | 0.76 - 1.37mbgs |
| ALL PARAMETERS MEET THE TABLE 1 SCS | |

| Sample ID | BH200-2 [Duplicate of BH2(MW)-SS2] |
|---|---|
| Date Sampled | 2020-06-11 |
| Sample Depth | 0.76 - 1.37mbgs |
| ALL PARAMETERS MEET THE TABLE 1 SCS | |

| Sample ID | BH2(MW)-SS3 |
|---|---|
| Date Sampled | 2020-06-11 |
| Sample Depth | 1.52 - 2.13mbgs |
| ALL PARAMETERS MEET THE TABLE 1 SCS | |

| Sample ID | BH200-3 [Duplicate of BH2(MW)-SS3] |
|---|---|
| Date Sampled | 2020-06-11 |
| Sample Depth | 1.52 - 2.13mbgs |
| ALL PARAMETERS MEET THE TABLE 1 SCS | |

| Sample ID | BH2(MW)-SS10 |
|---|---|
| Date Sampled | 2020-06-11 |
| Sample Depth | 6.86 - 7.47mbgs |
| ALL PARAMETERS MEET THE TABLE 1 SCS | |

INFERRED NEAR-SURFACE GROUNDWATER FLOW DIRECTION

N

**LEGEND:**

- APPROXIMATE EXTENT OF THE PHASE TWO PROPERTY
- CATCH BASIN
- LANDSCAPED AREA
- PAVED AREA
- MONITORING WELL BY OTHERS
- WATTERS ENVIRONMENTAL MONITORING WELL LOCATION
- WATTERS ENVIRONMENTAL BOREHOLE LOCATION
- PARAMETERS ANALYZED MEET SCS
- PARAMETERS ANALYZED EXCEED SCS
- SHALLOW SAMPLE EXCEEDS SCS DEEPER SAMPLE MEET SCS

**PHCs** PETROLEUM HYDROCARBONS

**SCS** TABLE 1, ALL TYPES OF PROPERTY USE

SOIL REMEDIATION AREA

0m 10m

SCALE


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DATE: APRIL 2024

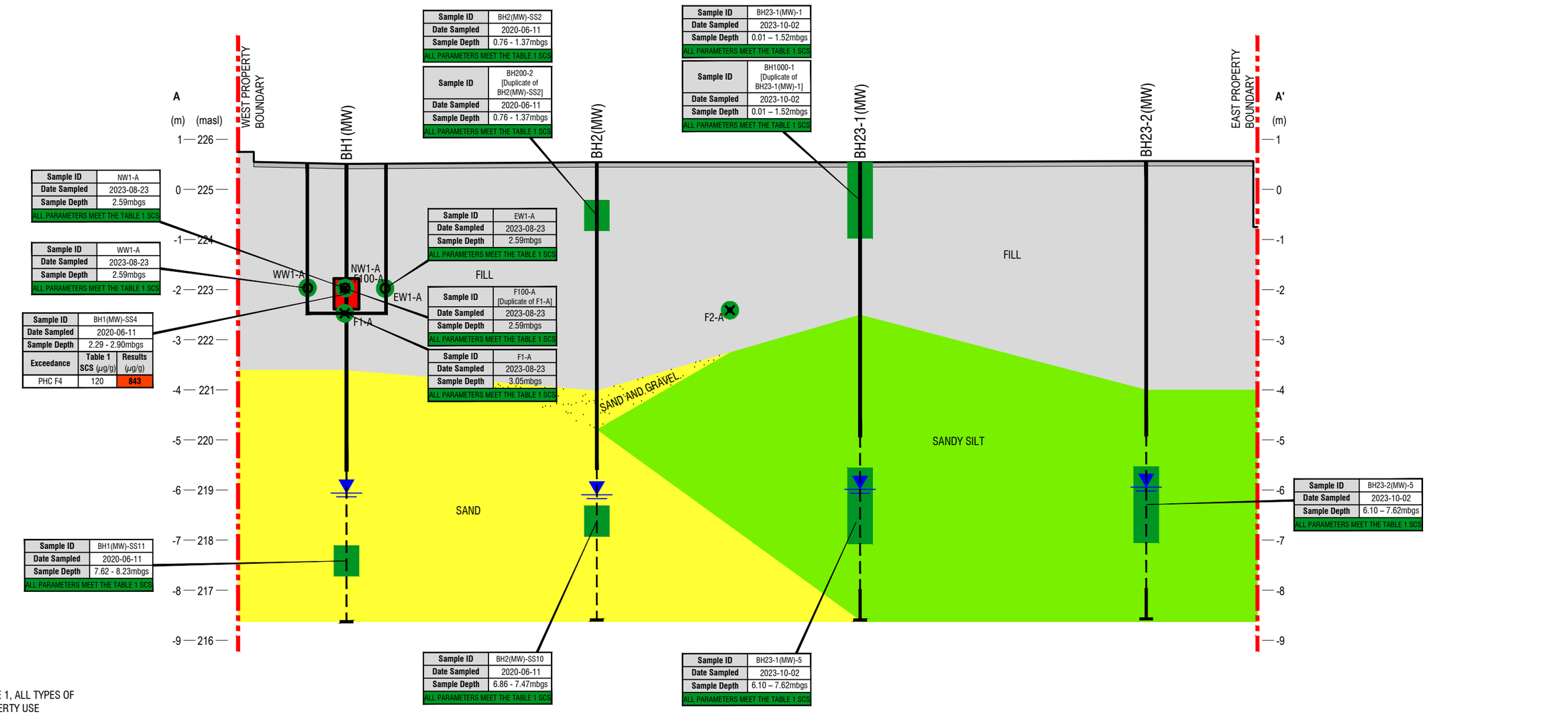
CLIENT: DUNLOP DEVELOPMENTS (BARRIE) INC.
SITE ADDRESS: 149-153 DUNLOP ST EAST, BARRIE, ONTARIO

REPORT NAME: PHASE TWO ENVIRONMENTAL SITE ASSESSMENT

FIGURE NAME: SOIL REMEDIATION - PHCs

PROJECT No: 20-0052.04

FIGURE No: 15




**LEGEND:**

- **SCS** — TABLE 1, ALL TYPES OF PROPERTY USE
- MONITORING WELL
- SCREENED SECTION OF MONITORING WELL
- GROUNDWATER LEVEL
- **masl** — METRES ABOVE SEA LEVEL
- **mbgs** — METRES BELOW GROUND SURFACE
- **PHCs** — PETROLEUM HYDROCARBONS
- PARAMETERS ANALYZED MEET SCS
- PARAMETERS ANALYZED EXCEED SCS
- SOIL REMEDIATION AREA

(H) 0m — 5m
(V) 0m — 10m
SCALE

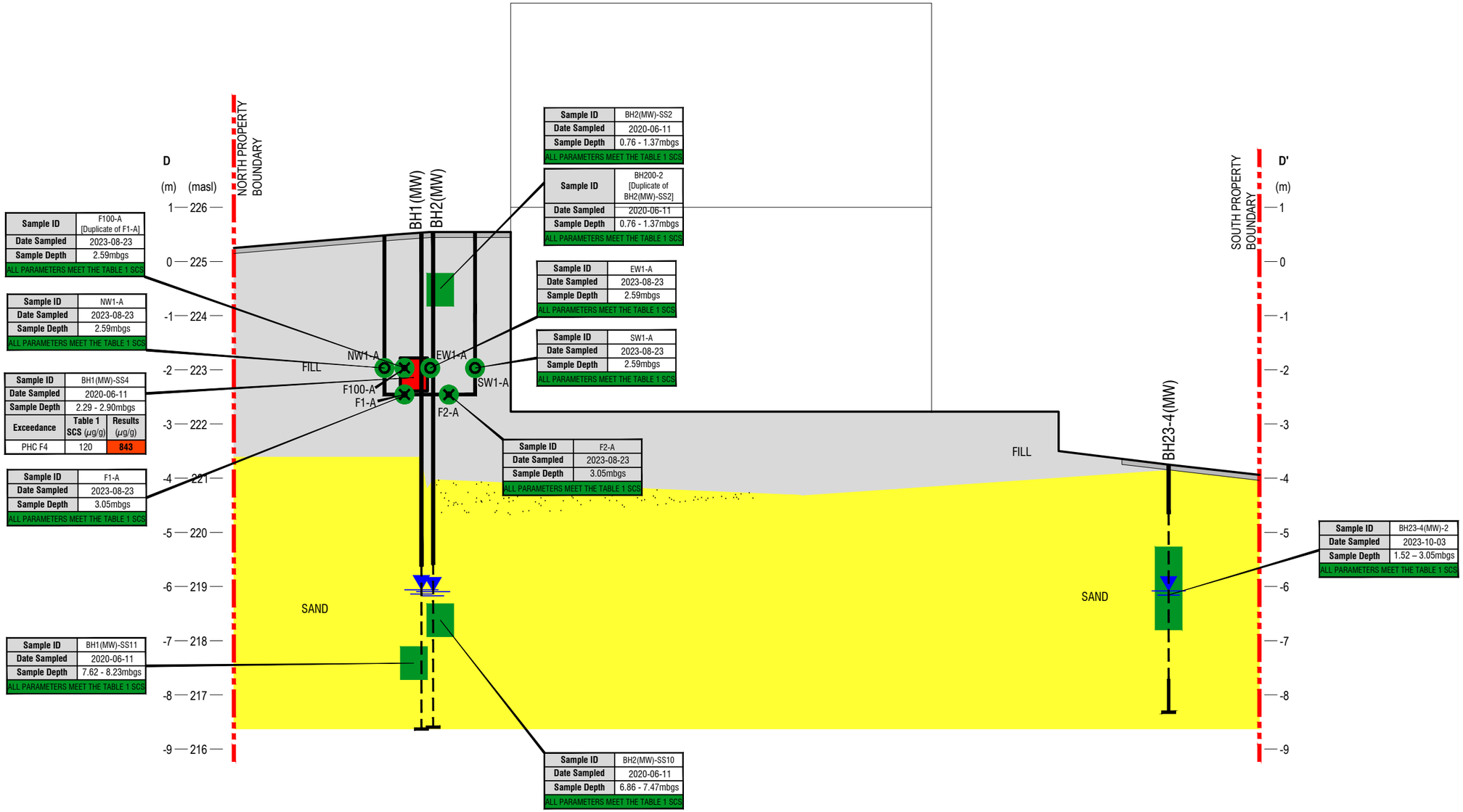
**WATTERS ENVIRONMENTAL GROUP INC®**
9135 Keele St. Unit A1
Concord, ON. L4K 0J4
T 416 361 2407
F 416 361 2410

DRAWN: B. CALDERONE
CHECKED: N. WRIGHT
DATE: APRIL 2024

CLIENT: DUNLOP DEVELOPMENTS (BARRIE) INC.
SITE ADDRESS: 149-153 DUNLOP ST EAST, BARRIE, ONTARIO

REPORT NAME: PHASE TWO ENVIRONMENTAL SITE ASSESSMENT

FIGURE NAME: SOIL REMEDIATION - PHCs - CROSS SECTION A-A'
PROJECT No: 20-0052.04
FIGURE No: 16A




**LEGEND:**

- **SCS** — TABLE 1, ALL TYPES OF PROPERTY USE
- MONITORING WELL
- SCREENED SECTION OF MONITORING WELL
- GROUNDWATER LEVEL
- **masl** — METRES ABOVE SEA LEVEL
- **mbgs** — METRES BELOW GROUND SURFACE
- **PHCs** — PETROLEUM HYDROCARBONS
- PARAMETERS ANALYZED MEET SCS
- PARAMETERS ANALYZED EXCEED SCS
- SOIL REMEDIATION AREA

(H) 0m — 5m
(V) 0m — 10m
SCALE

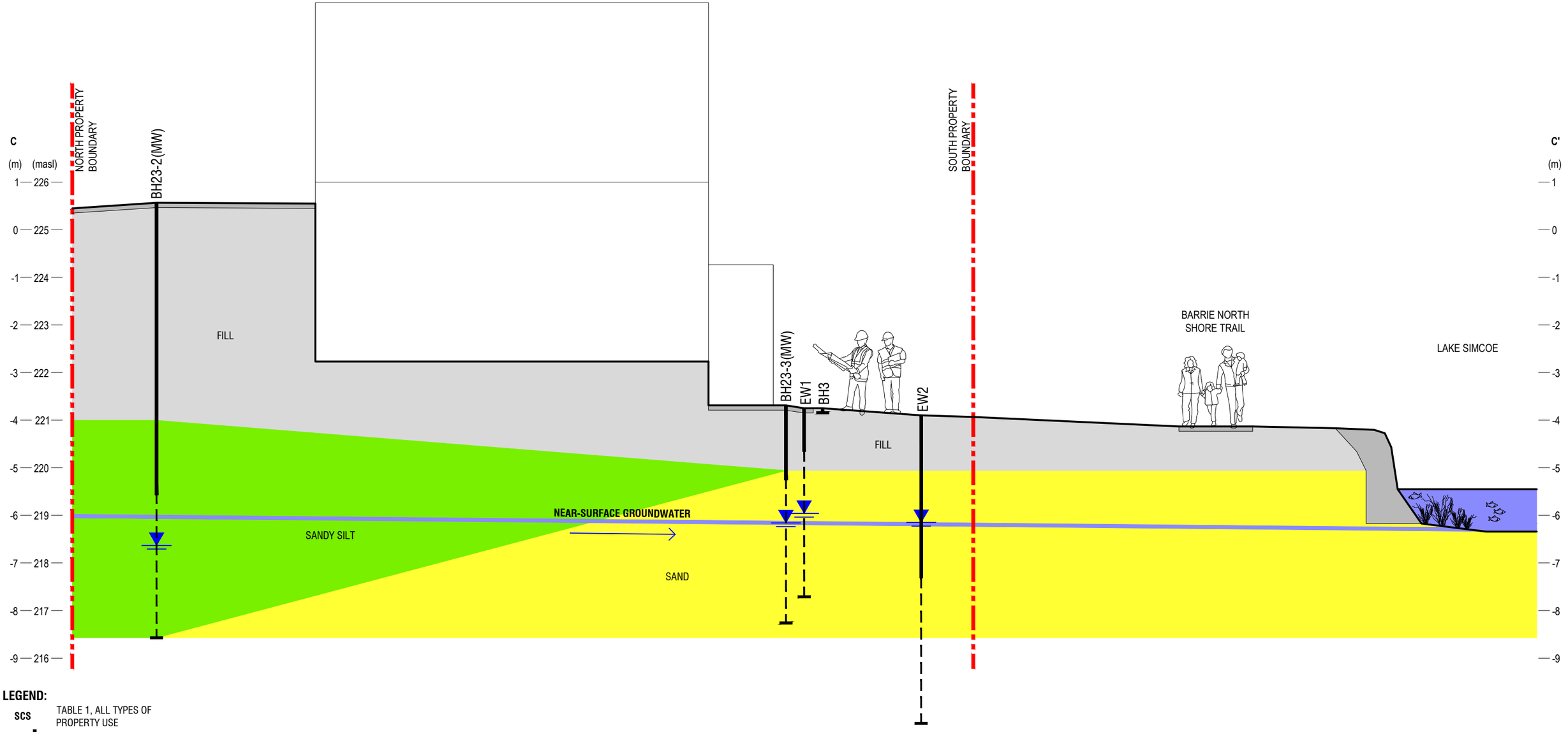
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Concord, ON. L4K 0J4
T 416 361 2407
F 416 361 2410

DRAWN: B. CALDERONE
CHECKED: N. WRIGHT
DATE: APRIL 2024

CLIENT: DUNLOP DEVELOPMENTS (BARRIE) INC.
SITE ADDRESS: 149-153 DUNLOP ST EAST, BARRIE, ONTARIO

REPORT NAME: PHASE TWO ENVIRONMENTAL SITE ASSESSMENT

FIGURE NAME: SOIL REMEDIATION - PHCs - CROSS SECTION D-D'
PROJECT No: 20-0052.04
FIGURE No: 16B




**LEGEND:**

| | |
|---|---|
| **SCS** | TABLE 1, ALL TYPES OF PROPERTY USE |
| | MONITORING WELL |
| | SCREENED SECTION OF MONITORING WELL |
| | GROUNDWATER LEVEL |
| **masl** | METRES ABOVE SEA LEVEL |
| **mbgs** | METRES BELOW GROUND SURFACE |
| **EW1** | MONITORING WELL DETAILS OBTAINED FROM WELL RECORD 7124832 |
| **EW2** | MONITORING WELL DEPTH OBTAINED FROM THE FIELD MEASUREMENT AND THE SCREEN LENGTH WAS INFERRED TO BE 3.05m |

(H) 0m 5m
(V) 0m 10m
SCALE

**WATTERS ENVIRONMENTAL GROUP INC®**
9135 Keele St. Unit A1
Concord, ON. L4K 0J4
T 416 361 2407
F 416 361 2410

DRAWN: B. CALDERONE
CHECKED: N. WRIGHT
DATE: APRIL 2024

CLIENT: DUNLOP DEVELOPMENTS (BARRIE) INC.
SITE ADDRESS: 149-153 DUNLOP ST EAST, BARRIE, ONTARIO

REPORT NAME: PHASE TWO ENVIRONMENTAL SITE ASSESSMENT

FIGURE NAME: PHASE TWO CONCEPTUAL SITE MODEL
PROJECT No: 20-0052.04
FIGURE No: 17

# APPENDIX A

## Sampling and Analysis Plan

**Sampling and Analysis Plan Rationale**

Based on identified Potentially Contaminating Activities (PCAs), the following Areas of Potential Environmental Concerns (APECs) identified within the Site are summarized below.

| APEC | Borehole/ Monitoring Well | Rationale | Contaminants of Potential Concern* | |
|---|---|---|---|---|
| | | | Soil | Groundwater |
| APEC 1 | BH1(MW) | A former carriage paint shop operated on the northwest side of the Site. | PHCs, VOCs, BTEX, THMs, Metals, CR(VI), Hg | PHCs, VOCs, BTEX, THMs, Metals, CR(VI), Hg |
| APEC 2A | BH1(MW) | A former gasoline service station operated on the northwest side of the Site. | PHCs, VOCs, BTEX, THMs, PAHs, Metals | PHCs, VOCs, BTEX, THMs, PAHs, Metals |
| APEC 2B | | A former automotive repair garage operated on the northwest side of the Site. | PHCs, VOCs, BTEX, THMs, PAHs, Metals, As, Sb, Se, B-HWS, CN-, CR(VI), Hg | PHCs, VOCs, BTEX, THMs, PAHs, Metals, As, Sb, Se, CN-, CR(VI), Hg |
| APEC 3 | BH23-1(MW), BH23-2(MW), BH23-3(MW) | A former automotive repair garage operated on the east side of the Site. | PHCs, VOCs, BTEX, THMs, PAHs, Metals, As, Sb, Se, B-HWS, CN-, CR(VI), Hg | PHCs, VOCs, BTEX, THMs, PAHs, Metals, As, Sb, Se, CN-, CR(VI), Hg |
| APEC 4 | BH23-4(MW) | A former small engine repair garage operated on the southwest side of the Site. | PHCs, VOCs, BTEX, THMs, PAHs, Metals, As, Sb, Se, B-HWS, CN-, CR(VI), Hg | PHCs, VOCs, BTEX, THMs, PAHs, Metals, As, Sb, Se, CN-, CR(VI), Hg |
| APEC 5 | BH23-1(MW), BH23-2(MW) | A former gasoline service station operated on the northeast side of the Site. | PHCs, VOCs, BTEX, THMs, PAHs, Metals | PHCs, VOCs, BTEX, THMs, PAHs, Metals |
| APEC 6 | BH23-3(MW) | Former heating oil AST was present along the southeast exterior of the Site building. | PHCs, BTEX, PAHs | - |

| APEC | Borehole/ Monitoring Well | Rationale | Contaminants of Potential Concern* | |
|---|---|---|---|---|
| | | | Soil | Groundwater |
| APEC 7 | BH1(MW), BH2(MW), BH23-1(MW), BH23-2(MW), BH23-3(MW) | Presence of fill of unknown quality. | PAHs, Metals, As, Sb, Se, B-HWS, CN-, CR(VI), Hg | - |
| APEC 8 | BH23-4(MW), BH23-5 | Former rail spur and tracks were present immediately south of the Site. | PHCs, VOCs, BTEX, THMs, PAHs, Metals, As, Sb, Se, B-HWS, CN-, CR(VI), Hg | - |
| APEC 9 | BH23-5 | A pad-mounted transformer is present southeast of the Site. | PHCs, PCBs | - |
| APEC 10A | BH1(MW), BH2(MW), BH23-1(MW) | A former machine shop was present north of the Site. | - | PHCs, VOCs, BTEX, THMs, Metals, As, Sb, Se, CN-, CR(VI), Hg |
| APEC 10B | | A former commercial printing service and associated hazardous waste (photo processing wastes) generation was present north of the Site. | - | PHCs, VOCs, BTEX, THMs, Metals, As, Sb, Se, CN-, CR(VI), Hg |
| APEC 10C | | | - | PHCs, VOCs, BTEX, THMs, Metals, As, Sb, Se, CN-, CR(VI), Hg |
| APEC11 | Not Applicable – Sampling not required as per Section 49.1 of O. Reg. 153/04. | Road salting for the safety of vehicular and pedestrian traffic. | - | - |

*Notes:

PHC: Petroleum Hydrocarbons; VOC: Volatile Organic Compounds; THMs: Trihalomethanes; BTEX: Benzene, Toluene, Ethylbenzene, Xylene; PAH: Polycyclic Aromatic Hydrocarbons; Other Regulated Parameters (ORPs) consist of Hexavalent Chromium [Cr (VI)], Cyanide (CN-), pH, hot water soluble boron (B-HWS), Arsenic (As), Antimony (Sb), Selenium (Se), Mercury (Hg); PCBs: Polychlorinated Biphenyls

In addition to assessing the above noted APECs, two existing on-Site monitoring wells installed by others, EX1 and EX2, will be sampled to assess elevated concentrations of contaminants reported in previous investigations.

| Borehole/ Monitoring Well | Rationale | Contaminants of Potential Concern* | |
|---|---|---|---|
| | | Soil | Groundwater |
| EX1 | An elevated antimony result in groundwater was reported in the 2017 TIL Phase I ESA Report. | - | Metals, As, Sb, Se |
| EX2 | An elevated chloroform result in groundwater was reported in the 2020 Watters Phase II ESA Report. | - | VOCs |

**Sampling Information**

| | |
|---|---|
| **Media To Be Investigated** | Soil and groundwater |
| **Sampling Parameters** | See table above |
| **Sampling System** | Judgmental |
| **Sampling Locations** | See table above. For soil samples, surface and/or subsurface samples shall be evaluated and the "worst-case" sample should be determined for laboratory analysis consideration. Deeper samples are to be analyzed for vertical delineation (if required due to contamination in the shallow soils). |
| **Sampling Interval** | Continuous sampling intervals for boreholes drilled with a Geoprobe drilling rig. |
| **Sampling Method** | Macro cores using direct push. |
| **Cluster or nested wells?** | Not applicable – Only needed if there is contaminated groundwater |
| **Trip Blank** | Include a trip blank for each submission of groundwater samples for VOC analysis. |

| | |
|---|---|
| **Performance Criteria Reference** | Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act, Amended July 1, 2011 and as of February 19, 2021 (Table 5-1 to 5-15). |

**Residue Management**

Soil cuttings and groundwater purged from the monitoring wells shall be stored in 45 gallon steel drums and be temporarily left on the Phase Two Property. The Client must be informed that the sealed drums should be secured at all times, which is part of their responsibility. Upon receipt of the laboratory results, handling and/or disposal options shall be discussed with the Client.

Prior to soil offsite disposal and/or transportation (if required), a composite soil sample shall be collected and be sent to an accredited laboratory for Toxicity Characteristics Leaching Procedure (TCLP) analysis.

**Quality Assurance / Quality Control**

| | |
|---|---|
| **Applicable Site Condition Standards** | Table 1 Full Depth Background Site Condition Standards (SCS) for Residential/Parkland/Institutional/Industrial/Commercial/Community property use in the Ontario Ministry of the Environment, Conservation and Park (MECP) publication "Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act", dated April 15, 2011. |
| **Laboratory** | SGS Canada Inc. |
| **Duplicate** | Duplicate ratio of 1:10, as a minimum, for each parameter group. |
| **Trip Blank** | Include a trip blank if sampling for VOC parameters in groundwater. |

| | |
|---|---|
| **Performance Criteria Reference** | PAHs, OC Pesticides, Chlorophenols, PCBs, Methyl Mercury Relative Percentage Difference (RPD): ≤30% ground water and ≤40%soil<br>PHCs RPD: ≤30% both groundwater and soil<br>VOCs RPD: ≤30% groundwater and ≤50% soil<br>Metals, Hydride Metals, Sodium, and Mercury RPD: ≤20% ground water and ≤30% soil<br>Boron-HWS: ≤40% soil<br>Chromium VI, Chloride and Cyanide RPD: ≤20% ground water and ≤35% soil<br>Electrical Conductivity RPD: ≤10% soil<br>pH: within 0.3 pH units<br>Referenced from "*Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act*", dated March 9, 2004, amended July 1, 2011 and as of February 19, 2021. |

All soil and groundwater samples will be transferred immediately into laboratory supplied sampling containers. Details of the sampling containers are summarized below:

| Parameter | Sample Bottle | Preservative | Handling & Custody of Samples |
|---|---|---|---|
| **Soil** | | | |
| Metals & ORPs, PHCs (F2-F4), PAHs, PCBs, and Reg. 347/558 Toxicity Characteristics Leaching Procedure | Amber glass Teflon lined lid | None | Field staff will collect soil samples and transfer them to the lab. All soil samples will be kept in a cooler with ice from the time of collection until the time they are transferred to the laboratory's control under Chain-of-Custody procedures. |
| VOCs, PHCs (F1) | Vial | Methanol | |

| **Groundwater** | | | |
|---|---|---|---|
| PHCs (F2-F4) | Amber Glass Bottle | HCl | Field staff will collect groundwater samples and transfer them to the lab. All groundwater samples will be kept in a cooler with ice from the time of collection until the time they are transferred to the laboratory's control under Chain of Custody procedures. |
| PAH | Amber Glass Bottle | None | |
| Dissolved Metals | Plastic Bottle | Nitric Acid | |
| Mercury | Amber Glass | HCl | |
| Cr (VI) | Plastic Bottle | Ammonium sulphate/hydroxide | |
| CN- | Plastic Bottle | NaOH | |
| General Analysis | Plastic Bottle | No Preservative | |
| VOCs, PHCs (F1) | Vials | $NaHSO_4$ | |

Field investigations and sample handling procedures will be conducted in general accordance with Watters Environmental's Standard Operating Procedures for Phase Two ESAs. To minimize the potential for cross-contamination of samples at differing locations, the following procedures were used by Watters Environmental field staff:

- New disposable gloves are to be used for each sample collected (parameter varying);
- Non-dedicated tools are to be cleaned between sample collections;
- Soil samples are to be placed in laboratory-supplied containers suitable for the analysis;
- Wells are to be purged with dedicated, WaterraÈ tubing, for each well; and
- Water samples are to be retrieved with dedicated low-flow sampler tubing for each well (where low-flow sampling can be completed).

Samples are to be labelled and stored in a cooler with ice while in the field and during transportation to the office and/or laboratory.

All soil samples submitted for chemical analysis will be submitted in laboratory-supplied glass containers. Samples to be analyzed for metals and inorganics, PCBs, PAHs and PHCs in the F2 to F4 fractions, will be submitted in glass jars with Teflon lined lids. Soil samples submitted for analysis of VOCs, BTEX, THMs, and PHCs in the F1 fraction will be collected using disposable TerraCore samplers and placed in vials containing a pre-measured amount of methanol both of which will be provided by SGS. A new TerraCore sampler will be used each time soil samples are collected for potential analysis of VOCs and PHCs in the F1 fraction.

At least one field duplicate sample will be collected for every ten samples submitted for laboratory analysis. One trip blank sample (for each submission) will also be submitted for laboratory analysis when groundwater samples are analyzed for VOCs.

**Additional Site Information**

| | |
|---|---|
| **Physical Impediments** | The boreholes and monitoring wells should be placed at strategic locations with the consideration of access limitations and the underground utilities beneath and the aboveground utilities above the Phase Two Property. |
| **Utilities** | Underground utilities associated with the Site building at the Phase Two Property may include water lines, natural gas lines and electrical lines. Ensure that public utility locates are ordered through Ontario One Call, and all drilling areas are scanned by a private utility locator. |
| **Site Boundaries** | See survey plan (Appendix B) or figures from Phase One ESA. |
| **Adjacent Properties / Structures** | See Figure 2 from Phase One ESA. |

**Applicable Watters Environmental Standard Operating Procedures**

| | |
|---|---|
| **Borehole Drilling** | Watters Environmental SOP # 4.1.1, 4.1.2 and 4.1.3 |
| **Excavating** | Watters Environmental SOP #8.1.1 and 8.1.2 |
| **Soil Sampling** | Watters Environmental SOP # 4.1.8, 6.5.1, 6.5.2 |
| **Field Screening Measurements** | Watters Environmental SOP # 4.5 and 6.5.9 |
| **Monitoring Well Installation** | Watters Environmental SOP # 4.1.5 |
| **Monitoring Well Development** | Watters Environmental SOP #6.2.2 and 6.2.3 |

| | |
|---|---|
| **Water Quality Measurements** | Watters Environmental SOP #6.2.1 |
| **Groundwater Sampling** | Watters Environmental SOP #6.2.1, 6.2.4, 6.2.5 and 6.2.7 |
| **Sediment Sampling** | Not Applicable |

# APPENDIX B

## Plan of Survey

# PLAN OF SURVEY OF PART OF DUNLOP STREET (STOPPED UP AND CLOSED BY BY-LAW 2001-191, INST. No. LT507517) AND PART OF WATER LOTS LOTS 17 AND 18 (SOUTH SIDE OF DUNLOP STREET), REGISTERED PLAN 2 CITY OF BARRIE COUNTY OF SIMCOE

SCALE 1:250

10m 5m 0 10m 20metres

R-PE SURVEYING LTD., O.L.S.

## METRIC

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

## SURVEYOR'S CERTIFICATE

I CERTIFY THAT:

1. THIS SURVEY AND PLAN ARE CORRECT AND IN ACCORDANCE WITH THE SURVEYS ACT, THE SURVEYORS ACT AND THE LAND TITLES ACT AND THE REGULATIONS MADE UNDER THEM.
2. THE SURVEY WAS COMPLETED ON THE 31st DAY OF MAY, 2023

DATE JUNE 1st, 2023

C. P. EDWARD
ONTARIO LAND SURVEYOR

THIS PLAN OF SURVEY RELATES TO AOLS PLAN SUBMISSION FORM NUMBER 2209434.

I REQUIRE THIS PLAN TO BE DEPOSITED UNDER THE LAND TITLES ACT.

DATE JUNE 1st, 2023

C. P. EDWARD, O.L.S.

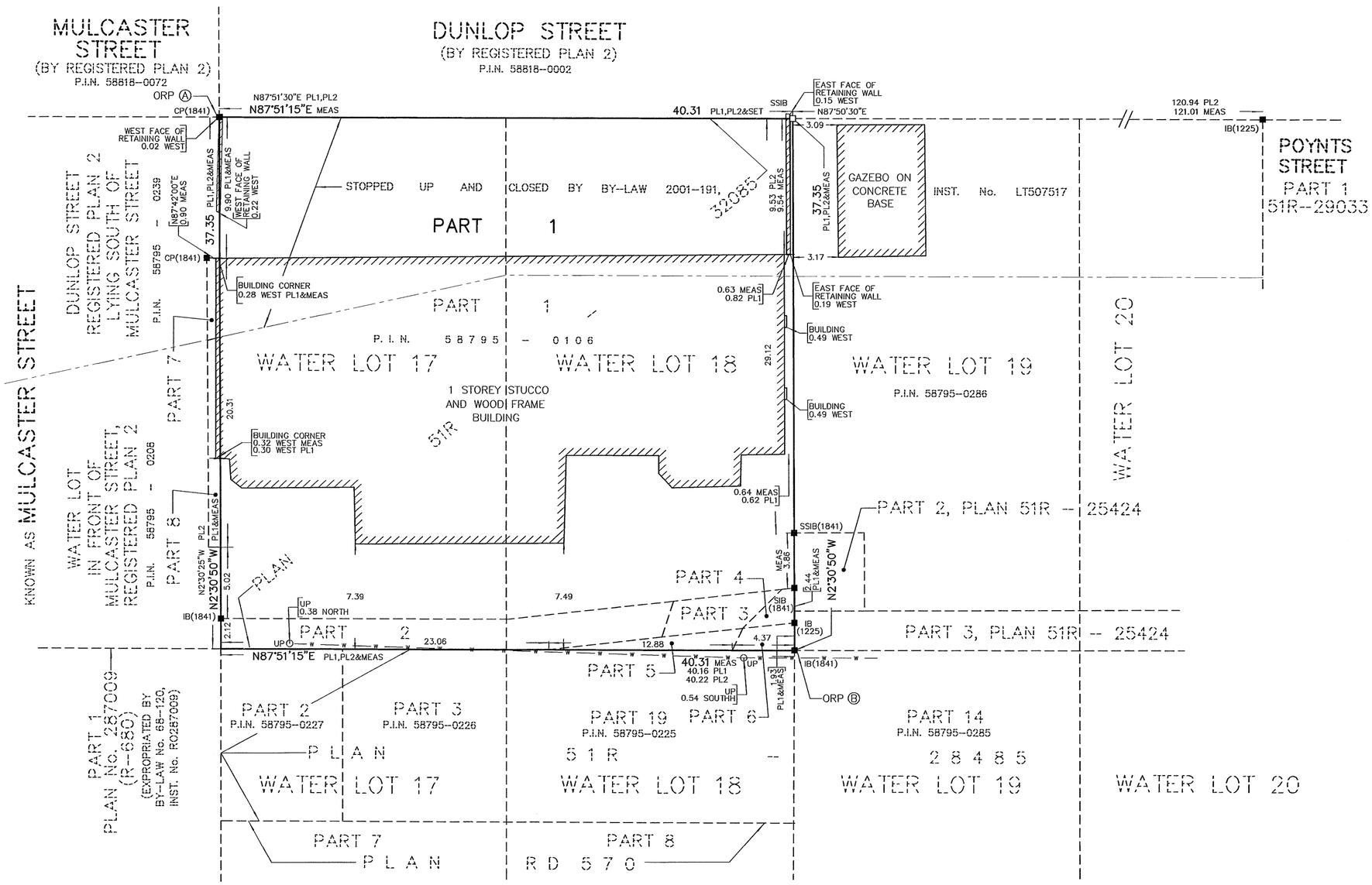
**PLAN 51R- 44261**

RECEIVED AND DEPOSITED

DATE Sept. 12, 2023

REPRESENTATIVE FOR LAND REGISTRAR FOR THE LAND TITLES DIVISION OF SIMCOE (No.51)

| SCHEDULE | | | |
|---|---|---|---|
| PART | LOT/STREET | REGISTERED PLAN | P.I.N. |
| 1 | PART OF WATER LOTS 17 AND 18 (SOUTH SIDE OF DUNLOP STREET) AND PART OF DUNLOP STREET (STOPPED UP AND CLOSED BY BY-LAW 2001-191, INST. No. LT507517) | 2 | ALL OF 58795-0106 |




## NOTES

| | |
|---|---|
| □ | DENOTES MONUMENT SET |
| ■ | DENOTES MONUMENT FOUND |
| IB | DENOTES IRON BAR |
| SIB | DENOTES STANDARD IRON BAR |
| SSIB | DENOTES SHORT STANDARD IRON BAR |
| CP | DENOTES CONCRETE PIN |
| P.I.N. | DENOTES PROPERTY IDENTIFIER NUMBER |
| PL1 | DENOTES PLAN 51R-32085 |
| PL2 | DENOTES PLAN 51R-28485 |
| (1225) | DENOTES RAIKES SURVEYING LTD., O.L.S. |
| (1841) | DENOTES PETER RAIKES, O.L.S. |
| ORP | DENOTES OBSERVED REFERENCE POINT |
| -W- | DENOTES OVERHEAD WIRE |
| UP | DENOTES UTILITY POLE |

## INTEGRATION NOTE

BEARINGS ARE GRID, UTM, NAD83 (CSRS: CBNV6: 2010.0), DERIVED FROM OBSERVED REFERENCE POINTS (A) AND (B) USING CANNET REAL TIME NETWORK (RTN) No. 20120110003 (NORTHING: 4910049.14, EASTING: 606039.36).

COORDINATES ARE UTM ZONE 17, NAD83 (CSRS) (CBNV6-2010.0), TO URBAN ACCURACY PER SEC. 14 (2) OF O.REG. 216/10, AND CANNOT, IN THEMSELVES, BE USED TO RE-ESTABLISH CORNERS OR BOUNDARIES SHOWN ON THIS PLAN.

| POINT | NORTHING | EASTING |
|---|---|---|
| ORP (A) | 4915946.51 | 604717.88 |
| ORP (B) | 4915910.73 | 604759.80 |

DISTANCES ARE GROUND AND CAN BE CONVERTED TO GRID BY MULTIPLYING BY THE COMBINED SCALE FACTOR OF 0.999740.


**R-PE SURVEYING LTD.**
ONTARIO LAND SURVEYORS
643 Chrislea Road, Suite 7
Woodbridge, Ontario L4L 8A3
Tel.(416)635-5000 Fax (416)635-5001
Tel.(905)264-0881 Fax (905)264-2099
Website: www.r-pe.ca


DRAWN: A.Q. CHECKED: C.P.E.
JOB No. 20-283 CAD FILE No. 20283R01

# APPENDIX C

# Borehole Logs

WATTERS ENVIRONMENTAL GROUP INC.®
9135 Keele Street, Unit A1
Concord, Ontario L4K 0J4
www.wattersenvironmental.com
416-361-2407

**Borehole No:** BH1(MW)

***Project No.: 20-0052.02***

**Client:** Dunlop Developments (Barrie) Inc.

**Location:** 149-153 Dunlop Street East & 5 Mulcaster Street, Barrie, Ontario

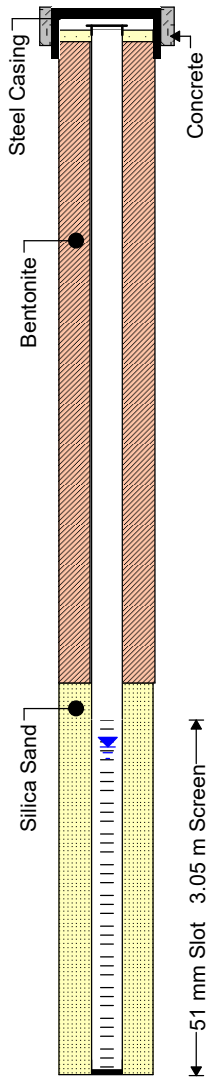
**Ground Elevation:** -

**Total Depth:** 9.14 m / 30 feet

**Logged By:** BDW

**Project Manager:** BW

| SUBSURFACE PROFILE | | | | SAMPLE | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Depth (ft / m) | Symbol | Description | Depth/Elev. | Number | Type | Blow Count | Recovery % | Vapour (CCG/PID) | Lab Submitted | Monitoring Well Completion Details |
| 0 / 0 | | Ground Surface | 0.00 | | | | | | | |
| | | 100mm ASPHALT | 0.00 | 1 | SS | 3-5-5-4 | 75% | 0,0 | X | |
| 1 / | | FILL, medium sand, some cobbles, trace clay, medium brown to dark brown, moist, loose | | 2 | SS | 1-3-1-1 | 5% | - | | |
| 4 / 1 | | | -1.52 | | | | | | | |
| 5 / | | FILL, silty sand, trace gravel, trace cobbles, light to dark brown, moist, loose | 1.52 | 3 | SS | 1-1-1-1 | 20% | 0,0 | X | |
| 8 / 2 | | | | 4 | SS | 1-1-21-5 | 40% | 0,0 | X | |
| 9 / | | large cobble @ 2.74 m | | | | | | | | |
| 10 / 3 | | | | 5 | SS | 7-3-3-3 | 33% | 0,0 | | |
| 11 / | | large cobble @ 3.35 m | | | | | | | | |
| 13 / 4 | | | -4.11 | 6 | SS | 7-23-9-5 | 40% | 0,0 | | |
| 14 / | | SAND, medium to coarse, some cobbles, light to medium brown | 4.11 | | | | | | | |
| 16 / 5 | | | | 7 | SS | 1-2-2-3 | 60% | 0,0 | | |
| 17 / | | trace organic material @ 5.03 m | | | | | | | | |
| 18 / | | fine sand, some silt, trace organic material @ 5.49 m | | 8 | SS | 2-5-5-6 | 95% | 0,0 | X | |
| 20 / 6 | | | | 9 | SS | 3-5-6-7 | 66% | 0,0 | | |
| 23 / 7 | | | | 10 | SS | 1-2-3-4 | 66% | 0,0 | | |
| 24 / | | saturated @ 7.32 m | | | | | | | | |
| 25 / | | medium brown @ 7.62 m | | 11 | SS | 10-10-9-10 | 100% | 0,0 | X | |
| 26 / 8 | | | | | | | | | | |
| 28 / | | trace organic material @ 8.53 m | | 12 | SS | 3-6-7-10 | 100% | 0,0 | | |
| 29 / 9 | | | -9.14 | | | | | | | |
| 30 / | | End of Borehole | 9.14 | | | | | | | |
| 33 / 10 | | | | | | | | | | |




**Drilled By:** Profile Drilling Inc., Mobile B-45 HD

**Drill Method:** Hollow Stem Augers & Split Spoon Sampling

**Drill Date:** June 11, 2020

**Hole Size:** 8"

**Screening Tool:** RKI Eagle II

**Sheet:** 1 of 1

WATTERS ENVIRONMENTAL GROUP INC.®
9135 Keele Street, Unit A1
Concord, Ontario L4K 0J4
www.wattersenvironmental.com
416-361-2407

**Borehole No:** BH2(MW)

***Project No.: 20-0052.02***

**Client:** Dunlop Developments (Barrie) Inc.

**Location:** 149-153 Dunlop Street East & 5 Mulcaster Street, Barrie, Ontario

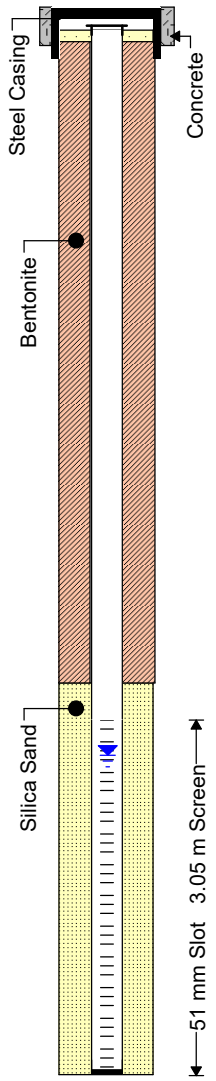
**Ground Elevation:** -

**Total Depth:** 9.14 m / 30 feet

**Logged By:** BDW

**Project Manager:** BW

| SUBSURFACE PROFILE | | | | SAMPLE | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Depth (ft / m) | Symbol | Description | Depth/Elev. | Number | Type | Blow Count | Recovery % | Vapour (CCG/PID) | Lab Submitted | Monitoring Well Completion Details |
| 0 / 0 | | Ground Surface | 0.00 | | | | | | | |
| 0 / 0 | | 100mm ASPHALT | 0.00 | 1 | SS | 5-5-4-2 | 66% | 0,0 | X | |
| 1 / 0 | | FILL, medium sand, some cobbles, trace gravel, brown, moist, loose | -0.76 | | | | | | | |
| 3 / 1 | | FILL, silty sand, trace gravel, trace cobbles, brown, moist, loose | 0.76 | 2 | SS | 1-1-1-1 | 60% | 0,0 | X | |
| 6 / 2 | | | | 3 | SS | 1-1-1 | 60% | 0,0 | X | |
| 8 / 2 | | | | 4 | SS | 1-1-1-1 | 45% | 0,0 | | |
| 10 / 3 | | | | 5 | SS | 1-2-2-2 | 33% | 0,0 | | |
| 13 / 4 | | large cobble @ 3.96 m | | 6 | SS | 2-5-11-16 | 15% | 0,0 | X | |
| 15 / 4 | | | -4.57 | | | | | | | |
| 15 / 5 | | SAND and GRAVEL, trace cobbles, trace oxidation, brown, moist | 4.57 | 7 | SS | 11-17-19-27 | 50% | 0,0 | | |
| 17 / 5 | | | -5.33 | | | | | | | |
| 18 / 5 | | SAND, coarse, trace cobble, trace gravel, brown, moist | 5.33 | 8 | SS | 10-10-8-9 | 20% | 0,0 | | |
| 20 / 6 | | | | 9 | SS | 4-8-14-19 | 60% | 0,0 | | |
| 22 / 6 | | saturated @ 6.71 m | | | | | | | | |
| 23 / 7 | | | | 10 | SS | 3-4-5-10 | 100% | 0,0 | X | |
| 25 / 7 | | | | 11 | SS | 4-6-10-7 | 60% | 0,0 | | |
| 27 / 8 | | | | | | | | | | |
| 28 / 8 | | | | 12 | SS | 3-6-5-3 | 66% | 0,0 | | |
| 29 / 9 | | | -9.14 | | | | | | | |
| 30 / 9 | | End of Borehole | 9.14 | | | | | | | |
| 33 / 10 | | | | | | | | | | |




**Drilled By:** Profile Drilling Inc., Mobile B-45 HD

**Drill Method:** Hollow Stem Augers & Split Spoon Sampling

**Drill Date:** June 12, 2020

**Hole Size:** 8"

**Screening Tool:** RKI Eagle II

**Sheet:** 1 of 1

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**Borehole No:** BH3

***Project No.: 20-0052.02***

**Client:** Dunlop Developments (Barrie) Inc.

**Location:** 149-153 Dunlop Street East & 5 Mulcaster Street, Barrie, Ontario

**Ground Elevation:** -

**Total Depth:** 0.30 m / 1 foot

**Logged By:** BDW

**Project Manager:** BW

| SUBSURFACE PROFILE | | | | SAMPLE | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Depth (ft / m) | Symbol | Description | Depth/Elev. | Number | Type | Blow Count | Recovery % | Vapour (CCG/PID) | Lab Submitted | Monitoring Well Completion Details |
| 0 / 0 | | Ground Surface | 0.00 | | | | | | | |
| 0 / 0 | | TOPSOIL, trace sand, trace gravel, moist | 0.00 | 1 | SS | | 100% | 0,0 | X | |
| | | End of Borehole (Refusal) | | | | | | | | |

ft: 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33

m: 0 1 2 3 4 5 6 7 8 9 10

**Drilled By:** Profile Drilling Inc., Pionjar

**Drill Method:** Split Spoon Sampling

**Drill Date:** June 12, 2020

**Hole Size:** 2"

**Screening Tool:** RKI Eagle II

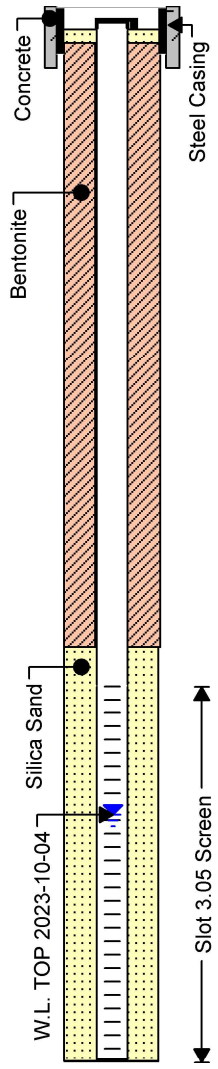
**Sheet:** 1 of 1

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***Borehole No.: BH23-1(MW)***

**Project No.:** 20-0052.04
**Client:** Dunlop Developments (Barrie) Inc.
**Location:** 149 Dunlop Street East, Barrie, Ontario
**Ground Elevation:** N/A **Total Depth:** 9.14 m
**Logged By:** MW **Project Manager:** NW

| SUBSURFACE PROFILE | | | | SAMPLE | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Depth (ft / m) | Symbol | Description | Depth/Elev. | Number | Type | Blow Count | Recovery % | Vapour(CCG/PID) | Lab Submitted | Borehole Completion Details |
| 0 / 0 | | Surface | | | | | | | | |
| 0 / 0 | | Asphalt 100mm | 0.00 | | | | | | | |
| 0 / 0 – 3 / 1 | | Fill, brown sand, with silt seams, cobble, trace gravel, trace coal and trace brick | | 1 | DP | | 60 | 0/0 | X | |
| 3 / 1 – 6 / 2 | | | | 2 | DP | | 40 | 0/0 | | |
| 10 / 3 | | Grey sandy silt, with cobble, trace gravel, trace oxidization | 3.05 | 3 | DP | | 70 | 0/0 | | |
| 13 / 4 – 20 / 6 | | | | 4 | DP | | 70 | 0/0 | | |
| 20 / 6 | | saturated | | | | | | | | |
| 20 / 6 – 26 / 8 | | | | 5 | DP | | 60 | 0/0 | X | |
| 23 / 7 | | gravel | | | | | | | | |
| 26 / 8 – 30 / 9 | | | | 6 | DP | | 80 | 0/0 | | |
| 30 / 9 | | End of Borehole | 9.14 | | | | | | | |



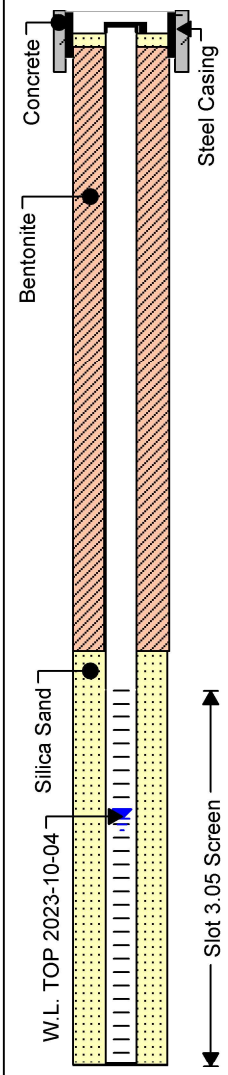

**Drilled By:** Strata Drilling Group
**Drill Method:** Geoprobe 7822DT, Direct Push (5ft Sleeves)
**Drill Date:** Octobe 2, 2023
**Hole Size:** 150mm
**Screening Tool:** RKI Eagle II
**Sheet:** 1 of 1

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***Borehole No.: BH23-2(MW)***

**Project No.:** 20-0052.04
**Client:** Dunlop Developments (Barrie) Inc.
**Location:** 149 Dunlop Street East, Barrie, Ontario
**Ground Elevation:** N/A **Total Depth:** 9.14 m
**Logged By:** MW **Project Manager:** NW

| SUBSURFACE PROFILE | | | | SAMPLE | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Depth (ft / m) | Symbol | Description | Depth/Elev. | Number | Type | Blow Count | Recovery % | Vapour(CCG/PID) | Lab Submitted | Borehole Completion Details |
| 0 / 0 | | Surface | | | | | | | | |
| 0 | | Asphalt 100mm | 0.00 | | | | | | | |
| 1 | | Fill, brown sand, with silt seams, cobble and trace gravel fill | | 1 | DP | | 30 | 0/0 | | |
| 2 / 1 | | | | | | | | | | |
| 3 | | | | 2 | DP | | 30 | 0/0 | X | |
| 4 / 2 | | Trace coal | | | | | | | | |
| 5 | | | | 3 | DP | | 10 | 0/0 | | |
| 6 / 3 | | | | | | | | | | |
| 7 | | Grey sandy silt, with cobble, trace gravel, trace oxidization | 4.57 | 4 | DP | | 40 | 0/0 | | |
| 8 / 4 | | | | | | | | | | |
| 9 | | Saturated w/cobble and gravel | | 5 | DP | | 60 | 0/0 | X | |
| 10 / 5 | | | | | | | | | | |
| 11 | | | | 6 | DP | | 50 | 0/0 | | |
| 12 / 6 | | | | | | | | | | |
| 13 | | | | | | | | | | |
| 14 / 7 | | | | | | | | | | |
| 15 | | | | | | | | | | |
| 16 / 8 | | | | | | | | | | |
| 17 | | | | | | | | | | |
| 18 / 9 | | | | | | | | | | |
| 19 | | | | | | | | | | |
| 20 / 10 | | | | | | | | | | |
| 21 | | | | | | | | | | |
| 22 / 11 | | | | | | | | | | |
| 23 | | | | | | | | | | |
| 24 / 12 | | | | | | | | | | |
| 25 | | | | | | | | | | |
| 26 / 13 | | | | | | | | | | |
| 27 | | | | | | | | | | |
| 28 / 14 | | | | | | | | | | |
| 29 | | | | | | | | | | |
| 30 / 15 | | End of Borehole | 9.14 | | | | | | | |
| 31 | | | | | | | | | | |




**Drilled By:** Strata Drilling Group
**Drill Method:** Geoprobe 7822DT, Direct Push (5ft Sleeves)
**Drill Date:** October 2, 2023

**Hole Size:** 150mm
**Screening Tool:** RKI Eagle II
**Sheet:** 1 of 1

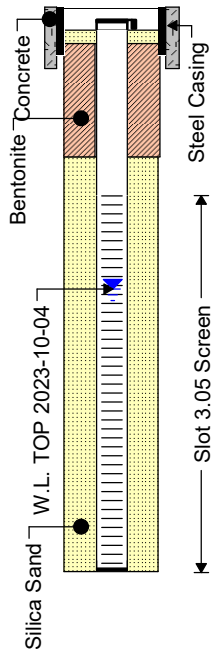
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***Borehole No.: BH23-3(MW)***

**Project No.:** 20-0052.04
**Client:** Dunlop Developments (Barrie) Inc.
**Location:** 149 Dunlop Street East, Barrie Ontario
**Ground Elevation:** N/A **Total Depth:** 4.57 m
**Logged By:** MW **Project Manager:** NW

| SUBSURFACE PROFILE | | | | SAMPLE | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Depth (ft / m) | Symbol | Description | Depth/Elev. | Number | Type | Blow Count | Recovery % | Vapour(CCG/PID) | Lab Submitted | Borehole Completion Details |
| 0 / 0 | | Surface | | | | | | | | |
| 0 / 0 | | Asphalt 100mm | 0.00 | | | | | | | |
| 1 / 0 | | Filll, brown sand, with silt seams, cobble, trace gravel | | 1 | DP | | 40 | 0/0 | X | |
| 4 / 1 | | black (100mm) | | | | | | | | |
| 5 / 1 | | | 1.37 | | | | | | | |
| 6 / 2 | | saturated | | 2 | DP | | 30 | 0/0 | X | |
| 10 / 3 | | silt pockets (5mm) | | | | | | | | |
| 10 / 3 | | | | 3 | DP | | 50 | 0/0 | | |
| 15 / 4 | | End of Borehole | 4.57 | | | | | | | |
| 31 / 9 | | | | | | | | | | |




**Drilled By:** Strata Drilling Group
**Drill Method:** Geoprobe 7822DT, Direct Push (5ft Sleeves)
**Drill Date:** October 3, 2023

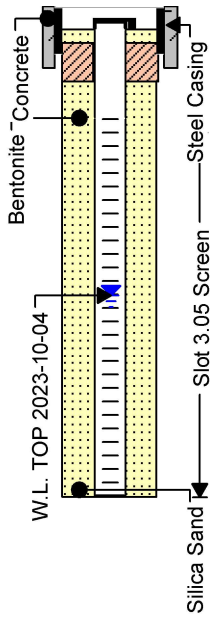
**Hole Size:** 150mm
**Screening Tool:** RKI Eagle II
**Sheet:** 1 of 1

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***Borehole No.: BH23-4(MW)***

**Project No.:** 20-0052.04
**Client:** Dunlop Developments (Barrie) Inc.
**Location:** 149 Dunlop Street East, Barrie Ontario
**Ground Elevation:** N/A **Total Depth:** 4.57 m
**Logged By:** MW **Project Manager:** NW

| SUBSURFACE PROFILE | | | | SAMPLE | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Depth (ft / m) | Symbol | Description | Depth/Elev. | Number | Type | Blow Count | Recovery % | Vapour(CCG/PID) | Lab Submitted | Borehole Completion Details |
| 0 / 0 | | Surface | | | | | | | | |
| 0 / 0 | | Interlock Stone 100mm | 0.00 | | | | | | | |
| 0 – 3 / 0 – 1 | | Brown/grey sand, moist with cobble and trace gravel | | 1 | DP | | 30 | 25/0 | | |
| 6 – 10 / 2 – 3 | | saturated<br>silt pockets (5mm) | | 2 | DP | | 30 | 25/0 | X | |
| 10 – 13 / 3 – 4 | | | | 3 | DP | | 70 | 0/0 | | |
| 15 / 5 | | End of Borehole | 4.57 | | | | | | | |




**Drilled By:** Strata Drilling Group
**Drill Method:** Geoprobe 7822DT, Direct Push (5ft Sleeves)
**Drill Date:** October 3, 2023
**Hole Size:** 150mm
**Screening Tool:** RKI Eagle II
**Sheet:** 1 of 1

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***Borehole No.: BH23-5***

**Project No.:** 20-0052.04
**Client:** Dunlop Developments (Barrie) Inc.
**Location:** 149 Dunlop Street East, Barrie Ontario
**Ground Elevation:** N/A **Total Depth:** 3.05 m
**Logged By:** MW **Project Manager:** NW

| SUBSURFACE PROFILE | | | | SAMPLE | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Depth | Symbol | Description | Depth/Elev. | Number | Type | Blow Count | Recovery % | Vapour(CCG/PID) | Lab Submitted | Borehole Completion Details |
| ft / m | | Surface | | | | | | | | |
| 0 / 0 | | Topsoil 100mm | 0.00 | | | | | | | |
| 1 | | Fill, brown sand, moist with cobble and trace gravel | | 1 | DP | | 50 | 20/1 | X | |
| 2 / 1 | | | | | | | | | | |
| 3 | | very moist, trace wood, trace oxidization | | 2 | DP | | 40 | 20/1 | X | |
| 4 / 2 | | | | | | | | | | |
| 5 | | | | | | | | | | |
| 6 / 3 | | End of Borehole | 3.05 | | | | | | | |
| 7 | | | | | | | | | | |
| 8 / 4 | | | | | | | | | | |
| 9 | | | | | | | | | | |
| 10 / 5 | | | | | | | | | | |
| 11 | | | | | | | | | | |
| 12 / 6 | | | | | | | | | | |
| 13 | | | | | | | | | | |
| 14 / 7 | | | | | | | | | | |
| 15 | | | | | | | | | | |
| 16 / 8 | | | | | | | | | | |
| 17 | | | | | | | | | | |
| 18 / 9 | | | | | | | | | | |
| 19 | | | | | | | | | | |
| 20 / 10 | | | | | | | | | | |
| 21 | | | | | | | | | | |
| 22 / 11 | | | | | | | | | | |
| 23 | | | | | | | | | | |
| 24 / 12 | | | | | | | | | | |
| 25 | | | | | | | | | | |
| 26 / 13 | | | | | | | | | | |
| 27 | | | | | | | | | | |
| 28 / 14 | | | | | | | | | | |
| 29 | | | | | | | | | | |
| 30 / 15 | | | | | | | | | | |
| 31 | | | | | | | | | | |

**Drilled By:** Strata Drilling Group
**Drill Method:** Geoprobe 7822DT, Direct Push (5ft Sleeves)
**Drill Date:** October 2, 2023

**Hole Size:** 150mm
**Screening Tool:** RKI Eagle II
**Sheet:** 1 of 1

# APPENDIX D

## Laboratory Certificates-of-Analyses

# FINAL REPORT

CA15298-JUN20 R1

## First Page

| CLIENT DETAILS | | LABORATORY DETAILS | |
|---|---|---|---|
| Client | Watters Environmental Group Inc. | Project Specialist | Jill Campbell, B.Sc.,GISAS |
| | | Laboratory | SGS Canada Inc. |
| Address | 9135 Keele St Unit A1<br>Concord, ON<br>L4K 0J4. Canada | Address | 185 Concession St., Lakefield ON, K0L 2H0 |
| Contact | Basil Wong | Telephone | 2165 |
| Telephone | (416) 361-2407 | Facsimile | 705-652-6365 |
| Facsimile | (416) 361-2410 | Email | jill.campbell@sgs.com |
| Email | Bwong@wattersenvironmental.com; labcerts@wattersenvironm | SGS Reference | CA15298-JUN20 |
| Project | 20-0052.01 | Received | 06/15/2020 |
| Order Number | | Approved | 06/19/2020 |
| Samples | Soil (15) | Report Number | CA15298-JUN20 R1 |
| | | Date Reported | 12/20/2023 |

COMMENTS

CCME Method Compliance: Analyses were conducted using analytical procedures that comply with the Reference Method for the CWS for Petroleum Hydrocarbons in Soil and have been validated for use at the SGS laboratory, Lakefield, ON site.

Quality Compliance: Instrument performance / calibration quality criteria were met and extraction and analysis limits for holding times were met.

nC6 and nC10 response factors within 30% of response factor for toluene: YES

nC10, nC16 and nC34 response factors within 10% of the average response for the three compounds: YES

C50 response factors within 70% of nC10 + nC16 + nC34 average: YES

Linearity is within 15%: YES

F4G - gravimetric heavy hydrocarbons cannot be added to the C6 to C50 hydrocarbons.
The results for F4 and F4G are both reported and the greater of the two values is to be used in application to the CWS PHC.

Hydrocarbon results are expressed on a dry weight basis.

Benzo(b)fluoranthene results for comparison to the standard are reported as benzo(b+j)fluoranthene. Benzo(b)fluoranthene and benzo(j)fluoranthene co-elute and cannot be reported individually by the analytical method used.

Temperature of Sample upon Receipt: 8 degrees C
Cooling Agent Present:Yes
Custody Seal Present:Yes

Chain of Custody Number:013895/013896

QC Batch GCM253-JUN20: Pyrene, Benzo(a)anthracene, Chrysene, Benzo(b+j)fluoranthene and Benzo(a)pyrene: Dup RPD; RPD for these parameters are outside control limits. The average of the two duplicates for each compound are less than five times the RL, therefore a greater uncertainty is expected.

SIGNATORIES

on behalf of Jill Campbell, B.Sc.,GISAS



1,1-Dichloroethane matrix spike; recovery for this parameter is outside control limits; the overall quality control for this analysis has been assessed and meets method acceptability criteria.

## RESULTS - SOIL

| | Sample Number | 9 | 10 | 11 | 12 | |
|---|---|---|---|---|---|---|
| | Sample Name | BH1(MW)-SS1 | BH1(MW)-SS3 | BH1(MW)-SS4 | BH1(MW)-SS8 | |
| | Sample Matrix | Soil | Soil | Soil | Soil | |
| | Sampled By | Brooke Wallace | Brooke Wallace | Brooke Wallace | Brooke Wallace | |
| | Sample Date | 11/06/2020 | 11/06/2020 | 11/06/2020 | 11/06/2020 | |
| **Parameter** | **Units** | **RL** | **Result** | **Result** | **Result** | **Result** | **L1** |

L1 = REG153 / SOIL / COARSE - TABLE 1 - Residential/Parkland/Industrial - UNDEFINED

### Method: ASTM D422-63 | Internal ref.: Grain Size

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Grain Size | % | - | --- | --- | --- | 85.6%Coarse | |

### Conductivity

### Method: EPA 6010/SM 2510 | Internal ref.: ME-CA-[ENV]EWL-LAK-AN-006

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Conductivity | mS/cm | 0.002 | --- | 1.0 | --- | --- | 0.57 |

### Cyanide by SFA

### Method: SM 4500 | Internal ref.: ME-CA-[ENV]SFA-LAK-AN-005

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Free Cyanide | µg/g | 0.05 | --- | < 0.05 | --- | --- | 0.051 |

### Hexavalent Chromium by SFA

### Method: EPA218.6/EPA3060A | Internal ref.: ME-CA-[ENV]SKA-LAK-AN-012

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Chromium VI | µg/g | 0.2 | --- | < 0.2 | --- | --- | 0.66 |

### Mercury by CVAAS

### Method: EPA 7471A/EPA 245 | Internal ref.: ME-CA-[ENV]SPE-LAK-AN-004

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Mercury | µg/g | 0.05 | --- | < 0.05 | --- | --- | 0.27 |

### Metals in aqueous samples - ICP-OES

### Method: MOE 4696e01/EPA 6010 | Internal ref.: ME-CA-[ENV]SPE-LAK-AN-003

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| SAR Calcium | mg/L | 0.09 | --- | 80.5 | --- | --- | |
| SAR Magnesium | mg/L | 0.02 | --- | 5.6 | --- | --- | |
| SAR Sodium | mg/L | 0.15 | --- | 179 | --- | --- | |

### Metals in Soil - Aqua-regia/ICP-MS

### Method: EPA 3050/EPA 200.8 | Internal ref.: ME-CA-[ENV]SPE-LAK-AN-005

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Barium | µg/g | 0.1 | --- | 13 | --- | --- | 220 |
| Beryllium | µg/g | 0.02 | --- | 0.12 | --- | --- | 2.5 |
| Boron | µg/g | 1 | --- | 3 | --- | --- | 36 |
| Cadmium | µg/g | 0.02 | --- | 0.03 | --- | --- | 1.2 |
| Chromium | µg/g | 0.5 | --- | 8.6 | --- | --- | 70 |
| Cobalt | µg/g | 0.01 | --- | 1.8 | --- | --- | 21 |
| Copper | µg/g | 0.1 | --- | 14 | --- | --- | 92 |
| Lead | µg/g | 0.1 | --- | 6.5 | --- | --- | 120 |
| Molybdenum | µg/g | 0.1 | --- | 0.5 | --- | --- | 2 |
| Nickel | µg/g | 0.5 | --- | 4.7 | --- | --- | 82 |
| Silver | µg/g | 0.05 | --- | < 0.05 | --- | --- | 0.5 |

## RESULTS - SOIL

| | Sample Number | 9 | 10 | 11 | 12 | |
|---|---|---|---|---|---|---|
| | Sample Name | BH1(MW)-SS1 | BH1(MW)-SS3 | BH1(MW)-SS4 | BH1(MW)-SS8 | |
| | Sample Matrix | Soil | Soil | Soil | Soil | |
| | Sampled By | Brooke Wallace | Brooke Wallace | Brooke Wallace | Brooke Wallace | |
| | Sample Date | 11/06/2020 | 11/06/2020 | 11/06/2020 | 11/06/2020 | |
| **Parameter** | **Units** | **RL** | **Result** | **Result** | **Result** | **Result** | **L1** |

L1 = REG153 / SOIL / COARSE - TABLE 1 - Residential/Parkland/Industrial - UNDEFINED

### Metals in Soil - Aqua-regia/ICP-MS (continued)

#### Method: EPA 3050/EPA 200.8 | Internal ref.: ME-CA-[ENV]SPE-LAK-AN-005

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Thallium | µg/g | 0.02 | --- | 0.03 | --- | --- | 1 |
| Uranium | µg/g | 0.002 | --- | 0.23 | --- | --- | 2.5 |
| Vanadium | µg/g | 3 | --- | 14 | --- | --- | 86 |
| Zinc | µg/g | 0.7 | --- | 12 | --- | --- | 290 |
| Antimony | µg/g | 0.8 | --- | < 0.8 | --- | --- | 1.3 |
| Arsenic | µg/g | 0.5 | --- | 0.7 | --- | --- | 18 |
| Selenium | µg/g | 0.7 | --- | < 0.7 | --- | --- | 1.5 |

### Moisture

#### Method: CCME Tier 1 | Internal ref.: ME-CA-[ENV]GC-LAK-AN-010

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Moisture Content | % | - | --- | 4.6 | 6.6 | --- | |

### Petroleum Hydrocarbons (F1)

#### Method: CCME Tier 1 | Internal ref.: ME-CA-[ENV]GC-LAK-AN-010

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| F1 (C6-C10) | µg/g | 10 | --- | --- | < 10 | --- | 25 |
| F1-BTEX (C6-C10) | µg/g | 10 | --- | --- | < 10 | --- | 25 |

### Petroleum Hydrocarbons (F2-F4)

#### Method: CCME Tier 1 | Internal ref.: ME-CA-[ENV]GC-LAK-AN-010

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| F2 (C10-C16) | µg/g | 10 | --- | --- | < 10 | --- | 10 |
| F3 (C16-C34) | µg/g | 50 | --- | --- | 74 | --- | 240 |
| F4 (C34-C50) | µg/g | 50 | --- | --- | 204 | --- | 120 |
| Chromatogram returned to baseline at nC50 | Yes / No | - | --- | --- | NO | --- | |

### Petroleum Hydrocarbons (F4G)

#### Method: CCME Tier 1 | Internal ref.: ME-CA-[ENV]GC-LAK-AN-010

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| F4G-sg (GHH) | µg/g | 200 | --- | --- | 843 | --- | 120 |

### pH

#### Method: SM 4500 | Internal ref.: ME-CA-[ENV]EWL-LAK-AN-001

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| pH | pH Units | 0.05 | 8.04 | 8.06 | --- | --- | |

### Semi-Volatile Organics

#### Method: EPA 3541/8270D | Internal ref.: ME-CA-[ENV]GC-LAK-AN-005

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 2-Chlorophenol | µg/g | 0.1 | --- | --- | --- | --- | 0.1 |
| 2,4-Dichlorophenol | µg/g | 0.1 | --- | --- | --- | --- | 0.1 |

## RESULTS - SOIL

| | Sample Number | 9 | 10 | 11 | 12 | |
|---|---|---|---|---|---|---|
| | Sample Name | BH1(MW)-SS1 | BH1(MW)-SS3 | BH1(MW)-SS4 | BH1(MW)-SS8 | |
| | Sample Matrix | Soil | Soil | Soil | Soil | |
| | Sampled By | Brooke Wallace | Brooke Wallace | Brooke Wallace | Brooke Wallace | |
| | Sample Date | 11/06/2020 | 11/06/2020 | 11/06/2020 | 11/06/2020 | |
| **Parameter** | **Units** | **RL** | **Result** | **Result** | **Result** | **Result** | **L1** |

L1 = REG153 / SOIL / COARSE - TABLE 1 - Residential/Parkland/Industrial - UNDEFINED

### Semi-Volatile Organics (continued)

#### Method: EPA 3541/8270D | Internal ref.: ME-CA-[ENV]GC-LAK-AN-005

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 2,4,6-Trichlorophenol | µg/g | 0.1 | --- | --- | --- | --- | 0.1 |
| 2,4,5-Trichlorophenol | µg/g | 0.1 | --- | --- | --- | --- | 0.1 |
| Pentachlorophenol | µg/g | 0.1 | --- | --- | --- | --- | 0.1 |
| Acenaphthene | µg/g | 0.05 | --- | --- | < 0.05 | --- | 0.072 |
| Acenaphthylene | µg/g | 0.05 | --- | --- | < 0.05 | --- | 0.093 |
| Anthracene | µg/g | 0.05 | --- | --- | < 0.05 | --- | 0.16 |
| Benzo(a)anthracene | µg/g | 0.05 | --- | --- | < 0.05 | --- | 0.36 |
| Benzo(a)pyrene | µg/g | 0.05 | --- | --- | < 0.05 | --- | 0.3 |
| Benzo(b+j)fluoranthene | µg/g | 0.05 | --- | --- | < 0.05 | --- | 0.47 |
| Benzo(ghi)perylene | µg/g | 0.1 | --- | --- | < 0.1 | --- | 0.68 |
| Benzo(k)fluoranthene | µg/g | 0.05 | --- | --- | < 0.05 | --- | 0.48 |
| Chrysene | µg/g | 0.05 | --- | --- | < 0.05 | --- | 2.8 |
| Dibenzo(a,h)anthracene | µg/g | 0.06 | --- | --- | < 0.06 | --- | 0.1 |
| Fluoranthene | µg/g | 0.05 | --- | --- | < 0.05 | --- | 0.56 |
| Fluorene | µg/g | 0.05 | --- | --- | < 0.05 | --- | 0.12 |
| Indeno(1,2,3-cd)pyrene | µg/g | 0.1 | --- | --- | < 0.1 | --- | 0.23 |
| 1-Methylnaphthalene | µg/g | 0.05 | --- | --- | < 0.05 | --- | |
| 2-Methylnaphthalene | µg/g | 0.05 | --- | --- | < 0.05 | --- | |
| Methylnaphthalene, 2-(1-) | µg/g | 0.05 | --- | --- | < 0.05 | --- | 0.59 |
| Naphthalene | µg/g | 0.05 | --- | --- | < 0.05 | --- | 0.09 |
| Phenanthrene | µg/g | 0.05 | --- | --- | < 0.05 | --- | 0.69 |
| Pyrene | µg/g | 0.05 | --- | --- | < 0.05 | --- | 1 |
| Surr Nitrobenzene-d5 | Surr Rec % | - | --- | --- | 82 | --- | |
| Surr 2-Fluorobiphenyl | Surr Rec % | - | --- | --- | 78 | --- | |
| Surr 4-Terphenyl-d14 | Surr Rec % | - | --- | --- | 78 | --- | |
| Surr 2-Fluorophenol | Surr Rec % | - | --- | --- | 71 | --- | |
| Surr Phenol-d6 | Surr Rec % | - | --- | --- | 82 | --- | |
| Surr 2,4,6-Tribromophenol | Surr Rec % | - | --- | --- | 69 | --- | |

### Sodium adsorption ratio (SAR)

#### Method: MOE 4696e01/EPA 6010 | Internal ref.: ME-CA-[ENV]ARD-LAK-AN-021

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Sodium Adsorption Ratio | --- | 0.2 | --- | 5.6 | --- | --- | 2.4 |

### Volatile Organics

#### Method: EPA 5035A/5030B/8260C | Internal ref.: ME-CA-[ENV]GC-LAK-AN-004

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Acetone | µg/g | 0.5 | --- | --- | < 0.5 | --- | 0.5 |
| Bromomethane | µg/g | 0.05 | --- | --- | < 0.05 | --- | 0.05 |

## RESULTS - SOIL

| | Sample Number | 9 | 10 | 11 | 12 | |
|---|---|---|---|---|---|---|
| | Sample Name | BH1(MW)-SS1 | BH1(MW)-SS3 | BH1(MW)-SS4 | BH1(MW)-SS8 | |
| | Sample Matrix | Soil | Soil | Soil | Soil | |
| | Sampled By | Brooke Wallace | Brooke Wallace | Brooke Wallace | Brooke Wallace | |
| | Sample Date | 11/06/2020 | 11/06/2020 | 11/06/2020 | 11/06/2020 | |
| **Parameter** | **Units** | **RL** | **Result** | **Result** | **Result** | **Result** | **L1** |

L1 = REG153 / SOIL / COARSE - TABLE 1 - Residential/Parkland/Industrial - UNDEFINED

### Volatile Organics (continued)

Method: EPA 5035A/5030B/8260C | Internal ref.: ME-CA-[ENV]GC-LAK-AN-004

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Carbon tetrachloride | µg/g | 0.05 | --- | --- | < 0.05 | --- | 0.05 |
| Chlorobenzene | µg/g | 0.05 | --- | --- | < 0.05 | --- | 0.05 |
| Chloroform | µg/g | 0.05 | --- | --- | < 0.05 | --- | 0.05 |
| 1,2-Dichlorobenzene | µg/g | 0.05 | --- | --- | < 0.05 | --- | 0.05 |
| 1,3-Dichlorobenzene | µg/g | 0.05 | --- | --- | < 0.05 | --- | 0.05 |
| 1,4-Dichlorobenzene | µg/g | 0.05 | --- | --- | < 0.05 | --- | 0.05 |
| Dichlorodifluoromethane | µg/g | 0.05 | --- | --- | < 0.05 | --- | 0.05 |
| 1,1-Dichloroethane | µg/g | 0.05 | --- | --- | < 0.05 | --- | 0.05 |
| 1,2-Dichloroethane | µg/g | 0.05 | --- | --- | < 0.05 | --- | 0.05 |
| 1,1-Dichloroethylene | µg/g | 0.05 | --- | --- | < 0.05 | --- | 0.05 |
| trans-1,2-Dichloroethylene | µg/g | 0.05 | --- | --- | < 0.05 | --- | 0.05 |
| cis-1,2-Dichloroethylene | µg/g | 0.05 | --- | --- | < 0.05 | --- | 0.05 |
| 1,2-Dichloropropane | µg/g | 0.05 | --- | --- | < 0.05 | --- | 0.05 |
| cis-1,3-dichloropropene | µg/g | 0.03 | --- | --- | < 0.03 | --- | |
| trans-1,3-dichloropropene | µg/g | 0.03 | --- | --- | < 0.03 | --- | |
| 1,3-dichloropropene (total) | µg/g | 0.05 | --- | --- | < 0.05 | --- | 0.05 |
| Ethylenedibromide | µg/g | 0.05 | --- | --- | < 0.05 | --- | 0.05 |
| n-Hexane | µg/g | 0.05 | --- | --- | < 0.05 | --- | 0.05 |
| Methyl ethyl ketone | µg/g | 0.5 | --- | --- | < 0.5 | --- | 0.5 |
| Methyl isobutyl ketone | µg/g | 0.5 | --- | --- | < 0.5 | --- | 0.5 |
| Methyl-t-butyl Ether | µg/g | 0.05 | --- | --- | < 0.05 | --- | 0.05 |
| Methylene Chloride | µg/g | 0.05 | --- | --- | < 0.05 | --- | 0.05 |
| Styrene | µg/g | 0.05 | --- | --- | < 0.05 | --- | 0.05 |
| Tetrachloroethylene | µg/g | 0.05 | --- | --- | < 0.05 | --- | 0.05 |
| 1,1,1,2-Tetrachloroethane | µg/g | 0.05 | --- | --- | < 0.05 | --- | 0.05 |
| 1,1,2,2-Tetrachloroethane | µg/g | 0.05 | --- | --- | < 0.05 | --- | 0.05 |
| 1,1,1-Trichloroethane | µg/g | 0.05 | --- | --- | < 0.05 | --- | 0.05 |
| 1,1,2-Trichloroethane | µg/g | 0.05 | --- | --- | < 0.05 | --- | 0.05 |
| Trichloroethylene | µg/g | 0.05 | --- | --- | < 0.05 | --- | 0.05 |
| Trichlorofluoromethane | µg/g | 0.05 | --- | --- | < 0.05 | --- | 0.25 |
| Vinyl Chloride | µg/g | 0.02 | --- | --- | < 0.02 | --- | 0.02 |
| Benzene | µg/g | 0.02 | --- | --- | < 0.02 | --- | 0.02 |
| Ethylbenzene | µg/g | 0.05 | --- | --- | < 0.05 | --- | 0.05 |
| Toluene | µg/g | 0.05 | --- | --- | < 0.05 | --- | 0.2 |
| Xylene (total) | µg/g | 0.05 | --- | --- | < 0.05 | --- | 0.05 |
| m/p-xylene | µg/g | 0.05 | --- | --- | < 0.05 | --- | |
| o-xylene | µg/g | 0.05 | --- | --- | < 0.05 | --- | |

## RESULTS - SOIL

| | Sample Number | 9 | 10 | 11 | 12 | |
|---|---|---|---|---|---|---|
| | Sample Name | BH1(MW)-SS1 | BH1(MW)-SS3 | BH1(MW)-SS4 | BH1(MW)-SS8 | |
| | Sample Matrix | Soil | Soil | Soil | Soil | |
| | Sampled By | Brooke Wallace | Brooke Wallace | Brooke Wallace | Brooke Wallace | |
| | Sample Date | 11/06/2020 | 11/06/2020 | 11/06/2020 | 11/06/2020 | |
| **Parameter** | **Units** | **RL** | **Result** | **Result** | **Result** | **Result** | **L1** |

L1 = REG153 / SOIL / COARSE - TABLE 1 - Residential/Parkland/Industrial - UNDEFINED

### Volatile Organics (continued)

#### Method: EPA 5035A/5030B/8260C | Internal ref.: ME-CA-[ENV]GC-LAK-AN-004

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Bromodichloromethane | µg/g | 0.05 | --- | --- | < 0.05 | --- | 0.05 |
| Bromoform | µg/g | 0.05 | --- | --- | < 0.05 | --- | 0.05 |
| Dibromochloromethane | µg/g | 0.05 | --- | --- | < 0.05 | --- | 0.05 |
| Surr 1,2-Dichloroethane-d4 | Surr Rec % | - | --- | --- | 101 | --- | |
| Surr 4-Bromofluorobenzene | Surr Rec % | - | --- | --- | 97 | --- | |
| Surr 2-Bromo-1-Chloropropane | Surr Rec % | - | --- | --- | 81 | --- | |

### Water Soluble Boron

#### Method: O.Reg. 15 3/04 | Internal ref.: ME-CA-[ENV] SPE-LAK-AN-003

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Water Soluble Boron | µg/g | 0.5 | --- | < 0.5 | --- | --- | |

## RESULTS - SOIL

| | Sample Number | 13 | 14 | 15 | 16 | |
|---|---|---|---|---|---|---|
| | Sample Name | BH1(MW)-SS11 | BH2(MW)-SS1 | BH2(MW)-SS2 | BH2(MW)-SS3 | |
| | Sample Matrix | Soil | Soil | Soil | Soil | |
| | Sampled By | Brooke Wallace | Brooke Wallace | Brooke Wallace | Brooke Wallace | |
| | Sample Date | 11/06/2020 | 12/06/2020 | 12/06/2020 | 12/06/2020 | |
| **Parameter** | **Units** | **RL** | **Result** | **Result** | **Result** | **Result** | **L1** |

L1 = REG153 / SOIL / COARSE - TABLE 1 - Residential/Parkland/Industrial - UNDEFINED

### Method: ASTM D422-63 | Internal ref.: Grain Size

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Grain Size | % | - | --- | --- | --- | --- | |

### Conductivity

### Method: EPA 6010/SM 2510 | Internal ref.: ME-CA-[ENV]EWL-LAK-AN-006

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Conductivity | mS/cm | 0.002 | --- | 0.57 | --- | --- | 0.57 |

### Cyanide by SFA

### Method: SM 4500 | Internal ref.: ME-CA-[ENV]SFA-LAK-AN-005

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Free Cyanide | µg/g | 0.05 | --- | < 0.05 | --- | --- | 0.051 |

### Hexavalent Chromium by SFA

### Method: EPA218.6/EPA3060A | Internal ref.: ME-CA-[ENV]SKA-LAK-AN-012

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Chromium VI | µg/g | 0.2 | --- | < 0.2 | --- | --- | 0.66 |

### Mercury by CVAAS

### Method: EPA 7471A/EPA 245 | Internal ref.: ME-CA-[ENV]SPE-LAK-AN-004

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Mercury | µg/g | 0.05 | --- | < 0.05 | --- | --- | 0.27 |

### Metals in aqueous samples - ICP-OES

### Method: MOE 4696e01/EPA 6010 | Internal ref.: ME-CA-[ENV]SPE-LAK-AN-003

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| SAR Calcium | mg/L | 0.09 | --- | 5.8 | --- | --- | |
| SAR Magnesium | mg/L | 0.02 | --- | 1.7 | --- | --- | |
| SAR Sodium | mg/L | 0.15 | --- | 79.4 | --- | --- | |

### Metals in Soil - Aqua-regia/ICP-MS

### Method: EPA 3050/EPA 200.8 | Internal ref.: ME-CA-[ENV]SPE-LAK-AN-005

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Barium | µg/g | 0.1 | --- | 16 | --- | --- | 220 |
| Beryllium | µg/g | 0.02 | --- | 0.12 | --- | --- | 2.5 |
| Boron | µg/g | 1 | --- | 3 | --- | --- | 36 |
| Cadmium | µg/g | 0.02 | --- | 0.06 | --- | --- | 1.2 |
| Chromium | µg/g | 0.5 | --- | 6.4 | --- | --- | 70 |
| Cobalt | µg/g | 0.01 | --- | 2.2 | --- | --- | 21 |
| Copper | µg/g | 0.1 | --- | 4.1 | --- | --- | 92 |
| Lead | µg/g | 0.1 | --- | 4.3 | --- | --- | 120 |
| Molybdenum | µg/g | 0.1 | --- | 0.2 | --- | --- | 2 |
| Nickel | µg/g | 0.5 | --- | 3.7 | --- | --- | 82 |
| Silver | µg/g | 0.05 | --- | < 0.05 | --- | --- | 0.5 |

## RESULTS - SOIL

| | Sample Number | 13 | 14 | 15 | 16 | |
|---|---|---|---|---|---|---|
| | Sample Name | BH1(MW)-SS11 | BH2(MW)-SS1 | BH2(MW)-SS2 | BH2(MW)-SS3 | |
| | Sample Matrix | Soil | Soil | Soil | Soil | |
| | Sampled By | Brooke Wallace | Brooke Wallace | Brooke Wallace | Brooke Wallace | |
| | Sample Date | 11/06/2020 | 12/06/2020 | 12/06/2020 | 12/06/2020 | |
| **Parameter** | **Units** | **RL** | **Result** | **Result** | **Result** | **Result** | **L1** |

L1 = REG153 / SOIL / COARSE - TABLE 1 - Residential/Parkland/Industrial - UNDEFINED

### Metals in Soil - Aqua-regia/ICP-MS (continued)

#### Method: EPA 3050/EPA 200.8 | Internal ref.: ME-CA-[ENV]SPE-LAK-AN-005

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Thallium | µg/g | 0.02 | --- | 0.03 | --- | --- | 1 |
| Uranium | µg/g | 0.002 | --- | 0.24 | --- | --- | 2.5 |
| Vanadium | µg/g | 3 | --- | 14 | --- | --- | 86 |
| Zinc | µg/g | 0.7 | --- | 20 | --- | --- | 290 |
| Antimony | µg/g | 0.8 | --- | < 0.8 | --- | --- | 1.3 |
| Arsenic | µg/g | 0.5 | --- | 0.6 | --- | --- | 18 |
| Selenium | µg/g | 0.7 | --- | < 0.7 | --- | --- | 1.5 |

### Moisture

#### Method: CCME Tier 1 | Internal ref.: ME-CA-[ENV]GC-LAK-AN-010

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Moisture Content | % | - | 14.6 | 3.6 | 7.1 | 8.9 | |

### Petroleum Hydrocarbons (F1)

#### Method: CCME Tier 1 | Internal ref.: ME-CA-[ENV]GC-LAK-AN-010

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| F1 (C6-C10) | µg/g | 10 | < 10 | --- | < 10 | --- | 25 |
| F1-BTEX (C6-C10) | µg/g | 10 | < 10 | --- | < 10 | --- | 25 |

### Petroleum Hydrocarbons (F2-F4)

#### Method: CCME Tier 1 | Internal ref.: ME-CA-[ENV]GC-LAK-AN-010

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| F2 (C10-C16) | µg/g | 10 | < 10 | --- | < 10 | --- | 10 |
| F3 (C16-C34) | µg/g | 50 | < 50 | --- | < 50 | --- | 240 |
| F4 (C34-C50) | µg/g | 50 | < 50 | --- | < 50 | --- | 120 |
| Chromatogram returned to baseline at nC50 | Yes / No | - | YES | --- | YES | --- | |

### Petroleum Hydrocarbons (F4G)

#### Method: CCME Tier 1 | Internal ref.: ME-CA-[ENV]GC-LAK-AN-010

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| F4G-sg (GHH) | µg/g | 200 | --- | --- | --- | --- | 120 |

### pH

#### Method: SM 4500 | Internal ref.: ME-CA-[ENV]EWL-LAK-AN-001

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| pH | pH Units | 0.05 | 8.25 | 8.09 | 7.94 | --- | |

### Semi-Volatile Organics

#### Method: EPA 3541/8270D | Internal ref.: ME-CA-[ENV]GC-LAK-AN-005

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 2-Chlorophenol | µg/g | 0.1 | --- | --- | --- | --- | 0.1 |
| 2,4-Dichlorophenol | µg/g | 0.1 | --- | --- | --- | --- | 0.1 |

## RESULTS - SOIL

| | Sample Number | 13 | 14 | 15 | 16 | |
|---|---|---|---|---|---|---|
| | Sample Name | BH1(MW)-SS11 | BH2(MW)-SS1 | BH2(MW)-SS2 | BH2(MW)-SS3 | |
| | Sample Matrix | Soil | Soil | Soil | Soil | |
| | Sampled By | Brooke Wallace | Brooke Wallace | Brooke Wallace | Brooke Wallace | |
| | Sample Date | 11/06/2020 | 12/06/2020 | 12/06/2020 | 12/06/2020 | |
| **Parameter** | **Units** | **RL** | **Result** | **Result** | **Result** | **Result** | **L1** |

L1 = REG153 / SOIL / COARSE - TABLE 1 - Residential/Parkland/Industrial - UNDEFINED

### Semi-Volatile Organics (continued)

#### Method: EPA 3541/8270D | Internal ref.: ME-CA-[ENV]GC-LAK-AN-005

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 2,4,6-Trichlorophenol | µg/g | 0.1 | --- | --- | --- | --- | 0.1 |
| 2,4,5-Trichlorophenol | µg/g | 0.1 | --- | --- | --- | --- | 0.1 |
| Pentachlorophenol | µg/g | 0.1 | --- | --- | --- | --- | 0.1 |
| Acenaphthene | µg/g | 0.05 | --- | --- | --- | < 0.05 | 0.072 |
| Acenaphthylene | µg/g | 0.05 | --- | --- | --- | < 0.05 | 0.093 |
| Anthracene | µg/g | 0.05 | --- | --- | --- | < 0.05 | 0.16 |
| Benzo(a)anthracene | µg/g | 0.05 | --- | --- | --- | < 0.05 | 0.36 |
| Benzo(a)pyrene | µg/g | 0.05 | --- | --- | --- | < 0.05 | 0.3 |
| Benzo(b+j)fluoranthene | µg/g | 0.05 | --- | --- | --- | < 0.05 | 0.47 |
| Benzo(ghi)perylene | µg/g | 0.1 | --- | --- | --- | < 0.1 | 0.68 |
| Benzo(k)fluoranthene | µg/g | 0.05 | --- | --- | --- | < 0.05 | 0.48 |
| Chrysene | µg/g | 0.05 | --- | --- | --- | < 0.05 | 2.8 |
| Dibenzo(a,h)anthracene | µg/g | 0.06 | --- | --- | --- | < 0.06 | 0.1 |
| Fluoranthene | µg/g | 0.05 | --- | --- | --- | < 0.05 | 0.56 |
| Fluorene | µg/g | 0.05 | --- | --- | --- | < 0.05 | 0.12 |
| Indeno(1,2,3-cd)pyrene | µg/g | 0.1 | --- | --- | --- | < 0.1 | 0.23 |
| 1-Methylnaphthalene | µg/g | 0.05 | --- | --- | --- | < 0.05 | |
| 2-Methylnaphthalene | µg/g | 0.05 | --- | --- | --- | < 0.05 | |
| Methylnaphthalene, 2-(1-) | µg/g | 0.05 | --- | --- | --- | < 0.05 | 0.59 |
| Naphthalene | µg/g | 0.05 | --- | --- | --- | < 0.05 | 0.09 |
| Phenanthrene | µg/g | 0.05 | --- | --- | --- | < 0.05 | 0.69 |
| Pyrene | µg/g | 0.05 | --- | --- | --- | < 0.05 | 1 |
| Surr Nitrobenzene-d5 | Surr Rec % | - | --- | --- | --- | 129 | |
| Surr 2-Fluorobiphenyl | Surr Rec % | - | --- | --- | --- | 104 | |
| Surr 4-Terphenyl-d14 | Surr Rec % | - | --- | --- | --- | 81 | |
| Surr 2-Fluorophenol | Surr Rec % | - | --- | --- | --- | 73 | |
| Surr Phenol-d6 | Surr Rec % | - | --- | --- | --- | 110 | |
| Surr 2,4,6-Tribromophenol | Surr Rec % | - | --- | --- | --- | 85 | |

### Sodium adsorption ratio (SAR)

#### Method: MOE 4696e01/EPA 6010 | Internal ref.: ME-CA-[ENV]ARD-LAK-AN-021

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Sodium Adsorption Ratio | --- | 0.2 | --- | 7.2 | --- | --- | 2.4 |

### Volatile Organics

#### Method: EPA 5035A/5030B/8260C | Internal ref.: ME-CA-[ENV]GC-LAK-AN-004

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Acetone | µg/g | 0.5 | < 0.5 | --- | < 0.5 | --- | 0.5 |
| Bromomethane | µg/g | 0.05 | < 0.05 | --- | < 0.05 | --- | 0.05 |

## RESULTS - SOIL

| | Sample Number | 13 | 14 | 15 | 16 | |
|---|---|---|---|---|---|---|
| | Sample Name | BH1(MW)-SS11 | BH2(MW)-SS1 | BH2(MW)-SS2 | BH2(MW)-SS3 | |
| | Sample Matrix | Soil | Soil | Soil | Soil | |
| | Sampled By | Brooke Wallace | Brooke Wallace | Brooke Wallace | Brooke Wallace | |
| | Sample Date | 11/06/2020 | 12/06/2020 | 12/06/2020 | 12/06/2020 | |
| **Parameter** | **Units** | **RL** | **Result** | **Result** | **Result** | **Result** | **L1** |

L1 = REG153 / SOIL / COARSE - TABLE 1 - Residential/Parkland/Industrial - UNDEFINED

### Volatile Organics (continued)

Method: EPA 5035A/5030B/8260C | Internal ref.: ME-CA-[ENV]GC-LAK-AN-004

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Carbon tetrachloride | µg/g | 0.05 | < 0.05 | --- | < 0.05 | --- | 0.05 |
| Chlorobenzene | µg/g | 0.05 | < 0.05 | --- | < 0.05 | --- | 0.05 |
| Chloroform | µg/g | 0.05 | < 0.05 | --- | < 0.05 | --- | 0.05 |
| 1,2-Dichlorobenzene | µg/g | 0.05 | < 0.05 | --- | < 0.05 | --- | 0.05 |
| 1,3-Dichlorobenzene | µg/g | 0.05 | < 0.05 | --- | < 0.05 | --- | 0.05 |
| 1,4-Dichlorobenzene | µg/g | 0.05 | < 0.05 | --- | < 0.05 | --- | 0.05 |
| Dichlorodifluoromethane | µg/g | 0.05 | < 0.05 | --- | < 0.05 | --- | 0.05 |
| 1,1-Dichloroethane | µg/g | 0.05 | < 0.05 | --- | < 0.05 | --- | 0.05 |
| 1,2-Dichloroethane | µg/g | 0.05 | < 0.05 | --- | < 0.05 | --- | 0.05 |
| 1,1-Dichloroethylene | µg/g | 0.05 | < 0.05 | --- | < 0.05 | --- | 0.05 |
| trans-1,2-Dichloroethylene | µg/g | 0.05 | < 0.05 | --- | < 0.05 | --- | 0.05 |
| cis-1,2-Dichloroethylene | µg/g | 0.05 | < 0.05 | --- | < 0.05 | --- | 0.05 |
| 1,2-Dichloropropane | µg/g | 0.05 | < 0.05 | --- | < 0.05 | --- | 0.05 |
| cis-1,3-dichloropropene | µg/g | 0.03 | < 0.03 | --- | < 0.03 | --- | |
| trans-1,3-dichloropropene | µg/g | 0.03 | < 0.03 | --- | < 0.03 | --- | |
| 1,3-dichloropropene (total) | µg/g | 0.05 | < 0.05 | --- | < 0.05 | --- | 0.05 |
| Ethylenedibromide | µg/g | 0.05 | < 0.05 | --- | < 0.05 | --- | 0.05 |
| n-Hexane | µg/g | 0.05 | < 0.05 | --- | < 0.05 | --- | 0.05 |
| Methyl ethyl ketone | µg/g | 0.5 | < 0.5 | --- | < 0.5 | --- | 0.5 |
| Methyl isobutyl ketone | µg/g | 0.5 | < 0.5 | --- | < 0.5 | --- | 0.5 |
| Methyl-t-butyl Ether | µg/g | 0.05 | < 0.05 | --- | < 0.05 | --- | 0.05 |
| Methylene Chloride | µg/g | 0.05 | < 0.05 | --- | < 0.05 | --- | 0.05 |
| Styrene | µg/g | 0.05 | < 0.05 | --- | < 0.05 | --- | 0.05 |
| Tetrachloroethylene | µg/g | 0.05 | < 0.05 | --- | < 0.05 | --- | 0.05 |
| 1,1,1,2-Tetrachloroethane | µg/g | 0.05 | < 0.05 | --- | < 0.05 | --- | 0.05 |
| 1,1,2,2-Tetrachloroethane | µg/g | 0.05 | < 0.05 | --- | < 0.05 | --- | 0.05 |
| 1,1,1-Trichloroethane | µg/g | 0.05 | < 0.05 | --- | < 0.05 | --- | 0.05 |
| 1,1,2-Trichloroethane | µg/g | 0.05 | < 0.05 | --- | < 0.05 | --- | 0.05 |
| Trichloroethylene | µg/g | 0.05 | < 0.05 | --- | < 0.05 | --- | 0.05 |
| Trichlorofluoromethane | µg/g | 0.05 | < 0.05 | --- | < 0.05 | --- | 0.25 |
| Vinyl Chloride | µg/g | 0.02 | < 0.02 | --- | < 0.02 | --- | 0.02 |
| Benzene | µg/g | 0.02 | < 0.02 | --- | < 0.02 | --- | 0.02 |
| Ethylbenzene | µg/g | 0.05 | < 0.05 | --- | < 0.05 | --- | 0.05 |
| Toluene | µg/g | 0.05 | < 0.05 | --- | < 0.05 | --- | 0.2 |
| Xylene (total) | 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 | --- | |

## RESULTS - SOIL

| | Sample Number | 13 | 14 | 15 | 16 | |
|---|---|---|---|---|---|---|
| | Sample Name | BH1(MW)-SS11 | BH2(MW)-SS1 | BH2(MW)-SS2 | BH2(MW)-SS3 | |
| | Sample Matrix | Soil | Soil | Soil | Soil | |
| | Sampled By | Brooke Wallace | Brooke Wallace | Brooke Wallace | Brooke Wallace | |
| | Sample Date | 11/06/2020 | 12/06/2020 | 12/06/2020 | 12/06/2020 | |
| **Parameter** | **Units** | **RL** | **Result** | **Result** | **Result** | **Result** | **L1** |

L1 = REG153 / SOIL / COARSE - TABLE 1 - Residential/Parkland/Industrial - UNDEFINED

### Volatile Organics (continued)

#### Method: EPA 5035A/5030B/8260C | Internal ref.: ME-CA-[ENV]GC-LAK-AN-004

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Bromodichloromethane | µg/g | 0.05 | < 0.05 | --- | < 0.05 | --- | 0.05 |
| Bromoform | µg/g | 0.05 | < 0.05 | --- | < 0.05 | --- | 0.05 |
| Dibromochloromethane | µg/g | 0.05 | < 0.05 | --- | < 0.05 | --- | 0.05 |
| Surr 1,2-Dichloroethane-d4 | Surr Rec % | - | 100 | --- | 100 | --- | |
| Surr 4-Bromofluorobenzene | Surr Rec % | - | 96 | --- | 96 | --- | |
| Surr 2-Bromo-1-Chloropropane | Surr Rec % | - | 80 | --- | 80 | --- | |

### Water Soluble Boron

#### Method: O.Reg. 15 3/04 | Internal ref.: ME-CA-[ENV] SPE-LAK-AN-003

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Water Soluble Boron | µg/g | 0.5 | --- | < 0.5 | --- | --- | |

## RESULTS - SOIL

| | Sample Number | 17 | 18 | 19 | 20 | |
|---|---|---|---|---|---|---|
| | Sample Name | BH2(MW)-SS6 | BH2(MW)-SS10 | BH3-SS1 | BH200-1 | |
| | Sample Matrix | Soil | Soil | Soil | Soil | |
| | Sampled By | Brooke Wallace | Brooke Wallace | Brooke Wallace | Brooke Wallace | |
| | Sample Date | 12/06/2020 | 12/06/2020 | 12/06/2020 | 12/06/2020 | |
| **Parameter** | **Units** | **RL** | **Result** | **Result** | **Result** | **Result** | **L1** |
| | | | | | | | L1 = REG153 / SOIL / COARSE - TABLE 1 - Residential/Parkland/Industrial - UNDEFINED |
| **Method: ASTM D422-63 \| Internal ref.: Grain Size** | | | | | | | |
| Grain Size | % | - | 87.4%Coarse | --- | --- | --- | |
| **Conductivity** | | | | | | | |
| **Method: EPA 6010/SM 2510 \| Internal ref.: ME-CA-[ENV]EWL-LAK-AN-006** | | | | | | | |
| Conductivity | mS/cm | 0.002 | --- | --- | 0.17 | 0.43 | 0.57 |
| **Cyanide by SFA** | | | | | | | |
| **Method: SM 4500 \| Internal ref.: ME-CA-[ENV]SFA-LAK-AN-005** | | | | | | | |
| Free Cyanide | µg/g | 0.05 | --- | --- | < 0.05 | < 0.05 | 0.051 |
| **Hexavalent Chromium by SFA** | | | | | | | |
| **Method: EPA218.6/EPA3060A \| Internal ref.: ME-CA-[ENV]SKA-LAK-AN-012** | | | | | | | |
| Chromium VI | µg/g | 0.2 | --- | --- | < 0.2 | < 0.2 | 0.66 |
| **Mercury by CVAAS** | | | | | | | |
| **Method: EPA 7471A/EPA 245 \| Internal ref.: ME-CA-[ENV]SPE-LAK-AN-004** | | | | | | | |
| Mercury | µg/g | 0.05 | --- | --- | < 0.05 | < 0.05 | 0.27 |
| **Metals in aqueous samples - ICP-OES** | | | | | | | |
| **Method: MOE 4696e01/EPA 6010 \| Internal ref.: ME-CA-[ENV]SPE-LAK-AN-003** | | | | | | | |
| SAR Calcium | mg/L | 0.09 | --- | --- | 19.1 | 12.5 | |
| SAR Magnesium | mg/L | 0.02 | --- | --- | 1.7 | 3.4 | |
| SAR Sodium | mg/L | 0.15 | --- | --- | 9.1 | 74.8 | |
| **Metals in Soil - Aqua-regia/ICP-MS** | | | | | | | |
| **Method: EPA 3050/EPA 200.8 \| Internal ref.: ME-CA-[ENV]SPE-LAK-AN-005** | | | | | | | |
| Barium | µg/g | 0.1 | --- | --- | 33 | 14 | 220 |
| Beryllium | µg/g | 0.02 | --- | --- | 0.17 | 0.11 | 2.5 |
| Boron | µg/g | 1 | --- | --- | 4 | 3 | 36 |
| Cadmium | µg/g | 0.02 | --- | --- | 0.68 | 0.06 | 1.2 |
| Chromium | µg/g | 0.5 | --- | --- | 10 | 4.8 | 70 |
| Cobalt | µg/g | 0.01 | --- | --- | 2.5 | 1.8 | 21 |
| Copper | µg/g | 0.1 | --- | --- | 12 | 3.5 | 92 |
| Lead | µg/g | 0.1 | --- | --- | 29 | 3.5 | 120 |
| Molybdenum | µg/g | 0.1 | --- | --- | 0.3 | 0.1 | 2 |
| Nickel | µg/g | 0.5 | --- | --- | 5.2 | 3.3 | 82 |

## RESULTS - SOIL

| | Sample Number | 17 | 18 | 19 | 20 | |
|---|---|---|---|---|---|---|
| | Sample Name | BH2(MW)-SS6 | BH2(MW)-SS10 | BH3-SS1 | BH200-1 | |
| | Sample Matrix | Soil | Soil | Soil | Soil | |
| | Sampled By | Brooke Wallace | Brooke Wallace | Brooke Wallace | Brooke Wallace | |
| | Sample Date | 12/06/2020 | 12/06/2020 | 12/06/2020 | 12/06/2020 | |
| **Parameter** | **Units** | **RL** | **Result** | **Result** | **Result** | **Result** | **L1** |

L1 = REG153 / SOIL / COARSE - TABLE 1 - Residential/Parkland/Industrial - UNDEFINED

### Metals in Soil - Aqua-regia/ICP-MS (continued)

#### Method: EPA 3050/EPA 200.8 | Internal ref.: ME-CA-[ENV]SPE-LAK-AN-005

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Silver | µg/g | 0.05 | --- | --- | < 0.05 | < 0.05 | 0.5 |
| Thallium | µg/g | 0.02 | --- | --- | 0.04 | 0.03 | 1 |
| Uranium | µg/g | 0.002 | --- | --- | 0.28 | 0.17 | 2.5 |
| Vanadium | µg/g | 3 | --- | --- | 19 | 9 | 86 |
| Zinc | µg/g | 0.7 | --- | --- | 56 | 16 | 290 |
| Antimony | µg/g | 0.8 | --- | --- | < 0.8 | < 0.8 | 1.3 |
| Arsenic | µg/g | 0.5 | --- | --- | 1.6 | 0.6 | 18 |
| Selenium | µg/g | 0.7 | --- | --- | < 0.7 | < 0.7 | 1.5 |

### Moisture

#### Method: CCME Tier 1 | Internal ref.: ME-CA-[ENV]GC-LAK-AN-010

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Moisture Content | % | - | --- | 16.8 | 13.2 | 2.7 | |

### Petroleum Hydrocarbons (F1)

#### Method: CCME Tier 1 | Internal ref.: ME-CA-[ENV]GC-LAK-AN-010

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| F1 (C6-C10) | µg/g | 10 | --- | < 10 | < 10 | --- | 25 |
| F1-BTEX (C6-C10) | µg/g | 10 | --- | < 10 | < 10 | --- | 25 |

### Petroleum Hydrocarbons (F2-F4)

#### Method: CCME Tier 1 | Internal ref.: ME-CA-[ENV]GC-LAK-AN-010

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| F2 (C10-C16) | µg/g | 10 | --- | < 10 | < 10 | --- | 10 |
| F3 (C16-C34) | µg/g | 50 | --- | < 50 | < 50 | --- | 240 |
| F4 (C34-C50) | µg/g | 50 | --- | < 50 | < 50 | --- | 120 |
| Chromatogram returned to baseline at nC50 | Yes / No | - | --- | YES | YES | --- | |

### Petroleum Hydrocarbons (F4G)

#### Method: CCME Tier 1 | Internal ref.: ME-CA-[ENV]GC-LAK-AN-010

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| F4G-sg (GHH) | µg/g | 200 | --- | --- | --- | --- | 120 |

### pH

#### Method: SM 4500 | Internal ref.: ME-CA-[ENV]EWL-LAK-AN-001

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| pH | pH Units | 0.05 | --- | 8.14 | 7.65 | 8.09 | |

### Semi-Volatile Organics

#### Method: EPA 3541/8270D | Internal ref.: ME-CA-[ENV]GC-LAK-AN-005

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 2-Chlorophenol | µg/g | 0.1 | --- | --- | < 0.1 | --- | 0.1 |

## RESULTS - SOIL

| | Sample Number | 17 | 18 | 19 | 20 | |
|---|---|---|---|---|---|---|
| | Sample Name | BH2(MW)-SS6 | BH2(MW)-SS10 | BH3-SS1 | BH200-1 | |
| | Sample Matrix | Soil | Soil | Soil | Soil | |
| | Sampled By | Brooke Wallace | Brooke Wallace | Brooke Wallace | Brooke Wallace | |
| | Sample Date | 12/06/2020 | 12/06/2020 | 12/06/2020 | 12/06/2020 | |
| **Parameter** | **Units** | **RL** | **Result** | **Result** | **Result** | **Result** | **L1** |
| | | | | | | | L1 = REG153 / SOIL / COARSE - TABLE 1 - Residential/Parkland/Industrial - UNDEFINED |
| **Semi-Volatile Organics (continued)** | | | | | | | |
| **Method: EPA 3541/8270D \| Internal ref.: ME-CA-[ENV]GC-LAK-AN-005** | | | | | | | |
| 2,4-Dichlorophenol | µg/g | 0.1 | --- | --- | < 0.1 | --- | 0.1 |
| 2,4,6-Trichlorophenol | µg/g | 0.1 | --- | --- | < 0.1 | --- | 0.1 |
| 2,4,5-Trichlorophenol | µg/g | 0.1 | --- | --- | < 0.1 | --- | 0.1 |
| Pentachlorophenol | µg/g | 0.1 | --- | --- | < 0.1 | --- | 0.1 |
| Acenaphthene | µg/g | 0.05 | --- | --- | < 0.05 | --- | 0.072 |
| Acenaphthylene | µg/g | 0.05 | --- | --- | < 0.05 | --- | 0.093 |
| Anthracene | µg/g | 0.05 | --- | --- | < 0.05 | --- | 0.16 |
| Benzo(a)anthracene | µg/g | 0.05 | --- | --- | < 0.05 | --- | 0.36 |
| Benzo(a)pyrene | µg/g | 0.05 | --- | --- | < 0.05 | --- | 0.3 |
| Benzo(b+j)fluoranthene | µg/g | 0.05 | --- | --- | < 0.05 | --- | 0.47 |
| Benzo(ghi)perylene | µg/g | 0.1 | --- | --- | < 0.1 | --- | 0.68 |
| Benzo(k)fluoranthene | µg/g | 0.05 | --- | --- | < 0.05 | --- | 0.48 |
| Chrysene | µg/g | 0.05 | --- | --- | < 0.05 | --- | 2.8 |
| Dibenzo(a,h)anthracene | µg/g | 0.06 | --- | --- | < 0.06 | --- | 0.1 |
| Fluoranthene | µg/g | 0.05 | --- | --- | 0.06 | --- | 0.56 |
| Fluorene | µg/g | 0.05 | --- | --- | < 0.05 | --- | 0.12 |
| Indeno(1,2,3-cd)pyrene | µg/g | 0.1 | --- | --- | < 0.1 | --- | 0.23 |
| 1-Methylnaphthalene | µg/g | 0.05 | --- | --- | < 0.05 | --- | |
| 2-Methylnaphthalene | µg/g | 0.05 | --- | --- | < 0.05 | --- | |
| Methylnaphthalene, 2-(1-) | µg/g | 0.05 | --- | --- | < 0.05 | --- | 0.59 |
| Naphthalene | µg/g | 0.05 | --- | --- | < 0.05 | --- | 0.09 |
| Phenanthrene | µg/g | 0.05 | --- | --- | < 0.05 | --- | 0.69 |
| Pyrene | µg/g | 0.05 | --- | --- | < 0.05 | --- | 1 |
| Surr Nitrobenzene-d5 | Surr Rec % | - | --- | --- | 83 | --- | |
| Surr 2-Fluorobiphenyl | Surr Rec % | - | --- | --- | 82 | --- | |
| Surr 4-Terphenyl-d14 | Surr Rec % | - | --- | --- | 82 | --- | |
| Surr 2-Fluorophenol | Surr Rec % | - | --- | --- | 78 | --- | |
| Surr Phenol-d6 | Surr Rec % | - | --- | --- | 85 | --- | |
| Surr 2,4,6-Tribromophenol | Surr Rec % | - | --- | --- | 88 | --- | |
| **Sodium adsorption ratio (SAR)** | | | | | | | |
| **Method: MOE 4696e01/EPA 6010 \| Internal ref.: ME-CA-[ENV]ARD-LAK-AN-021** | | | | | | | |
| Sodium Adsorption Ratio | --- | 0.2 | --- | --- | 0.5 | 4.1 | 2.4 |
| **Volatile Organics** | | | | | | | |
| **Method: EPA 5035A/5030B/8260C \| Internal ref.: ME-CA-[ENV]GC-LAK-AN-004** | | | | | | | |
| Acetone | µg/g | 0.5 | --- | < 0.5 | < 0.5 | --- | 0.5 |

## RESULTS - SOIL

| | Sample Number | 17 | 18 | 19 | 20 | |
|---|---|---|---|---|---|---|
| | Sample Name | BH2(MW)-SS6 | BH2(MW)-SS10 | BH3-SS1 | BH200-1 | |
| | Sample Matrix | Soil | Soil | Soil | Soil | |
| | Sampled By | Brooke Wallace | Brooke Wallace | Brooke Wallace | Brooke Wallace | |
| | Sample Date | 12/06/2020 | 12/06/2020 | 12/06/2020 | 12/06/2020 | |
| **Parameter** | **Units** | **RL** | **Result** | **Result** | **Result** | **Result** | **L1** |

L1 = REG153 / SOIL / COARSE - TABLE 1 - Residential/Parkland/Industrial - UNDEFINED

### Volatile Organics (continued)

Method: EPA 5035A/5030B/8260C | Internal ref.: ME-CA-[ENV]GC-LAK-AN-004

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Bromomethane | µg/g | 0.05 | --- | < 0.05 | < 0.05 | --- | 0.05 |
| Carbon tetrachloride | µg/g | 0.05 | --- | < 0.05 | < 0.05 | --- | 0.05 |
| Chlorobenzene | µg/g | 0.05 | --- | < 0.05 | < 0.05 | --- | 0.05 |
| Chloroform | µg/g | 0.05 | --- | < 0.05 | < 0.05 | --- | 0.05 |
| 1,2-Dichlorobenzene | µg/g | 0.05 | --- | < 0.05 | < 0.05 | --- | 0.05 |
| 1,3-Dichlorobenzene | µg/g | 0.05 | --- | < 0.05 | < 0.05 | --- | 0.05 |
| 1,4-Dichlorobenzene | µg/g | 0.05 | --- | < 0.05 | < 0.05 | --- | 0.05 |
| Dichlorodifluoromethane | µg/g | 0.05 | --- | < 0.05 | < 0.05 | --- | 0.05 |
| 1,1-Dichloroethane | µg/g | 0.05 | --- | < 0.05 | < 0.05 | --- | 0.05 |
| 1,2-Dichloroethane | µg/g | 0.05 | --- | < 0.05 | < 0.05 | --- | 0.05 |
| 1,1-Dichloroethylene | µg/g | 0.05 | --- | < 0.05 | < 0.05 | --- | 0.05 |
| trans-1,2-Dichloroethylene | µg/g | 0.05 | --- | < 0.05 | < 0.05 | --- | 0.05 |
| cis-1,2-Dichloroethylene | µg/g | 0.05 | --- | < 0.05 | < 0.05 | --- | 0.05 |
| 1,2-Dichloropropane | µg/g | 0.05 | --- | < 0.05 | < 0.05 | --- | 0.05 |
| cis-1,3-dichloropropene | µg/g | 0.03 | --- | < 0.03 | < 0.03 | --- | |
| trans-1,3-dichloropropene | µg/g | 0.03 | --- | < 0.03 | < 0.03 | --- | |
| 1,3-dichloropropene (total) | µg/g | 0.05 | --- | < 0.05 | < 0.05 | --- | 0.05 |
| Ethylenedibromide | µg/g | 0.05 | --- | < 0.05 | < 0.05 | --- | 0.05 |
| n-Hexane | µg/g | 0.05 | --- | < 0.05 | < 0.05 | --- | 0.05 |
| Methyl ethyl ketone | µg/g | 0.5 | --- | < 0.5 | < 0.5 | --- | 0.5 |
| Methyl isobutyl ketone | µg/g | 0.5 | --- | < 0.5 | < 0.5 | --- | 0.5 |
| Methyl-t-butyl Ether | µg/g | 0.05 | --- | < 0.05 | < 0.05 | --- | 0.05 |
| Methylene Chloride | µg/g | 0.05 | --- | < 0.05 | < 0.05 | --- | 0.05 |
| Styrene | µg/g | 0.05 | --- | < 0.05 | < 0.05 | --- | 0.05 |
| Tetrachloroethylene | µg/g | 0.05 | --- | < 0.05 | < 0.05 | --- | 0.05 |
| 1,1,1,2-Tetrachloroethane | µg/g | 0.05 | --- | < 0.05 | < 0.05 | --- | 0.05 |
| 1,1,2,2-Tetrachloroethane | µg/g | 0.05 | --- | < 0.05 | < 0.05 | --- | 0.05 |
| 1,1,1-Trichloroethane | µg/g | 0.05 | --- | < 0.05 | < 0.05 | --- | 0.05 |
| 1,1,2-Trichloroethane | µg/g | 0.05 | --- | < 0.05 | < 0.05 | --- | 0.05 |
| Trichloroethylene | µg/g | 0.05 | --- | < 0.05 | < 0.05 | --- | 0.05 |
| Trichlorofluoromethane | µg/g | 0.05 | --- | < 0.05 | < 0.05 | --- | 0.25 |
| Vinyl Chloride | µg/g | 0.02 | --- | < 0.02 | < 0.02 | --- | 0.02 |
| Benzene | µg/g | 0.02 | --- | < 0.02 | < 0.02 | --- | 0.02 |
| Ethylbenzene | µg/g | 0.05 | --- | < 0.05 | < 0.05 | --- | 0.05 |
| Toluene | µg/g | 0.05 | --- | < 0.05 | < 0.05 | --- | 0.2 |
| Xylene (total) | µg/g | 0.05 | --- | < 0.05 | < 0.05 | --- | 0.05 |
| m/p-xylene | µg/g | 0.05 | --- | < 0.05 | < 0.05 | --- | |

## RESULTS - SOIL

| | Sample Number | 17 | 18 | 19 | 20 | |
|---|---|---|---|---|---|---|
| | Sample Name | BH2(MW)-SS6 | BH2(MW)-SS10 | BH3-SS1 | BH200-1 | |
| | Sample Matrix | Soil | Soil | Soil | Soil | |
| | Sampled By | Brooke Wallace | Brooke Wallace | Brooke Wallace | Brooke Wallace | |
| | Sample Date | 12/06/2020 | 12/06/2020 | 12/06/2020 | 12/06/2020 | |
| **Parameter** | **Units** | **RL** | **Result** | **Result** | **Result** | **Result** | **L1** |

L1 = REG153 / SOIL / COARSE - TABLE 1 - Residential/Parkland/Industrial - UNDEFINED

### Volatile Organics (continued)

#### Method: EPA 5035A/5030B/8260C | Internal ref.: ME-CA-[ENV]GC-LAK-AN-004

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| o-xylene | µg/g | 0.05 | --- | < 0.05 | < 0.05 | --- | |
| Bromodichloromethane | µg/g | 0.05 | --- | < 0.05 | < 0.05 | --- | 0.05 |
| Bromoform | µg/g | 0.05 | --- | < 0.05 | < 0.05 | --- | 0.05 |
| Dibromochloromethane | µg/g | 0.05 | --- | < 0.05 | < 0.05 | --- | 0.05 |
| Surr 1,2-Dichloroethane-d4 | Surr Rec % | - | --- | 99 | 100 | --- | |
| Surr 4-Bromofluorobenzene | Surr Rec % | - | --- | 97 | 96 | --- | |
| Surr 2-Bromo-1-Chloropropane | Surr Rec % | - | --- | 80 | 80 | --- | |

### Water Soluble Boron

#### Method: O.Reg. 15 3/04 | Internal ref.: ME-CA-[ENV] SPE-LAK-AN-003

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Water Soluble Boron | µg/g | 0.5 | --- | --- | < 0.5 | < 0.5 | |

## RESULTS - SOIL

| | Sample Number | 21 | 22 | 23 | |
|---|---|---|---|---|---|
| | Sample Name | BH200-2 | BH200-3 | BH300-1 | |
| | Sample Matrix | Soil | Soil | Soil | |
| | Sampled By | Brooke Wallace | Brooke Wallace | Brooke Wallace | |
| | Sample Date | 12/06/2020 | 12/06/2020 | 12/06/2020 | |
| **Parameter** | **Units** | **RL** | **Result** | **Result** | **Result** | **L1** |
| | | | | | | L1 = REG153 / SOIL / COARSE - TABLE 1 - Residential/Parkland/Industrial - UNDEFINED |
| **Method: ASTM D422-63 \| Internal ref.: Grain Size** | | | | | | |
| Grain Size | % | - | --- | --- | --- | |
| **Conductivity** | | | | | | |
| **Method: EPA 6010/SM 2510 \| Internal ref.: ME-CA-[ENV]EWL-LAK-AN-006** | | | | | | |
| Conductivity | mS/cm | 0.002 | --- | --- | --- | 0.57 |
| **Cyanide by SFA** | | | | | | |
| **Method: SM 4500 \| Internal ref.: ME-CA-[ENV]SFA-LAK-AN-005** | | | | | | |
| Free Cyanide | µg/g | 0.05 | --- | --- | --- | 0.051 |
| **Hexavalent Chromium by SFA** | | | | | | |
| **Method: EPA218.6/EPA3060A \| Internal ref.: ME-CA-[ENV]SKA-LAK-AN-012** | | | | | | |
| Chromium VI | µg/g | 0.2 | --- | --- | --- | 0.66 |
| **Mercury by CVAAS** | | | | | | |
| **Method: EPA 7471A/EPA 245 \| Internal ref.: ME-CA-[ENV]SPE-LAK-AN-004** | | | | | | |
| Mercury | µg/g | 0.05 | --- | --- | --- | 0.27 |
| **Metals in aqueous samples - ICP-OES** | | | | | | |
| **Method: MOE 4696e01/EPA 6010 \| Internal ref.: ME-CA-[ENV]SPE-LAK-AN-003** | | | | | | |
| SAR Calcium | mg/L | 0.09 | --- | --- | --- | |
| SAR Magnesium | mg/L | 0.02 | --- | --- | --- | |
| SAR Sodium | mg/L | 0.15 | --- | --- | --- | |
| **Metals in Soil - Aqua-regia/ICP-MS** | | | | | | |
| **Method: EPA 3050/EPA 200.8 \| Internal ref.: ME-CA-[ENV]SPE-LAK-AN-005** | | | | | | |
| Barium | µg/g | 0.1 | --- | --- | --- | 220 |
| Beryllium | µg/g | 0.02 | --- | --- | --- | 2.5 |
| Boron | µg/g | 1 | --- | --- | --- | 36 |
| Cadmium | µg/g | 0.02 | --- | --- | --- | 1.2 |
| Chromium | µg/g | 0.5 | --- | --- | --- | 70 |
| Cobalt | µg/g | 0.01 | --- | --- | --- | 21 |
| Copper | µg/g | 0.1 | --- | --- | --- | 92 |
| Lead | µg/g | 0.1 | --- | --- | --- | 120 |
| Molybdenum | µg/g | 0.1 | --- | --- | --- | 2 |
| Nickel | µg/g | 0.5 | --- | --- | --- | 82 |
| Silver | µg/g | 0.05 | --- | --- | --- | 0.5 |

## RESULTS - SOIL

| | Sample Number | 21 | 22 | 23 | |
|---|---|---|---|---|---|
| | Sample Name | BH200-2 | BH200-3 | BH300-1 | |
| | Sample Matrix | Soil | Soil | Soil | |
| | Sampled By | Brooke Wallace | Brooke Wallace | Brooke Wallace | |
| | Sample Date | 12/06/2020 | 12/06/2020 | 12/06/2020 | |
| **Parameter** | **Units** | **RL** | **Result** | **Result** | **Result** | **L1** |
| | | | | | | L1 = REG153 / SOIL / COARSE - TABLE 1 - Residential/Parkland/Industrial - UNDEFINED |
| **Metals in Soil - Aqua-regia/ICP-MS (continued)** | | | | | | |
| **Method: EPA 3050/EPA 200.8 \| Internal ref.: ME-CA-[ENV]SPE-LAK-AN-005** | | | | | | |
| Thallium | µg/g | 0.02 | --- | --- | --- | 1 |
| Uranium | µg/g | 0.002 | --- | --- | --- | 2.5 |
| Vanadium | µg/g | 3 | --- | --- | --- | 86 |
| Zinc | µg/g | 0.7 | --- | --- | --- | 290 |
| Antimony | µg/g | 0.8 | --- | --- | --- | 1.3 |
| Arsenic | µg/g | 0.5 | --- | --- | --- | 18 |
| Selenium | µg/g | 0.7 | --- | --- | --- | 1.5 |
| **Moisture** | | | | | | |
| **Method: CCME Tier 1 \| Internal ref.: ME-CA-[ENV]GC-LAK-AN-010** | | | | | | |
| Moisture Content | % | - | 7.0 | 8.1 | 9.7 | |
| **Petroleum Hydrocarbons (F1)** | | | | | | |
| **Method: CCME Tier 1 \| Internal ref.: ME-CA-[ENV]GC-LAK-AN-010** | | | | | | |
| F1 (C6-C10) | µg/g | 10 | < 10 | --- | --- | 25 |
| F1-BTEX (C6-C10) | µg/g | 10 | < 10 | --- | --- | 25 |
| **Petroleum Hydrocarbons (F2-F4)** | | | | | | |
| **Method: CCME Tier 1 \| Internal ref.: ME-CA-[ENV]GC-LAK-AN-010** | | | | | | |
| F2 (C10-C16) | µg/g | 10 | < 10 | --- | --- | 10 |
| F3 (C16-C34) | µg/g | 50 | < 50 | --- | --- | 240 |
| F4 (C34-C50) | µg/g | 50 | < 50 | --- | --- | 120 |
| Chromatogram returned to baseline at nC50 | Yes / No | - | YES | --- | --- | |
| **Petroleum Hydrocarbons (F4G)** | | | | | | |
| **Method: CCME Tier 1 \| Internal ref.: ME-CA-[ENV]GC-LAK-AN-010** | | | | | | |
| F4G-sg (GHH) | µg/g | 200 | --- | --- | --- | 120 |
| **pH** | | | | | | |
| **Method: SM 4500 \| Internal ref.: ME-CA-[ENV]EWL-LAK-AN-001** | | | | | | |
| pH | pH Units | 0.05 | --- | --- | --- | |
| **Semi-Volatile Organics** | | | | | | |
| **Method: EPA 3541/8270D \| Internal ref.: ME-CA-[ENV]GC-LAK-AN-005** | | | | | | |
| 2-Chlorophenol | µg/g | 0.1 | --- | --- | < 0.1 | 0.1 |
| 2,4-Dichlorophenol | µg/g | 0.1 | --- | --- | < 0.1 | 0.1 |

## RESULTS - SOIL

| | | | |
|---|---|---|---|
| **Sample Number** | 21 | 22 | 23 |
| **Sample Name** | BH200-2 | BH200-3 | BH300-1 |
| **Sample Matrix** | Soil | Soil | Soil |
| **Sampled By** | Brooke Wallace | Brooke Wallace | Brooke Wallace |
| **Sample Date** | 12/06/2020 | 12/06/2020 | 12/06/2020 |

L1 = REG153 / SOIL / COARSE - TABLE 1 - Residential/Parkland/Industrial - UNDEFINED

### Semi-Volatile Organics (continued)

#### Method: EPA 3541/8270D | Internal ref.: ME-CA-[ENV]GC-LAK-AN-005

| Parameter | Units | RL | Result | Result | Result | L1 |
|---|---|---|---|---|---|---|
| 2,4,6-Trichlorophenol | µg/g | 0.1 | --- | --- | < 0.1 | 0.1 |
| 2,4,5-Trichlorophenol | µg/g | 0.1 | --- | --- | < 0.1 | 0.1 |
| Pentachlorophenol | µg/g | 0.1 | --- | --- | < 0.1 | 0.1 |
| Acenaphthene | µg/g | 0.05 | --- | < 0.05 | --- | 0.072 |
| Acenaphthylene | µg/g | 0.05 | --- | < 0.05 | --- | 0.093 |
| Anthracene | µg/g | 0.05 | --- | < 0.05 | --- | 0.16 |
| Benzo(a)anthracene | µg/g | 0.05 | --- | < 0.05 | --- | 0.36 |
| Benzo(a)pyrene | µg/g | 0.05 | --- | < 0.05 | --- | 0.3 |
| Benzo(b+j)fluoranthene | µg/g | 0.05 | --- | < 0.05 | --- | 0.47 |
| Benzo(ghi)perylene | µg/g | 0.1 | --- | < 0.1 | --- | 0.68 |
| Benzo(k)fluoranthene | µg/g | 0.05 | --- | < 0.05 | --- | 0.48 |
| Chrysene | µg/g | 0.05 | --- | < 0.05 | --- | 2.8 |
| Dibenzo(a,h)anthracene | µg/g | 0.06 | --- | < 0.06 | --- | 0.1 |
| Fluoranthene | µg/g | 0.05 | --- | < 0.05 | --- | 0.56 |
| Fluorene | µg/g | 0.05 | --- | < 0.05 | --- | 0.12 |
| Indeno(1,2,3-cd)pyrene | µg/g | 0.1 | --- | < 0.1 | --- | 0.23 |
| 1-Methylnaphthalene | µg/g | 0.05 | --- | < 0.05 | --- | |
| 2-Methylnaphthalene | µg/g | 0.05 | --- | < 0.05 | --- | |
| Methylnaphthalene, 2-(1-) | µg/g | 0.05 | --- | < 0.05 | --- | 0.59 |
| Naphthalene | µg/g | 0.05 | --- | < 0.05 | --- | 0.09 |
| Phenanthrene | µg/g | 0.05 | --- | < 0.05 | --- | 0.69 |
| Pyrene | µg/g | 0.05 | --- | < 0.05 | --- | 1 |
| Surr Nitrobenzene-d5 | Surr Rec % | - | --- | 74 | --- | |
| Surr 2-Fluorobiphenyl | Surr Rec % | - | --- | 68 | --- | |
| Surr 4-Terphenyl-d14 | Surr Rec % | - | --- | 63 | --- | |
| Surr 2-Fluorophenol | Surr Rec % | - | --- | 72 | --- | |
| Surr Phenol-d6 | Surr Rec % | - | --- | 78 | --- | |
| Surr 2,4,6-Tribromophenol | Surr Rec % | - | --- | 70 | --- | |

### Sodium adsorption ratio (SAR)

#### Method: MOE 4696e01/EPA 6010 | Internal ref.: ME-CA-[ENV]ARD-LAK-AN-021

| | | | | | | |
|---|---|---|---|---|---|---|
| Sodium Adsorption Ratio | --- | 0.2 | --- | --- | --- | 2.4 |

### Volatile Organics

#### Method: EPA 5035A/5030B/8260C | Internal ref.: ME-CA-[ENV]GC-LAK-AN-004

| | | | | | | |
|---|---|---|---|---|---|---|
| Acetone | µg/g | 0.5 | < 0.5 | --- | --- | 0.5 |
| Bromomethane | µg/g | 0.05 | < 0.05 | --- | --- | 0.05 |

## RESULTS - SOIL

| | Sample Number | 21 | 22 | 23 | |
|---|---|---|---|---|---|
| | Sample Name | BH200-2 | BH200-3 | BH300-1 | |
| | Sample Matrix | Soil | Soil | Soil | |
| | Sampled By | Brooke Wallace | Brooke Wallace | Brooke Wallace | |
| | Sample Date | 12/06/2020 | 12/06/2020 | 12/06/2020 | |
| **Parameter** | **Units** | **RL** | **Result** | **Result** | **Result** | **L1** |

L1 = REG153 / SOIL / COARSE - TABLE 1 - Residential/Parkland/Industrial - UNDEFINED

### Volatile Organics (continued)

Method: EPA 5035A/5030B/8260C | Internal ref.: ME-CA-[ENV]GC-LAK-AN-004

| | | | | | | |
|---|---|---|---|---|---|---|
| Carbon tetrachloride | µg/g | 0.05 | < 0.05 | --- | --- | 0.05 |
| Chlorobenzene | µg/g | 0.05 | < 0.05 | --- | --- | 0.05 |
| Chloroform | µg/g | 0.05 | < 0.05 | --- | --- | 0.05 |
| 1,2-Dichlorobenzene | µg/g | 0.05 | < 0.05 | --- | --- | 0.05 |
| 1,3-Dichlorobenzene | µg/g | 0.05 | < 0.05 | --- | --- | 0.05 |
| 1,4-Dichlorobenzene | µg/g | 0.05 | < 0.05 | --- | --- | 0.05 |
| Dichlorodifluoromethane | µg/g | 0.05 | < 0.05 | --- | --- | 0.05 |
| 1,1-Dichloroethane | µg/g | 0.05 | < 0.05 | --- | --- | 0.05 |
| 1,2-Dichloroethane | µg/g | 0.05 | < 0.05 | --- | --- | 0.05 |
| 1,1-Dichloroethylene | µg/g | 0.05 | < 0.05 | --- | --- | 0.05 |
| trans-1,2-Dichloroethylene | µg/g | 0.05 | < 0.05 | --- | --- | 0.05 |
| cis-1,2-Dichloroethylene | µg/g | 0.05 | < 0.05 | --- | --- | 0.05 |
| 1,2-Dichloropropane | µg/g | 0.05 | < 0.05 | --- | --- | 0.05 |
| cis-1,3-dichloropropene | µg/g | 0.03 | < 0.03 | --- | --- | |
| trans-1,3-dichloropropene | µg/g | 0.03 | < 0.03 | --- | --- | |
| 1,3-dichloropropene (total) | µg/g | 0.05 | < 0.05 | --- | --- | 0.05 |
| Ethylenedibromide | µg/g | 0.05 | < 0.05 | --- | --- | 0.05 |
| n-Hexane | µg/g | 0.05 | < 0.05 | --- | --- | 0.05 |
| Methyl ethyl ketone | µg/g | 0.5 | < 0.5 | --- | --- | 0.5 |
| Methyl isobutyl ketone | µg/g | 0.5 | < 0.5 | --- | --- | 0.5 |
| Methyl-t-butyl Ether | µg/g | 0.05 | < 0.05 | --- | --- | 0.05 |
| Methylene Chloride | µg/g | 0.05 | < 0.05 | --- | --- | 0.05 |
| Styrene | µg/g | 0.05 | < 0.05 | --- | --- | 0.05 |
| Tetrachloroethylene | µg/g | 0.05 | < 0.05 | --- | --- | 0.05 |
| 1,1,1,2-Tetrachloroethane | µg/g | 0.05 | < 0.05 | --- | --- | 0.05 |
| 1,1,2,2-Tetrachloroethane | µg/g | 0.05 | < 0.05 | --- | --- | 0.05 |
| 1,1,1-Trichloroethane | µg/g | 0.05 | < 0.05 | --- | --- | 0.05 |
| 1,1,2-Trichloroethane | µg/g | 0.05 | < 0.05 | --- | --- | 0.05 |
| Trichloroethylene | µg/g | 0.05 | < 0.05 | --- | --- | 0.05 |
| Trichlorofluoromethane | µg/g | 0.05 | < 0.05 | --- | --- | 0.25 |
| Vinyl Chloride | µg/g | 0.02 | < 0.02 | --- | --- | 0.02 |
| Benzene | µg/g | 0.02 | < 0.02 | --- | --- | 0.02 |
| Ethylbenzene | µg/g | 0.05 | < 0.05 | --- | --- | 0.05 |
| Toluene | µg/g | 0.05 | < 0.05 | --- | --- | 0.2 |
| Xylene (total) | µg/g | 0.05 | < 0.05 | --- | --- | 0.05 |
| m/p-xylene | µg/g | 0.05 | < 0.05 | --- | --- | |
| o-xylene | µg/g | 0.05 | < 0.05 | --- | --- | |

## RESULTS - SOIL

| | | | | |
|---|---|---|---|---|
| **Sample Number** | 21 | 22 | 23 | |
| **Sample Name** | BH200-2 | BH200-3 | BH300-1 | |
| **Sample Matrix** | Soil | Soil | Soil | |
| **Sampled By** | Brooke Wallace | Brooke Wallace | Brooke Wallace | |
| **Sample Date** | 12/06/2020 | 12/06/2020 | 12/06/2020 | |

| Parameter | Units | RL | Result | Result | Result | L1 |
|---|---|---|---|---|---|---|
| | | | | | | L1 = REG153 / SOIL / COARSE - TABLE 1 - Residential/Parkland/Industrial - UNDEFINED |
| **Volatile Organics (continued)** | | | | | | |
| **Method: EPA 5035A/5030B/8260C \| Internal ref.: ME-CA-[ENV]GC-LAK-AN-004** | | | | | | |
| Bromodichloromethane | µg/g | 0.05 | < 0.05 | --- | --- | 0.05 |
| Bromoform | µg/g | 0.05 | < 0.05 | --- | --- | 0.05 |
| Dibromochloromethane | µg/g | 0.05 | < 0.05 | --- | --- | 0.05 |
| Surr 1,2-Dichloroethane-d4 | Surr Rec % | - | 101 | --- | --- | |
| Surr 4-Bromofluorobenzene | Surr Rec % | - | 97 | --- | --- | |
| Surr 2-Bromo-1-Chloropropane | Surr Rec % | - | 80 | --- | --- | |
| **Water Soluble Boron** | | | | | | |
| **Method: O.Reg. 15 3/04 \| Internal ref.: ME-CA-[ENV] SPE-LAK-AN-003** | | | | | | |
| Water Soluble Boron | µg/g | 0.5 | --- | --- | --- | |

## LEGEND

### FOOTNOTES

| | |
|---|---|
| **NSS** | Insufficient sample for analysis. |
| **RL** | Reporting Limit. |
| ↑ | Reporting limit raised. |
| ↓ | Reporting limit lowered. |
| **NA** | The sample was not analysed for this analyte |
| **ND** | Non Detect |

Results relate only to the sample tested.
Data reported represent the sample as submitted to SGS. Solid samples expressed on a dry weight basis.
"Temperature Upon Receipt" is representative of the whole shipment and may not reflect the temperature of individual samples.
Analysis conducted on samples submitted pursuant to or as part of Reg. 153/04, are in accordance to the "Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act and Excess Soil Quality" published by the Ministry and dated March 9, 2004 as amended.

SGS provides criteria information (such as regulatory or guideline limits and summary of limit exceedances) as a service. Every attempt is made to ensure the criteria information in this report is accurate and current, however, it is not guaranteed. Comparison to the most current criteria is the responsibility of the client and SGS assumes no responsibility for the accuracy of the criteria levels indicated.

SGS Canada Inc. statement of conformity decision rule does not consider uncertainty when analytical results are compared to a specified standard or regulation.
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This report supersedes all previous versions.

-- End of Analytical Report --

# Request for Laboratory Services and CHAIN OF CUSTODY

SGS Environment, Health & Safety - Lakefield: 185 Concession St., Lakefield, ON K0L 2H0 Phone: 705-652-2000 Fax: 705-652-6365 Web: www.sgs.com/environment
- London: 657 Consortium Court, London, ON, N6E 2S8 Phone: 519-672-4500 Toll Free: 877-848-8060 Fax: 519-672-0361

No: 013895 Page 1 of 2

## Laboratory Information Section - Lab use only

Received By: Oleg Morkin
Received By (signature):
Received Date: 6/15/20 (mm/dd/yy)
Received Time: 16:00 (hr:min)
Custody Seal Present: Yes ☑ No ☐
Custody Seal Intact: Yes ☑ No ☐
Cooling Agent Present: Yes ☐ No ☐ Type: ice
Temperature Upon Receipt (°C): 8.8.8
LAB LIMS #: CA15298-Jun20

## REPORT INFORMATION

Company: Watters Environmental
Contact: Basil Wong
Address: 9135 Keele St, Unit A
Concord, ON L4K 0J4
Phone: 416-361-2407
Fax: 416-361-2410
Email: bwong@wattersenvironmental.com

## INVOICE INFORMATION

☑ (same as Report Information)
Company:
Contact: Brooklyn Espinola
Address:
Phone:
Email: ap@wattersenvironmental.com

Quotation #:
P.O. #:
Project #: 20-0052.01
Site Location/ID:

## TURNAROUND TIME (TAT) REQUIRED

☑ Regular TAT (5-7days)
TAT's are quoted in business days (exclude statutory holidays & weekends). Samples received after 6pm or on weekends: TAT begins next business day
RUSH TAT (Additional Charges May Apply): ☐ 1 Day ☐ 2 Days ☐ 3 Days ☐ 4 Days
PLEASE CONFIRM RUSH FEASIBILITY WITH SGS REPRESENTATIVE PRIOR TO SUBMISSION
Specify Due Date:
NOTE: DRINKING (POTABLE) WATER SAMPLES FOR HUMAN CONSUMPTION MUST BE SUBMITTED WITH SGS DRINKING WATER CHAIN OF CUSTODY

## REGULATIONS

Regulation 153/04: ☐ Table 1 ☑ Res/Park ☐ Table 2 ☐ Ind/Com ☐ Table 3 ☐ Agri/Other ☑ Table B/9
Soil Texture: ☑ Coarse ☐ Medium ☐ Fine
Other Regulations: ☐ Reg 347/558 (3 Day min TAT) ☐ PWQO ☐ MMER ☐ CCME ☐ Other: ☐ MISA
Sewer By-Law: ☐ Sanitary ☐ Storm Municipality:

RECORD OF SITE CONDITION (RSC) ☑ YES ☐ NO

## ANALYSIS REQUESTED

| | SAMPLE IDENTIFICATION | DATE SAMPLED | TIME SAMPLED | # OF BOTTLES | MATRIX | Field Filtered (Y/N) | M&I: Metals & Inorganics (Cl, Na-water) incl CrVI, CN, Hg pH,(B(HWS),EC,SAR-soil) | M&I: Full Metals Suite ICP metals plus B(HWS-soil only) Hg, CrVI | M&I: ICP Metals only Sb,As,Ba,Be,B,Cd,Cr,Co,Cu,Pb,Mo,Ni, Se,Ag,Tl,U,V,Zn | SVOC: PAHs only | SVOC: SVOCs all incl PAHs, ABNs, CPs | PCB: PCBs Total ☐ Aroclor ☐ | PHC: F1-F4 + BTEX | PHC: F1-F4 only no BTEX | VOC: VOCs all incl BTEX | VOC: BTEX only | Pest: Pesticides Organochlorine or specify other | Other: pH | Other: Grain Size | Other: Chlorophenols | Other: | Other: | Other: Sewer Use: Specify pkg: | Other: Water Characterization Pkg General ☐ Extended | TCLP: Specify TCLP tests ☐M&I ☐VOC ☐PCB ☐B(a)P ☐ABN ☐Ignit. | COMMENTS: |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | BH1(MW)-SS1 | Jun 11/20 | 9:30AM | 1 | Soil | | | | | | | | | | | | | ✓ | | | | | | | | |
| 2 | BH1(MW)-SS3 | | 9:50AM | 1 | | | ✓ | | | | | | | | | | | | | | | | | | | *Limited Sample* |
| 3 | BH1(MW)-SS4 | | 10:00AM | 4 | | | | | | ✓ | | | ✓ | | ✓ | | | | | | | | | | | |
| 4 | BH1(MW)-SS8 | | 10:40AM | 1 | | | | | | | | | | | | | | | ✓ | | | | | | | |
| 5 | BH1(MW)-SS11 | | 11:40AM | 3 | | | | | | | | | ✓ | | ✓ | | | ✓ | | | | | | | | |
| 6 | BH2(MW)-SS1 | Jun12/20 | 9:20AM | 1 | | | ✓ | | | | | | | | | | | | | | | | | | | |
| 7 | BH2(MW)-SS2 | | 9:30AM | 3 | | | | | | | | | ✓ | | ✓ | | | ✓ | | | | | | | | |
| 8 | BH2(MW)-SS3 | | 9:40AM | 1 | | | | | | ✓ | | | | | | | | | | | | | | | | |
| 9 | BH2(MW)-SS6 | | 10:16AM | 1 | | | | | | | | | | | | | | | ✓ | | | | | | | |
| 10 | BH2(MW)-SS10 | | 11:00AM | 3 | | | | | | | | | ✓ | | ✓ | | | ✓ | | | | | | | | |
| 11 | BH3-SS1 | | 2:30PM | 6 | | | ✓ | | | ✓ | | | ✓ | | ✓ | | | | ✓ | | | | | | | |
| 12 | BH200-1 | | AM | 1 | | | ✓ | | | | | | | | | | | | | | | | | | | |

Observations/Comments/Special Instructions: please also send to laberts@wattersenvironmental.com

Sampled By (NAME): Brooke Wallace Signature: Date: 06/12/20 (mm/dd/yy)
Relinquished by (NAME): Brooke Wallace Signature: Date: 06/12/20 (mm/dd/yy)

Pink Copy - Client
Yellow & White Copy - SGS

Revision #: 1.2
Date of Issue: 09 Sept, 2019

Note: Submission of samples to SGS is acknowledgement that you have been provided direction on sample collection/handling and transportation of samples. {2} Submission of samples to SGS is considered authorization for completion of work. Signatures may appear on this form or be retained on file in the contract, or in an alternative format (e.g. shipping documents). {3} Results may be sent by email to an unlimited number of addresses for no additional cost. Fax is available upon request. This document is issued by the Company under its General Conditions of Service accessible at http://www.sgs.com/terms_and_conditions.htm. (Printed copies are available upon request.) Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein.

# Request for Laboratory Services and CHAIN OF CUSTODY

SGS Environment, Health & Safety - Lakefield: 185 Concession St., Lakefield, ON K0L 2H0 Phone: 705-652-2000 Fax: 705-652-6365 Web: www.sgs.com/environment
- London: 657 Consortium Court, London, ON, N6E 2S8 Phone: 519-672-4500 Toll Free: 877-848-8060 Fax: 519-672-0361

No: 013896
Page 2 of 2

## Laboratory Information Section - Lab use only

Received By: Oleg Mozhir
Received Date: 6/15/20 (mm/dd/yy)
Received Time: 16:00 (hr : min)
Received By (signature):
Custody Seal Present: Yes ☑ No ☐
Custody Seal Intact: Yes ☑ No ☐
Cooling Agent Present: Yes ☑ No ☐ Type: ice
Temperature Upon Receipt (°C): 8.8.8
LAB LIMS #:

### REPORT INFORMATION

Company: Watters Environmental
Contact: Basil Wong
Address: 9135 Keele St, Unit A1
Concord, ON L4K 0J4
Phone: 416-361-2407
Fax: 416-361-2410
Email: bwong@wattersenvironmental.com

### INVOICE INFORMATION

☑ (same as Report Information)
Company:
Contact: Brooklyn Espinola
Address:
Phone:
Email: ap@wattersenvironmental.com

Quotation #:
P.O. #:
Project #: 20-0052.01
Site Location/ID:

### TURNAROUND TIME (TAT) REQUIRED

☑ Regular TAT (5-7days)
TAT's are quoted in business days (exclude statutory holidays & weekends).
Samples received after 6pm or on weekends: TAT begins next business day

RUSH TAT (Additional Charges May Apply): ☐ 1 Day ☐ 2 Days ☐ 3 Days ☐ 4 Days
PLEASE CONFIRM RUSH FEASIBILITY WITH SGS REPRESENTATIVE PRIOR TO SUBMISSION

Specify Due Date:

NOTE: DRINKING (POTABLE) WATER SAMPLES FOR HUMAN CONSUMPTION MUST BE SUBMITTED WITH SGS DRINKING WATER CHAIN OF CUSTODY

### REGULATIONS

**Regulation 153/04:**
☐ Table 1 ☑ Res/Park Soil Texture: ☑ Coarse
☐ Table 2 ☐ Ind/Com ☐ Medium
☐ Table 3 ☐ Agri/Other ☐ Fine
☑ Table 3/9

**Other Regulations:**
☐ Reg 347/558 (3 Day min TAT)
☐ PWQO ☐ MMER
☐ CCME ☐ Other:
☐ MISA

**Sewer By-Law:**
☐ Sanitary
☐ Storm
Municipality:

RECORD OF SITE CONDITION (RSC) ☑ YES ☐ NO

### ANALYSIS REQUESTED

| | SAMPLE IDENTIFICATION | DATE SAMPLED | TIME SAMPLED | # OF BOTTLES | MATRIX | M&I: Field Filtered (Y/N) | M&I: Metals & Inorganics incl CrVI, CN, Hg pH,(B(HWS),EC,SAR–soil) (Cl, Na–water) | M&I: Full Metals Suite ICP metals plus B(HWS-soil only) Hg, CrVI | M&I: ICP Metals only Sb,As,Ba,Be,B,Cd,Cr,Co,Cu,Pb,Mo,Ni, Se,Ag,Tl,U,V,Zn | SVOC: PAHs only | SVOC: SVOCs all incl PAHs, ABNs, CPs | PCB: PCBs Total ☐ Aroclor ☐ | PHC: F1-F4 + BTEX | PHC: F1-F4 only no BTEX | VOC: VOCs all incl BTEX | VOC: BTEX only | Pest: Pesticides Organochlorine or specify other | Other: Chlorophenols | Other: | Other: | Other: | Other: | Other: Sewer Use: Specify pkg: | Other: Water Characterization Pkg General ☐ Extended ☐ | TCLP: Specify TCLP tests ☐M&I ☐VOC ☐PCB ☐B(a)P ☐ABN ☐Ignit. | COMMENTS: |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | BH200-2 | Jun 12/20 | AM | 3 | Soil | | | | | | | | ✓ | | ✓ | | | | | | | | | | |
| 2 | BH200-3 | ↓ | AM | 1 | | | | | | ✓ | | | | | | | | | | | | | | | |
| 3 | BH300-1 | ↓ | PM | 1 | ↓ | | | | | | | | | | | | | ✓ | | | | | | | |
| 4 | | | | | | | | | | | | | | | | | | | | | | | | | |
| 5 | | | | | | | | | | | | | | | | | | | | | | | | | |
| 6 | | | | | | | | | | | | | | | | | | | | | | | | | |
| 7 | | | | | | | | | | | | | | | | | | | | | | | | | |
| 8 | | | | | | | | | | | | | | | | | | | | | | | | | |
| 9 | | | | | | | | | | | | | | | | | | | | | | | | | |
| 10 | | | | | | | | | | | | | | | | | | | | | | | | | |
| 11 | | | | | | | | | | | | | | | | | | | | | | | | | |
| 12 | | | | | | | | | | | | | | | | | | | | | | | | | |

Observations/Comments/Special Instructions
please also send to labcerts@wattersenvironmental.com

Sampled By (NAME): Brooke Wallace
Signature:
Date: 06/12/20 (mm/dd/yy)

Relinquished by (NAME): Brooke Wallace
Signature:
Date: 06/12/20 (mm/dd/yy)

Pink Copy - Client
Yellow & White Copy - SGS

Revision #: 1.2
Date of Issue: 09 Sept, 2019

Note: Submission of samples to SGS is acknowledgement that you have been provided direction on sample collection/handling and transportation of samples. {2} Submission of samples to SGS is considered authorization for completion of work. Signatures may appear on this form or be retained on file in the contract, or in an alternative format (e.g. shipping documents). {3} Results may be sent by email to an unlimited number of addresses for no additional cost. Fax is available upon request. This document is issued by the Company under its General Conditions of Service accessible at http://www.sgs.com/terms_and_conditions.htm. (Printed copies are available upon request.) Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein.





# FINAL REPORT

## CA40040-OCT23 R1

**20-0052.04**

Prepared for

Watters Environmental Group Inc.

# FINAL REPORT

## First Page

| CLIENT DETAILS | | LABORATORY DETAILS | |
|---|---|---|---|
| Client | Watters Environmental Group Inc. | Project Specialist | Brad Moore Hon. B.Sc |
| | | Laboratory | SGS Canada Inc. |
| Address | 9135 Keele St Unit A1<br>Concord, ON<br>L4K 0J4. Canada | Address | 185 Concession St., Lakefield ON, K0L 2H0 |
| Contact | Natalie Wright | Telephone | 705-652-2143 |
| Telephone | (416) 361-2407 | Facsimile | 705-652-6365 |
| Facsimile | (416) 361-2410 | Email | brad.moore@sgs.com |
| Email | NWright@wattersenvironmental.com; labcerts@wattersenviron | SGS Reference | CA40040-OCT23 |
| Project | 20-0052.04 | Received | 10/05/2023 |
| Order Number | | Approved | 10/13/2023 |
| Samples | Soil (9) | Report Number | CA40040-OCT23 R1 |
| | | Date Reported | 10/13/2023 |

COMMENTS

CCME Method Compliance: Analyses were conducted using analytical procedures that comply with the Reference Method for the CWS for Petroleum Hydrocarbons in Soil and have been validated for use at the SGS laboratory, Lakefield, ON site.

Quality Compliance: Instrument performance / calibration quality criteria were met and extraction and analysis limits for holding times were met.

nC6 and nC10 response factors within 30% of response factor for toluene: YES

nC10, nC16 and nC34 response factors within 10% of the average response for the three compounds: YES

C50 response factors within 70% of nC10 + nC16 + nC34 average: YES

Linearity is within 15%: YES

F4G - gravimetric heavy hydrocarbons cannot be added to the C6 to C50 hydrocarbons.
The results for F4 and F4G are both reported and the greater of the two values is to be used in application to the CWS PHC.

Hydrocarbon results are expressed on a dry weight basis.

Benzo(b)fluoranthene results for comparison to the standard are reported as benzo(b+j)fluoranthene. Benzo(b)fluoranthene and benzo(j)fluoranthene co-elute and cannot be reported individually by the analytical method used.

Temperature of Sample upon Receipt: 7 degrees C
Cooling Agent Present: Yes
Custody Seal Present: Yes

Chain of Custody Number: 037136/037137

SIGNATORIES

Brad Moore Hon. B.Sc



TABLE OF CONTENTS

First Page..... 1

Index..... 2

Results..... 3-14

Exceedance Summary..... 15

Holding Time Summary..... 16-25

QC Summary..... 26-34

Legend..... 35

Annexes..... 36-37

**Client:** Watters Environmental Group Inc.
**Project:** 20-0052.04
**Project Manager:** Natalie Wright
**Samplers:** Michael Watters

MATRIX: SOIL

L1 = REG153 / SOIL / COARSE - TABLE 1 - Residential/Parkland/Industrial - UNDEFINED

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Sample Number** | | | | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 |
| **Sample Name** | | | | BH23-1(MW)-1 | BH1000-1 | BH23-1(MW)-5 | BH23-2(MW)-5 | BH23-3(MW)-2 | BH23-4(MW)-2 | BH23-5-1 | BH23-5000-1 |
| **Sample Matrix** | | | | Soil | Soil | Soil | Soil | Soil | Soil | Soil | Soil |
| **Sample Date** | | | | 02/10/2023 | 02/10/2023 | 02/10/2023 | 02/10/2023 | 03/10/2023 | 03/10/2023 | 02/10/2023 | 02/10/2023 |
| **Parameter** | **Units** | **RL** | **L1** | **Result** | **Result** | **Result** | **Result** | **Result** | **Result** | **Result** | **Result** |
| **BTEX** | | | | | | | | | | | |
| Benzene | µg/g | 0.02 | 0.02 | < 0.02 | < 0.02 | < 0.02 | < 0.02 | < 0.02 | < 0.02 | --- | --- |
| Ethylbenzene | µg/g | 0.05 | 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | --- | --- |
| Toluene | µg/g | 0.05 | 0.2 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | --- | --- |
| Xylene (total) | µg/g | 0.05 | 0.05 | < 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 | < 0.05 | < 0.05 | --- | --- |
| o-xylene | µg/g | 0.05 | | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | --- | --- |
| **Hydrides** | | | | | | | | | | | |
| Antimony | µg/g | 0.8 | 1.3 | < 0.8 | < 0.8 | < 0.8 | < 0.8 | < 0.8 | < 0.8 | --- | --- |
| Arsenic | µg/g | 0.5 | 18 | 0.5 | 0.5 | 1.2 | 0.9 | 0.9 | 2.8 | --- | --- |
| Selenium | µg/g | 0.1 | 1.5 | < 0.1 | < 0.1 | < 0.1 | < 0.1 | 0.1 | 0.1 | --- | --- |
| **Metals and Inorganics** | | | | | | | | | | | |
| Moisture Content | % | no | | 8.4 | 4.8 | 3.6 | 5.1 | 5.9 | 7.5 | 9.2 | 5.5 |
| Barium | µg/g | 0.1 | 220 | 9.6 | 9.0 | 34 | 14 | 24 | 52 | --- | --- |
| Beryllium | µg/g | 0.02 | 2.5 | 0.13 | 0.14 | 0.12 | 0.10 | 0.12 | 0.16 | --- | --- |
| Boron | µg/g | 1 | 36 | 2 | 1 | 2 | 2 | 2 | 5 | --- | --- |
| Cadmium | µg/g | 0.05 | 1.2 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | 0.08 | 0.17 | --- | --- |
| Chromium | µg/g | 0.5 | 70 | 4.0 | 6.1 | 8.1 | 5.0 | 8.2 | 9.9 | --- | --- |
| Cobalt | µg/g | 0.01 | 21 | 1.3 | 1.5 | 1.7 | 1.5 | 1.3 | 2.2 | --- | --- |
| Copper | µg/g | 0.1 | 92 | 2.6 | 2.7 | 3.8 | 4.7 | 5.0 | 12 | --- | --- |
| Lead | µg/g | 0.1 | 120 | 2.3 | 1.8 | 7.6 | 7.2 | 28 | 80 | --- | --- |
| Molybdenum | µg/g | 0.1 | 2 | 0.3 | 0.5 | 1.2 | 0.4 | 0.9 | 1.2 | --- | --- |

**Client:** Watters Environmental Group Inc.
**Project:** 20-0052.04
**Project Manager:** Natalie Wright
**Samplers:** Michael Watters

MATRIX: SOIL

L1 = REG153 / SOIL / COARSE - TABLE 1 - Residential/Parkland/Industrial - UNDEFINED

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | **Sample Number** | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 |
| | **Sample Name** | BH23-1(MW)-1 | BH1000-1 | BH23-1(MW)-5 | BH23-2(MW)-5 | BH23-3(MW)-2 | BH23-4(MW)-2 | BH23-5-1 | BH23-5000-1 |
| | **Sample Matrix** | Soil | Soil | Soil | Soil | Soil | Soil | Soil | Soil |
| | **Sample Date** | 02/10/2023 | 02/10/2023 | 02/10/2023 | 02/10/2023 | 03/10/2023 | 03/10/2023 | 02/10/2023 | 02/10/2023 |
| **Parameter** | **Units** | **RL** | **L1** | **Result** | **Result** | **Result** | **Result** | **Result** | **Result** | **Result** | **Result** |
| **Metals and Inorganics (continued)** | | | | | | | | | | | |
| Nickel | µg/g | 0.5 | 82 | 2.9 | 3.5 | 3.5 | 3.3 | 3.2 | 5.3 | --- | --- |
| Silver | µg/g | 0.05 | 0.5 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | 0.10 | --- | --- |
| Thallium | µg/g | 0.02 | 1 | < 0.02 | < 0.02 | 0.03 | 0.02 | 0.03 | 0.06 | --- | --- |
| Uranium | µg/g | 0.002 | 2.5 | 0.26 | 0.28 | 0.25 | 0.21 | 0.19 | 0.29 | --- | --- |
| Vanadium | µg/g | 3 | 86 | 8 | 11 | 10 | 9 | 7 | 12 | --- | --- |
| Zinc | µg/g | 0.7 | 290 | 7.9 | 7.9 | 20 | 14 | 32 | 50 | --- | --- |
| Water Soluble Boron | µg/g | 0.5 | | < 0.5 | < 0.5 | < 0.5 | < 0.5 | < 0.5 | < 0.5 | --- | --- |
| **Other (ORP)** | | | | | | | | | | | |
| Mercury | ug/g | 0.05 | 0.27 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | 0.07 | 0.23 | --- | --- |
| Sodium Adsorption Ratio | No unit | 0.2 | 2.4 | 6.6 | 7.1 | 10.5 | 9.9 | 1.8 | 5.8 | --- | --- |
| SAR Calcium | mg/L | 0.2 | | 27.3 | 25.8 | 24.0 | 4.6 | 18.9 | 6.0 | --- | --- |
| SAR Magnesium | mg/L | 0.3 | | 1.2 | 1.1 | 1.7 | 0.4 | 0.9 | 1.6 | --- | --- |
| SAR Sodium | mg/L | 0.1 | | 130 | 135 | 196 | 81.6 | 30.2 | 61.5 | --- | --- |
| Conductivity | mS/cm | 0.002 | 0.57 | 0.84 | 0.87 | 1.2 | 0.43 | 0.26 | 0.34 | --- | --- |
| pH | pH Units | 0.05 | | 7.97 | 7.95 | 8.05 | 8.23 | 8.07 | 7.96 | --- | --- |
| Chromium VI | µg/g | 0.2 | 0.66 | < 0.2 | < 0.2 | < 0.2 | < 0.2 | < 0.2 | < 0.2 | --- | --- |
| Free Cyanide | µg/g | 0.05 | 0.051 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | --- | --- |

**Client:** Watters Environmental Group Inc.
**Project:** 20-0052.04
**Project Manager:** Natalie Wright
**Samplers:** Michael Watters

MATRIX: SOIL

L1 = REG153 / SOIL / COARSE - TABLE 1 - Residential/Parkland/Industrial - UNDEFINED

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Sample Number** | | | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 |
| **Sample Name** | | | BH23-1(MW)-1 | BH1000-1 | BH23-1(MW)-5 | BH23-2(MW)-5 | BH23-3(MW)-2 | BH23-4(MW)-2 | BH23-5-1 | BH23-5000-1 |
| **Sample Matrix** | | | Soil | Soil | Soil | Soil | Soil | Soil | Soil | Soil |
| **Sample Date** | | | 02/10/2023 | 02/10/2023 | 02/10/2023 | 02/10/2023 | 03/10/2023 | 03/10/2023 | 02/10/2023 | 02/10/2023 |
| **Parameter** | **Units** | **RL** | **L1** | **Result** | **Result** | **Result** | **Result** | **Result** | **Result** | **Result** | **Result** |
| **PAHs** | | | | | | | | | | |
| Acenaphthene | µg/g | 0.05 | 0.072 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | --- | --- |
| Acenaphthylene | µg/g | 0.05 | 0.093 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | --- | --- |
| Anthracene | µg/g | 0.05 | 0.16 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | --- | --- |
| Benzo(a)anthracene | µg/g | 0.05 | 0.36 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | --- | --- |
| Benzo(a)pyrene | µg/g | 0.05 | 0.3 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | --- | --- |
| Benzo(b+j)fluoranthene | µg/g | 0.05 | 0.47 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | --- | --- |
| Benzo(ghi)perylene | µg/g | 0.1 | 0.68 | < 0.1 | < 0.1 | < 0.1 | < 0.1 | < 0.1 | < 0.1 | --- | --- |
| Benzo(k)fluoranthene | µg/g | 0.05 | 0.48 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | --- | --- |
| Chrysene | µg/g | 0.05 | 2.8 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | --- | --- |
| Dibenzo(a,h)anthracene | µg/g | 0.06 | 0.1 | < 0.06 | < 0.06 | < 0.06 | < 0.06 | < 0.06 | < 0.06 | --- | --- |
| Fluoranthene | µg/g | 0.05 | 0.56 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | --- | --- |
| Fluorene | µg/g | 0.05 | 0.12 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | --- | --- |
| Indeno(1,2,3-cd)pyrene | µg/g | 0.1 | 0.23 | < 0.1 | < 0.1 | < 0.1 | < 0.1 | < 0.1 | < 0.1 | --- | --- |
| 1-Methylnaphthalene | µg/g | 0.05 | | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | --- | --- |
| 2-Methylnaphthalene | µg/g | 0.05 | | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | --- | --- |
| Methylnaphthalene, 2-(1-) | µg/g | 0.05 | 0.59 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | --- | --- |
| Naphthalene | µg/g | 0.05 | 0.09 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | --- | --- |
| Phenanthrene | µg/g | 0.05 | 0.69 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | --- | --- |
| Pyrene | µg/g | 0.05 | 1 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | --- | --- |

**Client:** Watters Environmental Group Inc.
**Project:** 20-0052.04
**Project Manager:** Natalie Wright
**Samplers:** Michael Watters

MATRIX: SOIL

L1 = REG153 / SOIL / COARSE - TABLE 1 - Residential/Parkland/Industrial - UNDEFINED

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | **Sample Number** | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 |
| | **Sample Name** | BH23-1(MW)-1 | BH1000-1 | BH23-1(MW)-5 | BH23-2(MW)-5 | BH23-3(MW)-2 | BH23-4(MW)-2 | BH23-5-1 | BH23-5000-1 |
| | **Sample Matrix** | Soil | Soil | Soil | Soil | Soil | Soil | Soil | Soil |
| | **Sample Date** | 02/10/2023 | 02/10/2023 | 02/10/2023 | 02/10/2023 | 03/10/2023 | 03/10/2023 | 02/10/2023 | 02/10/2023 |
| **Parameter** | **Units** | **RL** | **L1** | **Result** | **Result** | **Result** | **Result** | **Result** | **Result** | **Result** | **Result** |
| **PCBs** | | | | | | | | | | | |
| Polychlorinated Biphenyls (PCBs) - Total | µg/g | 0.3 | 0.3 | --- | --- | --- | --- | --- | --- | < 0.3 | < 0.3 |
| **PHCs** | | | | | | | | | | | |
| F1 (C6-C10) | µg/g | 10 | 25 | < 10 | < 10 | < 10 | < 10 | < 10 | < 10 | < 10 | --- |
| F1-BTEX (C6-C10) | µg/g | 10 | 25 | < 10 | < 10 | < 10 | < 10 | < 10 | < 10 | < 10 | --- |
| F2 (C10-C16) | µg/g | 10 | 10 | < 10 | < 10 | < 10 | < 10 | < 10 | < 10 | < 10 | --- |
| F3 (C16-C34) | µg/g | 50 | 240 | < 50 | < 50 | < 50 | < 50 | < 50 | < 50 | < 50 | --- |
| F4 (C34-C50) | µg/g | 50 | 120 | < 50 | < 50 | < 50 | < 50 | < 50 | < 50 | < 50 | --- |
| Chromatogram returned to baseline at nC50 | Yes / No | no | | YES | YES | YES | YES | YES | YES | YES | --- |
| **SVOC Surrogates** | | | | | | | | | | | |
| Surr 2-Fluorobiphenyl | Surr Rec % | no | | 105 | 98 | 108 | 110 | 112 | 101 | --- | --- |
| Surr 4-Terphenyl-d14 | Surr Rec % | no | | 115 | 108 | 119 | 120 | 119 | 111 | --- | --- |
| Surr 2-Methylnaphthalene-D10 | Surr Rec % | no | | 100 | 92 | 101 | 104 | 106 | 91 | --- | --- |
| Surr Fluoranthene-D10 | Surr Rec % | no | | 111 | 104 | 112 | 112 | 114 | 105 | --- | --- |

**Client:** Watters Environmental Group Inc.
**Project:** 20-0052.04
**Project Manager:** Natalie Wright
**Samplers:** Michael Watters

MATRIX: SOIL

L1 = REG153 / SOIL / COARSE - TABLE 1 - Residential/Parkland/Industrial - UNDEFINED

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Sample Number** | | | | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 |
| **Sample Name** | | | | BH23-1(MW)-1 | BH1000-1 | BH23-1(MW)-5 | BH23-2(MW)-5 | BH23-3(MW)-2 | BH23-4(MW)-2 | BH23-5-1 | BH23-5000-1 |
| **Sample Matrix** | | | | Soil | Soil | Soil | Soil | Soil | Soil | Soil | Soil |
| **Sample Date** | | | | 02/10/2023 | 02/10/2023 | 02/10/2023 | 02/10/2023 | 03/10/2023 | 03/10/2023 | 02/10/2023 | 02/10/2023 |
| **Parameter** | | **Units** | **RL** | **L1** | **Result** | **Result** | **Result** | **Result** | **Result** | **Result** | **Result** | **Result** |
| **THMs (VOC)** | | | | | | | | | | | |
| Bromodichloromethane | | µg/g | 0.05 | 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | --- | --- |
| Bromoform | | µg/g | 0.05 | 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | --- | --- |
| Dibromochloromethane | | µg/g | 0.05 | 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | --- | --- |
| **VOC Surrogates** | | | | | | | | | | | |
| Surr 1,2-Dichloroethane-d4 | Surr Rec % | | no | | 104 | 104 | 104 | 104 | 103 | 103 | --- | --- |
| Surr 4-Bromofluorobenzene | Surr Rec % | | no | | 96 | 94 | 95 | 95 | 93 | 94 | --- | --- |
| Surr 2-Bromo-1-Chloropropane | Surr Rec % | | no | | 97 | 96 | 96 | 96 | 100 | 96 | --- | --- |
| **VOCs** | | | | | | | | | | | |
| Acetone | | µg/g | 0.5 | 0.5 | < 0.5 | < 0.5 | < 0.5 | < 0.5 | < 0.5 | < 0.5 | --- | --- |
| Bromomethane | | µg/g | 0.05 | 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | --- | --- |
| Carbon tetrachloride | | µg/g | 0.05 | 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | --- | --- |
| Chlorobenzene | | µg/g | 0.05 | 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | --- | --- |
| Chloroform | | µg/g | 0.05 | 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | --- | --- |
| 1,2-Dichlorobenzene | | µg/g | 0.05 | 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | --- | --- |
| 1,3-Dichlorobenzene | | µg/g | 0.05 | 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | --- | --- |
| 1,4-Dichlorobenzene | | µg/g | 0.05 | 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | --- | --- |
| Dichlorodifluoromethane | | µg/g | 0.05 | 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | --- | --- |
| 1,1-Dichloroethane | | µg/g | 0.05 | 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | --- | --- |
| 1,2-Dichloroethane | | µg/g | 0.05 | 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | --- | --- |
| 1,1-Dichloroethylene | | µg/g | 0.05 | 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | --- | --- |
| trans-1,2-Dichloroethylene | | µg/g | 0.05 | 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | --- | --- |

**Client:** Watters Environmental Group Inc.
**Project:** 20-0052.04
**Project Manager:** Natalie Wright
**Samplers:** Michael Watters

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L1 = REG153 / SOIL / COARSE - TABLE 1 - Residential/Parkland/Industrial - UNDEFINED

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | **Sample Number** | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 |
| | **Sample Name** | BH23-1(MW)-1 | BH1000-1 | BH23-1(MW)-5 | BH23-2(MW)-5 | BH23-3(MW)-2 | BH23-4(MW)-2 | BH23-5-1 | BH23-5000-1 |
| | **Sample Matrix** | Soil | Soil | Soil | Soil | Soil | Soil | Soil | Soil |
| | **Sample Date** | 02/10/2023 | 02/10/2023 | 02/10/2023 | 02/10/2023 | 03/10/2023 | 03/10/2023 | 02/10/2023 | 02/10/2023 |
| **Parameter** | **Units** | **RL** | **L1** | **Result** | **Result** | **Result** | **Result** | **Result** | **Result** | **Result** | **Result** |
| **VOCs (continued)** | | | | | | | | | | | |
| cis-1,2-Dichloroethylene | µg/g | 0.05 | 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | --- | --- |
| 1,2-Dichloropropane | µg/g | 0.05 | 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | --- | --- |
| cis-1,3-dichloropropene | µg/g | 0.03 | | < 0.03 | < 0.03 | < 0.03 | < 0.03 | < 0.03 | < 0.03 | --- | --- |
| trans-1,3-dichloropropene | µg/g | 0.03 | | < 0.03 | < 0.03 | < 0.03 | < 0.03 | < 0.03 | < 0.03 | --- | --- |
| 1,3-dichloropropene (total) | µg/g | 0.05 | 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | --- | --- |
| Ethylenedibromide | µg/g | 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 | --- | --- |
| Methyl ethyl ketone | µg/g | 0.5 | 0.5 | < 0.5 | < 0.5 | < 0.5 | < 0.5 | < 0.5 | < 0.5 | --- | --- |
| Methyl isobutyl ketone | µg/g | 0.5 | 0.5 | < 0.5 | < 0.5 | < 0.5 | < 0.5 | < 0.5 | < 0.5 | --- | --- |
| Methyl-t-butyl Ether | µg/g | 0.05 | 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | --- | --- |
| Methylene Chloride | µg/g | 0.05 | 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | --- | --- |
| Styrene | µg/g | 0.05 | 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | --- | --- |
| Tetrachloroethylene | µg/g | 0.05 | 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | --- | --- |
| 1,1,1,2-Tetrachloroethane | µg/g | 0.05 | 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | --- | --- |
| 1,1,2,2-Tetrachloroethane | µg/g | 0.05 | 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | --- | --- |
| 1,1,1-Trichloroethane | µg/g | 0.05 | 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | --- | --- |
| 1,1,2-Trichloroethane | µg/g | 0.05 | 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | --- | --- |
| Trichloroethylene | µg/g | 0.05 | 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | --- | --- |
| Trichlorofluoromethane | µg/g | 0.05 | 0.25 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | --- | --- |
| Vinyl Chloride | µg/g | 0.02 | 0.02 | < 0.02 | < 0.02 | < 0.02 | < 0.02 | < 0.02 | < 0.02 | --- | --- |

**Client:** Watters Environmental Group Inc.
**Project:** 20-0052.04
**Project Manager:** Natalie Wright
**Samplers:** Michael Watters

MATRIX: SOIL

L1 = REG153 / SOIL / COARSE - TABLE 1 - Residential/Parkland/Industrial - UNDEFINED

| | |
|---|---|
| **Sample Number** | 16 |
| **Sample Name** | BH23-5-2 |
| **Sample Matrix** | Soil |
| **Sample Date** | 02/10/2023 |

| Parameter | Units | RL | L1 | Result |
|---|---|---|---|---|
| **BTEX** | | | | |
| Benzene | µg/g | 0.02 | 0.02 | < 0.02 |
| Ethylbenzene | µg/g | 0.05 | 0.05 | < 0.05 |
| Toluene | µg/g | 0.05 | 0.2 | < 0.05 |
| Xylene (total) | µg/g | 0.05 | 0.05 | < 0.05 |
| m/p-xylene | µg/g | 0.05 | | < 0.05 |
| o-xylene | µg/g | 0.05 | | < 0.05 |
| **Hydrides** | | | | |
| Antimony | µg/g | 0.8 | 1.3 | < 0.8 |
| Arsenic | µg/g | 0.5 | 18 | 1.8 |
| Selenium | µg/g | 0.1 | 1.5 | 0.2 |
| **Metals and Inorganics** | | | | |
| Moisture Content | % | no | | 11.2 |
| Barium | µg/g | 0.1 | 220 | 43 |
| Beryllium | µg/g | 0.02 | 2.5 | 0.16 |
| Boron | µg/g | 1 | 36 | 3 |
| Cadmium | µg/g | 0.05 | 1.2 | 0.29 |
| Chromium | µg/g | 0.5 | 70 | 7.4 |
| Cobalt | µg/g | 0.01 | 21 | 2.1 |
| Copper | µg/g | 0.1 | 92 | 12 |
| Lead | µg/g | 0.1 | 120 | 66 |
| Molybdenum | µg/g | 0.1 | 2 | 0.4 |

**Client:** Watters Environmental Group Inc.
**Project:** 20-0052.04
**Project Manager:** Natalie Wright
**Samplers:** Michael Watters

MATRIX: SOIL

L1 = REG153 / SOIL / COARSE - TABLE 1 - Residential/Parkland/Industrial - UNDEFINED

| | |
|---|---|
| **Sample Number** | 16 |
| **Sample Name** | BH23-5-2 |
| **Sample Matrix** | Soil |
| **Sample Date** | 02/10/2023 |

| Parameter | Units | RL | L1 | Result |
|---|---|---|---|---|
| **Metals and Inorganics (continued)** | | | | |
| Nickel | µg/g | 0.5 | 82 | 4.6 |
| Silver | µg/g | 0.05 | 0.5 | < 0.05 |
| Thallium | µg/g | 0.02 | 1 | 0.06 |
| Uranium | µg/g | 0.002 | 2.5 | 0.26 |
| Vanadium | µg/g | 3 | 86 | 13 |
| Zinc | µg/g | 0.7 | 290 | 62 |
| Water Soluble Boron | µg/g | 0.5 | | < 0.5 |
| **Other (ORP)** | | | | |
| Mercury | ug/g | 0.05 | 0.27 | 0.14 |
| Sodium Adsorption Ratio | No unit | 0.2 | 2.4 | 1.4 |
| SAR Calcium | mg/L | 0.2 | | 18.3 |
| SAR Magnesium | mg/L | 0.3 | | 0.8 |
| SAR Sodium | mg/L | 0.1 | | 23.2 |
| Conductivity | mS/cm | 0.002 | 0.57 | 0.21 |
| pH | pH Units | 0.05 | | 7.70 |
| Chromium VI | µg/g | 0.2 | 0.66 | < 0.2 |
| Free Cyanide | µg/g | 0.05 | 0.051 | < 0.05 |

**Client:** Watters Environmental Group Inc.
**Project:** 20-0052.04
**Project Manager:** Natalie Wright
**Samplers:** Michael Watters

MATRIX: SOIL

L1 = REG153 / SOIL / COARSE - TABLE 1 - Residential/Parkland/Industrial - UNDEFINED

| | |
|---|---|
| **Sample Number** | 16 |
| **Sample Name** | BH23-5-2 |
| **Sample Matrix** | Soil |
| **Sample Date** | 02/10/2023 |

| Parameter | Units | RL | L1 | Result |
|---|---|---|---|---|
| **PAHs** | | | | |
| Acenaphthene | µg/g | 0.05 | 0.072 | < 0.05 |
| Acenaphthylene | µg/g | 0.05 | 0.093 | < 0.05 |
| Anthracene | µg/g | 0.05 | 0.16 | 0.05 |
| Benzo(a)anthracene | µg/g | 0.05 | 0.36 | 0.19 |
| Benzo(a)pyrene | µg/g | 0.05 | 0.3 | 0.17 |
| Benzo(b+j)fluoranthene | µg/g | 0.05 | 0.47 | 0.22 |
| Benzo(ghi)perylene | µg/g | 0.1 | 0.68 | 0.15 |
| Benzo(k)fluoranthene | µg/g | 0.05 | 0.48 | 0.08 |
| Chrysene | µg/g | 0.05 | 2.8 | 0.20 |
| Dibenzo(a,h)anthracene | µg/g | 0.06 | 0.1 | < 0.06 |
| Fluoranthene | µg/g | 0.05 | 0.56 | 0.39 |
| Fluorene | µg/g | 0.05 | 0.12 | < 0.05 |
| Indeno(1,2,3-cd)pyrene | µg/g | 0.1 | 0.23 | 0.12 |
| 1-Methylnaphthalene | µg/g | 0.05 | | < 0.05 |
| 2-Methylnaphthalene | µg/g | 0.05 | | < 0.05 |
| Methylnaphthalene, 2-(1-) | µg/g | 0.05 | 0.59 | 0.08 |
| Naphthalene | µg/g | 0.05 | 0.09 | < 0.05 |
| Phenanthrene | µg/g | 0.05 | 0.69 | 0.29 |
| Pyrene | µg/g | 0.05 | 1 | 0.34 |

**Client:** Watters Environmental Group Inc.
**Project:** 20-0052.04
**Project Manager:** Natalie Wright
**Samplers:** Michael Watters

MATRIX: SOIL

L1 = REG153 / SOIL / COARSE - TABLE 1 - Residential/Parkland/Industrial - UNDEFINED

| | |
|---|---|
| **Sample Number** | 16 |
| **Sample Name** | BH23-5-2 |
| **Sample Matrix** | Soil |
| **Sample Date** | 02/10/2023 |

| Parameter | Units | RL | L1 | Result |
|---|---|---|---|---|
| **PHCs** | | | | |
| F1 (C6-C10) | µg/g | 10 | 25 | < 10 |
| F1-BTEX (C6-C10) | µg/g | 10 | 25 | < 10 |
| F2 (C10-C16) | µg/g | 10 | 10 | < 10 |
| F3 (C16-C34) | µg/g | 50 | 240 | < 50 |
| F4 (C34-C50) | µg/g | 50 | 120 | < 50 |
| Chromatogram returned to baseline at nC50 | Yes / No | no | | YES |
| **SVOC Surrogates** | | | | |
| Surr 2-Fluorobiphenyl | Surr Rec % | no | | 98 |
| Surr 4-Terphenyl-d14 | Surr Rec % | no | | 101 |
| Surr 2-Methylnaphthalene-D10 | Surr Rec % | no | | 89 |
| Surr Fluoranthene-D10 | Surr Rec % | no | | 103 |

**Client:** Watters Environmental Group Inc.
**Project:** 20-0052.04
**Project Manager:** Natalie Wright
**Samplers:** Michael Watters

MATRIX: SOIL

L1 = REG153 / SOIL / COARSE - TABLE 1 - Residential/Parkland/Industrial - UNDEFINED

| | |
|---|---|
| **Sample Number** | 16 |
| **Sample Name** | BH23-5-2 |
| **Sample Matrix** | Soil |
| **Sample Date** | 02/10/2023 |

| Parameter | | Units | RL | L1 | Result |
|---|---|---|---|---|---|
| **THMs (VOC)** | | | | | |
| Bromodichloromethane | | µg/g | 0.05 | 0.05 | < 0.05 |
| Bromoform | | µg/g | 0.05 | 0.05 | < 0.05 |
| Dibromochloromethane | | µg/g | 0.05 | 0.05 | < 0.05 |
| **VOC Surrogates** | | | | | |
| Surr 1,2-Dichloroethane-d4 | Surr Rec % | | no | | 103 |
| Surr 4-Bromofluorobenzene | Surr Rec % | | no | | 94 |
| Surr 2-Bromo-1-Chloropropane | Surr Rec % | | no | | 95 |
| **VOCs** | | | | | |
| Acetone | | µg/g | 0.5 | 0.5 | < 0.5 |
| Bromomethane | | µg/g | 0.05 | 0.05 | < 0.05 |
| Carbon tetrachloride | | µg/g | 0.05 | 0.05 | < 0.05 |
| Chlorobenzene | | µg/g | 0.05 | 0.05 | < 0.05 |
| Chloroform | | µg/g | 0.05 | 0.05 | < 0.05 |
| 1,2-Dichlorobenzene | | µg/g | 0.05 | 0.05 | < 0.05 |
| 1,3-Dichlorobenzene | | µg/g | 0.05 | 0.05 | < 0.05 |
| 1,4-Dichlorobenzene | | µg/g | 0.05 | 0.05 | < 0.05 |
| Dichlorodifluoromethane | | µg/g | 0.05 | 0.05 | < 0.05 |
| 1,1-Dichloroethane | | µg/g | 0.05 | 0.05 | < 0.05 |
| 1,2-Dichloroethane | | µg/g | 0.05 | 0.05 | < 0.05 |
| 1,1-Dichloroethylene | | µg/g | 0.05 | 0.05 | < 0.05 |
| trans-1,2-Dichloroethylene | | µg/g | 0.05 | 0.05 | < 0.05 |

**Client:** Watters Environmental Group Inc.
**Project:** 20-0052.04
**Project Manager:** Natalie Wright
**Samplers:** Michael Watters

MATRIX: SOIL

L1 = REG153 / SOIL / COARSE - TABLE 1 - Residential/Parkland/Industrial - UNDEFINED

| | |
|---|---|
| **Sample Number** | 16 |
| **Sample Name** | BH23-5-2 |
| **Sample Matrix** | Soil |
| **Sample Date** | 02/10/2023 |

| Parameter | Units | RL | L1 | Result |
|---|---|---|---|---|
| **VOCs (continued)** | | | | |
| cis-1,2-Dichloroethylene | µg/g | 0.05 | 0.05 | < 0.05 |
| 1,2-Dichloropropane | µg/g | 0.05 | 0.05 | < 0.05 |
| cis-1,3-dichloropropene | µg/g | 0.03 | | < 0.03 |
| trans-1,3-dichloropropene | µg/g | 0.03 | | < 0.03 |
| 1,3-dichloropropene (total) | µg/g | 0.05 | 0.05 | < 0.05 |
| Ethylenedibromide | µg/g | 0.05 | 0.05 | < 0.05 |
| n-Hexane | µg/g | 0.05 | 0.05 | < 0.05 |
| Methyl ethyl ketone | µg/g | 0.5 | 0.5 | < 0.5 |
| Methyl isobutyl ketone | µg/g | 0.5 | 0.5 | < 0.5 |
| Methyl-t-butyl Ether | µg/g | 0.05 | 0.05 | < 0.05 |
| Methylene Chloride | µg/g | 0.05 | 0.05 | < 0.05 |
| Styrene | µg/g | 0.05 | 0.05 | < 0.05 |
| Tetrachloroethylene | µg/g | 0.05 | 0.05 | < 0.05 |
| 1,1,1,2-Tetrachloroethane | µg/g | 0.05 | 0.05 | < 0.05 |
| 1,1,2,2-Tetrachloroethane | µg/g | 0.05 | 0.05 | < 0.05 |
| 1,1,1-Trichloroethane | µg/g | 0.05 | 0.05 | < 0.05 |
| 1,1,2-Trichloroethane | µg/g | 0.05 | 0.05 | < 0.05 |
| Trichloroethylene | µg/g | 0.05 | 0.05 | < 0.05 |
| Trichlorofluoromethane | µg/g | 0.05 | 0.25 | < 0.05 |
| Vinyl Chloride | µg/g | 0.02 | 0.02 | < 0.02 |

## EXCEEDANCE SUMMARY

| Parameter | Method | Units | Result | REG153 / SOIL / COARSE - TABLE 1 - Residential/Parkland/Industrial - UNDEFINED L1 |
|---|---|---|---|---|
| **BH23-1(MW)-1** | | | | |
| Conductivity | EPA 6010/SM 2510 | mS/cm | 0.84 | 0.57 |
| Sodium Adsorption Ratio | MOE 4696e01/EPA 6010 | No unit | 6.6 | 2.4 |
| **BH1000-1** | | | | |
| Conductivity | EPA 6010/SM 2510 | mS/cm | 0.87 | 0.57 |
| Sodium Adsorption Ratio | MOE 4696e01/EPA 6010 | No unit | 7.1 | 2.4 |
| **BH23-1(MW)-5** | | | | |
| Conductivity | EPA 6010/SM 2510 | mS/cm | 1.2 | 0.57 |
| Sodium Adsorption Ratio | MOE 4696e01/EPA 6010 | No unit | 10.5 | 2.4 |
| **BH23-2(MW)-5** | | | | |
| Sodium Adsorption Ratio | MOE 4696e01/EPA 6010 | No unit | 9.9 | 2.4 |
| **BH23-4(MW)-2** | | | | |
| Sodium Adsorption Ratio | MOE 4696e01/EPA 6010 | No unit | 5.8 | 2.4 |

## HOLDING TIME SUMMARY

| Sample Name | QC Batch Reference | Sample Number | Sampled | Received | Extracted/ Prepared | Analysed | Holding Time | Approved |
|---|---|---|---|---|---|---|---|---|
| **Method: ASTM D422-63 \| Internal ref.: Grain Size** | | | | | | | | |
| BH23-1(MW)-1 | | 8 | 10/02/2023 | 10/05/2023 | | | 11/22/2024 | 10/12/2023 |
| BH1000-1 | | 9 | 10/02/2023 | 10/05/2023 | | | 11/21/2024 | 10/12/2023 |
| BH23-1(MW)-5 | | 10 | 10/02/2023 | 10/05/2023 | | | 11/22/2024 | 10/12/2023 |
| BH23-2(MW)-5 | | 11 | 10/02/2023 | 10/05/2023 | | | 11/22/2024 | 10/12/2023 |
| BH23-3(MW)-2 | | 12 | 10/03/2023 | 10/05/2023 | | | 11/23/2024 | 10/12/2023 |
| BH23-4(MW)-2 | | 13 | 10/03/2023 | 10/05/2023 | | | 11/23/2024 | 10/12/2023 |
| BH23-5-1 | | 14 | 10/02/2023 | 10/05/2023 | | | 11/22/2024 | 10/12/2023 |
| BH23-5000-1 | | 15 | 10/02/2023 | 10/05/2023 | | | 11/22/2024 | 10/12/2023 |
| BH23-5-2 | | 16 | 10/02/2023 | 10/05/2023 | | | 11/22/2024 | 10/12/2023 |
| BH23-1(MW)-3 ON HOLD | | 17 | 10/02/2023 | 10/05/2023 | | | 11/22/2024 | 10/12/2023 |
| BH23-1(MW)-6 ON HOLD | | 18 | 10/02/2023 | 10/05/2023 | | | 11/22/2024 | 10/12/2023 |
| BH23-2(MW)-2 ON HOLD | | 19 | 10/02/2023 | 10/05/2023 | | | 11/22/2024 | 10/12/2023 |
| BH23-2(MW)-4 ON HOLD | | 20 | 10/02/2023 | 10/05/2023 | | | 11/22/2024 | 10/12/2023 |
| BH23-2(MW)-6 ON HOLD | | 21 | 10/02/2023 | 10/05/2023 | | | 11/22/2024 | 10/12/2023 |
| BH23-3(MW)-1 ON HOLD | | 22 | 10/03/2023 | 10/05/2023 | | | 11/23/2024 | 10/12/2023 |
| BH23-3(MW)-2 ON HOLD | | 23 | 10/03/2023 | 10/05/2023 | | | 11/23/2024 | 10/12/2023 |
| BH23-3(MW)-3 ON HOLD | | 24 | 10/03/2023 | 10/05/2023 | | | 11/23/2024 | 10/12/2023 |
| BH23-4(MW)-1 ON HOLD | | 25 | 10/03/2023 | 10/05/2023 | | | 11/23/2024 | 10/12/2023 |
| BH23-4(MW)-3 ON HOLD | | 26 | 10/03/2023 | 10/05/2023 | | | 11/23/2024 | 10/12/2023 |
| BH23-5-1 ON HOLD | | 27 | 10/03/2023 | 10/05/2023 | | | 11/23/2024 | 10/12/2023 |
| BH23-5-2 ON HOLD | | 28 | 10/03/2023 | 10/05/2023 | | | 11/23/2024 | 10/12/2023 |
| **Conductivity** | | | | | | | | |
| **Method: EPA 6010/SM 2510 \| Internal ref.: ME-CA-[ENV]EWL-LAK-AN-006** | | | | | | | | |
| BH23-1(MW)-1 | EWL0205-OCT23 | 8 | 10/02/2023 | 10/05/2023 | 10/10/2023 | 10/10/2023 | 10/30/2023 | 10/11/2023 |
| BH1000-1 | EWL0205-OCT23 | 9 | 10/02/2023 | 10/05/2023 | 10/10/2023 | 10/10/2023 | 10/30/2023 | 10/11/2023 |
| BH23-1(MW)-5 | EWL0205-OCT23 | 10 | 10/02/2023 | 10/05/2023 | 10/10/2023 | 10/10/2023 | 10/30/2023 | 10/11/2023 |
| BH23-2(MW)-5 | EWL0205-OCT23 | 11 | 10/02/2023 | 10/05/2023 | 10/10/2023 | 10/10/2023 | 10/30/2023 | 10/11/2023 |
| BH23-3(MW)-2 | EWL0205-OCT23 | 12 | 10/03/2023 | 10/05/2023 | 10/10/2023 | 10/10/2023 | 10/31/2023 | 10/11/2023 |
| BH23-4(MW)-2 | EWL0205-OCT23 | 13 | 10/03/2023 | 10/05/2023 | 10/10/2023 | 10/10/2023 | 10/31/2023 | 10/11/2023 |
| BH23-5-1 | | 14 | 10/02/2023 | 10/05/2023 | 10/10/2023 | 10/10/2023 | 10/30/2023 | 10/11/2023 |
| BH23-5000-1 | | 15 | 10/02/2023 | 10/05/2023 | 10/10/2023 | 10/10/2023 | 10/30/2023 | 10/11/2023 |
| BH23-5-2 | EWL0205-OCT23 | 16 | 10/02/2023 | 10/05/2023 | 10/10/2023 | 10/10/2023 | 10/30/2023 | 10/11/2023 |
| BH23-1(MW)-3 ON HOLD | | 17 | 10/02/2023 | 10/05/2023 | 10/10/2023 | 10/10/2023 | 10/30/2023 | 10/11/2023 |
| BH23-1(MW)-6 ON HOLD | | 18 | 10/02/2023 | 10/05/2023 | 10/10/2023 | 10/10/2023 | 10/30/2023 | 10/11/2023 |
| BH23-2(MW)-2 ON HOLD | | 19 | 10/02/2023 | 10/05/2023 | 10/10/2023 | 10/10/2023 | 10/30/2023 | 10/11/2023 |
| BH23-2(MW)-4 ON HOLD | | 20 | 10/02/2023 | 10/05/2023 | 10/10/2023 | 10/10/2023 | 10/30/2023 | 10/11/2023 |
| BH23-2(MW)-6 ON HOLD | | 21 | 10/02/2023 | 10/05/2023 | 10/10/2023 | 10/10/2023 | 10/30/2023 | 10/11/2023 |
| BH23-3(MW)-1 ON HOLD | | 22 | 10/03/2023 | 10/05/2023 | 10/10/2023 | 10/10/2023 | 10/31/2023 | 10/11/2023 |

## HOLDING TIME SUMMARY

| Sample Name | QC Batch Reference | Sample Number | Sampled | Received | Extracted/ Prepared | Analysed | Holding Time | Approved |
|---|---|---|---|---|---|---|---|---|
| **Conductivity (continued)** | | | | | | | | |
| **Method: EPA 6010/SM 2510 \| Internal ref.: ME-CA-[ENV]EWL-LAK-AN-006** | | | | | | | | |
| BH23-3(MW)-2 ON HOLD | | 23 | 10/03/2023 | 10/05/2023 | 10/10/2023 | 10/10/2023 | 10/31/2023 | 10/11/2023 |
| BH23-3(MW)-3 ON HOLD | | 24 | 10/03/2023 | 10/05/2023 | 10/10/2023 | 10/10/2023 | 10/31/2023 | 10/11/2023 |
| BH23-4(MW)-1 ON HOLD | | 25 | 10/03/2023 | 10/05/2023 | 10/10/2023 | 10/10/2023 | 10/31/2023 | 10/11/2023 |
| BH23-4(MW)-3 ON HOLD | | 26 | 10/03/2023 | 10/05/2023 | 10/10/2023 | 10/10/2023 | 10/31/2023 | 10/11/2023 |
| BH23-5-1 ON HOLD | | 27 | 10/03/2023 | 10/05/2023 | 10/10/2023 | 10/10/2023 | 10/31/2023 | 10/11/2023 |
| BH23-5-2 ON HOLD | | 28 | 10/03/2023 | 10/05/2023 | 10/10/2023 | 10/10/2023 | 10/31/2023 | 10/11/2023 |
| **Cyanide by SFA** | | | | | | | | |
| **Method: SM 4500 \| Internal ref.: ME-CA-[ENV]SFA-LAK-AN-005** | | | | | | | | |
| BH23-1(MW)-1 | SKA5034-OCT23 | 8 | 10/02/2023 | 10/05/2023 | | | 10/16/2023 | 10/11/2023 |
| BH1000-1 | SKA5034-OCT23 | 9 | 10/02/2023 | 10/05/2023 | | | 10/16/2023 | 10/11/2023 |
| BH23-1(MW)-5 | SKA5034-OCT23 | 10 | 10/02/2023 | 10/05/2023 | | | 10/16/2023 | 10/11/2023 |
| BH23-2(MW)-5 | SKA5034-OCT23 | 11 | 10/02/2023 | 10/05/2023 | | | 10/16/2023 | 10/11/2023 |
| BH23-3(MW)-2 | SKA5034-OCT23 | 12 | 10/03/2023 | 10/05/2023 | | | 10/17/2023 | 10/11/2023 |
| BH23-4(MW)-2 | SKA5034-OCT23 | 13 | 10/03/2023 | 10/05/2023 | | | 10/17/2023 | 10/11/2023 |
| BH23-5-1 | | 14 | 10/02/2023 | 10/05/2023 | | | 10/16/2023 | 10/11/2023 |
| BH23-5000-1 | | 15 | 10/02/2023 | 10/05/2023 | | | 10/16/2023 | 10/11/2023 |
| BH23-5-2 | SKA5034-OCT23 | 16 | 10/02/2023 | 10/05/2023 | | | 10/16/2023 | 10/11/2023 |
| BH23-1(MW)-3 ON HOLD | | 17 | 10/02/2023 | 10/05/2023 | | | 10/16/2023 | 10/11/2023 |
| BH23-1(MW)-6 ON HOLD | | 18 | 10/02/2023 | 10/05/2023 | | | 10/16/2023 | 10/11/2023 |
| BH23-2(MW)-2 ON HOLD | | 19 | 10/02/2023 | 10/05/2023 | | | 10/16/2023 | 10/11/2023 |
| BH23-2(MW)-4 ON HOLD | | 20 | 10/02/2023 | 10/05/2023 | | | 10/16/2023 | 10/11/2023 |
| BH23-2(MW)-6 ON HOLD | | 21 | 10/02/2023 | 10/05/2023 | | | 10/16/2023 | 10/11/2023 |
| BH23-3(MW)-1 ON HOLD | | 22 | 10/03/2023 | 10/05/2023 | | | 10/17/2023 | 10/11/2023 |
| BH23-3(MW)-2 ON HOLD | | 23 | 10/03/2023 | 10/05/2023 | | | 10/17/2023 | 10/11/2023 |
| BH23-3(MW)-3 ON HOLD | | 24 | 10/03/2023 | 10/05/2023 | | | 10/17/2023 | 10/11/2023 |
| BH23-4(MW)-1 ON HOLD | | 25 | 10/03/2023 | 10/05/2023 | | | 10/17/2023 | 10/11/2023 |
| BH23-4(MW)-3 ON HOLD | | 26 | 10/03/2023 | 10/05/2023 | | | 10/17/2023 | 10/11/2023 |
| BH23-5-1 ON HOLD | | 27 | 10/03/2023 | 10/05/2023 | | | 10/17/2023 | 10/11/2023 |
| BH23-5-2 ON HOLD | | 28 | 10/03/2023 | 10/05/2023 | | | 10/17/2023 | 10/11/2023 |
| **Hexavalent Chromium by SFA** | | | | | | | | |
| **Method: EPA218.6/EPA3060A \| Internal ref.: ME-CA-[ENV]SKA-LAK-AN-012** | | | | | | | | |
| BH23-1(MW)-1 | SKA5039-OCT23 | 8 | 10/02/2023 | 10/05/2023 | 10/12/2023 | 10/12/2023 | 11/01/2023 | 10/12/2023 |
| BH1000-1 | SKA5039-OCT23 | 9 | 10/02/2023 | 10/05/2023 | 10/12/2023 | 10/12/2023 | 11/01/2023 | 10/12/2023 |
| BH23-1(MW)-5 | SKA5039-OCT23 | 10 | 10/02/2023 | 10/05/2023 | 10/12/2023 | 10/12/2023 | 11/01/2023 | 10/12/2023 |
| BH23-2(MW)-5 | SKA5039-OCT23 | 11 | 10/02/2023 | 10/05/2023 | 10/12/2023 | 10/12/2023 | 11/01/2023 | 10/12/2023 |
| BH23-3(MW)-2 | SKA5039-OCT23 | 12 | 10/03/2023 | 10/05/2023 | 10/12/2023 | 10/12/2023 | 11/02/2023 | 10/12/2023 |
| BH23-4(MW)-2 | SKA5039-OCT23 | 13 | 10/03/2023 | 10/05/2023 | 10/12/2023 | 10/12/2023 | 11/02/2023 | 10/12/2023 |

## HOLDING TIME SUMMARY

| Sample Name | QC Batch Reference | Sample Number | Sampled | Received | Extracted/ Prepared | Analysed | Holding Time | Approved |
|---|---|---|---|---|---|---|---|---|
| **Hexavalent Chromium by SFA (continued)** | | | | | | | | |
| **Method: EPA218.6/EPA3060A \| Internal ref.: ME-CA-[ENV]SKA-LAK-AN-012** | | | | | | | | |
| BH23-5-1 | | 14 | 10/02/2023 | 10/05/2023 | 10/12/2023 | 10/12/2023 | 11/01/2023 | 10/12/2023 |
| BH23-5000-1 | | 15 | 10/02/2023 | 10/05/2023 | 10/12/2023 | 10/12/2023 | 11/01/2023 | 10/12/2023 |
| BH23-5-2 | SKA5039-OCT23 | 16 | 10/02/2023 | 10/05/2023 | 10/12/2023 | 10/12/2023 | 11/01/2023 | 10/12/2023 |
| BH23-1(MW)-3 ON HOLD | | 17 | 10/02/2023 | 10/05/2023 | 10/12/2023 | 10/12/2023 | 11/01/2023 | 10/12/2023 |
| BH23-1(MW)-6 ON HOLD | | 18 | 10/02/2023 | 10/05/2023 | 10/12/2023 | 10/12/2023 | 11/01/2023 | 10/12/2023 |
| BH23-2(MW)-2 ON HOLD | | 19 | 10/02/2023 | 10/05/2023 | 10/12/2023 | 10/12/2023 | 11/01/2023 | 10/12/2023 |
| BH23-2(MW)-4 ON HOLD | | 20 | 10/02/2023 | 10/05/2023 | 10/12/2023 | 10/12/2023 | 11/01/2023 | 10/12/2023 |
| BH23-2(MW)-6 ON HOLD | | 21 | 10/02/2023 | 10/05/2023 | 10/12/2023 | 10/12/2023 | 11/01/2023 | 10/12/2023 |
| BH23-3(MW)-1 ON HOLD | | 22 | 10/03/2023 | 10/05/2023 | 10/12/2023 | 10/12/2023 | 11/02/2023 | 10/12/2023 |
| BH23-3(MW)-2 ON HOLD | | 23 | 10/03/2023 | 10/05/2023 | 10/12/2023 | 10/12/2023 | 11/02/2023 | 10/12/2023 |
| BH23-3(MW)-3 ON HOLD | | 24 | 10/03/2023 | 10/05/2023 | 10/12/2023 | 10/12/2023 | 11/02/2023 | 10/12/2023 |
| BH23-4(MW)-1 ON HOLD | | 25 | 10/03/2023 | 10/05/2023 | 10/12/2023 | 10/12/2023 | 11/02/2023 | 10/12/2023 |
| BH23-4(MW)-3 ON HOLD | | 26 | 10/03/2023 | 10/05/2023 | 10/12/2023 | 10/12/2023 | 11/02/2023 | 10/12/2023 |
| BH23-5-1 ON HOLD | | 27 | 10/03/2023 | 10/05/2023 | 10/12/2023 | 10/12/2023 | 11/02/2023 | 10/12/2023 |
| BH23-5-2 ON HOLD | | 28 | 10/03/2023 | 10/05/2023 | 10/12/2023 | 10/12/2023 | 11/02/2023 | 10/12/2023 |
| **Mercury by CVAAS** | | | | | | | | |
| **Method: EPA 7471A/EPA 245 \| Internal ref.: ME-CA-[ENV]SPE-LAK-AN-004** | | | | | | | | |
| BH23-1(MW)-1 | EMS0089-OCT23 | 8 | 10/02/2023 | 10/05/2023 | 10/12/2023 | 10/12/2023 | 10/30/2023 | 10/12/2023 |
| BH1000-1 | EMS0089-OCT23 | 9 | 10/02/2023 | 10/05/2023 | 10/12/2023 | 10/12/2023 | 10/30/2023 | 10/12/2023 |
| BH23-1(MW)-5 | EMS0089-OCT23 | 10 | 10/02/2023 | 10/05/2023 | 10/12/2023 | 10/12/2023 | 10/30/2023 | 10/12/2023 |
| BH23-2(MW)-5 | EMS0089-OCT23 | 11 | 10/02/2023 | 10/05/2023 | 10/12/2023 | 10/12/2023 | 10/30/2023 | 10/12/2023 |
| BH23-3(MW)-2 | EMS0089-OCT23 | 12 | 10/03/2023 | 10/05/2023 | 10/12/2023 | 10/12/2023 | 10/31/2023 | 10/12/2023 |
| BH23-4(MW)-2 | EMS0089-OCT23 | 13 | 10/03/2023 | 10/05/2023 | 10/12/2023 | 10/12/2023 | 10/31/2023 | 10/12/2023 |
| BH23-5-1 | | 14 | 10/02/2023 | 10/05/2023 | 10/12/2023 | 10/12/2023 | 10/30/2023 | 10/12/2023 |
| BH23-5000-1 | | 15 | 10/02/2023 | 10/05/2023 | 10/12/2023 | 10/12/2023 | 10/30/2023 | 10/12/2023 |
| BH23-5-2 | EMS0089-OCT23 | 16 | 10/02/2023 | 10/05/2023 | 10/12/2023 | 10/12/2023 | 10/30/2023 | 10/12/2023 |
| BH23-1(MW)-3 ON HOLD | | 17 | 10/02/2023 | 10/05/2023 | 10/12/2023 | 10/12/2023 | 10/30/2023 | 10/12/2023 |
| BH23-1(MW)-6 ON HOLD | | 18 | 10/02/2023 | 10/05/2023 | 10/12/2023 | 10/12/2023 | 10/30/2023 | 10/12/2023 |
| BH23-2(MW)-2 ON HOLD | | 19 | 10/02/2023 | 10/05/2023 | 10/12/2023 | 10/12/2023 | 10/30/2023 | 10/12/2023 |
| BH23-2(MW)-4 ON HOLD | | 20 | 10/02/2023 | 10/05/2023 | 10/12/2023 | 10/12/2023 | 10/30/2023 | 10/12/2023 |
| BH23-2(MW)-6 ON HOLD | | 21 | 10/02/2023 | 10/05/2023 | 10/12/2023 | 10/12/2023 | 10/30/2023 | 10/12/2023 |
| BH23-3(MW)-1 ON HOLD | | 22 | 10/03/2023 | 10/05/2023 | 10/12/2023 | 10/12/2023 | 10/31/2023 | 10/12/2023 |
| BH23-3(MW)-2 ON HOLD | | 23 | 10/03/2023 | 10/05/2023 | 10/12/2023 | 10/12/2023 | 10/31/2023 | 10/12/2023 |
| BH23-3(MW)-3 ON HOLD | | 24 | 10/03/2023 | 10/05/2023 | 10/12/2023 | 10/12/2023 | 10/31/2023 | 10/12/2023 |
| BH23-4(MW)-1 ON HOLD | | 25 | 10/03/2023 | 10/05/2023 | 10/12/2023 | 10/12/2023 | 10/31/2023 | 10/12/2023 |
| BH23-4(MW)-3 ON HOLD | | 26 | 10/03/2023 | 10/05/2023 | 10/12/2023 | 10/12/2023 | 10/31/2023 | 10/12/2023 |
| BH23-5-1 ON HOLD | | 27 | 10/03/2023 | 10/05/2023 | 10/12/2023 | 10/12/2023 | 10/31/2023 | 10/12/2023 |
| BH23-5-2 ON HOLD | | 28 | 10/03/2023 | 10/05/2023 | 10/12/2023 | 10/12/2023 | 10/31/2023 | 10/12/2023 |

## HOLDING TIME SUMMARY

| Sample Name | QC Batch Reference | Sample Number | Sampled | Received | Extracted/ Prepared | Analysed | Holding Time | Approved |
|---|---|---|---|---|---|---|---|---|
| **Metals in aqueous samples - ICP-OES** | | | | | | | | |
| **Method: MOE 4696e01/EPA 6010 \| Internal ref.: ME-CA-[ENV]SPE-LAK-AN-003** | | | | | | | | |
| BH23-1(MW)-1 | ESG0019-OCT23 | 8 | 10/02/2023 | 10/05/2023 | 10/10/2023 | 10/10/2023 | 03/30/2024 | 10/11/2023 |
| BH1000-1 | ESG0019-OCT23 | 9 | 10/02/2023 | 10/05/2023 | 10/10/2023 | 10/10/2023 | 03/30/2024 | 10/11/2023 |
| BH23-1(MW)-5 | ESG0019-OCT23 | 10 | 10/02/2023 | 10/05/2023 | 10/10/2023 | 10/10/2023 | 03/30/2024 | 10/11/2023 |
| BH23-2(MW)-5 | ESG0019-OCT23 | 11 | 10/02/2023 | 10/05/2023 | 10/10/2023 | 10/10/2023 | 03/30/2024 | 10/11/2023 |
| BH23-3(MW)-2 | ESG0019-OCT23 | 12 | 10/03/2023 | 10/05/2023 | 10/10/2023 | 10/10/2023 | 03/31/2024 | 10/11/2023 |
| BH23-4(MW)-2 | ESG0019-OCT23 | 13 | 10/03/2023 | 10/05/2023 | 10/10/2023 | 10/10/2023 | 03/31/2024 | 10/11/2023 |
| BH23-5-1 | | 14 | 10/02/2023 | 10/05/2023 | 10/10/2023 | 10/10/2023 | 03/30/2024 | 10/11/2023 |
| BH23-5000-1 | | 15 | 10/02/2023 | 10/05/2023 | 10/10/2023 | 10/10/2023 | 03/30/2024 | 10/11/2023 |
| BH23-5-2 | ESG0019-OCT23 | 16 | 10/02/2023 | 10/05/2023 | 10/10/2023 | 10/10/2023 | 03/30/2024 | 10/11/2023 |
| BH23-1(MW)-3 ON HOLD | | 17 | 10/02/2023 | 10/05/2023 | 10/10/2023 | 10/10/2023 | 03/30/2024 | 10/11/2023 |
| BH23-1(MW)-6 ON HOLD | | 18 | 10/02/2023 | 10/05/2023 | 10/10/2023 | 10/10/2023 | 03/30/2024 | 10/11/2023 |
| BH23-2(MW)-2 ON HOLD | | 19 | 10/02/2023 | 10/05/2023 | 10/10/2023 | 10/10/2023 | 03/30/2024 | 10/11/2023 |
| BH23-2(MW)-4 ON HOLD | | 20 | 10/02/2023 | 10/05/2023 | 10/10/2023 | 10/10/2023 | 03/30/2024 | 10/11/2023 |
| BH23-2(MW)-6 ON HOLD | | 21 | 10/02/2023 | 10/05/2023 | 10/10/2023 | 10/10/2023 | 03/30/2024 | 10/11/2023 |
| BH23-3(MW)-1 ON HOLD | | 22 | 10/03/2023 | 10/05/2023 | 10/10/2023 | 10/10/2023 | 03/31/2024 | 10/11/2023 |
| BH23-3(MW)-2 ON HOLD | | 23 | 10/03/2023 | 10/05/2023 | 10/10/2023 | 10/10/2023 | 03/31/2024 | 10/11/2023 |
| BH23-3(MW)-3 ON HOLD | | 24 | 10/03/2023 | 10/05/2023 | 10/10/2023 | 10/10/2023 | 03/31/2024 | 10/11/2023 |
| BH23-4(MW)-1 ON HOLD | | 25 | 10/03/2023 | 10/05/2023 | 10/10/2023 | 10/10/2023 | 03/31/2024 | 10/11/2023 |
| BH23-4(MW)-3 ON HOLD | | 26 | 10/03/2023 | 10/05/2023 | 10/10/2023 | 10/10/2023 | 03/31/2024 | 10/11/2023 |
| BH23-5-1 ON HOLD | | 27 | 10/03/2023 | 10/05/2023 | 10/10/2023 | 10/10/2023 | 03/31/2024 | 10/11/2023 |
| BH23-5-2 ON HOLD | | 28 | 10/03/2023 | 10/05/2023 | 10/10/2023 | 10/10/2023 | 03/31/2024 | 10/11/2023 |
| **Metals in Soil - Aqua-regia/ICP-MS** | | | | | | | | |
| **Method: EPA 3050/EPA 200.8 \| Internal ref.: ME-CA-[ENV]SPE-LAK-AN-005** | | | | | | | | |
| BH23-1(MW)-1 | EMS0089-OCT23 | 8 | 10/02/2023 | 10/05/2023 | 10/12/2023 | 10/12/2023 | 03/30/2024 | 10/12/2023 |
| BH1000-1 | EMS0089-OCT23 | 9 | 10/02/2023 | 10/05/2023 | 10/12/2023 | 10/12/2023 | 03/30/2024 | 10/12/2023 |
| BH23-1(MW)-5 | EMS0089-OCT23 | 10 | 10/02/2023 | 10/05/2023 | 10/12/2023 | 10/12/2023 | 03/30/2024 | 10/12/2023 |
| BH23-2(MW)-5 | EMS0089-OCT23 | 11 | 10/02/2023 | 10/05/2023 | 10/12/2023 | 10/12/2023 | 03/30/2024 | 10/12/2023 |
| BH23-3(MW)-2 | EMS0089-OCT23 | 12 | 10/03/2023 | 10/05/2023 | 10/12/2023 | 10/12/2023 | 03/31/2024 | 10/12/2023 |
| BH23-4(MW)-2 | EMS0089-OCT23 | 13 | 10/03/2023 | 10/05/2023 | 10/12/2023 | 10/12/2023 | 03/31/2024 | 10/12/2023 |
| BH23-5-1 | | 14 | 10/02/2023 | 10/05/2023 | 10/12/2023 | 10/12/2023 | 03/30/2024 | 10/12/2023 |
| BH23-5000-1 | | 15 | 10/02/2023 | 10/05/2023 | 10/12/2023 | 10/12/2023 | 03/30/2024 | 10/12/2023 |
| BH23-5-2 | EMS0089-OCT23 | 16 | 10/02/2023 | 10/05/2023 | 10/12/2023 | 10/12/2023 | 03/30/2024 | 10/12/2023 |
| BH23-1(MW)-3 ON HOLD | | 17 | 10/02/2023 | 10/05/2023 | 10/12/2023 | 10/12/2023 | 03/30/2024 | 10/12/2023 |
| BH23-1(MW)-6 ON HOLD | | 18 | 10/02/2023 | 10/05/2023 | 10/12/2023 | 10/12/2023 | 03/30/2024 | 10/12/2023 |
| BH23-2(MW)-2 ON HOLD | | 19 | 10/02/2023 | 10/05/2023 | 10/12/2023 | 10/12/2023 | 03/30/2024 | 10/12/2023 |
| BH23-2(MW)-4 ON HOLD | | 20 | 10/02/2023 | 10/05/2023 | 10/12/2023 | 10/12/2023 | 03/30/2024 | 10/12/2023 |
| BH23-2(MW)-6 ON HOLD | | 21 | 10/02/2023 | 10/05/2023 | 10/12/2023 | 10/12/2023 | 03/30/2024 | 10/12/2023 |
| BH23-3(MW)-1 ON HOLD | | 22 | 10/03/2023 | 10/05/2023 | 10/12/2023 | 10/12/2023 | 03/31/2024 | 10/12/2023 |

## HOLDING TIME SUMMARY

| Sample Name | QC Batch Reference | Sample Number | Sampled | Received | Extracted/ Prepared | Analysed | Holding Time | Approved |
|---|---|---|---|---|---|---|---|---|
| **Metals in Soil - Aqua-regia/ICP-MS (continued)** | | | | | | | | |
| **Method: EPA 3050/EPA 200.8 \| Internal ref.: ME-CA-[ENV]SPE-LAK-AN-005** | | | | | | | | |
| BH23-3(MW)-2 ON HOLD | | 23 | 10/03/2023 | 10/05/2023 | 10/12/2023 | 10/12/2023 | 03/31/2024 | 10/12/2023 |
| BH23-3(MW)-3 ON HOLD | | 24 | 10/03/2023 | 10/05/2023 | 10/12/2023 | 10/12/2023 | 03/31/2024 | 10/12/2023 |
| BH23-4(MW)-1 ON HOLD | | 25 | 10/03/2023 | 10/05/2023 | 10/12/2023 | 10/12/2023 | 03/31/2024 | 10/12/2023 |
| BH23-4(MW)-3 ON HOLD | | 26 | 10/03/2023 | 10/05/2023 | 10/12/2023 | 10/12/2023 | 03/31/2024 | 10/12/2023 |
| BH23-5-1 ON HOLD | | 27 | 10/03/2023 | 10/05/2023 | 10/12/2023 | 10/12/2023 | 03/31/2024 | 10/12/2023 |
| BH23-5-2 ON HOLD | | 28 | 10/03/2023 | 10/05/2023 | 10/12/2023 | 10/12/2023 | 03/31/2024 | 10/12/2023 |
| **Moisture** | | | | | | | | |
| **Method: CCME Tier 1 \| Internal ref.: ME-CA-[ENV]GC-LAK-AN-010** | | | | | | | | |
| BH23-1(MW)-1 | GCM0117-OCT23 | 8 | 10/02/2023 | 10/05/2023 | | | 12/01/2023 | 10/10/2023 |
| BH1000-1 | GCM0117-OCT23 | 9 | 10/02/2023 | 10/05/2023 | | | 12/01/2023 | 10/10/2023 |
| BH23-1(MW)-5 | GCM0117-OCT23 | 10 | 10/02/2023 | 10/05/2023 | | | 12/01/2023 | 10/10/2023 |
| BH23-2(MW)-5 | GCM0117-OCT23 | 11 | 10/02/2023 | 10/05/2023 | | | 12/01/2023 | 10/10/2023 |
| BH23-3(MW)-2 | GCM0117-OCT23 | 12 | 10/03/2023 | 10/05/2023 | | | 12/02/2023 | 10/10/2023 |
| BH23-4(MW)-2 | GCM0117-OCT23 | 13 | 10/03/2023 | 10/05/2023 | | | 12/02/2023 | 10/10/2023 |
| BH23-5-1 | GCM0117-OCT23 | 14 | 10/02/2023 | 10/05/2023 | | | 12/01/2023 | 10/10/2023 |
| BH23-5000-1 | GCM0117-OCT23 | 15 | 10/02/2023 | 10/05/2023 | | | 12/01/2023 | 10/10/2023 |
| BH23-5-2 | GCM0117-OCT23 | 16 | 10/02/2023 | 10/05/2023 | | | 12/01/2023 | 10/10/2023 |
| BH23-1(MW)-3 ON HOLD | | 17 | 10/02/2023 | 10/05/2023 | | | 12/01/2023 | 10/10/2023 |
| BH23-1(MW)-6 ON HOLD | | 18 | 10/02/2023 | 10/05/2023 | | | 12/01/2023 | 10/10/2023 |
| BH23-2(MW)-2 ON HOLD | | 19 | 10/02/2023 | 10/05/2023 | | | 12/01/2023 | 10/10/2023 |
| BH23-2(MW)-4 ON HOLD | | 20 | 10/02/2023 | 10/05/2023 | | | 12/01/2023 | 10/10/2023 |
| BH23-2(MW)-6 ON HOLD | | 21 | 10/02/2023 | 10/05/2023 | | | 12/01/2023 | 10/10/2023 |
| BH23-3(MW)-1 ON HOLD | | 22 | 10/03/2023 | 10/05/2023 | | | 12/02/2023 | 10/10/2023 |
| BH23-3(MW)-2 ON HOLD | | 23 | 10/03/2023 | 10/05/2023 | | | 12/02/2023 | 10/10/2023 |
| BH23-3(MW)-3 ON HOLD | | 24 | 10/03/2023 | 10/05/2023 | | | 12/02/2023 | 10/10/2023 |
| BH23-4(MW)-1 ON HOLD | | 25 | 10/03/2023 | 10/05/2023 | | | 12/02/2023 | 10/10/2023 |
| BH23-4(MW)-3 ON HOLD | | 26 | 10/03/2023 | 10/05/2023 | | | 12/02/2023 | 10/10/2023 |
| BH23-5-1 ON HOLD | | 27 | 10/03/2023 | 10/05/2023 | | | 12/02/2023 | 10/10/2023 |
| BH23-5-2 ON HOLD | | 28 | 10/03/2023 | 10/05/2023 | | | 12/02/2023 | 10/10/2023 |
| **Petroleum Hydrocarbons (F1)** | | | | | | | | |
| **Method: CCME Tier 1 \| Internal ref.: ME-CA-[ENV]GC-LAK-AN-010** | | | | | | | | |
| BH23-1(MW)-1 | GCM0139-OCT23 | 8 | 10/02/2023 | 10/05/2023 | | | 10/16/2023 | 10/13/2023 |
| BH1000-1 | GCM0139-OCT23 | 9 | 10/02/2023 | 10/05/2023 | | | 10/16/2023 | 10/13/2023 |
| BH23-1(MW)-5 | GCM0139-OCT23 | 10 | 10/02/2023 | 10/05/2023 | | | 10/16/2023 | 10/13/2023 |
| BH23-2(MW)-5 | GCM0139-OCT23 | 11 | 10/02/2023 | 10/05/2023 | | | 10/16/2023 | 10/13/2023 |
| BH23-3(MW)-2 | GCM0139-OCT23 | 12 | 10/03/2023 | 10/05/2023 | | | 10/17/2023 | 10/13/2023 |
| BH23-4(MW)-2 | GCM0139-OCT23 | 13 | 10/03/2023 | 10/05/2023 | | | 10/17/2023 | 10/13/2023 |

## HOLDING TIME SUMMARY

| Sample Name | QC Batch Reference | Sample Number | Sampled | Received | Extracted/ Prepared | Analysed | Holding Time | Approved |
|---|---|---|---|---|---|---|---|---|
| **Petroleum Hydrocarbons (F1) (continued)** | | | | | | | | |
| **Method: CCME Tier 1 \| Internal ref.: ME-CA-[ENV]GC-LAK-AN-010** | | | | | | | | |
| BH23-5-1 | GCM0199-OCT23 | 14 | 10/02/2023 | 10/05/2023 | | | 10/16/2023 | 10/13/2023 |
| BH23-5000-1 | | 15 | 10/02/2023 | 10/05/2023 | | | 10/16/2023 | 10/13/2023 |
| BH23-5-2 | GCM0139-OCT23 | 16 | 10/02/2023 | 10/05/2023 | | | 10/16/2023 | 10/13/2023 |
| BH23-1(MW)-3 ON HOLD | | 17 | 10/02/2023 | 10/05/2023 | | | 10/16/2023 | 10/13/2023 |
| BH23-1(MW)-6 ON HOLD | | 18 | 10/02/2023 | 10/05/2023 | | | 10/16/2023 | 10/13/2023 |
| BH23-2(MW)-2 ON HOLD | | 19 | 10/02/2023 | 10/05/2023 | | | 10/16/2023 | 10/13/2023 |
| BH23-2(MW)-4 ON HOLD | | 20 | 10/02/2023 | 10/05/2023 | | | 10/16/2023 | 10/13/2023 |
| BH23-2(MW)-6 ON HOLD | | 21 | 10/02/2023 | 10/05/2023 | | | 10/16/2023 | 10/13/2023 |
| BH23-3(MW)-1 ON HOLD | | 22 | 10/03/2023 | 10/05/2023 | | | 10/17/2023 | 10/13/2023 |
| BH23-3(MW)-2 ON HOLD | | 23 | 10/03/2023 | 10/05/2023 | | | 10/17/2023 | 10/13/2023 |
| BH23-3(MW)-3 ON HOLD | | 24 | 10/03/2023 | 10/05/2023 | | | 10/17/2023 | 10/13/2023 |
| BH23-4(MW)-1 ON HOLD | | 25 | 10/03/2023 | 10/05/2023 | | | 10/17/2023 | 10/13/2023 |
| BH23-4(MW)-3 ON HOLD | | 26 | 10/03/2023 | 10/05/2023 | | | 10/17/2023 | 10/13/2023 |
| BH23-5-1 ON HOLD | | 27 | 10/03/2023 | 10/05/2023 | | | 10/17/2023 | 10/13/2023 |
| BH23-5-2 ON HOLD | | 28 | 10/03/2023 | 10/05/2023 | | | 10/17/2023 | 10/13/2023 |
| **Petroleum Hydrocarbons (F2-F4)** | | | | | | | | |
| **Method: CCME Tier 1 \| Internal ref.: ME-CA-[ENV]GC-LAK-AN-010** | | | | | | | | |
| BH23-1(MW)-1 | GCM0115-OCT23 | 8 | 10/02/2023 | 10/05/2023 | | | 11/11/2023 | 10/10/2023 |
| BH1000-1 | GCM0115-OCT23 | 9 | 10/02/2023 | 10/05/2023 | | | 10/16/2023 | 10/10/2023 |
| BH23-1(MW)-5 | GCM0115-OCT23 | 10 | 10/02/2023 | 10/05/2023 | | | 10/16/2023 | 10/10/2023 |
| BH23-2(MW)-5 | GCM0115-OCT23 | 11 | 10/02/2023 | 10/05/2023 | | | 10/16/2023 | 10/10/2023 |
| BH23-3(MW)-2 | GCM0115-OCT23 | 12 | 10/03/2023 | 10/05/2023 | | | 10/17/2023 | 10/10/2023 |
| BH23-4(MW)-2 | GCM0115-OCT23 | 13 | 10/03/2023 | 10/05/2023 | | | 10/17/2023 | 10/10/2023 |
| BH23-5-1 | GCM0115-OCT23 | 14 | 10/02/2023 | 10/05/2023 | | | 10/16/2023 | 10/10/2023 |
| BH23-5000-1 | | 15 | 10/02/2023 | 10/05/2023 | | | 10/16/2023 | 10/10/2023 |
| BH23-5-2 | GCM0115-OCT23 | 16 | 10/02/2023 | 10/05/2023 | | | 10/16/2023 | 10/10/2023 |
| BH23-1(MW)-3 ON HOLD | | 17 | 10/02/2023 | 10/05/2023 | | | 11/11/2023 | 10/10/2023 |
| BH23-1(MW)-6 ON HOLD | | 18 | 10/02/2023 | 10/05/2023 | | | 11/11/2023 | 10/10/2023 |
| BH23-2(MW)-2 ON HOLD | | 19 | 10/02/2023 | 10/05/2023 | | | 10/16/2023 | 10/10/2023 |
| BH23-2(MW)-4 ON HOLD | | 20 | 10/02/2023 | 10/05/2023 | | | 10/16/2023 | 10/10/2023 |
| BH23-2(MW)-6 ON HOLD | | 21 | 10/02/2023 | 10/05/2023 | | | 10/16/2023 | 10/10/2023 |
| BH23-3(MW)-1 ON HOLD | | 22 | 10/03/2023 | 10/05/2023 | | | 11/12/2023 | 10/10/2023 |
| BH23-3(MW)-2 ON HOLD | | 23 | 10/03/2023 | 10/05/2023 | | | 11/12/2023 | 10/10/2023 |
| BH23-3(MW)-3 ON HOLD | | 24 | 10/03/2023 | 10/05/2023 | | | 11/12/2023 | 10/10/2023 |
| BH23-4(MW)-1 ON HOLD | | 25 | 10/03/2023 | 10/05/2023 | | | 10/17/2023 | 10/10/2023 |
| BH23-4(MW)-3 ON HOLD | | 26 | 10/03/2023 | 10/05/2023 | | | 11/12/2023 | 10/10/2023 |
| BH23-5-1 ON HOLD | | 27 | 10/03/2023 | 10/05/2023 | | | 11/12/2023 | 10/10/2023 |
| BH23-5-2 ON HOLD | | 28 | 10/03/2023 | 10/05/2023 | | | 11/12/2023 | 10/10/2023 |

## HOLDING TIME SUMMARY

### pH

Method: SM 4500 | Internal ref.: ME-CA-[ENV]EWL-LAK-AN-001

| Sample Name | QC Batch Reference | Sample Number | Sampled | Received | Extracted/ Prepared | Analysed | Holding Time | Approved |
|---|---|---|---|---|---|---|---|---|
| BH23-1(MW)-1 | ARD0035-OCT23 | 8 | 10/02/2023 | 10/05/2023 | 10/10/2023 | 10/10/2023 | 11/01/2023 | 10/10/2023 |
| BH1000-1 | ARD0035-OCT23 | 9 | 10/02/2023 | 10/05/2023 | 10/10/2023 | 10/10/2023 | 11/01/2023 | 10/10/2023 |
| BH23-1(MW)-5 | ARD0035-OCT23 | 10 | 10/02/2023 | 10/05/2023 | 10/10/2023 | 10/10/2023 | 11/01/2023 | 10/10/2023 |
| BH23-2(MW)-5 | ARD0035-OCT23 | 11 | 10/02/2023 | 10/05/2023 | 10/10/2023 | 10/10/2023 | 11/01/2023 | 10/10/2023 |
| BH23-3(MW)-2 | ARD0035-OCT23 | 12 | 10/03/2023 | 10/05/2023 | 10/10/2023 | 10/10/2023 | 11/02/2023 | 10/10/2023 |
| BH23-4(MW)-2 | ARD0035-OCT23 | 13 | 10/03/2023 | 10/05/2023 | 10/10/2023 | 10/10/2023 | 11/02/2023 | 10/10/2023 |
| BH23-5-1 | | 14 | 10/02/2023 | 10/05/2023 | 10/10/2023 | 10/10/2023 | 11/01/2023 | 10/10/2023 |
| BH23-5000-1 | | 15 | 10/02/2023 | 10/05/2023 | 10/10/2023 | 10/10/2023 | 11/01/2023 | 10/10/2023 |
| BH23-5-2 | ARD0035-OCT23 | 16 | 10/02/2023 | 10/05/2023 | 10/10/2023 | 10/10/2023 | 11/01/2023 | 10/10/2023 |
| BH23-1(MW)-3 ON HOLD | | 17 | 10/02/2023 | 10/05/2023 | 10/10/2023 | 10/10/2023 | 11/01/2023 | 10/10/2023 |
| BH23-1(MW)-6 ON HOLD | | 18 | 10/02/2023 | 10/05/2023 | 10/10/2023 | 10/10/2023 | 11/01/2023 | 10/10/2023 |
| BH23-2(MW)-2 ON HOLD | | 19 | 10/02/2023 | 10/05/2023 | 10/10/2023 | 10/10/2023 | 11/01/2023 | 10/10/2023 |
| BH23-2(MW)-4 ON HOLD | | 20 | 10/02/2023 | 10/05/2023 | 10/10/2023 | 10/10/2023 | 11/01/2023 | 10/10/2023 |
| BH23-2(MW)-6 ON HOLD | | 21 | 10/02/2023 | 10/05/2023 | 10/10/2023 | 10/10/2023 | 11/01/2023 | 10/10/2023 |
| BH23-3(MW)-1 ON HOLD | | 22 | 10/03/2023 | 10/05/2023 | 10/10/2023 | 10/10/2023 | 11/02/2023 | 10/10/2023 |
| BH23-3(MW)-2 ON HOLD | | 23 | 10/03/2023 | 10/05/2023 | 10/10/2023 | 10/10/2023 | 11/02/2023 | 10/10/2023 |
| BH23-3(MW)-3 ON HOLD | | 24 | 10/03/2023 | 10/05/2023 | 10/10/2023 | 10/10/2023 | 11/02/2023 | 10/10/2023 |
| BH23-4(MW)-1 ON HOLD | | 25 | 10/03/2023 | 10/05/2023 | 10/10/2023 | 10/10/2023 | 11/02/2023 | 10/10/2023 |
| BH23-4(MW)-3 ON HOLD | | 26 | 10/03/2023 | 10/05/2023 | 10/10/2023 | 10/10/2023 | 11/02/2023 | 10/10/2023 |
| BH23-5-1 ON HOLD | | 27 | 10/03/2023 | 10/05/2023 | 10/10/2023 | 10/10/2023 | 11/02/2023 | 10/10/2023 |
| BH23-5-2 ON HOLD | | 28 | 10/03/2023 | 10/05/2023 | 10/10/2023 | 10/10/2023 | 11/02/2023 | 10/10/2023 |

### Polychlorinated Biphenyls

Method: EPA 3570/8082A/8270C | Internal ref.: ME-CA-[ENV]GC-LAK-AN-001

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| BH23-1(MW)-1 | | 8 | 10/02/2023 | 10/05/2023 | 10/10/2023 | 10/12/2023 | 11/22/2024 | 10/12/2023 |
| BH1000-1 | | 9 | 10/02/2023 | 10/05/2023 | 10/10/2023 | 10/12/2023 | 11/21/2024 | 10/12/2023 |
| BH23-1(MW)-5 | | 10 | 10/02/2023 | 10/05/2023 | 10/10/2023 | 10/12/2023 | 11/22/2024 | 10/12/2023 |
| BH23-2(MW)-5 | | 11 | 10/02/2023 | 10/05/2023 | 10/10/2023 | 10/12/2023 | 11/22/2024 | 10/12/2023 |
| BH23-3(MW)-2 | | 12 | 10/03/2023 | 10/05/2023 | 10/10/2023 | 10/12/2023 | 11/23/2024 | 10/12/2023 |
| BH23-4(MW)-2 | | 13 | 10/03/2023 | 10/05/2023 | 10/10/2023 | 10/12/2023 | 11/23/2024 | 10/12/2023 |
| BH23-5-1 | GCM0147-OCT23 | 14 | 10/02/2023 | 10/05/2023 | 10/10/2023 | 10/12/2023 | 11/22/2024 | 10/12/2023 |
| BH23-5000-1 | GCM0147-OCT23 | 15 | 10/02/2023 | 10/05/2023 | 10/10/2023 | 10/12/2023 | 11/22/2024 | 10/12/2023 |
| BH23-5-2 | | 16 | 10/02/2023 | 10/05/2023 | 10/10/2023 | 10/12/2023 | 11/22/2024 | 10/12/2023 |
| BH23-1(MW)-3 ON HOLD | | 17 | 10/02/2023 | 10/05/2023 | 10/10/2023 | 10/12/2023 | 11/22/2024 | 10/12/2023 |
| BH23-1(MW)-6 ON HOLD | | 18 | 10/02/2023 | 10/05/2023 | 10/10/2023 | 10/12/2023 | 11/22/2024 | 10/12/2023 |
| BH23-2(MW)-2 ON HOLD | | 19 | 10/02/2023 | 10/05/2023 | 10/10/2023 | 10/12/2023 | 11/22/2024 | 10/12/2023 |
| BH23-2(MW)-4 ON HOLD | | 20 | 10/02/2023 | 10/05/2023 | 10/10/2023 | 10/12/2023 | 11/22/2024 | 10/12/2023 |
| BH23-2(MW)-6 ON HOLD | | 21 | 10/02/2023 | 10/05/2023 | 10/10/2023 | 10/12/2023 | 11/22/2024 | 10/12/2023 |
| BH23-3(MW)-1 ON HOLD | | 22 | 10/03/2023 | 10/05/2023 | 10/10/2023 | 10/12/2023 | 11/23/2024 | 10/12/2023 |

## HOLDING TIME SUMMARY

| Sample Name | QC Batch Reference | Sample Number | Sampled | Received | Extracted/ Prepared | Analysed | Holding Time | Approved |
|---|---|---|---|---|---|---|---|---|
| **Polychlorinated Biphenyls (continued)** | | | | | | | | |
| **Method: EPA 3570/8082A/8270C \| Internal ref.: ME-CA-[ENV]GC-LAK-AN-001** | | | | | | | | |
| BH23-3(MW)-2 ON HOLD | | 23 | 10/03/2023 | 10/05/2023 | 10/10/2023 | 10/12/2023 | 11/23/2024 | 10/12/2023 |
| BH23-3(MW)-3 ON HOLD | | 24 | 10/03/2023 | 10/05/2023 | 10/10/2023 | 10/12/2023 | 11/23/2024 | 10/12/2023 |
| BH23-4(MW)-1 ON HOLD | | 25 | 10/03/2023 | 10/05/2023 | 10/10/2023 | 10/12/2023 | 11/23/2024 | 10/12/2023 |
| BH23-4(MW)-3 ON HOLD | | 26 | 10/03/2023 | 10/05/2023 | 10/10/2023 | 10/12/2023 | 11/23/2024 | 10/12/2023 |
| BH23-5-1 ON HOLD | | 27 | 10/03/2023 | 10/05/2023 | 10/10/2023 | 10/12/2023 | 11/23/2024 | 10/12/2023 |
| BH23-5-2 ON HOLD | | 28 | 10/03/2023 | 10/05/2023 | 10/10/2023 | 10/12/2023 | 11/23/2024 | 10/12/2023 |
| **Semi-Volatile Organics** | | | | | | | | |
| **Method: EPA 3541/8270D \| Internal ref.: ME-CA-[ENV]GC-LAK-AN-005** | | | | | | | | |
| BH23-1(MW)-1 | GCM0118-OCT23 | 8 | 10/02/2023 | 10/05/2023 | | | 12/01/2023 | 10/12/2023 |
| BH1000-1 | GCM0118-OCT23 | 9 | 10/02/2023 | 10/05/2023 | | | 12/01/2023 | 10/12/2023 |
| BH23-1(MW)-5 | GCM0118-OCT23 | 10 | 10/02/2023 | 10/05/2023 | | | 10/16/2023 | 10/12/2023 |
| BH23-2(MW)-5 | GCM0118-OCT23 | 11 | 10/02/2023 | 10/05/2023 | | | 12/01/2023 | 10/12/2023 |
| BH23-3(MW)-2 | GCM0118-OCT23 | 12 | 10/03/2023 | 10/05/2023 | | | 10/17/2023 | 10/12/2023 |
| BH23-4(MW)-2 | GCM0118-OCT23 | 13 | 10/03/2023 | 10/05/2023 | | | 10/17/2023 | 10/12/2023 |
| BH23-5-1 | | 14 | 10/02/2023 | 10/05/2023 | | | 12/01/2023 | 10/12/2023 |
| BH23-5000-1 | | 15 | 10/02/2023 | 10/05/2023 | | | 12/01/2023 | 10/12/2023 |
| BH23-5-2 | GCM0118-OCT23 | 16 | 10/02/2023 | 10/05/2023 | | | 12/01/2023 | 10/12/2023 |
| BH23-1(MW)-3 ON HOLD | | 17 | 10/02/2023 | 10/05/2023 | | | 12/01/2023 | 10/12/2023 |
| BH23-1(MW)-6 ON HOLD | | 18 | 10/02/2023 | 10/05/2023 | | | 10/16/2023 | 10/12/2023 |
| BH23-2(MW)-2 ON HOLD | | 19 | 10/02/2023 | 10/05/2023 | | | 12/01/2023 | 10/12/2023 |
| BH23-2(MW)-4 ON HOLD | | 20 | 10/02/2023 | 10/05/2023 | | | 10/16/2023 | 10/12/2023 |
| BH23-2(MW)-6 ON HOLD | | 21 | 10/02/2023 | 10/05/2023 | | | 12/01/2023 | 10/12/2023 |
| BH23-3(MW)-1 ON HOLD | | 22 | 10/03/2023 | 10/05/2023 | | | 10/17/2023 | 10/12/2023 |
| BH23-3(MW)-2 ON HOLD | | 23 | 10/03/2023 | 10/05/2023 | | | 10/17/2023 | 10/12/2023 |
| BH23-3(MW)-3 ON HOLD | | 24 | 10/03/2023 | 10/05/2023 | | | 12/02/2023 | 10/12/2023 |
| BH23-4(MW)-1 ON HOLD | | 25 | 10/03/2023 | 10/05/2023 | | | 10/17/2023 | 10/12/2023 |
| BH23-4(MW)-3 ON HOLD | | 26 | 10/03/2023 | 10/05/2023 | | | 10/17/2023 | 10/12/2023 |
| BH23-5-1 ON HOLD | | 27 | 10/03/2023 | 10/05/2023 | | | 10/17/2023 | 10/12/2023 |
| BH23-5-2 ON HOLD | | 28 | 10/03/2023 | 10/05/2023 | | | 10/17/2023 | 10/12/2023 |
| **Sodium adsorption ratio (SAR)** | | | | | | | | |
| **Method: MOE 4696e01/EPA 6010 \| Internal ref.: ME-CA-[ENV]ARD-LAK-AN-021** | | | | | | | | |
| BH23-1(MW)-1 | | 8 | 10/02/2023 | 10/05/2023 | 10/10/2023 | 10/10/2023 | 03/30/2024 | 10/11/2023 |
| BH1000-1 | | 9 | 10/02/2023 | 10/05/2023 | 10/10/2023 | 10/10/2023 | 03/30/2024 | 10/11/2023 |
| BH23-1(MW)-5 | | 10 | 10/02/2023 | 10/05/2023 | 10/10/2023 | 10/10/2023 | 03/30/2024 | 10/11/2023 |
| BH23-2(MW)-5 | | 11 | 10/02/2023 | 10/05/2023 | 10/10/2023 | 10/10/2023 | 03/30/2024 | 10/11/2023 |
| BH23-3(MW)-2 | | 12 | 10/03/2023 | 10/05/2023 | 10/10/2023 | 10/10/2023 | 03/31/2024 | 10/11/2023 |
| BH23-4(MW)-2 | | 13 | 10/03/2023 | 10/05/2023 | 10/10/2023 | 10/10/2023 | 03/31/2024 | 10/11/2023 |

## HOLDING TIME SUMMARY

| Sample Name | QC Batch Reference | Sample Number | Sampled | Received | Extracted/ Prepared | Analysed | Holding Time | Approved |
|---|---|---|---|---|---|---|---|---|
| **Sodium adsorption ratio (SAR) (continued)** | | | | | | | | |
| **Method: MOE 4696e01/EPA 6010 \| Internal ref.: ME-CA-[ENV]ARD-LAK-AN-021** | | | | | | | | |
| BH23-5-1 | | 14 | 10/02/2023 | 10/05/2023 | 10/10/2023 | 10/10/2023 | 03/30/2024 | 10/11/2023 |
| BH23-5000-1 | | 15 | 10/02/2023 | 10/05/2023 | 10/10/2023 | 10/10/2023 | 03/30/2024 | 10/11/2023 |
| BH23-5-2 | | 16 | 10/02/2023 | 10/05/2023 | 10/10/2023 | 10/10/2023 | 03/30/2024 | 10/11/2023 |
| BH23-1(MW)-3 ON HOLD | | 17 | 10/02/2023 | 10/05/2023 | 10/10/2023 | 10/10/2023 | 03/30/2024 | 10/11/2023 |
| BH23-1(MW)-6 ON HOLD | | 18 | 10/02/2023 | 10/05/2023 | 10/10/2023 | 10/10/2023 | 03/30/2024 | 10/11/2023 |
| BH23-2(MW)-2 ON HOLD | | 19 | 10/02/2023 | 10/05/2023 | 10/10/2023 | 10/10/2023 | 03/30/2024 | 10/11/2023 |
| BH23-2(MW)-4 ON HOLD | | 20 | 10/02/2023 | 10/05/2023 | 10/10/2023 | 10/10/2023 | 03/30/2024 | 10/11/2023 |
| BH23-2(MW)-6 ON HOLD | | 21 | 10/02/2023 | 10/05/2023 | 10/10/2023 | 10/10/2023 | 03/30/2024 | 10/11/2023 |
| BH23-3(MW)-1 ON HOLD | | 22 | 10/03/2023 | 10/05/2023 | 10/10/2023 | 10/10/2023 | 03/31/2024 | 10/11/2023 |
| BH23-3(MW)-2 ON HOLD | | 23 | 10/03/2023 | 10/05/2023 | 10/10/2023 | 10/10/2023 | 03/31/2024 | 10/11/2023 |
| BH23-3(MW)-3 ON HOLD | | 24 | 10/03/2023 | 10/05/2023 | 10/10/2023 | 10/10/2023 | 03/31/2024 | 10/11/2023 |
| BH23-4(MW)-1 ON HOLD | | 25 | 10/03/2023 | 10/05/2023 | 10/10/2023 | 10/10/2023 | 03/31/2024 | 10/11/2023 |
| BH23-4(MW)-3 ON HOLD | | 26 | 10/03/2023 | 10/05/2023 | 10/10/2023 | 10/10/2023 | 03/31/2024 | 10/11/2023 |
| BH23-5-1 ON HOLD | | 27 | 10/03/2023 | 10/05/2023 | 10/10/2023 | 10/10/2023 | 03/31/2024 | 10/11/2023 |
| BH23-5-2 ON HOLD | | 28 | 10/03/2023 | 10/05/2023 | 10/10/2023 | 10/10/2023 | 03/31/2024 | 10/11/2023 |
| **Volatile Organics** | | | | | | | | |
| **Method: EPA 5035A/5030B/8260C \| Internal ref.: ME-CA-[ENV]GC-LAK-AN-004** | | | | | | | | |
| BH23-1(MW)-1 | GCM0138-OCT23 | 8 | 10/02/2023 | 10/05/2023 | 10/10/2023 | 10/10/2023 | 10/16/2023 | 10/11/2023 |
| BH1000-1 | GCM0138-OCT23 | 9 | 10/02/2023 | 10/05/2023 | 10/10/2023 | 10/10/2023 | 10/16/2023 | 10/11/2023 |
| BH23-1(MW)-5 | GCM0138-OCT23 | 10 | 10/02/2023 | 10/05/2023 | 10/10/2023 | 10/10/2023 | 10/16/2023 | 10/11/2023 |
| BH23-2(MW)-5 | GCM0138-OCT23 | 11 | 10/02/2023 | 10/05/2023 | 10/10/2023 | 10/10/2023 | 10/16/2023 | 10/11/2023 |
| BH23-3(MW)-2 | GCM0138-OCT23 | 12 | 10/03/2023 | 10/05/2023 | 10/10/2023 | 10/10/2023 | 10/17/2023 | 10/11/2023 |
| BH23-4(MW)-2 | GCM0138-OCT23 | 13 | 10/03/2023 | 10/05/2023 | 10/10/2023 | 10/10/2023 | 10/17/2023 | 10/11/2023 |
| BH23-5-1 | | 14 | 10/02/2023 | 10/05/2023 | 10/10/2023 | 10/10/2023 | 10/16/2023 | 10/11/2023 |
| BH23-5000-1 | | 15 | 10/02/2023 | 10/05/2023 | 10/10/2023 | 10/10/2023 | 10/16/2023 | 10/11/2023 |
| BH23-5-2 | GCM0138-OCT23 | 16 | 10/02/2023 | 10/05/2023 | 10/10/2023 | 10/10/2023 | 10/16/2023 | 10/11/2023 |
| BH23-1(MW)-3 ON HOLD | | 17 | 10/02/2023 | 10/05/2023 | 10/10/2023 | 10/10/2023 | 10/16/2023 | 10/11/2023 |
| BH23-1(MW)-6 ON HOLD | | 18 | 10/02/2023 | 10/05/2023 | 10/10/2023 | 10/10/2023 | 10/16/2023 | 10/11/2023 |
| BH23-2(MW)-2 ON HOLD | | 19 | 10/02/2023 | 10/05/2023 | 10/10/2023 | 10/10/2023 | 10/16/2023 | 10/11/2023 |
| BH23-2(MW)-4 ON HOLD | | 20 | 10/02/2023 | 10/05/2023 | 10/10/2023 | 10/10/2023 | 10/16/2023 | 10/11/2023 |
| BH23-2(MW)-6 ON HOLD | | 21 | 10/02/2023 | 10/05/2023 | 10/10/2023 | 10/10/2023 | 10/16/2023 | 10/11/2023 |
| BH23-3(MW)-1 ON HOLD | | 22 | 10/03/2023 | 10/05/2023 | 10/10/2023 | 10/10/2023 | 10/17/2023 | 10/11/2023 |
| BH23-3(MW)-2 ON HOLD | | 23 | 10/03/2023 | 10/05/2023 | 10/10/2023 | 10/10/2023 | 10/17/2023 | 10/11/2023 |
| BH23-3(MW)-3 ON HOLD | | 24 | 10/03/2023 | 10/05/2023 | 10/10/2023 | 10/10/2023 | 10/17/2023 | 10/11/2023 |
| BH23-4(MW)-1 ON HOLD | | 25 | 10/03/2023 | 10/05/2023 | 10/10/2023 | 10/10/2023 | 10/17/2023 | 10/11/2023 |
| BH23-4(MW)-3 ON HOLD | | 26 | 10/03/2023 | 10/05/2023 | 10/10/2023 | 10/10/2023 | 10/17/2023 | 10/11/2023 |
| BH23-5-1 ON HOLD | | 27 | 10/03/2023 | 10/05/2023 | 10/10/2023 | 10/10/2023 | 10/17/2023 | 10/11/2023 |
| BH23-5-2 ON HOLD | | 28 | 10/03/2023 | 10/05/2023 | 10/10/2023 | 10/10/2023 | 10/17/2023 | 10/11/2023 |

## HOLDING TIME SUMMARY

| Sample Name | QC Batch Reference | Sample Number | Sampled | Received | Extracted/ Prepared | Analysed | Holding Time | Approved |
|---|---|---|---|---|---|---|---|---|
| **Water Soluble Boron** | | | | | | | | |
| **Method: O.Reg. 15 3/04 \| Internal ref.: ME-CA-[ENV] SPE-LAK-AN-003** | | | | | | | | |
| BH23-1(MW)-1 | ESG0020-OCT23 | 8 | 10/02/2023 | 10/05/2023 | 10/11/2023 | 10/11/2023 | 03/30/2024 | 10/12/2023 |
| BH1000-1 | ESG0020-OCT23 | 9 | 10/02/2023 | 10/05/2023 | 10/11/2023 | 10/11/2023 | 03/30/2024 | 10/12/2023 |
| BH23-1(MW)-5 | ESG0020-OCT23 | 10 | 10/02/2023 | 10/05/2023 | 10/11/2023 | 10/11/2023 | 03/30/2024 | 10/12/2023 |
| BH23-2(MW)-5 | ESG0020-OCT23 | 11 | 10/02/2023 | 10/05/2023 | 10/11/2023 | 10/11/2023 | 03/30/2024 | 10/12/2023 |
| BH23-3(MW)-2 | ESG0020-OCT23 | 12 | 10/03/2023 | 10/05/2023 | 10/11/2023 | 10/11/2023 | 03/31/2024 | 10/12/2023 |
| BH23-4(MW)-2 | ESG0020-OCT23 | 13 | 10/03/2023 | 10/05/2023 | 10/11/2023 | 10/11/2023 | 03/31/2024 | 10/12/2023 |
| BH23-5-1 | | 14 | 10/02/2023 | 10/05/2023 | 10/11/2023 | 10/11/2023 | 03/30/2024 | 10/12/2023 |
| BH23-5000-1 | | 15 | 10/02/2023 | 10/05/2023 | 10/11/2023 | 10/11/2023 | 03/30/2024 | 10/12/2023 |
| BH23-5-2 | ESG0023-OCT23 | 16 | 10/02/2023 | 10/05/2023 | 10/11/2023 | 10/11/2023 | 03/30/2024 | 10/12/2023 |
| BH23-1(MW)-3 ON HOLD | | 17 | 10/02/2023 | 10/05/2023 | 10/11/2023 | 10/11/2023 | 03/30/2024 | 10/12/2023 |
| BH23-1(MW)-6 ON HOLD | | 18 | 10/02/2023 | 10/05/2023 | 10/11/2023 | 10/11/2023 | 03/30/2024 | 10/12/2023 |
| BH23-2(MW)-2 ON HOLD | | 19 | 10/02/2023 | 10/05/2023 | 10/11/2023 | 10/11/2023 | 03/30/2024 | 10/12/2023 |
| BH23-2(MW)-4 ON HOLD | | 20 | 10/02/2023 | 10/05/2023 | 10/11/2023 | 10/11/2023 | 03/30/2024 | 10/12/2023 |
| BH23-2(MW)-6 ON HOLD | | 21 | 10/02/2023 | 10/05/2023 | 10/11/2023 | 10/11/2023 | 03/30/2024 | 10/12/2023 |
| BH23-3(MW)-1 ON HOLD | | 22 | 10/03/2023 | 10/05/2023 | 10/11/2023 | 10/11/2023 | 03/31/2024 | 10/12/2023 |
| BH23-3(MW)-2 ON HOLD | | 23 | 10/03/2023 | 10/05/2023 | 10/11/2023 | 10/11/2023 | 03/31/2024 | 10/12/2023 |
| BH23-3(MW)-3 ON HOLD | | 24 | 10/03/2023 | 10/05/2023 | 10/11/2023 | 10/11/2023 | 03/31/2024 | 10/12/2023 |
| BH23-4(MW)-1 ON HOLD | | 25 | 10/03/2023 | 10/05/2023 | 10/11/2023 | 10/11/2023 | 03/31/2024 | 10/12/2023 |
| BH23-4(MW)-3 ON HOLD | | 26 | 10/03/2023 | 10/05/2023 | 10/11/2023 | 10/11/2023 | 03/31/2024 | 10/12/2023 |
| BH23-5-1 ON HOLD | | 27 | 10/03/2023 | 10/05/2023 | 10/11/2023 | 10/11/2023 | 03/31/2024 | 10/12/2023 |
| BH23-5-2 ON HOLD | | 28 | 10/03/2023 | 10/05/2023 | 10/11/2023 | 10/11/2023 | 03/31/2024 | 10/12/2023 |

## QC SUMMARY

### Conductivity

Method: EPA 6010/SM 2510 I Internal ref.: ME-CA-IENVIEWL-LAK-AN-006

| Parameter | QC batch Reference | Units | RL | Method Blank | Duplicate | | LCS/Spike Blank | | | Matrix Spike / Ref. | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | RPD | AC (%) | Spike Recovery (%) | Recovery Limits (%) | | Spike Recovery (%) | Recovery Limits (%) | |
| | | | | | | | | Low | High | | Low | High |
| Conductivity | EWL0205-OCT23 | mS/cm | 0.002 | <0.002 | 0 | 10 | 99 | 90 | 110 | NA | | |

### Cyanide by SFA

Method: SM 4500 I Internal ref.: ME-CA-IENVISFA-LAK-AN-005

| Parameter | QC batch Reference | Units | RL | Method Blank | Duplicate | | LCS/Spike Blank | | | Matrix Spike / Ref. | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | RPD | AC (%) | Spike Recovery (%) | Recovery Limits (%) | | Spike Recovery (%) | Recovery Limits (%) | |
| | | | | | | | | Low | High | | Low | High |
| Free Cyanide | SKA5034-OCT23 | µg/g | 0.05 | <0.05 | ND | 20 | 100 | 80 | 120 | 96 | 75 | 125 |

### Hexavalent Chromium by SFA

Method: EPA218.6/EPA3060A I Internal ref.: ME-CA-IENVISKA-LAK-AN-012

| Parameter | QC batch Reference | Units | RL | Method Blank | Duplicate | | LCS/Spike Blank | | | Matrix Spike / Ref. | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | RPD | AC (%) | Spike Recovery (%) | Recovery Limits (%) | | Spike Recovery (%) | Recovery Limits (%) | |
| | | | | | | | | Low | High | | Low | High |
| Chromium VI | SKA5039-OCT23 | ug/g | 0.2 | <0.2 | ND | 20 | 100 | 80 | 120 | 92 | 75 | 125 |

## QC SUMMARY

### Mercury by CVAAS

Method: EPA 7471A/EPA 245 | Internal ref.: ME-CA-IENVISPE-LAK-AN-004

| Parameter | QC batch Reference | Units | RL | Method Blank | Duplicate | | LCS/Spike Blank | | | Matrix Spike / Ref. | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | RPD | AC (%) | Spike Recovery (%) | Recovery Limits (%) | | Spike Recovery (%) | Recovery Limits (%) | |
| | | | | | | | | Low | High | | Low | High |
| Mercury | EMS0089-OCT23 | ug/g | 0.05 | <0.05 | 10 | 20 | 97 | 80 | 120 | 87 | 70 | 130 |

### Metals in aqueous samples - ICP-OES

Method: MOE 4696e01/EPA 6010 | Internal ref.: ME-CA-IENVISPE-LAK-AN-003

| Parameter | QC batch Reference | Units | RL | Method Blank | Duplicate | | LCS/Spike Blank | | | Matrix Spike / Ref. | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | RPD | AC (%) | Spike Recovery (%) | Recovery Limits (%) | | Spike Recovery (%) | Recovery Limits (%) | |
| | | | | | | | | Low | High | | Low | High |
| SAR Calcium | ESG0019-OCT23 | mg/L | 0.2 | <0.2 | 1 | 20 | 106 | 80 | 120 | 96 | 70 | 130 |
| SAR Magnesium | ESG0019-OCT23 | mg/L | 0.3 | <0.3 | 3 | 20 | 105 | 80 | 120 | 94 | 70 | 130 |
| SAR Sodium | ESG0019-OCT23 | mg/L | 0.1 | <0.1 | ND | 20 | 97 | 80 | 120 | 92 | 70 | 130 |

## QC SUMMARY

### Metals in Soil - Aqua-regia/ICP-MS

Method: EPA 3050/EPA 200.8 | Internal ref.: ME-CA-[ENVISPE-LAK-AN-005

| Parameter | QC batch Reference | Units | RL | Method Blank | Duplicate | | LCS/Spike Blank | | | Matrix Spike / Ref. | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | RPD | AC (%) | Spike Recovery (%) | Recovery Limits (%) | | Spike Recovery (%) | Recovery Limits (%) | |
| | | | | | | | | Low | High | | Low | High |
| Silver | EMS0089-OCT23 | ug/g | 0.05 | <0.05 | 4 | 20 | 102 | 70 | 130 | 104 | 70 | 130 |
| Arsenic | EMS0089-OCT23 | µg/g | 0.5 | <0.5 | 5 | 20 | 96 | 70 | 130 | 95 | 70 | 130 |
| Barium | EMS0089-OCT23 | ug/g | 0.1 | <0.1 | 2 | 20 | 96 | 70 | 130 | 94 | 70 | 130 |
| Beryllium | EMS0089-OCT23 | µg/g | 0.02 | <0.02 | 0 | 20 | 97 | 70 | 130 | 107 | 70 | 130 |
| Boron | EMS0089-OCT23 | µg/g | 1 | <1 | 3 | 20 | 95 | 70 | 130 | 97 | 70 | 130 |
| Cadmium | EMS0089-OCT23 | ug/g | 0.05 | <0.05 | 2 | 20 | 94 | 70 | 130 | 102 | 70 | 130 |
| Cobalt | EMS0089-OCT23 | µg/g | 0.01 | <0.01 | 4 | 20 | 99 | 70 | 130 | 99 | 70 | 130 |
| Chromium | EMS0089-OCT23 | µg/g | 0.5 | <0.5 | 1 | 20 | 97 | 70 | 130 | 104 | 70 | 130 |
| Copper | EMS0089-OCT23 | µg/g | 0.1 | <0.1 | 11 | 20 | 98 | 70 | 130 | 101 | 70 | 130 |
| Molybdenum | EMS0089-OCT23 | µg/g | 0.1 | <0.1 | 3 | 20 | 100 | 70 | 130 | 111 | 70 | 130 |
| Nickel | EMS0089-OCT23 | ug/g | 0.5 | <0.5 | 20 | 20 | 97 | 70 | 130 | 100 | 70 | 130 |
| Lead | EMS0089-OCT23 | µg/g | 0.1 | <0.1 | 19 | 20 | 95 | 70 | 130 | 103 | 70 | 130 |
| Antimony | EMS0089-OCT23 | µg/g | 0.8 | <0.8 | ND | 20 | 101 | 70 | 130 | 91 | 70 | 130 |
| Selenium | EMS0089-OCT23 | ug/g | 0.1 | <0.1 | 3 | 20 | 97 | 70 | 130 | 93 | 70 | 130 |
| Thallium | EMS0089-OCT23 | µg/g | 0.02 | <0.02 | 1 | 20 | 92 | 70 | 130 | 105 | 70 | 130 |
| Uranium | EMS0089-OCT23 | µg/g | 0.002 | <0.002 | 5 | 20 | 98 | 70 | 130 | 113 | 70 | 130 |
| Vanadium | EMS0089-OCT23 | µg/g | 3 | <3 | 2 | 20 | 96 | 70 | 130 | 99 | 70 | 130 |
| Zinc | EMS0089-OCT23 | µg/g | 0.7 | <0.7 | 3 | 20 | 96 | 70 | 130 | 95 | 70 | 130 |

## QC SUMMARY

### Petroleum Hydrocarbons (F1)

Method: CCME Tier 1 I Internal ref.: ME-CA-[ENV]GC-LAK-AN-010

| Parameter | QC batch Reference | Units | RL | Method Blank | Duplicate | | LCS/Spike Blank | | | Matrix Spike / Ref. | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | RPD | AC (%) | Spike Recovery (%) | Recovery Limits (%) | | Spike Recovery (%) | Recovery Limits (%) | |
| | | | | | | | | Low | High | | Low | High |
| F1 (C6-C10) | GCM0139-OCT23 | µg/g | 10 | <10 | ND | 30 | 89 | 80 | 120 | 92 | 60 | 140 |
| F1 (C6-C10) | GCM0199-OCT23 | µg/g | 10 | <10 | ND | 30 | 94 | 80 | 120 | 96 | 60 | 140 |

### Petroleum Hydrocarbons (F2-F4)

Method: CCME Tier 1 I Internal ref.: ME-CA-[ENV]GC-LAK-AN-010

| Parameter | QC batch Reference | Units | RL | Method Blank | Duplicate | | LCS/Spike Blank | | | Matrix Spike / Ref. | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | RPD | AC (%) | Spike Recovery (%) | Recovery Limits (%) | | Spike Recovery (%) | Recovery Limits (%) | |
| | | | | | | | | Low | High | | Low | High |
| F2 (C10-C16) | GCM0115-OCT23 | µg/g | 10 | <10 | ND | 30 | 109 | 80 | 120 | 115 | 60 | 140 |
| F3 (C16-C34) | GCM0115-OCT23 | µg/g | 50 | <50 | ND | 30 | 109 | 80 | 120 | 115 | 60 | 140 |
| F4 (C34-C50) | GCM0115-OCT23 | µg/g | 50 | <50 | ND | 30 | 109 | 80 | 120 | 115 | 60 | 140 |

## QC SUMMARY

### pH

Method: SM 4500 I Internal ref.: ME-CA-[ENVIEWL-LAK-AN-001

| Parameter | QC batch Reference | Units | RL | Method Blank | Duplicate | | LCS/Spike Blank | | | Matrix Spike / Ref. | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | RPD | AC (%) | Spike Recovery (%) | Recovery Limits (%) | | Spike Recovery (%) | Recovery Limits (%) | |
| | | | | | | | | Low | High | | Low | High |
| pH | ARD0035-OCT23 | pH Units | 0.05 | | 0 | 20 | 100 | 80 | 120 | | | |

### Polychlorinated Biphenyls

Method: EPA 3570/8082A/8270C I Internal ref.: ME-CA-[ENVIGC-LAK-AN-001

| Parameter | QC batch Reference | Units | RL | Method Blank | Duplicate | | LCS/Spike Blank | | | Matrix Spike / Ref. | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | RPD | AC (%) | Spike Recovery (%) | Recovery Limits (%) | | Spike Recovery (%) | Recovery Limits (%) | |
| | | | | | | | | Low | High | | Low | High |
| Polychlorinated Biphenyls (PCBs) - Total | GCM0147-OCT23 | µg/g | 0.3 | < 0.3 | ND | 40 | 75 | 60 | 140 | 60 | 60 | 140 |

## QC SUMMARY

### Semi-Volatile Organics

Method: EPA 3541/8270D | Internal ref.: ME-CA-[ENV]GC-LAK-AN-005

| Parameter | QC batch Reference | Units | RL | Method Blank | Duplicate | | LCS/Spike Blank | | | Matrix Spike / Ref. | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | RPD | AC (%) | Spike Recovery (%) | Recovery Limits (%) | | Spike Recovery (%) | Recovery Limits (%) | |
| | | | | | | | | Low | High | | Low | High |
| 1-Methylnaphthalene | GCM0118-OCT23 | µg/g | 0.05 | < 0.05 | ND | 40 | 122 | 50 | 140 | 106 | 50 | 140 |
| 2-Methylnaphthalene | GCM0118-OCT23 | µg/g | 0.05 | < 0.05 | ND | 40 | 114 | 50 | 140 | 98 | 50 | 140 |
| Acenaphthene | GCM0118-OCT23 | µg/g | 0.05 | < 0.05 | ND | 40 | 117 | 50 | 140 | 102 | 50 | 140 |
| Acenaphthylene | GCM0118-OCT23 | µg/g | 0.05 | < 0.05 | ND | 40 | 117 | 50 | 140 | 101 | 50 | 140 |
| Anthracene | GCM0118-OCT23 | µg/g | 0.05 | < 0.05 | ND | 40 | 119 | 50 | 140 | 103 | 50 | 140 |
| Benzo(a)anthracene | GCM0118-OCT23 | µg/g | 0.05 | < 0.05 | ND | 40 | 139 | 50 | 140 | 122 | 50 | 140 |
| Benzo(a)pyrene | GCM0118-OCT23 | µg/g | 0.05 | < 0.05 | ND | 40 | 125 | 50 | 140 | 109 | 50 | 140 |
| Benzo(b+j)fluoranthene | GCM0118-OCT23 | µg/g | 0.05 | < 0.05 | ND | 40 | 128 | 50 | 140 | 112 | 50 | 140 |
| Benzo(ghi)perylene | GCM0118-OCT23 | µg/g | 0.1 | < 0.1 | ND | 40 | 127 | 50 | 140 | 108 | 50 | 140 |
| Benzo(k)fluoranthene | GCM0118-OCT23 | µg/g | 0.05 | < 0.05 | ND | 40 | 118 | 50 | 140 | 102 | 50 | 140 |
| Chrysene | GCM0118-OCT23 | µg/g | 0.05 | < 0.05 | ND | 40 | 138 | 50 | 140 | 120 | 50 | 140 |
| Dibenzo(a,h)anthracene | GCM0118-OCT23 | µg/g | 0.06 | < 0.06 | ND | 40 | 103 | 50 | 140 | 95 | 50 | 140 |
| Fluoranthene | GCM0118-OCT23 | µg/g | 0.05 | < 0.05 | ND | 40 | 125 | 50 | 140 | 112 | 50 | 140 |
| Fluorene | GCM0118-OCT23 | µg/g | 0.05 | < 0.05 | ND | 40 | 120 | 50 | 140 | 104 | 50 | 140 |
| Indeno(1,2,3-cd)pyrene | GCM0118-OCT23 | µg/g | 0.1 | < 0.1 | ND | 40 | 112 | 50 | 140 | 97 | 50 | 140 |
| Naphthalene | GCM0118-OCT23 | µg/g | 0.05 | < 0.05 | ND | 40 | 130 | 50 | 140 | 112 | 50 | 140 |
| Phenanthrene | GCM0118-OCT23 | µg/g | 0.05 | < 0.05 | ND | 40 | 125 | 50 | 140 | 111 | 50 | 140 |
| Pyrene | GCM0118-OCT23 | µg/g | 0.05 | < 0.05 | ND | 40 | 136 | 50 | 140 | 119 | 50 | 140 |

## QC SUMMARY

### Volatile Organics

Method: EPA 5035A/5030B/8260C | Internal ref.: ME-CA-IENVIGC-LAK-AN-004

| Parameter | QC batch Reference | Units | RL | Method Blank | Duplicate | | LCS/Spike Blank | | | Matrix Spike / Ref. | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | RPD | AC (%) | Spike Recovery (%) | Recovery Limits (%) | | Spike Recovery (%) | Recovery Limits (%) | |
| | | | | | | | | Low | High | | Low | High |
| 1,1,1,2-Tetrachloroethane | GCM0138-OCT23 | µg/g | 0.05 | < 0.05 | ND | 50 | 105 | 60 | 130 | 101 | 50 | 140 |
| 1,1,1-Trichloroethane | GCM0138-OCT23 | µg/g | 0.05 | < 0.05 | ND | 50 | 98 | 60 | 130 | 101 | 50 | 140 |
| 1,1,2,2-Tetrachloroethane | GCM0138-OCT23 | µg/g | 0.05 | < 0.05 | ND | 50 | 103 | 60 | 130 | 96 | 50 | 140 |
| 1,1,2-Trichloroethane | GCM0138-OCT23 | µg/g | 0.05 | < 0.05 | ND | 50 | 104 | 60 | 130 | 98 | 50 | 140 |
| 1,1-Dichloroethane | GCM0138-OCT23 | µg/g | 0.05 | < 0.05 | ND | 50 | 102 | 60 | 130 | 99 | 50 | 140 |
| 1,1-Dichloroethylene | GCM0138-OCT23 | µg/g | 0.05 | < 0.05 | ND | 50 | 95 | 60 | 130 | 97 | 50 | 140 |
| 1,2-Dichlorobenzene | GCM0138-OCT23 | µg/g | 0.05 | < 0.05 | ND | 50 | 102 | 60 | 130 | 101 | 50 | 140 |
| 1,2-Dichloroethane | GCM0138-OCT23 | µg/g | 0.05 | < 0.05 | ND | 50 | 104 | 60 | 130 | 99 | 50 | 140 |
| 1,2-Dichloropropane | GCM0138-OCT23 | µg/g | 0.05 | < 0.05 | ND | 50 | 104 | 60 | 130 | 99 | 50 | 140 |
| 1,3-Dichlorobenzene | GCM0138-OCT23 | µg/g | 0.05 | < 0.05 | ND | 50 | 102 | 60 | 130 | 100 | 50 | 140 |
| 1,4-Dichlorobenzene | GCM0138-OCT23 | µg/g | 0.05 | < 0.05 | ND | 50 | 107 | 60 | 130 | 104 | 50 | 140 |
| Acetone | GCM0138-OCT23 | µg/g | 0.5 | < 0.5 | ND | 50 | 90 | 50 | 140 | 96 | 50 | 140 |
| Benzene | GCM0138-OCT23 | µg/g | 0.02 | < 0.02 | ND | 50 | 104 | 60 | 130 | 100 | 50 | 140 |
| Bromodichloromethane | GCM0138-OCT23 | µg/g | 0.05 | < 0.05 | ND | 50 | 104 | 60 | 130 | 98 | 50 | 140 |
| Bromoform | GCM0138-OCT23 | µg/g | 0.05 | < 0.05 | ND | 50 | 103 | 60 | 130 | 99 | 50 | 140 |
| Bromomethane | GCM0138-OCT23 | µg/g | 0.05 | < 0.05 | ND | 50 | 94 | 50 | 140 | 84 | 50 | 140 |
| Carbon tetrachloride | GCM0138-OCT23 | µg/g | 0.05 | < 0.05 | ND | 50 | 95 | 60 | 130 | 101 | 50 | 140 |
| Chlorobenzene | GCM0138-OCT23 | µg/g | 0.05 | < 0.05 | ND | 50 | 100 | 60 | 130 | 100 | 50 | 140 |
| Chloroform | GCM0138-OCT23 | µg/g | 0.05 | < 0.05 | ND | 50 | 103 | 60 | 130 | 99 | 50 | 140 |
| cis-1,2-Dichloroethylene | GCM0138-OCT23 | µg/g | 0.05 | < 0.05 | ND | 50 | 106 | 60 | 130 | 100 | 50 | 140 |

## QC SUMMARY

### Volatile Organics (continued)

Method: EPA 5035A/5030B/8260C | Internal ref.: ME-CA-IENVIGC-LAK-AN-004

| Parameter | QC batch Reference | Units | RL | Method Blank | Duplicate | | LCS/Spike Blank | | | Matrix Spike / Ref. | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | RPD | AC (%) | Spike Recovery (%) | Recovery Limits (%) | | Spike Recovery (%) | Recovery Limits (%) | |
| | | | | | | | | Low | High | | Low | High |
| cis-1,3-dichloropropene | GCM0138-OCT23 | µg/g | 0.03 | < 0.03 | ND | 50 | 105 | 60 | 130 | 94 | 50 | 140 |
| Dibromochloromethane | GCM0138-OCT23 | µg/g | 0.05 | < 0.05 | ND | 50 | 103 | 60 | 130 | 97 | 50 | 140 |
| Dichlorodifluoromethane | GCM0138-OCT23 | µg/g | 0.05 | < 0.05 | ND | 50 | 51 | 50 | 140 | 50 | 50 | 140 |
| Ethylbenzene | GCM0138-OCT23 | µg/g | 0.05 | < 0.05 | ND | 50 | 101 | 60 | 130 | 101 | 50 | 140 |
| Ethylenedibromide | GCM0138-OCT23 | µg/g | 0.05 | < 0.05 | ND | 50 | 105 | 60 | 130 | 99 | 50 | 140 |
| n-Hexane | GCM0138-OCT23 | µg/g | 0.05 | < 0.05 | ND | 50 | 79 | 60 | 130 | 79 | 50 | 140 |
| m/p-xylene | GCM0138-OCT23 | µg/g | 0.05 | < 0.05 | ND | 50 | 102 | 60 | 130 | 102 | 50 | 140 |
| Methyl ethyl ketone | GCM0138-OCT23 | µg/g | 0.5 | < 0.5 | ND | 50 | 99 | 50 | 140 | 95 | 50 | 140 |
| Methyl isobutyl ketone | GCM0138-OCT23 | µg/g | 0.5 | < 0.5 | ND | 50 | 103 | 50 | 140 | 99 | 50 | 140 |
| Methyl-t-butyl Ether | GCM0138-OCT23 | µg/g | 0.05 | < 0.05 | ND | 50 | 104 | 60 | 130 | 98 | 50 | 140 |
| Methylene Chloride | GCM0138-OCT23 | µg/g | 0.05 | < 0.05 | ND | 50 | 102 | 60 | 130 | 96 | 50 | 140 |
| o-xylene | GCM0138-OCT23 | µg/g | 0.05 | < 0.05 | ND | 50 | 106 | 60 | 130 | 104 | 50 | 140 |
| Styrene | GCM0138-OCT23 | µg/g | 0.05 | < 0.05 | ND | 50 | 104 | 60 | 130 | 101 | 50 | 140 |
| Tetrachloroethylene | GCM0138-OCT23 | µg/g | 0.05 | < 0.05 | ND | 50 | 96 | 60 | 130 | 99 | 50 | 140 |
| Toluene | GCM0138-OCT23 | µg/g | 0.05 | < 0.05 | ND | 50 | 103 | 60 | 130 | 99 | 50 | 140 |
| trans-1,2-Dichloroethylene | GCM0138-OCT23 | µg/g | 0.05 | < 0.05 | ND | 50 | 98 | 60 | 130 | 96 | 50 | 140 |
| trans-1,3-dichloropropene | GCM0138-OCT23 | µg/g | 0.03 | < 0.03 | ND | 50 | 104 | 60 | 130 | 93 | 50 | 140 |
| Trichloroethylene | GCM0138-OCT23 | µg/g | 0.05 | < 0.05 | ND | 50 | 100 | 60 | 130 | 102 | 50 | 140 |
| Trichlorofluoromethane | GCM0138-OCT23 | µg/g | 0.05 | < 0.05 | ND | 50 | 88 | 50 | 140 | 94 | 50 | 140 |
| Vinyl Chloride | GCM0138-OCT23 | µg/g | 0.02 | < 0.02 | ND | 50 | 81 | 50 | 140 | 82 | 50 | 140 |

## QC SUMMARY

### Water Soluble Boron

Method: O.Reg. 15 3/04 | Internal ref.: ME-CA-[ENV] SPE-LAK-AN-003

| Parameter | QC batch Reference | Units | RL | Method Blank | Duplicate | | LCS/Spike Blank | | | Matrix Spike / Ref. | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | RPD | AC (%) | Spike Recovery (%) | Recovery Limits (%) | | Spike Recovery (%) | Recovery Limits (%) | |
| | | | | | | | | Low | High | | Low | High |
| Water Soluble Boron | ESG0020-OCT23 | µg/g | 0.5 | <0.5 | ND | 20 | 108 | 80 | 120 | 102 | 70 | 130 |
| Water Soluble Boron | ESG0023-OCT23 | µg/g | 0.5 | <0.5 | ND | 20 | 102 | 80 | 120 | 98 | 70 | 130 |

Method Blank: a blank matrix that is carried through the entire analytical procedure. Used to assess laboratory contamination.
Duplicate: Paired analysis of a separate portion of the same sample that is carried through the entire analytical procedure. Used to evaluate measurement precision.
LCS/Spike Blank: Laboratory control sample or spike blank refer to a blank matrix to which a known amount of analyte has been added. Used to evaluate analyte recovery and laboratory accuracy without sample matrix effects.
Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate laboratory accuracy with sample matrix effects.
Reference Material: a material or substance matrix matched to the samples that contains a known amount of the analyte of interest. A reference material may be used in place of a matrix spike.
RL: Reporting limit
RPD: Relative percent difference
AC: Acceptance criteria

**Multielement Scan Qualifier**: as the number of analytes in a scan increases, so does the chance of a limit exceedance by random chance as opposed to a real method problem. Thus, in multielement scans, for the LCS and matrix spike, up to 10% of the analytes may exceed the quoted limits by up to 10% absolute and the spike is considered acceptable.
**Duplicate Qualifier**: for duplicates as the measured result approaches the RL, the uncertainty associated with the value increases dramatically, thus duplicate acceptance limits apply only where the average of the two duplicates is greater than five times the RL.
**Matrix Spike Qualifier**: for matrix spikes, as the concentration of the native analyte increases, the uncertainty of the matrix spike recovery increases. Thus, the matrix spike acceptance limits apply only when the concentration of the matrix spike is greater than or equal to the concentration of the native analyte.

## LEGEND

### FOOTNOTES

| | |
|---|---|
| **NSS** | Insufficient sample for analysis. |
| **RL** | Reporting Limit. |
| ↑ | Reporting limit raised. |
| ↓ | Reporting limit lowered. |
| **NA** | The sample was not analysed for this analyte |
| **ND** | Non Detect |

Results relate only to the sample tested.
Data reported represent the sample as submitted to SGS. Solid samples expressed on a dry weight basis.
"Temperature Upon Receipt" is representative of the whole shipment and may not reflect the temperature of individual samples.
Analysis conducted on samples submitted pursuant to or as part of Reg. 153/04, are in accordance to the "Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act and Excess Soil Quality" published by the Ministry and dated March 9, 2004 as amended.

SGS provides criteria information (such as regulatory or guideline limits and summary of limit exceedances) as a service. Every attempt is made to ensure the criteria information in this report is accurate and current, however, it is not guaranteed. Comparison to the most current criteria is the responsibility of the client and SGS assumes no responsibility for the accuracy of the criteria levels indicated.

SGS Canada Inc. statement of conformity decision rule does not consider uncertainty when analytical results are compared to a specified standard or regulation.
This document is issued, on the Client's behalf, by the Company under its General Conditions of Service available on request and accessible at http://www.sgs.com/terms_and_conditions.htm.
The Client's attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any other holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. Reproduction of this analytical report in full or in part is prohibited.

This report supersedes all previous versions.

-- End of Analytical Report --

# Request for Laboratory Services and CHAIN OF CUSTODY

SGS Industries & Environment - Lakefield: 185 Concession St., Lakefield, ON K0L 2H0 Phone: 705-652-2000 Fax: 705-652-6365 Web: www.sgs.com/environment
- London: 657 Consortium Court, London, ON, N6E 2S8 Phone: 519-672-4500 Toll Free: 877-848-8060 Fax: 519-672-0361

No: 037136 Page 1 of 2

## Laboratory Information Section - Lab use only

Received By: ED
Received Date: 10/5/23 (mm/dd/yy)
Received Time: 1505 (hr : min)
Received By (signature):
Custody Seal Present: Yes ☑ No ☐
Custody Seal Intact: Yes ☑ No ☐
Cooling Agent Present: Yes ☑ No ☐ Type: ICE
Temperature Upon Receipt (°C): 7 x 3
LAB LIMS #: CA-410040-Oct23

| REPORT INFORMATION | INVOICE INFORMATION |
|---|---|
| Company: Watters Environmental | ☑ (same as Report Information) |
| Contact: Natalie Wright | Company: |
| Address: 9135 Keele St. Unit A1 Concord ON, L4K 0J4 | Contact: B. Espinola |
| Phone: 416 361 2407 | Address: |
| Fax: nwright@wattersenvironmental.com | Phone: |
| Email: labcerts@wattersenvironmental.com | Email: ap@wattersenvironmental.com |

Quotation #:
Project #: 20-0052.04
P.O. #:
Site Location/ID:

### TURNAROUND TIME (TAT) REQUIRED

☑ Regular TAT (5-7days)
TAT's are quoted in business days (exclude statutory holidays & weekends). Samples received after 6pm or on weekends: TAT begins next business day

RUSH TAT (Additional Charges May Apply): ☐ 1 Day ☐ 2 Days ☐ 3 Days ☐ 4 Days
PLEASE CONFIRM RUSH FEASIBILITY WITH SGS REPRESENTATIVE PRIOR TO SUBMISSION

Specify Due Date:
*NOTE: DRINKING (POTABLE) WATER SAMPLES FOR HUMAN CONSUMPTION MUST BE SUBMITTED WITH SGS DRINKING WATER CHAIN OF CUSTODY

### REGULATIONS

☐ O.Reg 153/04 ☐ O.Reg 406/19
☑ Table 1 ☑ Res/Park Soil Texture: ☐ Coarse
☐ Table 2 ☑ Ind/Com ☐ Medium/Fine
☐ Table 3 ☐ Agri/Other
☐ Table ____ Appx. ____
Soil Volume ☐ <350m3 ☐ >350m3

Other Regulations: ☐ Reg 347/558 (3 Day min TAT) ☐ PWQO ☐ MMER ☐ CCME ☐ Other: ☐ MISA ☐ ODWS Not Reportable *See note

Sewer By-Law: ☐ Sanitary ☐ Storm Municipality:

RECORD OF SITE CONDITION (RSC) ☑ YES ☐ NO

### ANALYSIS REQUESTED

| | SAMPLE IDENTIFICATION | DATE SAMPLED | TIME SAMPLED | # OF BOTTLES | MATRIX | Field Filtered (Y/N) | M&I: Metals & Inorganics (incl CrVI, CN,Hg pH,(B(HWS),EC,SAR-soil) (Cl, Na-water) | M&I: Full Metals Suite ICP metals plus B(HWS-soil only) Hg, CrVI | M&I: ICP Metals only Sb,As,Ba,Be,B,Cd, Cr,Co,Cu,Pb,Mo,Ni,Se,Ag,Ti,U,V,Zn | SVOC: PAHs only | SVOC: SVOCs all incl PAHs, ABNs, CPs | PCB: PCBs Total ☐ Aroclor ☐ | PHC: F1-F4 + BTEX | PHC: F1-F4 only no BTEX | VOC: VOCs all incl BTEX | VOC: BTEX only | Pest: Pesticides Organochlorine or specify other | Other (please specify) | Other (please specify) | Other (please specify) | Other (please specify) | Other (please specify) | Sewer Use: Specify pkg: | Water Characterization Pkg ☐ General Extended | SPLP: Specify tests ☐ Metals ☐ VOC ☐ 1,4-Dioxane ☐ OCP ☐ ABN | TCLP: Specify tests ☐ M&I ☐ VOC ☐ PCB ☐ B(a)P ☐ ABN ☐ Ignit. | COMMENTS: |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | BH23-1(MW)-1 | 10/2/23 | 11:15 | 5 | SS | | ✓ | | | ✓ | | | ✓ | | ✓ | | | | | | | | | | | | |
| 2 | BH1000-1 | ↓ | 7:15 | 5 | SS | | ✓ | | | ✓ | | | ✓ | | ✓ | | | | | | | | | | | | |
| 3 | BH23-1(MW)-5 | ↓ | 11:45 | 5 | SS | | ✓ | | | ✓ | | | ✓ | | ✓ | | | | | | | | | | | | |
| 4 | BH23-2(MW)-5 | ↓ | 10:00 | 5 | SS | | ✓ | | | ✓ | | | ✓ | | ✓ | | | | | | | | | | | | |
| 5 | BH23-3(MW)-2 | 10/3/23 | 9:10 | 5 | SS | | ✓ | | | ✓ | | | ✓ | | ✓ | | | | | | | | | | | | |
| 6 | BH23-4(MW)-2 | ↓ | 11:00 | 5 | SS | | ✓ | | | ✓ | | | ✓ | | ✓ | | | | | | | | | | | | |
| 7 | BH23-5-1 | 10/2/23 | 2:00 | 2 | SS | | | | | | | ✓ | | ✓ | | | | | | | | | | | | | |
| 8 | BH23-5000-1 | ↓ | 1:00 | 1 | SS | | | | | | | ✓ | | | | | | | | | | | | | | | |
| 9 | BH23-5-2 | ↓ | 2:15 | 5 | SS | | ✓ | | | ✓ | | | ✓ | | ✓ | | | | | | | | | | | | |
| 10 | BH23-1(MW)-3 | 10/2/23 | 11:35 | 5 | SS | | ✓ | | | ✓ | | | ✓ | | ✓ | | | | | | | | | | | | HOLD |
| 11 | BH23-1(MW)-6 | ↓ | 12:00 | 5 | SS | | ✓ | | | ✓ | | | ✓ | | ✓ | | | | | | | | | | | | HOLD |
| 12 | BH23-2(MW)-2 | ↓ | 9:30 | 5 | SS | | ✓ | | | ✓ | | | ✓ | | ✓ | | | | | | | | | | | | HOLD |

Observations/Comments/Special Instructions

Sampled By (NAME): Michael Watters Signature: Michael Watters Date: 10/05/23 (mm/dd/yy)
Relinquished by (NAME): Michael Watters Signature: Michael Watters Date: 10/05/23 (mm/dd/yy)

Pink Copy - Client
Yellow & White Copy - SGS

Revision #: 1.7
Date of Issue: 07 JUNE 2023

Note: Submission of samples to SGS is acknowledgement that you have been provided direction on sample collection/handling and transportation of samples. {2} Submission of samples to SGS is considered authorization for completion of work. Signatures may appear on this form or be retained on file in the contract, or in an alternative format (e.g. shipping documents). {3} Results may be sent by email to an unlimited number of addresses for no additional cost. Fax is available upon request. This document is issued by the Company under its General Conditions of Service accessible at http://www.sgs.com/terms_and_conditions.htm. (Printed copies are available upon request.) Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein.

# Request for Laboratory Services and CHAIN OF CUSTODY

SGS Industries & Environment - Lakefield: 185 Concession St., Lakefield, ON K0L 2H0 Phone: 705-652-2000 Fax: 705-652-6365 Web: www.sgs.com/environment
- London: 657 Consortium Court, London, ON, N6E 2S8 Phone: 519-672-4500 Toll Free: 877-848-8060 Fax: 519-672-0361

No: 037137 Page 2 of 2

## Laboratory Information Section - Lab use only

Received By: ~~Watters Environmental~~ Received By (signature):
Received Date: 10/6/23 (mm/dd/yy) Custody Seal Present: Yes ☑ No ☐ Cooling Agent Present: Yes ☐ No ☐ Type: ICE
Received Time: 15:05 (hr : min) Custody Seal Intact: Yes ☐ No ☐ Temperature Upon Receipt (°C) 2.x3 LAB LIMS #: CA-40040-Oct23

| REPORT INFORMATION | INVOICE INFORMATION |
|---|---|
| Company: Watters Environmental | ☑ (same as Report Information) |
| Contact: Natalie Wright | Company: |
| Address: 9135 Keele St. Unit A1 Concord ON, L4K 0J4 | Contact: B. Espinola |
| Phone: 416 316 2407 | Address: |
| Fax: nwright@wattersenvironmental.com | |
| Email: laberts@wattersenvironmental.com | Email: ap@wattersenvironmental.com |

Quotation #: P.O. #:
Project #: 20-0052.04 Site Location/ID:

**TURNAROUND TIME (TAT) REQUIRED**

☑ Regular TAT (5-7days) TAT's are quoted in business days (exclude statutory holidays & weekends). Samples received after 6pm or on weekends: TAT begins next business day

RUSH TAT (Additional Charges May Apply): ☐ 1 Day ☐ 2 Days ☐ 3 Days ☐ 4 Days

PLEASE CONFIRM RUSH FEASIBILITY WITH SGS REPRESENTATIVE PRIOR TO SUBMISSION

Specify Due Date: *NOTE: DRINKING (POTABLE) WATER SAMPLES FOR HUMAN CONSUMPTION MUST BE SUBMITTED WITH SGS DRINKING WATER CHAIN OF CUSTODY

**REGULATIONS**

☐ O.Reg 153/04 ☐ O.Reg 406/19
☑ Table 1 ☑ Res/Park Soil Texture: ☑ Coarse
☐ Table 2 ☑ Ind/Com ☐ Medium/Fine
☐ Table 3 ☐ Agri/Other
☐ Table _____ Appx. _____
Soil Volume ☐ <350m3 ☐ >350m3

Other Regulations: ☐ Reg 347/558 (3 Day min TAT) ☐ PWQO ☐ MMER ☐ CCME ☐ Other: ☐ MISA ☐ ODWS Not Reportable *See note

Sewer By-Law: ☐ Sanitary ☐ Storm Municipality:

RECORD OF SITE CONDITION (RSC) ☑ YES ☐ NO

**ANALYSIS REQUESTED**

| | SAMPLE IDENTIFICATION | DATE SAMPLED | TIME SAMPLED | # OF BOTTLES | MATRIX | Field Filtered (Y/N) | M&I: Metals & Inorganics (incl CrVI, CN,Hg pH,(B(HWS),EC,SAR-soil) (Cl, Na-water) | M&I: Full Metals Suite (ICP metals plus B(HWS-soil only) Hg, CrVI | M&I: ICP Metals only Sb,As,Ba,Be,B,Cd, Cr,Co,Cu,Pb,Mo,Ni,Se,Ag,Ti,U,V,Zn | SVOC: PAHs only | SVOC: SVOCs all incl PAHs, ABNs, CPs | PCB: PCBs Total ☐ Aroclor ☐ | PHC: F1-F4 + BTEX | PHC: F1-F4 only no BTEX | VOC: VOCs all incl BTEX | VOC: BTEX only | Pest: Pesticides Organochlorine or specify other | Other: pH | Other: GSA | Other | Other | Other | Other: Sewer Use: Specify pkg: | Other: Water Characterization Pkg General ☐ Extended ☐ | SPLP: Specify tests ☐ Metals ☐ VOC ☐ 1,4-Dioxane ☐ OCP ☐ ABN | TCLP: Specify tests ☐ M&I ☐ VOC ☐ PCB ☐ B(a)P ☐ ABN ☐ Ignit. | COMMENTS: |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | BH23-2(MW)-4 | 10/2/23 | 9:45 | 5 | SS | | ✓ | | | ✓ | | | ✓ | | ✓ | | | | ✓ | | | | | | | HOLD |
| 2 | BH23-2(MW)-6 | ↓ | 10:15 | 5 | SS | | ✓ | | | ✓ | | | ✓ | | ✓ | | | | | | | | | | | HOLD |
| 3 | BH23-3(MW)-1 | 10/3/23 | 9:00 | 6 | SS | | ✓ | | | ✓ | | | ✓ | | ✓ | | | ✓ | | | | | | | | HOLD |
| 4 | BH23-3(MW)-2 | | 9:10 | 1 | SS | | | | | | | | | | | | | | ✓ | | | | | | | HOLD |
| 5 | BH23-3(MW)-3 | | 9:30 | 6 | SS | | ✓ | | | ✓ | | | ✓ | | ✓ | | | ✓ | | | | | | | | HOLD |
| 6 | BH23-4(MW)-1 | | 10:45 | 5 | SS | | ✓ | | | ✓ | | | ✓ | | ✓ | | | | | | | | | | | HOLD |
| 7 | BH23-4(MW)-3 | ↓ | 11:15 | 5 | SS | | ✓ | | | ✓ | | | ✓ | | ✓ | | | | | | | | | | | HOLD |
| 8 | BH23-5-1 | 10/2/23 | 2:00 | 4 | SS | | ✓ | | | | | | | | ✓ | | | | ✓ | | | | | | | HOLD |
| 9 | BH23-5-2 | ↓ | 2:15 | 1 | SS | | | | | | | ✓ | | | | | | | | | | | | | | HOLD |
| 10 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 11 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 12 | | | | | | | | | | | | | | | | | | | | | | | | | | |

Observations/Comments/Special Instructions

Sampled By (NAME): Michael Watters Signature: Date: 10/05/23 (mm/dd/yy) Pink Copy - Client

Relinquished by (NAME): Michael Watters Signature: Date: 10/05/23 (mm/dd/yy) Yellow & White Copy - SGS

Revision #: 1.7
Date of Issue: 07 JUNE 2023

Note: Submission of samples to SGS is acknowledgement that you have been provided direction on sample collection/handling and transportation of samples. {2} Submission of samples to SGS is considered authorization for completion of work. Signatures may appear on this form or be retained on file in the contract, or in an alternative format (e.g. shipping documents). {3} Results may be sent by email to an unlimited number of addresses for no additional cost. Fax is available upon request. This document is issued by the Company under its General Conditions of Service accessible at http://www.sgs.com/terms_and_conditions.htm. (Printed copies are available upon request.) Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein.





# FINAL REPORT

## CA40170-OCT23 R1

**20-0052.04**

Prepared for

Watters Environmental Group Inc.

# FINAL REPORT

## First Page

| CLIENT DETAILS | | LABORATORY DETAILS | |
|---|---|---|---|
| Client | Watters Environmental Group Inc. | Project Specialist | Maarit Wolfe, Hon.B.Sc |
| | | Laboratory | SGS Canada Inc. |
| Address | 9135 Keele St Unit A1, Concord<br>Canada, L4K 0J4<br>Phone: (416) 361-2407. Fax:(416) 361-2410 | Address | 185 Concession St., Lakefield ON, K0L 2H0 |
| Contact | Natalie Wright | Telephone | 705-652-2000 |
| Telephone | (416) 361-2407 | Facsimile | 705-652-6365 |
| Facsimile | (416) 361-2410 | Email | Maarit.Wolfe@sgs.com |
| Email | NWright@wattersenvironmental.com; labcerts@wattersenviron | SGS Reference | CA40170-OCT23 |
| Project | 20-0052.04 | Received | 10/23/2023 |
| Order Number | | Approved | 10/27/2023 |
| Samples | Soil (2) | Report Number | CA40170-OCT23 R1 |
| | | Date Reported | 10/27/2023 |

COMMENTS

CCME Method Compliance: Analyses were conducted using analytical procedures that comply with the Reference Method for the CWS for Petroleum Hydrocarbons in Soil and have been validated for use at the SGS laboratory, Lakefield, ON site.

Quality Compliance: Instrument performance / calibration quality criteria were met and extraction and analysis limits for holding times were met.

nC6 and nC10 response factors within 30% of response factor for toluene: YES

nC10, nC16 and nC34 response factors within 10% of the average response for the three compounds: YES

C50 response factors within 70% of nC10 + nC16 + nC34 average: YES

Linearity is within 15%: YES

F4G - gravimetric heavy hydrocarbons cannot be added to the C6 to C50 hydrocarbons.
The results for F4 and F4G are both reported and the greater of the two values is to be used in application to the CWS PHC.

Hydrocarbon results are expressed on a dry weight basis.

Benzo(b)fluoranthene results for comparison to the standard are reported as benzo(b+j)fluoranthene. Benzo(b)fluoranthene and benzo(j)fluoranthene co-elute and cannot be reported individually by the analytical method used.

Temperature of Sample upon Receipt: 7 degrees C
Cooling Agent Present: Yes
Custody Seal Present: Yes

Chain of Custody Number: 037136/037137

SIGNATORIES

Maarit Wolfe, Hon.B.Sc



TABLE OF CONTENTS

First Page..... 1

Index..... 2

Results..... 3-5

Exceedance Summary..... 6

Holding Time Summary..... 7-8

QC Summary..... 9-14

Legend..... 15

Annexes..... 16-17

**Client:** Watters Environmental Group Inc.
**Project:** 20-0052.04
**Project Manager:** Natalie Wright
**Samplers:** Michael Watters

MATRIX: SOIL

L1 = REG153 / SOIL / COARSE - TABLE 1 - Residential/Parkland/Industrial - UNDEFINED

| | | |
|---|---|---|
| **Sample Number** | 8 | 9 |
| **Sample Name** | BH23-2(MW)-2 | BH23-3(MW)-1 |
| **Sample Matrix** | Soil | Soil |
| **Sample Date** | 02/10/2023 | 03/10/2023 |

| Parameter | Units | RL | L1 | Result | Result |
|---|---|---|---|---|---|
| **Hydrides** | | | | | |
| Antimony | µg/g | 0.8 | 1.3 | < 0.8 | < 0.8 |
| Arsenic | µg/g | 0.5 | 18 | 1.6 | 3.4 |
| Selenium | µg/g | 0.1 | 1.5 | 0.1 | 0.3 |
| **Metals and Inorganics** | | | | | |
| Moisture Content | % | 0.1 | | 6.1 | 16.9 |
| Barium | µg/g | 0.1 | 220 | 13 | 61 |
| Beryllium | µg/g | 0.02 | 2.5 | 0.09 | 0.16 |
| Boron | µg/g | 1 | 36 | 2 | 3 |
| Cadmium | µg/g | 0.05 | 1.2 | 0.05 | 0.44 |
| Chromium | µg/g | 0.5 | 70 | 4.8 | 6.2 |
| Cobalt | µg/g | 0.01 | 21 | 1.6 | 1.9 |
| Copper | µg/g | 0.1 | 92 | 4.0 | 10 |
| Lead | µg/g | 0.1 | 120 | 5.7 | 90 |
| Molybdenum | µg/g | 0.1 | 2 | 0.3 | 0.4 |
| Nickel | µg/g | 0.5 | 82 | 3.4 | 5.9 |
| Silver | µg/g | 0.05 | 0.5 | < 0.05 | < 0.05 |
| Thallium | µg/g | 0.02 | 1 | < 0.02 | 0.04 |
| Uranium | µg/g | 0.002 | 2.5 | 0.26 | 0.27 |
| Vanadium | µg/g | 3 | 86 | 10 | 11 |
| Zinc | µg/g | 0.7 | 290 | 22 | 68 |
| Water Soluble Boron | µg/g | 0.5 | | < 0.5 | < 0.5 |

**Client:** Watters Environmental Group Inc.
**Project:** 20-0052.04
**Project Manager:** Natalie Wright
**Samplers:** Michael Watters

MATRIX: SOIL

L1 = REG153 / SOIL / COARSE - TABLE 1 - Residential/Parkland/Industrial - UNDEFINED

| | | | | | |
|---|---|---|---|---|---|
| | **Sample Number** | | | 8 | 9 |
| | **Sample Name** | | | BH23-2(MW)-2 | BH23-3(MW)-1 |
| | **Sample Matrix** | | | Soil | Soil |
| | **Sample Date** | | | 02/10/2023 | 03/10/2023 |
| **Parameter** | **Units** | **RL** | **L1** | **Result** | **Result** |
| **Other (ORP)** | | | | | |
| Mercury | ug/g | 0.05 | 0.27 | < 0.05 | 0.05 |
| Sodium Adsorption Ratio | No unit | 0.2 | 2.4 | 9.6 | 0.5 |
| SAR Calcium | mg/L | 0.2 | | 7.0 | 20.0 |
| SAR Magnesium | mg/L | 0.3 | | 0.5 | 1.1 |
| SAR Sodium | mg/L | 0.1 | | 98.2 | 8.7 |
| Conductivity | mS/cm | 0.002 | 0.57 | 0.44 | 0.16 |
| pH | pH Units | 0.05 | | 7.89 | 7.92 |
| Chromium VI | µg/g | 0.2 | 0.66 | < 0.2 | < 0.2 |
| Free Cyanide | µg/g | 0.05 | 0.051 | < 0.05 | < 0.05 |
| **PAHs** | | | | | |
| Acenaphthene | µg/g | 0.05 | 0.072 | < 0.05 | < 0.05 |
| Acenaphthylene | µg/g | 0.05 | 0.093 | < 0.05 | < 0.05 |
| Anthracene | µg/g | 0.05 | 0.16 | < 0.05 | < 0.05 |
| Benzo(a)anthracene | µg/g | 0.05 | 0.36 | < 0.05 | 0.22 |
| Benzo(a)pyrene | µg/g | 0.05 | 0.3 | < 0.05 | 0.27 |
| Benzo(b+j)fluoranthene | µg/g | 0.05 | 0.47 | < 0.05 | 0.36 |
| Benzo(ghi)perylene | µg/g | 0.1 | 0.68 | < 0.1 | 0.26 |
| Benzo(k)fluoranthene | µg/g | 0.05 | 0.48 | < 0.05 | 0.14 |
| Chrysene | µg/g | 0.05 | 2.8 | < 0.05 | 0.32 |
| Dibenzo(a,h)anthracene | µg/g | 0.06 | 0.1 | < 0.06 | < 0.06 |
| Fluoranthene | µg/g | 0.05 | 0.56 | < 0.05 | 0.59 |
| Fluorene | µg/g | 0.05 | 0.12 | < 0.05 | < 0.05 |

**Client:** Watters Environmental Group Inc.
**Project:** 20-0052.04
**Project Manager:** Natalie Wright
**Samplers:** Michael Watters

MATRIX: SOIL

L1 = REG153 / SOIL / COARSE - TABLE 1 - Residential/Parkland/Industrial - UNDEFINED

| | | |
|---|---|---|
| **Sample Number** | 8 | 9 |
| **Sample Name** | BH23-2(MW)-2 | BH23-3(MW)-1 |
| **Sample Matrix** | Soil | Soil |
| **Sample Date** | 02/10/2023 | 03/10/2023 |

| Parameter | Units | RL | L1 | Result | Result |
|---|---|---|---|---|---|
| **PAHs (continued)** | | | | | |
| Indeno(1,2,3-cd)pyrene | µg/g | 0.1 | 0.23 | < 0.1 | 0.20 |
| 1-Methylnaphthalene | µg/g | 0.05 | | < 0.05 | 0.06 |
| 2-Methylnaphthalene | µg/g | 0.05 | | < 0.05 | 0.06 |
| Methylnaphthalene, 2-(1-) | µg/g | 0.05 | 0.59 | < 0.05 | 0.11 |
| Naphthalene | µg/g | 0.05 | 0.09 | < 0.05 | < 0.05 |
| Phenanthrene | µg/g | 0.05 | 0.69 | < 0.05 | 0.22 |
| Pyrene | µg/g | 0.05 | 1 | < 0.05 | 0.34 |
| **SVOC Surrogates** | | | | | |
| Surr 2-Fluorobiphenyl | Surr Rec % | no | | 98 | 95 |
| Surr 4-Terphenyl-d14 | Surr Rec % | no | | 87 | 77 |
| Surr 2-Methylnaphthalene-D10 | Surr Rec % | no | | 96 | 92 |
| Surr Fluoranthene-D10 | Surr Rec % | no | | 99 | 97 |

## EXCEEDANCE SUMMARY

| Parameter | Method | Units | Result | REG153 / SOIL / COARSE - TABLE 1 - Residential/Parkland/Industrial - UNDEFINED L1 |
|---|---|---|---|---|
| **BH23-2(MW)-2** | | | | |
| Sodium Adsorption Ratio | MOE 4696e01/EPA 6010 | No unit | 9.6 | 2.4 |
| **BH23-3(MW)-1** | | | | |
| Fluoranthene | EPA 3541/8270D | µg/g | 0.59 | 0.56 |

## HOLDING TIME SUMMARY

| Sample Name | QC Batch Reference | Sample Number | Sampled | Received | Extracted/ Prepared | Analysed | Holding Time | Approved |
|---|---|---|---|---|---|---|---|---|
| **Conductivity** | | | | | | | | |
| **Method: EPA 6010/SM 2510 \| Internal ref.: ME-CA-[ENV]EWL-LAK-AN-006** | | | | | | | | |
| BH23-2(MW)-2 | EWL0597-OCT23 | 8 | 10/02/2023 | 10/23/2023 | 10/25/2023 | 10/25/2023 | 10/30/2023 | 10/26/2023 |
| BH23-3(MW)-1 | EWL0597-OCT23 | 9 | 10/03/2023 | 10/23/2023 | 10/25/2023 | 10/25/2023 | 10/31/2023 | 10/26/2023 |
| **Cyanide by SFA** | | | | | | | | |
| **Method: SM 4500 \| Internal ref.: ME-CA-[ENV]SFA-LAK-AN-005** | | | | | | | | |
| BH23-2(MW)-2 | SKA5077-OCT23 | 8 | 10/02/2023 | 10/23/2023 | | | 10/16/2023 | 10/25/2023 |
| BH23-3(MW)-1 | SKA5077-OCT23 | 9 | 10/03/2023 | 10/23/2023 | | | 10/17/2023 | 10/25/2023 |
| **Hexavalent Chromium by SFA** | | | | | | | | |
| **Method: EPA218.6/EPA3060A \| Internal ref.: ME-CA-[ENV]SKA-LAK-AN-012** | | | | | | | | |
| BH23-2(MW)-2 | SKA5078-OCT23 | 8 | 10/02/2023 | 10/23/2023 | 10/23/2023 | 10/24/2023 | 11/01/2023 | 10/24/2023 |
| BH23-3(MW)-1 | SKA5078-OCT23 | 9 | 10/03/2023 | 10/23/2023 | 10/23/2023 | 10/24/2023 | 11/02/2023 | 10/24/2023 |
| **Mercury by CVAAS** | | | | | | | | |
| **Method: EPA 7471A/EPA 245 \| Internal ref.: ME-CA-[ENV]SPE-LAK-AN-004** | | | | | | | | |
| BH23-2(MW)-2 | EMS0222-OCT23 | 8 | 10/02/2023 | 10/23/2023 | 10/25/2023 | 10/25/2023 | 10/30/2023 | 10/25/2023 |
| BH23-3(MW)-1 | EMS0222-OCT23 | 9 | 10/03/2023 | 10/23/2023 | 10/25/2023 | 10/25/2023 | 10/31/2023 | 10/25/2023 |
| **Metals in aqueous samples - ICP-OES** | | | | | | | | |
| **Method: MOE 4696e01/EPA 6010 \| Internal ref.: ME-CA-[ENV]SPE-LAK-AN-003** | | | | | | | | |
| BH23-2(MW)-2 | ESG0049-OCT23 | 8 | 10/02/2023 | 10/23/2023 | 10/25/2023 | 10/25/2023 | 03/30/2024 | 10/25/2023 |
| BH23-3(MW)-1 | ESG0049-OCT23 | 9 | 10/03/2023 | 10/23/2023 | 10/25/2023 | 10/25/2023 | 03/31/2024 | 10/25/2023 |
| **Metals in Soil - Aqua-regia/ICP-MS** | | | | | | | | |
| **Method: EPA 3050/EPA 200.8 \| Internal ref.: ME-CA-[ENV]SPE-LAK-AN-005** | | | | | | | | |
| BH23-2(MW)-2 | EMS0222-OCT23 | 8 | 10/02/2023 | 10/23/2023 | 10/25/2023 | 10/25/2023 | 03/30/2024 | 10/25/2023 |
| BH23-3(MW)-1 | EMS0222-OCT23 | 9 | 10/03/2023 | 10/23/2023 | 10/25/2023 | 10/25/2023 | 03/31/2024 | 10/25/2023 |
| **Moisture** | | | | | | | | |
| **Method: CCME Tier 1 \| Internal ref.: ME-CA-[ENV]GC-LAK-AN-010** | | | | | | | | |
| BH23-2(MW)-2 | GCM0382-OCT23 | 8 | 10/02/2023 | 10/23/2023 | 10/23/2023 | 10/24/2023 | 12/01/2023 | 10/24/2023 |
| BH23-3(MW)-1 | GCM0382-OCT23 | 9 | 10/03/2023 | 10/23/2023 | 10/23/2023 | 10/24/2023 | 12/02/2023 | 10/24/2023 |
| **pH** | | | | | | | | |
| **Method: SM 4500 \| Internal ref.: ME-CA-[ENV]EWL-LAK-AN-001** | | | | | | | | |
| BH23-2(MW)-2 | ARD0110-OCT23 | 8 | 10/02/2023 | 10/23/2023 | 10/24/2023 | 10/24/2023 | 11/01/2023 | 10/25/2023 |
| BH23-3(MW)-1 | ARD0110-OCT23 | 9 | 10/03/2023 | 10/23/2023 | 10/24/2023 | 10/24/2023 | 11/02/2023 | 10/25/2023 |
| **Semi-Volatile Organics** | | | | | | | | |
| **Method: EPA 3541/8270D \| Internal ref.: ME-CA-[ENV]GC-LAK-AN-005** | | | | | | | | |
| BH23-2(MW)-2 | GCM0388-OCT23 | 8 | 10/02/2023 | 10/23/2023 | | | 12/01/2023 | 10/27/2023 |
| BH23-3(MW)-1 | GCM0388-OCT23 | 9 | 10/03/2023 | 10/23/2023 | | | 10/17/2023 | 10/27/2023 |

## HOLDING TIME SUMMARY

| Sample Name | QC Batch Reference | Sample Number | Sampled | Received | Extracted/ Prepared | Analysed | Holding Time | Approved |
|---|---|---|---|---|---|---|---|---|
| **Sodium adsorption ratio (SAR)** | | | | | | | | |
| **Method: MOE 4696e01/EPA 6010 \| Internal ref.: ME-CA-[ENV]ARD-LAK-AN-021** | | | | | | | | |
| BH23-2(MW)-2 | | 8 | 10/02/2023 | 10/23/2023 | 10/25/2023 | 10/25/2023 | 03/30/2024 | 10/25/2023 |
| BH23-3(MW)-1 | | 9 | 10/03/2023 | 10/23/2023 | 10/25/2023 | 10/25/2023 | 03/31/2024 | 10/25/2023 |
| **Water Soluble Boron** | | | | | | | | |
| **Method: O.Reg. 15 3/04 \| Internal ref.: ME-CA-[ENV] SPE-LAK-AN-003** | | | | | | | | |
| BH23-2(MW)-2 | ESG0044-OCT23 | 8 | 10/02/2023 | 10/23/2023 | 10/24/2023 | 10/24/2023 | 03/30/2024 | 10/25/2023 |
| BH23-3(MW)-1 | ESG0044-OCT23 | 9 | 10/03/2023 | 10/23/2023 | 10/24/2023 | 10/24/2023 | 03/31/2024 | 10/25/2023 |

## QC SUMMARY

### Conductivity

Method: EPA 6010/SM 2510 I Internal ref.: ME-CA-IENVIEWL-LAK-AN-006

| Parameter | QC batch Reference | Units | RL | Method Blank | Duplicate | | LCS/Spike Blank | | | Matrix Spike / Ref. | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | RPD | AC (%) | Spike Recovery (%) | Recovery Limits (%) | | Spike Recovery (%) | Recovery Limits (%) | |
| | | | | | | | | Low | High | | Low | High |
| Conductivity | EWL0597-OCT23 | mS/cm | 0.002 | <0.002 | 1 | 10 | 101 | 90 | 110 | NA | | |

### Cyanide by SFA

Method: SM 4500 I Internal ref.: ME-CA-IENVISFA-LAK-AN-005

| Parameter | QC batch Reference | Units | RL | Method Blank | Duplicate | | LCS/Spike Blank | | | Matrix Spike / Ref. | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | RPD | AC (%) | Spike Recovery (%) | Recovery Limits (%) | | Spike Recovery (%) | Recovery Limits (%) | |
| | | | | | | | | Low | High | | Low | High |
| Free Cyanide | SKA5077-OCT23 | µg/g | 0.05 | <0.05 | ND | 20 | 103 | 80 | 120 | 92 | 75 | 125 |

### Hexavalent Chromium by SFA

Method: EPA218.6/EPA3060A I Internal ref.: ME-CA-IENVISKA-LAK-AN-012

| Parameter | QC batch Reference | Units | RL | Method Blank | Duplicate | | LCS/Spike Blank | | | Matrix Spike / Ref. | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | RPD | AC (%) | Spike Recovery (%) | Recovery Limits (%) | | Spike Recovery (%) | Recovery Limits (%) | |
| | | | | | | | | Low | High | | Low | High |
| Chromium VI | SKA5078-OCT23 | ug/g | 0.2 | <0.2 | ND | 20 | 100 | 80 | 120 | 112 | 75 | 125 |

## QC SUMMARY

### Mercury by CVAAS

Method: EPA 7471A/EPA 245 | Internal ref.: ME-CA-IENVISPE-LAK-AN-004

| Parameter | QC batch Reference | Units | RL | Method Blank | Duplicate | | LCS/Spike Blank | | | Matrix Spike / Ref. | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | RPD | AC (%) | Spike Recovery (%) | Recovery Limits (%) | | Spike Recovery (%) | Recovery Limits (%) | |
| | | | | | | | | Low | High | | Low | High |
| Mercury | EMS0222-OCT23 | ug/g | 0.05 | <0.05 | 8 | 20 | 98 | 80 | 120 | 85 | 70 | 130 |

### Metals in aqueous samples - ICP-OES

Method: MOE 4696e01/EPA 6010 | Internal ref.: ME-CA-IENVISPE-LAK-AN-003

| Parameter | QC batch Reference | Units | RL | Method Blank | Duplicate | | LCS/Spike Blank | | | Matrix Spike / Ref. | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | RPD | AC (%) | Spike Recovery (%) | Recovery Limits (%) | | Spike Recovery (%) | Recovery Limits (%) | |
| | | | | | | | | Low | High | | Low | High |
| SAR Calcium | ESG0049-OCT23 | mg/L | 0.2 | <0.2 | 1 | 20 | 106 | 80 | 120 | 104 | 70 | 130 |
| SAR Magnesium | ESG0049-OCT23 | mg/L | 0.3 | <0.3 | 1 | 20 | 102 | 80 | 120 | 102 | 70 | 130 |
| SAR Sodium | ESG0049-OCT23 | mg/L | 0.1 | <0.1 | 2 | 20 | 96 | 80 | 120 | 101 | 70 | 130 |

## QC SUMMARY

### Metals in Soil - Aqua-regia/ICP-MS

Method: EPA 3050/EPA 200.8 | Internal ref.: ME-CA-[ENVISPE-LAK-AN-005

| Parameter | QC batch Reference | Units | RL | Method Blank | Duplicate | | LCS/Spike Blank | | | Matrix Spike / Ref. | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | RPD | AC (%) | Spike Recovery (%) | Recovery Limits (%) | | Spike Recovery (%) | Recovery Limits (%) | |
| | | | | | | | | Low | High | | Low | High |
| Silver | EMS0222-OCT23 | ug/g | 0.05 | <0.05 | 0 | 20 | 103 | 70 | 130 | 102 | 70 | 130 |
| Arsenic | EMS0222-OCT23 | ug/g | 0.5 | <0.5 | 1 | 20 | 105 | 70 | 130 | 112 | 70 | 130 |
| Barium | EMS0222-OCT23 | ug/g | 0.1 | <0.1 | 12 | 20 | 99 | 70 | 130 | 103 | 70 | 130 |
| Beryllium | EMS0222-OCT23 | ug/g | 0.02 | <0.02 | 15 | 20 | 94 | 70 | 130 | 99 | 70 | 130 |
| Boron | EMS0222-OCT23 | ug/g | 1 | <1 | 17 | 20 | 93 | 70 | 130 | 86 | 70 | 130 |
| Cadmium | EMS0222-OCT23 | ug/g | 0.05 | <0.05 | 1 | 20 | 94 | 70 | 130 | 106 | 70 | 130 |
| Cobalt | EMS0222-OCT23 | ug/g | 0.01 | <0.01 | 17 | 20 | 104 | 70 | 130 | 99 | 70 | 130 |
| Chromium | EMS0222-OCT23 | ug/g | 0.5 | <0.5 | 10 | 20 | 102 | 70 | 130 | 104 | 70 | 130 |
| Copper | EMS0222-OCT23 | ug/g | 0.1 | <0.1 | 2 | 20 | 105 | 70 | 130 | 101 | 70 | 130 |
| Molybdenum | EMS0222-OCT23 | ug/g | 0.1 | <0.1 | 4 | 20 | 106 | 70 | 130 | 107 | 70 | 130 |
| Nickel | EMS0222-OCT23 | ug/g | 0.5 | <0.5 | 16 | 20 | 105 | 70 | 130 | 103 | 70 | 130 |
| Lead | EMS0222-OCT23 | ug/g | 0.1 | <0.1 | 13 | 20 | 101 | 70 | 130 | 103 | 70 | 130 |
| Antimony | EMS0222-OCT23 | ug/g | 0.8 | <0.8 | ND | 20 | 103 | 70 | 130 | 114 | 70 | 130 |
| Selenium | EMS0222-OCT23 | ug/g | 0.1 | <0.1 | 15 | 20 | 100 | 70 | 130 | 99 | 70 | 130 |
| Thallium | EMS0222-OCT23 | ug/g | 0.02 | <0.02 | ND | 20 | 97 | 70 | 130 | 108 | 70 | 130 |
| Uranium | EMS0222-OCT23 | ug/g | 0.002 | <0.002 | 19 | 20 | 94 | 70 | 130 | 97 | 70 | 130 |
| Vanadium | EMS0222-OCT23 | ug/g | 3 | <3 | 16 | 20 | 100 | 70 | 130 | 98 | 70 | 130 |
| Zinc | EMS0222-OCT23 | ug/g | 0.7 | <0.7 | 14 | 20 | 106 | 70 | 130 | 97 | 70 | 130 |

## QC SUMMARY

### pH

Method: SM 4500 I Internal ref.: ME-CA-[ENV]EWL-LAK-AN-001

| Parameter | QC batch Reference | Units | RL | Method Blank | Duplicate | | LCS/Spike Blank | | | Matrix Spike / Ref. | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | RPD | AC (%) | Spike Recovery (%) | Recovery Limits (%) | | Spike Recovery (%) | Recovery Limits (%) | |
| | | | | | | | | Low | High | | Low | High |
| pH | ARD0110-OCT23 | pH Units | 0.05 | | 0 | 20 | 100 | 80 | 120 | | | |

## QC SUMMARY

### Semi-Volatile Organics

Method: EPA 3541/8270D | Internal ref.: ME-CA-[ENV]GC-LAK-AN-005

| Parameter | QC batch Reference | Units | RL | Method Blank | Duplicate | | LCS/Spike Blank | | | Matrix Spike / Ref. | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | RPD | AC (%) | Spike Recovery (%) | Recovery Limits (%) | | Spike Recovery (%) | Recovery Limits (%) | |
| | | | | | | | | Low | High | | Low | High |
| 1-Methylnaphthalene | GCM0388-OCT23 | µg/g | 0.05 | < 0.05 | ND | 40 | 95 | 50 | 140 | 104 | 50 | 140 |
| 2-Methylnaphthalene | GCM0388-OCT23 | µg/g | 0.05 | < 0.05 | ND | 40 | 97 | 50 | 140 | 108 | 50 | 140 |
| Acenaphthene | GCM0388-OCT23 | µg/g | 0.05 | < 0.05 | ND | 40 | 97 | 50 | 140 | 108 | 50 | 140 |
| Acenaphthylene | GCM0388-OCT23 | µg/g | 0.05 | < 0.05 | ND | 40 | 89 | 50 | 140 | 104 | 50 | 140 |
| Anthracene | GCM0388-OCT23 | µg/g | 0.05 | < 0.05 | ND | 40 | 92 | 50 | 140 | 107 | 50 | 140 |
| Benzo(a)anthracene | GCM0388-OCT23 | µg/g | 0.05 | < 0.05 | ND | 40 | 94 | 50 | 140 | 102 | 50 | 140 |
| Benzo(a)pyrene | GCM0388-OCT23 | µg/g | 0.05 | < 0.05 | ND | 40 | 85 | 50 | 140 | 92 | 50 | 140 |
| Benzo(b+j)fluoranthene | GCM0388-OCT23 | µg/g | 0.05 | < 0.05 | ND | 40 | 93 | 50 | 140 | 90 | 50 | 140 |
| Benzo(ghi)perylene | GCM0388-OCT23 | µg/g | 0.1 | < 0.1 | ND | 40 | 95 | 50 | 140 | 102 | 50 | 140 |
| Benzo(k)fluoranthene | GCM0388-OCT23 | µg/g | 0.05 | < 0.05 | ND | 40 | 92 | 50 | 140 | 94 | 50 | 140 |
| Chrysene | GCM0388-OCT23 | µg/g | 0.05 | < 0.05 | ND | 40 | 92 | 50 | 140 | 94 | 50 | 140 |
| Dibenzo(a,h)anthracene | GCM0388-OCT23 | µg/g | 0.06 | < 0.06 | ND | 40 | 81 | 50 | 140 | 102 | 50 | 140 |
| Fluoranthene | GCM0388-OCT23 | µg/g | 0.05 | < 0.05 | ND | 40 | 92 | 50 | 140 | 112 | 50 | 140 |
| Fluorene | GCM0388-OCT23 | µg/g | 0.05 | < 0.05 | ND | 40 | 95 | 50 | 140 | 109 | 50 | 140 |
| Indeno(1,2,3-cd)pyrene | GCM0388-OCT23 | µg/g | 0.1 | < 0.1 | ND | 40 | 87 | 50 | 140 | 107 | 50 | 140 |
| Naphthalene | GCM0388-OCT23 | µg/g | 0.05 | < 0.05 | ND | 40 | 95 | 50 | 140 | 102 | 50 | 140 |
| Phenanthrene | GCM0388-OCT23 | µg/g | 0.05 | < 0.05 | ND | 40 | 95 | 50 | 140 | 102 | 50 | 140 |
| Pyrene | GCM0388-OCT23 | µg/g | 0.05 | < 0.05 | ND | 40 | 102 | 50 | 140 | 83 | 50 | 140 |

## QC SUMMARY

### Water Soluble Boron

Method: O.Reg. 15 3/04 | Internal ref.: ME-CA-[ENV] SPE-LAK-AN-003

| Parameter | QC batch Reference | Units | RL | Method Blank | Duplicate | | LCS/Spike Blank | | | Matrix Spike / Ref. | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | RPD | AC (%) | Spike Recovery (%) | Recovery Limits (%) | | Spike Recovery (%) | Recovery Limits (%) | |
| | | | | | | | | Low | High | | Low | High |
| Water Soluble Boron | ESG0044-OCT23 | µg/g | 0.5 | <0.5 | ND | 20 | 104 | 80 | 120 | 100 | 70 | 130 |

Method Blank: a blank matrix that is carried through the entire analytical procedure. Used to assess laboratory contamination.

Duplicate: Paired analysis of a separate portion of the same sample that is carried through the entire analytical procedure. Used to evaluate measurement precision.

LCS/Spike Blank: Laboratory control sample or spike blank refer to a blank matrix to which a known amount of analyte has been added. Used to evaluate analyte recovery and laboratory accuracy without sample matrix effects.

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

Reference Material: a material or substance matrix matched to the samples that contains a known amount of the analyte of interest. A reference material may be used in place of a matrix spike.

RL: Reporting limit

RPD: Relative percent difference

AC: Acceptance criteria

**Multielement Scan Qualifier**: as the number of analytes in a scan increases, so does the chance of a limit exceedance by random chance as opposed to a real method problem. Thus, in multielement scans, for the LCS and matrix spike, up to 10% of the analytes may exceed the quoted limits by up to 10% absolute and the spike is considered acceptable.

**Duplicate Qualifier**: for duplicates as the measured result approaches the RL, the uncertainty associated with the value increases dramatically, thus duplicate acceptance limits apply only where the average of the two duplicates is greater than five times the RL.

**Matrix Spike Qualifier**: for matrix spikes, as the concentration of the native analyte increases, the uncertainty of the matrix spike recovery increases. Thus, the matrix spike acceptance limits apply only when the concentration of the matrix spike is greater than or equal to the concentration of the native analyte.

## LEGEND

### FOOTNOTES

| | |
|---|---|
| **NSS** | Insufficient sample for analysis. |
| **RL** | Reporting Limit. |
| ↑ | Reporting limit raised. |
| ↓ | Reporting limit lowered. |
| **NA** | The sample was not analysed for this analyte |
| **ND** | Non Detect |

Results relate only to the sample tested.
Data reported represent the sample as submitted to SGS. Solid samples expressed on a dry weight basis.
"Temperature Upon Receipt" is representative of the whole shipment and may not reflect the temperature of individual samples.
Analysis conducted on samples submitted pursuant to or as part of Reg. 153/04, are in accordance to the "Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act and Excess Soil Quality" published by the Ministry and dated March 9, 2004 as amended.

SGS provides criteria information (such as regulatory or guideline limits and summary of limit exceedances) as a service. Every attempt is made to ensure the criteria information in this report is accurate and current, however, it is not guaranteed. Comparison to the most current criteria is the responsibility of the client and SGS assumes no responsibility for the accuracy of the criteria levels indicated.

SGS Canada Inc. statement of conformity decision rule does not consider uncertainty when analytical results are compared to a specified standard or regulation.
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This report supersedes all previous versions.

-- End of Analytical Report --

# Request for Laboratory Services and CHAIN OF CUSTODY

SGS Industries & Environment - Lakefield: 185 Concession St., Lakefield, ON K0L 2H0 Phone: 705-652-2000 Fax: 705-652-6365 Web: www.sgs.com/environment
- London: 657 Consortium Court, London, ON, N6E 2S8 Phone: 519-672-4500 Toll Free: 877-848-8060 Fax: 519-672-0361

No: 037136 Page 1 of 2

## Laboratory Information Section - Lab use only

Received By: BD
Received Date: 10/5/23 (mm/dd/yy)
Received Time: 15:05 (hr : min)
Received By (signature):
Custody Seal Present: Yes ☐ No ☐
Custody Seal Intact: Yes ☑ No ☐
Cooling Agent Present: Yes ☑ No ☐ Type: ICE
Temperature Upon Receipt (°C): 7 x 3
LAB LIMS #: CA40170-OCT23

| REPORT INFORMATION | INVOICE INFORMATION |
|---|---|
| Company: Watters Environmental | ☑ (same as Report Information) |
| Contact: Natalie Wright | Company: |
| Address: 9135 Keele St. Unit A1 Concord ON, L4K 0J4 | Contact: B Espinola |
| Phone: 416 361 2407 | Address: |
| Fax: nwright@wattersenvironmental.com | Phone: |
| Email: labcerts@wattersenvironmental.com | Email: ap@wattersenvironmental.com |

Quotation #:
Project #: 20-0052.04
P.O. #:
Site Location/ID:

### TURNAROUND TIME (TAT) REQUIRED

☑ Regular TAT (5-7days)
TAT's are quoted in business days (exclude statutory holidays & weekends). Samples received after 6pm or on weekends: TAT begins next business day
RUSH TAT (Additional Charges May Apply): ☐ 1 Day ☐ 2 Days ☐ 3 Days ☐ 4 Days
PLEASE CONFIRM RUSH FEASIBILITY WITH SGS REPRESENTATIVE PRIOR TO SUBMISSION
Specify Due Date:
*NOTE: DRINKING (POTABLE) WATER SAMPLES FOR HUMAN CONSUMPTION MUST BE SUBMITTED WITH SGS DRINKING WATER CHAIN OF CUSTODY

### REGULATIONS

☐ O.Reg 153/04 ☐ O.Reg 406/19
☑ Table 1 ☑ Res/Park Soil Texture: ☐ Coarse
☐ Table 2 ☑ Ind/Com ☐ Medium/Fine
☐ Table 3 ☐ Agri/Other
☐ Table _____ Appx. _____
Soil Volume ☐ <350m3 ☐ >350m3

Other Regulations: ☐ Reg 347/558 (3 Day min TAT) ☐ PWQO ☐ MMER ☐ CCME ☐ Other: ☐ MISA ☐ ODWS Not Reportable *See note

Sewer By-Law: ☐ Sanitary ☐ Storm Municipality:

RECORD OF SITE CONDITION (RSC) ☑ YES ☐ NO

### ANALYSIS REQUESTED

| SAMPLE IDENTIFICATION | DATE SAMPLED | TIME SAMPLED | # OF BOTTLES | MATRIX | Field Filtered (Y/N) | M&I: Metals & Inorganics (incl CrVI, CN, Hg pH (B(HWS),EC,SAR-soil) (Cl, Na-water) | M&I: Full Metals Suite (ICP metals plus B(HWS-soil only) Hg, CrVI | M&I: ICP Metals only Sb,As,Ba,Be,B,Cd, Cr,Co,Cu,Pb,Mo,Ni,Se,Ag,Tl,U,V,Zn | SVOC: PAHs only | SVOC: SVOCs all incl PAHs, ABNs, CPs | PCB: PCBs Total ☐ Aroclor ☐ | PHC: F1-F4 + BTEX | PHC: F1-F4 only no BTEX | VOC: VOCs all incl BTEX | VOC: BTEX only | Pest: Pesticides Organochlorine or specify other | Other (please specify) | SPLP: Specify tests | TCLP: Specify tests | COMMENTS: |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | BH23-1(MW)-1 | 10/2/23 | 11:15 | 5 | SS | ✓ | | | ✓ | | | ✓ | | ✓ | | | | ☐Metals ☐VOC ☐1,4-Dioxane ☐OCP ☐ABN | ☐M&I ☐VOC ☐PCB ☐B(a)P ☐ABN ☐Ignit. | |
| 2 | BH1000-1 | | 7:15 | 5 | SS | ✓ | | | ✓ | | | ✓ | | ✓ | | | | | | |
| 3 | BH23-1(MW)-5 | ↓ | 11:45 | 5 | SS | ✓ | | | ✓ | | | ✓ | | ✓ | | | | | | |
| 4 | BH23-2(MW)-5 | ✓ | 10:00 | 5 | SS | ✓ | | | ✓ | | | ✓ | | ✓ | | | | | | |
| 5 | BH23-3(MW)-2 | 10/2/23 | 9:10 | 5 | SS | ✓ | | | ✓ | | | ✓ | | ✓ | | | | | | |
| 6 | BH23-4(MW)-2 | ↓ | 11:00 | 5 | SS | ✓ | | | ✓ | | | ✓ | | ✓ | | | | | | |
| 7 | BH23-5-1 | 10/2/23 | 2:20 | 2 | SS | | | | | | ✓ | | ✓ | | | | | | | |
| 8 | BH23-5000-1 | ↓ | 1:00 | 1 | SS | | | | | | ✓ | | | | | | | | | |
| 9 | BH23-5-2 | ↓ | 2:15 | 5 | SS | ✓ | | | ✓ | | | ✓ | | ✓ | | | | | | |
| 10 | BH23-1(MW)-3 | 10/2/23 | 11:35 | 5 | SS | ✓ | | | ✓ | | | ✓ | | ✓ | | | | | | HOLD |
| 11 | BH23-1(MW)-5 | ↓ | 12:00 | 5 | SS | ✓ | | | ✓ | | | ✓ | | ✓ | | | | | | HOLD |
| 12 | BH23-2(MW)-2 | ↓ | 9:30 | 5 | SS | ✓ | | | ✓ | | | ✓ | | ✓ | | | | | | HOLD |

Observations/Comments/Special Instructions

Sampled By (NAME): Michael Watters Signature: Michael Watters Date: 10/05/23 (mm/dd/yy)
Relinquished by (NAME): Michael Watters Signature: Michael Watters Date: 10/05/23 (mm/dd/yy)

Pink Copy - Client
Yellow & White Copy - SGS

Revision #: 1.7
Date of Issue: 07 JUNE 2023

Note: Submission of samples to SGS is acknowledgement that you have been provided direction on sample collection/handling and transportation of samples. {2} Submission of samples to SGS is considered authorization for completion of work. Signatures may appear on this form or be retained on file in the contract, or in an alternative format (e.g. shipping documents). {3} Results may be sent by email to an unlimited number of addresses for no additional cost. Fax is available upon request. This document is issued by the Company under its General Conditions of Service accessible at http://www.sgs.com/terms_and_conditions.htm. (Printed copies are available upon request.) Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein.

# Request for Laboratory Services and CHAIN OF CUSTODY

SGS Industries & Environment - Lakefield: 185 Concession St., Lakefield, ON K0L 2H0 Phone: 705-652-2000 Fax: 705-652-6365 Web: www.sgs.com/environment
- London: 657 Consortium Court, London, ON, N6E 2S8 Phone: 519-672-4500 Toll Free: 877-848-8060 Fax: 519-672-0361

No: 037137 Page 2 of 2

## Laboratory Information Section - Lab use only

Received By: ~~Watters Environmental~~ Received By (signature):
Received Date: 10/6/23 (mm/dd/yy) Custody Seal Present: Yes ☑ No ☐ Cooling Agent Present: Yes ☑ No ☐ Type: ICE
Received Time: 15:05 (hr : min) Custody Seal Intact: Yes ☐ No ☐ Temperature Upon Receipt (°C) 2.x3 LAB LIMS #: CA-40046-Oct23

| REPORT INFORMATION | INVOICE INFORMATION |
|---|---|
| Company: Watters Environmental | ☑ (same as Report Information) |
| Contact: Natalie Wright | Company: |
| Address: 9135 Keele St. Unit A1 Concord ON, L4K 0J4 | Contact: B. Espinola |
| Phone: 416 316 2407 | Address: |
| Fax: nwright@wattersenvironmental.com | |
| Email: labcerts@wattersenvironmental.com | Email: ap@wattersenvironmental.com |

Quotation #: P.O. #:
Project #: 20-0052.04 Site Location/ID:

**TURNAROUND TIME (TAT) REQUIRED**

☑ Regular TAT (5-7days) TAT's are quoted in business days (exclude statutory holidays & weekends). Samples received after 6pm or on weekends: TAT begins next business day

RUSH TAT (Additional Charges May Apply): ☐ 1 Day ☐ 2 Days ☐ 3 Days ☐ 4 Days

PLEASE CONFIRM RUSH FEASIBILITY WITH SGS REPRESENTATIVE PRIOR TO SUBMISSION

Specify Due Date:

*NOTE: DRINKING (POTABLE) WATER SAMPLES FOR HUMAN CONSUMPTION MUST BE SUBMITTED WITH SGS DRINKING WATER CHAIN OF CUSTODY

**REGULATIONS**

☐ O.Reg 153/04 ☐ O.Reg 406/19
☑ Table 1 ☑ Res/Park Soil Texture: ☑ Coarse
☐ Table 2 ☑ Ind/Com ☐ Medium/Fine
☐ Table 3 ☐ Agri/Other
☐ Table _____ Appx. _____
Soil Volume ☐ <350m3 ☐ >350m3

Other Regulations: ☐ Reg 347/558 (3 Day min TAT) ☐ PWQO ☐ MMER ☐ CCME ☐ Other: ☐ MISA ☑ ODWS Not Reportable *See note

Sewer By-Law: ☐ Sanitary ☐ Storm Municipality:

RECORD OF SITE CONDITION (RSC) ☑ YES ☐ NO

**ANALYSIS REQUESTED**

| | SAMPLE IDENTIFICATION | DATE SAMPLED | TIME SAMPLED | # OF BOTTLES | MATRIX | Field Filtered (Y/N) | M&I: Metals & Inorganics (incl CrVI, CN, Hg, pH (B(HWS), EC, SAR–soil) Cl, Na–water) | M&I: Full Metals Suite (ICP metals plus B(HWS)–soil only) Hg, CrVI | M&I: ICP Metals only Sb,As,Ba,Be,B,Cd, Cr,Co,Cu,Pb,Mo,Ni,Se,Ag,Tl,U,V,Zn | SVOC: PAHs only | SVOC: SVOCs (all incl PAHs; ABNs; CPs | PCB: PCBs Total ☐ Aroclor ☐ | PHC: F1-F4 + BTEX | PHC: F1-F4 only (no BTEX | VOC: VOCs (all incl BTEX | VOC: BTEX only | Pest: Pesticides Organochlorine or specify other | Other: pH | Other: GSA | Other: Sewer Use: Specify pkg: | Other: Water Characterization Pkg General ☐ Extended ☐ | SPLP: Specify tests ☐Metals ☐VOC ☐1,4-Dioxane ☐OCP ☐ABN | TCLP: Specify tests ☐M&I ☐VOC ☐PCB ☐B(a)P ☐ABN ☐Ignit. | COMMENTS: |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | BH23-2(MW)-4 | 10/2/23 | 9:45 | 5 | SS | | ✓ | | | ✓ | | | ✓ | | ✓ | | | | | | | | | HOLD |
| 2 | BH23-2(MW)-6 | ↓ | 10:15 | 5 | SS | | ✓ | | | ✓ | | | ✓ | | ✓ | | | | | | | | | HOLD |
| 3 | BH23-3(MW)-1 | 10/3/23 | 9:00 | 6 | SS | | ✓ | | | ✓ | | | ✓ | | ✓ | | ✓ | | | | | | | ~~HOLD~~ |
| 4 | BH23-3(MW)-2 | ↓ | 9:16 | 1 | SS | | ↓ | | | ↓ | | | ↓ | | ↓ | | ↓ | ✓ | | | | | | HOLD |
| 5 | BH23-3(MW)-3 | | 9:30 | 6 | SS | | ✓ | | | ✓ | | | ✓ | | ✓ | | | ✓ | | | | | | HOLD |
| 6 | BH23-4(MW)-1 | | 10:45 | 5 | SS | | ✓ | | | ✓ | | | ✓ | | ✓ | | | | | | | | | HOLD |
| 7 | BH23-4(MW)-3 | ↓ | 11:15 | 5 | SS | | ✓ | | | ✓ | | | ✓ | | ✓ | | | | | | | | | HOLD |
| 8 | BH23-5-1 | 10/2/23 | 2:00 | 4 | SS | | ✓ | | | | | | | | ✓ | | | ✓ | | | | | | HOLD |
| 9 | BH23-5-2 | ↓ | 2:15 | 1 | SS | | | | | | | ✓ | | | | | | | | | | | | HOLD |
| 10 | | | | | | | | | | | | | | | | | | | | | | | | |
| 11 | | | | | | | | | | | | | | | | | | | | | | | | |
| 12 | | | | | | | | | | | | | | | | | | | | | | | | |

Observations/Comments/Special Instructions

Sampled By (NAME): Michael Watters Signature: Michael Watters Date: 10/05/23 (mm/dd/yy) Pink Copy - Client

Relinquished by (NAME): Michael Watters Signature: Michael Watters Date: 10/05/23 (mm/dd/yy) Yellow & White Copy - SGS

Revision #: 1.7
Date of Issue: 07 JUNE 2023

Note: Submission of samples to SGS is acknowledgement that you have been provided direction on sample collection/handling and transportation of samples. {2} Submission of samples to SGS is considered authorization for completion of work. Signatures may appear on this form or be retained on file in the contract, or in an alternative format (e.g. shipping documents). {3} Results may be sent by email to an unlimited number of addresses for no additional cost. Fax is available upon request. This document is issued by the Company under its General Conditions of Service accessible at http://www.sgs.com/terms_and_conditions.htm. (Printed copies are available upon request.) Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein.

# FINAL REPORT

CA15296-JUN20 R1

## First Page

| CLIENT DETAILS | | LABORATORY DETAILS | |
|---|---|---|---|
| Client | Watters Environmental Group Inc. | Project Specialist | Jill Campbell, B.Sc.,GISAS |
| | | Laboratory | SGS Canada Inc. |
| Address | 9135 Keele St Unit A1<br>Concord, ON<br>L4K 0J4. Canada | Address | 185 Concession St., Lakefield ON, K0L 2H0 |
| Contact | Basil Wong | Telephone | 2165 |
| Telephone | (416) 361-2407 | Facsimile | 705-652-6365 |
| Facsimile | (416) 361-2410 | Email | jill.campbell@sgs.com |
| Email | Bwong@wattersenvironmental.com; labcerts@wattersenvironm | SGS Reference | CA15296-JUN20 |
| Project | 20-0052.02 | Received | 06/15/2020 |
| Order Number | | Approved | 06/19/2020 |
| Samples | Ground Water (4) | Report Number | CA15296-JUN20 R1 |
| | | Date Reported | 12/20/2023 |

COMMENTS

CCME Method Compliance: Analyses were conducted using analytical procedures that comply with the Reference Method for the CWS for Petroleum Hydrocarbons in Soil and have been validated for use at the SGS laboratory, Lakefield, ON site.

Quality Compliance: Instrument performance / calibration quality criteria were met and extraction and analysis limits for holding times were met.

nC6 and nC10 response factors within 30% of response factor for toluene: YES

nC10, nC16 and nC34 response factors within 10% of the average response for the three compounds: YES

C50 response factors within 70% of nC10 + nC16 + nC34 average: YES

Linearity is within 15%: YES

F4G - gravimetric heavy hydrocarbons cannot be added to the C6 to C50 hydrocarbons.
The results for F4 and F4G are both reported and the greater of the two values is to be used in application to the CWS PHC.

Benzo(b)fluoranthene results for comparison to the standard are reported as benzo(b+j)fluoranthene. Benzo(b)fluoranthene and benzo(j)fluoranthene co-elute and cannot be reported individually by the analytical method used.

Temperature of Sample upon Receipt: 7 degrees C
Cooling Agent Present:Yes
Custody Seal Present:Yes

Chain of Custody Number:013903

SIGNATORIES

on behalf of Jill Campbell, B.Sc.,GISAS



## RESULTS - WATER

| | Sample Number | 8 | 9 | 10 | 11 | |
|---|---|---|---|---|---|---|
| | Sample Name | BH2 (MW) | BH1 (MW) | BH100 (MW) | Trip Blank | |
| | Sample Matrix | Ground Water | Ground Water | Ground Water | Ground Water | |
| | Sampled By | Michael Watters | Michael Watters | Michael Watters | Michael Watters | |
| | Sample Date | 15/06/2020 | 15/06/2020 | 15/06/2020 | 15/06/2020 | |
| **Parameter** | **Units** | **RL** | **Result** | **Result** | **Result** | **Result** | **L1** |
| | | | | | | | L1 = REG153 / GROUND WATER / COARSE - TABLE 1 - All Types of Property Uses - UNDEFINED |
| **Petroleum Hydrocarbons (F1)** | | | | | | | |
| **Method: CCME Tier 1 \| Internal ref.: ME-CA-[ENV]GC-LAK-AN-010** | | | | | | | |
| F1 (C6-C10) | µg/L | 25 | < 25 | < 25 | < 25 | --- | 420 |
| F1-BTEX (C6-C10) | µg/L | 25 | < 25 | < 25 | < 25 | --- | |
| **Petroleum Hydrocarbons (F2-F4)** | | | | | | | |
| **Method: CCME Tier 1 \| Internal ref.: ME-CA-[ENV]GC-LAK-AN-010** | | | | | | | |
| F2 (C10-C16) | µg/L | 100 | < 100 | < 100 | < 100 | --- | 150 |
| F3 (C16-C34) | µg/L | 200 | < 200 | < 200 | < 200 | --- | 500 |
| F4 (C34-C50) | µg/L | 200 | < 200 | < 200 | < 200 | --- | 500 |
| Chromatogram returned to baseline at nC50 | Yes / No | - | YES | YES | YES | --- | |
| **Volatile Organics** | | | | | | | |
| **Method: EPA 5030B/8260C \| Internal ref.: ME-CA-[ENV]GC-LAK-AN-004** | | | | | | | |
| Acetone | µg/L | 30 | < 30 | < 30 | < 30 | < 30 | 2700 |
| Bromomethane | µg/L | 0.5 | < 0.5 | < 0.5 | < 0.5 | < 0.5 | 0.89 |
| Carbon tetrachloride | µg/L | 0.2 | < 0.2 | < 0.2 | < 0.2 | < 0.2 | 0.2 |
| Chlorobenzene | µg/L | 0.5 | < 0.5 | < 0.5 | < 0.5 | < 0.5 | 0.5 |
| Chloroform | µg/L | 0.5 | < 0.5 | 1.1 | 1.0 | < 0.5 | 2 |
| 1,2-Dichlorobenzene | µg/L | 0.5 | < 0.5 | < 0.5 | < 0.5 | < 0.5 | 0.5 |
| 1,3-Dichlorobenzene | µg/L | 0.5 | < 0.5 | < 0.5 | < 0.5 | < 0.5 | 0.5 |
| 1,4-Dichlorobenzene | µg/L | 0.5 | < 0.5 | < 0.5 | < 0.5 | < 0.5 | 0.5 |
| Dichlorodifluoromethane | µg/L | 2.0 | < 2 | < 2 | < 2 | < 2 | 590 |
| 1,1-Dichloroethane | µg/L | 0.5 | < 0.5 | < 0.5 | < 0.5 | < 0.5 | 0.5 |
| 1,2-Dichloroethane | µg/L | 0.5 | < 0.5 | < 0.5 | < 0.5 | < 0.5 | 0.5 |
| 1,1-Dichloroethylene | µg/L | 0.5 | < 0.5 | < 0.5 | < 0.5 | < 0.5 | 0.5 |
| trans-1,2-Dichloroethene | µg/L | 0.5 | < 0.5 | < 0.5 | < 0.5 | < 0.5 | 1.6 |
| cis-1,2-Dichloroethene | µg/L | 0.5 | < 0.5 | < 0.5 | < 0.5 | < 0.5 | 1.6 |
| 1,2-Dichloropropane | µg/L | 0.5 | < 0.5 | < 0.5 | < 0.5 | < 0.5 | 0.5 |
| cis-1,3-Dichloropropene | µg/L | 0.5 | < 0.5 | < 0.5 | < 0.5 | < 0.5 | |
| trans-1,3-Dichloropropene | µg/L | 0.5 | < 0.5 | < 0.5 | < 0.5 | < 0.5 | |
| 1,3-dichloropropene (total) | µg/L | 0.5 | < 0.5 | < 0.5 | < 0.5 | < 0.5 | 0.5 |
| Ethylenedibromide | µg/L | 0.2 | < 0.2 | < 0.2 | < 0.2 | < 0.2 | 0.2 |
| n-Hexane | µg/L | 1.0 | < 1 | < 1 | < 1 | < 1 | 5 |
| Methyl ethyl ketone | µg/L | 20 | < 20 | < 20 | < 20 | < 20 | 400 |
| Methyl Isobutyl Ketone | µg/L | 20 | < 20 | < 20 | < 20 | < 20 | 640 |
| Methyl-t-butyl Ether | µg/L | 2.0 | < 2 | < 2 | < 2 | < 2 | 15 |
| Methylene Chloride | µg/L | 0.5 | < 0.5 | < 0.5 | < 0.5 | < 0.5 | 5 |

## RESULTS - WATER

| | | | | | | |
|---|---|---|---|---|---|---|
| **Sample Number** | | 8 | 9 | 10 | 11 | |
| **Sample Name** | | BH2 (MW) | BH1 (MW) | BH100 (MW) | Trip Blank | |
| **Sample Matrix** | | Ground Water | Ground Water | Ground Water | Ground Water | |
| **Sampled By** | | Michael Watters | Michael Watters | Michael Watters | Michael Watters | |
| **Sample Date** | | 15/06/2020 | 15/06/2020 | 15/06/2020 | 15/06/2020 | |
| **Parameter** | **Units** | **RL** | **Result** | **Result** | **Result** | **Result** | **L1** |

L1 = REG153 / GROUND WATER / COARSE - TABLE 1 - All Types of Property Uses - UNDEFINED

### Volatile Organics (continued)

Method: EPA 5030B/8260C | Internal ref.: ME-CA-[ENV]GC-LAK-AN-004

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Styrene | µg/L | 0.5 | < 0.5 | < 0.5 | < 0.5 | < 0.5 | 0.5 |
| Tetrachloroethylene (perchloroethylene) | µg/L | 0.5 | < 0.5 | < 0.5 | < 0.5 | < 0.5 | 0.5 |
| 1,1,1,2-Tetrachloroethane | µg/L | 0.5 | < 0.5 | < 0.5 | < 0.5 | < 0.5 | 1.1 |
| 1,1,2,2-Tetrachloroethane | µg/L | 0.5 | < 0.5 | < 0.5 | < 0.5 | < 0.5 | 0.5 |
| 1,1,1-Trichloroethane | µg/L | 0.5 | < 0.5 | < 0.5 | < 0.5 | < 0.5 | 0.5 |
| 1,1,2-Trichloroethane | µg/L | 0.5 | < 0.5 | < 0.5 | < 0.5 | < 0.5 | 0.5 |
| Trichloroethylene | µg/L | 0.5 | < 0.5 | < 0.5 | < 0.5 | < 0.5 | 0.5 |
| Trichlorofluoromethane | µg/L | 5.0 | < 5 | < 5 | < 5 | < 5 | 150 |
| Vinyl Chloride | µg/L | 0.2 | < 0.2 | < 0.2 | < 0.2 | < 0.2 | 0.5 |
| Benzene | µg/L | 0.5 | < 0.5 | < 0.5 | < 0.5 | < 0.5 | 0.5 |
| Ethylbenzene | µg/L | 0.5 | < 0.5 | < 0.5 | < 0.5 | < 0.5 | 0.5 |
| Toluene | µg/L | 0.5 | < 0.5 | < 0.5 | < 0.5 | < 0.5 | 0.8 |
| Xylene (total) | µg/L | 0.5 | < 0.5 | < 0.5 | < 0.5 | < 0.5 | 72 |
| m/p-xylene | µg/L | 0.5 | < 0.5 | < 0.5 | < 0.5 | < 0.5 | |
| o-xylene | µg/L | 0.5 | < 0.5 | < 0.5 | < 0.5 | < 0.5 | |
| Bromodichloromethane | µg/L | 0.5 | < 0.5 | < 0.5 | < 0.5 | < 0.5 | 2 |
| Bromoform | µg/L | 0.5 | < 0.5 | < 0.5 | < 0.5 | < 0.5 | 5 |
| Dibromochloromethane | µg/L | 0.5 | < 0.5 | < 0.5 | < 0.5 | < 0.5 | 2 |
| Surr 1,2-Dichloroethane-d4 | Surr Rec % | - | 101 | 104 | 103 | 102 | |
| Surr 2-Bromo-1-Chloropropane | Surr Rec % | - | 95 | 97 | 99 | 93 | |
| Surr 4-Bromofluorobenzene | Surr Rec % | - | 96 | 96 | 97 | 94 | |

## LEGEND

### FOOTNOTES

| | |
|---|---|
| **NSS** | Insufficient sample for analysis. |
| **RL** | Reporting Limit. |
| ↑ | Reporting limit raised. |
| ↓ | Reporting limit lowered. |
| **NA** | The sample was not analysed for this analyte |
| **ND** | Non Detect |

Results relate only to the sample tested.
Data reported represent the sample as submitted to SGS. Solid samples expressed on a dry weight basis.
"Temperature Upon Receipt" is representative of the whole shipment and may not reflect the temperature of individual samples.
Analysis conducted on samples submitted pursuant to or as part of Reg. 153/04, are in accordance to the "Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act and Excess Soil Quality" published by the Ministry and dated March 9, 2004 as amended.

SGS provides criteria information (such as regulatory or guideline limits and summary of limit exceedances) as a service. Every attempt is made to ensure the criteria information in this report is accurate and current, however, it is not guaranteed. Comparison to the most current criteria is the responsibility of the client and SGS assumes no responsibility for the accuracy of the criteria levels indicated.

SGS Canada Inc. statement of conformity decision rule does not consider uncertainty when analytical results are compared to a specified standard or regulation.
This document is issued, on the Client's behalf, by the Company under its General Conditions of Service available on request and accessible at http://www.sgs.com/terms_and_conditions.htm.
The Client's attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any other holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. Reproduction of this analytical report in full or in part is prohibited.

This report supersedes all previous versions.

-- End of Analytical Report --

# Request for Laboratory Services and CHAIN OF CUSTODY

SGS Environment, Health & Safety - Lakefield: 185 Concession St., Lakefield, ON K0L 2H0 Phone: 705-652-2000 Fax: 705-652-6365 Web: www.sgs.com/environment
- London: 657 Consortium Court, London, ON, N6E 2S8 Phone: 519-672-4500 Toll Free: 877-848-8060 Fax: 519-672-0361

No: 013903 Page 1 of 1

## Laboratory Information Section - Lab use only

Received By: Oleg Mozhn
Received Date: 6/15/20 (mm/dd/yy)
Received Time: 16:00 (hr : min)
Received By (signature):
Custody Seal Present: Yes ☑ No ☐
Custody Seal Intact: Yes ☑ No ☐
Cooling Agent Present: Yes ☑ No ☐ Type: ice
Temperature Upon Receipt (°C): 7.7.7
LAB LIMS #: QA152960

## REPORT INFORMATION

Company: WEGI
Contact: Basil Wong
Address: 9135 Keele St. Unit A1, Concord, ON
Phone: 416 361 2407
Fax: labcerts@wattersenvironmental.com
Email: Bwong@wattersenvironmental.com

## INVOICE INFORMATION

☑ (same as Report Information)
Company:
Contact: Brooklyn Espinola
Address:
Phone:
Email: ap@wattersenvironmental.com

Quotation #:
P.O. #:
Project #: 20-0052.02
Site Location/ID:

## TURNAROUND TIME (TAT) REQUIRED

☑ Regular TAT (5-7days)
TAT's are quoted in business days (exclude statutory holidays & weekends). Samples received after 6pm or on weekends: TAT begins next business day
RUSH TAT (Additional Charges May Apply): ☐ 1 Day ☐ 2 Days ☐ 3 Days ☐ 4 Days
PLEASE CONFIRM RUSH FEASIBILITY WITH SGS REPRESENTATIVE PRIOR TO SUBMISSION

Specify Due Date:

NOTE: DRINKING (POTABLE) WATER SAMPLES FOR HUMAN CONSUMPTION MUST BE SUBMITTED WITH SGS DRINKING WATER CHAIN OF CUSTODY

## REGULATIONS

**Regulation 153/04:** ☐ Table 1 ☑ Res/Park ☐ Table 2 ☐ Ind/Com ☐ Table 3 ☐ Agri/Other ☑ Table 8+9
Soil Texture: ☑ Coarse ☐ Medium ☐ Fine

**Other Regulations:** ☐ Reg 347/558 (3 Day min TAT) ☐ PWQO ☐ MMER ☐ CCME ☐ Other: ☐ MISA

**Sewer By-Law:** ☐ Sanitary ☐ Storm Municipality:

RECORD OF SITE CONDITION (RSC) ☑ YES ☐ NO

## ANALYSIS REQUESTED

| | SAMPLE IDENTIFICATION | DATE SAMPLED | TIME SAMPLED | # OF BOTTLES | MATRIX |
|---|---|---|---|---|---|
| 1 | BH2 (MW) | 06/15/20 | 8:00 | 6 | GW |
| 2 | BH1 (MW) | 06/15/20 | 9:00 | 6 | GW |
| 3 | BH100 (MW) | 06/15/20 | 10:00 | 6 | GW |
| 4 | Trip Blank | | | | |
| 5 | | | | | |
| 6 | | | | | |
| 7 | | | | | |
| 8 | | | | | |
| 9 | | | | | |
| 10 | | | | | |
| 11 | | | | | |
| 12 | | | | | |

| | Field Filtered (Y/N) | M&I: Metals & Inorganics (incl CrVI, CN, Hg pH,(B(HWS),EC,SAR–soil) (Cl, Na–water) | M&I: Full Metals Suite (ICP metals plus B(HWS-soil only) Hg, CrVI | M&I: ICP Metals only (Sb,As,Ba,Be,B,Cd,Cr,Co,Cu,Pb,Mo,Ni, Se,Ag,Tl,U,V,Zn | SVOC: PAHs only | SVOC: SVOCs all incl PAHs, ABNs, CPs | PCB: PCBs Total ☐ Aroclor ☐ | PHC: F1-F4 + BTEX | PHC: F1-F4 only no BTEX | VOC: VOCs all incl BTEX | VOC: BTEX only | Pest: Pesticides Organochlorine or specify other | Other (please specify) | Other | Other | Other | Other | Other: Sewer Use: Specify pkg: | Other: Water Characterization Pkg General ☐ Extended ☐ | TCLP: Specify TCLP tests ☐M&I ☐VOC ☐PCB ☐B(a)P ☐ABN ☐Ignit. | COMMENTS: |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | | | | | | | | ✓ | | ✓ | | | | | | | | | | | |
| 2 | | | | | | | | ✓ | | ✓ | | | | | | | | | | | |
| 3 | | | | | | | | ✓ | | ✓ | | | | | | | | | | | |
| 4 | | | | | | | | | | ✓ | | | | | | | | | | | |

Observations/Comments/Special Instructions

Sampled By (NAME): Michael Watters Signature: Michael Watters Date: 06/15/20 (mm/dd/yy)
Relinquished by (NAME): Michael Watters Signature: Michael Watters Date: 06/15/20 (mm/dd/yy)

Pink Copy - Client
Yellow & White Copy - SGS

Revision #: 1.2
Date of Issue: 09 Sept, 2019

Note: Submission of samples to SGS is acknowledgement that you have been provided direction on sample collection/handling and transportation of samples. {2} Submission of samples to SGS is considered authorization for completion of work. Signatures may appear on this form or be retained on file in the contract, or in an alternative format (e.g. shipping documents). {3} Results may be sent by email to an unlimited number of addresses for no additional cost. Fax is available upon request. This document is issued by the Company under its General Conditions of Service accessible at http://www.sgs.com/terms_and_conditions.htm. (Printed copies are available upon request.) Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein.

# FINAL REPORT

CA15392-MAY20 R1

## First Page

| CLIENT DETAILS | | LABORATORY DETAILS | |
|---|---|---|---|
| Client | Watters Environmental Group Inc. | Project Specialist | Jill Campbell, B.Sc.,GISAS |
| | | Laboratory | SGS Canada Inc. |
| Address | 9135 Keele St Unit A1<br>Concord, ON<br>L4K 0J4. Canada | Address | 185 Concession St., Lakefield ON, K0L 2H0 |
| Contact | Brooke Wallace | Telephone | 2165 |
| Telephone | (416) 361-2407 | Facsimile | 705-652-6365 |
| Facsimile | (416) 361-2410 | Email | jill.campbell@sgs.com |
| Email | bwallace@wattersenvironmental.com; labcerts@wattersenviror | SGS Reference | CA15392-MAY20 |
| Project | 20-0052.01 | Received | 05/22/2020 |
| Order Number | | Approved | 05/28/2020 |
| Samples | Ground Water (2) | Report Number | CA15392-MAY20 R1 |
| | | Date Reported | 11/16/2023 |

COMMENTS

CCME Method Compliance: Analyses were conducted using analytical procedures that comply with the Reference Method for the CWS for Petroleum Hydrocarbons in Soil and have been validated for use at the SGS laboratory, Lakefield, ON site.

Quality Compliance: Instrument performance / calibration quality criteria were met and extraction and analysis limits for holding times were met.

nC6 and nC10 response factors within 30% of response factor for toluene: YES

nC10, nC16 and nC34 response factors within 10% of the average response for the three compounds: YES

C50 response factors within 70% of nC10 + nC16 + nC34 average: YES

Linearity is within 15%: YES

F4G - gravimetric heavy hydrocarbons cannot be added to the C6 to C50 hydrocarbons.
The results for F4 and F4G are both reported and the greater of the two values is to be used in application to the CWS PHC.

Benzo(b)fluoranthene results for comparison to the standard are reported as benzo(b+j)fluoranthene. Benzo(b)fluoranthene and benzo(j)fluoranthene co-elute and cannot be reported individually by the analytical method used.

Temperature of Sample upon Receipt: 4 degrees C
Cooling Agent Present:Yes
Custody Seal Present:Yes

Chain of Custody Number:013647

SIGNATORIES

on behalf of Jill Campbell, B.Sc.,GISAS



## RESULTS - WATER

| | | | |
|---|---|---|---|
| **Sample Number** | 8 | 9 | |
| **Sample Name** | EW1 | EW2 | |
| **Sample Matrix** | Ground Water | Ground Water | |
| **Sampled By** | Brooke Wallace | Brooke Wallace | |
| **Sample Date** | 22/05/2020 | 22/05/2020 | |

| Parameter | Units | RL | Result | Result | L1 |
|---|---|---|---|---|---|
| | | | | | L1 = REG153 / GROUND WATER / COARSE - TABLE 1 - All Types of Property Uses - UNDEFINED |
| **Petroleum Hydrocarbons (F1)** | | | | | |
| **Method: CCME Tier 1 \| Internal ref.: ME-CA-[ENV]GC-LAK-AN-010** | | | | | |
| F1 (C6-C10) | µg/L | 25 | < 25 | < 25 | 420 |
| F1-BTEX (C6-C10) | µg/L | 25 | < 25 | < 25 | |
| **Petroleum Hydrocarbons (F2-F4)** | | | | | |
| **Method: CCME Tier 1 \| Internal ref.: ME-CA-[ENV]GC-LAK-AN-010** | | | | | |
| F2 (C10-C16) | µg/L | 100 | < 100 | < 100 | 150 |
| F3 (C16-C34) | µg/L | 200 | < 200 | < 200 | 500 |
| F4 (C34-C50) | µg/L | 200 | < 200 | < 200 | 500 |
| Chromatogram returned to baseline at nC50 | Yes / No | - | YES | YES | |
| **Volatile Organics** | | | | | |
| **Method: EPA 5030B/8260C \| Internal ref.: ME-CA-[ENV]GC-LAK-AN-004** | | | | | |
| Acetone | µg/L | 30 | < 30 | < 30 | 2700 |
| Bromomethane | µg/L | 0.5 | < 0.5 | < 0.5 | 0.89 |
| Carbon tetrachloride | µg/L | 0.2 | < 0.2 | < 0.2 | 0.2 |
| Chlorobenzene | µg/L | 0.5 | < 0.5 | < 0.5 | 0.5 |
| Chloroform | µg/L | 0.5 | < 0.5 | 2.4 | 2 |
| 1,2-Dichlorobenzene | µg/L | 0.5 | < 0.5 | < 0.5 | 0.5 |
| 1,3-Dichlorobenzene | µg/L | 0.5 | < 0.5 | < 0.5 | 0.5 |
| 1,4-Dichlorobenzene | µg/L | 0.5 | < 0.5 | < 0.5 | 0.5 |
| Dichlorodifluoromethane | µg/L | 2.0 | < 2 | < 2 | 590 |
| 1,1-Dichloroethane | µg/L | 0.5 | < 0.5 | < 0.5 | 0.5 |
| 1,2-Dichloroethane | µg/L | 0.5 | < 0.5 | < 0.5 | 0.5 |
| 1,1-Dichloroethylene | µg/L | 0.5 | < 0.5 | < 0.5 | 0.5 |
| trans-1,2-Dichloroethene | µg/L | 0.5 | < 0.5 | < 0.5 | 1.6 |
| cis-1,2-Dichloroethene | µg/L | 0.5 | < 0.5 | < 0.5 | 1.6 |
| 1,2-Dichloropropane | µg/L | 0.5 | < 0.5 | < 0.5 | 0.5 |
| cis-1,3-Dichloropropene | µg/L | 0.5 | < 0.5 | < 0.5 | |
| trans-1,3-Dichloropropene | µg/L | 0.5 | < 0.5 | < 0.5 | |
| Ethylenedibromide | µg/L | 0.2 | < 0.2 | < 0.2 | 0.2 |
| n-Hexane | µg/L | 1.0 | < 1 | < 1 | 5 |
| Methyl ethyl ketone | µg/L | 20 | < 20 | < 20 | 400 |
| Methyl Isobutyl Ketone | µg/L | 20 | < 20 | < 20 | 640 |
| Methyl-t-butyl Ether | µg/L | 2.0 | < 2 | < 2 | 15 |
| Methylene Chloride | µg/L | 0.5 | < 0.5 | < 0.5 | 5 |
| Styrene | µg/L | 0.5 | < 0.5 | < 0.5 | 0.5 |

## RESULTS - WATER

| | | | |
|---|---|---|---|
| **Sample Number** | 8 | 9 | |
| **Sample Name** | EW1 | EW2 | |
| **Sample Matrix** | Ground Water | Ground Water | |
| **Sampled By** | Brooke Wallace | Brooke Wallace | |
| **Sample Date** | 22/05/2020 | 22/05/2020 | |

| Parameter | Units | RL | Result | Result | L1 |
|---|---|---|---|---|---|
| | | | | | L1 = REG153 / GROUND WATER / COARSE - TABLE 1 - All Types of Property Uses - UNDEFINED |
| **Volatile Organics (continued)** | | | | | |
| **Method: EPA 5030B/8260C \| Internal ref.: ME-CA-[ENV]GC-LAK-AN-004** | | | | | |
| Tetrachloroethylene (perchloroethylene) | µg/L | 0.5 | < 0.5 | < 0.5 | 0.5 |
| 1,1,1,2-Tetrachloroethane | µg/L | 0.5 | < 0.5 | < 0.5 | 1.1 |
| 1,1,2,2-Tetrachloroethane | µg/L | 0.5 | < 0.5 | < 0.5 | 0.5 |
| 1,1,1-Trichloroethane | µg/L | 0.5 | < 0.5 | < 0.5 | 0.5 |
| 1,1,2-Trichloroethane | µg/L | 0.5 | < 0.5 | < 0.5 | 0.5 |
| Trichloroethylene | µg/L | 0.5 | < 0.5 | < 0.5 | 0.5 |
| Trichlorofluoromethane | µg/L | 5.0 | < 5 | < 5 | 150 |
| Vinyl Chloride | µg/L | 0.2 | < 0.2 | < 0.2 | 0.5 |
| Benzene | µg/L | 0.5 | < 0.5 | < 0.5 | 0.5 |
| Ethylbenzene | µg/L | 0.5 | < 0.5 | < 0.5 | 0.5 |
| Toluene | µg/L | 0.5 | < 0.5 | < 0.5 | 0.8 |
| Xylene (total) | µg/L | 0.5 | < 0.5 | < 0.5 | 72 |
| m/p-xylene | µg/L | 0.5 | < 0.5 | < 0.5 | |
| o-xylene | µg/L | 0.5 | < 0.5 | < 0.5 | |
| Bromodichloromethane | µg/L | 0.5 | < 0.5 | 0.5 | 2 |
| Bromoform | µg/L | 0.5 | < 0.5 | < 0.5 | 5 |
| Dibromochloromethane | µg/L | 0.5 | < 0.5 | < 0.5 | 2 |
| Surr 1,2-Dichloroethane-d4 | Surr Rec % | - | 100 | 100 | |
| Surr 2-Bromo-1-Chloropropane | Surr Rec % | - | 82 | 85 | |
| Surr 4-Bromofluorobenzene | Surr Rec % | - | 99 | 99 | |

## LEGEND

### FOOTNOTES

| | |
|---|---|
| **NSS** | Insufficient sample for analysis. |
| **RL** | Reporting Limit. |
| ↑ | Reporting limit raised. |
| ↓ | Reporting limit lowered. |
| **NA** | The sample was not analysed for this analyte |
| **ND** | Non Detect |

Results relate only to the sample tested.
Data reported represent the sample as submitted to SGS. Solid samples expressed on a dry weight basis.
"Temperature Upon Receipt" is representative of the whole shipment and may not reflect the temperature of individual samples.
Analysis conducted on samples submitted pursuant to or as part of Reg. 153/04, are in accordance to the "Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act and Excess Soil Quality" published by the Ministry and dated March 9, 2004 as amended.

SGS provides criteria information (such as regulatory or guideline limits and summary of limit exceedances) as a service. Every attempt is made to ensure the criteria information in this report is accurate and current, however, it is not guaranteed. Comparison to the most current criteria is the responsibility of the client and SGS assumes no responsibility for the accuracy of the criteria levels indicated.

SGS Canada Inc. statement of conformity decision rule does not consider uncertainty when analytical results are compared to a specified standard or regulation.
This document is issued, on the Client's behalf, by the Company under its General Conditions of Service available on request and accessible at http://www.sgs.com/terms_and_conditions.htm.
The Client's attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any other holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. Reproduction of this analytical report in full or in part is prohibited.

This report supersedes all previous versions.

-- End of Analytical Report --

# SGS Request for Laboratory Services and CHAIN OF CUSTODY

orange AR

No: 013647

Page 1 of 1

Environment, Health & Safety - Lakefield: 185 Concession St., Lakefield, ON K0L 2H0 Phone: 705-652-2000 Fax: 705-652-6365 Web: www.sgs.com/environment
- London: 657 Consortium Court, London, ON, N6E 2S8 Phone: 519-672-4500 Toll Free: 877-848-8060 Fax: 519-672-0361

**Laboratory Information Section - Lab use only**

Received By: DAVID REID
Received By (signature): DReid
Received Date: 05/22/20 (mm/dd/yy)
Received Time: 15:55 (hr : min)
Custody Seal Present: Yes ☑ No ☐
Custody Seal Intact: Yes ☑ No ☐
Cooling Agent Present: Yes ☑ No ☐ Type: ice
Temperature Upon Receipt (°C) 3.4, 5
LAB LIMS #: SA15392-may20

| REPORT INFORMATION | INVOICE INFORMATION |
|---|---|
| Company: Wattersenvironmental | ☑ (same as Report Information) |
| Contact: Brooke Wallace | Company: |
| Address: 9135 Keele ST, Unit A1 Concord, ON L4K 0J4 | Contact: Brooklyn Espinola |
| Phone: 416-361-2407 | Address: |
| Fax: 416-361-2410 | Phone: |
| Email: labcerts@wattersenvironmental.com | Email: ap@wattersenvironmental.com |

Quotation #:
P.O. #:
Project #: 20-0052.01
Site Location/ID:

**TURNAROUND TIME (TAT) REQUIRED**

☑ Regular TAT (5-7days)

TAT's are quoted in business days (exclude statutory holidays & weekends). Samples received after 6pm or on weekends: TAT begins next business day

**RUSH TAT (Additional Charges May Apply):** ☐ 1 Day ☐ 2 Days ☐ 3 Days ☐ 4 Days

**PLEASE CONFIRM RUSH FEASIBILITY WITH SGS REPRESENTATIVE PRIOR TO SUBMISSION**

Specify Due Date:

**NOTE:** DRINKING (POTABLE) WATER SAMPLES FOR HUMAN CONSUMPTION MUST BE SUBMITTED WITH SGS DRINKING WATER CHAIN OF CUSTODY

**REGULATIONS**

**Regulation 153/04:**
☐ Table 1 ☑ Res/Park Soil Texture: ☑ Coarse
☐ Table 2 ☐ Ind/Com ☐ Medium
☐ Table 3 ☐ Agri/Other ☐ Fine
☑ Table 8/9

**Other Regulations:**
☐ Reg 347/558 (3 Day min TAT)
☐ PWQO ☐ MMER
☐ CCME ☐ Other:
☐ MISA

**Sewer By-Law:**
☐ Sanitary
☐ Storm
Municipality:

RECORD OF SITE CONDITION (RSC) ☐ YES ☐ NO

**ANALYSIS REQUESTED**

| | SAMPLE IDENTIFICATION | DATE SAMPLED | TIME SAMPLED | # OF BOTTLES | MATRIX |
|---|---|---|---|---|---|
| 1 | EW1 | May 22/20 | 9:15A | 6 | GW |
| 2 | EW2 | May 22/20 | 10:15A | 6 | GW |
| 3 | | | | | |
| 4 | | | | | |
| 5 | | | | | |
| 6 | | | | | |
| 7 | | | | | |
| 8 | | | | | |
| 9 | | | | | |
| 10 | | | | | |
| 11 | | | | | |
| 12 | | | | | |

| | Field Filtered (Y/N) | Metals & Inorganics incl CrVI, CN,Hg pH,(B(HWS),EC,SAR–soil) (Cl, Na–water) | Full Metals Suite ICP metals plus B(HWS-soil only) Hg, CrVI | ICP Metals only Sb,As,Ba,Be,B,Cd,Cr,Co,Cu,Pb,Mo,Ni, Se,Ag,Tl,U,V,Zn | PAHs only | SVOCs all incl PAHs, ABNs, CPs | PCBs Total ☐ Aroclor ☐ | F1-F4 + BTEX | F1-F4 only no BTEX | VOCs all incl BTEX | BTEX only | Pesticides Organochlorine or specify other | Other (please specify) | Sewer Use: Specify pkg: | Water Characterization Pkg General ☐ Extended ☐ | TCLP Specify TCLP tests ☐M&I ☐VOC ☐PCB ☐B(a)P ☐ABN ☐Ignit. | COMMENTS: |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | | | | | | | | ✓ | | ✓ | | | | | | | |
| 2 | | | | | | | | ✓ | | ✓ | | | | | | | |
| 3 | | | | | | | | | | | | | | | | | |
| 4 | | | | | | | | | | | | | | | | | |
| 5 | | | | | | | | | | | | | | | | | |
| 6 | | | | | | | | | | | | | | | | | |
| 7 | | | | | | | | | | | | | | | | | |
| 8 | | | | | | | | | | | | | | | | | |
| 9 | | | | | | | | | | | | | | | | | |
| 10 | | | | | | | | | | | | | | | | | |
| 11 | | | | | | | | | | | | | | | | | |
| 12 | | | | | | | | | | | | | | | | | |

Observations/Comments/Special Instructions: Please also send report to bwong@wattersenvironmental.com

Sampled By (NAME): Brooke Wallace Signature: Date: 05/22/20 (mm/dd/yy)
Relinquished by (NAME): Brooke Wallace Signature: Date: 05/22/20 (mm/dd/yy)

Pink Copy - Client
Yellow & White Copy - SGS

Revision #: 1.2
Date of Issue: 09 Sept, 2019

**Note:** Submission of samples to SGS is acknowledgement that you have been provided direction on sample collection/handling and transportation of samples. {2} Submission of samples to SGS is considered authorization for completion of work. Signatures may appear on this form or be retained on file in the contract, or in an alternative format (e.g. shipping documents). {3} Results may be sent by email to an unlimited number of addresses for no additional cost. Fax is available upon request. This document is issued by the Company under its General Conditions of Service accessible at http://www.sgs.com/terms_and_conditions.htm. (Printed copies are available upon request.) Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein.





# FINAL REPORT

## CA40037-OCT23 R1

## 20-0052.04

Prepared for

Watters Environmental Group Inc.

# FINAL REPORT

CA40037-OCT23 R1

## First Page

| CLIENT DETAILS | | LABORATORY DETAILS | |
|---|---|---|---|
| Client | Watters Environmental Group Inc. | Project Specialist | Jill Campbell, B.Sc.,GISAS |
| | | Laboratory | SGS Canada Inc. |
| Address | 9135 Keele St Unit A1<br>Concord, ON<br>L4K 0J4. Canada | Address | 185 Concession St., Lakefield ON, K0L 2H0 |
| Contact | Natalie Wright | Telephone | 2165 |
| Telephone | (416) 361-2407 | Facsimile | 705-652-6365 |
| Facsimile | (416) 361-2410 | Email | jill.campbell@sgs.com |
| Email | NWright@wattersenvironmental.com; labcerts@wattersenviron | SGS Reference | CA40037-OCT23 |
| Project | 20-0052.04 | Received | 10/05/2023 |
| Order Number | | Approved | 10/16/2023 |
| Samples | Ground Water (10) | Report Number | CA40037-OCT23 R1 |
| | | Date Reported | 10/18/2023 |

COMMENTS

CCME Method Compliance: Analyses were conducted using analytical procedures that comply with the Reference Method for the CWS for Petroleum Hydrocarbons in Soil and have been validated for use at the SGS laboratory, Lakefield, ON site.

Quality Compliance: Instrument performance / calibration quality criteria were met and extraction and analysis limits for holding times were met.

nC6 and nC10 response factors within 30% of response factor for toluene: YES

nC10, nC16 and nC34 response factors within 10% of the average response for the three compounds: YES

C50 response factors within 70% of nC10 + nC16 + nC34 average: YES

Linearity is within 15%: YES

Benzo(b)fluoranthene results for comparison to the standard are reported as benzo(b+j)fluoranthene. Benzo(b)fluoranthene and benzo(j)fluoranthene co-elute and cannot be reported individually by the analytical method used.

Temperature of Sample upon Receipt: 7 degrees C
Cooling Agent Present: Yes
Custody Seal Present: Yes

Chain of Custody Number: 032365

BH23 - 4 (MW) Surrogate 2-Methylnaphthalene-D10 is outside of control limits due to sample matrix. The overall quality control has been assessed and determined to be acceptable.

SIGNATORIES

Jill Campbell, B.Sc.,GISAS



TABLE OF CONTENTS

First Page..... 1-2

Index..... 3

Results..... 4-14

Exceedance Summary..... 15

Holding Time Summary..... 16-19

QC Summary..... 20-29

Legend..... 30

Annexes..... 31

**Client:** Watters Environmental Group Inc.
**Project:** 20-0052.04
**Project Manager:** Natalie Wright
**Samplers:** Michael Watters

MATRIX: WATER

L1 = REG153 / GROUND WATER / COARSE - TABLE 1 - All Types of Property Uses - UNDEFINED

| Parameter | Units | RL | L1 | Sample Number | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Sample Name | BH1 (MW) | BH2 (MW) | BH23 - 1 (MW) | BH23 - 2 (MW) | BH23 - 1000 | BH23 - 3 (MW) | BH23 - 4 (MW) | EW2 |
| | | | | Sample Matrix | Ground Water | Ground Water | Ground Water | Ground Water | Ground Water | Ground Water | Ground Water | Ground Water |
| | | | | Sample Date | 04/10/2023 | 04/10/2023 | 04/10/2023 | 04/10/2023 | 04/10/2023 | 04/10/2023 | 04/10/2023 | 04/10/2023 |
| | | | | | Result | Result | Result | Result | Result | Result | Result | Result |
| **BTEX** | | | | | | | | | | | | |
| Benzene | µg/L | 0.5 | 0.5 | | --- | --- | < 0.5 | < 0.5 | < 0.5 | < 0.5 | < 0.5 | < 0.5 |
| Ethylbenzene | µg/L | 0.5 | 0.5 | | --- | --- | < 0.5 | < 0.5 | < 0.5 | < 0.5 | < 0.5 | < 0.5 |
| Toluene | µg/L | 0.5 | 0.8 | | --- | --- | < 0.5 | < 0.5 | < 0.5 | < 0.5 | < 0.5 | < 0.5 |
| Xylene (total) | µg/L | 0.5 | 72 | | --- | --- | < 0.5 | < 0.5 | < 0.5 | < 0.5 | < 0.5 | < 0.5 |
| m/p-xylene | µg/L | 0.5 | | | --- | --- | < 0.5 | < 0.5 | < 0.5 | < 0.5 | < 0.5 | < 0.5 |
| o-xylene | µg/L | 0.5 | | | --- | --- | < 0.5 | < 0.5 | < 0.5 | < 0.5 | < 0.5 | < 0.5 |
| **Hydrides** | | | | | | | | | | | | |
| Antimony | µg/L | 0.9 | 1.5 | | 1.3 | < 0.9 | < 0.9 | < 0.9 | < 0.9 | 2.2 | < 0.9 | --- |
| Arsenic | µg/L | 0.2 | 13 | | 0.8 | 0.9 | 0.4 | < 0.2 | 0.4 | 0.6 | 0.4 | --- |
| Selenium | µg/L | 0.04 | 5 | | 2.25 | 2.73 | 2.04 | 2.05 | 2.02 | 3.49 | 0.61 | --- |
| **Metals and Inorganics** | | | | | | | | | | | | |
| Barium | µg/L | 0.08 | 610 | | 963 | 915 | 115 | 269 | 116 | 203 | 114 | --- |
| Beryllium | µg/L | 0.007 | 0.5 | | 0.040 | 0.080 | < 0.007 | < 0.007 | 0.007 | 0.050 | 0.008 | --- |
| Boron | µg/L | 2 | 1700 | | 96 | 85 | 108 | 78 | 109 | 163 | 88 | --- |
| Cadmium | µg/L | 0.003 | 0.5 | | 0.040 | 0.010 | 0.012 | 0.010 | 0.012 | 0.020 | 0.003 | --- |
| Chromium | µg/L | 0.08 | 11 | | 7.50 | 7.17 | 2.09 | 1.49 | 2.14 | 1.96 | 0.70 | --- |
| Cobalt | µg/L | 0.004 | 3.8 | | 0.760 | 0.450 | 0.610 | 0.371 | 0.628 | 2.05 | 0.212 | --- |
| Copper | µg/L | 0.2 | 5 | | 5.5 | 5.2 | 3.1 | 3.3 | 3.4 | 3.5 | 1.9 | --- |
| Lead | µg/L | 0.09 | 1.9 | | 0.10 | < 0.09 | 0.10 | < 0.09 | 0.11 | < 0.09 | < 0.09 | --- |
| Molybdenum | µg/L | 0.04 | 23 | | 3.66 | 8.42 | 10.6 | 3.91 | 9.97 | 10.3 | 2.06 | --- |
| Nickel | µg/L | 0.1 | 14 | | 8.3 | 1.1 | 4.1 | 3.3 | 4.2 | 4.6 | 1.6 | --- |

**Client:** Watters Environmental Group Inc.
**Project:** 20-0052.04
**Project Manager:** Natalie Wright
**Samplers:** Michael Watters

MATRIX: WATER

L1 = REG153 / GROUND WATER / COARSE - TABLE 1 - All Types of Property Uses - UNDEFINED

| Parameter | Units | RL | L1 | Sample Number 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Sample Name: BH1 (MW) | BH2 (MW) | BH23 - 1 (MW) | BH23 - 2 (MW) | BH23 - 1000 | BH23 - 3 (MW) | BH23 - 4 (MW) | EW2 |
| | | | | Sample Matrix: Ground Water | Ground Water | Ground Water | Ground Water | Ground Water | Ground Water | Ground Water | Ground Water |
| | | | | Sample Date: 04/10/2023 | 04/10/2023 | 04/10/2023 | 04/10/2023 | 04/10/2023 | 04/10/2023 | 04/10/2023 | 04/10/2023 |
| | | | | Result | Result | Result | Result | Result | Result | Result | Result |
| **Metals and Inorganics (continued)** | | | | | | | | | | | |
| Silver | µg/L | 0.05 | 0.3 | 0.390 | 0.230 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | --- |
| Thallium | µg/L | 0.005 | 0.5 | 0.020 | 0.070 | 0.028 | 0.037 | 0.032 | 0.020 | < 0.005 | --- |
| Uranium | µg/L | 0.002 | 8.9 | 0.980 | 1.11 | 0.397 | 0.637 | 0.407 | 0.570 | 0.267 | --- |
| Vanadium | µg/L | 0.01 | 3.9 | 1.92 | 2.06 | 1.20 | 0.77 | 1.24 | 1.35 | 0.97 | --- |
| Zinc | µg/L | 2 | 160 | 7 | 6 | 12 | 9 | 12 | 8 | 5 | --- |
| **Na** | | | | | | | | | | | |
| Sodium | µg/L | 10 | 490000 | 3910000 | 3350000 | 909000 | 664000 | 907000 | 1020000 | 155000 | --- |
| **Other (ORP)** | | | | | | | | | | | |
| Mercury (total) | µg/L | 0.01 | 0.1 | < 0.01 | < 0.01 | 0.06 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | --- |
| pH | No unit | 0.05 | | 7.35 | 7.41 | 7.63 | 7.40 | 7.66 | 7.35 | 7.25 | --- |
| Chloride | µg/L | 1000 | 790000 | 7200000 | 6900000 | 1600000 | 1600000 | 1600000 | 2500000 | 320000 | --- |
| Chromium VI | µg/L | 0.2 | 25 | 2.2 | 1.7 | 0.5 | 0.8 | 0.6 | < 0.2 | 0.3 | --- |
| Cyanide (free) | µg/L | 2 | 5 | 4 | 5 | < 2 | < 2 | < 2 | < 2 | < 2 | --- |

**Client:** Watters Environmental Group Inc.
**Project:** 20-0052.04
**Project Manager:** Natalie Wright
**Samplers:** Michael Watters

MATRIX: WATER

L1 = REG153 / GROUND WATER / COARSE - TABLE 1 - All Types of Property Uses - UNDEFINED

| Parameter | Units | RL | L1 | Sample Number | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Sample Name | BH1 (MW) | BH2 (MW) | BH23 - 1 (MW) | BH23 - 2 (MW) | BH23 - 1000 | BH23 - 3 (MW) | BH23 - 4 (MW) | EW2 |
| | | | | Sample Matrix | Ground Water | Ground Water | Ground Water | Ground Water | Ground Water | Ground Water | Ground Water | Ground Water |
| | | | | Sample Date | 04/10/2023 | 04/10/2023 | 04/10/2023 | 04/10/2023 | 04/10/2023 | 04/10/2023 | 04/10/2023 | 04/10/2023 |
| | | | | | Result | Result | Result | Result | Result | Result | Result | Result |
| **PAHs** | | | | | | | | | | | | |
| Acenaphthene | µg/L | 0.1 | 4.1 | | < 0.1 | < 0.1 | < 0.1 | < 0.1 | < 0.1 | < 0.1 | < 0.1 | --- |
| Acenaphthylene | µg/L | 0.1 | 1 | | < 0.1 | < 0.1 | < 0.1 | < 0.1 | < 0.1 | < 0.1 | < 0.1 | --- |
| Anthracene | µg/L | 0.1 | 0.1 | | < 0.1 | < 0.1 | < 0.1 | < 0.1 | < 0.1 | < 0.1 | < 0.1 | --- |
| Benzo(a)anthracene | µg/L | 0.1 | 0.2 | | < 0.1 | < 0.1 | < 0.1 | < 0.1 | < 0.1 | < 0.1 | < 0.1 | --- |
| Benzo(a)pyrene | µg/L | 0.01 | 0.01 | | 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | --- |
| Benzo(b+j)fluoranthene | µg/L | 0.1 | 0.1 | | < 0.1 | < 0.1 | < 0.1 | < 0.1 | < 0.1 | < 0.1 | < 0.1 | --- |
| Benzo(ghi)perylene | µg/L | 0.2 | 0.2 | | < 0.2 | < 0.2 | < 0.2 | < 0.2 | < 0.2 | < 0.2 | < 0.2 | --- |
| Benzo(k)fluoranthene | µg/L | 0.1 | 0.1 | | < 0.1 | < 0.1 | < 0.1 | < 0.1 | < 0.1 | < 0.1 | < 0.1 | --- |
| Chrysene | µg/L | 0.1 | 0.1 | | < 0.1 | < 0.1 | < 0.1 | < 0.1 | < 0.1 | < 0.1 | < 0.1 | --- |
| Dibenzo(a,h)anthracene | µg/L | 0.1 | 0.2 | | < 0.1 | < 0.1 | < 0.1 | < 0.1 | < 0.1 | < 0.1 | < 0.1 | --- |
| Fluoranthene | µg/L | 0.1 | 0.4 | | < 0.1 | < 0.1 | < 0.1 | < 0.1 | < 0.1 | < 0.1 | < 0.1 | --- |
| Fluorene | µg/L | 0.1 | 120 | | < 0.1 | < 0.1 | < 0.1 | < 0.1 | < 0.1 | < 0.1 | < 0.1 | --- |
| Indeno(1,2,3-cd)pyrene | µg/L | 0.2 | 0.2 | | < 0.2 | < 0.2 | < 0.2 | < 0.2 | < 0.2 | < 0.2 | < 0.2 | --- |
| 1-Methylnaphthalene | µg/L | 0.5 | | | < 0.5 | < 0.5 | < 0.5 | < 0.5 | < 0.5 | < 0.5 | < 0.5 | --- |
| 2-Methylnaphthalene | µg/L | 0.5 | | | < 0.5 | < 0.5 | < 0.5 | < 0.5 | < 0.5 | < 0.5 | < 0.5 | --- |
| Methylnaphthalene, 2-(1-) | µg/L | 0.5 | 2 | | < 0.5 | < 0.5 | < 0.5 | < 0.5 | < 0.5 | < 0.5 | < 0.5 | --- |
| Naphthalene | µg/L | 0.5 | 7 | | < 0.5 | < 0.5 | < 0.5 | < 0.5 | < 0.5 | < 0.5 | < 0.5 | --- |
| Phenanthrene | µg/L | 0.1 | 0.1 | | < 0.1 | < 0.1 | < 0.1 | < 0.1 | < 0.1 | < 0.1 | < 0.1 | --- |
| Pyrene | µg/L | 0.1 | 0.2 | | < 0.1 | < 0.1 | < 0.1 | < 0.1 | < 0.1 | < 0.1 | < 0.1 | --- |

**Client:** Watters Environmental Group Inc.
**Project:** 20-0052.04
**Project Manager:** Natalie Wright
**Samplers:** Michael Watters

MATRIX: WATER

L1 = REG153 / GROUND WATER / COARSE - TABLE 1 - All Types of Property Uses - UNDEFINED

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | **Sample Number** | | | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 |
| | **Sample Name** | | | BH1 (MW) | BH2 (MW) | BH23 - 1 (MW) | BH23 - 2 (MW) | BH23 - 1000 | BH23 - 3 (MW) | BH23 - 4 (MW) | EW2 |
| | **Sample Matrix** | | | Ground Water | Ground Water | Ground Water | Ground Water | Ground Water | Ground Water | Ground Water | Ground Water |
| | **Sample Date** | | | 04/10/2023 | 04/10/2023 | 04/10/2023 | 04/10/2023 | 04/10/2023 | 04/10/2023 | 04/10/2023 | 04/10/2023 |
| **Parameter** | **Units** | **RL** | **L1** | **Result** | **Result** | **Result** | **Result** | **Result** | **Result** | **Result** | **Result** |
| **PHCs** | | | | | | | | | | | |
| F1 (C6-C10) | µg/L | 25 | 420 | --- | --- | < 25 | < 25 | < 25 | < 25 | < 25 | --- |
| F1-BTEX (C6-C10) | µg/L | 25 | | --- | --- | < 25 | < 25 | < 25 | < 25 | < 25 | --- |
| F2 (C10-C16) | µg/L | 100 | 150 | --- | --- | < 100 | < 100 | < 100 | < 100 | < 100 | --- |
| F3 (C16-C34) | µg/L | 200 | 500 | --- | --- | < 200 | < 200 | < 200 | < 200 | < 200 | --- |
| F4 (C34-C50) | µg/L | 200 | 500 | --- | --- | < 200 | < 200 | < 200 | < 200 | < 200 | --- |
| Chromatogram returned to baseline at nC50 | Yes / No | no | | --- | --- | YES | YES | YES | YES | YES | --- |
| **SVOC Surrogates** | | | | | | | | | | | |
| Surr 2-Methylnaphthalene-D10 | Surr Rec % | no | | 75 | 80 | 79 | 81 | 76 | 75 | 41 | --- |
| Surr Fluoranthene-D10 | Surr Rec % | no | | 103 | 101 | 107 | 103 | 104 | 105 | 130 | --- |
| Surr 2-Fluorobiphenyl | Surr Rec % | no | | 77 | 79 | 80 | 80 | 75 | 75 | 43 | --- |
| Surr 4-Terphenyl-d14 | Surr Rec % | no | | 94 | 98 | 97 | 98 | 102 | 97 | 131 | --- |
| **THMs (VOC)** | | | | | | | | | | | |
| Bromodichloromethane | µg/L | 0.5 | 2 | --- | --- | < 0.5 | < 0.5 | < 0.5 | < 0.5 | < 0.5 | < 0.5 |
| Bromoform | µg/L | 0.5 | 5 | --- | --- | < 0.5 | < 0.5 | < 0.5 | < 0.5 | < 0.5 | < 0.5 |
| Dibromochloromethane | µg/L | 0.5 | 2 | --- | --- | < 0.5 | < 0.5 | < 0.5 | < 0.5 | < 0.5 | < 0.5 |

**Client:** Watters Environmental Group Inc.
**Project:** 20-0052.04
**Project Manager:** Natalie Wright
**Samplers:** Michael Watters

MATRIX: WATER

L1 = REG153 / GROUND WATER / COARSE - TABLE 1 - All Types of Property Uses - UNDEFINED

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Sample Number** | | | | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 |
| **Sample Name** | | | | BH1 (MW) | BH2 (MW) | BH23 - 1 (MW) | BH23 - 2 (MW) | BH23 - 1000 | BH23 - 3 (MW) | BH23 - 4 (MW) | EW2 |
| **Sample Matrix** | | | | Ground Water | Ground Water | Ground Water | Ground Water | Ground Water | Ground Water | Ground Water | Ground Water |
| **Sample Date** | | | | 04/10/2023 | 04/10/2023 | 04/10/2023 | 04/10/2023 | 04/10/2023 | 04/10/2023 | 04/10/2023 | 04/10/2023 |
| **Parameter** | **Units** | **RL** | **L1** | **Result** | **Result** | **Result** | **Result** | **Result** | **Result** | **Result** | **Result** |
| **VOC Surrogates** | | | | | | | | | | | |
| Surr 1,2-Dichloroethane-d4 | Surr Rec % | no | | --- | --- | 105 | 107 | 108 | 110 | 110 | 109 |
| Surr 2-Bromo-1-Chloropropane | Surr Rec % | no | | --- | --- | 97 | 102 | 100 | 101 | 98 | 99 |
| Surr 4-Bromofluorobenzene | Surr Rec % | no | | --- | --- | 93 | 93 | 95 | 95 | 89 | 89 |
| **VOCs** | | | | | | | | | | | |
| Acetone | µg/L | 30 | 2700 | --- | --- | < 30 | < 30 | < 30 | < 30 | < 30 | < 30 |
| Bromomethane | µg/L | 0.5 | 0.89 | --- | --- | < 0.5 | < 0.5 | < 0.5 | < 0.5 | < 0.5 | < 0.5 |
| Carbon tetrachloride | µg/L | 0.2 | 0.2 | --- | --- | < 0.2 | < 0.2 | < 0.2 | < 0.2 | < 0.2 | < 0.2 |
| Chlorobenzene | µg/L | 0.5 | 0.5 | --- | --- | < 0.5 | < 0.5 | < 0.5 | < 0.5 | < 0.5 | < 0.5 |
| Chloroform | µg/L | 0.5 | 2 | --- | --- | < 0.5 | < 0.5 | < 0.5 | < 0.5 | < 0.5 | < 0.5 |
| 1,2-Dichlorobenzene | µg/L | 0.5 | 0.5 | --- | --- | < 0.5 | < 0.5 | < 0.5 | < 0.5 | < 0.5 | < 0.5 |
| 1,3-Dichlorobenzene | µg/L | 0.5 | 0.5 | --- | --- | < 0.5 | < 0.5 | < 0.5 | < 0.5 | < 0.5 | < 0.5 |
| 1,4-Dichlorobenzene | µg/L | 0.5 | 0.5 | --- | --- | < 0.5 | < 0.5 | < 0.5 | < 0.5 | < 0.5 | < 0.5 |
| Dichlorodifluoromethane | µg/L | 2.0 | 590 | --- | --- | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 |
| 1,1-Dichloroethane | µg/L | 0.5 | 0.5 | --- | --- | < 0.5 | < 0.5 | < 0.5 | < 0.5 | < 0.5 | < 0.5 |
| 1,2-Dichloroethane | µg/L | 0.5 | 0.5 | --- | --- | < 0.5 | < 0.5 | < 0.5 | < 0.5 | < 0.5 | < 0.5 |
| 1,1-Dichloroethylene | µg/L | 0.5 | 0.5 | --- | --- | < 0.5 | < 0.5 | < 0.5 | < 0.5 | < 0.5 | < 0.5 |
| trans-1,2-Dichloroethene | µg/L | 0.5 | 1.6 | --- | --- | < 0.5 | < 0.5 | < 0.5 | < 0.5 | < 0.5 | < 0.5 |
| cis-1,2-Dichloroethene | µg/L | 0.5 | 1.6 | --- | --- | < 0.5 | < 0.5 | < 0.5 | < 0.5 | < 0.5 | < 0.5 |
| 1,2-Dichloropropane | µg/L | 0.5 | 0.5 | --- | --- | < 0.5 | < 0.5 | < 0.5 | < 0.5 | < 0.5 | < 0.5 |
| cis-1,3-Dichloropropene | µg/L | 0.5 | | --- | --- | < 0.5 | < 0.5 | < 0.5 | < 0.5 | < 0.5 | < 0.5 |
| trans-1,3-Dichloropropene | µg/L | 0.5 | | --- | --- | < 0.5 | < 0.5 | < 0.5 | < 0.5 | < 0.5 | < 0.5 |
| 1,3-dichloropropene (total) | µg/L | 0.5 | 0.5 | --- | --- | < 0.5 | < 0.5 | < 0.5 | < 0.5 | < 0.5 | < 0.5 |

**Client:** Watters Environmental Group Inc.
**Project:** 20-0052.04
**Project Manager:** Natalie Wright
**Samplers:** Michael Watters

MATRIX: WATER

L1 = REG153 / GROUND WATER / COARSE - TABLE 1 - All Types of Property Uses - UNDEFINED

| Parameter | Units | RL | L1 | Sample Number | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Sample Name | BH1 (MW) | BH2 (MW) | BH23 - 1 (MW) | BH23 - 2 (MW) | BH23 - 1000 | BH23 - 3 (MW) | BH23 - 4 (MW) | EW2 |
| | | | | Sample Matrix | Ground Water | Ground Water | Ground Water | Ground Water | Ground Water | Ground Water | Ground Water | Ground Water |
| | | | | Sample Date | 04/10/2023 | 04/10/2023 | 04/10/2023 | 04/10/2023 | 04/10/2023 | 04/10/2023 | 04/10/2023 | 04/10/2023 |
| | | | | | Result | Result | Result | Result | Result | Result | Result | Result |
| **VOCs (continued)** | | | | | | | | | | | | |
| Ethylenedibromide | µg/L | 0.2 | 0.2 | | --- | --- | < 0.2 | < 0.2 | < 0.2 | < 0.2 | < 0.2 | < 0.2 |
| n-Hexane | µg/L | 1.0 | 5 | | --- | --- | < 1 | < 1 | < 1 | < 1 | < 1 | < 1 |
| Methyl ethyl ketone | µg/L | 20 | 400 | | --- | --- | < 20 | < 20 | < 20 | < 20 | < 20 | < 20 |
| Methyl Isobutyl Ketone | µg/L | 20 | 640 | | --- | --- | < 20 | < 20 | < 20 | < 20 | < 20 | < 20 |
| Methyl-t-butyl Ether | µg/L | 2.0 | 15 | | --- | --- | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 |
| Methylene Chloride | µg/L | 0.5 | 5 | | --- | --- | < 0.5 | < 0.5 | < 0.5 | < 0.5 | < 0.5 | < 0.5 |
| Styrene | µg/L | 0.5 | 0.5 | | --- | --- | < 0.5 | < 0.5 | < 0.5 | < 0.5 | < 0.5 | < 0.5 |
| Tetrachloroethylene (perchloroethylene) | µg/L | 0.5 | 0.5 | | --- | --- | < 0.5 | < 0.5 | < 0.5 | < 0.5 | < 0.5 | < 0.5 |
| 1,1,1,2-Tetrachloroethane | µg/L | 0.5 | 1.1 | | --- | --- | < 0.5 | < 0.5 | < 0.5 | < 0.5 | < 0.5 | < 0.5 |
| 1,1,2,2-Tetrachloroethane | µg/L | 0.5 | 0.5 | | --- | --- | < 0.5 | < 0.5 | < 0.5 | < 0.5 | < 0.5 | < 0.5 |
| 1,1,1-Trichloroethane | µg/L | 0.5 | 0.5 | | --- | --- | < 0.5 | < 0.5 | < 0.5 | < 0.5 | < 0.5 | < 0.5 |
| 1,1,2-Trichloroethane | µg/L | 0.5 | 0.5 | | --- | --- | < 0.5 | < 0.5 | < 0.5 | < 0.5 | < 0.5 | < 0.5 |
| Trichloroethylene | µg/L | 0.5 | 0.5 | | --- | --- | < 0.5 | < 0.5 | < 0.5 | < 0.5 | < 0.5 | < 0.5 |
| Trichlorofluoromethane | µg/L | 5.0 | 150 | | --- | --- | < 5 | < 5 | < 5 | < 5 | < 5 | < 5 |
| Vinyl Chloride | µg/L | 0.2 | 0.5 | | --- | --- | < 0.2 | < 0.2 | < 0.2 | < 0.2 | < 0.2 | < 0.2 |

**Client:** Watters Environmental Group Inc.
**Project:** 20-0052.04
**Project Manager:** Natalie Wright
**Samplers:** Michael Watters

MATRIX: WATER

L1 = REG153 / GROUND WATER / COARSE - TABLE 1 - All Types of Property Uses - UNDEFINED

| | | |
|---|---|---|
| **Sample Number** | 15 | 16 |
| **Sample Name** | EW1 | Trip Blank |
| **Sample Matrix** | Ground Water | Ground Water |
| **Sample Date** | 04/10/2023 | 04/10/2023 |

| Parameter | Units | RL | L1 | Result | Result |
|---|---|---|---|---|---|
| **BTEX** | | | | | |
| Benzene | µg/L | 0.5 | 0.5 | --- | < 0.5 |
| Ethylbenzene | µg/L | 0.5 | 0.5 | --- | < 0.5 |
| Toluene | µg/L | 0.5 | 0.8 | --- | < 0.5 |
| Xylene (total) | µg/L | 0.5 | 72 | --- | < 0.5 |
| m/p-xylene | µg/L | 0.5 | | --- | < 0.5 |
| o-xylene | µg/L | 0.5 | | --- | < 0.5 |
| **Hydrides** | | | | | |
| Antimony | µg/L | 0.9 | 1.5 | 3.5 | --- |
| Arsenic | µg/L | 0.2 | 13 | 1.0 | --- |
| Selenium | µg/L | 0.04 | 5 | 0.96 | --- |
| **Metals and Inorganics** | | | | | |
| Barium | µg/L | 0.08 | 610 | 56.7 | --- |
| Beryllium | µg/L | 0.007 | 0.5 | < 0.007 | --- |
| Boron | µg/L | 2 | 1700 | 124 | --- |
| Cadmium | µg/L | 0.003 | 0.5 | 0.009 | --- |
| Chromium | µg/L | 0.08 | 11 | 0.53 | --- |
| Cobalt | µg/L | 0.004 | 3.8 | 0.689 | --- |
| Copper | µg/L | 0.2 | 5 | 3.3 | --- |
| Lead | µg/L | 0.09 | 1.9 | < 0.09 | --- |
| Molybdenum | µg/L | 0.04 | 23 | 4.49 | --- |
| Nickel | µg/L | 0.1 | 14 | 1.2 | --- |

**Client:** Watters Environmental Group Inc.
**Project:** 20-0052.04
**Project Manager:** Natalie Wright
**Samplers:** Michael Watters

MATRIX: WATER

L1 = REG153 / GROUND WATER / COARSE - TABLE 1 - All Types of Property Uses - UNDEFINED

| | | | | | |
|---|---|---|---|---|---|
| | **Sample Number** | | | 15 | 16 |
| | **Sample Name** | | | EW1 | Trip Blank |
| | **Sample Matrix** | | | Ground Water | Ground Water |
| | **Sample Date** | | | 04/10/2023 | 04/10/2023 |
| **Parameter** | **Units** | **RL** | **L1** | **Result** | **Result** |
| **Metals and Inorganics (continued)** | | | | | |
| Silver | µg/L | 0.05 | 0.3 | 0.099 | --- |
| Thallium | µg/L | 0.005 | 0.5 | 0.006 | --- |
| Uranium | µg/L | 0.002 | 8.9 | 0.153 | --- |
| Vanadium | µg/L | 0.01 | 3.9 | 1.17 | --- |
| Zinc | µg/L | 2 | 160 | 3 | --- |
| **Na** | | | | | |
| Sodium | µg/L | 10 | 490000 | 188000 | --- |
| **Other (ORP)** | | | | | |
| Mercury (total) | µg/L | 0.01 | 0.1 | < 0.01 | --- |
| pH | No unit | 0.05 | | 7.12 | --- |
| Chloride | µg/L | 1000 | 790000 | 320000 | --- |
| Chromium VI | µg/L | 0.2 | 25 | 0.3 | --- |
| Cyanide (free) | µg/L | 2 | 5 | < 2 | --- |

**Client:** Watters Environmental Group Inc.
**Project:** 20-0052.04
**Project Manager:** Natalie Wright
**Samplers:** Michael Watters

MATRIX: WATER

L1 = REG153 / GROUND WATER / COARSE - TABLE 1 - All Types of Property Uses - UNDEFINED

| | | | | | |
|---|---|---|---|---|---|
| | **Sample Number** | | | 15 | 16 |
| | **Sample Name** | | | EW1 | Trip Blank |
| | **Sample Matrix** | | | Ground Water | Ground Water |
| | **Sample Date** | | | 04/10/2023 | 04/10/2023 |
| **Parameter** | **Units** | **RL** | **L1** | **Result** | **Result** |
| **THMs (VOC)** | | | | | |
| Bromodichloromethane | µg/L | 0.5 | 2 | --- | < 0.5 |
| Bromoform | µg/L | 0.5 | 5 | --- | < 0.5 |
| Dibromochloromethane | µg/L | 0.5 | 2 | --- | < 0.5 |

**Client:** Watters Environmental Group Inc.
**Project:** 20-0052.04
**Project Manager:** Natalie Wright
**Samplers:** Michael Watters

MATRIX: WATER

L1 = REG153 / GROUND WATER / COARSE - TABLE 1 - All Types of Property Uses - UNDEFINED

| | | | | | |
|---|---|---|---|---|---|
| | | | | **Sample Number** | 15 | 16 |
| | | | | **Sample Name** | EW1 | Trip Blank |
| | | | | **Sample Matrix** | Ground Water | Ground Water |
| | | | | **Sample Date** | 04/10/2023 | 04/10/2023 |
| **Parameter** | **Units** | **RL** | **L1** | **Result** | **Result** |
| **VOC Surrogates** | | | | | |
| Surr 1,2-Dichloroethane-d4 | Surr Rec % | no | | --- | 103 |
| Surr 2-Bromo-1-Chloropropane | Surr Rec % | no | | --- | 95 |
| Surr 4-Bromofluorobenzene | Surr Rec % | no | | --- | 94 |
| **VOCs** | | | | | |
| Acetone | µg/L | 30 | 2700 | --- | < 30 |
| Bromomethane | µg/L | 0.5 | 0.89 | --- | < 0.5 |
| Carbon tetrachloride | µg/L | 0.2 | 0.2 | --- | < 0.2 |
| Chlorobenzene | µg/L | 0.5 | 0.5 | --- | < 0.5 |
| Chloroform | µg/L | 0.5 | 2 | --- | < 0.5 |
| 1,2-Dichlorobenzene | µg/L | 0.5 | 0.5 | --- | < 0.5 |
| 1,3-Dichlorobenzene | µg/L | 0.5 | 0.5 | --- | < 0.5 |
| 1,4-Dichlorobenzene | µg/L | 0.5 | 0.5 | --- | < 0.5 |
| Dichlorodifluoromethane | µg/L | 2.0 | 590 | --- | < 2 |
| 1,1-Dichloroethane | µg/L | 0.5 | 0.5 | --- | < 0.5 |
| 1,2-Dichloroethane | µg/L | 0.5 | 0.5 | --- | < 0.5 |
| 1,1-Dichloroethylene | µg/L | 0.5 | 0.5 | --- | < 0.5 |
| trans-1,2-Dichloroethene | µg/L | 0.5 | 1.6 | --- | < 0.5 |
| cis-1,2-Dichloroethene | µg/L | 0.5 | 1.6 | --- | < 0.5 |
| 1,2-Dichloropropane | µg/L | 0.5 | 0.5 | --- | < 0.5 |
| cis-1,3-Dichloropropene | µg/L | 0.5 | | --- | < 0.5 |
| trans-1,3-Dichloropropene | µg/L | 0.5 | | --- | < 0.5 |
| 1,3-dichloropropene (total) | µg/L | 0.5 | 0.5 | --- | < 0.5 |

**Client:** Watters Environmental Group Inc.
**Project:** 20-0052.04
**Project Manager:** Natalie Wright
**Samplers:** Michael Watters

MATRIX: WATER

L1 = REG153 / GROUND WATER / COARSE - TABLE 1 - All Types of Property Uses - UNDEFINED

| | | |
|---|---|---|
| **Sample Number** | 15 | 16 |
| **Sample Name** | EW1 | Trip Blank |
| **Sample Matrix** | Ground Water | Ground Water |
| **Sample Date** | 04/10/2023 | 04/10/2023 |

| Parameter | Units | RL | L1 | Result | Result |
|---|---|---|---|---|---|
| **VOCs (continued)** | | | | | |
| Ethylenedibromide | µg/L | 0.2 | 0.2 | --- | < 0.2 |
| n-Hexane | µg/L | 1.0 | 5 | --- | < 1 |
| Methyl ethyl ketone | µg/L | 20 | 400 | --- | < 20 |
| Methyl Isobutyl Ketone | µg/L | 20 | 640 | --- | < 20 |
| Methyl-t-butyl Ether | µg/L | 2.0 | 15 | --- | < 2 |
| Methylene Chloride | µg/L | 0.5 | 5 | --- | < 0.5 |
| Styrene | µg/L | 0.5 | 0.5 | --- | < 0.5 |
| Tetrachloroethylene (perchloroethylene) | µg/L | 0.5 | 0.5 | --- | < 0.5 |
| 1,1,1,2-Tetrachloroethane | µg/L | 0.5 | 1.1 | --- | < 0.5 |
| 1,1,2,2-Tetrachloroethane | µg/L | 0.5 | 0.5 | --- | < 0.5 |
| 1,1,1-Trichloroethane | µg/L | 0.5 | 0.5 | --- | < 0.5 |
| 1,1,2-Trichloroethane | µg/L | 0.5 | 0.5 | --- | < 0.5 |
| Trichloroethylene | µg/L | 0.5 | 0.5 | --- | < 0.5 |
| Trichlorofluoromethane | µg/L | 5.0 | 150 | --- | < 5 |
| Vinyl Chloride | µg/L | 0.2 | 0.5 | --- | < 0.2 |

## EXCEEDANCE SUMMARY

| Parameter | Method | Units | Result | REG153 / GROUND WATER / COARSE - TABLE 1 - All Types of Property Uses - UNDEFINED L1 |
|---|---|---|---|---|
| **BH1 (MW)** | | | | |
| Barium | SM 3030/EPA 200.8 | µg/L | 963 | 610 |
| Copper | SM 3030/EPA 200.8 | µg/L | 5.5 | 5 |
| Silver | SM 3030/EPA 200.8 | µg/L | 0.390 | 0.3 |
| Sodium | SM 3030/EPA 200.8 | µg/L | 3910000 | 490000 |
| Chloride | US EPA 325.2 | µg/L | 7200000 | 790000 |
| **BH2 (MW)** | | | | |
| Barium | SM 3030/EPA 200.8 | µg/L | 915 | 610 |
| Copper | SM 3030/EPA 200.8 | µg/L | 5.2 | 5 |
| Sodium | SM 3030/EPA 200.8 | µg/L | 3350000 | 490000 |
| Chloride | US EPA 325.2 | µg/L | 6900000 | 790000 |
| **BH23 - 1 (MW)** | | | | |
| Sodium | SM 3030/EPA 200.8 | µg/L | 909000 | 490000 |
| Chloride | US EPA 325.2 | µg/L | 1600000 | 790000 |
| **BH23 - 2 (MW)** | | | | |
| Sodium | SM 3030/EPA 200.8 | µg/L | 664000 | 490000 |
| Chloride | US EPA 325.2 | µg/L | 1600000 | 790000 |
| **BH23 - 1000** | | | | |
| Sodium | SM 3030/EPA 200.8 | µg/L | 907000 | 490000 |
| Chloride | US EPA 325.2 | µg/L | 1600000 | 790000 |
| **BH23 - 3 (MW)** | | | | |
| Antimony | SM 3030/EPA 200.8 | µg/L | 2.2 | 1.5 |
| Sodium | SM 3030/EPA 200.8 | µg/L | 1020000 | 490000 |
| Chloride | US EPA 325.2 | µg/L | 2500000 | 790000 |
| **EW1** | | | | |
| Antimony | SM 3030/EPA 200.8 | µg/L | 3.5 | 1.5 |

## HOLDING TIME SUMMARY

| Sample Name | QC Batch Reference | Sample Number | Sampled | Received | Extracted/ Prepared | Analysed | Holding Time | Approved |
|---|---|---|---|---|---|---|---|---|
| **Anions by discrete analyzer** | | | | | | | | |
| **Method: US EPA 325.2 \| Internal ref.: ME-CA-[ENV]EWL-LAK-AN-026** | | | | | | | | |
| BH1 (MW) | DIO5025-OCT23 | 7 | 10/04/2023 | 10/05/2023 | 10/11/2023 | 10/11/2023 | 11/01/2023 | 10/11/2023 |
| BH2 (MW) | DIO5024-OCT23 | 8 | 10/04/2023 | 10/05/2023 | 10/11/2023 | 10/11/2023 | 11/01/2023 | 10/11/2023 |
| BH23 - 1 (MW) | DIO5024-OCT23 | 9 | 10/04/2023 | 10/05/2023 | 10/11/2023 | 10/11/2023 | 11/01/2023 | 10/11/2023 |
| BH23 - 2 (MW) | DIO5024-OCT23 | 10 | 10/04/2023 | 10/05/2023 | 10/11/2023 | 10/11/2023 | 11/01/2023 | 10/11/2023 |
| BH23 - 1000 | DIO5024-OCT23 | 11 | 10/04/2023 | 10/05/2023 | 10/11/2023 | 10/11/2023 | 11/01/2023 | 10/11/2023 |
| BH23 - 3 (MW) | DIO5024-OCT23 | 12 | 10/04/2023 | 10/05/2023 | 10/11/2023 | 10/11/2023 | 11/01/2023 | 10/11/2023 |
| BH23 - 4 (MW) | DIO5024-OCT23 | 13 | 10/04/2023 | 10/05/2023 | 10/11/2023 | 10/11/2023 | 11/01/2023 | 10/11/2023 |
| EW2 | | 14 | 10/04/2023 | 10/05/2023 | 10/11/2023 | 10/11/2023 | 11/01/2023 | 10/11/2023 |
| EW1 | DIO5024-OCT23 | 15 | 10/04/2023 | 10/05/2023 | 10/11/2023 | 10/11/2023 | 11/01/2023 | 10/11/2023 |
| Trip Blank | | 16 | 10/04/2023 | 10/05/2023 | 10/11/2023 | 10/11/2023 | 11/01/2023 | 10/11/2023 |
| **Cyanide by SFA** | | | | | | | | |
| **Method: SM 4500 \| Internal ref.: ME-CA-[ENV]SFA-LAK-AN-005** | | | | | | | | |
| BH1 (MW) | SKA0067-OCT23 | 7 | 10/04/2023 | 10/05/2023 | 10/10/2023 | 10/10/2023 | 10/18/2023 | 10/10/2023 |
| BH2 (MW) | SKA0067-OCT23 | 8 | 10/04/2023 | 10/05/2023 | 10/10/2023 | 10/10/2023 | 10/18/2023 | 10/10/2023 |
| BH23 - 1 (MW) | SKA0067-OCT23 | 9 | 10/04/2023 | 10/05/2023 | 10/10/2023 | 10/10/2023 | 10/18/2023 | 10/10/2023 |
| BH23 - 2 (MW) | SKA0067-OCT23 | 10 | 10/04/2023 | 10/05/2023 | 10/10/2023 | 10/10/2023 | 10/18/2023 | 10/10/2023 |
| BH23 - 1000 | SKA0067-OCT23 | 11 | 10/04/2023 | 10/05/2023 | 10/10/2023 | 10/10/2023 | 10/18/2023 | 10/10/2023 |
| BH23 - 3 (MW) | SKA0067-OCT23 | 12 | 10/04/2023 | 10/05/2023 | 10/10/2023 | 10/10/2023 | 10/18/2023 | 10/10/2023 |
| BH23 - 4 (MW) | SKA0067-OCT23 | 13 | 10/04/2023 | 10/05/2023 | 10/10/2023 | 10/10/2023 | 10/18/2023 | 10/10/2023 |
| EW2 | | 14 | 10/04/2023 | 10/05/2023 | 10/10/2023 | 10/10/2023 | 10/18/2023 | 10/10/2023 |
| EW1 | SKA0067-OCT23 | 15 | 10/04/2023 | 10/05/2023 | 10/10/2023 | 10/10/2023 | 10/18/2023 | 10/10/2023 |
| Trip Blank | | 16 | 10/04/2023 | 10/05/2023 | 10/10/2023 | 10/10/2023 | 10/18/2023 | 10/10/2023 |
| **Hexavalent Chromium by SFA** | | | | | | | | |
| **Method: EPA218.6/EPA3060A \| Internal ref.: ME-CA-[ENV]SKA-LAK-AN-012** | | | | | | | | |
| BH1 (MW) | SKA0083-OCT23 | 7 | 10/04/2023 | 10/05/2023 | 10/11/2023 | 10/11/2023 | 10/18/2023 | 10/12/2023 |
| BH2 (MW) | SKA0083-OCT23 | 8 | 10/04/2023 | 10/05/2023 | 10/11/2023 | 10/11/2023 | 10/18/2023 | 10/12/2023 |
| BH23 - 1 (MW) | SKA0083-OCT23 | 9 | 10/04/2023 | 10/05/2023 | 10/11/2023 | 10/11/2023 | 10/18/2023 | 10/12/2023 |
| BH23 - 2 (MW) | SKA0083-OCT23 | 10 | 10/04/2023 | 10/05/2023 | 10/11/2023 | 10/11/2023 | 10/18/2023 | 10/12/2023 |
| BH23 - 1000 | SKA0083-OCT23 | 11 | 10/04/2023 | 10/05/2023 | 10/11/2023 | 10/11/2023 | 10/18/2023 | 10/12/2023 |
| BH23 - 3 (MW) | SKA0083-OCT23 | 12 | 10/04/2023 | 10/05/2023 | 10/11/2023 | 10/11/2023 | 10/18/2023 | 10/12/2023 |
| BH23 - 4 (MW) | SKA0083-OCT23 | 13 | 10/04/2023 | 10/05/2023 | 10/11/2023 | 10/11/2023 | 10/18/2023 | 10/12/2023 |
| EW2 | | 14 | 10/04/2023 | 10/05/2023 | 10/11/2023 | 10/11/2023 | 10/18/2023 | 10/12/2023 |
| EW1 | SKA0083-OCT23 | 15 | 10/04/2023 | 10/05/2023 | 10/11/2023 | 10/11/2023 | 10/18/2023 | 10/12/2023 |
| Trip Blank | | 16 | 10/04/2023 | 10/05/2023 | 10/11/2023 | 10/11/2023 | 10/18/2023 | 10/12/2023 |
| **Mercury by CVAAS** | | | | | | | | |
| **Method: SM 3112/SM 3112B \| Internal ref.: ME-CA-[ENV]SPE-LAK-AN-004** | | | | | | | | |
| BH1 (MW) | EHG0020-OCT23 | 7 | 10/04/2023 | 10/05/2023 | 10/15/2023 | 10/15/2023 | 11/01/2023 | 10/16/2023 |

## HOLDING TIME SUMMARY

| Sample Name | QC Batch Reference | Sample Number | Sampled | Received | Extracted/ Prepared | Analysed | Holding Time | Approved |
|---|---|---|---|---|---|---|---|---|
| **Mercury by CVAAS (continued)** | | | | | | | | |
| **Method: SM 3112/SM 3112B \| Internal ref.: ME-CA-[ENV]SPE-LAK-AN-004** | | | | | | | | |
| BH2 (MW) | EHG0020-OCT23 | 8 | 10/04/2023 | 10/05/2023 | 10/15/2023 | 10/15/2023 | 11/01/2023 | 10/16/2023 |
| BH23 - 1 (MW) | EHG0020-OCT23 | 9 | 10/04/2023 | 10/05/2023 | 10/15/2023 | 10/15/2023 | 11/01/2023 | 10/16/2023 |
| BH23 - 2 (MW) | EHG0020-OCT23 | 10 | 10/04/2023 | 10/05/2023 | 10/15/2023 | 10/15/2023 | 11/01/2023 | 10/16/2023 |
| BH23 - 1000 | EHG0020-OCT23 | 11 | 10/04/2023 | 10/05/2023 | 10/15/2023 | 10/15/2023 | 11/01/2023 | 10/16/2023 |
| BH23 - 3 (MW) | EHG0020-OCT23 | 12 | 10/04/2023 | 10/05/2023 | 10/15/2023 | 10/15/2023 | 11/01/2023 | 10/16/2023 |
| BH23 - 4 (MW) | EHG0020-OCT23 | 13 | 10/04/2023 | 10/05/2023 | 10/15/2023 | 10/15/2023 | 11/01/2023 | 10/16/2023 |
| EW2 | | 14 | 10/04/2023 | 10/05/2023 | 10/15/2023 | 10/15/2023 | 11/01/2023 | 10/16/2023 |
| EW1 | EHG0020-OCT23 | 15 | 10/04/2023 | 10/05/2023 | 10/15/2023 | 10/15/2023 | 11/01/2023 | 10/16/2023 |
| Trip Blank | | 16 | 10/04/2023 | 10/05/2023 | 10/15/2023 | 10/15/2023 | 11/01/2023 | 10/16/2023 |
| **Metals in aqueous samples - ICP-MS** | | | | | | | | |
| **Method: SM 3030/EPA 200.8 \| Internal ref.: ME-CA-[ENV]SPE-LAK-AN-006** | | | | | | | | |
| BH1 (MW) | EMS0095-OCT23 | 7 | 10/04/2023 | 10/05/2023 | 10/12/2023 | 10/12/2023 | 12/03/2023 | 10/12/2023 |
| BH2 (MW) | EMS0095-OCT23 | 8 | 10/04/2023 | 10/05/2023 | 10/12/2023 | 10/12/2023 | 12/03/2023 | 10/12/2023 |
| BH23 - 1 (MW) | EMS0095-OCT23 | 9 | 10/04/2023 | 10/05/2023 | 10/12/2023 | 10/12/2023 | 12/03/2023 | 10/12/2023 |
| BH23 - 2 (MW) | EMS0095-OCT23 | 10 | 10/04/2023 | 10/05/2023 | 10/12/2023 | 10/12/2023 | 12/03/2023 | 10/12/2023 |
| BH23 - 1000 | EMS0095-OCT23 | 11 | 10/04/2023 | 10/05/2023 | 10/12/2023 | 10/12/2023 | 12/03/2023 | 10/12/2023 |
| BH23 - 3 (MW) | EMS0095-OCT23 | 12 | 10/04/2023 | 10/05/2023 | 10/12/2023 | 10/12/2023 | 12/03/2023 | 10/12/2023 |
| BH23 - 4 (MW) | EMS0095-OCT23 | 13 | 10/04/2023 | 10/05/2023 | 10/12/2023 | 10/12/2023 | 12/03/2023 | 10/12/2023 |
| EW2 | | 14 | 10/04/2023 | 10/05/2023 | 10/12/2023 | 10/12/2023 | 12/03/2023 | 10/12/2023 |
| EW1 | EMS0095-OCT23 | 15 | 10/04/2023 | 10/05/2023 | 10/12/2023 | 10/12/2023 | 12/03/2023 | 10/12/2023 |
| Trip Blank | | 16 | 10/04/2023 | 10/05/2023 | 10/12/2023 | 10/12/2023 | 12/03/2023 | 10/12/2023 |
| **Petroleum Hydrocarbons (F1)** | | | | | | | | |
| **Method: CCME Tier 1 \| Internal ref.: ME-CA-[ENV]GC-LAK-AN-010** | | | | | | | | |
| BH1 (MW) | | 7 | 10/04/2023 | 10/05/2023 | | | 10/18/2023 | 10/11/2023 |
| BH2 (MW) | | 8 | 10/04/2023 | 10/05/2023 | | | 10/18/2023 | 10/11/2023 |
| BH23 - 1 (MW) | GCM0140-OCT23 | 9 | 10/04/2023 | 10/05/2023 | | | 10/18/2023 | 10/11/2023 |
| BH23 - 2 (MW) | GCM0140-OCT23 | 10 | 10/04/2023 | 10/05/2023 | | | 10/18/2023 | 10/11/2023 |
| BH23 - 1000 | GCM0140-OCT23 | 11 | 10/04/2023 | 10/05/2023 | | | 10/18/2023 | 10/11/2023 |
| BH23 - 3 (MW) | GCM0140-OCT23 | 12 | 10/04/2023 | 10/05/2023 | | | 10/18/2023 | 10/11/2023 |
| BH23 - 4 (MW) | GCM0140-OCT23 | 13 | 10/04/2023 | 10/05/2023 | | | 10/18/2023 | 10/11/2023 |
| EW2 | | 14 | 10/04/2023 | 10/05/2023 | | | 10/18/2023 | 10/11/2023 |
| EW1 | | 15 | 10/04/2023 | 10/05/2023 | | | 10/18/2023 | 10/11/2023 |
| Trip Blank | | 16 | 10/04/2023 | 10/05/2023 | | | 10/18/2023 | 10/11/2023 |
| **Petroleum Hydrocarbons (F2-F4)** | | | | | | | | |
| **Method: CCME Tier 1 \| Internal ref.: ME-CA-[ENV]GC-LAK-AN-010** | | | | | | | | |
| BH1 (MW) | | 7 | 10/04/2023 | 10/05/2023 | | | 10/18/2023 | 10/11/2023 |
| BH2 (MW) | | 8 | 10/04/2023 | 10/05/2023 | | | 10/18/2023 | 10/11/2023 |

## HOLDING TIME SUMMARY

| Sample Name | QC Batch Reference | Sample Number | Sampled | Received | Extracted/ Prepared | Analysed | Holding Time | Approved |
|---|---|---|---|---|---|---|---|---|
| **Petroleum Hydrocarbons (F2-F4) (continued)** | | | | | | | | |
| **Method: CCME Tier 1 \| Internal ref.: ME-CA-[ENV]GC-LAK-AN-010** | | | | | | | | |
| BH23 - 1 (MW) | GCM0124-OCT23 | 9 | 10/04/2023 | 10/05/2023 | | | 10/18/2023 | 10/11/2023 |
| BH23 - 2 (MW) | GCM0124-OCT23 | 10 | 10/04/2023 | 10/05/2023 | | | 10/18/2023 | 10/11/2023 |
| BH23 - 1000 | GCM0124-OCT23 | 11 | 10/04/2023 | 10/05/2023 | | | 10/18/2023 | 10/11/2023 |
| BH23 - 3 (MW) | GCM0124-OCT23 | 12 | 10/04/2023 | 10/05/2023 | | | 10/18/2023 | 10/11/2023 |
| BH23 - 4 (MW) | GCM0124-OCT23 | 13 | 10/04/2023 | 10/05/2023 | | | 10/18/2023 | 10/11/2023 |
| EW2 | | 14 | 10/04/2023 | 10/05/2023 | | | 10/18/2023 | 10/11/2023 |
| EW1 | | 15 | 10/04/2023 | 10/05/2023 | | | 10/18/2023 | 10/11/2023 |
| Trip Blank | | 16 | 10/04/2023 | 10/05/2023 | | | 10/18/2023 | 10/11/2023 |
| **pH** | | | | | | | | |
| **Method: SM 4500 \| Internal ref.: ME-CA-[ENV]EWL-LAK-AN-006** | | | | | | | | |
| BH1 (MW) | EWL0178-OCT23 | 7 | 10/04/2023 | 10/05/2023 | 10/07/2023 | 10/07/2023 | 10/11/2023 | 10/11/2023 |
| BH2 (MW) | EWL0178-OCT23 | 8 | 10/04/2023 | 10/05/2023 | 10/07/2023 | 10/07/2023 | 10/11/2023 | 10/11/2023 |
| BH23 - 1 (MW) | EWL0178-OCT23 | 9 | 10/04/2023 | 10/05/2023 | 10/07/2023 | 10/07/2023 | 10/11/2023 | 10/11/2023 |
| BH23 - 2 (MW) | EWL0178-OCT23 | 10 | 10/04/2023 | 10/05/2023 | 10/07/2023 | 10/07/2023 | 10/11/2023 | 10/11/2023 |
| BH23 - 1000 | EWL0178-OCT23 | 11 | 10/04/2023 | 10/05/2023 | 10/07/2023 | 10/07/2023 | 10/11/2023 | 10/11/2023 |
| BH23 - 3 (MW) | EWL0213-OCT23 | 12 | 10/04/2023 | 10/05/2023 | 10/07/2023 | 10/07/2023 | 10/11/2023 | 10/11/2023 |
| BH23 - 4 (MW) | EWL0178-OCT23 | 13 | 10/04/2023 | 10/05/2023 | 10/07/2023 | 10/07/2023 | 10/11/2023 | 10/11/2023 |
| EW2 | | 14 | 10/04/2023 | 10/05/2023 | 10/07/2023 | 10/07/2023 | 10/11/2023 | 10/11/2023 |
| EW1 | EWL0178-OCT23 | 15 | 10/04/2023 | 10/05/2023 | 10/07/2023 | 10/07/2023 | 10/11/2023 | 10/11/2023 |
| Trip Blank | | 16 | 10/04/2023 | 10/05/2023 | 10/07/2023 | 10/07/2023 | 10/11/2023 | 10/11/2023 |
| **Semi-Volatile Organics** | | | | | | | | |
| **Method: EPA 3541/8270D \| Internal ref.: ME-CA-[ENV]GC-LAK-AN-005** | | | | | | | | |
| BH1 (MW) | GCM0132-OCT23 | 7 | 10/04/2023 | 10/05/2023 | | | 10/24/2023 | 10/11/2023 |
| BH2 (MW) | GCM0132-OCT23 | 8 | 10/04/2023 | 10/05/2023 | | | 10/18/2023 | 10/11/2023 |
| BH23 - 1 (MW) | GCM0132-OCT23 | 9 | 10/04/2023 | 10/05/2023 | | | 10/18/2023 | 10/11/2023 |
| BH23 - 2 (MW) | GCM0132-OCT23 | 10 | 10/04/2023 | 10/05/2023 | | | 10/24/2023 | 10/11/2023 |
| BH23 - 1000 | GCM0132-OCT23 | 11 | 10/04/2023 | 10/05/2023 | | | 10/24/2023 | 10/11/2023 |
| BH23 - 3 (MW) | GCM0132-OCT23 | 12 | 10/04/2023 | 10/05/2023 | | | 10/24/2023 | 10/11/2023 |
| BH23 - 4 (MW) | GCM0132-OCT23 | 13 | 10/04/2023 | 10/05/2023 | | | 10/18/2023 | 10/11/2023 |
| EW2 | | 14 | 10/04/2023 | 10/05/2023 | | | 10/24/2023 | 10/11/2023 |
| EW1 | | 15 | 10/04/2023 | 10/05/2023 | | | 10/18/2023 | 10/11/2023 |
| Trip Blank | | 16 | 10/04/2023 | 10/05/2023 | | | 10/18/2023 | 10/11/2023 |
| **Volatile Organics** | | | | | | | | |
| **Method: EPA 5030B/8260C \| Internal ref.: ME-CA-[ENV]GC-LAK-AN-004** | | | | | | | | |
| BH1 (MW) | | 7 | 10/04/2023 | 10/05/2023 | 10/10/2023 | 10/10/2023 | 10/18/2023 | 10/11/2023 |
| BH2 (MW) | | 8 | 10/04/2023 | 10/05/2023 | 10/10/2023 | 10/10/2023 | 10/18/2023 | 10/11/2023 |
| BH23 - 1 (MW) | GCM0131-OCT23 | 9 | 10/04/2023 | 10/05/2023 | 10/10/2023 | 10/10/2023 | 10/18/2023 | 10/11/2023 |

## HOLDING TIME SUMMARY

| Sample Name | QC Batch Reference | Sample Number | Sampled | Received | Extracted/ Prepared | Analysed | Holding Time | Approved |
|---|---|---|---|---|---|---|---|---|
| **Volatile Organics (continued)** | | | | | | | | |
| **Method: EPA 5030B/8260C \| Internal ref.: ME-CA-[ENV]GC-LAK-AN-004** | | | | | | | | |
| BH23 - 2 (MW) | GCM0131-OCT23 | 10 | 10/04/2023 | 10/05/2023 | 10/10/2023 | 10/10/2023 | 10/18/2023 | 10/11/2023 |
| BH23 - 1000 | GCM0131-OCT23 | 11 | 10/04/2023 | 10/05/2023 | 10/10/2023 | 10/10/2023 | 10/18/2023 | 10/11/2023 |
| BH23 - 3 (MW) | GCM0131-OCT23 | 12 | 10/04/2023 | 10/05/2023 | 10/10/2023 | 10/10/2023 | 10/18/2023 | 10/11/2023 |
| BH23 - 4 (MW) | GCM0131-OCT23 | 13 | 10/04/2023 | 10/05/2023 | 10/10/2023 | 10/10/2023 | 10/18/2023 | 10/11/2023 |
| EW2 | GCM0131-OCT23 | 14 | 10/04/2023 | 10/05/2023 | 10/10/2023 | 10/10/2023 | 10/18/2023 | 10/11/2023 |
| EW1 | | 15 | 10/04/2023 | 10/05/2023 | 10/10/2023 | 10/10/2023 | 10/18/2023 | 10/11/2023 |
| Trip Blank | GCM0131-OCT23 | 16 | 10/04/2023 | 10/05/2023 | 10/10/2023 | 10/10/2023 | 10/18/2023 | 10/11/2023 |

## QC SUMMARY

### Anions by discrete analyzer

Method: US EPA 325.2 | Internal ref.: ME-CA-[ENV]EWL-LAK-AN-026

| Parameter | QC batch Reference | Units | RL | Method Blank | Duplicate | | LCS/Spike Blank | | | Matrix Spike / Ref. | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | RPD | AC (%) | Spike Recovery (%) | Recovery Limits (%) | | Spike Recovery (%) | Recovery Limits (%) | |
| | | | | | | | | Low | High | | Low | High |
| Chloride | DIO5024-OCT23 | ug/L | 1000 | <1000 | 1 | 20 | 101 | 80 | 120 | 100 | 75 | 125 |
| Chloride | DIO5025-OCT23 | ug/L | 1000 | <1000 | ND | 20 | 101 | 80 | 120 | 108 | 75 | 125 |

### Cyanide by SFA

Method: SM 4500 | Internal ref.: ME-CA-[ENV]SFA-LAK-AN-005

| Parameter | QC batch Reference | Units | RL | Method Blank | Duplicate | | LCS/Spike Blank | | | Matrix Spike / Ref. | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | RPD | AC (%) | Spike Recovery (%) | Recovery Limits (%) | | Spike Recovery (%) | Recovery Limits (%) | |
| | | | | | | | | Low | High | | Low | High |
| Cyanide (free) | SKA0067-OCT23 | µg/L | 2 | <2 | ND | 10 | 95 | 80 | 120 | 95 | 75 | 125 |

### Hexavalent Chromium by SFA

Method: EPA218.6/EPA3060A | Internal ref.: ME-CA-[ENV]SKA-LAK-AN-012

| Parameter | QC batch Reference | Units | RL | Method Blank | Duplicate | | LCS/Spike Blank | | | Matrix Spike / Ref. | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | RPD | AC (%) | Spike Recovery (%) | Recovery Limits (%) | | Spike Recovery (%) | Recovery Limits (%) | |
| | | | | | | | | Low | High | | Low | High |
| Chromium VI | SKA0083-OCT23 | ug/L | 0.2 | <0.2 | 9 | 20 | 96 | 80 | 120 | 93 | 75 | 125 |

## QC SUMMARY

### Mercury by CVAAS

Method: SM 3112/SM 3112B | Internal ref.: ME-CA-[ENV]SPE-LAK-AN-004

| Parameter | QC batch Reference | Units | RL | Method Blank | Duplicate | | LCS/Spike Blank | | | Matrix Spike / Ref. | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | RPD | AC (%) | Spike Recovery (%) | Recovery Limits (%) | | Spike Recovery (%) | Recovery Limits (%) | |
| | | | | | | | | Low | High | | Low | High |
| Mercury (total) | EHG0020-OCT23 | ug/L | 0.01 | < 0.01 | ND | 20 | 112 | 80 | 120 | 105 | 70 | 130 |

## QC SUMMARY

### Metals in aqueous samples - ICP-MS

Method: SM 3030/EPA 200.8 | Internal ref.: ME-CA-IENVISPE-LAK-AN-006

| Parameter | QC batch Reference | Units | RL | Method Blank | Duplicate | | LCS/Spike Blank | | | Matrix Spike / Ref. | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | RPD | AC (%) | Spike Recovery (%) | Recovery Limits (%) | | Spike Recovery (%) | Recovery Limits (%) | |
| | | | | | | | | Low | High | | Low | High |
| Arsenic | EMS0075-OCT23 | µg/L | 0.2 | <0.2 | 1 | 20 | 95 | 90 | 110 | 95 | 70 | 130 |
| Barium | EMS0075-OCT23 | ug/L | 0.08 | <0.08 | 1 | 20 | 91 | 90 | 110 | 101 | 70 | 130 |
| Beryllium | EMS0075-OCT23 | µg/L | 0.007 | <0.007 | ND | 20 | 90 | 90 | 110 | 86 | 70 | 130 |
| Boron | EMS0075-OCT23 | µg/L | 2 | <2 | 2 | 20 | 94 | 90 | 110 | 91 | 70 | 130 |
| Cadmium | EMS0075-OCT23 | µg/L | 0.003 | <0.003 | 5 | 20 | 97 | 90 | 110 | 89 | 70 | 130 |
| Cobalt | EMS0075-OCT23 | µg/L | 0.004 | <0.004 | 7 | 20 | 98 | 90 | 110 | 93 | 70 | 130 |
| Chromium | EMS0075-OCT23 | ug/L | 0.08 | <0.08 | 12 | 20 | 102 | 90 | 110 | 92 | 70 | 130 |
| Copper | EMS0075-OCT23 | ug/L | 0.2 | <0.2 | 0 | 20 | 98 | 90 | 110 | 106 | 70 | 130 |
| Molybdenum | EMS0075-OCT23 | ug/L | 0.04 | <0.04 | 1 | 20 | 96 | 90 | 110 | 110 | 70 | 130 |
| Sodium | EMS0075-OCT23 | ug/L | 10 | <10 | 0 | 20 | 101 | 90 | 110 | 98 | 70 | 130 |
| Nickel | EMS0075-OCT23 | µg/L | 0.1 | <0.1 | 3 | 20 | 96 | 90 | 110 | 88 | 70 | 130 |
| Lead | EMS0075-OCT23 | ug/L | 0.09 | <0.09 | ND | 20 | 98 | 90 | 110 | 89 | 70 | 130 |
| Antimony | EMS0075-OCT23 | ug/L | 0.9 | <0.9 | 1 | 20 | 96 | 90 | 110 | 84 | 70 | 130 |
| Selenium | EMS0075-OCT23 | µg/L | 0.04 | <0.04 | 3 | 20 | 102 | 90 | 110 | 110 | 70 | 130 |
| Thallium | EMS0075-OCT23 | µg/L | 0.005 | <0.005 | 14 | 20 | 97 | 90 | 110 | 86 | 70 | 130 |
| Uranium | EMS0075-OCT23 | µg/L | 0.002 | <0.002 | 2 | 20 | 95 | 90 | 110 | 80 | 70 | 130 |
| Vanadium | EMS0075-OCT23 | µg/L | 0.01 | <0.01 | 1 | 20 | 95 | 90 | 110 | 89 | 70 | 130 |
| Zinc | EMS0075-OCT23 | µg/L | 2 | <2 | ND | 20 | 96 | 90 | 110 | 91 | 70 | 130 |
| Silver | EMS0095-OCT23 | ug/L | 0.05 | <0.05 | ND | 20 | 103 | 90 | 110 | 83 | 70 | 130 |
| Arsenic | EMS0095-OCT23 | µg/L | 0.2 | <0.2 | 5 | 20 | 100 | 90 | 110 | 101 | 70 | 130 |

## QC SUMMARY

### Metals in aqueous samples - ICP-MS (continued)

Method: SM 3030/EPA 200.8 | Internal ref.: ME-CA-IENVISPE-LAK-AN-006

| Parameter | QC batch Reference | Units | RL | Method Blank | Duplicate | | LCS/Spike Blank | | | Matrix Spike / Ref. | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | RPD | AC (%) | Spike Recovery (%) | Recovery Limits (%) | | Spike Recovery (%) | Recovery Limits (%) | |
| | | | | | | | | Low | High | | Low | High |
| Barium | EMS0095-OCT23 | ug/L | 0.08 | <0.08 | 1 | 20 | 98 | 90 | 110 | 77 | 70 | 130 |
| Beryllium | EMS0095-OCT23 | µg/L | 0.007 | <0.007 | ND | 20 | 93 | 90 | 110 | 95 | 70 | 130 |
| Boron | EMS0095-OCT23 | µg/L | 2 | <2 | 1 | 20 | 96 | 90 | 110 | 95 | 70 | 130 |
| Cadmium | EMS0095-OCT23 | µg/L | 0.003 | <0.003 | 18 | 20 | 102 | 90 | 110 | 100 | 70 | 130 |
| Cobalt | EMS0095-OCT23 | µg/L | 0.004 | <0.004 | 0 | 20 | 101 | 90 | 110 | 99 | 70 | 130 |
| Chromium | EMS0095-OCT23 | ug/L | 0.08 | <0.08 | 1 | 20 | 99 | 90 | 110 | 120 | 70 | 130 |
| Copper | EMS0095-OCT23 | ug/L | 0.2 | <0.2 | 4 | 20 | 100 | 90 | 110 | 85 | 70 | 130 |
| Molybdenum | EMS0095-OCT23 | ug/L | 0.04 | <0.04 | 4 | 20 | 102 | 90 | 110 | 97 | 70 | 130 |
| Sodium | EMS0095-OCT23 | ug/L | 10 | <10 | 1 | 20 | 92 | 90 | 110 | 113 | 70 | 130 |
| Nickel | EMS0095-OCT23 | µg/L | 0.1 | <0.1 | 2 | 20 | 102 | 90 | 110 | 91 | 70 | 130 |
| Lead | EMS0095-OCT23 | ug/L | 0.09 | <0.09 | 0 | 20 | 105 | 90 | 110 | 104 | 70 | 130 |
| Antimony | EMS0095-OCT23 | ug/L | 0.9 | <0.9 | ND | 20 | 110 | 90 | 110 | 110 | 70 | 130 |
| Selenium | EMS0095-OCT23 | µg/L | 0.04 | <0.04 | 10 | 20 | 96 | 90 | 110 | 110 | 70 | 130 |
| Thallium | EMS0095-OCT23 | µg/L | 0.005 | <0.005 | 20 | 20 | 104 | 90 | 110 | 103 | 70 | 130 |
| Uranium | EMS0095-OCT23 | µg/L | 0.002 | 0.002 | 2 | 20 | 105 | 90 | 110 | 102 | 70 | 130 |
| Vanadium | EMS0095-OCT23 | µg/L | 0.01 | <0.01 | 0 | 20 | 100 | 90 | 110 | 99 | 70 | 130 |
| Zinc | EMS0095-OCT23 | µg/L | 2 | <2 | 2 | 20 | 99 | 90 | 110 | 89 | 70 | 130 |

## QC SUMMARY

### Petroleum Hydrocarbons (F1)

Method: CCME Tier 1 I Internal ref.: ME-CA-[ENVIGC-LAK-AN-010

| Parameter | QC batch Reference | Units | RL | Method Blank | Duplicate | | LCS/Spike Blank | | | Matrix Spike / Ref. | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | RPD | AC (%) | Spike Recovery (%) | Recovery Limits (%) | | Spike Recovery (%) | Recovery Limits (%) | |
| | | | | | | | | Low | High | | Low | High |
| F1 (C6-C10) | GCM0140-OCT23 | µg/L | 25 | <25 | ND | 30 | 95 | 60 | 140 | 87 | 60 | 140 |

### Petroleum Hydrocarbons (F2-F4)

Method: CCME Tier 1 I Internal ref.: ME-CA-[ENVIGC-LAK-AN-010

| Parameter | QC batch Reference | Units | RL | Method Blank | Duplicate | | LCS/Spike Blank | | | Matrix Spike / Ref. | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | RPD | AC (%) | Spike Recovery (%) | Recovery Limits (%) | | Spike Recovery (%) | Recovery Limits (%) | |
| | | | | | | | | Low | High | | Low | High |
| F2 (C10-C16) | GCM0124-OCT23 | µg/L | 100 | <100 | ND | 30 | 83 | 60 | 140 | 84 | 60 | 140 |
| F3 (C16-C34) | GCM0124-OCT23 | µg/L | 200 | <200 | ND | 30 | 83 | 60 | 140 | 84 | 60 | 140 |
| F4 (C34-C50) | GCM0124-OCT23 | µg/L | 200 | <200 | ND | 30 | 83 | 60 | 140 | 84 | 60 | 140 |

## QC SUMMARY

### pH

Method: SM 4500 I Internal ref.: ME-CA-[ENV]EWL-LAK-AN-006

| Parameter | QC batch Reference | Units | RL | Method Blank | Duplicate | | LCS/Spike Blank | | | Matrix Spike / Ref. | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | RPD | AC (%) | Spike Recovery (%) | Recovery Limits (%) | | Spike Recovery (%) | Recovery Limits (%) | |
| | | | | | | | | Low | High | | Low | High |
| pH | EWL0178-OCT23 | No unit | 0.05 | NA | 0 | | 100 | | | NA | | |
| pH | EWL0213-OCT23 | No unit | 0.05 | NA | 0 | | 100 | | | NA | | |

## QC SUMMARY

### Semi-Volatile Organics

Method: EPA 3510C/8270D | Internal ref.: ME-CA-[ENV]GC-LAK-AN-005

| Parameter | QC batch Reference | Units | RL | Method Blank | Duplicate | | LCS/Spike Blank | | | Matrix Spike / Ref. | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | RPD | AC (%) | Spike Recovery (%) | Recovery Limits (%) | | Spike Recovery (%) | Recovery Limits (%) | |
| | | | | | | | | Low | High | | Low | High |
| 1-Methylnaphthalene | GCM0132-OCT23 | µg/L | 0.5 | < 0.5 | ND | 30 | 98 | 50 | 140 | 96 | 50 | 140 |
| 2-Methylnaphthalene | GCM0132-OCT23 | µg/L | 0.5 | < 0.5 | ND | 30 | 97 | 50 | 140 | 94 | 50 | 140 |
| Acenaphthene | GCM0132-OCT23 | µg/L | 0.1 | < 0.1 | ND | 30 | 97 | 50 | 140 | 99 | 50 | 140 |
| Acenaphthylene | GCM0132-OCT23 | µg/L | 0.1 | < 0.1 | ND | 30 | 100 | 50 | 140 | 105 | 50 | 140 |
| Anthracene | GCM0132-OCT23 | µg/L | 0.1 | < 0.1 | ND | 30 | 97 | 50 | 140 | 101 | 50 | 140 |
| Benzo(a)anthracene | GCM0132-OCT23 | µg/L | 0.1 | < 0.1 | ND | 30 | 100 | 50 | 140 | 100 | 50 | 140 |
| Benzo(a)pyrene | GCM0132-OCT23 | µg/L | 0.01 | < 0.01 | ND | 30 | 99 | 50 | 140 | 100 | 50 | 140 |
| Benzo(b+j)fluoranthene | GCM0132-OCT23 | ug/L | 0.1 | < 0.1 | ND | 30 | 101 | 50 | 140 | 90 | 50 | 140 |
| Benzo(ghi)perylene | GCM0132-OCT23 | µg/L | 0.2 | < 0.2 | ND | 30 | 97 | 50 | 140 | 96 | 50 | 140 |
| Benzo(k)fluoranthene | GCM0132-OCT23 | µg/L | 0.1 | < 0.1 | ND | 30 | 96 | 50 | 140 | 95 | 50 | 140 |
| Chrysene | GCM0132-OCT23 | µg/L | 0.1 | < 0.1 | ND | 30 | 100 | 50 | 140 | 104 | 50 | 140 |
| Dibenzo(a,h)anthracene | GCM0132-OCT23 | µg/L | 0.1 | < 0.1 | ND | 30 | 102 | 50 | 140 | 102 | 50 | 140 |
| Fluoranthene | GCM0132-OCT23 | ug/L | 0.1 | < 0.1 | ND | 30 | 100 | 50 | 140 | 113 | 50 | 140 |
| Fluorene | GCM0132-OCT23 | µg/L | 0.1 | < 0.1 | ND | 30 | 99 | 50 | 140 | 105 | 50 | 140 |
| Indeno(1,2,3-cd)pyrene | GCM0132-OCT23 | µg/L | 0.2 | < 0.2 | ND | 30 | 102 | 50 | 140 | 99 | 50 | 140 |
| Naphthalene | GCM0132-OCT23 | µg/L | 0.5 | < 0.5 | ND | 30 | 100 | 50 | 140 | 96 | 50 | 140 |
| Phenanthrene | GCM0132-OCT23 | µg/L | 0.1 | < 0.1 | ND | 30 | 99 | 50 | 140 | 102 | 50 | 140 |
| Pyrene | GCM0132-OCT23 | µg/L | 0.1 | < 0.1 | ND | 30 | 99 | 50 | 140 | 101 | 50 | 140 |

## QC SUMMARY

### Volatile Organics

Method: EPA 5030B/8260C | Internal ref.: ME-CA-[ENVIGC-LAK-AN-004

| Parameter | QC batch Reference | Units | RL | Method Blank | Duplicate | | LCS/Spike Blank | | | Matrix Spike / Ref. | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | RPD | AC (%) | Spike Recovery (%) | Recovery Limits (%) | | Spike Recovery (%) | Recovery Limits (%) | |
| | | | | | | | | Low | High | | Low | High |
| 1,1,1,2-Tetrachloroethane | GCM0131-OCT23 | µg/L | 0.5 | <0.5 | ND | 30 | 100 | 60 | 130 | 102 | 50 | 140 |
| 1,1,1-Trichloroethane | GCM0131-OCT23 | µg/L | 0.5 | <0.5 | ND | 30 | 98 | 60 | 130 | 99 | 50 | 140 |
| 1,1,2,2-Tetrachloroethane | GCM0131-OCT23 | µg/L | 0.5 | <0.5 | ND | 30 | 102 | 60 | 130 | 110 | 50 | 140 |
| 1,1,2-Trichloroethane | GCM0131-OCT23 | µg/L | 0.5 | <0.5 | ND | 30 | 99 | 60 | 130 | 102 | 50 | 140 |
| 1,1-Dichloroethane | GCM0131-OCT23 | µg/L | 0.5 | <0.5 | ND | 30 | 98 | 60 | 130 | 101 | 50 | 140 |
| 1,1-Dichloroethylene | GCM0131-OCT23 | µg/L | 0.5 | <0.5 | ND | 30 | 95 | 60 | 130 | 96 | 50 | 140 |
| 1,2-Dichlorobenzene | GCM0131-OCT23 | µg/L | 0.5 | <0.5 | ND | 30 | 100 | 60 | 130 | 102 | 50 | 140 |
| 1,2-Dichloroethane | GCM0131-OCT23 | µg/L | 0.5 | <0.5 | ND | 30 | 98 | 60 | 130 | 100 | 50 | 140 |
| 1,2-Dichloropropane | GCM0131-OCT23 | µg/L | 0.5 | <0.5 | ND | 30 | 100 | 60 | 130 | 101 | 50 | 140 |
| 1,3-Dichlorobenzene | GCM0131-OCT23 | µg/L | 0.5 | <0.5 | ND | 30 | 102 | 60 | 130 | 103 | 50 | 140 |
| 1,4-Dichlorobenzene | GCM0131-OCT23 | µg/L | 0.5 | <0.5 | ND | 30 | 104 | 60 | 130 | 104 | 50 | 140 |
| Acetone | GCM0131-OCT23 | ug/L | 30 | <30 | ND | 30 | 95 | 50 | 140 | 100 | 50 | 140 |
| Benzene | GCM0131-OCT23 | µg/L | 0.5 | <0.5 | ND | 30 | 99 | 60 | 130 | 102 | 50 | 140 |
| Bromodichloromethane | GCM0131-OCT23 | µg/L | 0.5 | <0.5 | ND | 30 | 99 | 60 | 130 | 100 | 50 | 140 |
| Bromoform | GCM0131-OCT23 | µg/L | 0.5 | <0.5 | ND | 30 | 99 | 60 | 130 | 102 | 50 | 140 |
| Bromomethane | GCM0131-OCT23 | µg/L | 0.5 | <0.5 | ND | 30 | 91 | 50 | 140 | 94 | 50 | 140 |
| Carbon tetrachloride | GCM0131-OCT23 | µg/L | 0.2 | <0.2 | ND | 30 | 97 | 60 | 130 | 98 | 50 | 140 |
| Chlorobenzene | GCM0131-OCT23 | µg/L | 0.5 | <0.5 | ND | 30 | 99 | 60 | 130 | 100 | 50 | 140 |
| Chloroform | GCM0131-OCT23 | µg/L | 0.5 | <0.5 | ND | 30 | 98 | 60 | 130 | 100 | 50 | 140 |
| cis-1,2-Dichloroethene | GCM0131-OCT23 | µg/L | 0.5 | <0.5 | ND | 30 | 99 | 60 | 130 | 102 | 50 | 140 |

## QC SUMMARY

### Volatile Organics (continued)

Method: EPA 5030B/8260C | Internal ref.: ME-CA-[ENVIGC-LAK-AN-004

| Parameter | QC batch Reference | Units | RL | Method Blank | Duplicate | | LCS/Spike Blank | | | Matrix Spike / Ref. | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | RPD | AC (%) | Spike Recovery (%) | Recovery Limits (%) | | Spike Recovery (%) | Recovery Limits (%) | |
| | | | | | | | | Low | High | | Low | High |
| cis-1,3-Dichloropropene | GCM0131-OCT23 | µg/L | 0.5 | <0.5 | ND | 30 | 98 | 60 | 130 | 98 | 50 | 140 |
| Dibromochloromethane | GCM0131-OCT23 | µg/L | 0.5 | <0.5 | ND | 30 | 98 | 60 | 130 | 100 | 50 | 140 |
| Dichlorodifluoromethane | GCM0131-OCT23 | µg/L | 2.0 | <2 | ND | 30 | 65 | 50 | 140 | 61 | 50 | 140 |
| Ethylbenzene | GCM0131-OCT23 | µg/L | 0.5 | <0.5 | ND | 30 | 103 | 60 | 130 | 104 | 50 | 140 |
| Ethylenedibromide | GCM0131-OCT23 | µg/L | 0.2 | <0.2 | ND | 30 | 100 | 60 | 130 | 100 | 50 | 140 |
| n-Hexane | GCM0131-OCT23 | µg/L | 1.0 | <1 | ND | 30 | 89 | 60 | 130 | 85 | 50 | 140 |
| m/p-xylene | GCM0131-OCT23 | µg/L | 0.5 | <0.5 | ND | 30 | 104 | 60 | 130 | 105 | 50 | 140 |
| Methyl ethyl ketone | GCM0131-OCT23 | ug/L | 20 | <20 | ND | 30 | 97 | 60 | 130 | 96 | 50 | 140 |
| Methyl Isobutyl Ketone | GCM0131-OCT23 | µg/L | 20 | <20 | ND | 30 | 103 | 50 | 140 | 105 | 50 | 140 |
| Methyl-t-butyl Ether | GCM0131-OCT23 | µg/L | 2.0 | <2 | ND | 30 | 103 | 60 | 130 | 106 | 50 | 140 |
| Methylene Chloride | GCM0131-OCT23 | µg/L | 0.5 | <0.5 | ND | 30 | 102 | 60 | 130 | 102 | 50 | 140 |
| o-xylene | GCM0131-OCT23 | µg/L | 0.5 | <0.5 | ND | 30 | 105 | 60 | 130 | 106 | 50 | 140 |
| Styrene | GCM0131-OCT23 | µg/L | 0.5 | <0.5 | ND | 30 | 103 | 60 | 130 | 100 | 50 | 140 |
| Tetrachloroethylene (perchloroethylene) | GCM0131-OCT23 | µg/L | 0.5 | <0.5 | ND | 30 | 100 | 60 | 130 | 99 | 50 | 140 |
| Toluene | GCM0131-OCT23 | µg/L | 0.5 | <0.5 | ND | 30 | 101 | 60 | 130 | 102 | 50 | 140 |
| trans-1,2-Dichloroethene | GCM0131-OCT23 | µg/L | 0.5 | <0.5 | ND | 30 | 97 | 60 | 130 | 98 | 50 | 140 |
| trans-1,3-Dichloropropene | GCM0131-OCT23 | µg/L | 0.5 | <0.5 | ND | 30 | 96 | 60 | 130 | 100 | 50 | 140 |
| Trichloroethylene | GCM0131-OCT23 | µg/L | 0.5 | <0.5 | ND | 30 | 98 | 60 | 130 | 95 | 50 | 140 |
| Trichlorofluoromethane | GCM0131-OCT23 | µg/L | 5.0 | <5 | ND | 30 | 95 | 50 | 140 | 94 | 50 | 140 |
| Vinyl Chloride | GCM0131-OCT23 | µg/L | 0.2 | <0.2 | ND | 30 | 85 | 50 | 140 | 86 | 50 | 140 |

## QC SUMMARY

Method Blank: a blank matrix that is carried through the entire analytical procedure. Used to assess laboratory contamination.
Duplicate: Paired analysis of a separate portion of the same sample that is carried through the entire analytical procedure. Used to evaluate measurement precision.
LCS/Spike Blank: Laboratory control sample or spike blank refer to a blank matrix to which a known amount of analyte has been added. Used to evaluate analyte recovery and laboratory accuracy without sample matrix effects.
Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate laboratory accuracy with sample matrix effects.
Reference Material: a material or substance matrix matched to the samples that contains a known amount of the analyte of interest. A reference material may be used in place of a matrix spike.
RL: Reporting limit
RPD: Relative percent difference
AC: Acceptance criteria

**Multielement Scan Qualifier**: as the number of analytes in a scan increases, so does the chance of a limit exceedance by random chance as opposed to a real method problem. Thus, in multielement scans, for the LCS and matrix spike, up to 10% of the analytes may exceed the quoted limits by up to 10% absolute and the spike is considered acceptable.
**Duplicate Qualifier**: for duplicates as the measured result approaches the RL, the uncertainty associated with the value increases dramatically, thus duplicate acceptance limits apply only where the average of the two duplicates is greater than five times the RL.
**Matrix Spike Qualifier**: for matrix spikes, as the concentration of the native analyte increases, the uncertainty of the matrix spike recovery increases. Thus, the matrix spike acceptance limits apply only when the concentration of the matrix spike is greater than or equal to the concentration of the native analyte.

## LEGEND

### FOOTNOTES

| | |
|---|---|
| **NSS** | Insufficient sample for analysis. |
| **RL** | Reporting Limit. |
| ↑ | Reporting limit raised. |
| ↓ | Reporting limit lowered. |
| **NA** | The sample was not analysed for this analyte |
| **ND** | Non Detect |

Results relate only to the sample tested.
Data reported represent the sample as submitted to SGS. Solid samples expressed on a dry weight basis.
"Temperature Upon Receipt" is representative of the whole shipment and may not reflect the temperature of individual samples.
Analysis conducted on samples submitted pursuant to or as part of Reg. 153/04, are in accordance to the "Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act and Excess Soil Quality" published by the Ministry and dated March 9, 2004 as amended.

SGS provides criteria information (such as regulatory or guideline limits and summary of limit exceedances) as a service. Every attempt is made to ensure the criteria information in this report is accurate and current, however, it is not guaranteed. Comparison to the most current criteria is the responsibility of the client and SGS assumes no responsibility for the accuracy of the criteria levels indicated.

SGS Canada Inc. statement of conformity decision rule does not consider uncertainty when analytical results are compared to a specified standard or regulation.
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This report supersedes all previous versions.

-- End of Analytical Report --

# Request for Laboratory Services and CHAIN OF CUSTODY

SGS Industries & Environment - Lakefield: 185 Concession St., Lakefield, ON K0L 2H0 Phone: 705-652-2000 Fax: 705-652-6365 Web: www.sgs.com/environment
- London: 657 Consortium Court, London, ON, N6E 2S8 Phone: 519-672-4500 Toll Free: 877-848-8060 Fax: 519-672-0361

No: 032365 Page 1 of 1

**Laboratory Information Section - Lab use only**

Received By: ED
Received Date: 10/5/23 (mm/dd/yy)
Received Time: 15:07 (hr : min)
Received By (signature):
Custody Seal Present: Yes ☑ No ☐
Custody Seal Intact: Yes ☑ No ☐
Cooling Agent Present: Yes ☑ No ☐ Type: ICE
Temperature Upon Receipt (°C) 7x3
CA40037 - OCT 23
LAB LIMS #:

## REPORT INFORMATION

Company: Watters Environmental
Contact: Natalie Wright
Address: 9135 Keele St. Unit A7
Concord, ON, L4K 0J4
Phone: 416 361 2407
Fax: nwright@wattersenvironmental.com
Email: labert@wattersenvironmental.com

## INVOICE INFORMATION

☑ (same as Report Information)
Company:
Contact: B. Espinola
Address:
Phone:
Email: ap@wattersenvironmental.com

Quotation #:
Project #: 20-0052.04
P.O. #:
Site Location/ID:

## TURNAROUND TIME (TAT) REQUIRED

☑ Regular TAT (5-7days)
TAT's are quoted in business days (exclude statutory holidays & weekends). Samples received after 6pm or on weekends: TAT begins next business day

RUSH TAT (Additional Charges May Apply): ☐ 1 Day ☐ 2 Days ☐ 3 Days ☐ 4 Days
PLEASE CONFIRM RUSH FEASIBILITY WITH SGS REPRESENTATIVE PRIOR TO SUBMISSION

Specify Due Date:

*NOTE: DRINKING (POTABLE) WATER SAMPLES FOR HUMAN CONSUMPTION MUST BE SUBMITTED WITH SGS DRINKING WATER CHAIN OF CUSTODY

## REGULATIONS

☐ O.Reg 153/04 ☐ O.Reg 406/19
☑ Table 1 ☑ Res/Park Soil Texture: ☑ Coarse
☐ Table 2 ☑ Ind/Com ☐ Medium/Fine
☐ Table 3 ☐ Agri/Other
☐ Table ____ Appx. ____
Soil Volume ☐ <350m3 ☐ >350m3

Other Regulations:
☐ Reg 347/558 (3 Day min TAT)
☐ PWQO ☐ MMER
☐ CCME ☐ Other:
☐ MISA
☐ ODWS Not Reportable *See note

Sewer By-Law:
☐ Sanitary
☐ Storm
Municipality:

RECORD OF SITE CONDITION (RSC) ☑ YES ☐ NO

## ANALYSIS REQUESTED

| | SAMPLE IDENTIFICATION | DATE SAMPLED | TIME SAMPLED | # OF BOTTLES | MATRIX | M&I: Field Filtered (Y/N) | M&I: Metals & Inorganics incl CrVI, CN, Hg pH,(B(HWS),EC,SAR-soil) (Cl, Na-water) | M&I: Full Metals Suite ICP metals plus B(HWS-soil only) Hg, CrVI | M&I: ICP Metals only Sb,As,Ba,Be,B,Cd, Cr,Co,Cu,Pb,Mo,Ni,Se,Ag,Tl,U,V,Zn | SVOC: PAHs only | SVOC: SVOCs all incl PAHs, ABNs, CPs | PCB: PCBs Total ☐ Aroclor ☐ | PHC: F1-F4 + BTEX | PHC: F1-F4 only no BTEX | VOC: VOCs all incl BTEX | VOC: BTEX only | Pest: Pesticides Organochlorine or specify other | Other (please specify) | Other (please specify) | Other (please specify) | Other (please specify) | Other: Sewer Use: Specify pkg: | Other: Water Characterization Pkg General ☐ Extended ☐ | SPLP Specify tests | TCLP Specify tests | COMMENTS: |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | BH1 (MW) | 10/4/23 | 9:00 | 8 | GW | ✓ | ✓ | | | ✓ | | | ✓ | | ✓ | | | | | | | | | | |
| 2 | BH2 (MW) | | 10:00 | 8 | GW | ✓ | ✓ | | | ✓ | | | | | | | | | | | | | | | |
| 3 | BH23 - 1 (MW) | | 11:00 | 14 | GW | ✓ | ✓ | | | ✓ | | | ✓ | | ✓ | | | | | | | | | | |
| 4 | BH23 - 2 (MW) | | 12:00 | 14 | GW | ✓ | ✓ | | | ✓ | | | ✓ | | ✓ | | | | | | | | | | |
| 5 | BH23 - 1000 | | 7:00 | 14 | GW | ✓ | ✓ | | | ✓ | | | ✓ | | ✓ | | | | | | | | | | |
| 6 | BH23 - 3 (MW) | | 1:00 | 14 | GW | ✓ | ✓ | | | ✓ | | | ✓ | | ✓ | | | | | | | | | | |
| 7 | BH23 - 4 (MW) | | 2:00 | 14 | GW | ✓ | ✓ | | | ✓ | | | ✓ | | ✓ | | | | | | | | | | |
| 8 | EW2 | | 3:00 | 2 | GW | | | | | | | | | | ✓ | | | | | | | | | | |
| 9 | EW1 | | 4:00 | 6 | GW | ✓ | ✓ | | | | | | | | | | | | | | | | | | |
| 10 | TRIP BLANK | | | 2 | GW | | | | | | | | | | ✓ | | | | | | | | | | |
| 11 | | | | | | | | | | | | | | | | | | | | | | | | | |
| 12 | | | | | | | | | | | | | | | | | | | | | | | | | |

Observations/Comments/Special Instructions

Sampled By (NAME): Michael Watters Signature: Michael Watters Date: 10/05/23 (mm/dd/yy)
Relinquished by (NAME): Michael Watters Signature: Michael Watters Date: 10/05/23 (mm/dd/yy)

Pink Copy - Client
Yellow & White Copy - SGS

Revision #: 1.6
Date of Issue: 02 May 2022

**Note:** Submission of samples to SGS is acknowledgement that you have been provided direction on sample collection/handling and transportation of samples. {2} Submission of samples to SGS is considered authorization for completion of work. Signatures may appear on this form or be retained on file in the contract, or in an alternative format (e.g. shipping documents). {3} Results may be sent by email to an unlimited number of addresses for no additional cost. Fax is available upon request. This document is issued by the Company under its General Conditions of Service accessible at http://www.sgs.com/terms_and_conditions.htm. (Printed copies are available upon request.) Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein.





# FINAL REPORT

## CA40163-FEB24 R

## 20-0052.04

Prepared for

Watters Environmental Group Inc.

# FINAL REPORT

CA40163-FEB24 R

## First Page

| CLIENT DETAILS | | LABORATORY DETAILS | |
|---|---|---|---|
| Client | Watters Environmental Group Inc. | Project Specialist | Brad Moore Hon. B.Sc |
| | | Laboratory | SGS Canada Inc. |
| Address | 9135 Keele St Unit A1<br>Concord, ON<br>L4K 0J4. Canada | Address | 185 Concession St., Lakefield ON, K0L 2H0 |
| Contact | Natalie Wright | Telephone | 705-652-2143 |
| Telephone | (416) 361-2407 | Facsimile | 705-652-6365 |
| Facsimile | (416) 361-2410 | Email | brad.moore@sgs.com |
| Email | NWright@wattersenvironmental.com; labcerts@wattersenviron | SGS Reference | CA40163-FEB24 |
| Project | 20-0052.04 | Received | 02/21/2024 |
| Order Number | | Approved | 02/27/2024 |
| Samples | Ground Water (2) | Report Number | CA40163-FEB24 R |
| | | Date Reported | 02/27/2024 |

COMMENTS

Temperature of Sample upon Receipt: 9 degrees C
Cooling Agent Present: Yes
Custody Seal Present: Yes

Chain of Custody Number: 038028

SIGNATORIES

Brad Moore Hon. B.Sc

TABLE OF CONTENTS

First Page..... 1

Index..... 2

Results..... 3

Exceedance Summary..... 4

Holding Time Summary..... 5

QC Summary..... 6-8

Legend..... 9

Annexes..... 10

**Client:** Watters Environmental Group Inc.
**Project:** 20-0052.04
**Project Manager:** Natalie Wright
**Samplers:** Ivan Aguilar

MATRIX: WATER

L1 = REG153 / GROUND WATER / COARSE - TABLE 1 - All Types of Property Uses - UNDEFINED

| | | | | | |
|---|---|---|---|---|---|
| | **Sample Number** | | | 7 | 8 |
| | **Sample Name** | | | EW1 | BH2(MW) |
| | **Sample Matrix** | | | Ground Water | Ground Water |
| | **Sample Date** | | | 21/02/2024 | 21/02/2024 |
| **Parameter** | **Units** | **RL** | **L1** | **Result** | **Result** |
| **Hydrides** | | | | | |
| Antimony | µg/L | 0.9 | 1.5 | 2.6 | < 0.9 |
| Arsenic | µg/L | 0.2 | 13 | 1.3 | 1.0 |
| Selenium | µg/L | 0.04 | 5 | 0.89 | 1.38 |
| **Metals and Inorganics** | | | | | |
| Barium | µg/L | 0.08 | 610 | --- | 680 |
| Beryllium | µg/L | 0.007 | 0.5 | --- | < 0.007 |
| Boron | µg/L | 2 | 1700 | --- | 87 |
| Cadmium | µg/L | 0.003 | 0.5 | --- | 0.020 |
| Chromium | µg/L | 0.08 | 11 | --- | 3.25 |
| Cobalt | µg/L | 0.004 | 3.8 | --- | 0.110 |
| Copper | µg/L | 2 | 5 | --- | 3 |
| Lead | µg/L | 0.09 | 1.9 | --- | 0.09 |
| Molybdenum | µg/L | 0.4 | 23 | --- | 2.3 |
| Nickel | µg/L | 0.1 | 14 | --- | 0.8 |
| Silver | µg/L | 0.05 | 0.3 | --- | 0.240 |
| Thallium | µg/L | 0.005 | 0.5 | --- | 0.070 |
| Uranium | µg/L | 0.002 | 8.9 | --- | 0.750 |
| Vanadium | µg/L | 0.01 | 3.9 | --- | 1.16 |
| Zinc | µg/L | 2 | 160 | --- | 4 |

## EXCEEDANCE SUMMARY

| Parameter | Method | Units | Result | REG153 / GROUND WATER / COARSE - TABLE 1 - All Types of Property Uses - UNDEFINED L1 |
|---|---|---|---|---|
| **EW1** | | | | |
| Antimony | SM 3030/EPA 200.8 | µg/L | 2.6 | 1.5 |
| **BH2(MW)** | | | | |
| Barium | SM 3030/EPA 200.8 | µg/L | 680 | 610 |

## HOLDING TIME SUMMARY

| Sample Name | QC Batch Reference | Sample Number | Sampled | Received | Extracted/ Prepared | Analysed | Holding Time | Approved |
|---|---|---|---|---|---|---|---|---|
| **Metals in aqueous samples - ICP-MS** | | | | | | | | |
| **Method: SM 3030/EPA 200.8 \| Internal ref.: ME-CA-[ENV]SPE-LAK-AN-006** | | | | | | | | |
| EW1 | EMS0212-FEB24 | 7 | 02/21/2024 | 02/21/2024 | 02/23/2024 | 02/27/2024 | 04/21/2024 | 02/27/2024 |
| BH2(MW) | EMS0228-FEB24 | 8 | 02/21/2024 | 02/21/2024 | 02/23/2024 | 02/27/2024 | 04/21/2024 | 02/27/2024 |

## QC SUMMARY

### Metals in aqueous samples - ICP-MS

Method: SM 3030/EPA 200.8 | Internal ref.: ME-CA-IENVISPE-LAK-AN-006

| Parameter | QC batch Reference | Units | RL | Method Blank | Duplicate | | LCS/Spike Blank | | | Matrix Spike / Ref. | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | RPD | AC (%) | Spike Recovery (%) | Recovery Limits (%) | | Spike Recovery (%) | Recovery Limits (%) | |
| | | | | | | | | Low | High | | Low | High |
| Silver | EMS0212-FEB24 | ug/L | 0.05 | <0.05 | ND | 20 | 103 | 90 | 110 | 96 | 70 | 130 |
| Arsenic | EMS0212-FEB24 | µg/L | 0.2 | <0.2 | 7 | 20 | 104 | 90 | 110 | 105 | 70 | 130 |
| Barium | EMS0212-FEB24 | ug/L | 0.08 | <0.08 | 5 | 20 | 100 | 90 | 110 | 97 | 70 | 130 |
| Beryllium | EMS0212-FEB24 | µg/L | 0.007 | <0.007 | ND | 20 | 96 | 90 | 110 | 100 | 70 | 130 |
| Boron | EMS0212-FEB24 | µg/L | 2 | <2 | 2 | 20 | 94 | 90 | 110 | 90 | 70 | 130 |
| Cadmium | EMS0212-FEB24 | µg/L | 0.003 | <0.003 | 0 | 20 | 105 | 90 | 110 | 111 | 70 | 130 |
| Cobalt | EMS0212-FEB24 | µg/L | 0.004 | <0.004 | 6 | 20 | 104 | 90 | 110 | 106 | 70 | 130 |
| Chromium | EMS0212-FEB24 | ug/L | 0.08 | <0.08 | ND | 20 | 104 | 90 | 110 | 113 | 70 | 130 |
| Copper | EMS0212-FEB24 | ug/L | 2 | <2 | 6 | 20 | 105 | 90 | 110 | 105 | 70 | 130 |
| Molybdenum | EMS0212-FEB24 | ug/L | 0.4 | <0.4 | 3 | 20 | 100 | 90 | 110 | 91 | 70 | 130 |
| Nickel | EMS0212-FEB24 | µg/L | 0.1 | <0.1 | 1 | 20 | 103 | 90 | 110 | 99 | 70 | 130 |
| Lead | EMS0212-FEB24 | ug/L | 0.09 | <0.09 | ND | 20 | 105 | 90 | 110 | 101 | 70 | 130 |
| Antimony | EMS0212-FEB24 | ug/L | 0.9 | <0.9 | ND | 20 | 95 | 90 | 110 | 109 | 70 | 130 |
| Selenium | EMS0212-FEB24 | µg/L | 0.04 | <0.04 | 10 | 20 | 103 | 90 | 110 | 118 | 70 | 130 |
| Thallium | EMS0212-FEB24 | µg/L | 0.005 | <0.005 | ND | 20 | 101 | 90 | 110 | 103 | 70 | 130 |
| Uranium | EMS0212-FEB24 | µg/L | 0.002 | <0.002 | 4 | 20 | 102 | 90 | 110 | 102 | 70 | 130 |
| Vanadium | EMS0212-FEB24 | µg/L | 0.01 | <0.01 | 1 | 20 | 102 | 90 | 110 | 104 | 70 | 130 |
| Zinc | EMS0212-FEB24 | µg/L | 2 | <2 | 4 | 20 | 108 | 90 | 110 | 108 | 70 | 130 |
| Silver | EMS0228-FEB24 | ug/L | 0.05 | <0.05 | ND | 20 | 103 | 90 | 110 | 81 | 70 | 130 |
| Arsenic | EMS0228-FEB24 | µg/L | 0.2 | <0.2 | 3 | 20 | 106 | 90 | 110 | 99 | 70 | 130 |

## QC SUMMARY

### Metals in aqueous samples - ICP-MS (continued)

Method: SM 3030/EPA 200.8 | Internal ref.: ME-CA-IENVISPE-LAK-AN-006

| Parameter | QC batch Reference | Units | RL | Method Blank | Duplicate | | LCS/Spike Blank | | | Matrix Spike / Ref. | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | RPD | AC (%) | Spike Recovery (%) | Recovery Limits (%) | | Spike Recovery (%) | Recovery Limits (%) | |
| | | | | | | | | Low | High | | Low | High |
| Barium | EMS0228-FEB24 | ug/L | 0.08 | <0.08 | 2 | 20 | 105 | 90 | 110 | 99 | 70 | 130 |
| Beryllium | EMS0228-FEB24 | µg/L | 0.007 | <0.007 | ND | 20 | 103 | 90 | 110 | 99 | 70 | 130 |
| Boron | EMS0228-FEB24 | µg/L | 2 | <2 | ND | 20 | 95 | 90 | 110 | 90 | 70 | 130 |
| Cadmium | EMS0228-FEB24 | µg/L | 0.003 | <0.003 | ND | 20 | 107 | 90 | 110 | 102 | 70 | 130 |
| Cobalt | EMS0228-FEB24 | µg/L | 0.004 | <0.004 | 11 | 20 | 102 | 90 | 110 | 95 | 70 | 130 |
| Chromium | EMS0228-FEB24 | ug/L | 0.08 | <0.08 | ND | 20 | 102 | 90 | 110 | 99 | 70 | 130 |
| Copper | EMS0228-FEB24 | ug/L | 2 | <2 | ND | 20 | 101 | 90 | 110 | 109 | 70 | 130 |
| Molybdenum | EMS0228-FEB24 | ug/L | 0.4 | <0.4 | 2 | 20 | 100 | 90 | 110 | 92 | 70 | 130 |
| Nickel | EMS0228-FEB24 | µg/L | 0.1 | <0.1 | 11 | 20 | 106 | 90 | 110 | 100 | 70 | 130 |
| Lead | EMS0228-FEB24 | ug/L | 0.09 | <0.09 | ND | 20 | 108 | 90 | 110 | 117 | 70 | 130 |
| Antimony | EMS0228-FEB24 | ug/L | 0.9 | <0.9 | ND | 20 | 97 | 90 | 110 | 106 | 70 | 130 |
| Selenium | EMS0228-FEB24 | µg/L | 0.04 | <0.04 | ND | 20 | 106 | 90 | 110 | 113 | 70 | 130 |
| Thallium | EMS0228-FEB24 | µg/L | 0.005 | <0.005 | ND | 20 | 106 | 90 | 110 | 99 | 70 | 130 |
| Uranium | EMS0228-FEB24 | µg/L | 0.002 | <0.002 | 2 | 20 | 107 | 90 | 110 | 100 | 70 | 130 |
| Vanadium | EMS0228-FEB24 | µg/L | 0.01 | <0.01 | 5 | 20 | 103 | 90 | 110 | 100 | 70 | 130 |
| Zinc | EMS0228-FEB24 | µg/L | 2 | <2 | ND | 20 | 102 | 90 | 110 | 122 | 70 | 130 |

## QC SUMMARY

Method Blank: a blank matrix that is carried through the entire analytical procedure. Used to assess laboratory contamination.

Duplicate: Paired analysis of a separate portion of the same sample that is carried through the entire analytical procedure. Used to evaluate measurement precision.

LCS/Spike Blank: Laboratory control sample or spike blank refer to a blank matrix to which a known amount of analyte has been added. Used to evaluate analyte recovery and laboratory accuracy without sample matrix effects.

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

Reference Material: a material or substance matrix matched to the samples that contains a known amount of the analyte of interest. A reference material may be used in place of a matrix spike.

RL: Reporting limit

RPD: Relative percent difference

AC: Acceptance criteria

**Multielement Scan Qualifier**: as the number of analytes in a scan increases, so does the chance of a limit exceedance by random chance as opposed to a real method problem. Thus, in multielement scans, for the LCS and matrix spike, up to 10% of the analytes may exceed the quoted limits by up to 10% absolute and the spike is considered acceptable.

**Duplicate Qualifier**: for duplicates as the measured result approaches the RL, the uncertainty associated with the value increases dramatically, thus duplicate acceptance limits apply only where the average of the two duplicates is greater than five times the RL.

**Matrix Spike Qualifier**: for matrix spikes, as the concentration of the native analyte increases, the uncertainty of the matrix spike recovery increases. Thus, the matrix spike acceptance limits apply only when the concentration of the matrix spike is greater than or equal to the concentration of the native analyte.

## LEGEND

### FOOTNOTES

| | |
|---|---|
| **NSS** | Insufficient sample for analysis. |
| **RL** | Reporting Limit. |
| ↑ | Reporting limit raised. |
| ↓ | Reporting limit lowered. |
| **NA** | The sample was not analysed for this analyte |
| **ND** | Non Detect |

Results relate only to the sample tested.
Data reported represent the sample as submitted to SGS. Solid samples expressed on a dry weight basis.
"Temperature Upon Receipt" is representative of the whole shipment and may not reflect the temperature of individual samples.
Analysis conducted on samples submitted pursuant to or as part of Reg. 153/04, are in accordance to the "Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act and Excess Soil Quality" published by the Ministry and dated March 9, 2004 as amended.

SGS provides criteria information (such as regulatory or guideline limits and summary of limit exceedances) as a service. Every attempt is made to ensure the criteria information in this report is accurate and current, however, it is not guaranteed. Comparison to the most current criteria is the responsibility of the client and SGS assumes no responsibility for the accuracy of the criteria levels indicated.

SGS Canada Inc. statement of conformity decision rule does not consider uncertainty when analytical results are compared to a specified standard or regulation.
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This report supersedes all previous versions.

-- End of Analytical Report --

# SGS

## Request for Laboratory Services and CHAIN OF CUSTODY

No: 038028

Page 1 of 1

Industries & Environment - Lakefield: 185 Concession St., Lakefield, ON K0L 2H0 Phone: 705-652-2000 Fax: 705-652-6365 Web: www.sgs.com/environment
- London: 657 Consortium Court, London, ON, N6E 2S8 Phone: 519-672-4500 Toll Free: 877-848-8060 Fax: 519-672-0361

**Laboratory Information Section - Lab use only**

Received By: Seth Rem
Received By (signature):
Received Date: 02/21/2024 (mm/dd/yy)
Received Time: 13:30 (hr: min)
Custody Seal Present: Yes ☑ No ☐
Custody Seal Intact: Yes ☑ No ☐
Cooling Agent Present: Yes ☑ No ☐ Type: ice pack
Temperature Upon Receipt (°C): 9 & 2
CA40163-Feb 24
LAB LIMS #:

### REPORT INFORMATION

Company: WATTERS ENVIRONMENTAL
Contact: NATALIE WRIGHT
Address: 9135 Keele St Unit A2, Vaughan, ON L4K0J4
Phone: 416-301-2407
Fax:
Email: labcerts, Nwright@wattersenvironmental.com

### INVOICE INFORMATION

☐ (same as Report Information)
Company: Watter Environmental
Contact: Accounts Payable
Address: 9135 Keele St Unit A1, Vaughan, ON L4K0J4
Phone: 416-361-2407 - AP
Email: Nwright@wattersenvironmental.com

Quotation #:
Project #: 20-0052-004
P.O. #:
Site Location/ID:

### TURNAROUND TIME (TAT) REQUIRED

☑ Regular TAT (5-7days)

TAT's are quoted in business days (exclude statutory holidays & weekends).
Samples received after 6pm or on weekends: TAT begins next business day

RUSH TAT (Additional Charges May Apply): ☐ 1 Day ☐ 2 Days ☐ 3 Days ☐ 4 Days
PLEASE CONFIRM RUSH FEASIBILITY WITH SGS REPRESENTATIVE PRIOR TO SUBMISSION

Specify Due Date:

*NOTE: DRINKING (POTABLE) WATER SAMPLES FOR HUMAN CONSUMPTION MUST BE SUBMITTED WITH SGS DRINKING WATER CHAIN OF CUSTODY

### REGULATIONS

☑ O.Reg 153/04 ☐ O.Reg 406/19

☑ Table 1 ☑ Res/Park Soil Texture: ☐ Coarse
☐ Table 2 ☑ Ind/Com ☐ Medium/Fine
☐ Table 3 ☐ Agri/Other
☐ Table _____ Appx. _____
Soil Volume ☐ <350m3 ☐ >350m3

**Other Regulations:**
☐ Reg 347/558 (3 Day min TAT)
☐ PWQO ☐ MMER
☐ CCME ☐ Other:
☐ MISA
☐ ODWS Not Reportable *See note

**Sewer By-Law:**
☐ Sanitary
☐ Storm
Municipality:

### RECORD OF SITE CONDITION (RSC) ☑ YES ☐ NO

### ANALYSIS REQUESTED

| | SAMPLE IDENTIFICATION | DATE SAMPLED | TIME SAMPLED | # OF BOTTLES | MATRIX | Field Filtered (Y/N) | M&I: Metals & Inorganics (incl CrVI, CN, Hg pH (B(HWS), EC, SAR--soil) (Cl, Na-water) | M&I: Full Metals Suite (ICP metals plus B(HWS-soil only) Hg, CrVI | M&I: ICP Metals only Sb,As,Ba,Be,B,Cd, Cr,Co,Cu,Pb,Mo,Ni,Se,Ag,Ti,U,V,Zn | SVOC: PAHs only | SVOC: SVOCs all incl PAHs, ABNs, CPs | PCB: PCBs ☐ Aroclor ☐ Total | PHC: F1-F4 + BTEX | PHC: F1-F4 only no BTEX | VOC: VOCs all incl BTEX | VOC: BTEX only | Pest: Pesticides Organochlorine or specify other | Other: 1.2.2 Metals | Other: As, Sb, Se (Hydride M.) | Other: | Other: | Other: Sewer Use: Specify pkg: | Other: Water Characterization Pkg ☐ Extended ☐ General | SPLP: Specify tests ☐ Metals ☐ VOC ☐ 1,4-Dioxane ☐ OCP ☐ ABN | TCLP: Specify tests ☐ M&I ☐ VOC ☐ PCB ☐ B(a)P ☐ ABN ☐ Ignit. | COMMENTS: |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | EW 1 | FEB 21, 2024 | 9:45 | 1 | GW | Y | | | | | | | | | | | | ✓ | | | | | | | | |
| 2 | BH2 (MW) | FEB 21, 2024 | 11:15 | 1 | GW | Y | | | | | | | | | | | | ✓ | | | | | | | | |
| 3 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 5 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 6 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 7 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 8 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 9 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 10 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 11 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 12 | | | | | | | | | | | | | | | | | | | | | | | | | | |

Observations/Comments/Special Instructions

Sampled By (NAME): IVAN AGUILAR Signature: Date: 02/21/24 (mm/dd/yy)
Relinquished by (NAME): Signature: Date: / / (mm/dd/yy)

Pink Copy - Client
Yellow & White Copy - SGS



**Note:** Submission of samples to SGS is acknowledgement that you have been provided direction on sample collection/handling and transportation of samples. {2} Submission of samples to SGS is considered authorization for completion of work. Signatures may appear on this form or be retained on file in the contract, or in an alternative format (e.g. shipping documents). {3} Results may be sent by email to an unlimited number of addresses for no additional cost. Fax is available upon request. This document is issued by the Company under its General Conditions of Service accessible at http://www.sgs.com/terms_and_conditions.htm. (Printed copies are available upon request.) Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein.

# APPENDIX E

## Summary and Maximum Concentrations of Soil and Analytical Data

# APPENDIX E
# ALL SOIL SAMPLES COMPARED TO SCS

149-153 DUNLOP STREET EAST, BARRIE, ONTARIO
PROJECT NO. 20-0052.04

| Sample ID: | Table 1 Standards (µg/g) | Maximum Concentration (µg/g) | BH1(MW)-SS1 | BH1(MW)-SS3 | BH1(MW)-SS4 | BH1(MW)-SS11 | BH2(MW)-SS1 | BH200-1 [Duplicate of BH2(MW)-SS1] | BH2(MW)-SS2 | BH200-2 [Duplicate of BH2(MW)-SS2] | BH2(MW)-SS3 | BH200-3 [Duplicate of BH2(MW)-SS3] | BH2(MW)-SS10 | BH3-SS1 | BH23-1(MW)-1 | BH1000-1 [Duplicate of BH23-1(MW)-1] | BH23-1(MW)-5 | BH23-2(MW)-2 | BH23-2(MW)-5 | BH23-3(MW)-1 | BH23-3(MW)-2 | BH23-4(MW)-2 | BH23-5-1 | BH23-5000-1 [Duplicate of BH23-5-1] | BH23-5-2 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sample Depth (mbgs): | | | 0.01 - 0.61 | 1.52 - 2.13 | 2.29 - 2.90 | 7.62 - 8.23 | 0.01 - 0.61 | 0.01 - 0.61 | 0.76 - 1.37 | 0.76 - 1.37 | 1.52 - 2.13 | 1.52 - 2.13 | 6.86 - 7.47 | 0.0 - 0.61 | 0.01 – 1.52 | 0.01 – 1.52 | 6.10 – 7.62 | 1.52 – 3.05 | 6.10 – 7.62 | 0.01 - 1.52 | 1.52 – 3.05 | 1.52 – 3.05 | 0.0 – 1.52 | 0.0 – 1.52 | 1.52 – 3.05 |
| Date Sampled: | | | June 11, 2020 | June 11, 2020 | June 11, 2020 | June 11, 2020 | June 12, 2020 | June 12, 2020 | June 12, 2020 | June 12, 2020 | June 12, 2020 | June 12, 2020 | June 12, 2020 | June 12, 2020 | October 2, 2023 | October 2, 2023 | October 2, 2023 | October 2, 2023 | October 2, 2023 | October 3, 2023 | October 3, 2023 | October 3, 2023 | October 2, 2023 | October 2, 2023 | October 2, 2023 |
| Lab Certificate Number: | | | CA15298-JUN20 | CA15298-JUN20 | CA15298-JUN20 | CA15298-JUN20 | CA15298-JUN20 | CA15298-JUN20 | CA15298-JUN20 | CA15298-JUN20 | CA15298-JUN20 | CA15298-JUN20 | CA15298-JUN20 | CA15298-JUN20 | CA40040-OCT23 | CA40040-OCT23 | CA40040-OCT23 | CA40170-OCT23 | CA40040-OCT23 | CA40170-OCT23 | CA40040-OCT23 | CA40040-OCT23 | CA40040-OCT23 | CA40040-OCT23 | CA40040-OCT23 |
| **PHCs** | | | | | | | | | | | | | | | | | | | | | | | | | |
| F1 (C6-C10) | 25 | <10 | - | - | <10 | <10 | - | - | <10 | <10 | - | - | <10 | <10 | <10 | <10 | <10 | - | <10 | - | <10 | <10 | <10 | - | <10 |
| F1-BTEX (C6-C10 Hydrocarbons) | 25 | <10 | - | - | <10 | <10 | - | - | <10 | <10 | - | - | <10 | <10 | <10 | <10 | <10 | - | <10 | - | <10 | <10 | <10 | - | <10 |
| F2 (C10-C16 Hydrocarbons) | 10 | <10 | - | - | <10 | <10 | - | - | <10 | <10 | - | - | <10 | <10 | <10 | <10 | <10 | - | <10 | - | <10 | <10 | <10 | - | <10 |
| F3 (C16-C34 Hydrocarbons) | 240 | 74 | - | - | 74 | <50 | - | - | <50 | <50 | - | - | <50 | <50 | <50 | <50 | <50 | - | <50 | - | <50 | <50 | <50 | - | <50 |
| F4 (C34-C50 Hydrocarbons) | 120 | 843 | - | - | 843 | <50 | - | - | <50 | <50 | - | - | <50 | <50 | <50 | <50 | <50 | - | <50 | - | <50 | <50 | <50 | - | <50 |
| **BTEX** | | | | | | | | | | | | | | | | | | | | | | | | | |
| Benzene | 0.02 | <0.02 | - | - | <0.02 | <0.02 | - | - | <0.02 | <0.02 | - | - | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | - | <0.02 | - | <0.02 | <0.02 | - | - | <0.02 |
| Toluene | 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 | <0.05 | - | - | <0.05 |
| Ethylbenzene | 0.05 | <0.05 | - | - | <0.05 | <0.05 | - | - | <0.05 | <0.05 | - | - | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | - | <0.05 | - | <0.05 | <0.05 | - | - | <0.05 |
| Xylene (Total) | 0.05 | <0.05 | - | - | <0.05 | <0.05 | - | - | <0.05 | <0.05 | - | - | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | - | <0.05 | - | <0.05 | <0.05 | - | - | <0.05 |
| **THMs** | | | | | | | | | | | | | | | | | | | | | | | | | |
| Bromodichloromethane | 0.05 | <0.05 | - | - | <0.05 | <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 | 0.05 | <0.05 | - | - | <0.05 | <0.05 | - | - | <0.05 | <0.05 | - | - | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | - | <0.05 | - | <0.05 | <0.05 | - | - | <0.05 |
| Dibromochloromethane | 0.05 | <0.05 | - | - | <0.05 | <0.05 | - | - | <0.05 | <0.05 | - | - | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | - | <0.05 | - | <0.05 | <0.05 | - | - | <0.05 |
| **VOCs** | | | | | | | | | | | | | | | | | | | | | | | | | |
| Acetone | 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 |
| Bromomethane | 0.05 | <0.05 | - | - | <0.05 | <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 | 0.05 | <0.05 | - | - | <0.05 | <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 | 0.05 | <0.05 | - | - | <0.05 | <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 | 0.05 | <0.05 | - | - | <0.05 | <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 | 0.05 | <0.05 | - | - | <0.05 | <0.05 | - | - | <0.05 | <0.05 | - | - | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | - | <0.05 | - | <0.05 | <0.05 | - | - | <0.05 |
| 1,3-Dichlorobenzene | 0.05 | <0.05 | - | - | <0.05 | <0.05 | - | - | <0.05 | <0.05 | - | - | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | - | <0.05 | - | <0.05 | <0.05 | - | - | <0.05 |
| 1,4-Dichlorobenzene | 0.05 | <0.05 | - | - | <0.05 | <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 | 0.05 | <0.05 | - | - | <0.05 | <0.05 | - | - | <0.05 | <0.05 | - | - | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | - | <0.05 | - | <0.05 | <0.05 | - | - | <0.05 |
| 1,1-Dichloroethane | 0.05 | <0.05 | - | - | <0.05 | <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 | 0.05 | <0.05 | - | - | <0.05 | <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-Dichloroethylene | 0.05 | <0.05 | - | - | <0.05 | <0.05 | - | - | <0.05 | <0.05 | - | - | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | - | <0.05 | - | <0.05 | <0.05 | - | - | <0.05 |
| cis-1,2-Dichloroethylene | 0.05 | <0.05 | - | - | <0.05 | <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 | 0.05 | <0.05 | - | - | <0.05 | <0.05 | - | - | <0.05 | <0.05 | - | - | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | - | <0.05 | - | <0.05 | <0.05 | - | - | <0.05 |
| 1,2-Dichloropropane | 0.05 | <0.05 | - | - | <0.05 | <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) | 0.05 | <0.05 | - | - | <0.05 | <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 | 0.05 | <0.05 | - | - | <0.05 | <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 | 0.05 | <0.05 | - | - | <0.05 | <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 | 0.05 | <0.05 | - | - | <0.05 | <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 Isobutyl Ketone | 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 |
| Methyl Ethyl Ketone | 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 |
| Methyl t-butyl ether (MTBE) | 0.05 | <0.05 | - | - | <0.05 | <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 | 0.05 | <0.05 | - | - | <0.05 | <0.05 | - | - | <0.05 | <0.05 | - | - | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | - | <0.05 | - | <0.05 | <0.05 | - | - | <0.05 |
| 1,1,1,2-Tetrachloroethane | 0.05 | <0.05 | - | - | <0.05 | <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 | 0.05 | <0.05 | - | - | <0.05 | <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 | 0.05 | <0.05 | - | - | <0.05 | <0.05 | - | - | <0.05 | <0.05 | - | - | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | - | <0.05 | - | <0.05 | <0.05 | - | - | <0.05 |
| 1,1,1-Trichloroethane | 0.05 | <0.05 | - | - | <0.05 | <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 | 0.05 | <0.05 | - | - | <0.05 | <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 | 0.05 | <0.05 | - | - | <0.05 | <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 | 0.02 | <0.02 | - | - | <0.02 | <0.02 | - | - | <0.02 | <0.02 | - | - | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 | - | <0.02 | - | <0.02 | <0.02 | - | - | <0.02 |
| Trichlorofluoromethane | 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 | <0.05 | - | - | <0.05 |
| **PAHs** | | | | | | | | | | | | | | | | | | | | | | | | | |
| Acenaphthene | 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 | 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 | 0.16 | 0.05 | - | - | <0.05 | - | - | - | - | - | <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)anthracene | 0.36 | 0.22 | - | - | <0.05 | - | - | - | - | - | <0.05 | <0.05 | - | <0.05 | <0.05 | <0.05 | <0.05 | < 0.05 | <0.05 | 0.22 | <0.05 | <0.05 | - | - | 0.19 |
| Benzo(a)pyrene | 0.3 | 0.27 | - | - | <0.05 | - | - | - | - | - | <0.05 | <0.05 | - | <0.05 | <0.05 | <0.05 | <0.05 | < 0.05 | <0.05 | 0.27 | <0.05 | <0.05 | - | - | 0.17 |
| Benzo(b)fluoranthene | 0.47 | 0.36 | - | - | <0.05 | - | - | - | - | - | <0.05 | <0.05 | - | <0.05 | <0.05 | <0.05 | <0.05 | < 0.05 | <0.05 | 0.36 | <0.05 | <0.05 | - | - | 0.22 |
| Benzo(g,h,i)perylene | 0.68 | 0.26 | - | - | <0.1 | - | - | - | - | - | <0.1 | <0.1 | - | <0.1 | <0.1 | <0.1 | <0.1 | < 0.1 | <0.1 | 0.26 | <0.1 | <0.1 | - | - | 0.15 |
| Benzo(k)fluoranthene | 0.48 | 0.14 | - | - | <0.05 | - | - | - | - | - | <0.05 | <0.05 | - | <0.05 | <0.05 | <0.05 | <0.05 | < 0.05 | <0.05 | 0.14 | <0.05 | <0.05 | - | - | 0.08 |
| Chrysene | 2.8 | 0.32 | - | - | <0.05 | - | - | - | - | - | <0.05 | <0.05 | - | <0.05 | <0.05 | <0.05 | <0.05 | < 0.05 | <0.05 | 0.32 | <0.05 | <0.05 | - | - | 0.2 |
| Dibenz(a,h)anthracene | 0.1 | <0.06 | - | - | <0.06 | - | - | - | - | - | <0.06 | <0.06 | - | <0.06 | <0.06 | <0.06 | <0.06 | < 0.06 | <0.06 | < 0.06 | <0.06 | <0.06 | - | - | <0.06 |
| Fluoranthene | 0.56 | 4.59 | - | - | <0.05 | - | - | - | - | - | <0.05 | <0.05 | - | 0.06 | <0.05 | <0.05 | <0.05 | < 0.05 | <0.05 | 4.59 | <0.05 | <0.05 | - | - | 0.39 |
| Fluorene | 0.12 | <0.05 | - | - | <0.05 | - | - | - | - | - | <0.05 | <0.05 | - | <0.05 | <0.05 | <0.05 | <0.05 | < 0.05 | <0.05 | < 0.05 | <0.05 | <0.05 | - | - | <0.05 |
| Indeno(1,2,3-cd)pyrene | 0.23 | 0.20 | - | - | <0.1 | - | - | - | - | - | <0.1 | <0.1 | - | <0.1 | <0.1 | <0.1 | <0.1 | < 0.1 | <0.1 | 0.20 | <0.1 | <0.1 | - | - | 0.12 |
| 1-Methylnaphthalene | 0.59 | 0.06 | - | - | <0.05 | - | - | - | - | - | <0.05 | <0.05 | - | <0.05 | <0.05 | <0.05 | <0.05 | < 0.05 | <0.05 | 0.06 | <0.05 | <0.05 | - | - | <0.05 |
| 2-Methylnaphthalene | 0.59 | 0.06 | - | - | <0.05 | - | - | - | - | - | <0.05 | <0.05 | - | <0.05 | <0.05 | <0.05 | <0.05 | < 0.05 | <0.05 | 0.06 | <0.05 | <0.05 | - | - | <0.05 |
| Methylnaphthalene, 2-(1-) | 0.59 | 0.11 | - | - | <0.05 | - | - | - | - | - | <0.05 | <0.05 | - | <0.05 | <0.05 | <0.05 | <0.05 | < 0.05 | <0.05 | 0.11 | <0.05 | <0.05 | - | - | 0.08 |
| Naphthalene | 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 |
| Phenanthrene | 0.69 | 0.29 | - | - | <0.05 | - | - | - | - | - | <0.05 | <0.05 | - | <0.05 | <0.05 | <0.05 | <0.05 | < 0.05 | <0.05 | 0.22 | <0.05 | <0.05 | - | - | 0.29 |
| Pyrene | 1 | 0.34 | - | - | <0.05 | - | - | - | - | - | <0.05 | <0.05 | - | <0.05 | <0.05 | <0.05 | <0.05 | < 0.05 | <0.05 | 0.34 | <0.05 | <0.05 | - | - | 0.34 |
| **ORPs** | | | | | | | | | | | | | | | | | | | | | | | | | |
| Sodium Adsorption Ratio | 2.4 | 2.4[1] | - | 5.6[1] | - | - | 7.2[1] | 4.1[1] | - | - | - | - | - | 0.5 | 6.6[1] | 7.1[1] | 10.5[1] | 9.6[1] | 9.9[1] | 0.5[1] | 1.8 | 5.8[1] | - | - | 1.4 |
| Conductivity (mS/cm) | 0.57 | 0.57[1] | - | 1[1] | - | - | 0.57 | 0.43 | - | - | - | - | - | 0.17 | 0.84[1] | 0.87[1] | 1.2[1] | 0.44[1] | 0.43 | 0.16[1] | 0.26 | 0.34 | - | - | 0.21 |
| pH | 5-9 surface | 7.65 - 8.09 | 8.04 | - | - | - | 8.09 | 8.09 | 7.94 | - | - | - | - | 7.65 | 7.97 | 7.95 | - | - | - | 7.92 | 8.07 | 7.96 | - | - | 7.7 |
| pH | 5-11 subsurface | 8.05 - 8.25 | - | 8.06 | - | 8.25 | - | - | - | - | - | - | 8.14 | - | - | - | 8.05 | 7.89 | 8.23 | - | - | - | - | - | - |
| Boron (Hot Water Soluble) | - | <0.5 | - | <0.5 | - | - | <0.5 | <0.5 | - | - | - | - | - | <0.5 | <0.5 | <0.5 | <0.5 | < 0.5 | <0.5 | < 0.5 | <0.5 | <0.5 | - | - | <0.5 |
| Chromium VI | 0.66 | <0.2 | - | <0.2 | - | - | <0.2 | <0.2 | - | - | - | - | - | <0.2 | <0.2 | <0.2 | <0.2 | < 0.2 | <0.2 | < 0.2 | <0.2 | <0.2 | - | - | <0.2 |
| Free Cyanide | 0.051 | <0.05 | - | <0.05 | - | - | <0.05 | <0.05 | - | - | - | - | - | <0.05 | <0.05 | <0.05 | <0.05 | < 0.05 | <0.05 | < 0.05 | <0.05 | <0.05 | - | - | <0.05 |
| Mercury | 0.27 | 0.23 | - | <0.05 | - | - | <0.05 | <0.05 | - | - | - | - | - | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | 0.05 | 0.07 | 0.23 | - | - | 0.14 |
| **Hydride-Forming Metals** | | | | | | | | | | | | | | | | | | | | | | | | | |
| Antimony | 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 |
| Arsenic | 18 | 3.4 | - | 0.7 | - | - | 0.6 | 0.6 | - | - | - | - | - | 1.6 | 0.5 | 0.5 | 1.2 | 1.6 | 0.9 | 3.4 | 0.9 | 2.8 | - | - | 1.8 |
| Selenium | 1.5 | 0.3 | - | <0.7 | - | - | <0.7 | <0.7 | - | - | - | - | - | <0.7 | <0.1 | <0.1 | <0.1 | 0.1 | <0.1 | 0.3 | 0.1 | 0.1 | - | - | 0.2 |
| **Metals** | | | | | | | | | | | | | | | | | | | | | | | | | |
| Barium | 220 | 61 | - | 13 | - | - | 16 | 14 | - | - | - | - | - | 33 | 9.6 | 9 | 34 | 13 | 14 | 61 | 24 | 52 | - | - | 43 |
| Beryllium | 2.5 | 0.17 | - | 0.12 | - | - | 0.12 | 0.11 | - | - | - | - | - | 0.17 | 0.13 | 0.14 | 0.12 | 0.09 | 0.1 | 0.16 | 0.12 | 0.16 | - | - | 0.16 |
| Boron | 36 | 5 | - | 3 | - | - | 3 | 3 | - | - | - | - | - | 4 | 2 | 1 | 2 | 2 | 2 | 3 | 2 | 5 | - | - | 3 |
| Cadmium | 1.2 | 0.68 | - | 0.03 | - | - | 0.06 | 0.06 | - | - | - | - | - | 0.68 | <0.05 | <0.05 | <0.05 | 0.05 | <0.05 | 0.44 | 0.08 | 0.17 | - | - | 0.29 |
| Chromium | 70 | 10 | - | 8.6 | - | - | 6.4 | 4.8 | - | - | - | - | - | 10 | 4 | 6.1 | 8.1 | 4.8 | 5 | 6.2 | 8.2 | 9.9 | - | - | 7.4 |
| Cobalt | 21 | 2.5 | - | 1.8 | - | - | 2.2 | 1.8 | - | - | - | - | - | 2.5 | 1.3 | 1.5 | 1.7 | 1.6 | 1.5 | 1.9 | 1.3 | 2.2 | - | - | 2.1 |
| Copper | 92 | 14 | - | 14 | - | - | 4.1 | 3.5 | - | - | - | - | - | 12 | 2.6 | 2.7 | 3.8 | 4 | 4.7 | 10 | 5 | 12 | - | - | 12 |
| Lead | 120 | 90 | - | 6.5 | - | - | 4.3 | 3.5 | - | - | - | - | - | 29 | 2.3 | 1.8 | 7.6 | 5.7 | 7.2 | 90 | 28 | 80 | - | - | 66 |
| Molybdenum | 2 | 1.2 | - | 0.5 | - | - | 0.2 | 0.1 | - | - | - | - | - | 0.3 | 0.3 | 0.5 | 1.2 | 0.3 | 0.4 | 0.4 | 0.9 | 1.2 | - | - | 0.4 |
| Nickel | 82 | 5.9 | - | 4.7 | - | - | 3.7 | 3.3 | - | - | - | - | - | 5.2 | 2.9 | 3.5 | 3.5 | 3.4 | 3.3 | 5.9 | 3.2 | 5.3 | - | - | 4.6 |
| Silver | 0.5 | 0.1 | - | <0.05 | - | - | <0.05 | <0.05 | - | - | - | - | - | <0.05 | <0.05 | <0.05 | <0.05 | < 0.05 | <0.05 | < 0.05 | <0.05 | 0.1 | - | - | <0.05 |
| Thallium | 1 | 0.06 | - | 0.03 | - | - | 0.03 | 0.03 | - | - | - | - | - | 0.04 | <0.02 | <0.02 | 0.03 | < 0.02 | 0.02 | 0.04 | 0.03 | 0.06 | - | - | 0.06 |
| Uranium | 2.5 | 0.29 | - | 0.23 | - | - | 0.24 | 0.17 | - | - | - | - | - | 0.28 | 0.26 | 0.28 | 0.25 | 0.26 | 0.21 | 0.27 | 0.19 | 0.29 | - | - | 0.26 |
| Vanadium | 86 | 19 | - | 14 | - | - | 14 | 9 | - | - | - | - | - | 19 | 8 | 11 | 10 | 10 | 9 | 11 | 7 | 12 | - | - | 13 |
| Zinc | 290 | 68 | - | 12 | - | - | 20 | 16 | - | - | - | - | - | 56 | 7.9 | 7.9 | 20 | 22 | 14 | 68 | 32 | 50 | - | - | 62 |
| **PCBs** | | | | | | | | | | | | | | | | | | | | | | | | | |
| Polychlorinated Biphenyls - Total | 0.3 | <0.3 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | <0.3 | <0.3 | - |

**Notes:**
Table 1 - Full Depth Background Site Condition Standards for Residential/Parkland/Institutional/Industrial/Commercial/Community Property Use

All concentrations in µg/g unless otherwise noted
mbgs - metres below ground surface
**Red Shaded and Bolded Values - Exceed the Table 1 Standards**
[1] - As provided for under Section 49.1 of O. Reg. 153/04 elevated sodium and chloride concentrations are deemed to have met the Table 1 Standards.




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# APPENDIX F

## Summary and Maximum Concentrations of Groundwater Analytical Data

# APPENDIX F
# ALL GRODUNWATER SAMPLES COMPARED TO SCS

149-153 DUNLOP STREET EAST, BARRIE, ONTARIO
PROJECT NO. 20-0052.04

| Sampling Event: | | | Watters Environmental 2020 Phase II ESA | | | | | | Watters Environmental 2024 Phase Two ESA | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sample ID: | Table 1 Standards (Ûg/L) | Maximum Concentration (Ûg/L) | EW1 | EW2 | BH1(MW) | BH100(MW) [Duplicate of BH1(MW)] | BH2(MW) | Trip Blank | BH1(MW) | BH2(MW) | BH23-1(MW) | BH23-1000 [Duplicate of BH23-1(MW)] | BH23-2(MW) | BH23-3(MW) | BH23-4(MW) | EW1 | EW2 | Trip Blank | BH2(MW) | EW1 |
| Date Sampled: | | | May 22, 2020 | May 22, 2020 | June 15, 2020 | June 15, 2020 | June 15, 2020 | June 15, 2020 | October 4, 2023 | October 4, 2023 | October 4, 2023 | October 4, 2023 | October 4, 2023 | October 4, 2023 | October 4, 2023 | October 4, 2023 | October 4, 2023 | October 4, 2023 | February 21, 2024 | February 21, 2024 |
| Lab Certificate Number: | | | CA15392-MAY20 | CA15392-MAY20 | CA15296-JUN20 | CA15296-JUN20 | CA15296-JUN20 | CA15296-JUN20 | CA40037-OCT23 | CA40037-OCT23 | CA40037-OCT23 | CA40037-OCT23 | CA40037-OCT23 | CA40037-OCT23 | CA40037-OCT23 | CA40037-OCT23 | CA40037-OCT23 | CA40037-OCT23 | CA40163-FEB24 | CA40163-FEB24 |
| **PHCs** | | | | | | | | | | | | | | | | | | | | |
| F1 (C6-C10 Hydrocarbons) | 420 | <25 | <25 | <25 | <25 | <25 | <25 | - | - | - | <25 | <25 | <25 | <25 | <25 | - | - | - | - | - |
| F2 (C10-C16 Hydrocarbons) | 150 | <100 | <100 | <100 | <100 | <100 | <100 | - | - | - | <100 | <100 | <100 | <100 | <100 | - | - | - | - | - |
| F3 (C16-C34 Hydrocarbons) | 500 | <200 | <200 | <200 | <200 | <200 | <200 | - | - | - | <200 | <200 | <200 | <200 | <200 | - | - | - | - | - |
| F4 (C34-C50 Hydrocarbons) | 500 | <200 | <200 | <200 | <200 | <200 | <200 | - | - | - | <200 | <200 | <200 | <200 | <200 | - | - | - | - | - |
| **BTEX** | | | | | | | | | | | | | | | | | | | | |
| Benzene | 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 | - | - |
| Toluene | 0.8 | <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 | - | - |
| Ethylbenzene | 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 | - | - |
| Xylene (Total) | 72 | <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 | - | - |
| **THMs** | | | | | | | | | | | | | | | | | | | | |
| Bromodichloromethane | 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 | - | - |
| Bromoform | 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 | - | - |
| Dibromochloromethane | 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 | - | - |
| **VOCs** | | | | | | | | | | | | | | | | | | | | |
| Acetone | 2,700 | <30 | <30 | <30 | <30 | <30 | <30 | <30 | - | - | <30 | <30 | <30 | <30 | <30 | - | <30 | <30 | - | - |
| Bromomethane | 0.89 | <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 | - | - |
| Carbon Tetrachloride | 0.2 | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 | - | - | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 | - | <0.2 | <0.2 | - | - |
| Chlorobenzene | 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 | - | - |
| Chloroform | 2 | 2[1] | <0.5 | 2.4[1] | 1.1 | 1 | <0.5 | <0.5 | - | - | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | - | <0.5 | <0.5 | - | - |
| 1,2-Dichlorobenzene | 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 | - | - |
| 1,3-Dichlorobenzene | 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 | - | - |
| 1,4-Dichlorobenzene | 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 | - | - |
| Dichlorodifluoromethane | 590 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | - | - | <2 | <2 | <2 | <2 | <2 | - | <2 | <2 | - | - |
| 1,1-Dichloroethane | 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 | - | - |
| 1,2-Dichloroethane | 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 | - | - |
| 1,1-Dichloroethylene | 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 | - | - |
| trans-1,2-Dichloroethylene | 1.6 | <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 | - | - |
| cis-1,2-Dichloroethylene | 1.6 | <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 | - | - |
| 1,2-Dichloropropane | 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 | - | - |
| 1,3-Dichloropropene (cis+trans) | 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 | - | - |
| Ethylene Dibromide | 0.2 | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 | - | - | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 | - | <0.2 | <0.2 | - | - |
| n-Hexane | 5 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | - | - | <1 | <1 | <1 | <1 | <1 | - | <1 | <1 | - | - |
| Methylene Chloride | 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 | - | - |
| Methyl Ethyl Ketone | 400 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | - | - | <20 | <20 | <20 | <20 | <20 | - | <20 | <20 | - | - |
| Methyl Isobutyl Ketone | 640 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | - | - | <20 | <20 | <20 | <20 | <20 | - | <20 | <20 | - | - |
| Methyl t-butyl ether (MTBE) | 15 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | - | - | <2 | <2 | <2 | <2 | <2 | - | <2 | <2 | - | - |
| Styrene | 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 | - | - |
| 1,1,1,2-Tetrachloroethane | 1.1 | <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 | - | - |
| 1,1,2,2-Tetrachloroethane | 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 | - | - |
| Tetrachloroethylene | 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 | - | - |
| 1,1,1-Trichloroethane | 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 | - | - |
| 1,1,2-Trichloroethane | 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 | - | - |
| Trichloroethylene | 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 | - | - |
| Trichlorofluoromethane | 150 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | - | - | <5 | <5 | <5 | <5 | <5 | - | <5 | <5 | - | - |
| Vinyl Chloride | 0.5 | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 | - | - | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 | - | <0.2 | <0.2 | - | - |
| **PAHs** | | | | | | | | | | | | | | | | | | | | |
| Acenaphthene | 4.1 | <0.1 | - | - | - | - | - | - | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | - | - | - | - | - |
| Acenaphthylene | 1 | <0.1 | - | - | - | - | - | - | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | - | - | - | - | - |
| Anthracene | 0.1 | <0.1 | - | - | - | - | - | - | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | - | - | - | - | - |
| Benzo(a)anthracene | 0.2 | <0.1 | - | - | - | - | - | - | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | - | - | - | - | - |
| Benzo(a)pyrene | 0.01 | 0.01 | - | - | - | - | - | - | 0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | - | - | - | - | - |
| Benzo(b)fluoranthene | 0.1 | <0.1 | - | - | - | - | - | - | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | - | - | - | - | - |
| Benzo(g,h,i)perylene | 0.2 | <0.2 | - | - | - | - | - | - | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 | - | - | - | - | - |
| Benzo(k)fluoranthene | 0.1 | <0.1 | - | - | - | - | - | - | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | - | - | - | - | - |
| Chrysene | 0.1 | <0.1 | - | - | - | - | - | - | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | - | - | - | - | - |
| Dibenz(a,h)anthracene | 0.2 | <0.1 | - | - | - | - | - | - | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | - | - | - | - | - |
| Fluoranthene | 0.4 | <0.1 | - | - | - | - | - | - | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | - | - | - | - | - |
| Fluorene | 120 | <0.1 | - | - | - | - | - | - | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | - | - | - | - | - |
| Indeno(1,2,3-cd)pyrene | 0.2 | <0.2 | - | - | - | - | - | - | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 | - | - | - | - | - |
| 1-Methylnaphthalene | 2 | <0.5 | - | - | - | - | - | - | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | - | - | - | - | - |
| 2-Methylnaphthalene | 2 | <0.5 | - | - | - | - | - | - | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | - | - | - | - | - |
| Methylnaphthalene, 2-(1-) | 2 | <0.5 | - | - | - | - | - | - | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | - | - | - | - | - |
| Naphthalene | 7 | <0.5 | - | - | - | - | - | - | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | - | - | - | - | - |
| Phenanthrene | 0.1 | <0.1 | - | - | - | - | - | - | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | - | - | - | - | - |
| Pyrene | 0.2 | <0.1 | - | - | - | - | - | - | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | - | - | - | - | - |
| **Inorganics** | | | | | | | | | | | | | | | | | | | | |
| Chloride | 790,000 | 790000[2] | - | - | - | - | - | - | 7200000[2] | 6900000[2] | 1600000[2] | 1600000[2] | 1600000[2] | 2500000[2] | 320,000 | 320,000 | - | - | - | - |
| Sodium | 490,000 | 490000[2] | - | - | - | - | - | - | 3910000[2] | 3350000[2] | 909000[2] | 907000[2] | 664000[2] | 1020000[2] | 155,000 | 188,000 | - | - | - | - |
| Chromium VI | 25 | 2.2 | - | - | - | - | - | - | 2.2 | 1.7 | 0.5 | 0.6 | 0.8 | <0.2 | 0.3 | 0.3 | - | - | - | - |
| Cyanide (free) | 5 | 5 | - | - | - | - | - | - | 4 | 5 | <2 | <2 | <2 | <2 | <2 | <2 | - | - | - | - |
| Mercury (total) | 0.1 | 0.06 | - | - | - | - | - | - | <0.01 | <0.01 | 0.06 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | - | - | - | - |
| **Hydride-Forming Metals** | | | | | | | | | | | | | | | | | | | | |
| Antimony | 1.5 | **3.5** | - | - | - | - | - | - | 1.3 | <0.9 | <0.9 | <0.9 | <0.9 | **2.2** | <0.9 | **3.5** | - | - | <0.9 | **2.6** |
| Arsenic | 13 | 1.3 | - | - | - | - | - | - | 0.8 | 0.9 | 0.4 | 0.4 | <0.2 | 0.6 | 0.4 | 1.0 | - | - | 1.0 | 1.3 |
| Selenium | 5 | 3.49 | - | - | - | - | - | - | 2.25 | 2.73 | 2.04 | 2.02 | 2.05 | 3.49 | 0.61 | 0.96 | - | - | 1.38 | 0.89 |
| **Metals** | | | | | | | | | | | | | | | | | | | | |
| Barium | 610 | **963** | - | - | - | - | - | - | **963** | **915** | 115 | 116 | 269 | 203 | 114 | 56.7 | - | - | **680** | - |
| Beryllium | 0.5 | 0.08 | - | - | - | - | - | - | 0.04 | 0.08 | <0.007 | 0.007 | <0.007 | 0.05 | 0.008 | <0.007 | - | - | <0.007 | - |
| Boron | 1,700 | 163 | - | - | - | - | - | - | 96 | 85 | 108 | 109 | 78 | 163 | 88 | 124 | - | - | 87 | - |
| Cadmium | 0.5 | 0.040 | - | - | - | - | - | - | 0.040 | 0.010 | 0.012 | 0.012 | 0.010 | 0.020 | 0.003 | 0.009 | - | - | 0.020 | - |
| Chromium | 11 | 7.5 | - | - | - | - | - | - | 7.5 | 7.17 | 2.09 | 2.14 | 1.49 | 1.96 | 0.7 | 0.53 | - | - | 3.25 | - |
| Cobalt | 3.8 | 2.05 | - | - | - | - | - | - | 0.760 | 0.450 | 0.610 | 0.628 | 0.371 | 2.05 | 0.212 | 0.689 | - | - | 0.110 | - |
| Copper | 5 | **5.5** | - | - | - | - | - | - | **5.5** | **5.2** | 3.1 | 3.4 | 3.3 | 3.5 | 1.9 | 3.3 | - | - | 3 | - |
| Lead | 1.9 | 0.11 | - | - | - | - | - | - | 0.1 | <0.09 | 0.1 | 0.11 | <0.09 | <0.09 | <0.09 | <0.09 | - | - | 0.09 | - |
| Molybdenum | 23 | 10.6 | - | - | - | - | - | - | 3.66 | 8.42 | 10.6 | 9.97 | 3.91 | 10.3 | 2.06 | 4.49 | - | - | 2.3 | - |
| Nickel | 14 | 8.3 | - | - | - | - | - | - | 8.3 | 1.1 | 4.1 | 4.2 | 3.3 | 4.6 | 1.6 | 1.2 | - | - | 0.8 | - |
| Silver | 0.3 | **0.390** | - | - | - | - | - | - | **0.390** | 0.230 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | 0.099 | - | - | 0.240 | - |
| Thallium | 0.5 | 0.07 | - | - | - | - | - | - | 0.020 | 0.070 | 0.028 | 0.032 | 0.037 | 0.020 | <0.005 | 0.006 | - | - | 0.070 | - |
| Uranium | 8.9 | 1.11 | - | - | - | - | - | - | 0.980 | 1.11 | 0.397 | 0.407 | 0.637 | 0.570 | 0.267 | 0.153 | - | - | 0.750 | - |
| Vanadium | 3.9 | 2.06 | - | - | - | - | - | - | 1.92 | 2.06 | 1.2 | 1.24 | 0.77 | 1.35 | 0.97 | 1.17 | - | - | 1.16 | - |
| Zinc | 160 | 12 | - | - | - | - | - | - | 7 | 6 | 12 | 12 | 9 | 8 | 5 | 3 | - | - | 4 | - |

**Notes:**
Table 1 - Full Depth Background Site Condition Standards for All Types of Property Use
All concentrations in Ûg/L unless otherwise noted
**Red Shaded and Bolded Values - Exceed the Table 1 Standards**
[1] - As provided for under Section 49.1 of O. Reg. 153/04 an elevated chloroform concentation is deemed to have met the Table 1 Standard.
[2] - As provided for under Section 49.1 of O. Reg. 153/04 elevated sodium and chloride concentations are deemed to have met the Table 1 Standards.




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Tel: (416) 361-2407 Å Fax: (416) 361-2410 Å www.wattersenvironmental.com

# ATTACHMENT G

## Remediation Report

# SOIL REMEDIATION

## 149-153 DUNLOP STREET EAST
## BARRIE, ONTARIO



WATTERS
ENVIRONMENTAL
GROUP INC.

**CONFIDENTIAL**

# SOIL REMEDIATION

## 149-153 DUNLOP STREET EAST
## BARRIE, ONTARIO

Prepared for:

**DUNLOP DEVELOPMENTS (BARRIE) INC.**
129 Rowntree Dairy Road, Unit 4
Woodbridge, Ontario
L4L 6C9

Prepared by:

**WATTERS ENVIRONMENTAL GROUP INC.**
9135 Keele St., Unit A1
Concord, Ontario
L4K 0J4

April 2024
Reference No. 20-0052.04

**CONFIDENTIAL**

**SOIL REMEDIATION**

**149-153 DUNLOP STREET EAST**
**BARRIE, ONTARIO**

Prepared by:



Natalie Wright, P.Eng., $QP_{ESA}$
Project Manager

Reviewed by:



Basil Wong, M.Eng., P.Eng.
Vice President, Technical Services

April 2024
Reference No. 20-0052.04

# EXECUTIVE SUMMARY

Watters Environmental Group Inc. (Watters Environmental) was retained by Dunlop Developments (Barrie) Inc. (the ñClientò) to monitor soil remediation activities on a commercial property located at 149 Dunlop Street East, in Barrie, Ontario (hereafter the ñPhase Two Propertyò or the ñSiteò).

This property was the subject of Phase One and Two Environmental Site Assessments (ESAs), as a Record of Site Condition (RSC) is planned to be submitted to the Ontario Ministry of the Environment, Conservation and Parks (MECP) for approval and filing. Excavation/remediation activities were conducted to address petroleum hydrocarbon fraction F4 (PHC F4) impacted soil identified on the northwest side of the Phase Two Property.

## Background

The Phase Two Property is located on the southeast corner of the intersection of Dunlop Street East and Mulcaster Street, in an area of mixed residential, commercial, and parkland uses.

The Phase Two Property was formerly known as municipal addresses 149-153 Dunlop Street East and 5 Mulcaster Street. The Phase Two Property is currently owned by the Client and covers an area of approximately 0.15 hectares (0.38 acres). The Phase Two Property contains a multi-unit commercial building (hereafter the ñSite buildingò) in the centre of the Site with asphalt paved parking north of the Site building and some landscaping, an interlock stone walkway, and asphalt paved parking south of the Site building. The Site building is one level at the north side and two levels at the south side. A partial basement is present beneath the west side of the Site building. Three units were undergoing renovations by new businesses: Endo, a cannabis retailer, Late Apex Simulators, a gaming arcade, and a restaurant. One unit was occupied by Noahôs African & Caribbean Tropical Food Inc. and was open to the public, and the fifth unit was vacant.

Watters Environmental understands that the Phase Two Property is planned to be redeveloped with a multi-unit commercial and residential building, and a Record of Site Condition (RSC) is required for that process. As such, the Phase Two ESA was conducted in accordance with Ontario Regulation (O. Reg.) 153/04 (i.e., Records of Site Condition ï Part XV.1 of the Act, made under the Ontario Environmental Protection Act, R.S.O. 1990), as amended (hereafter referred to as ñO. Reg. 153/04ò).

Watters Environmental completed a Phase One Environmental Site Assessment (ESA) on the Phase Two Property (referred to as the Phase One Property in the Phase One ESA report). The findings of the Phase One ESA are summarized in Watters Environmentalôs report entitled, *"Phase One Environmental Site Assessment, 149-153 Dunlop Street East, Barrie, Ontario"* dated April 2024 (the ñ2024 Watters Environmental Phase One ESAò). The 2024 Watters Environmental Phase One ESA identified potentially contaminating activities (PCAs) on the Phase Two Property and on surrounding properties, which resulted in areas of potential environmental concern (APECs) on the Phase Two Property.

The analytical results for soil and groundwater were compared to the Table 1 Full Depth Background Site Condition Standards (SCS) for residential / parkland / institutional / industrial / commercial / community property use contained in the document by the Ontario Ministry of the Environment [MOE ï now MECP] entitled, ñ*Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act*ò (dated April 15, 2011). These standards are hereafter referred to as the ñTable 1 SCSò.

Soil samples collected from borehole, BH1(MW), drilled by Watters Environmental, identified a concentration of PHC F4 in the soil under the asphalt parking on the northwest side of the Phase Two Property that exceeded the Table 1 SCS.

The base of the excavation was dry upon completion and all PHC concentrations in groundwater, including in groundwater collected from BH1(MW) located within the excavation, meet the Table 1 SCS.

**Remediation Activities**

Watters Environmental was on-Site on August 23, 2023 and observed the extent of the final excavation, assessed the soil on the floor and sidewalls of the final excavation for visual and olfactory evidence of contamination, and collected confirmatory soil samples from the floor and sidewalls of the excavation.

**Confirmation Soil Sampling**

Watters Environmental collected confirmatory floor and sidewall samples based on the size of the excavation, as per Table 3 in Schedule E of O. Reg. 153/04. The final confirmation sidewall and floor samples meet the Table 1 SCS.

**Remediation Volumes**

A total of 39.02 tonnes of impacted soil, based on weigh scale tickets at the disposal site, were excavated and disposed of at an MECP-approved waste receiving facility. Using an assumed soil density of 2 tonnes/cubic metres ($m^3$), the volume of soil excavated and removed from the Phase Two Property is approximately 19.51 $m^3$. Based on field measurements of the final excavation, the estimated volume excavated is approximately 58 $m^3$, which is different than the aforementioned estimate based on the weight. Impacted soil excavated on August 23, 2023, and stockpiled next to the excavation, was placed back into the excavation for safety reasons when the sidewalls of the excavation began to cave in. As such, not all PHC F4 impacted soil was removed from the Phase Two Property.

**Backfilling**

The excavation was also backfilled with 40.71 tonnes of 2 inch crushed material from Natural Stone Source Ontario Ltd., in Ramara, Ontario, and 2.06 tonnes of 14 mm material from Lafarge in Barrie, Ontario, based on weigh scale tickets. A composite sample plus a duplicate sample of the material brought to the Phase Two Property was collected on August 23, 2023 and submitted to an accredited laboratory for analytical testing of PAHs, metals, hydride-forming metals and ORPs [i.e., boron-hot water soluble (B-HWS), hexavalent chromium [Cr(VI)], cyanide (CN-), mercury (Hg), electrical conductivity (EC) and sodium adsorption ratio (SAR)]. The soil sample meets the Table 1 SCS with the exception of EC.

**Conclusion**

Based on observations made at the Phase Two Property, and on the results of the laboratory analyses of soil verification samples collected by Watters Environmental from the final limits of the remediation area, the extent of PHC F4 impacted soil at the Phase Two Property is known.

As noted, soil excavated and stockpiled adjacent to the excavation on August 23, 2023, was placed back into the excavation following collection of the confirmation soil samples, for safety reasons as the sidewalls of the excavation began to cave in. As such, not all PHC F4 impacted soil was removed from the Phase Two Property.

# TABLE OF CONTENTS

**SECTION** **PAGE**

EXECUTIVE SUMMARY ..... i

TABLE OF CONTENTS ..... iv

1.0 INTRODUCTION ..... 1

1.1 Background ..... 1

1.2 Report Format ..... 2

2.0 BACKGROUND ..... 3

2.1 Site Description ..... 3

2.2 Applicable Regulatory Standards ..... 3

2.3 Previous Environmental Reports ..... 5

2.4 Parameter of Interest ..... 8

2.5 Roles and Responsibilities ..... 8

3.0 REMEDIATION ACTIVITY SUMMARY ..... 11

3.1 Waste Classification Analysis ..... 11

3.2 Soil Remediation Activities ..... 11

3.3 Soil Verification Sample Analysis ..... 12

3.4 Quality Assurance/Quality Control ..... 13

3.5 Remediation Volumes ..... 14

3.6 Site Restoration ..... 14

4.0 SUMMARY AND CONCLUSIONS ..... 15

5.0 QUALIFICATIONS AND LIMITATIONS ..... 16

## TABLE OF CONTENTS (Continued)

LIST OF FIGURES

Figure 1: Phase Two Property Location Map

Figure 2: Soil Remediation ï PHCs

Figure 3A: Soil Remediation ï PHCs ï Cross Section A-Aô

Figure 3B: Soil Remediation ï PHCs ï Cross Section B-Bô

LIST OF APPENDICES

Appendix A: Laboratory Certificates-of-Analyses

Appendix B: Weigh Tickets for Disposed Soil

Appendix C: Weigh Tickets for Imported Materials

# 1.0 INTRODUCTION

Watters Environmental Group Inc. (Watters Environmental) was retained by Dunlop Developments (Barrie) Inc. (the ñClientò) to monitor soil remediation activities on a commercial property located at 149 Dunlop Street East, in Barrie, Ontario (hereafter the ñPhase Two Propertyò or the ñSiteò).

This property was the subject of Phase One and Two Environmental Site Assessments (ESAs), as a Record of Site Condition (RSC) is planned to be submitted to the Ontario Ministry of the Environment, Conservation and Parks (MECP) for approval and filing. Excavation/remediation activities were conducted as a soil sample collected from a borehole advanced on the northwest corner of the Phase Two Property, contained a concentration of petroleum hydrocarbon fraction F4 (PHC F4) greater that the applicable site condition standards.

## 1.1 Background

Watters Environmental understands that the Phase Two Property is planned to be redeveloped with a multi-unit commercial and residential building, and a Record of Site Condition (RSC) is required for that process. As such, the Phase Two ESA was conducted in accordance with Ontario Regulation (O. Reg.) 153/04 (i.e., Records of Site Condition ï Part XV.1 of the Act, made under the Ontario Environmental Protection Act, R.S.O. 1990), as amended (hereafter referred to as ñO. Reg. 153/04ò).

Watters Environmental completed a Phase One Environmental Site Assessment (ESA) on the Phase Two Property (referred to as the Phase One Property in the Phase One ESA report). The findings of the Phase One ESA are summarized in Watters Environmentalôs report entitled, *ìPhase One Environmental Site Assessment, 149-153 Dunlop Street East, Barrie, Ontarioî* dated April 2024 (the ñ2024 Watters Environmental Phase One ESAò). The 2024 Watters Environmental Phase One ESA identified potentially contaminating activities (PCAs) on the Phase Two Property and on surrounding properties, which resulted in areas of potential environmental concern (APECs) on the Phase Two Property.

The analytical results for soil and groundwater were compared to the Table 1 Full Depth Background Site Condition Standards (SCS) for residential / parkland / institutional / industrial / commercial / community property use contained in the document by the Ontario Ministry of the Environment [MOE ï now MECP] entitled, ñ*Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act*ò (dated April 15, 2011). These generic standards are hereafter referred to as the ñTable 1 SCSò.

A soil sample collected from a borehole, BH1(MW), drilled by Watters Environmental as part of a Phase II ESA (June 2020), contained soil with a PHC F4 that exceeded the Table 1 SCS.

As a result, a soil remediation program consisting of excavation and off-Site disposal was planned in order to remove the PHC-impacted soil. This report details the activities associated with the remediation of the above-noted impacted soil that have been completed to date. Additional remediation will be required to be completed prior to filing an RSC.

No groundwater was observed in the base of the excavation. Additionally, the concentrations of PHCs in the groundwater sample collected from monitoring well BH1(MW), installed within the excavation, meets the Table 1 SCS.

### 1.2 Report Format

Background information regarding the Phase Two Property, including a general description of the property, the applicable standards for soil remediation, a listing of previous reports, and roles and responsibilities, is included in Section 2.0. Section 3.0 provides a remediation activity summary, results of confirmatory sampling, volumes of materials excavated and removed from the Phase Two Property, and volume of material brought to the Site. Section 4.0 provides a summary and conclusions. Qualifications and limitations for the work completed and the corresponding findings are provided in Section 5.0.

# 2.0 BACKGROUND

## 2.1 Site Description

The Phase Two Property is located on the southeast corner of the intersection of Dunlop Street East and Mulcaster Street, in an area of mixed residential, commercial, and parkland uses.

The Phase Two Property was formerly known as municipal addresses 149-153 Dunlop Street East and 5 Mulcaster Street. The Phase Two Property is currently owned by the Client and covers an area of approximately 0.15 hectares (0.38 acres). The Phase Two Property contains a multi-unit commercial building (hereafter the ñSite buildingò) in the centre of the Site with asphalt-paved parking north of the Site building and some landscaping, an interlock stone walkway, and asphalt paved parking south of the Site building. The Site building is one level at the north side and two levels at the south side due to the steep southward slope of the Phase Two Property and surrounding lands. A partial basement is present beneath the west side of the Site building. Three units were undergoing renovations by new businesses: Endo, a cannabis retailer, Late Apex Simulators, a gaming arcade, and a restaurant. One unit was occupied by Noahôs African & Caribbean Tropical Food Inc. and was open to the public, and the fifth unit was vacant.

## 2.2 Applicable Regulatory Standards

The results of the soil and groundwater chemical analyses were evaluated using the Standards prescribed in the Ministry of the Environment [MOE ï now the Ministry of the Environment, Conservation and Parks (MECP)] document entitled, *"Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act"* (dated April 15, 2011). These Standards were used to determine whether soil and groundwater quality complied with the MECP Standards and to determine whether additional investigations or remedial actions to reduce the concentrations are required. These Standards are applied as per O. Reg. 153/04.

The Phase Two Property is currently used for commercial purposes but will be redeveloped for residential and commercial purposes in the future. The use of the Table 1 Full Depth Background Site Condition Standards (SCS) for Residential / Parkland / Institutional / Industrial / Commercial / Community Property Use, was considered appropriate by Watters Environmental based on the following:

- The Phase Two Property, and all other properties located within the Phase One Study Area (i.e., within 250 metres from the boundaries of the Site), are supplied by a municipal drinking water system (i.e., from the City of Barrie);

- The RSC will not be specifying agricultural or other use as the type of property use for which the RSC is filed;

- The Phase Two Property is located in an area designated in the municipal official plan as a well-head protection area and significant groundwater recharge area;

- There is a municipal water supply well within the Phase One Study Area, approximately 100 metres southwest of the Phase Two Property;

- The soil samples analyzed at the Phase Two Property were within a pH range of 5 to 9 for surface soils (i.e., soils that are no more than 1.5 metres below the soil surface) and 5 to 11 for subsurface soils (i.e., soils that are more than 1.5 metres below the soil surface);

- Kempenfelt Bay (Lake Simcoe) is approximately 20 metres southeast of the Phase Two Property at its closest point; therefore, the Phase Two Property is located within 30 metres of a water body;

- The Phase Two Property is located within 30 metres of an area of natural significance, as land south and east of the Phase Two Property is identified as an Environmental Protection Area (Level 3) in the City of Barrie Official Plan (Adopted April 2023) and the Phase Two Property is located within 30 metres of Lake Simcoe where Black Redhorse, a threatened fish species in Ontario, is identified as being present;

- The Phase Two Property is not located within areas where the Niagara Escarpment Planning and Development Act or Oak Ridgeôs Moraine Conservation Act, 2001 applies;

- The Phase Two Property is not a ñshallow soil property,ò as defined in O. Reg. 153/04 as bedrock is not present within 2.0 metres below ground surface (mbgs). Watters Environmental did not encounter bedrock in the deepest borehole drilled in this Phase Two ESA, which was at a depth of approximately 9.14 mbgs; and

- Grain size analysis indicated that the soil is predominantly coarse textured (see Section 6.4 of this report).

Based on the above, Watters Environmental compared the soil and groundwater sample analytical data from the Phase Two Property to the Table 1 Full Depth Background SCS for Residential/ Parkland/Institutional/Industrial/Commercial/Community Property Use as contained in the MECP publication ñSoil, Ground Water and Sediment Standards for *Use Under Part XV.1 of the Environmental Protection Act*ò, April 15, 2011. These soil and groundwater quality standards are hereafter referred to as the ñTable 1 SCSò.

## 2.3 Previous Environmental Reports

The following previous environmental reports prepared for the Phase Two Property were reviewed by Watters Environmental:

- ñ*Draft Report on Phase I Environmental Site Assessment and Groundwater Sampling, 149-153 Dunlop Street East and 5 Mulcaster Street, Barrie, Ontario*ò, prepared by Toronto Inspection Ltd. (TIL) for 2476703 Ontario Inc., dated November 3, 2017 (the ñ2017 TIL Phase I ESA Reportò);

- ñ*Phase II Environmental Site Assessment, 149-153 Dunlop Street East & 5 Mulcaster Street, Barrie, Ontario"*, prepared by Watters Environmental for Dunlop Developments (Barrie) Inc., dated June 2020 (the ñ2020 Watters Phase II ESA Reportò);

- *"Phase One Environmental Site Assessment, 149-153 Dunlop Street East, Barrie, Ontario*ò, prepared by Watters Environmental for the Client, dated April 2024 (the ñ2024 Watters Environmental Phase One ESA Reportò); and

- *"Phase Two Environmental Site Assessment, 149-153 Dunlop Street East, Barrie, Ontario*ò, prepared by Watters Environmental for the Client, dated April 2024 (the ñ2024 Watters Environmental Phase Two ESA Reportò).

The 2017 TIL Phase I ESA Report and 2020 Watters Phase II ESA Report are summarized in the 2024 Watters Environmental Phase One ESA Report.

2024 Watters Environmental Phase One Report

Based on the Phase One ESA completed, it was Watters Environmentalôs opinion that there were PCAs from historical or current operations on the Phase One Property and within the Phase One Study Area, as defined in O. Reg. 153/04, which resulted in APECs on the Phase One Property.

The on-Site and off-Site PCAs that resulted in APECs on the Phase One Property are summarized as follows:

| PCA | Location of Activity | Table 2 PCA No. & Description* | Discussion |
|---|---|---|---|
| 1 | On-Site, Northwest side of the Phase One Property | #39 ï Paints Manufacturing, Processing and Bulk Storage | A former carriage paint shop operated on the northwest side of the Phase One Property. |
| 2A | On-Site, Northwest side of the Phase One Property | #28 ï Gasoline and Associated Products Storage in Fixed Tanks | A former gasoline service station operated on the northwest side of the Phase One Property. |
| 2B | On-Site, Northwest side of the Phase One Property | #27 ï Garages and Maintenance and Repair of Railcars, Marine Vehicles and Aviation Vehicles | A former automotive repair garage operated on the northwest side of the Phase One Property. |
| 3 | On-Site, East side of the Phase One Property | #27 ï Garages and Maintenance and Repair of Railcars, Marine Vehicles and Aviation Vehicles | A former automotive repair garage operated on the east side of the Phase One Property. |
| 4 | On-Site, Southwest side of the Phase One Property | #27 ï Garages and Maintenance and Repair of Railcars, Marine Vehicles and Aviation Vehicles | A former small engine repair garage operated on the southwest side of the Phase One Property. |
| 5 | On-Site, Northeast side of the Phase One Property | #28 ï Gasoline and Associated Products Storage in Fixed Tanks | A former gasoline service station operated on the northeast side of the Phase One Property. |
| 6 | On-Site, Southeast side of the Phase One Property | #28 ï Gasoline and Associated Products Storage in Fixed Tanks | Former heating oil AST was present along the southeast exterior of the building. |
| 7 | On-Site, North side of the Phase One Property | #30 ï Importation of Fill Material of Unknown Quality | Fill was identified in boreholes on the north side of the Phase One Property. |

| PCA | Location of Activity | Table 2 PCA No. & Description* | Discussion |
|---|---|---|---|
| 8 | Off-Site, South of the Phase One Property | #46 ï Rail Yards, Tracks and Spurs | Former rail spur and tracks were present immediately south of the Phase One Property. |
| 9 | Off-Site, Southeast of the Phase One Property | #55 ï Transformer Manufacturing, Processing and Use | A pad-mounted transformer is present southeast of the Phase One Property. |
| 10A | Off-Site, 45 metres north of the Phase One Property | #34 ï Metal Fabrication | A former machine shop was present at 17 Mulcaster Street. |
| 10B | Off-Site, 45 metres north of the Phase One Property | #31 ï Ink Manufacturing, Processing and Bulk Storage | A former commercial printing service and associated hazardous waste (photo processing wastes) generation was present at 17 Mulcaster Street. |
| 10C | | #58 ï Waste Disposal and Waste Management, including thermal treatment, landfilling and transfer of waste, other than use of biosoils as soil conditioners | |
| 11 | On-Site, Exterior Areas of the Phase One Property | Not Applicable ï Road Salt Application | Road salt may have been applied to the exterior paved areas for the safety of vehicular and pedestrian traffic. |

* O. Reg. 153/04, Schedule D, Table 2: Potentially Contaminating Activities

Based on the APECs identified, Watters Environmental stated that a Phase Two ESA would be required before an RSC application can be submitted, as per O. Reg. 153/04.

2024 Watters Environmental Phase Two ESA

Based on the results of this Phase Two ESA, Watters Environmental presented the following findings:

- The Phase Two ESA was conducted in accordance with Ontario Regulation 153/04 (i.e., Records of Site Condition ï Part XV.1 of the Act, made under the Ontario Environmental Protection Act, R.S.O. 1990 Regulationò);

- Soil containing PHC F4 exceeding the Table 1 SCS was identified on the northwest side of the Phase Two Property;

- Fill containing fluoranthene (a PAH) exceeding the Table 1 SCS was identified on the southeast side of the Phase Two Property;

- The concentrations of petroleum hydrocarbons (PHCs F1-F4), volatile organic compounds (VOCs), Trihalomethanes (THMs), benzene, toluene, ethylbenzene, and xylenes (collectively BTEX), hydride-forming metals (As, Sb, Se), other regulated parameters [i.e., boron-hot water soluble (B-HWS), hexavalent chromium [Cr(VI)], cyanide (CN-), mercury (Hg), electrical conductivity (EC) and sodium adsorption ratio (SAR)], and polychlorinated biphenyls (PCBs) in all other soil samples collected throughout the Phase Two Property meet the Table 1 SCS;

- Groundwater containing concentrations of metals parameters (i.e., barium, copper, and/or silver) exceeding the Table 1 SCS was identified on the northwest side of the Phase Two Property and groundwater containing concentrations of a hydride-forming metal (i.e., antimony) exceeding the Table 1 SCS was identified on the southeast side of the Phase Two Property; and

- The concentrations of PHCs, VOCs, THMs, BTEX, PAHs, and other regulated parameters [i.e., Cr(VI), CN-, Hg, sodium, and chloride] in all other groundwater samples on the Phase Two Property meet the Table 1 SCS.

## 2.4 Parameter of Interest

PHCs were considered to be the parameter of interest for this remediation program. Confirmation soil samples collected from the floor and sidewalls of the excavation were submitted for laboratory analysis of PHCs, VOCs, BTEX, and THMs.

## 2.5 Roles and Responsibilities

The Client retained the remediation contractor, Soilcan of Toronto, Ontario, to conduct the excavation and off-Site disposal of the impacted soils. Watters Environmental monitored the soil excavation activities on August 23, 2023 and collected the confirmation soil samples.

Watters Environmental completed the following services:

- Identify to the contractor the lateral extent and depth of the excavation to be conducted;
- Utilize the toxicity characteristic leaching procedure (TCLP) sample from the 2020 Phase II ESA, which indicated that the concentrations of all tested parameters were below the O. Reg. 558/00, Schedule 4 leachate quality criteria. As such, the excavated impacted soil was considered to be a non-hazardous solid waste;
- Collected confirmation soil samples for laboratory analysis from the floor and sidewalls of the remedial excavation;
- Reviewed and compared all laboratory analytical data for the confirmation soil samples to determine whether the PHC concentrations meet the Table 1 SCS;
- Provided project management and liaison with on-Site field staff, the contractor, and the Client, as required; and
- Prepared a summary report on the results of the environmental remediation activities completed at the Phase Two Property.

Watters Environmental provided the laboratory certificates-of-analyses for the bulk soil samples and TCLP testing from the 2020 Phase II ESA to Soilcan, who forwarded the results to a waste receiving facility that would accept the impacted soil. Cannington directly retained dump trucks to transport the excavated soil to NRK Remediation Facility located at 7406 Concession Road B&C, in Orillia, Ontario. This facility operates under Environmental Compliance Approval number 6332-A2GNRY.

Soil excavated and stockpiled adjacent to the excavation was placed back into the excavation on August 23, 2023 following collection of the confirmation soil samples, for safety reasons as the sidewalls of the excavation had begun to cave in. As such, not all PHC F4 impacted soil was removed from the Phase Two Property. The remaining PHC F4 impacted soil will be excavated and disposed of off-site at a later date.

The excavation was also backfilled with 40.71 tonnes of 2 inch crushed material from Natural Stone Source Ontario Ltd., in Ramara, Ontario, and 2.06 tonnes of 14 mm material from Lafarge in Barrie, Ontario, based on weigh scale tickets. A composite sample plus a duplicate sample of the material brought to the Phase Two Property was collected on August 23, 2023 and submitted to an accredited laboratory for analytical testing. The soil samples meet the Table 1 SCS with the exception of EC.

Watters Environmental retained SGS Canada Inc. (SGS) in Lakefield, Ontario to conduct the analysis of the confirmation soil samples collected from the sidewalls and floor of the excavation. SGS is accredited by the Canadian Association of Laboratory Accreditation Inc. (CALA) (Accreditation No. 1001999) and meets the requirements of Section 47 of O. Reg. 153/04 certifying that the analytical laboratory be accredited in accordance with the International Standard ISO/IEC 17025 and with standards developed by CALA.

# 3.0 REMEDIATION ACTIVITY SUMMARY

## 3.1 Waste Classification Analysis

Watters Environmental collected a TCLP sample from the Phase Two Property during the 2020 Phase II ESA to identify the waste classification for disposal purposes (i.e., to classify as ñhazardousò or ñnon-hazardousò solid waste). The parameters tested in the leachate included metals and inorganics (i.e., fluoride, cyanide, nitrite, nitrate), benzo(a)pyrene, volatile organic compounds, and polychlorinated biphenyls. The laboratory certificate-of-analysis is provided in Appendix A. The analytical results indicated that the concentrations of all tested parameters were below the O. Reg. 558/00, Schedule 4 leachate quality criteria. As such, the excavated impacted soil was considered to be a non-hazardous solid waste.

## 3.2 Soil Remediation Activities

***Remediation of the PHC-Impacted Soils***

A drilling program was completed by Watters Environmental in June 2020 as part of the 2020 Watters Phase II ESA, which consisted of advancing 3 boreholes [BH1(MW), BH2(MW), and BH3], two of which were completed as monitoring wells [i.e., BH1(MW) and BH2(MW)]. A soil sample from BH1(MW) contained a concentration of PHC F4 that exceeded the Table 1 SCS. There were no groundwater exceedances, including in groundwater collected from BH1(MW), of the Table 1 SCS.

As such, a total of 39.02 tonnes of soil (based on weigh scale tickets), surrounding BH1(MW) was excavated and disposed of at NRK Remediation Facility in Orillia, Ontario on August 22, 2023.

Watters Environmental was on-Site on August 23, 2023 and observed the extent of the final excavation, assessed the soil on the floor and sidewalls of the final excavation for visual and olfactory evidence of contamination, and collected confirmatory soil samples from the floor and sidewalls of the excavation.

Confirmatory soil samples collected from the floor and sidewalls of the final excavation show the extent of the PHC F4 impacted soil; however, PHC F4 impacted soil excavated on August 23, 2023 was placed back into the excavation for safety reasons when the sidewalls of the excavation began to cave in. As such, not all PHC F4 impacted soil was removed from the Phase Two Property. The remaining PHC F4 impacted soil will be excavated and disposed of off-site at a later date.

***Confirmation Soil Sampling***

Soil containing PHC F4 that exceeded the Table 1 SCS was identified on the northwest side of the Phase Two Property [i.e., BH1(MW)-SS4 (2.29 ï 2.90 mbgs)] and was likely a result of former automotive repair activities. The concentrations of PHC F1-F4 in a deeper soil sample [i.e., BH1(MW)-SS11 (7.62 ï 8.23 mbgs)], met the Table 1 SCS.

On August 22, 2023, a total of 39.02 tonnes of soil (based on weigh scale tickets), surrounding BH1(MW) was excavated and disposed of at NRK Remediation Facility in Orillia, Ontario. Watters Environmental was on-Site on August 23, 2023, when additional soil surrounding BH1(MW) was excavated from approximately of 2.29 to 3.05 mbgs and stockpiled adjacent to the excavation in preparation for off-Site disposal.

The final excavation measured approximately 4 metres by 4.9 metres at the top of the excavation (previous ground surface) and was excavated to a depth of approximately 3 mbgs. Due to the sand to silty sand stratigraphy of the soil, the sidewalls of the excavation had a slight slope down to the base of the excavation which was slightly less that 4 metres by 4.9 metres in area.

Therefore, the total excavation area was under 19.6 square metres. Table 3 in Schedule E of O. Reg. 153/04 states that excavations with a floor area less than 25 square metres requires a minimum of 2 confirmation floor samples and 2 confirmation sidewall samples. A total of 2 confirmation floor samples and 4 confirmation sidewall samples (i.e., 1 confirmation soil sample from each sidewall of the excavation), plus one duplicate sample was collected for quality assurance / quality control purposes, and were submitted to an accredited laboratory for PHCs, VOCs, BTEX, and THMs analysis. All samples met the Table 1 SCS. Therefore, the number of confirmation floor samples meet the regulatory requirements.

The base of the excavation was dry upon completion. Additionally, the concentration of PHCs in the groundwater sample collected from BH1(MW) located within the excavation, meet the Table 1 SCS.

## 3.3 Soil Verification Sample Analysis

The following table summarize the details of the final soil verification samples collected by Watters Environmental from the floor and sidewalls of the remedial excavation at the Phase Two Property that were selected for laboratory analysis. The number of floor and sidewall samples collected met the requirements of Table 3 in Schedule E of O. Reg. 153/04.

**Confirmation Soil Sample Analytical Summary**

| Soil Sample Number | Sampling Location | Sample Depth (mbgs) | Laboratory Analysis | Lab Certificate Number (see Appendix A) |
|---|---|---|---|---|
| F1-A | Floor ï North Portion | 3.05 | PHCs, VOCs, BTEX, THMs | CA40239-AUG23 R |
| F100-A (duplicate of F1-A) | Floor ï North Portion | 3.05 | PHCs, VOCs, BTEX, THMs | CA40239-AUG23 R |
| F2-A | Floor ï South Portion | 3.05 | PHCs, VOCs, BTEX, THMs | CA40239-AUG23 R |
| NW1-A | North Wall | 2.59 | PHCs, VOCs, BTEX, THMs | CA40239-AUG23 R |
| EW1-A | East Wall | 2.59 | PHCs, VOCs, BTEX, THMs | CA40239-AUG23 R |
| SW1-A | South Wall | 2.59 | PHCs, VOCs, BTEX, THMs | CA40239-AUG23 R |
| WW1-A | West Wall | 2.59 | PHCs, VOCs, BTEX, THMs | CA40239-AUG23 R |

## 3.4 Quality Assurance/Quality Control

Field sampling activities were conducted by Watters Environmental personnel following Watters Environmentalôs standard field protocols for environmental remediation programs, which generally follow or exceed the protocols accepted by the MECP and the environmental consulting industry in Ontario.

A field duplicate sample was collected and submitted for laboratory analysis, as per O. Reg. 153/04 (i.e., 1 in 10 samples). The soil verification samples collected from the Phase Two Property were recorded on Chain-of-Custody forms, copies of which were retained within Watters Environmentalôs files upon sample submission. The samples were packed in ice-chilled coolers, with the Chain-of-Custody forms inside, and picked up the laboratory.

As noted previously, the laboratory analytical testing for the soil verification samples was completed by SGS in Lakefield, Ontario, who is accredited by CALA.

### 3.5 Remediation Volumes

A total of 39.02 tonnes of impacted soil, based on weigh scale tickets at the receiving site, were excavated and disposed of at an MECP-approved waste receiving facility. Using an assumed soil density of 2 tonnes/cubic metres ($m^3$), the volume of soil excavated and removed from the Phase Two Property is approximately 19.51 $m^3$. Based on field measurements of the final excavation, the estimated volume excavated is approximately 58 $m^3$, which is different than the aforementioned estimate based on the weight. Impacted soil excavated on August 23, 2023, and stockpiled next to the excavation, was placed back into the excavation for safety reasons when the sidewalls of the excavation began to cave in. As such, not all PHC F4 impacted soil was removed from the Phase Two Property. The remaining PHC F4 impacted soil will be excavated and disposed of off-site at a later date. The weigh tickets for the soil disposed at NRK Remediation Facility in Orillia, Ontario are provided in Appendix B.

### 3.6 Site Restoration

As noted, soil excavated and stockpiled adjacent to the excavation on August 23, 2023, was placed back into the excavation following collection of the confirmation soil samples, for safety reasons as the sidewalls of the excavation began to cave in. As such, not all PHC F4 impacted soil was removed from the Phase Two Property. The remaining PHC F4 impacted soil will be excavated and disposed of off-site at a later date.

The excavation was also backfilled with 40.71 tonnes of 2 inch crushed material from Natural Stone Source Ontario Ltd., in Ramara, Ontario, and 2.06 tonnes of 14 mm material from Lafarge in Barrie, Ontario, based on weigh scale tickets. The weigh tickets for the crushed limestone brought to the Phase Two Property are provided in Appendix C.

A composite sample plus a duplicate sample [i.e., CS1 and CS100, Lab Certificate Number CA40241-AUG23 R] of the material brought to the Phase Two Property was collected on August 23, 2023 and submitted to an accredited laboratory for analytical testing of PAHs, metals, hydride-forming metals and ORPs [i.e., boron-hot water soluble (B-HWS), hexavalent chromium [Cr(VI)], cyanide (CN-), mercury (Hg), electrical conductivity (EC) and sodium adsorption ratio (SAR)]. The soil sample meets the Table 1 SCS with the exception of EC. The laboratory certificate-of-analysis is provided in Appendix A.

## 4.0 SUMMARY AND CONCLUSIONS

Based on observations made at the Phase Two Property, and on the results of the laboratory analyses of soil verification samples collected by Watters Environmental from the final limits of the remediation area, the extent of PHC F4 impacted soil at the Phase Two Property is known.

As noted, soil excavated and stockpiled adjacent to the excavation on August 23, 2023, was placed back into the excavation following collection of the confirmation soil samples, for safety reasons as the sidewalls of the excavation began to cave in. As such, not all PHC F4 impacted soil was removed from the Phase Two Property. The remaining PHC F4 impacted soil will be excavated and disposed of off-site at a later date.

## 5.0 QUALIFICATIONS AND LIMITATIONS

Watters Environmental has prepared this report at the request of, and for the exclusive use of Darlene Gabarro. Watters Environmental will not be responsible for the use of this report by any other party, or reliance on or any decision to be made based on it by any such other party without the prior written consent of Watters Environmental. Watters Environmental accepts no responsibility for damages, if any, by any other party as a result of decisions or actions based on this report.

This environmental remediation was conducted in accordance with Watters Environmentalôs proposed scope of work, verbal requests from the client and generally accepted environmental assessment practices in Ontario at the time of the remediation. No other warranty, expressed or implied, is made.

This environmental remediation was designed to address the environmental impacts to soil known and/or reasonably expected to be present at the Phase Two Property, reflecting the findings of previous Phase Two Property investigations completed by Watters Environmental and Watters Environmentalôs best judgment and experience. This report should in no way be construed as a definitive representation of any and all environmental impacts that may be present at the Phase Two Property resulting from past or current practices. The remediation was conducted using representative soil sample data. Data interpolations between physical testing points are open to interpretation. As such, it is not feasible to conclude absolutely the conditions that may exist in the subsurface. Inferred conditions assume that homogeneous conditions exist, when in fact they may not. Subsurface conditions will vary between testing points and are likely to change with time. No assurance is made regarding changes in conditions subsequent to the time of the remediation. The findings contained in this report may be based, in part, upon information provided by others. No assurance is made regarding the accuracy of the information not generated by Watters Environmental.

This report is complete only as an entire document, and no section is intended to be used separately.

# FIGURES




N

**LEGEND:**

APPROXIMATE EXTENT OF THE PHASE TWO PROPERTY

0m 200m

SCALE

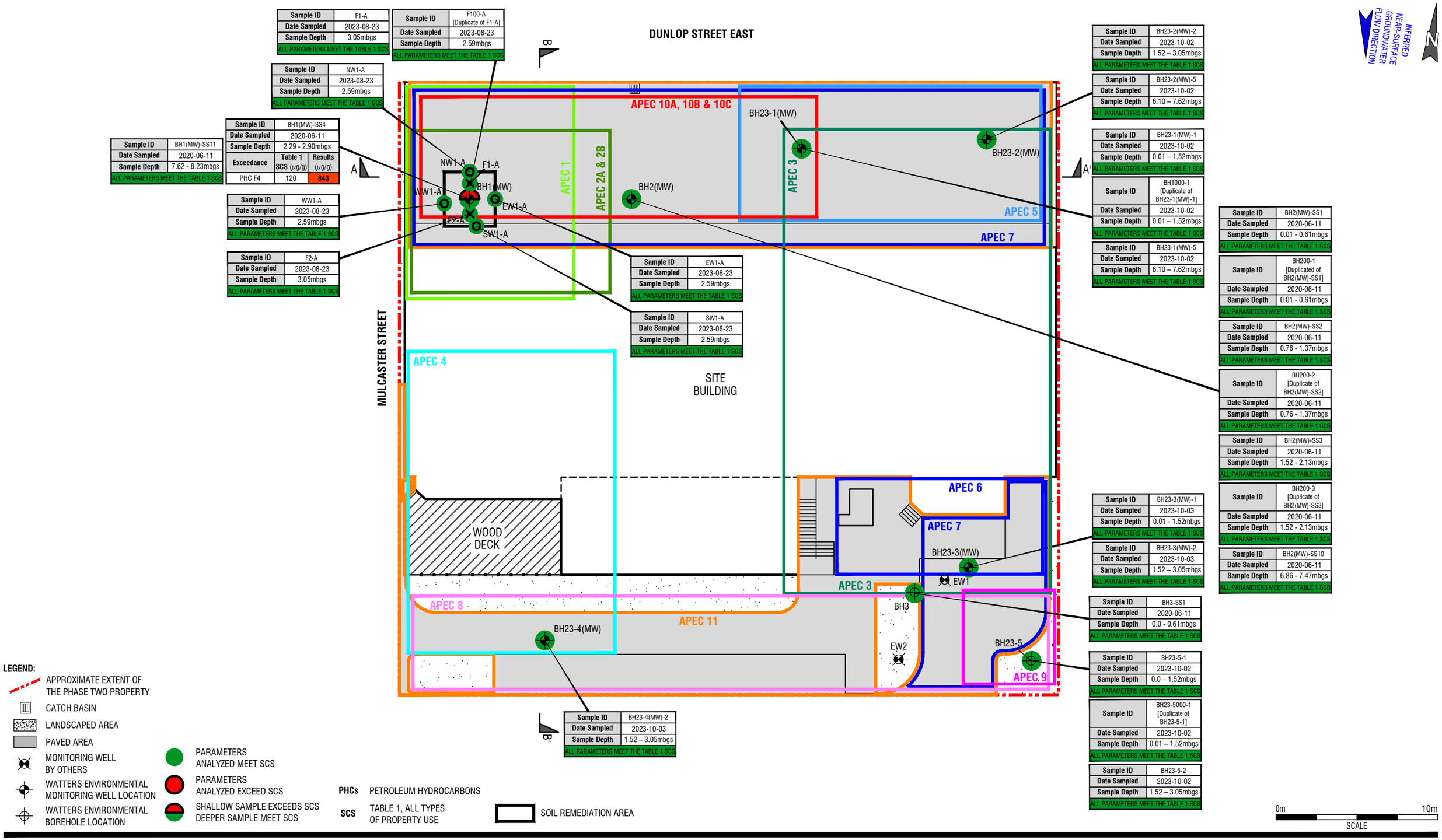
**WATTERS ENVIRONMENTAL GROUP INC®**
9135 Keele St. Unit A1
Concord, ON. L4K 0J4
T 416 361 2407
F 416 361 2410

DRAWN: B. CALDERONE
CHECKED: N. WRIGHT
DATE: APRIL 2024

CLIENT: DUNLOP DEVELOPMENTS (BARRIE) INC.
SITE ADDRESS: 149-153 DUNLOP ST EAST, BARRIE, ONTARIO

REPORT NAME: SOIL REMEDIATION

FIGURE NAME: PHASE TWO PROPERTY LOCATION MAP
PROJECT No: 20-0052.04
FIGURE No: 1




| Sample ID | F1-A |
|---|---|
| Date Sampled | 2023-08-23 |
| Sample Depth | 3.05mbgs |
| ALL PARAMETERS MEET THE TABLE 1 SCS | |

| Sample ID | F100-A [Duplicate of F1-A] |
|---|---|
| Date Sampled | 2023-08-23 |
| Sample Depth | 2.59mbgs |
| ALL PARAMETERS MEET THE TABLE 1 SCS | |

| Sample ID | NW1-A |
|---|---|
| Date Sampled | 2023-08-23 |
| Sample Depth | 2.59mbgs |
| ALL PARAMETERS MEET THE TABLE 1 SCS | |

| Sample ID | BH1(MW)-SS4 | |
|---|---|---|
| Date Sampled | 2020-06-11 | |
| Sample Depth | 2.29 - 2.90mbgs | |
| Exceedance | Table 1 SCS (µg/g) | Results (µg/g) |
| PHC F4 | 120 | 843 |

| Sample ID | BH1(MW)-SS11 |
|---|---|
| Date Sampled | 2020-06-11 |
| Sample Depth | 7.62 - 8.23mbgs |
| ALL PARAMETERS MEET THE TABLE 1 SCS | |

| Sample ID | WW1-A |
|---|---|
| Date Sampled | 2023-08-23 |
| Sample Depth | 2.59mbgs |
| ALL PARAMETERS MEET THE TABLE 1 SCS | |

| Sample ID | F2-A |
|---|---|
| Date Sampled | 2023-08-23 |
| Sample Depth | 3.05mbgs |
| ALL PARAMETERS MEET THE TABLE 1 SCS | |

| Sample ID | EW1-A |
|---|---|
| Date Sampled | 2023-08-23 |
| Sample Depth | 2.59mbgs |
| ALL PARAMETERS MEET THE TABLE 1 SCS | |

| Sample ID | SW1-A |
|---|---|
| Date Sampled | 2023-08-23 |
| Sample Depth | 2.59mbgs |
| ALL PARAMETERS MEET THE TABLE 1 SCS | |

| Sample ID | BH23-4(MW)-2 |
|---|---|
| Date Sampled | 2023-10-03 |
| Sample Depth | 1.52 – 3.05mbgs |
| ALL PARAMETERS MEET THE TABLE 1 SCS | |

| Sample ID | BH23-2(MW)-2 |
|---|---|
| Date Sampled | 2023-10-02 |
| Sample Depth | 1.52 – 3.05mbgs |
| ALL PARAMETERS MEET THE TABLE 1 SCS | |

| Sample ID | BH23-2(MW)-5 |
|---|---|
| Date Sampled | 2023-10-02 |
| Sample Depth | 6.10 – 7.62mbgs |
| ALL PARAMETERS MEET THE TABLE 1 SCS | |

| Sample ID | BH23-1(MW)-1 |
|---|---|
| Date Sampled | 2023-10-02 |
| Sample Depth | 0.01 – 1.52mbgs |
| ALL PARAMETERS MEET THE TABLE 1 SCS | |

| Sample ID | BH1000-1 [Duplicate of BH23-1(MW)-1] |
|---|---|
| Date Sampled | 2023-10-02 |
| Sample Depth | 0.01 – 1.52mbgs |
| ALL PARAMETERS MEET THE TABLE 1 SCS | |

| Sample ID | BH23-1(MW)-5 |
|---|---|
| Date Sampled | 2023-10-02 |
| Sample Depth | 6.10 – 7.62mbgs |
| ALL PARAMETERS MEET THE TABLE 1 SCS | |

| Sample ID | BH2(MW)-SS1 |
|---|---|
| Date Sampled | 2020-06-11 |
| Sample Depth | 0.01 - 0.61mbgs |
| ALL PARAMETERS MEET THE TABLE 1 SCS | |

| Sample ID | BH200-1 [Duplicated of BH2(MW)-SS1] |
|---|---|
| Date Sampled | 2020-06-11 |
| Sample Depth | 0.01 - 0.61mbgs |
| ALL PARAMETERS MEET THE TABLE 1 SCS | |

| Sample ID | BH2(MW)-SS2 |
|---|---|
| Date Sampled | 2020-06-11 |
| Sample Depth | 0.76 - 1.37mbgs |
| ALL PARAMETERS MEET THE TABLE 1 SCS | |

| Sample ID | BH200-2 [Duplicate of BH2(MW)-SS2] |
|---|---|
| Date Sampled | 2020-06-11 |
| Sample Depth | 0.76 - 1.37mbgs |
| ALL PARAMETERS MEET THE TABLE 1 SCS | |

| Sample ID | BH2(MW)-SS3 |
|---|---|
| Date Sampled | 2020-06-11 |
| Sample Depth | 1.52 - 2.13mbgs |
| ALL PARAMETERS MEET THE TABLE 1 SCS | |

| Sample ID | BH200-3 [Duplicate of BH2(MW)-SS3] |
|---|---|
| Date Sampled | 2020-06-11 |
| Sample Depth | 1.52 - 2.13mbgs |
| ALL PARAMETERS MEET THE TABLE 1 SCS | |

| Sample ID | BH2(MW)-SS10 |
|---|---|
| Date Sampled | 2020-06-11 |
| Sample Depth | 6.86 - 7.47mbgs |
| ALL PARAMETERS MEET THE TABLE 1 SCS | |

| Sample ID | BH23-3(MW)-1 |
|---|---|
| Date Sampled | 2023-10-03 |
| Sample Depth | 0.01 - 1.52mbgs |
| ALL PARAMETERS MEET THE TABLE 1 SCS | |

| Sample ID | BH23-3(MW)-2 |
|---|---|
| Date Sampled | 2023-10-03 |
| Sample Depth | 1.52 – 3.05mbgs |
| ALL PARAMETERS MEET THE TABLE 1 SCS | |

| Sample ID | BH3-SS1 |
|---|---|
| Date Sampled | 2020-06-11 |
| Sample Depth | 0.0 - 0.61mbgs |
| ALL PARAMETERS MEET THE TABLE 1 SCS | |

| Sample ID | BH23-5-1 |
|---|---|
| Date Sampled | 2023-10-02 |
| Sample Depth | 0.0 – 1.52mbgs |
| ALL PARAMETERS MEET THE TABLE 1 SCS | |

| Sample ID | BH23-5000-1 [Duplicate of BH23-5-1] |
|---|---|
| Date Sampled | 2023-10-02 |
| Sample Depth | 0.01 – 1.52mbgs |
| ALL PARAMETERS MEET THE TABLE 1 SCS | |

| Sample ID | BH23-5-2 |
|---|---|
| Date Sampled | 2023-10-02 |
| Sample Depth | 1.52 – 3.05mbgs |
| ALL PARAMETERS MEET THE TABLE 1 SCS | |

**LEGEND:**

- APPROXIMATE EXTENT OF THE PHASE TWO PROPERTY
- CATCH BASIN
- LANDSCAPED AREA
- PAVED AREA
- MONITORING WELL BY OTHERS
- WATTERS ENVIRONMENTAL MONITORING WELL LOCATION
- WATTERS ENVIRONMENTAL BOREHOLE LOCATION
- PARAMETERS ANALYZED MEET SCS
- PARAMETERS ANALYZED EXCEED SCS
- SHALLOW SAMPLE EXCEEDS SCS DEEPER SAMPLE MEET SCS

**PHCs** PETROLEUM HYDROCARBONS

**SCS** TABLE 1, ALL TYPES OF PROPERTY USE

SOIL REMEDIATION AREA

0m 10m

SCALE


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DATE: APRIL 2024

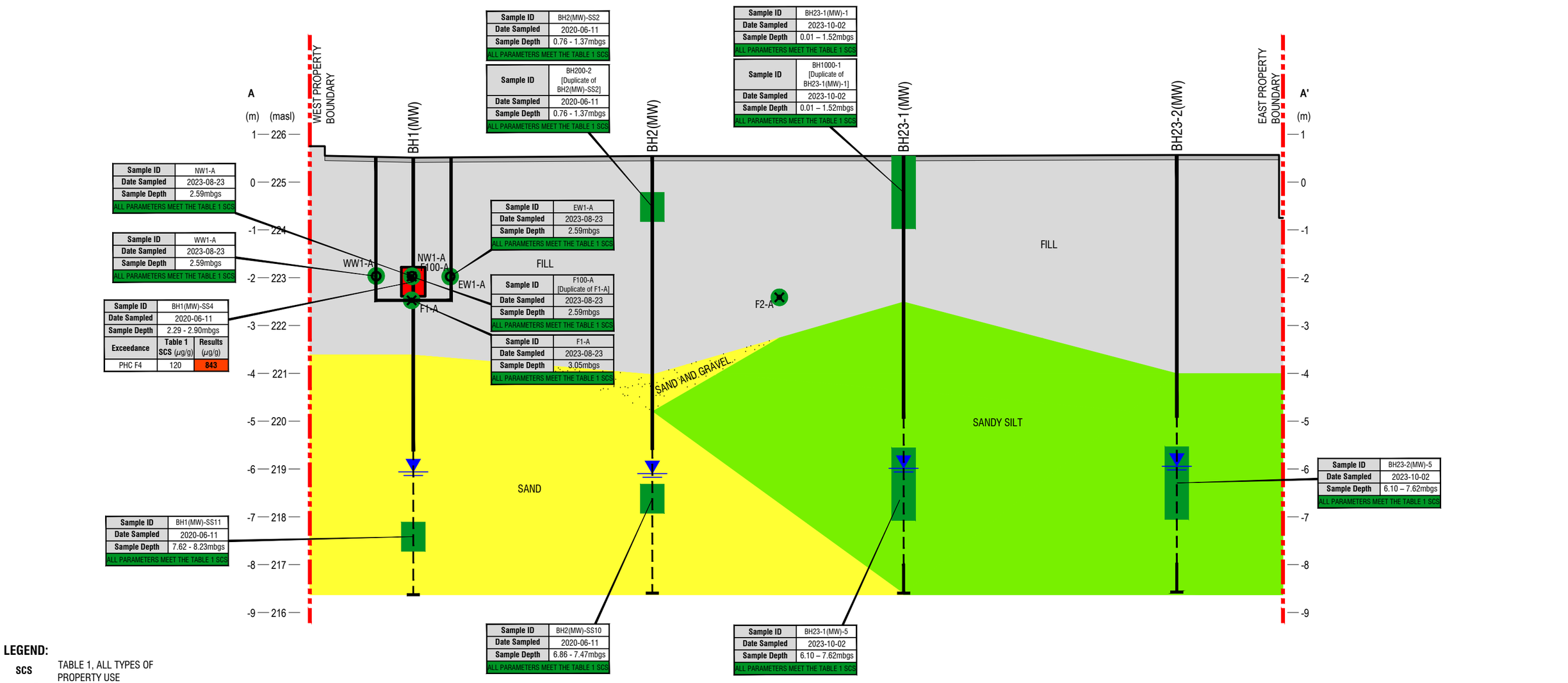
CLIENT: DUNLOP DEVELOPMENTS (BARRIE) INC.
SITE ADDRESS: 149-153 DUNLOP ST EAST, BARRIE, ONTARIO

REPORT NAME: SOIL REMEDIATION

FIGURE NAME: SOIL REMEDIATION - PHCs

PROJECT No: 20-0052.04

FIGURE No: 2




**LEGEND:**

- **SCS** — TABLE 1, ALL TYPES OF PROPERTY USE
- MONITORING WELL
- SCREENED SECTION OF MONITORING WELL
- GROUNDWATER LEVEL
- **masl** — METRES ABOVE SEA LEVEL
- **mbgs** — METRES BELOW GROUND SURFACE
- **PHCs** — PETROLEUM HYDROCARBONS
- PARAMETERS ANALYZED MEET SCS
- PARAMETERS ANALYZED EXCEED SCS
- SOIL REMEDIATION AREA

(H) 0m — 5m
(V) 0m — 10m
SCALE

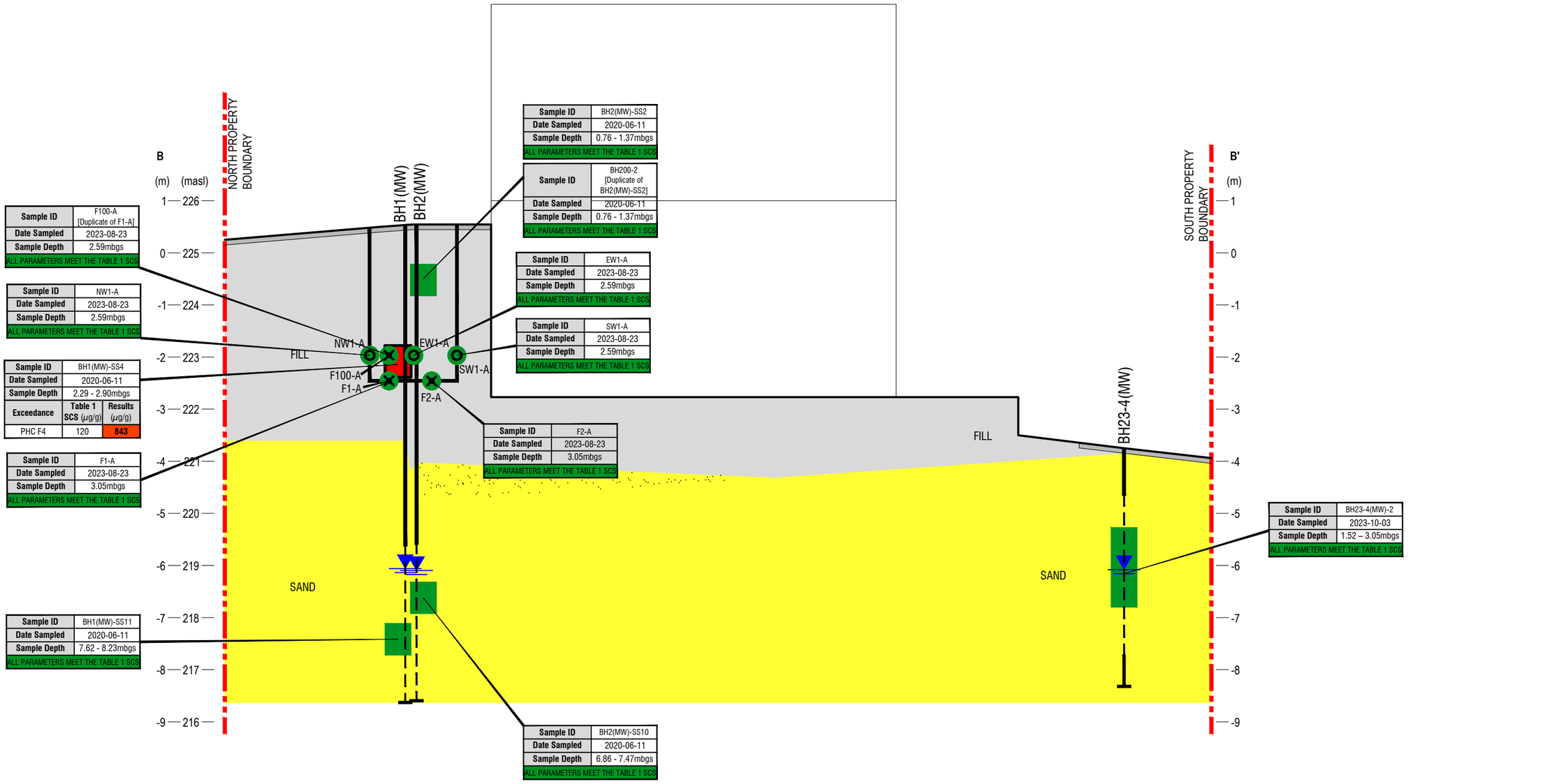
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DRAWN: B. CALDERONE
CHECKED: N. WRIGHT
DATE: APRIL 2024

CLIENT: DUNLOP DEVELOPMENTS (BARRIE) INC.
SITE ADDRESS: 149-153 DUNLOP ST EAST, BARRIE, ONTARIO

REPORT NAME: SOIL REMEDIATION

FIGURE NAME: SOIL REMEDIATION - PHCs - CROSS SECTION A-A'
PROJECT No: 20-0052.04
FIGURE No: 3A




**LEGEND:**

- **SCS** — TABLE 1, ALL TYPES OF PROPERTY USE
- MONITORING WELL
- SCREENED SECTION OF MONITORING WELL
- GROUNDWATER LEVEL
- **masl** — METRES ABOVE SEA LEVEL
- **mbgs** — METRES BELOW GROUND SURFACE
- **PHCs** — PETROLEUM HYDROCARBONS
- PARAMETERS ANALYZED MEET SCS
- PARAMETERS ANALYZED EXCEED SCS
- SOIL REMEDIATION AREA

(H) 0m — 5m
(V) 0m — 10m
SCALE

**WATTERS ENVIRONMENTAL GROUP INC®**
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DRAWN: B. CALDERONE
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DATE: APRIL 2024

CLIENT: DUNLOP DEVELOPMENTS (BARRIE) INC.
SITE ADDRESS: 149-153 DUNLOP ST EAST, BARRIE, ONTARIO

REPORT NAME: SOIL REMEDIATION

FIGURE NAME: SOIL REMEDIATION - PHCs - CROSS SECTION B-B'
PROJECT No: 20-0052.04
FIGURE No: 3B

# APPENDIX A

## Laboratory Certificates of Analyses

# FINAL REPORT

CA40239-AUG23 R1

## First Page

| CLIENT DETAILS | | LABORATORY DETAILS | |
|---|---|---|---|
| Client | Watters Environmental Group Inc. | Project Specialist | Jill Campbell, B.Sc.,GISAS |
| | | Laboratory | SGS Canada Inc. |
| Address | 9135 Keele St Unit A1<br>Concord, ON<br>L4K 0J4. Canada | Address | 185 Concession St., Lakefield ON, K0L 2H0 |
| Contact | Natalie Wright | Telephone | 2165 |
| Telephone | (416) 361-2407 | Facsimile | 705-652-6365 |
| Facsimile | (416) 361-2410 | Email | jill.campbell@sgs.com |
| Email | NWright@wattersenvironmental.com; labcerts@wattersenviron | SGS Reference | CA40239-AUG23 |
| Project | 20-0052.04 | Received | 08/23/2023 |
| Order Number | | Approved | 08/29/2023 |
| Samples | Soil (7) | Report Number | CA40239-AUG23 R1 |
| | | Date Reported | 12/20/2023 |

COMMENTS

CCME Method Compliance: Analyses were conducted using analytical procedures that comply with the Reference Method for the CWS for Petroleum Hydrocarbons in Soil and have been validated for use at the SGS laboratory, Lakefield, ON site.

Quality Compliance: Instrument performance / calibration quality criteria were met and extraction and analysis limits for holding times were met.

nC6 and nC10 response factors within 30% of response factor for toluene: YES

nC10, nC16 and nC34 response factors within 10% of the average response for the three compounds: YES

C50 response factors within 70% of nC10 + nC16 + nC34 average: YES

Linearity is within 15%: YES

Hydrocarbon results are expressed on a dry weight basis.

Temperature of Sample upon Receipt: 7 degrees C
Cooling Agent Present:Yes
Custody Seal Present:Yes

Chain of Custody Number:032341

SIGNATORIES

on behalf of Jill Campbell, B.Sc.,GISAS



## RESULTS - SOIL

| | Sample Number | 8 | 9 | 10 | 11 | |
|---|---|---|---|---|---|---|
| | Sample Name | F1-A | F2-A | NW1-A | EW1-A | |
| | Sample Matrix | Soil | Soil | Soil | Soil | |
| | Sampled By | Andrew Watters | Andrew Watters | Andrew Watters | Andrew Watters | |
| | Sample Date | 23/08/2023 | 23/08/2023 | 23/08/2023 | 23/08/2023 | |
| **Parameter** | **Units** | **RL** | **Result** | **Result** | **Result** | **Result** | **L1** |
| | | | | | | | L1 = REG153 / SOIL / COARSE - TABLE 1 - Residential/Parkland/Industrial - UNDEFINED |
| **Moisture** | | | | | | | |
| **Method: CCME Tier 1 \| Internal ref.: ME-CA-[ENV]GC-LAK-AN-010** | | | | | | | |
| Moisture Content | % | - | 4.5 | 7.3 | 5.8 | 4.7 | |
| **Petroleum Hydrocarbons (F1)** | | | | | | | |
| **Method: CCME Tier 1 \| Internal ref.: ME-CA-[ENV]GC-LAK-AN-010** | | | | | | | |
| F1 (C6-C10) | µg/g | 10 | < 10 | < 10 | < 10 | < 10 | 25 |
| F1-BTEX (C6-C10) | µg/g | 10 | < 10 | < 10 | < 10 | < 10 | 25 |
| **Petroleum Hydrocarbons (F2-F4)** | | | | | | | |
| **Method: CCME Tier 1 \| Internal ref.: ME-CA-[ENV]GC-LAK-AN-010** | | | | | | | |
| F2 (C10-C16) | µg/g | 10 | < 10 | < 10 | < 10 | < 10 | 10 |
| F3 (C16-C34) | µg/g | 50 | < 50 | < 50 | < 50 | < 50 | 240 |
| F4 (C34-C50) | µg/g | 50 | < 50 | < 50 | < 50 | < 50 | 120 |
| Chromatogram returned to baseline at nC50 | Yes / No | - | YES | YES | YES | YES | |
| **Volatile Organics** | | | | | | | |
| **Method: EPA 5035A/5030B/8260C \| Internal ref.: ME-CA-[ENV]GC-LAK-AN-004** | | | | | | | |
| Acetone | µg/g | 0.5 | < 0.5 | < 0.5 | < 0.5 | < 0.5 | 0.5 |
| Bromomethane | µg/g | 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | 0.05 |
| Carbon tetrachloride | µg/g | 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | 0.05 |
| Chlorobenzene | µg/g | 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | 0.05 |
| Chloroform | µg/g | 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | 0.05 |
| 1,2-Dichlorobenzene | µg/g | 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | 0.05 |
| 1,3-Dichlorobenzene | µg/g | 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | 0.05 |
| 1,4-Dichlorobenzene | µg/g | 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | 0.05 |
| Dichlorodifluoromethane | µg/g | 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | 0.05 |
| 1,1-Dichloroethane | µg/g | 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | 0.05 |
| 1,2-Dichloroethane | µg/g | 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | 0.05 |
| 1,1-Dichloroethylene | µg/g | 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | 0.05 |
| trans-1,2-Dichloroethylene | µg/g | 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | 0.05 |
| cis-1,2-Dichloroethylene | µg/g | 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | 0.05 |
| 1,2-Dichloropropane | µg/g | 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | 0.05 |
| cis-1,3-dichloropropene | µg/g | 0.03 | < 0.03 | < 0.03 | < 0.03 | < 0.03 | |
| trans-1,3-dichloropropene | µg/g | 0.03 | < 0.03 | < 0.03 | < 0.03 | < 0.03 | |
| 1,3-dichloropropene (total) | µg/g | 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | 0.05 |
| Ethylenedibromide | µg/g | 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 |

## RESULTS - SOIL

| | | | | | | |
|---|---|---|---|---|---|---|
| | **Sample Number** | 8 | 9 | 10 | 11 | |
| | **Sample Name** | F1-A | F2-A | NW1-A | EW1-A | |
| | **Sample Matrix** | Soil | Soil | Soil | Soil | |
| | **Sampled By** | Andrew Watters | Andrew Watters | Andrew Watters | Andrew Watters | |
| | **Sample Date** | 23/08/2023 | 23/08/2023 | 23/08/2023 | 23/08/2023 | |
| **Parameter** | **Units** | **RL** | **Result** | **Result** | **Result** | **Result** | **L1** |

L1 = REG153 / SOIL / COARSE - TABLE 1 - Residential/Parkland/Industrial - UNDEFINED

### Volatile Organics (continued)

Method: EPA 5035A/5030B/8260C | Internal ref.: ME-CA-[ENV]GC-LAK-AN-004

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Methyl ethyl ketone | µg/g | 0.5 | < 0.5 | < 0.5 | < 0.5 | < 0.5 | 0.5 |
| Methyl isobutyl ketone | µg/g | 0.5 | < 0.5 | < 0.5 | < 0.5 | < 0.5 | 0.5 |
| Methyl-t-butyl Ether | µg/g | 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | 0.05 |
| Methylene Chloride | µg/g | 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | 0.05 |
| Styrene | µg/g | 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | 0.05 |
| Tetrachloroethylene | µg/g | 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | 0.05 |
| 1,1,1,2-Tetrachloroethane | µg/g | 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | 0.05 |
| 1,1,2,2-Tetrachloroethane | µg/g | 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | 0.05 |
| 1,1,1-Trichloroethane | µg/g | 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | 0.05 |
| 1,1,2-Trichloroethane | µg/g | 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | 0.05 |
| Trichloroethylene | µg/g | 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | 0.05 |
| Trichlorofluoromethane | µg/g | 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | 0.25 |
| Vinyl Chloride | µg/g | 0.02 | < 0.02 | < 0.02 | < 0.02 | < 0.02 | 0.02 |
| Benzene | µg/g | 0.02 | < 0.02 | < 0.02 | < 0.02 | < 0.02 | 0.02 |
| Ethylbenzene | µg/g | 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | 0.05 |
| Toluene | µg/g | 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | 0.2 |
| Xylene (total) | 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 | |
| Bromodichloromethane | µg/g | 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | 0.05 |
| Bromoform | µg/g | 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | 0.05 |
| Dibromochloromethane | µg/g | 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | 0.05 |
| Surr 1,2-Dichloroethane-d4 | Surr Rec % | - | 104 | 103 | 103 | 102 | |
| Surr 4-Bromofluorobenzene | Surr Rec % | - | 96 | 95 | 96 | 95 | |
| Surr 2-Bromo-1-Chloropropane | Surr Rec % | - | 97 | 97 | 97 | 97 | |

## RESULTS - SOIL

| | Sample Number | 12 | 13 | 14 | |
|---|---|---|---|---|---|
| | Sample Name | SW1-A | WW1-A | F100-A | |
| | Sample Matrix | Soil | Soil | Soil | |
| | Sampled By | Andrew Watters | Andrew Watters | Andrew Watters | |
| | Sample Date | 23/08/2023 | 23/08/2023 | 23/08/2023 | |
| **Parameter** | **Units** | **RL** | **Result** | **Result** | **Result** | **L1** |
| | | | | | | L1 = REG153 / SOIL / COARSE - TABLE 1 - Residential/Parkland/Industrial - UNDEFINED |
| **Moisture** | | | | | | |
| **Method: CCME Tier 1 \| Internal ref.: ME-CA-[ENV]GC-LAK-AN-010** | | | | | | |
| Moisture Content | % | - | 4.1 | 5.0 | 5.7 | |
| **Petroleum Hydrocarbons (F1)** | | | | | | |
| **Method: CCME Tier 1 \| Internal ref.: ME-CA-[ENV]GC-LAK-AN-010** | | | | | | |
| F1 (C6-C10) | µg/g | 10 | < 10 | < 10 | < 10 | 25 |
| F1-BTEX (C6-C10) | µg/g | 10 | < 10 | < 10 | < 10 | 25 |
| **Petroleum Hydrocarbons (F2-F4)** | | | | | | |
| **Method: CCME Tier 1 \| Internal ref.: ME-CA-[ENV]GC-LAK-AN-010** | | | | | | |
| F2 (C10-C16) | µg/g | 10 | < 10 | < 10 | < 10 | 10 |
| F3 (C16-C34) | µg/g | 50 | < 50 | < 50 | < 50 | 240 |
| F4 (C34-C50) | µg/g | 50 | < 50 | < 50 | < 50 | 120 |
| Chromatogram returned to baseline at nC50 | Yes / No | - | YES | YES | YES | |
| **Volatile Organics** | | | | | | |
| **Method: EPA 5035A/5030B/8260C \| Internal ref.: ME-CA-[ENV]GC-LAK-AN-004** | | | | | | |
| Acetone | µg/g | 0.5 | < 0.5 | < 0.5 | < 0.5 | 0.5 |
| Bromomethane | µg/g | 0.05 | < 0.05 | < 0.05 | < 0.05 | 0.05 |
| Carbon tetrachloride | µg/g | 0.05 | < 0.05 | < 0.05 | < 0.05 | 0.05 |
| Chlorobenzene | µg/g | 0.05 | < 0.05 | < 0.05 | < 0.05 | 0.05 |
| Chloroform | µg/g | 0.05 | < 0.05 | < 0.05 | < 0.05 | 0.05 |
| 1,2-Dichlorobenzene | µg/g | 0.05 | < 0.05 | < 0.05 | < 0.05 | 0.05 |
| 1,3-Dichlorobenzene | µg/g | 0.05 | < 0.05 | < 0.05 | < 0.05 | 0.05 |
| 1,4-Dichlorobenzene | µg/g | 0.05 | < 0.05 | < 0.05 | < 0.05 | 0.05 |
| Dichlorodifluoromethane | µg/g | 0.05 | < 0.05 | < 0.05 | < 0.05 | 0.05 |
| 1,1-Dichloroethane | µg/g | 0.05 | < 0.05 | < 0.05 | < 0.05 | 0.05 |
| 1,2-Dichloroethane | µg/g | 0.05 | < 0.05 | < 0.05 | < 0.05 | 0.05 |
| 1,1-Dichloroethylene | µg/g | 0.05 | < 0.05 | < 0.05 | < 0.05 | 0.05 |
| trans-1,2-Dichloroethylene | µg/g | 0.05 | < 0.05 | < 0.05 | < 0.05 | 0.05 |
| cis-1,2-Dichloroethylene | µg/g | 0.05 | < 0.05 | < 0.05 | < 0.05 | 0.05 |
| 1,2-Dichloropropane | µg/g | 0.05 | < 0.05 | < 0.05 | < 0.05 | 0.05 |
| cis-1,3-dichloropropene | µg/g | 0.03 | < 0.03 | < 0.03 | < 0.03 | |
| trans-1,3-dichloropropene | µg/g | 0.03 | < 0.03 | < 0.03 | < 0.03 | |
| 1,3-dichloropropene (total) | µg/g | 0.05 | < 0.05 | < 0.05 | < 0.05 | 0.05 |
| Ethylenedibromide | µg/g | 0.05 | < 0.05 | < 0.05 | < 0.05 | 0.05 |
| n-Hexane | µg/g | 0.05 | < 0.05 | < 0.05 | < 0.05 | 0.05 |

## RESULTS - SOIL

| | | | | |
|---|---|---|---|---|
| **Sample Number** | 12 | 13 | 14 | |
| **Sample Name** | SW1-A | WW1-A | F100-A | |
| **Sample Matrix** | Soil | Soil | Soil | |
| **Sampled By** | Andrew Watters | Andrew Watters | Andrew Watters | |
| **Sample Date** | 23/08/2023 | 23/08/2023 | 23/08/2023 | |

| Parameter | Units | RL | Result | Result | Result | L1 |
|---|---|---|---|---|---|---|
| | | | | | | L1 = REG153 / SOIL / COARSE - TABLE 1 - Residential/Parkland/Industrial - UNDEFINED |

### Volatile Organics (continued)

Method: EPA 5035A/5030B/8260C | Internal ref.: ME-CA-[ENV]GC-LAK-AN-004

| | | | | | | |
|---|---|---|---|---|---|---|
| Methyl ethyl ketone | µg/g | 0.5 | < 0.5 | < 0.5 | < 0.5 | 0.5 |
| Methyl isobutyl ketone | µg/g | 0.5 | < 0.5 | < 0.5 | < 0.5 | 0.5 |
| Methyl-t-butyl Ether | µg/g | 0.05 | < 0.05 | < 0.05 | < 0.05 | 0.05 |
| Methylene Chloride | µg/g | 0.05 | < 0.05 | < 0.05 | < 0.05 | 0.05 |
| Styrene | µg/g | 0.05 | < 0.05 | < 0.05 | < 0.05 | 0.05 |
| Tetrachloroethylene | µg/g | 0.05 | < 0.05 | < 0.05 | < 0.05 | 0.05 |
| 1,1,1,2-Tetrachloroethane | µg/g | 0.05 | < 0.05 | < 0.05 | < 0.05 | 0.05 |
| 1,1,2,2-Tetrachloroethane | µg/g | 0.05 | < 0.05 | < 0.05 | < 0.05 | 0.05 |
| 1,1,1-Trichloroethane | µg/g | 0.05 | < 0.05 | < 0.05 | < 0.05 | 0.05 |
| 1,1,2-Trichloroethane | µg/g | 0.05 | < 0.05 | < 0.05 | < 0.05 | 0.05 |
| Trichloroethylene | µg/g | 0.05 | < 0.05 | < 0.05 | < 0.05 | 0.05 |
| Trichlorofluoromethane | µg/g | 0.05 | < 0.05 | < 0.05 | < 0.05 | 0.25 |
| Vinyl Chloride | µg/g | 0.02 | < 0.02 | < 0.02 | < 0.02 | 0.02 |
| Benzene | µg/g | 0.02 | < 0.02 | < 0.02 | < 0.02 | 0.02 |
| Ethylbenzene | µg/g | 0.05 | < 0.05 | < 0.05 | < 0.05 | 0.05 |
| Toluene | µg/g | 0.05 | < 0.05 | < 0.05 | < 0.05 | 0.2 |
| Xylene (total) | µg/g | 0.05 | < 0.05 | < 0.05 | < 0.05 | 0.05 |
| m/p-xylene | µg/g | 0.05 | < 0.05 | < 0.05 | < 0.05 | |
| o-xylene | µg/g | 0.05 | < 0.05 | < 0.05 | < 0.05 | |
| Bromodichloromethane | µg/g | 0.05 | < 0.05 | < 0.05 | < 0.05 | 0.05 |
| Bromoform | µg/g | 0.05 | < 0.05 | < 0.05 | < 0.05 | 0.05 |
| Dibromochloromethane | µg/g | 0.05 | < 0.05 | < 0.05 | < 0.05 | 0.05 |
| Surr 1,2-Dichloroethane-d4 | Surr Rec % | - | 103 | 103 | 103 | |
| Surr 4-Bromofluorobenzene | Surr Rec % | - | 95 | 95 | 96 | |
| Surr 2-Bromo-1-Chloropropane | Surr Rec % | - | 98 | 97 | 96 | |

## LEGEND

### FOOTNOTES

| | |
|---|---|
| **NSS** | Insufficient sample for analysis. |
| **RL** | Reporting Limit. |
| ↑ | Reporting limit raised. |
| ↓ | Reporting limit lowered. |
| **NA** | The sample was not analysed for this analyte |
| **ND** | Non Detect |

Results relate only to the sample tested.
Data reported represent the sample as submitted to SGS. Solid samples expressed on a dry weight basis.
"Temperature Upon Receipt" is representative of the whole shipment and may not reflect the temperature of individual samples.
Analysis conducted on samples submitted pursuant to or as part of Reg. 153/04, are in accordance to the "Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act and Excess Soil Quality" published by the Ministry and dated March 9, 2004 as amended.

SGS provides criteria information (such as regulatory or guideline limits and summary of limit exceedances) as a service. Every attempt is made to ensure the criteria information in this report is accurate and current, however, it is not guaranteed. Comparison to the most current criteria is the responsibility of the client and SGS assumes no responsibility for the accuracy of the criteria levels indicated.

SGS Canada Inc. statement of conformity decision rule does not consider uncertainty when analytical results are compared to a specified standard or regulation.
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This report supersedes all previous versions.

-- End of Analytical Report --

# Request for Laboratory Services and CHAIN OF CUSTODY

SGS Industries & Environment - Lakefield: 185 Concession St., Lakefield, ON K0L 2H0 Phone: 705-652-2000 Fax: 705-652-6365 Web: www.sgs.com/environment
- London: 657 Consortium Court, London, ON, N6E 2S8 Phone: 519-672-4500 Toll Free: 877-848-8060 Fax: 519-672-0361

No: 032341 Page 1 of 1

**Laboratory Information Section - Lab use only**

Received By: Scott L
Received Date: 08 / 23 / 2023 (mm/dd/yy)
Received Time: 14 00 (hr : min)
Received By (signature): S.
Custody Seal Present: Yes ☑ No ☐
Custody Seal Intact: Yes ☑ No ☐
Cooling Agent Present: Yes ☑ No ☐ Type: Ice
Temperature Upon Receipt (°C) 7c x3
LAB LIMS #: CA 40239-Aug23

## REPORT INFORMATION

Company: Watters Environmental Group
Contact: Natalie Wright
Address: 9135 Keele St, Unit A1
Concord, ON L4K 0S4
Phone: (416) 361-2407
Fax: (416) 361-2410
Email: nwright@wattersenvironmental.com; labcerts@wattersenvironmental.com

## INVOICE INFORMATION

☑ (same as Report Information)
Company:
Contact: Brandon Espinola
Address:
Phone:
Email: ap@wattersenvironmental.com

Quotation #:
P.O. #:
Project #: 20-0052.04
Site Location/ID:

## TURNAROUND TIME (TAT) REQUIRED

☑ Regular TAT (5-7days)
TAT's are quoted in business days (exclude statutory holidays & weekends). Samples received after 6pm or on weekends: TAT begins next business day

RUSH TAT (Additional Charges May Apply): ☐ 1 Day ☐ 2 Days ☐ 3 Days ☐ 4 Days
PLEASE CONFIRM RUSH FEASIBILITY WITH SGS REPRESENTATIVE PRIOR TO SUBMISSION

Specify Due Date:

*NOTE: DRINKING (POTABLE) WATER SAMPLES FOR HUMAN CONSUMPTION MUST BE SUBMITTED WITH SGS DRINKING WATER CHAIN OF CUSTODY

## REGULATIONS

☑ O.Reg 153/04 ☐ O.Reg 406/19
☐ Table 1 ☑ Res/Park Soil Texture:
☑ Table 2 ☑ Coarse
☐ Table 3 ☐ Agri/Other ☐ Medium/Fine
☑ Table 8 Appx.
Soil Volume ☐ <350m3 ☐ >350m3

Other Regulations:
☐ Reg 347/558 (3 Day min TAT)
☐ PWQO ☐ MMER
☐ CCME ☐ Other:
☐ MISA
☐ ODWS Not Reportable *See note

Sewer By-Law:
☐ Sanitary
☐ Storm
Municipality:

RECORD OF SITE CONDITION (RSC) ☑ YES ☐ NO

## ANALYSIS REQUESTED

| | SAMPLE IDENTIFICATION | DATE SAMPLED | TIME SAMPLED | # OF BOTTLES | MATRIX | M&I: Field Filtered (Y/N) | M&I: Metals & Inorganics (incl CrVI, CN, Hg pH,(B(HWS),EC,SAR-soil) (Cl, Na-water) | M&I: Full Metals Suite (ICP metals plus B(HWS-soil only) Hg, CrVI | M&I: ICP Metals only Sb,As,Ba,Be,B,Cd, Cr,Co,Cu,Pb,Mo,Ni,Se,Ag,Tl,U,V,Zn | SVOC: PAHs only | SVOC: SVOCs all incl PAHs, ABNs, CPs | PCB: PCBs Total ☐ Aroclor ☐ | PHC: F1-F4 + BTEX | PHC: F1-F4 only no BTEX | VOC: VOCs all incl BTEX | VOC: BTEX only | Pest: Pesticides Organochlorine or specify other | Other (please specify) | Other | Other | Other | Other: Sewer Use: Specify pkg: | Other: Water Characterization Pkg General ☐ Extended ☐ | SPLP: Specify tests ☐ Metals ☐ VOC ☐ 1,4-Dioxane ☐ OCP ☐ ABN | TCLP: Specify tests ☐ M&I ☐ VOC ☐ PCB ☐ B(a)P ☐ ABN ☐ Ignit. | COMMENTS: |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | F1-A | August 23, 2023 | 8:45 | 3 | SOIL | | | | | | | | ✓ | | ✓ | | | | | | | | | | |
| 2 | F2-A | " | 9:00 | " | " | | | | | | | | ✓ | | ✓ | | | | | | | | | | |
| 3 | NW1-A | " | 9:10 | " | " | | | | | | | | ✓ | | ✓ | | | | | | | | | | |
| 4 | EW1-A | " | 9:20 | " | " | | | | | | | | ✓ | | ✓ | | | | | | | | | | |
| 5 | SW1-A | " | 9:30 | " | " | | | | | | | | ✓ | | ✓ | | | | | | | | | | |
| 6 | WW1-A | " | 9:40 | " | " | | | | | | | | ✓ | | ✓ | | | | | | | | | | |
| 7 | F100-A | " | 9:45 | " | " | | | | | | | | ✓ | | ✓ | | | | | | | | | | |
| 8 | | | | | | | | | | | | | | | | | | | | | | | | | |
| 9 | | | | | | | | | | | | | | | | | | | | | | | | | |
| 10 | | | | | | | | | | | | | | | | | | | | | | | | | |
| 11 | | | | | | | | | | | | | | | | | | | | | | | | | |
| 12 | | | | | | | | | | | | | | | | | | | | | | | | | |

Observations/Comments/Special Instructions

Sampled By (NAME): Andrew Watters
Signature:
Date: 08 / 23 / 23 (mm/dd/yy)

Relinquished by (NAME): Andrew Watters
Signature:
Date: 08 / 23 / 23 (mm/dd/yy)

Pink Copy - Client
Yellow & White Copy - SGS

Revision #: 1.6
Date of Issue: 02 May 2022

**Note:** Submission of samples to SGS is acknowledgement that you have been provided direction on sample collection/handling and transportation of samples. {2} Submission of samples to SGS is considered authorization for completion of work. Signatures may appear on this form or be retained on file in the contract, or in an alternative format (e.g. shipping documents). {3} Results may be sent by email to an unlimited number of addresses for no additional cost. Fax is available upon request. This document is issued by the Company under its General Conditions of Service accessible at http://www.sgs.com/terms_and_conditions.htm. (Printed copies are available upon request.) Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein.

# FINAL REPORT

CA40241-AUG23 R1

## First Page

| CLIENT DETAILS | | LABORATORY DETAILS | |
|---|---|---|---|
| Client | Watters Environmental Group Inc. | Project Specialist | Jill Campbell, B.Sc.,GISAS |
| | | Laboratory | SGS Canada Inc. |
| Address | 9135 Keele St Unit A1<br>Concord, ON<br>L4K 0J4. Canada | Address | 185 Concession St., Lakefield ON, K0L 2H0 |
| Contact | Natalie Wright | Telephone | 2165 |
| Telephone | (416) 361-2407 | Facsimile | 705-652-6365 |
| Facsimile | (416) 361-2410 | Email | jill.campbell@sgs.com |
| Email | NWright@wattersenvironmental.com; labcerts@wattersenviron | SGS Reference | CA40241-AUG23 |
| Project | 20-0052.04 | Received | 08/23/2023 |
| Order Number | | Approved | 08/29/2023 |
| Samples | Soil (2) | Report Number | CA40241-AUG23 R1 |
| | | Date Reported | 12/20/2023 |

COMMENTS

Benzo(b)fluoranthene results for comparison to the standard are reported as benzo(b+j)fluoranthene. Benzo(b)fluoranthene and benzo(j)fluoranthene co-elute and cannot be reported individually by the analytical method used.

Temperature of Sample upon Receipt: 7 degrees C
Cooling Agent Present:Yes
Custody Seal Present:Yes

Chain of Custody Number:037043

SIGNATORIES

on behalf of Jill Campbell, B.Sc.,GISAS



## RESULTS - SOIL

| | | | |
|---|---|---|---|
| **Sample Number** | 8 | 9 | |
| **Sample Name** | CS1 | CS100 | |
| **Sample Matrix** | Soil | Soil | |
| **Sampled By** | Andrew Watters | Andrew Watters | |
| **Sample Date** | 23/08/2023 | 23/08/2023 | |

| Parameter | Units | RL | Result | Result | L1 |
|---|---|---|---|---|---|
| | | | | | L1 = REG153 / SOIL / COARSE - TABLE 1 - Residential/Parkland/Industrial - UNDEFINED |
| **Conductivity** | | | | | |
| **Method: EPA 6010/SM 2510 \| Internal ref.: ME-CA-[ENV]EWL-LAK-AN-006** | | | | | |
| Conductivity | mS/cm | 0.002 | 0.77 | 0.75 | 0.57 |
| **Cyanide by SFA** | | | | | |
| **Method: SM 4500 \| Internal ref.: ME-CA-[ENV]SFA-LAK-AN-005** | | | | | |
| Free Cyanide | µg/g | 0.05 | < 0.05 | < 0.05 | 0.051 |
| **Hexavalent Chromium by SFA** | | | | | |
| **Method: EPA218.6/EPA3060A \| Internal ref.: ME-CA-[ENV]SKA-LAK-AN-012** | | | | | |
| Chromium VI | µg/g | 0.2 | < 0.2 | < 0.2 | 0.66 |
| **Mercury by CVAAS** | | | | | |
| **Method: EPA 7471A/EPA 245 \| Internal ref.: ME-CA-[ENV]SPE-LAK-AN-004** | | | | | |
| Mercury | ug/g | 0.05 | < 0.05 | < 0.05 | 0.27 |
| **Metals in aqueous samples - ICP-OES** | | | | | |
| **Method: MOE 4696e01/EPA 6010 \| Internal ref.: ME-CA-[ENV]SPE-LAK-AN-003** | | | | | |
| SAR Calcium | mg/L | 0.2 | 132 | 120 | |
| SAR Magnesium | mg/L | 0.3 | 19.7 | 18.3 | |
| SAR Sodium | mg/L | 0.1 | 3.5 | 3.6 | |
| **Metals in Soil - Aqua-regia/ICP-MS** | | | | | |
| **Method: EPA 3050/EPA 200.8 \| Internal ref.: ME-CA-[ENV]SPE-LAK-AN-005** | | | | | |
| Barium | µg/g | 0.1 | 220 | 220 | 220 |
| Beryllium | µg/g | 0.02 | 0.20 | 0.19 | 2.5 |
| Boron | µg/g | 1 | 14 | 14 | 36 |
| Cadmium | µg/g | 0.05 | < 0.05 | < 0.05 | 1.2 |
| Chromium | µg/g | 0.5 | 7.9 | 7.7 | 70 |
| Cobalt | µg/g | 0.01 | 5.1 | 5.3 | 21 |
| Copper | µg/g | 0.1 | 8.7 | 9.0 | 92 |
| Lead | µg/g | 0.1 | 7.4 | 7.0 | 120 |
| Molybdenum | µg/g | 0.1 | 0.7 | 0.7 | 2 |
| Nickel | µg/g | 0.5 | 9.7 | 15 | 82 |
| Silver | µg/g | 0.05 | 0.06 | 0.07 | 0.5 |
| Thallium | µg/g | 0.02 | 0.08 | 0.09 | 1 |
| Uranium | µg/g | 0.002 | 0.35 | 0.36 | 2.5 |
| Vanadium | µg/g | 3 | 7 | 6 | 86 |
| Zinc | µg/g | 0.7 | 17 | 15 | 290 |

## RESULTS - SOIL

| | | | |
|---|---|---|---|
| **Sample Number** | 8 | 9 | |
| **Sample Name** | CS1 | CS100 | |
| **Sample Matrix** | Soil | Soil | |
| **Sampled By** | Andrew Watters | Andrew Watters | |
| **Sample Date** | 23/08/2023 | 23/08/2023 | |

| Parameter | Units | RL | Result | Result | L1 |
|---|---|---|---|---|---|
| | | | | | L1 = REG153 / SOIL / COARSE - TABLE 1 - Residential/Parkland/Industrial - UNDEFINED |
| **Metals in Soil - Aqua-regia/ICP-MS (continued)** | | | | | |
| **Method: EPA 3050/EPA 200.8 \| Internal ref.: ME-CA-[ENV]SPE-LAK-AN-005** | | | | | |
| Antimony | µg/g | 0.8 | < 0.8 | < 0.8 | 1.3 |
| Arsenic | µg/g | 0.5 | 8.6 | 8.9 | 18 |
| Selenium | µg/g | 0.1 | 0.1 | 0.1 | 1.5 |
| **Moisture** | | | | | |
| **Method: CCME Tier 1 \| Internal ref.: ME-CA-[ENV]GC-LAK-AN-010** | | | | | |
| Moisture Content | % | - | 4.8 | 4.7 | |
| **pH** | | | | | |
| **Method: SM 4500 \| Internal ref.: ME-CA-[ENV]EWL-LAK-AN-001** | | | | | |
| pH | pH Units | 0.05 | 7.96 | 7.94 | |
| **Semi-Volatile Organics** | | | | | |
| **Method: EPA 3541/8270D \| Internal ref.: ME-CA-[ENV]GC-LAK-AN-005** | | | | | |
| Acenaphthene | µg/g | 0.05 | < 0.05 | < 0.05 | 0.072 |
| Acenaphthylene | µg/g | 0.05 | < 0.05 | < 0.05 | 0.093 |
| Anthracene | µg/g | 0.05 | < 0.05 | < 0.05 | 0.16 |
| Benzo(a)anthracene | µg/g | 0.05 | < 0.05 | < 0.05 | 0.36 |
| Benzo(a)pyrene | µg/g | 0.05 | < 0.05 | < 0.05 | 0.3 |
| Benzo(b+j)fluoranthene | µg/g | 0.05 | < 0.05 | < 0.05 | 0.47 |
| Benzo(ghi)perylene | µg/g | 0.1 | < 0.1 | < 0.1 | 0.68 |
| Benzo(k)fluoranthene | µg/g | 0.05 | < 0.05 | < 0.05 | 0.48 |
| Chrysene | µg/g | 0.05 | < 0.05 | < 0.05 | 2.8 |
| Dibenzo(a,h)anthracene | µg/g | 0.06 | < 0.06 | < 0.06 | 0.1 |
| Fluoranthene | µg/g | 0.05 | < 0.05 | < 0.05 | 0.56 |
| Fluorene | µg/g | 0.05 | < 0.05 | < 0.05 | 0.12 |
| Indeno(1,2,3-cd)pyrene | µg/g | 0.1 | < 0.1 | < 0.1 | 0.23 |
| 1-Methylnaphthalene | µg/g | 0.05 | < 0.05 | < 0.05 | |
| 2-Methylnaphthalene | µg/g | 0.05 | < 0.05 | < 0.05 | |
| Methylnaphthalene, 2-(1-) | µg/g | 0.05 | < 0.05 | < 0.05 | 0.59 |
| Naphthalene | µg/g | 0.05 | < 0.05 | < 0.05 | 0.09 |
| Phenanthrene | µg/g | 0.05 | < 0.05 | < 0.05 | 0.69 |
| Pyrene | µg/g | 0.05 | < 0.05 | < 0.05 | 1 |
| Surr 2-Fluorobiphenyl | Surr Rec % | - | 82 | 82 | |
| Surr 4-Terphenyl-d14 | Surr Rec % | - | 81 | 88 | |
| Surr 2-Methylnaphthalene-D10 | Surr Rec % | - | 87 | 91 | |
| Surr Fluoranthene-D10 | Surr Rec % | - | 79 | 86 | |

## RESULTS - SOIL

| | | | |
|---|---|---|---|
| **Sample Number** | 8 | 9 | |
| **Sample Name** | CS1 | CS100 | |
| **Sample Matrix** | Soil | Soil | |
| **Sampled By** | Andrew Watters | Andrew Watters | |
| **Sample Date** | 23/08/2023 | 23/08/2023 | |

| Parameter | Units | RL | Result | Result | L1 |
|---|---|---|---|---|---|
| | | | | | L1 = REG153 / SOIL / COARSE - TABLE 1 - Residential/Parkland/Industrial - UNDEFINED |

### Sodium adsorption ratio (SAR)

**Method: MOE 4696e01/EPA 6010 | Internal ref.: ME-CA-[ENV]ARD-LAK-AN-021**

| | | | | | |
|---|---|---|---|---|---|
| Sodium Adsorption Ratio | No unit | 0.2 | < 0.2 | < 0.2 | 2.4 |

### Water Soluble Boron

**Method: O.Reg. 15 3/04 | Internal ref.: ME-CA-[ENV] SPE-LAK-AN-003**

| | | | | | |
|---|---|---|---|---|---|
| Water Soluble Boron | µg/g | 0.5 | < 0.5 | < 0.5 | |

## LEGEND

### FOOTNOTES

**NSS** Insufficient sample for analysis.
**RL** Reporting Limit.
↑ Reporting limit raised.
↓ Reporting limit lowered.
**NA** The sample was not analysed for this analyte
**ND** Non Detect

Results relate only to the sample tested.
Data reported represent the sample as submitted to SGS. Solid samples expressed on a dry weight basis.
"Temperature Upon Receipt" is representative of the whole shipment and may not reflect the temperature of individual samples.
Analysis conducted on samples submitted pursuant to or as part of Reg. 153/04, are in accordance to the "Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act and Excess Soil Quality" published by the Ministry and dated March 9, 2004 as amended.

SGS provides criteria information (such as regulatory or guideline limits and summary of limit exceedances) as a service. Every attempt is made to ensure the criteria information in this report is accurate and current, however, it is not guaranteed. Comparison to the most current criteria is the responsibility of the client and SGS assumes no responsibility for the accuracy of the criteria levels indicated.

SGS Canada Inc. statement of conformity decision rule does not consider uncertainty when analytical results are compared to a specified standard or regulation.
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The Client's attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any other holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. Reproduction of this analytical report in full or in part is prohibited.

This report supersedes all previous versions.

-- End of Analytical Report --

# Request for Laboratory Services and CHAIN OF CUSTODY

No: 037043

Page 1 of 1

SGS Industries & Environment - Lakefield: 185 Concession St., Lakefield, ON K0L 2H0 Phone: 705-652-2000 Fax: 705-652-6365 Web: www.sgs.com/environment
- London: 657 Consortium Court, London, ON, N6E 2S8 Phone: 519-672-4500 Toll Free: 877-848-8060 Fax: 519-672-0361

**Laboratory Information Section - Lab use only**

Received By: Scott L
Received By (signature): S-
Received Date: 08 / 23 / 2023 (mm/dd/yy)
Received Time: 1400 (hr : min)
Custody Seal Present: Yes ☑ No ☐
Custody Seal Intact: Yes ☑ No ☐
Cooling Agent Present: Yes ☑ No ☐ Type: ice
Temperature Upon Receipt (°C): TCK 3
LAB LIMS #: CA 40241-Aug 23

## REPORT INFORMATION

Company: Watters Environmental Group
Contact: Natalie Wright
Address: 9135 Keele St, Unit A1
Concord, ON L4K 0S4
Phone: (416) 361-2407
Fax: (416) 361-2410
Email: nwright@wattersenvironmental.com labcerts

## INVOICE INFORMATION

☑ (same as Report Information)
Company:
Contact: Brandon Espinda
Address:
Phone:
Email: ap@wattersenvironmental.com

Quotation #:
P.O. #:
Project #: 20-0052.04
Site Location/ID:

## TURNAROUND TIME (TAT) REQUIRED

☑ Regular TAT (5-7days)
TAT's are quoted in business days (exclude statutory holidays & weekends). Samples received after 6pm or on weekends: TAT begins next business day

RUSH TAT (Additional Charges May Apply): ☐ 1 Day ☐ 2 Days ☐ 3 Days ☐ 4 Days
PLEASE CONFIRM RUSH FEASIBILITY WITH SGS REPRESENTATIVE PRIOR TO SUBMISSION

Specify Due Date:

*NOTE: DRINKING (POTABLE) WATER SAMPLES FOR HUMAN CONSUMPTION MUST BE SUBMITTED WITH SGS DRINKING WATER CHAIN OF CUSTODY

## REGULATIONS

☑ O.Reg 153/04 ☐ O.Reg 406/19

☐ Table 1 ☑ Res/Park Soil Texture:
☑ Table 2 ☐ Industrial ☑ Coarse
☐ Table 3 ☐ Agri/Other ☐ Medium/Fine
☑ Table 8 Appx.
Soil Volume ☐ <350m3 ☐ >350m3

**Other Regulations:**
☐ Reg 347/558 (3 Day min TAT)
☐ PWQO ☐ MMER
☐ CCME ☐ Other:
☐ MISA
☐ ODWS Not Reportable *See note

**Sewer By-Law:**
☐ Sanitary
☐ Storm
Municipality:

RECORD OF SITE CONDITION (RSC) ☑ YES ☐ NO

## ANALYSIS REQUESTED

| | SAMPLE IDENTIFICATION | DATE SAMPLED | TIME SAMPLED | # OF BOTTLES | MATRIX | Field Filtered (Y/N) | M&I: Metals & Inorganics (incl CrVI, CN,Hg pH,(B(HWS),EC,SAR–soil) (Cl, Na–water) | M&I: Full Metals Suite (ICP metals plus B(HWS–soil only) Hg, CrVI | M&I: ICP Metals only Sb,As,Ba,Be,B,Cd, Cr,Co,Cu,Pb,Mo,Ni,Se,Ag,Tl,U,V,Zn | SVOC: PAHs only | SVOC: SVOCs all incl PAHs, ABNs, CPs | PCB: PCBs Total ☐ Aroclor ☐ | PHC: F1-F4 + BTEX | PHC: F1-F4 only no BTEX | VOC: VOCs all incl BTEX | VOC: BTEX only | Pest: Pesticides Organochlorine or specify other | Other (please specify) | Other | Other | Other | Sewer Use: Specify pkg: | Water Characterization Pkg General ☐ Extended ☐ | SPLP: Specify tests | TCLP: Specify tests | COMMENTS: |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | CS1 | August 23, 2023 | 11:30 | 3 | Soil | | ✓ | | | ✓ | | | | | | | | | | | | | | | |
| 2 | CS100 | " | 12:30 | " | " | | ✓ | | | ✓ | | | | | | | | | | | | | | | |
| 3 | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4 | | | | | | | | | | | | | | | | | | | | | | | | | |
| 5 | | | | | | | | | | | | | | | | | | | | | | | | | |
| 6 | | | | | | | | | | | | | | | | | | | | | | | | | |
| 7 | | | | | | | | | | | | | | | | | | | | | | | | | |
| 8 | | | | | | | | | | | | | | | | | | | | | | | | | |
| 9 | | | | | | | | | | | | | | | | | | | | | | | | | |
| 10 | | | | | | | | | | | | | | | | | | | | | | | | | |
| 11 | | | | | | | | | | | | | | | | | | | | | | | | | |
| 12 | | | | | | | | | | | | | | | | | | | | | | | | | |

Observations/Comments/Special Instructions

Sampled By (NAME): Andrew Watters Signature: Date: 08 / 23 / 23 (mm/dd/yy)
Relinquished by (NAME): Andrew Watters Signature: Date: 08 / 23 / 23 (mm/dd/yy)

Pink Copy - Client
Yellow & White Copy - SGS



Note: Submission of samples to SGS is acknowledgement that you have been provided direction on sample collection/handling and transportation of samples. {2} Submission of samples to SGS is considered authorization for completion of work. Signatures may appear on this form or be retained on file in the contract, or in an alternative format (e.g. shipping documents). {3} Results may be sent by email to an unlimited number of addresses for no additional cost. Fax is available upon request. This document is issued by the Company under its General Conditions of Service accessible at http://www.sgs.com/terms_and_conditions.htm. (Printed copies are available upon request.) Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein.





# FINAL REPORT

## CA15297-JUN20 R

## 20-0052-01

Prepared for

Watters Environmental Group Inc.

# FINAL REPORT

CA15297-JUN20 R

## First Page

| CLIENT DETAILS | | LABORATORY DETAILS | |
|---|---|---|---|
| Client | Watters Environmental Group Inc. | Project Specialist | Jill Campbell, B.Sc.,GISAS |
| | | Laboratory | SGS Canada Inc. |
| Address | 9135 Keele St Unit A1<br>Concord, ON<br>L4K 0J4. Canada | Address | 185 Concession St., Lakefield ON, K0L 2H0 |
| Contact | Basil Wong | Telephone | 2165 |
| Telephone | (416) 361-2407 | Facsimile | 705-652-6365 |
| Facsimile | (416) 361-2410 | Email | jill.campbell@sgs.com |
| Email | Bwong@wattersenvironmental.com; labcerts@wattersenvironm | SGS Reference | CA15297-JUN20 |
| Project | 20-0052-01 | Received | 06/15/2020 |
| Order Number | | Approved | 06/19/2020 |
| Samples | Leachate (1) | Report Number | CA15297-JUN20 R |
| | | Date Reported | 06/19/2020 |

COMMENTS

Temperature of Sample upon Receipt: 8 degrees C
Cooling Agent Present:Yes
Custody Seal Present:Yes

Chain of Custody Number:013897

TCLP metals reported at 10x DL

RL raised for nits due to sample matrix

SIGNATORIES

Jill Campbell, B.Sc.,GISAS



TABLE OF CONTENTS

First Page..... 1-2

Index..... 3

Results..... 4-7

Exceedance Summary..... 8

QC Summary..... 9-14

Legend..... 15

Annexes..... 16

**Client:** Watters Environmental Group Inc.
**Project:** 20-0052-01
**Project Manager:** Basil Wong
**Samplers:** Brooke Wallace

PACKAGE: **REG558 - Acid rock Drainage**
(LEACHATE)

L1 = REG558 / LEACHATE / - - SCHEDULE 4 - -

| | |
|---|---|
| **Sample Number** | 6 |
| **Sample Name** | TCLP |
| **Sample Matrix** | Leachate |
| **Sample Date** | 12/06/2020 |

| Parameter | Units | RL | L1 | Result |
|---|---|---|---|---|
| **Acid rock Drainage** | | | | |
| Final pH | no unit | 0.01 | | 5.93 |

PACKAGE: **REG558 - Metals and Inorganics**
(LEACHATE)

L1 = REG558 / LEACHATE / - - SCHEDULE 4 - -

| | |
|---|---|
| **Sample Number** | 6 |
| **Sample Name** | TCLP |
| **Sample Matrix** | Leachate |
| **Sample Date** | 12/06/2020 |

| Parameter | Units | RL | L1 | Result |
|---|---|---|---|---|
| **Metals and Inorganics** | | | | |
| Sample weight | g | 0.001 | | 100 |
| Ext Fluid | #1 or #2 | 0.01 | | 2 |
| ^ Ext Volume | mL | 0.01 | | 2000 |
| Nitrite (as N) | as N mg/L | 0.03 | | < 0.3↑ |
| Nitrate (as N) | as N mg/L | 0.06 | | < 0.6↑ |
| Nitrate + Nitrite (as N) | as N mg/L | 0.06 | 1000 | < 0.6↑ |
| Fluoride | mg/L | 0.06 | 150 | 0.17 |
| Cyanide (total) | mg/L | 0.01 | 20 | < 0.01 |
| Arsenic | mg/L | 0.002 | 2.5 | < 0.002 |
| Silver | mg/L | 0.0005 | 5 | < 0.0005 |
| Barium | mg/L | 0.0002 | 100 | 0.222 |
| Boron | mg/L | 0.02 | 500 | 0.06 |
| Cadmium | mg/L | 0.00003 | 0.5 | 0.00114 |

**Client:** Watters Environmental Group Inc.
**Project:** 20-0052-01
**Project Manager:** Basil Wong
**Samplers:** Brooke Wallace

PACKAGE: **REG558 - Metals and Inorganics** (LEACHATE)

L1 = REG558 / LEACHATE / - - SCHEDULE 4 - -

| | |
|---|---|
| **Sample Number** | 6 |
| **Sample Name** | TCLP |
| **Sample Matrix** | Leachate |
| **Sample Date** | 12/06/2020 |

| Parameter | Units | RL | L1 | Result |
|---|---|---|---|---|
| **Metals and Inorganics (continued)** | | | | |
| Chromium | mg/L | 0.0008 | 5 | < 0.0008 |
| Lead | mg/L | 0.0001 | 5 | 0.0174 |
| Selenium | mg/L | 0.0004 | 1 | < 0.0004 |
| Uranium | mg/L | 0.00002 | 10 | 0.00385 |

PACKAGE: **REG558 - Other (ORP)** (LEACHATE)

L1 = REG558 / LEACHATE / - - SCHEDULE 4 - -

| | |
|---|---|
| **Sample Number** | 6 |
| **Sample Name** | TCLP |
| **Sample Matrix** | Leachate |
| **Sample Date** | 12/06/2020 |

| Parameter | Units | RL | L1 | Result |
|---|---|---|---|---|
| **Other (ORP)** | | | | |
| Mercury | mg/L | 0.00001 | 0.1 | < 0.00001 |

PACKAGE: **REG558 - PCBs** (LEACHATE)

L1 = REG558 / LEACHATE / - - SCHEDULE 4 - -

| | |
|---|---|
| **Sample Number** | 6 |
| **Sample Name** | TCLP |
| **Sample Matrix** | Leachate |
| **Sample Date** | 12/06/2020 |

| Parameter | Units | RL | L1 | Result |
|---|---|---|---|---|
| **PCBs** | | | | |
| Polychlorinated Biphenyls (PCBs) - Total | mg/L | 0.001 | 0.3 | < 0.001 |

**Client:** Watters Environmental Group Inc.
**Project:** 20-0052-01
**Project Manager:** Basil Wong
**Samplers:** Brooke Wallace

PACKAGE: **REG558 - SVOCs - PAHs** (LEACHATE)

L1 = REG558 / LEACHATE / - - SCHEDULE 4 - -

| | |
|---|---|
| **Sample Number** | 6 |
| **Sample Name** | TCLP |
| **Sample Matrix** | Leachate |
| **Sample Date** | 12/06/2020 |

| Parameter | Units | RL | L1 | Result |
|---|---|---|---|---|
| **SVOCs - PAHs** | | | | |
| Benzo(a)pyrene | mg/L | 0.001 | 0.001 | < 0.001 |

PACKAGE: **REG558 - VOCs** (LEACHATE)

L1 = REG558 / LEACHATE / - - SCHEDULE 4 - -

| | |
|---|---|
| **Sample Number** | 6 |
| **Sample Name** | TCLP |
| **Sample Matrix** | Leachate |
| **Sample Date** | 12/06/2020 |

| Parameter | Units | RL | L1 | Result |
|---|---|---|---|---|
| **VOCs** | | | | |
| Methyl ethyl ketone | mg/L | 0.8 | 200 | < 0.8 |
| Vinyl Chloride | mg/L | 0.008 | 0.2 | < 0.008 |
| Dichloromethane | mg/L | 0.02 | 5 | < 0.02 |
| Chloroform | mg/L | 0.02 | 10 | < 0.02 |
| Trichloroethylene | mg/L | 0.02 | 5 | < 0.02 |
| Tetrachloroethene | mg/L | 0.02 | | < 0.02 |
| Monochlorobenzene | mg/L | 0.02 | 8 | < 0.02 |
| Carbon tetrachloride | mg/L | 0.008 | 0.5 | < 0.008 |
| 1,2-Dichlorobenzene | mg/L | 0.02 | 20 | < 0.02 |
| 1,4-Dichlorobenzene | mg/L | 0.02 | 0.5 | < 0.02 |
| 1,2-Dichloroethane | mg/L | 0.02 | 0.5 | < 0.02 |
| 1,1-Dichloroethylene | mg/L | 0.02 | 1.4 | < 0.02 |

**Client:** Watters Environmental Group Inc.
**Project:** 20-0052-01
**Project Manager:** Basil Wong
**Samplers:** Brooke Wallace

PACKAGE: **REG558 - VOCs - BTEX** (LEACHATE)

L1 = REG558 / LEACHATE / - - SCHEDULE 4 - -

| | |
|---|---|
| **Sample Number** | 6 |
| **Sample Name** | TCLP |
| **Sample Matrix** | Leachate |
| **Sample Date** | 12/06/2020 |

| Parameter | Units | RL | L1 | Result |
|---|---|---|---|---|
| **VOCs - BTEX** | | | | |
| Benzene | mg/L | 0.02 | 0.5 | < 0.02 |

## EXCEEDANCE SUMMARY

No exceedances are present above the regulatory limit(s) indicated

## QC SUMMARY

### Anions by IC

Method: EPA300/MA300-Ions1.3 | Internal ref.: ME-CA-[ENV]IC-LAK-AN-001

| Parameter | QC batch Reference | Units | RL | Method Blank | Duplicate | | LCS/Spike Blank | | | Matrix Spike / Ref. | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | RPD | AC (%) | Spike Recovery (%) | Recovery Limits (%) | | Spike Recovery (%) | Recovery Limits (%) | |
| | | | | | | | | Low | High | | Low | High |
| Nitrate + Nitrite (as N) | DIO0393-JUN20 | mg/L | 0.06 | <0.06 | NA | | NA | | | NA | | |
| Nitrite (as N) | DIO0393-JUN20 | mg/L | 0.03 | <0.03 | ND | 20 | 102 | 80 | 120 | 107 | 75 | 125 |
| Nitrate (as N) | DIO0393-JUN20 | mg/L | 0.06 | <0.06 | ND | 20 | 100 | 80 | 120 | 105 | 75 | 125 |

### Cyanide by SFA

Method: SM 4500 | Internal ref.: ME-CA-[ENV]SFA-LAK-AN-005

| Parameter | QC batch Reference | Units | RL | Method Blank | Duplicate | | LCS/Spike Blank | | | Matrix Spike / Ref. | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | RPD | AC (%) | Spike Recovery (%) | Recovery Limits (%) | | Spike Recovery (%) | Recovery Limits (%) | |
| | | | | | | | | Low | High | | Low | High |
| Cyanide (total) | SKA0170-JUN20 | mg/L | 0.01 | <0.01 | ND | 10 | 98 | 90 | 110 | NV | 75 | 125 |

## QC SUMMARY

### Fluoride by Specific Ion Electrode

Method: SM 4500 I Internal ref.: ME-CA-[ENVIEWL-LAK-AN-014

| Parameter | QC batch Reference | Units | RL | Method Blank | Duplicate | | LCS/Spike Blank | | | Matrix Spike / Ref. | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | RPD | AC (%) | Spike Recovery (%) | Recovery Limits (%) | | Spike Recovery (%) | Recovery Limits (%) | |
| | | | | | | | | Low | High | | Low | High |
| Fluoride | EWL0303-JUN20 | mg/L | 0.06 | <0.06 | 2 | 10 | 103 | 90 | 110 | 100 | 75 | 125 |

### Inorganics-General

Method: EPA 7471A/SM 3112B I Internal ref.: ME-CA-[ENVISPE-LAK-AN-004

| Parameter | QC batch Reference | Units | RL | Method Blank | Duplicate | | LCS/Spike Blank | | | Matrix Spike / Ref. | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | RPD | AC (%) | Spike Recovery (%) | Recovery Limits (%) | | Spike Recovery (%) | Recovery Limits (%) | |
| | | | | | | | | Low | High | | Low | High |
| Mercury | EHG0015-JUN20 | mg/L | 0.00001 | < 0.00001 | ND | 20 | 101 | 80 | 120 | 94 | 70 | 130 |

## QC SUMMARY

### Metals in aqueous samples - ICP-MS

Method: SM 3030/EPA 200.8 I Internal ref.: ME-CA-IENVISPE-LAK-AN-006

| Parameter | QC batch Reference | Units | RL | Method Blank | Duplicate | | LCS/Spike Blank | | | Matrix Spike / Ref. | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | RPD | AC (%) | Spike Recovery (%) | Recovery Limits (%) | | Spike Recovery (%) | Recovery Limits (%) | |
| | | | | | | | | Low | High | | Low | High |
| Silver | EMS0086-JUN20 | mg/L | 0.0005 | <0.00005 | ND | 20 | 98 | 90 | 110 | 98 | 70 | 130 |
| Arsenic | EMS0086-JUN20 | mg/L | 0.002 | <0.0002 | 5 | 20 | 98 | 90 | 110 | 106 | 70 | 130 |
| Barium | EMS0086-JUN20 | mg/L | 0.0002 | <0.00002 | 5 | 20 | 99 | 90 | 110 | 71 | 70 | 130 |
| Boron | EMS0086-JUN20 | mg/L | 0.02 | <0.002 | 9 | 20 | 96 | 90 | 110 | 109 | 70 | 130 |
| Cadmium | EMS0086-JUN20 | mg/L | 0.00003 | <0.000003 | 0 | 20 | 99 | 90 | 110 | 89 | 70 | 130 |
| Chromium | EMS0086-JUN20 | mg/L | 0.0008 | <0.00008 | ND | 20 | 94 | 90 | 110 | NV | 70 | 130 |
| Lead | EMS0086-JUN20 | mg/L | 0.0001 | <0.00001 | 4 | 20 | 100 | 90 | 110 | 97 | 70 | 130 |
| Selenium | EMS0086-JUN20 | mg/L | 0.0004 | <0.00004 | ND | 20 | 98 | 90 | 110 | 95 | 70 | 130 |
| Uranium | EMS0086-JUN20 | mg/L | 0.00002 | <0.000002 | 6 | 20 | 99 | 90 | 110 | 92 | 70 | 130 |

### Polychlorinated Biphenyls

Method: MOE E3400/EPA 8082A I Internal ref.: ME-CA-IENVIGC-LAK-AN-001

| Parameter | QC batch Reference | Units | RL | Method Blank | Duplicate | | LCS/Spike Blank | | | Matrix Spike / Ref. | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | RPD | AC (%) | Spike Recovery (%) | Recovery Limits (%) | | Spike Recovery (%) | Recovery Limits (%) | |
| | | | | | | | | Low | High | | Low | High |
| Polychlorinated Biphenyls (PCBs) - Total | GCM0287-JUN20 | mg/L | 0.001 | < 0.001 | NSS | 30 | 88 | 60 | 140 | 101 | 60 | 140 |

## QC SUMMARY

### Semi-Volatile Organics

Method: EPA 3510C/8270D | Internal ref.: ME-CA-[ENV]GC-LAK-AN-005

| Parameter | QC batch Reference | Units | RL | Method Blank | Duplicate | | LCS/Spike Blank | | | Matrix Spike / Ref. | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | RPD | AC (%) | Spike Recovery (%) | Recovery Limits (%) | | Spike Recovery (%) | Recovery Limits (%) | |
| | | | | | | | | Low | High | | Low | High |
| Benzo(a)pyrene | GCM0294-JUN20 | mg/L | 0.001 | < 0.001 | NSS | 30 | 101 | 50 | 140 | NSS | 50 | 140 |

## QC SUMMARY

### Volatile Organics

Method: EPA 5030B/8260C | Internal ref.: ME-CA-[ENVIGC-LAK-AN-004

| Parameter | QC batch Reference | Units | RL | Method Blank | Duplicate | | LCS/Spike Blank | | | Matrix Spike / Ref. | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | RPD | AC (%) | Spike Recovery (%) | Recovery Limits (%) | | Spike Recovery (%) | Recovery Limits (%) | |
| | | | | | | | | Low | High | | Low | High |
| 1,1-Dichloroethylene | GCM0291-JUN20 | mg/L | 0.02 | <0.02 | ND | 30 | 106 | 60 | 130 | 107 | 50 | 140 |
| 1,2-Dichlorobenzene | GCM0291-JUN20 | mg/L | 0.02 | <0.02 | ND | 30 | 96 | 60 | 130 | 99 | 50 | 140 |
| 1,2-Dichloroethane | GCM0291-JUN20 | mg/L | 0.02 | <0.02 | ND | 30 | 97 | 60 | 130 | 99 | 50 | 140 |
| 1,4-Dichlorobenzene | GCM0291-JUN20 | mg/L | 0.02 | <0.02 | ND | 30 | 98 | 60 | 130 | 101 | 50 | 140 |
| Benzene | GCM0291-JUN20 | mg/L | 0.02 | <0.02 | ND | 30 | 99 | 60 | 130 | 105 | 50 | 140 |
| Carbon tetrachloride | GCM0291-JUN20 | mg/L | 0.008 | <0.008 | ND | 30 | 103 | 60 | 130 | 106 | 50 | 140 |
| Chloroform | GCM0291-JUN20 | mg/L | 0.02 | <0.02 | ND | 30 | 100 | 60 | 130 | 104 | 50 | 140 |
| Dichloromethane | GCM0291-JUN20 | mg/L | 0.02 | <0.02 | ND | 30 | 100 | 60 | 130 | 101 | 50 | 140 |
| Methyl ethyl ketone | GCM0291-JUN20 | mg/L | 0.8 | <0.8 | ND | 30 | 96 | 50 | 140 | 102 | 50 | 140 |
| Monochlorobenzene | GCM0291-JUN20 | mg/L | 0.02 | <0.02 | ND | 30 | 99 | 60 | 130 | 101 | 50 | 140 |
| Tetrachloroethene | GCM0291-JUN20 | mg/L | 0.02 | <0.02 | ND | 30 | 100 | 60 | 130 | 99 | 50 | 140 |
| Trichloroethylene | GCM0291-JUN20 | mg/L | 0.02 | <0.02 | ND | 30 | 104 | 60 | 130 | 92 | 50 | 140 |
| Vinyl Chloride | GCM0291-JUN20 | mg/L | 0.008 | <0.008 | ND | 30 | 124 | 50 | 140 | 132 | 50 | 140 |

## QC SUMMARY

Method Blank: a blank matrix that is carried through the entire analytical procedure. Used to assess laboratory contamination.

Duplicate: Paired analysis of a separate portion of the same sample that is carried through the entire analytical procedure. Used to evaluate measurement precision.

LCS/Spike Blank: Laboratory control sample or spike blank refer to a blank matrix to which a known amount of analyte has been added. Used to evaluate analyte recovery and laboratory accuracy without sample matrix effects.

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

Reference Material: a material or substance matrix matched to the samples that contains a known amount of the analyte of interest. A reference material may be used in place of a matrix spike.

RL: Reporting limit

RPD: Relative percent difference

AC: Acceptance criteria

**Multielement Scan Qualifier**: as the number of analytes in a scan increases, so does the chance of a limit exceedance by random chance as opposed to a real method problem. Thus, in multielement scans, for the LCS and matrix spike, up to 10% of the analytes may exceed the quoted limits by up to 10% absolute and the spike is considered acceptable.

**Duplicate Qualifier**: for duplicates as the measured result approaches the RL, the uncertainty associated with the value increases dramatically, thus duplicate acceptance limits apply only where the average of the two duplicates is greater than five times the RL.

**Matrix Spike Qualifier**: for matrix spikes, as the concentration of the native analyte increases, the uncertainty of the matrix spike recovery increases. Thus, the matrix spike acceptance limits apply only when the concentration of the matrix spike is greater than or equal to the concentration of the native analyte.

## LEGEND

### FOOTNOTES

| | |
|---|---|
| **NSS** | Insufficient sample for analysis. |
| **RL** | Reporting Limit. |
| ↑ | Reporting limit raised. |
| ↓ | Reporting limit lowered. |
| **NA** | The sample was not analysed for this analyte |
| **ND** | Non Detect |

Samples analysed as received. Solid samples expressed on a dry weight basis. "Temperature Upon Receipt" is representative of the whole shipment and may not reflect the temperature of individual samples.

Analysis conducted on samples submitted pursuant to or as part of Reg. 153/04, are in accordance to the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act" published by the Ministry and dated March 9, 2004 as amended.

SGS provides criteria information (such as regulatory or guideline limits and summary of limit exceedances) as a service. Every attempt is made to ensure the criteria information in this report is accurate and current, however, it is not guaranteed. Comparison to the most current criteria is the responsibility of the client and SGS assumes no responsibility for the accuracy of the criteria levels indicated. This document is issued, on the Client's behalf, by the Company under its General Conditions of Service available on request and accessible at http://www.sgs.com/terms_and_conditions.htm. The Client's attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any other holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents.

This report must not be reproduced, except in full. This report supersedes all previous versions.

-- End of Analytical Report --

# Request for Laboratory Services and CHAIN OF CUSTODY

SGS Environment, Health & Safety - Lakefield: 185 Concession St., Lakefield, ON K0L 2H0 Phone: 705-652-2000 Fax: 705-652-6365 Web: www.sgs.com/environment
- London: 657 Consortium Court, London, ON, N6E 2S8 Phone: 519-672-4500 Toll Free: 877-848-8060 Fax: 519-672-0361

No: 013897 Page 1 of 1

**Laboratory Information Section - Lab use only**

Received By: Oleg Mashir
Received Date: 6/15/20 (mm/dd/yy)
Received Time: 16:00 (hr : min)
Received By (signature):
Custody Seal Present: Yes ☐ No ☐
Custody Seal Intact: Yes ☐ No ☐
Cooling Agent Present: Yes ☑ No ☐ Type: ice
Temperature Upon Receipt (°C): 8.2, 8.2
LAB LIMS #: 9A15297-Jun20

## REPORT INFORMATION

Company: Watters Environmental
Contact: Basil Wong
Address: 9135 Keele St, Unit A1
Concord, ON L4K 0J4
Phone: 416-361-2407
Fax: 416-361-2410
Email: bwong@wattersenvironmental.com

## INVOICE INFORMATION

☑ (same as Report Information)
Company:
Contact: Brooklyn Espindola
Address:
Phone:
Email: ap@wattersenvironmental.com

Quotation #:
P.O. #:
Project #: 20-0052.01
Site Location/ID:

## TURNAROUND TIME (TAT) REQUIRED

☑ Regular TAT (5-7days)
TAT's are quoted in business days (exclude statutory holidays & weekends). Samples received after 6pm or on weekends: TAT begins next business day

**RUSH TAT (Additional Charges May Apply):** ☐ 1 Day ☐ 2 Days ☐ 3 Days ☐ 4 Days
**PLEASE CONFIRM RUSH FEASIBILITY WITH SGS REPRESENTATIVE PRIOR TO SUBMISSION**

Specify Due Date:

**NOTE:** DRINKING (POTABLE) WATER SAMPLES FOR HUMAN CONSUMPTION MUST BE SUBMITTED WITH SGS DRINKING WATER CHAIN OF CUSTODY

## REGULATIONS

**Regulation 153/04:**
☐ Table 1 ☑ Res/Park Soil Texture: ☑ Coarse
☐ Table 2 ☐ Ind/Com ☐ Medium
☐ Table 3 ☐ Agri/Other ☐ Fine
☑ Table 8/9

**Other Regulations:**
☐ Reg 347/558 (3 Day min TAT)
☐ PWQO ☐ MMER
☐ CCME ☐ Other:
☐ MISA

**Sewer By-Law:**
☐ Sanitary
☐ Storm
Municipality:

RECORD OF SITE CONDITION (RSC) ☑ YES ☐ NO

## ANALYSIS REQUESTED

| | SAMPLE IDENTIFICATION | DATE SAMPLED | TIME SAMPLED | # OF BOTTLES | MATRIX | M&I: Field Filtered (Y/N) | M&I: Metals & Inorganics incl CrVI, CN,Hg pH,(B(HWS),EC,SAR–soil) (Cl, Na–water) | M&I: Full Metals Suite ICP metals plus B(HWS-soil only) Hg, CrVI | M&I: ICP Metals only Sb,As,Ba,Be,B,Cd,Cr,Co,Cu,Pb,Mo,Ni, Se,Ag,Ti,U,V,Zn | SVOC: PAHs only | SVOC: SVOCs all incl PAHs, ABNs, CPs | PCB: PCBs Total ☐ Aroclor ☐ | PHC: F1-F4 + BTEX | PHC: F1-F4 only no BTEX | VOC: VOCs all incl BTEX | VOC: BTEX only | Pest: Pesticides Organochlorine or specify other | Other (please specify) | Other | Other | Other | Other | Other: Sewer Use: Specify pkg: | Other: Water Characterization Pkg General ☐ Extended ☐ | TCLP: Specify TCLP tests ☑ M&I ☑ VOC ☑ PCB ☑ B(a)P ☐ ABN ☐ Ignit. | COMMENTS: |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | TCLP | Jun12/20 | – | 1 | Soil | | | | | | | | | | | | | | | | | | | ✓ | |
| 2 | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3 | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4 | | | | | | | | | | | | | | | | | | | | | | | | | |
| 5 | | | | | | | | | | | | | | | | | | | | | | | | | |
| 6 | | | | | | | | | | | | | | | | | | | | | | | | | |
| 7 | | | | | | | | | | | | | | | | | | | | | | | | | |
| 8 | | | | | | | | | | | | | | | | | | | | | | | | | |
| 9 | | | | | | | | | | | | | | | | | | | | | | | | | |
| 10 | | | | | | | | | | | | | | | | | | | | | | | | | |
| 11 | | | | | | | | | | | | | | | | | | | | | | | | | |
| 12 | | | | | | | | | | | | | | | | | | | | | | | | | |

Observations/Comments/Special Instructions
~~take~~ please send as well to labcerts@wattersenvironmental.com

Sampled By (NAME): Brooke Wallace Signature: Date: 06/12/20 (mm/dd/yy)
Relinquished by (NAME): Brooke Wallace Signature: Date: 06/12/20 (mm/dd/yy)

Pink Copy - Client
Yellow & White Copy - SGS

Revision #: 1.2
Date of Issue: 09 Sept, 2019

**Note:** Submission of samples to SGS is acknowledgement that you have been provided direction on sample collection/handling and transportation of samples. {2} Submission of samples to SGS is considered authorization for completion of work. Signatures may appear on this form or be retained on file in the contract, or in an alternative format (e.g. shipping documents). {3} Results may be sent by email to an unlimited number of addresses for no additional cost. Fax is available upon request. This document is issued by the Company under its General Conditions of Service accessible at http://www.sgs.com/terms_and_conditions.htm. (Printed copies are available upon request.) Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein.

# APPENDIX B

## Weigh Tickets for Disposed Soil

NRK REMEDIATION FACILITY
7406 CONCESSION ROAD B&C
ORILLIA, ON L3V 6H5

Phone 705-326-7675

Ticket # 6130

2023-08-22 3:27:09 PM

Customer Soil & Earth Inc.
Job # 2461

P.O. #

Location: 149-153 Dunlop Street East

Item SOIL NON HAZARDOUS
Material SOIL

BOL# 25176

Gross 30610 kg
Tare 13900 kg
Net 16710 kg 16.71

Truck 5009 Type TRIAXLE
Licence BN4766
Driver
Owner TerraClean

Driver _____

Received by _____

_____

info@ESSsoils.com www.ESSsoils.com

NRK REMEDIATION FACILITY
7406 CONCESSION ROAD B&C
ORILLIA, ON L3V 6H5

Phone 705-326-7675

Ticket # 6130

2023-08-22 3:27:09 PM

Customer Soil & Earth Inc.
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P.O. #

Location: 149-153 Dunlop Street East

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Truck 5009 Type TRIAXLE
Licence BN4766
Driver
Owner TerraClean

Driver _____

Received by _____

_____

info@ESSsoils.com www.ESSsoils.com

NRK REMEDIATION FACILITY
7406 CONCESSION ROAD B&C
ORILLIA, ON L3V 6H5

Phone 705-326-7675

Ticket # 6128

2023-08-22 12:24:44 PM

Customer Soil & Earth Inc.
Job # 2461

P.O. #

Location: 149-153 Dunlop Street East

Item SOIL NON HAZARDOUS
Material SOIL

BOL# 25178

Gross 36540 kg
Tare 14230 kg
Net 22310 kg 22.31

Truck 5009 Type TRIAXLE
Licence BN4766
Driver
Owner TerraClean

Driver _____

Received by _____

_____

info@ESSsoils.com www.ESSsoils.com

NRK REMEDIATION FACILITY
7406 CONCESSION ROAD B&C
ORILLIA, ON L3V 6H5

Phone 705-326-7675

Ticket # 6128

2023-08-22 12:24:44 PM

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P.O. #

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BOL# 25178

Gross 36540 kg
Tare 14230 kg
Net 22310 kg 22.31

Truck 5009 Type TRIAXLE
Licence BN4766
Driver
Owner TerraClean

Driver _____

Received by _____

_____

info@ESSsoils.com www.ESSsoils.com

# APPENDIX C

## Weigh Tickets for Imported Materials

Lafarge 3P50 **LAFARGE BARRIE AGG**
701 Dunlop Street West

GST # 10293 0856
(705) 792-1775 x122

Ticket: 152253382 8/23/2023 Time In: 10:54:34AM Time Out: 10:57:36AM

Customer: 78943 COD-BARRIE YARD
Order: 400864170 2023 COD SIMCOE-BARRIE DEPOT-DIY
VARIOUS, SIMCOE COUNTY

P.O.: SOILCAN
Dispatch: 0

Pickup

Truck: TMP TMP
Hauler: 4000000 CUSTOMER VEHICLE
Zone: ZONE0

License:
Max GVW 0

Product: 9050 LI,20-14MM,CLEAR

| | Kg | Lbs | | | |
|---|---|---|---|---|---|
| Gross: | 7140 | 15741 | 909375 | ENVIRONMEN | 3.61 |
| Tare: | 5080 | 11199 | 909379 | TOARC FEE | 0.47 |
| Net: | 2060 | 4542 | 912049 | CARBON TAX | 0.21 |

| | | |
|---|---|---|
| Quantity: | 2.06 | Metric Ton |
| Today: | 22.64 | Metric Ton |
| Loads: | 6 | |

| Cash Sale | Price | Amount | HST1300 | 13.00% | 8.04 |
|---|---|---|---|---|---|
| Material: | 27.92 | 57.52 | | | |
| Other: | | 4.29 | | | |
| Tax: | 13.00% | 8.04 | | | |
| **Total:** | | 69.85 | | | |

TICKET: 152253382 Location: 3P50 Description: Tare: 5080 Net: 2.06

Scale: 1 Weighmaster: Marilia A

RECEIVED: _____

Natural Stone Source Ontario Ltd.
7556 Concession Road B-C
Ramara, ON L3V 0K7

Phone 855-787-8663
Office 705-955-9655

Ticket # 3203
2023-08-22 12:53:29 PM

Customer ESSENTIAL SOILS SOLUTIONS
Order Soil and Earth
P.O. #
Location 1
Zone
Material 2" CRUSHED

Gross 34220 kg
Tare 14220 kg MAN WT
Net 20000 kg 20.00

Truck 5009- BN4176 Type NS
Owner TERRA CLEAN

Driver _____
Received by _____
_____

info@naturalstonesourceontario.com www.naturalstonesourceontario.con

Natural Stone Source Ontario Ltd.
7556 Concession Road B-C
Ramara, ON L3V 0K7

Phone 855-787-8663
Office 705-955-9655

Ticket # 3203
2023-08-22 12:53:29 PM

Customer ESSENTIAL SOILS SOLUTIONS
Order Soil and Earth
P.O. #
Location 1
Zone
Material 2" CRUSHED

Gross 34220 kg
Tare 14220 kg MAN WT
Net 20000 kg 20.00

Truck 5009- BN4176 Type NS
Owner TERRA CLEAN

Driver _____
Received by _____
_____

info@naturalstonesourceontario.com www.naturalstonesourceontario.con

Natural Stone Source Ontario Ltd.
7556 Concession Road B-C
Ramara, ON L3V 0K7

Phone 855-787-8663
Office 705-955-9655

Ticket # 3204
2023-08-22 3:48:30 PM

Customer ESSENTIAL SOILS SOLUTIONS
Order Soil and Earth
P.O. #
Location 1
Zone
Material 2" CRUSHED

Gross 34930 kg
Tare 14220 kg MAN WT
Net 20710 kg 20.71

Truck 5009- BN4176 Type NS
Owner TERRA CLEAN

Driver _____
Received by _____

info@naturalstonesourceontario.com www.naturalstonesourceontario.con

Natural Stone Source Ontario Ltd.
7556 Concession Road B-C
Ramara, ON L3V 0K7

Phone 855-787-8663
Office 705-955-9655

Ticket # 3204
2023-08-22 3:48:30 PM

Customer ESSENTIAL SOILS SOLUTIONS
Order Soil and Earth
P.O. #
Location 1
Zone
Material 2" CRUSHED

Gross 34930 kg
Tare 14220 kg MAN WT
Net 20710 kg 20.71

Truck 5009- BN4176 Type NS
Owner TERRA CLEAN

Driver _____
Received by _____

info@naturalstonesourceontario.com www.naturalstonesourceontario.con