



LIMITED PHASE II ENVIRONMENTAL SITE  
ASSESSMENT

FORMER ORANGEVILLE  
RAIL, MISSISSAUGA,  
BRAMPTON AND  
CALEDON, ONTARIO

REGION OF PEEL

PROJECT NO.: 211-10139-00  
DATE: MAY 2022

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May 2, 2022

Mr. Ryan Grzesiak  
REGION OF PEEL  
10 Peel Centre Drive, Suite B  
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Subject: Limited Phase II Environmental Site Assessment  
Former Orangeville Rail, Mississauga/Caledon/Brampton, Ontario  
Project No.: 211-10139-00

WSP is pleased to present our finalized Limited Phase II Environmental Site Assessment report for the above-noted property. The report describes the interpreted environmental conditions at the property and addresses comments received by email on February 9 and March 4, 2022.

Thank you for the opportunity to provide our services.

Yours truly,



A handwritten signature in blue ink, appearing to read 'C. Johnston'.

Christopher Johnston, M.A., P.Geo. (Limited), QP<sub>ESA</sub>  
Team Lead – Contaminated Lands, Toronto

WSP ref.: 211-10139-00



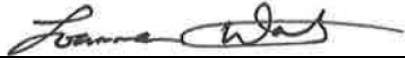
# QUALITY MANAGEMENT

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Remarks	Limited Phase II ESA	Limited Phase II ESA		
Date	January 17, 2022	April 29, 2022		
Prepared by	Joanna West	Joanna West		
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Project number	211-10139-00	211-10139-00		
Report number	01	02		
File reference	ORBY Limited Phase II ESA	ORBY Limited Phase II ESA		

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This limitations statement is considered an integral part of this report.



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# ACRONYMS AND ABBREVIATIONS

µm	micrometre(s)
APEC	area(s) of potential environmental concern as defined in O.Reg. 153/04, “the area on, in or under a phase one property where one or more contaminants are potentially present, as determined through the phase one environmental site assessment, including through (a) identification of past or present uses on, in or under the phase one property, and (b) identification of potentially contaminating activity”
As	arsenic
B-HWS	boron (hot water soluble)
BTEX	benzene, toluene, ethylbenzene, and xylenes
CALA	Canadian Association for Laboratory Accreditation
Cl-	chlorine
CN-	cyanide
COPC	contaminant(s) of potential concern
Cr (VI)	hexavalent chromium
CSM	conceptual site model
DNAPL	dense non-aqueous phase liquid(s)
EC	electrical conductivity
ESA	environmental site assessment
ha	hectare(s)
Hg	mercury
ICC	Industrial/Commercial/Community
km	kilometre(s)
L	litre(s)
LNAPL	light non-aqueous phase liquid(s)
m	metre(s)
masl	metres above sea level
mbgs	metres below ground surface
MDL	method detection limit
MNRF	Ministry of Natural Resources and Forestry
MECP	Ministry of the Environment, Conservation and Parks
N/S	Not Specified
Na	sodium
O.Reg. 153/04	Ontario Regulation 153/04, as amended
O.Reg. 347	Ontario Regulation 347, as amended

O.Reg. 903	Ontario Regulation 903, as amended
ORPs	other regulated parameters
PAH	polycyclic aromatic hydrocarbon
PCA	potentially contaminating activity as defined in O.Reg. 153/04, “a use or activity set out in Column A of Table 2 of Schedule D that is occurring or has occurred in a Phase One study area”
PCB	polychlorinated biphenyls
PHC	petroleum hydrocarbon
PID	photoionization detector
PIN	property identification number
ppm	parts per million
QA	quality assurance
QC	quality control
QPESA	Qualified Person for ESAs according to MECP O.Reg. 153/04
RA	Risk Assessment
RDL	reporting detection limit
RPI	Residential/Parkland/Institution
RPIICC	Residential/Parkland/Institution/Industrial/Commercial/Community
RSC	Record of Site Condition
SAP	Sampling and Analysis Plan
SAR	sodium adsorption ratio
Sb	antimony
Se	selenium
SOP	standard operating procedure(s)
SCS	Site Condition Standard
THM	trihalomethane
TOV	total organic vapours
UST	underground storage tank
VOC	volatile organic compound



# 1 EXECUTIVE SUMMARY

WSP Canada Inc. was retained by the Region of Peel to conduct a Limited Phase II Environmental Site Assessment (ESA) of the former Orangeville Rail, beginning in Streetsville, Mississauga, continuing through Brampton, and terminating in Orangeville, Ontario (hereafter referred to as the “Phase II Property” or “Site”). It is WSP’s understanding that this Phase II ESA was completed for due diligence purposes prior to a potential property transaction. This report considers elements of Ontario Regulation 153/04 but does not fulfill the prescribed reporting requirements under Schedule E. There is no current requirement identified for a Record of Site Condition (RSC) to be filed. Section 13 (1) of O. Reg. 153/04 provides an exemption for the change in use of a property from a railway line to a trail used for recreational activities, negating the need for an RSC.

The Site begins in Mississauga, continues through Brampton, and terminates in Orangeville, Ontario running through mixed commercial, residential, agricultural, and industrial areas. The Site is comprised of a single-track railroad right-of-way, approximately 55 km in length and 19.8 m in width. The Site was developed as a passenger/freight railroad track beginning in the 1860s. The Site historically included one (1) rail yard, located in Brampton, and eight (8) smaller junctions where CP Rail station buildings were historically located. These stations or junctions included: Churchville, Snelgrove, Cheltenham, Inglewood, Forks of the Credit, Cataract, Alton, and Melville. It is noted that historic underground and aboveground fuel storage tanks have been identified in the vicinity of Mayfield Road (Snelgrove Junction). Records reviewed indicate that these historic tanks have been removed, dating back to at least 1999. This area was investigated in this Limited Phase II ESA through investigation location BH21-25.

The Site is irregular in shape and occupies an area of approximately 125.5 ha (310 acres). The Site is currently used as a railway. The Site is proposed to be converted into a multi-purpose recreational trail.

The Contaminant Overview Study (COS) completed by WSP in June 2020 identified multiple on-Site and off-Site potentially contaminating activities (PCAs) that resulted in the identification of 113 areas of potential environmental concern (APECs). WSP notes that only select APECs (Forty (40)) were investigated as part of this Limited Phase II ESA at the authorization of the Client. APECs were selected to achieve as much geographical coverage as possible. The Limited Phase II ESA conducted by WSP involved the advancement of 45 boreholes and installation of 18 shallow-screened groundwater monitoring wells to investigate soil and (shallow and overburden) groundwater conditions across the Site.

Based on the Limited Phase II ESA, WSP presents the following conclusions and recommendations:

- There were no investigation locations (soil or groundwater) that reported concentrations / values in excess of the MECP Table 1 SCS within the Mississauga footprint of the Site. Therefore, no further assessment is considered warranted at this time within the Mississauga footprint of the Site.
- Three (3) soil samples collected within the Brampton footprint of the Site at a depth interval of 0.0 to 0.6 mgbs (BH21-7 SS1, BH21-8 SS1 and BH21-45 SS1) did not meet the applicable MECP Table 1 SCS for PAHs. Additional evaluation through Due Diligence Risk Assessment (DDRA) is recommended.

- Two (2) soil samples collected within the Brampton footprint of the Site at a depth interval of 0.0 to 0.6 mbgs (BH21-16 SS1 and BH21-20 SS1) did not meet the applicable MECP Table 1 SCS for metals. Additional evaluation through DDRA is recommended.
- One (1) soil sample collected within the Brampton footprint of the Site at a depth interval of 7.6 to 8.2 mbgs (BH21-45 SS8) did not meet the applicable Table 1 SCS for PHCs (F1) and BTEX (ethylbenzene and xylenes). Additional evaluation through DDRA is recommended.
- Shallow groundwater quality within the Brampton footprint of the Site did not meet the MECP Table 1 SCS as of December 7, 2021. In particular, contaminant exceedances were identified at BH21-6 (cobalt and chromium; WSP notes that elevated chloride at BH21-6 does not warrant further assessment per Section 49.1 of O. Reg. 153/04 as the standard is considered met), BH21-16 (molybdenum) and BH 21-45 (molybdenum and PAHs). At the request of the Client, resampling of BH21-16 (molybdenum) and BH21-45 (molybdenum and PAHs) was undertaken on February 11, 2022, using low-flow sampling techniques. Molybdenum was detected in both confirmatory samples from BH21-16 and BH21-45 at concentrations greater than the Table 1 SCS. PAHs were not detected in the confirmatory sample from BH21-45. It is therefore inferred that the PAHs measured in the original groundwater sample from BH21-45 may have been influenced by sediment in the sample and may not be representative of the groundwater quality in this monitoring well. Additional evaluation through DDRA is recommended<sup>1</sup>.
- The risk potential for off-Site adverse effects relative to any migration of molybdenum via groundwater transport relative to concentrations observed in shallow groundwater monitoring wells BH21-16 and BH21-45 is considered low. The molybdenum concentrations are inferred to be related to the presence of clayey soil. Further, the Table 2 and 8 SCS were both met.
- The risk potential for off-Site adverse effects relative to any migration of chromium via groundwater transport relative to the concentration observed in shallow groundwater monitoring well BH21-6 is considered low. While there is insufficient information to draw conclusions on the nature (anthropogenic vs. naturally occurring) of this contaminant in shallow groundwater, the Table 2 and 8 SCS were both met.
- The risk potential for off-Site adverse effects relative to any migration of cobalt via groundwater transport relative to the concentration observed in shallow groundwater monitoring well BH21-6 is increased relative to molybdenum and/or chromium concentrations identified at BH21-6, BH21-6 and/or BH21-45 on the basis that the Table 2 and 8 SCS were not met. Additional evaluation through DDRA is recommended.
- Four (4) soil samples collected within the Caledon footprint of the Site at depth intervals of 0.0 to 0.6 mbgs (BH21-10 S1, BH21-32 SS1 and BH21-36 SS1) and 0.6 to 1.2 mbgs (BH21-41 S2) did not meet the applicable MECP Table 1 SCS for metals and/or mercury. Additional evaluation through DDRA is recommended.
- Two (2) soil samples collected within the Caledon footprint of the Site at depth intervals of 1.5 to 2.1 mbgs (BH21-9 SS3) and 1.2 to 1.8 mbgs (BH21-40 S3) did not meet the applicable MECP Table 1 SCS for PAHs. Additional evaluation through DDRA is recommended.

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<sup>1</sup> The Brampton DDRA maintained a conservative approach and considered the PAH concentrations in the original groundwater sample from BH21-45 as a worst-case scenario.

- Two (2) soil samples collected within the Caledon footprint of the Site at depth intervals of 0.6 to 1.2 mbgs (BH21-31 S2) and 0.0 to 0.6 mbgs (BH21-41 S1) did not meet the applicable MECP Table 1 SCS for PHCs (F2; BH21-31 S2) or BTEX (xylenes; BH21-41 S1). Additional evaluation through DDRA is recommended.
- As an alternative to implementation of risk management measures within the Caledon footprint of the Site, the Client could consider additional assessment (to further characterize lateral and vertical extents of impact) and subsequent implementation of excavation and disposal of impacted soil identified at BH21-10, BH21-41 and BH21-36. Confirmatory soil sampling and testing would be required to confirm the appropriateness of remedial excavation limits.
- Once the groundwater wells are no longer required for monitoring or sampling purposes, these wells are recommended to be appropriately decommissioned by a licensed well contractor as required by O. Reg. 903.

## 2 INTRODUCTION

WSP Canada Inc. was retained by the Region of Peel to conduct a Limited Phase II Environmental Site Assessment (ESA) of the former Orangeville Rail, beginning in Streetsville, Mississauga, continuing through Brampton, and terminating in Orangeville, Ontario (hereafter referred to as the “Phase II Property” or “Site”). It is WSP’s understanding that this Phase II ESA was completed for due diligence purposes prior to a potential property transaction. This report considers elements of Ontario Regulation 153/04 but does not fulfill the prescribed reporting requirements under Schedule E. There is no current requirement identified for a Record of Site Condition (RSC) to be filed. Section 13 (1) of O. Reg. 153/04 provides an exemption for the change in use of a property from a railway line to a trail used for recreational activities, negating the need for an RSC.

The Site is comprised of a single-track railroad right-of-way, approximately 55 km in length and 19.8 m in width. The Site was developed as a passenger/freight railroad track beginning in the 1860s. The Site historically included one (1) rail yard, located in Brampton, and eight (8) smaller junctions where CP Rail station buildings were historically located. These stations or junctions included: Churchville, Snelgrove, Cheltenham, Inglewood, Forks of the Credit, Cataract, Alton, and Melville.

For the purposes of this investigation, the Mississauga portion of the Site is defined as the southernmost section of the Property, between Atwood Lane and Highway 407. The Brampton portion of the Site is the length of railway between Highway 407 and Mayfield Road, and the Caledon portion runs between Mayfield Road north to Orangeville, between Townline and Dufferin Road 109.

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### 2.1 SITE DESCRIPTION

Property information for the Site is provided in the table below:

**Table 2.1** Property Information

CRITERION	DESCRIPTION
Municipal Address	No municipal address is associated with the Site.
Property Identification Numbers (PINs)	See WSP, 2020
Legal Description	Legal descriptions were not provided at the time of this investigation.

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## 2.2 PROPERTY OWNERSHIP

Property ownership information for the Site is provided in the table below:

**Table 2.2 Property Ownership Information**

CRITERION	DESCRIPTION
Current Site Owner	Orangeville Railway Development Corporation (ORDC)
Region Representative	Mr. Ryan Grzesiak Region of Peel 2 Copper Road Brampton, Ontario L6T 4W5 Email: ryan.grzesiak@peelregion.ca

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## 2.3 CURRENT AND PROPOSED FUTURE USES

The Site is currently utilized for industrial purposes as a railway. Proposed redevelopment of the Site for parkland use includes the conversion of the railway into a multi-purpose recreational trail.

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## 2.4 APPLICABLE SITE CONDITION STANDARD

The Site as a whole, could incorporate the Table 1: Full Depth Background Site Condition Standards for residential / parkland / institutional / industrial / commercial / community (RPIICC) property use (soil) and all types of property use (groundwater), on the identified basis of environmentally significant areas located within 30 metres (m) of boundaries. Further, portions of the Site could incorporate the Table 8: Generic Site Condition Standards for Use within 30 m of a Water Body in a Potable Ground Water Condition for RPIICC property use (soil) and all types of property use (groundwater), on the identified basis of water bodies within 30 m of property boundaries.

Additionally, portions of the Site could incorporate the Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition for RPI property use (soil) and all types of property use (groundwater), in areas of the railway corridor that have not identified environmentally sensitive areas or water bodies within 30 m of property boundaries.

WSP notes that the majority of boreholes are not within 30 m of an environmentally significant area or a water body. As permission to use non-potable standards was not sought, the Table 2 SCS could be considered for assessment purposes. However, there are portions of the railway corridor footprint that are located within 30 m of an environmentally significant area and a water body. Therefore, for the purposes of this report, comparisons to Tables 1, 2 and 8 have been applied to our appended tables. Tables 1, 2 and 8 are set forth in the Ministry of the Environment, Conservation and Parks (MECP) 2011 publication “*Soil, Ground Water and Sediment Standards for Use under Part XV.1 of the Environmental Protection Act*”.

With regards to the 2011 MECP Table 8 Generic Site Condition Standard (SCS) for Use within 30 m of a Water Body in a Potable Groundwater Condition for RPIICC property uses, the selection of this standard for specific portions of the Phase II Property for comparison purposes was based on the following:

- Groundwater is used as a potable water source in the vicinity of the Phase II Property;
- The Phase II Property is not considered an “environmentally sensitive” site, as defined by O.Reg. 153/04;
- The future use of the Phase II Property is considered parkland land use (e.g., multi-use recreational trail);
- A water body is situated within 30 m of the specified portions of the Phase II Property;
- The pH of the soil samples analysed during this investigation from forty-four (44) boreholes ranged from 7.04 to 7.91, which falls within the acceptable range stated in O.Reg. 153/04; and,
- Bedrock was not encountered within 2 m of the ground surface.

With regards to the 2011 MECP Table 2 Full Depth Generic SCS in a Potable Groundwater Condition for RPI property use in course textured soils, the evaluation standard was selected for specific portions of the Phase II Property for comparison purposes based on the following:

- Groundwater is used as a potable water source in the vicinity of the Phase II Property;
- The Phase II Property is not considered an “environmentally sensitive” site, as defined by O.Reg. 153/04;
- The future use of the Phase II Property is considered parkland land use (e.g., multi-use recreational trail);
- The portions of the Site are not situated within 30 m of a water body; and,
- The pH of the soil samples analysed during this investigation from forty-four (44) boreholes ranged from 7.04 to 7.91, which falls within the acceptable range stated in O.Reg. 153/04; and,
- Bedrock was not encountered within 2 m of the ground surface.

Tables 1, 2, and 8 are set forth in the Ministry of the Environment, Conservation and Parks (MECP) 2011b publication “*Soil, Ground Water and Sediment Standards for Use under Part XV.1 of the Environmental Protection Act*”.

# 3 BACKGROUND INFORMATION

## 3.1 PHYSICAL SETTING

A summary of the Site’s physical setting determined through the COS is included in table below:

**Table 3.1 Summary of Physical Setting**

CRITERIA	DESCRIPTION
i. Water Bodies	<p>The following water bodies were identified within the Phase II Study Area:</p> <ul style="list-style-type: none"><li>— The Site intersects Levi’s Creek just south of the 407 Express Toll Route;</li><li>— The Site intersects an unnamed creek south of Old School Road;</li><li>— An unnamed creek runs parallel to Site south of the Brampton Airport, east adjacent to Site;</li><li>— The Site intersects the Credit River north of Olde Base Line Road;</li><li>— The Site intersects Caledon Creek north of Queen Street East, Alton; and,</li><li>— An unnamed creek runs parallel to Site south of Route 109, Orangeville.</li></ul>
ii. Areas of Natural Significance	<p>The following areas of natural significance were identified within the Contaminant Overview Study Area:</p> <ul style="list-style-type: none"><li>— The Meadowvale Conservation Area was listed as an area of natural significance within 1 km of Site;</li><li>— The Churchville-Norval Wetland Complex was listed as an area of natural significance within 1 km of Site;</li><li>— A portion of the Site traverses the Green Belt;</li><li>— A portion of the Site traverses the Niagara Escarpment Plan Protection Area;</li><li>— A portion of the Site traverses the Forks of the Credit Provincial Park; and,</li><li>— A portion of the Site traverses the Caledon meltwater deposits.</li></ul>

<p>iii. Topography and surface water drainage features on the Phase II property</p>	<p>The Site ranges in elevation from approximately 174 masl in Churchville to 427 masl in Orangeville. The topography in the vicinity of the Site generally slopes to the southeast towards Lake Ontario. Based on the regional topography, the inferred shallow groundwater flow direction regional across the Site is southeast. The groundwater flow direction on the Site can only be confirmed through long-term groundwater monitoring.</p> <p>The Site is situated within bevelled till plains, sand plains, drumlinized till plains, escarpment, and spillway physiographic regions. The Site intersects several surficial geological areas; however, the surficial geology in vicinity of the majority of the Site is described as clay to silt textured till derived from glaciolacustrine deposits or shale. Additional surficial geological units located within the vicinity of the Site include modern alluvial deposits consisting of clay, silt, sand, and gravel (which may contain organic remains), fine glaciolacustrine deposits consisting of silt and clay, minor sand and gravel, interbedded silt and clay and gritty, pebbly flow till and rainout deposits, Paleozoic bedrock in the vicinity of Inglewood Junction, Ice-contact stratified deposits consisting of sand and gravel, minor silt, clay and till, glaciofluvial deposits consisting of river deposits and delta topset facies, and organic deposits consisting of peat, muck, and marl in the vicinity of the Forks of the Credit Junction, Alton Junction, and Melville Junction. The underlying bedrock within the area generally consists of shale, limestone, dolostone, and siltstone of the Queenston Formation in the southern portion of Site, and moves into sandstone, shale, dolostone, and siltstone of the Clinton, Cataract Group, and Amabel Formation once north of the Forks of the Credit.</p>
<p>iv. Well-head protection areas or other designation</p>	<p>Part of the Caledon portion of the Site falls within a well-head protection area. Based on the MECP Source Protection Information Atlas, the following boreholes fall within this area: BH21-9, BH21-10, BH21-11, BH21-13, BH21-14, BH21-15, BH21-33, BH21-34, BH21-36, BH21-37 and BH21-38.</p> <p>The Mississauga and Brampton portions of the Site are not situated within a well-head protection area.</p>
<p>v. Municipal drinking water system</p>	<p>Caledon: The Town of Caledon obtains its potable water primarily potable groundwater sources, as well as from Lake Ontario. No water supply wells were observed on the Site, and several domestic water wells were identified within the Study Area.</p> <p>A reportable spill of potable water was included in the ERIS Spill Database, as reported in the COS (WSP, 2020). This spill pertains to a release of potable drinking water from the Region of Peel’s Snelgrove Elevated Tank (water storage tower) directly to a storm sewer for a period of 37 minutes on September 29, 2011. This spill is not considered an environmental concern to the subject site.</p> <p>Brampton: The City of Brampton obtains its potable water primarily from Lake Ontario and also from some potable groundwater sources. The municipality supplies water to properties within the Study Area. No water supply wells were observed on the Site, and several domestic water wells were identified within the Study Area.</p> <p>Mississauga: The municipality supplies water to properties within the Study Area, and the primary potable water source is Lake Ontario.</p> <p>The Site itself is not serviced for water.</p>
<p>vi. Well observations</p>	<p>No potable water wells or monitoring wells were observed on the Site.</p>



# 4 SCOPE OF INVESTIGATION

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## 4.1 OVERVIEW OF SITE INVESTIGATION

The Phase II ESA involved intrusive investigation in the areas determined in the COS to be APECs. The Phase II ESA was carried out in accordance with O. Reg. 153/04. The Site investigation activities were limited to visible and accessible locations of the Site. Subsurface investigations, testing, sampling, and laboratory analyses were completed based on findings of the WSP COS, accessibility to APECs, and Site observations.

The Site investigation program included the following:

- Clearance of public and private underground utilities and services prior to commencement of intrusive investigation activities.
- Preparation of a Health and Safety Plan and safe execution of all proposed work.
- Advancement of forty-five (45) boreholes on the Phase II Property, to an approximate maximum depth of 9.1 mbgs. Boreholes less than 2 mbgs in depth were advanced manually using a hand auger. Boreholes greater than 2 mbgs were advanced using a track-mounted rig. The soil lithology from each borehole was logged in the field and samples were screened for hexane with a combustible gas detector. The locations of the boreholes were selected to investigate select APECs (forty ((40)) identified during the Contaminant Overview Study.
- Based on field screening and visual/olfactory observations, worst-case/representative soil samples from the boreholes were submitted for laboratory testing of relevant COPC.
- Groundwater monitoring wells were installed within eighteen (18) boreholes to assess groundwater quality below the Site and determine the direction of groundwater flow.
- The groundwater levels in the wells were measured to determine the groundwater table elevation. The wells were surveyed to a geodetic benchmark to determine groundwater flow direction.
- The groundwater wells were purged to remove stagnant water and sampled for laboratory testing of relevant parameters of concern.
- Both soil and groundwater samples were submitted for chemical analysis by a CALA certified laboratory.

# 5 INVESTIGATION METHOD

## 5.1 GENERAL

This section provides a brief description of all methods employed in undertaking the current Phase II ESA investigation. Where the method differs from the associated standard operating procedure, a detailed description of the method used and a rationale for the change in method is provided in the appropriate subsection below.

## 5.2 UTILITY LOCATES

Ontario One Call was contacted for the public utilities locates for the investigation. Premier Locates was retained by WSP to locate private utilities on-Site for all the subsurface investigation work.

## 5.3 DRILLING

WSP staff inspected the Site and identified the preferred borehole locations to provide general site coverage and investigate select APECs identified in the WSP COS. The borehole locations are shown on Figures 2-1 through 2-64. The location of underground services and utilities within the Site were cleared prior to the commencement of the drilling program. WSP arranged for the service locates to be completed through Ontario One Call and Landshark Locating Services. A summary of the drilling events is presented in the table below.

**Table 5-1 Summary of Drilling**

INFORMATION PARAMETER	DETAILS
Name of Drilling Contractor	Davis Drilling
Drilling Equipment Used	CME55 (track-mounted) – Boreholes greater than 1.8 mbgs Hand auger – Boreholes less than 1.8 mbgs
Measures taken to minimize the potential for cross-contamination	A 50-mm stainless steel split spoon sampler was used to collect soil samples from the boreholes. The split spoon sampler was brushed clean of soil, washed in municipal water containing phosphate free detergent, rinsed in municipal water, and then rinsed with distilled water for each sampling interval in order to reduce the potential for cross contamination.  The hand auger was rinsed with distilled water between each sampling interval.
Frequency of sample collection	CME55: every 0.6 m per 0.8 m for the first 3.1 m followed by 0.6 m per 1.5 m to the termination of the borehole. Hand Auger: every 0.6 m up to 1.8 mbgs

From October 27 to December 6, 2021, a total of forty-five (45) boreholes were drilled along select areas of the Phase II Property. Hand-augered boreholes were advanced to a maximum depth of 1.8 mbgs. Soil samples were collected manually from the auger threads. Boreholes drilled with the CME55 were advanced to a maximum depth of 9.1 mbgs. Soil samples were collected from the fill and native material and the upper bedrock contact using a 50-mm diameter, 0.61-m long stainless-steel split spoon sampler.

## 5.4 SOIL

### 5.4.1 SOIL SAMPLING

Disposable nitrile gloves were used during sample collection and changed between each sample to minimize the potential for cross-contamination. Soil samples were described in the field by WSP staff and observations were recorded in a dedicated field book. Soil samples were collected directly into laboratory-supplied 120-mL glass jars and 40-mL methanol-preserved vials and were stored at a temperature of less than 10°C. Samples selected for laboratory analysis were handled under standard chain of custody procedures until received at the laboratory. The soil samples selected for laboratory analysis were considered representative of worst-case conditions in the boreholes based on field screening results and visual and olfactory observations.

All soil samples were submitted to AGAT Laboratories in Mississauga, Ontario. The soil samples submitted for chemical analysis are summarized in Table 2, appended.

### 5.4.2 FIELD SCREENING MEASUREMENTS

Soil samples collected from the boreholes were field screened for combustible gases using an RKI Eagle 2 CGD. In addition to visual and olfactory observations, the results of field screening were used to determine worst-case samples in order to select those to submit to the laboratory for analysis of volatile parameters. Additional samples may have been analysed for delineation purposes, if required. A summary of field screening measurements is provided in the table below.

**Table 5-2 Summary of Field Screening Information**

CRITERIA	DESCRIPTION
i. Make and Model of Field Screening Instrument	RKI Eagle 2 CGD, Serial Number E2G087
ii. Chemicals that Field Screening Instrument Detects and Respective Detection Limits	Combustible Gas (Hexane) with dynamic range of 0 to 50,000 parts per million (ppm)
iii. Precision of the Measurements	1 ppm
iv. Accuracy of the Measurements	50 ppm or $\pm 5\%$ display reading
v. Calibration Reference Standards	Hexane

Field screening measurements (CGD readings) are discussed in Section 6.3.1.2 and presented on the finalized borehole logs, included in **Appendix A**.

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## 5.5 GROUNDWATER

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### 5.5.1 GROUNDWATER MONITORING AND WELL MODIFICATION

A total of eighteen (18) monitoring wells were installed by WSP between November 8, 2021 and February 11, 2022, along the length of the Phase II property. Two (2) wells were installed in Mississauga, eight (8) in Brampton and eight (8) in Caledon. The wells were installed and sampled for groundwater characterization purposes, based on COPCs identified in the COS.

Monitoring well construction details are provided in the borehole logs in **Appendix A**.

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### 5.5.2 GROUNDWATER FIELD MEASUREMENT OF WATER QUALITY PARAMETERS

Between November 22 and December 2, 2021, all wells on Site were purged using 13 mm LDPE Waterra tubing and an inertial pump (foot valve). The wells were purged by removing three well volumes or by purging the well dry three times. Field measurements of water quality parameters were collected using a Hanna multi-meter as part of this assessment including field pH, EC, and temperature. Field groundwater quality measurements were obtained after the removal of each well volume and were recorded in a dedicated field book. This data has been archived and is available upon request.

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### 5.5.3 GROUNDWATER SAMPLING

Between November 23 and December 7, 2021, following purging, groundwater samples were collected from all wells on Site for the purpose of assessing both shallow groundwater quality at the Phase II Property. Additional re-sampling of two (2) wells occurred on February 11, 2022, based on exceedances identified in the 2021 sampling event.

The groundwater samples were collected in laboratory-supplied bottles and stored in an ice-filled cooler and submitted under proper chain of custody procedures to AGAT Laboratories in Mississauga for analysis of metals and inorganics, PAHs, PHCs, PCBs, OCPs and VOCs.

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## 5.6 SEDIMENT SAMPLING

Sediment sampling was not conducted as part of this Phase II ESA.

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## 5.7 ANALYTICAL TESTING

Soil and groundwater samples were submitted to AGAT Laboratories in Mississauga, Ontario, for chemical analysis for the above listed parameters. AGAT Laboratories is certified by CALA.

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## 5.8 RESIDUE MANAGEMENT PROCEDURES

The management of residues such as soil cuttings, purged groundwater and fluids from equipment cleaning was conducted as indicated in the table below.

**Table 5.3 Summary of Residue Management Procedures**

RESIDUE	MANAGEMENT PROCEDURE
i. Soil cuttings from drilling and excavations	Soil cuttings were scattered in the vicinity of the boreholes.
ii. Water from well development and purging	Groundwater from the development, purging and sampling of the monitoring wells was discharged down gradient, away from the monitoring wells.
iii. Fluids from equipment cleaning.	Equipment cleaning water was emptied onto the ground down gradient of the wells.

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## 5.9 ELEVATION SURVEY

The existing ground surface and top of pipe (well casing) elevations of the groundwater monitoring wells were surveyed by WSP personnel. The ground surface elevations are included on the borehole logs in **Appendix A**.

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## 5.10 QUALITY ASSURANCE AND QUALITY CONTROL MEASURES

Sample containers were labelled with unique sample identification, the project number, and the sampling date. A laboratory-supplied chain of custody was completed for each laboratory submission; one copy was retained for the project file, while the remaining copy accompanied the samples to the laboratory.

Nitrile gloves, used during sample handling, were replaced after each sample was collected to reduce the potential for cross-contamination of the samples. Field equipment was decontaminated and rinsed with de-ionized water between samples.

As part of the quality assurance/quality control (QA/QC) program for the project, a minimum of one (1) blind field duplicate sample for every ten samples was collected and analyzed for each parameter group in both soil and groundwater. The relative percent difference (RPD) between duplicate samples was calculated in accordance with the *Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act as amended July 1, 2011* (i.e., 2011 Protocol). The calculated RPD was assessed against the recommended performance criteria outlined in the 2011 Protocol where the measured concentration was greater than 5 times the laboratory reportable detection limit (RDL).

AGAT Laboratories also performed QA/QC procedures as outlined in their CALA procedures. These procedures included analysis of lab duplicates and blanks as well as analysis of surrogate recovery as outlined in the Certificates of Analysis provided in **Appendix B**.

# 6 REVIEW AND EVALUATION

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## 6.1 GEOLOGY/SOIL STRATIGRAPHY

A brief summary of the subsurface conditions encountered at the Site is presented below. Detailed borehole logs are included in **Appendix A**.

### **Mississauga:**

The Mississauga portion of the Phase II Property is located within a Bevelled Till Plains physiographic region.

Boreholes BH21-1, BH21-12, BH21-42, BH21-43 and BH21-44 were advanced through an initial layer of sandy silt to a max depth of 1.22 mbgs, underlain by clayey silt to a max depth of 1.83 mbgs. In BH21-12, BH21-42, BH21-43 and BH21-44, this was underlain by silty clay to clay, ranging in depth from 0.76 to 9.75 mbgs. Bedrock was not encountered in this portion of the investigation, and is expected at depths greater than 7.3 mbgs based on available MECP well records.

### **Brampton:**

The northern part of the Brampton portion of the Site and Study Area is located within a Drumlinized Till Plains physiographic region (BH21-18 through BH21-24). The southern part is located within a Bevelled Till Plains physiographic region (BH21-2 through BH21-8, BH21-16, BH21-17 and BH21-45).

BH21-45, BH21-16, BH21-2, BH21-22 and BH21-3 were advanced through a layer of sandy silt to a max depth of 6.1 mbgs, underlain by clay ranging between 1.52 to 9.75 mbgs. The clay was underlain by silty sand ranging between 7.9 and 9.14 mbgs. This was in turn underlain by red shale ranging from 6.20 mbgs to borehole termination. Shallow boreholes BH21-18 through BH21-21 were advanced through sandy silt up to 2.6 mbgs, underlain by red shale ranging from 1.2 mbgs to borehole termination. Shallow boreholes BH21-17, BH21-4, BH21-5, BH21-23 and BH21-24 were all advanced through sandy silt or silt to borehole termination. In BH21-6, sandy silt was encountered to 3.15 mbgs, and underlain by sand and pulverized rock to 6.20 mbgs, at which point red shale was encountered to borehole termination.

### **Caledon:**

The portion of the Study Area north of (and including) BH21-31 is located within a Spillway physiographic region. The southern portion is located within a Drumlinized Till Plains physiographic region.

Boreholes BH21-11, BH21-13, BH21-25, BH21-28, BH21-30 and BH21-31 were advanced through sandy silt ranging from surface to 6.1 mbgs. This was underlain by sand and gravel in BH21-11 and BH21-13 ranging from 0.7 to 9.14 mbgs. Beneath the initial sandy silt, clay was encountered in BH21-25, BH21-28, BH21-30 and BH21-31 ranging in depths from 1.27 to 9.75 mbgs. Shallow boreholes BH21-14, BH21-15, BH21-26, BH21-27, BH21-29 and BH21-37 to BH21-40 were advanced through sandy silt or silty sand to borehole termination. Pulverized rock was encountered in BH21-30, BH21-36 and BH21-32 ranging between 6.45 mbgs and 9.45 mbgs.

Bedrock was not encountered in this portion of the investigation and is expected at depths greater than 23 mbgs based on MECP well records.

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## 6.2 HYDROGEOLOGY

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### 6.2.1 ELEVATIONS

The groundwater levels in the monitoring wells ranged from surface to 6.6 mbgs across the Site on December 7, 2021. Corresponding groundwater elevations ranged from 169.0 to 421.0 masl. Regional groundwater flow direction is to the south/southeast towards Lake Ontario.

The water levels and corresponding elevations are included in Table 1, appended to this report.

Neither LNAPL nor DNAPL were found to be present in any of the monitoring wells on the Site.

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## 6.3 RESULTS OF ANALYSIS

The results of the laboratory analysis are discussed in the following sub-sections.

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### 6.3.1 SOIL TEXTURE ANALYSIS

Coarse-fine grained SCS were used (for Table 2) as a measure as the soil types most consisted of sandy silt to silty sand.

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### 6.3.2 FIELD SCREENING

During WSP's 2021 investigation, a total of 244 soil samples were screened for combustible gas concentrations using an RKI Eagle 2. The combustible gas concentrations ranged from 0 to 10 ppm. The combustible vapor readings are included on the borehole logs included in **Appendix A**. The samples that were submitted for laboratory analysis of organic parameters (VOCs, PHCs, PCBs, OCPs or PAHs) are indicated in the borehole logs provided in **Appendix A**.

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### 6.3.3 SOIL CHEMICAL QUALITY

The soil analytical results are presented in Tables 4 through Table 8. The chemical exceedances in soil are presented in Figures 3, 4 and 5. Analytical results are separated by City (Mississauga (A) /Brampton (B) /Caledon (C)).

The Laboratory Certificates of Analysis for the soil analysis are provided in **Appendix B**.

### 6.3.4 SOIL – METALS AND OTHER REGULATED PARAMETERS

A total of fifty-two (52) soil samples, including four (4) blind field duplicates for QA/QC purposes, were collected and submitted for analysis of metals and ORPs. The soil analytical results for VOCs are provided in Table 4 A/B/C.

Laboratory analysis indicated the following parameter exceedances of Table 1 SCS for metals and other regulated parameters (also shown in Figures 3-1 to 3-6):

**Table 6.1 Summary of Metal & ORP Exceedances in Soil**

SAMPLE ID	DEPTH (MBGS)	PARAMETER	UNITS	TABLE 1 SCS	TABLE 2 SCS	TABLE 8 SCS	ANALYTICAL RESULT	MUNICIPALITY
BH21-16 SS2	0.0 – 0.6	Antimony	µg/g	1.3	7.5	1.3	2.8	Brampton
		Molybdenum	µg/g	2	6.9	2	3.7	
		Zinc	µg/g	290	340	290	468	
BH21-20	0.0 – 0.6	Nickel	µg/g	1.5	100	82	142	
BH21-10 S1	0.0 – 0.6	Antimony	µg/g	1.3	7.5	1.3	3.5	Caledon
		Arsenic	µg/g	18	18	18	24	
		Molybdenum	µg/g	2	6.9	2	11	
		Selenium	µg/g	1.5	2.4	1.5	2.1	
BH21-32 SS1	0.0 – 0.6	Antimony	µg/g	1.3	7.5	1.3	1.9	Caledon
		Mercury	µg/g	0.27	0.27	0.27	0.32	
BH21-36	0.0 – 0.6	Lead	µg/g	120	120	120	205	
BH21-41 S2	0.6 – 1.2	Arsenic	µg/g	18	18	18	26	Caledon
		Molybdenum	µg/g	2	6.9	2	2.1	

### 6.3.5 SOIL – PETROLEUM HYDROCARBONS AND BTEX

A total of forty-six (46) soil samples, including two (2) blind field duplicates for QA/QC purposes, were collected and submitted for analysis of PHCs and BTEX. The soil analytical results for VOCs are provided in Table 5 A/B/C.

Laboratory analysis indicated the following parameter exceedances of Table 1 SCS for PHCs and BTEX (also shown in Figures 5-1 to 5-3):



**Table 6.2 Summary of PHC and BTEX exceedances in Soil**

SAMPLE ID	DEPTH (MBGS)	PARAMETER	UNITS	TABLE 1 SCS	TABLE 2 SCS	TABLE 8 SCS	ANALYTICAL RESULT	MUNICIPALITY
BH21-45 SS8	7.6 – 8.2	Ethylbenzene	µg/g	0.05	1.1	0.05	0.9	Brampton
		Total Xylenes	µg/g	0.05	3.1	0.05	5.55	
		PHC F2	µg/g	10	98	10	51	
BH21-31 S2	0.6 – 1.2	PHC F2	µg/g	10	98	10	13	Caledon
BH21-41 S1	0.0 – 0.6	Total Xylenes	µg/g	0.05	3.1	0.05	0.22	

### 6.3.6 SOIL – VOLATILE ORGANIC COMPOUNDS

Twelve (12) soil samples were collected and submitted for analysis of VOCs.

The soil analytical results for VOCs are provided in Table 6 A/B/C and the results of the laboratory analyses indicated that all samples analysed met the applicable Table 1 SCS

### 6.3.7 SOIL – POLYCYCLIC AROMATIC HYDROCARBONS

A total of forty-six (46) soil samples, including four (4) blind field duplicates for QA/QC purposes, were collected and submitted for analysis of PAHs. The soil analytical results for VOCs are provided in Table 7 A/B/C.

Laboratory analysis indicated the following parameter exceedances of Table 1 SCS for PAHs (also shown in Figures 4-1 to 4-4):

**Table 6.3 Summary of PAH Exceedances in Soil**

SAMPLE ID	DEPTH (MBGS)	PARAMETER	UNITS	TABLE 1 SCS	TABLE 2 SCS	TABLE 8 SCS	ANALYTICAL RESULT	MUNICIPALITY
BH21-7 SS1	0.0 – 0.6	Anthracene	µg/g	0.16	0.67	0.22	0.18	Brampton
		Fluoranthene	µg/g	0.56	0.69	0.69	1.05	
		Benz(a)anthracene	µg/g	0.36	0.5	0.36	0.56	
		Benz(a)pyrene	µg/g	0.3	0.3	0.3	0.5	
		Benzo(b)fluoranthene	µg/g	0.47	0.78	0.47	0.6	
		Fluoranthene	µg/g	0.56	0.69	0.69	0.85	

BH21-8 SS1	0.0 – 0.6	Benz(a)anthracene	µg/g	0.36	0.5	0.36	0.46	Caledon
		Benz(a)pyrene	µg/g	0.3	0.3	0.3	0.4	
		Benzo(b)fluoranthene	µg/g	0.47	0.78	0.47	0.66	
		Indeno(1,2,3-	µg/g	0.23	0.38	0.23	0.26	
BH21-45 SS1	0.0 – 0.6	Fluoranthene	µg/g	0.56	0.69	0.69	0.57	
		Benz(a)anthracene	µg/g	0.36	0.5	0.36	0.39	
		Benz(a)pyrene	µg/g	0.3	0.3	0.3	0.33	
BH21-9	1.5 – 2.1	Anthracene	µg/g	0.16	0.67	0.22	0.18	
BH21-40 S2	1.2 – 1.8	Naphthalene	µg/g	0.09	0.6	0.09	0.1	
		Benzo(b)fluoranthene	µg/g	0.47	0.78	0.47	0.53	
		Benzo(k)fluoranthene	µg/g	0.48	0.78	0.48	0.5	

### 6.3.8 SOIL – POLYCHLORINATED BIPHENYLS

Thirty-two (32) soil samples, including three (3) blind field duplicates for QA/QC purposes, were collected and submitted for analysis of PCBs. The soil analytical results for PCBs are provided in Table 8 A/B/C and the results of the laboratory analyses indicated that all samples analysed met the applicable Table 1 SCS.

### 6.3.9 SOIL – ORGANOCHLORINE PESTICIDES

Thirty-two (32) soil samples, including three (3) blind field duplicates for QA/QC purposes were collected and submitted for analysis of OCPs. The soil analytical results for OCPs are provided in Table 8 A/B/C and the results of the laboratory analyses indicated that all samples analysed met the applicable Table 1 SCS.

### 6.3.10 GROUNDWATER CHEMICAL QUALITY

The groundwater analytical results are presented in Tables 9 through 13. The chemical exceedances in groundwater are presented in Figures 6-1, 6-2 and 7-1. Chemical exceedances in groundwater were only identified in the **Brampton** portion of the Phase II Property. (For the tables, A – Mississauga, B – Brampton, C- Caledon).

The Laboratory Certificates of Analysis for the groundwater analysis completed during the present Phase II ESA are provided in **Appendix B**.

### 6.3.11 GROUNDWATER – METALS AND OTHER REGULATED PARAMETERS

A total of sixteen (16) groundwater samples were collected and submitted for analysis of metals and ORPs, including one (1) blind field duplicate for QA/QC purposes. BH21-16 and BH21-45 were

resampled for molybdenum only using low flow sampling in February 2022. The groundwater analytical results for metals and ORPs are provided in Table 9 A/B/C and the results of the laboratory analyses indicated the following exceedances of the Table 1 SCS (also shown in Figures 6-1 and 6-2):

**Table 6.4 Summary of Metal and ORP exceedances in Groundwater**

SAMPLE ID	SCREEN DEPTH (MBGS)	PARAMETER	UNITS	TABLE 1 SCS	TABLE 2 SCS	TABLE 8 SCS	DATE	ANALYTICAL RESULT
BH21-6	3.1 – 6.1	Chloride	µg/L	790000	790000	790000	06-Dec-21	<b>1460000</b>
		Chromium	µg/L	11	50	50		<b>25.3</b>
		Cobalt	µg/L	3.8	3.8	3.8		<b>4.53</b>
BH21-16	6.1 – 9.1	Molybdenum	µg/L	23	70	70	06-Dec-21	<b>24.7</b>
							11-Feb-22	<b>32.1</b>
BH21-45	6.1 – 9.1	Molybdenum	µg/L	23	70	70	01-Dec-21	<b>28</b>
							11-Feb-22	<b>57.1</b>

Exceedances were identified for chloride in BH21-6. The section 49.1 exemption under O. Reg. 153/04 is being applied by the Qualified Person on the basis that de-icing agents have been historically applied to surfaces on adjacent properties for the safety of vehicular or pedestrian traffic under conditions of snow or ice or both. On this basis, chloride is not considered as a COPC.

### 6.3.12 GROUNDWATER - PETROLEUM HYDROCARBONS AND BTEX

Nineteen (19) groundwater samples, including three (3) blind field duplicates for QA/QC purposes, were collected and submitted for the analysis of PHCs and BTEX during the present investigation.

The groundwater analytical results for PHCs are provided in Table 10 A/B/C and the results of the laboratory analyses indicated that all samples analysed met the applicable Table 1 SCS.

### 6.3.13 GROUNDWATER- VOLATILE ORGANIC COMPOUNDS

Twelve (12) groundwater samples, including two (2) blind field duplicates for QA/QC purposes, were collected and submitted for the analysis of VOCs during the present investigation.

The groundwater analytical results for VOCs are provided in Table 11 A/B/C and the results of the laboratory analyses indicated that all samples analysed met the applicable Table 1 SCS.

### 6.3.14 GROUNDWATER- POLYCYCLIC AROMATIC HYDROCARBONS

A total of sixteen (16) groundwater samples, including two (2) blind field duplicates for QA/QC purposes, were collected and submitted for analysis of PAHs. The groundwater analytical results for PAHs are provided in Table 12 A/B/C and the results of the laboratory analyses indicated the following

exceedances of the Table 1 SCS (also shown in Figure 7-1):

**Table 6.5 Summary of PAH exceedances in Groundwater**

SAMPLE ID	SCREEN DEPTH (MBGS)	PARAMETER	UNITS	TABLE 1 SCS	TABLE 2 SCS	TABLE 8 SCS	DATE	ANALYTICAL RESULT
BH21-45	6.1 – 9.1	Anthracene	µg/L	0.1	2.4	1	01-Dec-21	<b>1.79</b>
		Benz(a)anthracene	µg/L	0.2	1	1		<b>2.4</b>
		Benz(a)pyrene	µg/L	0.01	0.01	0.01		<b>3.67</b>
		Benzo(b)fluoranthene	µg/L	0.1	0.1	0.1		<b>4.92</b>
		Benzo(g,h,i)perylene	µg/L	0.2	0.2	0.2		<b>2.48</b>
		Benzo(k)fluoranthene	µg/L	0.1	0.1	0.1		<b>2.19</b>
		Chrysene	µg/L	0.1	0.1	0.1		<b>5.59</b>
		Dibenz(a,h)anthracene	µg/L	0.2	0.2	0.2		<b>0.32</b>
		Fluoranthene	µg/L	0.4	0.41	0.41		<b>17.9</b>
		Indeno(1,2,3-cd)pyrene	µg/L	2	0.2	0.2		<b>1.8</b>
		Phenanthrene	µg/L	0.1	1	1		<b>1.2</b>
		Pyrene	µg/L	0.2	4.1	4.1		<b>14.6</b>

### 6.3.15 GROUNDWATER– POLYCHLORINATED BIPHENYLS

Eight (8) groundwater samples, including one (1) blind field duplicate for QA/QC purposes, were collected and submitted for analysis of PCBs. The groundwater analytical results for PCBs are provided in Table 13 A/B/C and the results of the laboratory analyses indicated that all samples analysed met the applicable Table 1 SCS.

### 6.3.16 GROUNDWATER– ORGANOCHLORINE PESTICIDES

Three (3) groundwater samples were collected and submitted for analysis of OCPs. The groundwater analytical results for OCPs are provided in Table 13 A/B and the results of the laboratory analyses indicated that all samples analysed met the applicable Table 1 SCS.

### 6.3.17 SEDIMENT QUALITY

Sediment testing was not a part of this scope of work.

## 6.4 QUALITY ASSURANCE AND QUALITY CONTROL RESULTS

Ten (10) blind field duplicate soil samples were submitted for analysis. The calculated RPDs largely met the recommended performance criteria outlined in the 2011 Protocol, indicating acceptable correlation between samples. However, WSP notes that the nickel result in BH21-20 could not be reproduced by the laboratory within the accepted range of  $\leq 30\%$ . This result is attributed to sample heterogeneity and is not necessarily an indication on data reliability.

Four (4) blind field duplicate groundwater samples were collected. The calculated RPDs largely met the recommended performance criteria outlined in the 2011 Protocol, indicating acceptable correlation between samples. However, WSP notes that the PAH results in BH21-45 could not be reproduced within the accepted range of  $\leq 30\%$ , and metals could not be reproduced within the accepted range of  $\leq 20\%$ . These results may be attributed to sediment bias. Additional sampling via low flow technique is recommended to further assess the PAH presence identified in groundwater sampled from BH21-45.

Soil and groundwater duplicates with their parent samples and analyzed parameters are outlined in **Table 6.6**.

Three (3) trip blanks (distilled water samples), prepared by the laboratory, travelled along with the November and December 2021 groundwater samples and were analyzed by the laboratory for VOCs. The concentrations were below the RDL, indicating no contamination from the sample containers, preservatives, and transportation and storage conditions.

**Table 6.6** Summary of QA/QC Results

DATE	MEDIA	SAMPLE ID	FIELD DUPLICATE ID	PARAMETERS	QA/QC RESULTS
28-Oct-21	Soil	BH21-34 S1	QAQC-1	PCBs, OCPs	All results were within the 2011 Protocol criteria for RPD
		BH21-34 S2	QAQC-2	Metals & ORPs	All results were within the 2011 Protocol criteria for RPD
8-Nov-21		BH21-28 SS1	QAQC-3	Metals & ORPs	All results were within the 2011 Protocol criteria for RPD
28-Oct-21		BH21-34 S3	QAQC-3b	PAHs	All results were within the 2011 Protocol criteria for RPD
8-Nov-21		BH21-28 SS2	QAQC-4	PHCs, BTEX	All results were within the 2011 Protocol criteria for RPD
8-Nov-21		BH21-28 SS3	QAQC-5	PAHs, PCBs, OCPs	All results were within the 2011 Protocol criteria for RPD

23-Nov-21		BH21-20 SS1	QAQC-6	Metals & ORPs	The results for nickel exceeded the RPD criteria for metals in soil; sample heterogeneity is attributed to the disparity on reproducibility. All other results were within the 2011 Protocol criteria for RPD*
		BH21-20 SS2	QAQC-7	PAHs, PCBs, OCPs	All results were within the 2011 Protocol criteria for RPD
		BH21-20 SS3	QAQC-8	PHCs, BTEX	All results were within the 2011 Protocol criteria for RPD
1-Dec-21		BH21-16 SS2	QAQC-10	PAHs	All results were within the 2011 Protocol criteria for RPD
2-Dec-21		BH21-3 SS1	QAQC-12	Metals & ORPs	All results were within the 2011 Protocol criteria for RPD
1-Dec-21	Groundwater	BH21-45	QA/QC	PAHs, PCBs, OCPs, Metals & ORPs, PHCs, VOCs	The following parameters exceed the RPD criteria for PAHs and metals. Sample heterogeneity is attributed to the disparity on reproducibility. All other results were within the 2011 Protocol criteria for RPD*
6-Dec-21		BH21-16	QAQC-1	VOCs	All results were within the 2011 Protocol criteria for RPD
6-Dec-21		BH21-6	QAQC-2	PHCs/BTEX	All results were within the 2011 Protocol criteria for RPD
2-Dec-21		BH21-8	QAQC-2b	PAHs	All results were within the 2011 Protocol criteria for RPD

\* With regards to the reliability of the results of BH21-20 (soil) and BH21-45 (groundwater), the reported concentrations are assumed valid.

AGAT Laboratories carried out internal QA/QC measures including process recoveries, blanks, and replicate samples. The laboratory QA/QC results are provided on the Certificates of Analysis in **Appendix B**. The results were acceptable and therefore suitable for interpretation. The laboratory QA/QC results are provided on the Certificates of Analysis in **Appendix B**.

# 7 CONCLUSIONS & RECOMMENDATIONS

Based on the Limited Phase II ESA conducted by WSP, the following conclusions are set forth:

- There were no investigation locations (soil or groundwater) that reported concentrations / values in excess of the MECP Table 1 SCS within Mississauga footprint of the Site. Therefore, no further assessment is considered warranted at this time within the Mississauga footprint of the Site.
- Three (3) soil samples collected within the Brampton footprint of the Site at a depth interval of 0.0 to 0.6 mbgs (BH21-7 SS1, BH21-8 SS1 and BH21-45 SS1) did not meet the applicable MECP Table 1 SCS for PAHs. Additional evaluation through Due Diligence Risk Assessment (DDRA) is recommended.
- Two (2) soil samples collected within the Brampton footprint of the Site at a depth interval of 0.0 to 0.6 mbgs (BH21-16 SS1 and BH21-20 SS1) did not meet the applicable MECP Table 1 SCS for metals. Additional evaluation through DDRA is recommended.
- One (1) soil sample collected within the Brampton footprint of the Site at a depth interval of 7.6 to 8.2 mbgs (BH21-45 SS8) did not meet the applicable Table 1 SCS for PHCs (F1) and BTEX (ethylbenzene and xylenes). Additional evaluation through DDRA is recommended.
- Shallow groundwater quality within the Brampton footprint of the Site did not meet the MECP Table 1 SCS as of December 7, 2021. In particular, contaminant exceedances were identified at BH21-6 (cobalt and chromium; WSP notes that elevated chloride at BH21-6 does not warrant further assessment per Section 49.1 of O. Reg. 153/04 as the standard is considered met), BH21-16 (molybdenum) and BH 21-45 (molybdenum and PAHs). At the request of the Client, resampling of BH21-16 (molybdenum) and BH21-45 (molybdenum and PAHs) was undertaken on February 11, 2022, using low-flow sampling techniques. Molybdenum was detected in both confirmatory samples from BH21-16 and BH21-45 at concentrations greater than the Table 1 SCS. PAHs were not detected in the confirmatory sample from BH21-45. It is therefore inferred that the PAHs measured in the original groundwater sample from BH21-45 may have been influenced by sediment in the sample and may not be representative of the groundwater quality in this monitoring well. Additional evaluation through DDRA is recommended<sup>2</sup>.
- The risk potential for off-Site adverse effects relative to any migration of molybdenum via groundwater transport relative to concentrations observed in shallow groundwater monitoring wells BH21-16 and BH21-45 is considered low. The molybdenum concentrations are inferred to be related to the presence of clayey soil. Further, the Table 2 and 8 SCS were both met.
- The risk potential for off-Site adverse effects relative to any migration of chromium via groundwater transport relative to the concentration observed in shallow groundwater monitoring well BH21-6 is considered low. While there is insufficient information to draw conclusions on the nature (anthropogenic vs. naturally occurring) of this contaminant in shallow groundwater, the Table 2 and 8 SCS were both met.
- The risk potential for off-Site adverse effects relative to any migration of cobalt via groundwater transport relative to the concentration observed in shallow groundwater monitoring well BH21-6 is

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<sup>2</sup> The Brampton DDRA maintained a conservative approach and considered the PAH concentrations in the original groundwater sample from BH21-45 as a worst-case scenario.

increased relative to molybdenum and/or chromium concentrations identified at BH21-6, BH21-6 and/or BH21-45 on the basis that the Table 2 and 8 SCS were not met. Additional evaluation through DDRA is recommended.

- Four (4) soil samples collected within the Caledon footprint of the Site at depth intervals of 0.0 to 0.6 mbgs (BH21-10 S1, BH21-32 SS1 and BH21-36 SS1) and 0.6 to 1.2 mbgs (BH21-41 S2) did not meet the applicable MECF Table 1 SCS for metals and/or mercury. Additional evaluation through DDRA is recommended.
- Two (2) soil samples collected within the Caledon footprint of the Site at depth intervals of 1.5 to 2.1 mbgs (BH21-9 SS3) and 1.2 to 1.8 mbgs (BH21-40 S3) did not meet the applicable MECF Table 1 SCS for PAHs. Additional evaluation through DDRA is recommended.
- Two (2) soil samples collected within the Caledon footprint of the Site at depth intervals of 0.6 to 1.2 mbgs (BH21-31 S2) and 0.0 to 0.6 mbgs (BH21-41 S1) did not meet the applicable MECF Table 1 SCS for PHCs (F2; BH21-31 S2) or BTEX (xylenes; BH21-41 S1). Additional evaluation through DDRA is recommended.
- As an alternative to implementation of risk-management measures within the Caledon footprint of the Site, the Client could consider additional assessment (to further characterize lateral and vertical extents of impact) and subsequent implementation of excavation and disposal of impacted soil identified at BH21-10, BH21-41 and BH21-36. Confirmatory soil sampling and testing would be required to confirm the appropriateness of remedial excavation limits.
- Once the groundwater wells are no longer required for monitoring or sampling purposes, these wells are recommended to be appropriately decommissioned by a licensed well contractor as required by O. Reg. 903.

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## 7.1 QUALIFIER

This assignment is limited to the completion of a Limited Phase II ESA and analysis of potential contamination at the selected borehole locations. This report is prepared for the Region of Peel's sole use in the evaluation of the former Orangeville Rail property in Mississauga, Brampton and Caledon.

The Limited Phase II ESA, sampling, and laboratory analyses were completed as documented in the report. Extrapolation of data beyond the borehole locations assumes that homogenous conditions exist beyond the sampling locations, which may not be the case. Therefore, it is not feasible to state conclusively, that the subsurface conditions encountered during this investigation exist beyond the sampled locations.

The conclusions provided in this report reflect our best judgment in light of the information available at the time of report preparation. Any use, which a third party makes of this report, or any reliance on or any decisions to be made based on it, is the responsibility of such third parties. WSP accepts no responsibility for damages, if any, suffered by any third party because of decisions or actions taken, based on this report. Conclusions documented in this report do not apply to other land uses. It is understood that Site conditions, environmental or otherwise, are not static and that this report documents Site conditions at the time of the investigation.



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## 7.2 QUALIFICATIONS OF THE ASSESSORS

This report was prepared by Ms. Joanna West, GIT, who is currently an Environmental Scientist in the Toronto, Ontario office of WSP Canada Inc. She obtained an Honours Bachelor of Science degree in geology and a Master of Earth Sciences degree from the University of Toronto and has experience in conducting Phase One and Two ESAs on numerous residential, commercial, and industrial properties.

The conduct of this Limited Phase II ESA was supervised / reviewed by Mr. Christopher (Chris) Johnston, M.A., P.Geo. (Limited), QP<sub>ESA</sub>, currently the Toronto Area Team Lead for Contaminated Lands for WSP Canada Inc. Chris is licenced by Professional Geoscientists Ontario to practice in environmental site assessment and remediation, including contaminant hydrogeology, and is a Qualified Person for Environmental Site Assessment under Ontario Regulation 153/04. With 23 years of experience, Chris has conducted and managed hundreds of environmental investigations including Phase One ESAs, Phase II ESAs, and various site remediation projects across Ontario.

## 8 REFERENCES

- Ontario Ministry of the Environment, Conservation and Parks (MECP). 1996. Guidance on Sampling and Analytical Methods for Use at Contaminated Sites in Ontario. December 1996.
- Ontario Ministry of the Environment, Conservation and Parks (MECP). 2011b. Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act. July 1, 2011.
- Ontario Ministry of the Environment, Conservation and Parks (MECP). 2011c. Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act. July 1, 2011.
- Ontario Ministry of Northern Development and Mines (MNDM). 2016. Ontario Geological Society Maps. 2016.
- Ontario Ministry of the Environment, Conservation and Parks (MECP). 2016a. Environmental Monitoring and Reporting Branch Well Records. <https://www.ontario.ca/environment-and-energy/map-well-records>. Accessed January 4, 2021.
- Ontario Ministry of the Environment, Conservation and Parks (MECP). 2013. Ontario Regulation 903: “Wells.” R.R.O. 1990, under the Ontario Water Resources Act, as amended by O.Reg. 331/13.
- Environmental Risk Information Services (ERIS) 2018. ERIS Database Report, ORDC, Mississauga to Orangeville, ON. Requested by WSP Canada Inc. on February 25, 2020.
- WSP Canada Inc. (WSP) *Contaminant Overview Study, Former Orangeville Rail, Mississauga, Brampton and Caledon, ON*. June 2020.

# TABLES



**Notes for Soil & Groundwater Summary Tables - Mississauga (A-series)**

1. mbgs = metres below ground surface
2. ORPs = other regulated parameters
3. PHCs = petroleum hydrocarbons
4. VOCs = volatile organic compounds
5. PAHs = polycyclic aromatic hydrocarbons
7. APEC = area of potential environmental concern
6. - = parameter not analyzed
7. \* = pH criteria for surface soils (0 - 1.5 mbgs) is 5 to 9, for subsurface soil (below 1.5 mbgs) is 5 to 11
8. Units for all soil analyses are in µg/g (ppm) unless otherwise indicated
9. Units for all groundwater analyses are in µg/L (ppb) unless otherwise indicated
10. Table 1 RPIICC = Full Depth Background Site Condition Standards as contained in Table 1 of the Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act, published by the MECP on April 15, 2011
  
11. For soil and groundwater analytical results: **bold** = Concentration exceeds the 2011 MECP Table 1 SCS

**Table 1A Monitoring Well Installation and Groundwater Levels**

Monitoring Well ID		BH21-12	BH21-44	
Installed By		WSP	WSP	
Installation Date		18-Nov-21	17-Nov-21	
Well Status		Active	Active	
Well Inner Diameter	(mm)	50	50	
Casing Type (Flushmount / Monument)		Flushmount	Flushmount	
Top of Pipe Elevation	(masl)	173.241	172.853	
Ground Surface Elevation	(masl)	173.341	172.953	
Bottom of Concrete Seal/Top of Bentonite Seal	(mbgs)	1.3	0.3	
	(masl)	172.041	172.653	
Bottom of Bentonite Seal/Top of Sand Pack	(mbgs)	1.6	1.6	
	(masl)	171.8	171.4	
Top of Well Screen	(mbgs)	2.2	2.2	
	(masl)	171.1	170.8	
Screen Length	(m)	3.0	3.0	
Bottom of Screen	(mbgs)	5.2	5.2	
	(masl)	168.2	167.8	
22-Nov-21	Depth of GW	(mbgs)	4.3	1.6
	GW Elevation	(masl)	169.0	171.4
23-Nov-21	Depth of GW	(mbgs)	4.3	1.8
	GW Elevation	(masl)	169.0	171.2
7-Dec-21	Depth of GW	(mbgs)	4.3	1.5
	GW Elevation	(masl)	169.0	171.4

See "Notes for Soil and Groundwater Summary

**Table 2A Summary of Soil Samples Submitted for Chemical Analysis**

Borehole	Sample	Depth	Date	Parameters						APEC #
				M&ORP	PHCs	VOCs	PAHs	PCBs	OCPs	
BH21-1	SS1	0.0 - 0.6	17-Nov-21	-	-	-	-	✓	✓	13, 14, 38, 98, 114
	SS2	0.6 - 1.2		✓	-	-	✓	-	-	
	SS3	1.2 - 1.8		-	✓	-	-	-	-	
BH21-12	SS1	0.0 - 0.6	18-Nov-21	-	-	-	✓	-	-	13, 14, 38, 114
	SS3	1.5 - 2.1		-	✓	-	-	-	-	
BH21-42	SS1	0.0 - 0.6	18-Nov-21	✓	-	-	-	-	-	13, 14, 38, 114
	SS3	1.5 - 2.1		-	✓	-	-	-	-	
BH21-43	SS1	0.0 - 0.6	17-Nov-21	-	-	-	✓	✓	✓	13, 14, 38, 114
	SS2	0.8 - 1.4		✓	-	-	-	-	-	
	SS6	4.6 - 5.2		-	✓	✓	-	-	-	
BH21-44	SS1	0.0 - 0.6	17-Nov-21	✓	-	-	-	-	-	13, 14, 38, 114
	SS4	2.3 - 2.9		-	✓	-	-	-	-	

See "Notes for Soil and Groundwater Summary Tables" included at the beginning of this Section

**Table 3A Summary of Groundwater Samples Submitted for Chemical Analysis**

Monitoring Well ID	Screened Interval (mbgs)	Date	Parameters					APEC #	
			M&ORP	PHCs	VOCs	PAHs	PCBs		OCPs
BH21-12	2.2 - 5.2	23-Nov-21	✓	✓	-	✓	✓	✓	13, 14, 38, 114
BH21-44	2.2 - 5.2	23-Nov-21	✓	✓	-	✓	✓	✓	13, 14, 38, 114

See "Notes for Soil and Groundwater Summary Tables" included at the beginning of this Section

**Table 4A Soil Analytical Results - Metals & ORPs**

Parameter		BH21-1 SS2	BH21-42 SS1	BH21-43 SS2	BH21-44 SS1
Date of Collection	Table 1 RPIICC	Nov 17, 2021	Nov 18, 2021	Nov 17, 2021	Nov 17, 2021
Date Reported		Nov 29, 2021	Nov 26, 2021	Nov 29, 2021	Nov 29, 2021
Sampling Depth (mbgs)		0.8 - 1.4	0.0 - 0.6	0.8 - 1.4	0.0 - 0.6
Analytical Report Reference No.		21T831518	21T831991	21T831518	21T831518
Antimony	1.3	<0.8	<0.8	<0.8	<0.8
Arsenic	18	5	7	3	9
Barium	220	55.6	49.2	28.8	37.7
Beryllium	2.5	<0.4	<0.4	<0.4	<0.4
Boron	36	6	7	<5	5
Boron (Hot Water Extractable)	NA	<0.10	<0.10	<0.10	0.10
Cadmium	1.2	<0.5	<0.5	<0.5	<0.5
Chromium	70	17	19	8	13
Cobalt	21	9.1	9.2	3.1	6.2
Copper	92	20.3	35.3	7.2	28.4
Lead	120	7	15	4	14
Molybdenum	2	<0.5	<0.5	<0.5	<0.5
Nickel	82	17	20	6	12
Selenium	1.5	<0.8	<0.8	<0.8	<0.8
Silver	0.5	<0.5	<0.5	<0.5	<0.5
Thallium	1	<0.5	<0.5	<0.5	<0.5
Uranium	2.5	0.6	<0.50	<0.50	<0.50
Vanadium	86	22.2	25.3	15.5	18.9
Zinc	290	45	51	25	39
Chromium, Hexavalent	0.66	<0.2	<0.2	<0.2	<0.2
Cyanide, Free	0.051	<0.040	<0.040	<0.040	<0.040
Mercury	0.27	<0.10	<0.10	<0.10	<0.10
Electrical Conductivity (2:1)	0.57	0.508	0.110	0.103	0.107
Sodium Adsorption Ratio	2.4	0.233	0.090	0.089	0.068
pH, 2:1 CaCl2 Extraction	*	7.67	7.62	7.53	7.63

See "Notes for Soil and Groundwater Summary Tables" included at the beginning of this Section



**Table 5A Soil Analytical Results - PHCs & BTEX**

Parameter		BH21-1 SS3	BH21-12 SS3	BH21-42 SS3	BH21-43 SS6	BH21-44 SS4
Date of Collection	Table 1 RPIICC	Nov 17, 2021	Nov 18, 2021	Nov 18, 2021	Nov 17, 2021	Nov 17, 2021
Date Reported		Nov 29, 2021	Nov 26, 2021	Nov 26, 2021	Nov 29, 2021	Nov 29, 2021
Sampling Depth (mbgs)		1.5 - 2.1	1.5 - 2.1	1.5 - 2.1	4.6 - 5.2	2.3 - 2.9
Analytical Report Reference No.		21T831518	21T831991	21T831991	21T831518	21T831518
Benzene	0.02	<0.005	<0.005	<0.005	<0.005	<0.005
Toluene	0.2	<0.05	<0.05	<0.05	<0.05	<0.05
Ethylbenzene	0.05	<0.01	<0.01	<0.01	<0.01	<0.01
Total Xylenes	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
F1 (C6 to C10) minus BTEX	25	<10	<10	<10	<10	<10
F2 (C10 to C16)	10	<10	<10	<10	<10	<10
F3 (C16 to C34)	240	31	61	32	16	<10
F4 (C34 to C50)	120	11	22	12	15	<10

See "Notes for Soil and Groundwater Summary Tables" included at the beginning of this Section

**Table 6A Soil Analytical Results - VOCs**

Parameter	BH21-43 SS6	
Date of Collection	Table 1 RPIICC	Nov 17, 2021
Date Reported		Nov 29, 2021
Sampling Depth (mbgs)		4.6 - 5.2
Analytical Report Reference No.		21T831518
Acetone	0.5	<0.1
Benzene	0.02	<0.005
Bromodichloromethane	0.05	<0.01
Bromoform	0.05	<0.01
Bromomethane	0.05	<0.01
Carbon Tetrachloride	0.05	<0.0005
Chlorobenzene	0.05	<0.01
Chloroform	0.05	<0.01
Dibromochloromethane	0.05	<0.01
Dichlorobenzene, 1,2-	0.05	<0.01
Dichlorobenzene, 1,3-	0.05	<0.01
Dichlorobenzene, 1,4-	0.05	<0.01
Dichlorodifluoromethane	0.05	<0.01
Dichloroethane, 1,1-	0.05	<0.01
Dichloroethane, 1,2-	0.05	<0.002
Dichloroethylene, 1,1-	0.05	<0.01
Dichloroethylene, Cis- 1,2-	0.05	<0.01
Dichloroethylene, Trans- 1,2-	0.05	<0.01
Dichloropropane, 1,2-	0.05	<0.01
1,3-Dichloropropene (Cis + Trans)	0.05	<0.01
Ethylbenzene	0.05	<0.01
Ethylene Dibromide	0.05	<0.01
Hexane, n-	0.05	-
Methyl Ethyl Ketone	0.5	<0.1
Methyl Isobutyl Ketone	0.5	<0.1
Methyl tert-butyl Ether	0.05	<0.01
Methylene Chloride	0.05	<0.01
Styrene	0.05	<0.01
Tetrachloroethane, 1,1,1,2-	0.05	<0.01
Tetrachloroethane, 1,1,2,2-	0.05	<0.01
Tetrachloroethylene	0.05	-
Toluene	0.2	<0.01
Trichloroethane, 1,1,1-	0.05	<0.01
Trichloroethane, 1,1,2-	0.05	<0.01
Trichloroethylene	0.05	<0.01
Trichlorofluoromethane	0.25	<0.01
Vinyl Chloride	0.02	<0.0002
Xylene mixture	0.05	<0.01

See "Notes for Soil and Groundwater Summary Tables" included at the beginning of this Section

**Table 7A Soil Analytical Results - PAHs**

Parameter		BH21-1 SS1	BH21-12 SS1	BH21-43 SS1
Date of Collection	Table 1 RPIICC	Nov 17, 2021	Nov 18, 2021	Nov 17, 2021
Date Reported		Nov 29, 2021	Nov 26, 2021	Nov 29, 2021
Sampling Depth (mbgs)		0.8 - 1.4	0.0 - 0.6	0.0 - 0.6
Analytical Report Reference No.		21T831518	21T831991	21T831518
Naphthalene	0.09	<0.05	<0.05	<0.05
Acenaphthylene	0.093	<0.05	<0.05	<0.05
Acenaphthene	0.072	<0.05	<0.05	<0.05
Fluorene	0.12	<0.05	<0.05	<0.05
Phenanthrene	0.69	<0.05	<0.05	<0.05
Anthracene	0.16	<0.05	<0.05	<0.05
Fluoranthene	0.56	<0.05	0.06	0.07
Pyrene	1	<0.05	0.06	0.07
Benz(a)anthracene	0.36	<0.05	<0.05	<0.05
Chrysene	2.8	<0.05	<0.05	0.06
Benzo(b)fluoranthene	0.47	<0.05	0.13	0.11
Benzo(k)fluoranthene	0.48	<0.05	<0.05	<0.05
Benzo(a)pyrene	0.3	<0.05	0.08	0.05
Indeno(1,2,3-cd)pyrene	0.23	<0.05	0.09	0.06
Dibenz(a,h)anthracene	0.1	<0.05	<0.05	<0.05
Benzo(g,h,i)perylene	0.68	<0.05	0.11	0.07
Methylnaphthalene, 2-(1-)	0.59	<0.05	<0.05	<0.05

See "Notes for Soil and Groundwater Summary Tables" included at the beginning of this Section

**Table 8A Soil Analytical Results - PCBs and OC Pesticides**

Parameter		BH21-1 SS1	BH21-43 SS1
Date of Collection	Table 1 RPIICC	Nov 17, 2021	Nov 17, 2021
Date Reported		Nov 29, 2021	Nov 29, 2021
Sampling Depth (m bgs)		0.0 - 0.6	0.0 - 0.6
Analytical Report Reference No.		21T831518	21T831518
Polychlorinated Biphenyls	0.3	<0.10	<0.10
Aldrin	0.05	<0.005	<0.005
Chlordane	0.05	<0.007	<0.007
DDD	0.05	<0.007	<0.007
DDE	0.05	<0.007	<0.007
DDT	1.4	<0.007	<0.007
Dieldrin	0.05	<0.005	<0.005
Endosulfan	0.04	<0.005	<0.005
Endrin	0.04	<0.005	<0.005
Heptachlor	0.05	<0.005	<0.005
Heptachlor Epoxide	0.05	<0.005	<0.005
Hexachlorobenzene	0.01	<0.005	<0.005
Hexachlorobutadiene	0.01	<0.01	<0.01
Hexachlorocyclohexane Gamma-	0.01	<0.005	<0.005
Hexachloroethane	0.01	<0.01	<0.01
Methoxychlor	0.05	<0.005	<0.005

See "Notes for Soil and Groundwater Summary Tables" included at the beginning of this Section

**Table 9A Groundwater Analytical Results - Metals & ORPs**

Parameter		BH21-12	BH21-44
Date of Collection	Table 1 GW	Nov 23, 2021	Nov 23, 2021
Date Reported		Dec 03, 2021	Dec 03, 2021
Screened Depth (mbgs)		2.2 - 5.2	2.2 - 5.2
Analytical Report Reference No.		21T834096	21T834096
Antimony	1.5	<1.0	<1.0
Arsenic	13	7.8	2
Barium	610	119	101
Beryllium	0.5	<0.50	<0.50
Boron	1700	221	38
Cadmium	0.5	<0.20	<0.20
Chromium	11	<2.0	<2.0
Chromium VI	25	<2.0	<2.0
Cobalt	3.8	<0.50	0.67
Copper	5	1.7	<1.0
Cyanide	5	<2.0	<2.0
Lead	1.9	<0.50	<0.50
Mercury	0.1	<0.02	<0.02
Molybdenum	23	5.87	0.8
Nickel	14	1.9	<1.0
Selenium	5	1.6	3.3
Silver	0.3	<0.20	<0.20
Thallium	0.5	<0.30	<0.30
Uranium	8.9	1.74	1.65
Vanadium	3.9	0.78	1.01
Zinc	160	<5.0	<5.0
Sodium	490000	30100	8980
Chloride	790000	7260	7770

See "Notes for Soil and Groundwater Summary Tables" included at the beginning of this Section

**Table 10A Groundwater Analytical Results - PHCs&BTEX**

Parameter		BH21-12	BH21-44
Date of Collection	Table 1 GW	Nov 23, 2021	Nov 23, 2021
Date Reported		Dec 03, 2021	Dec 03, 2021
Screened Depth (mbgs)		2.2 - 5.2	2.2 - 5.2
Analytical Report Reference No.		21T834096	21T834096
Benzene	0.5	<0.20	<0.20
Toluene	0.8	<0.20	0.41
Ethylbenzene	0.5	<0.10	<0.10
Xylene Mixture	72	<0.20	<0.20
F1 (C6 to C10) minus BTEX	420	<25	<25
F2 (C10 to C16)	150	<100	<100
F3 (C16 to C34)	500	<100	<100
F4 (C34 to C50)	500	<100	<100

*See "Notes for Soil and Groundwater Summary Tables" included at the beginning of this Section*

**Table 11A Groundwater Analytical Results - VOCs**

NO MISSISSAUGA DATA

**Table 12A Groundwater Analytical Results - PAHs**

Parameter		BH21-12	BH21-44
Date of Collection	Table 1 GW	Nov 23, 2021	Nov 23, 2021
Date Reported		Dec 03, 2021	Dec 03, 2021
Screened Depth (mbgs)		2.2 - 5.2	2.2 - 5.2
Analytical Report Reference No.		21T834096	21T834096
Acenaphthene	4.1	<0.20	<0.20
Acenaphthylene	1	<0.20	<0.20
Anthracene	0.1	<0.10	<0.10
Benz(a)anthracene	0.2	<0.20	<0.20
Benzo(a)pyrene	0.01	<0.01	<0.01
Benzo(b)fluoranthene	0.1	<0.10	<0.10
Benzo(g,h,i)perylene	0.2	<0.20	<0.20
Benzo(k)fluoranthene	0.1	<0.10	<0.10
Chrysene	0.1	<0.10	<0.10
Dibenz(a,h)anthracene	0.2	<0.20	<0.20
Fluoranthene	0.4	<0.20	<0.20
Fluorene	120	<0.20	<0.20
Indeno(1,2,3-cd)pyrene	0.2	<0.20	<0.20
Methyl Naphthalene, 2-and 1-	2	<0.20	<0.20
Naphthalene	7	<0.20	<0.20
Phenanthrene	0.1	<0.10	<0.10
Pyrene	0.2	<0.20	<0.20

See "Notes for Soil and Groundwater Summary Tables" included at the beginning of this Section



Table 13A Groundwater Analytical Results - PCBs and OC Pesticides

Parameter		BH21-12	BH21-44
Date of Collection	Table 1 GW	Nov 23, 2021	Nov 23, 2021
Date Reported		Dec 03, 2021	Dec 03, 2021
Screened Depth (mbgs)		2.2 - 5.2	2.2 - 5.2
Analytical Report Reference No.		21T834096	21T834096
Polychlorinated Biphenyls	0.2	<0.1	<0.1
Aldrin	0.01	<0.01	<0.01
Chlordane	0.06	<0.04	<0.04
DDD	1.8	<0.05	<0.05
DDE	10	<0.01	<0.01
DDT	0.05	<0.04	<0.04
Dieldrin	0.05	<0.02	<0.02
Endosulfan	0.05	<0.05	<0.05
Endrin	0.05	<0.05	<0.05
Heptachlor	0.01	<0.01	<0.01
Heptachlor Epoxide	0.01	<0.01	<0.01
Hexachlorobenzene	0.01	<0.01	<0.01
Hexachlorobutadiene	0.01	<0.01	<0.01
Hexachlorocyclohexane Gamma-	0.01	<0.01	<0.01
Hexachloroethane	0.01	<0.01	<0.01
Methoxychlor	0.05	<0.04	<0.04

See "Notes for Soil and Groundwater Summary Tables" included at the end of this Section

Table 14A Summary of Maximum Concentrations in Soil

Group	Parameter	Table 1 RPIICC	Maximum Concentration	Location
BTEX	Benzene	0.02	<0.005	all samples
	Ethylbenzene	0.05	<0.01	all samples
	Toluene	0.2	<0.05	all samples
	Total Xylenes	0.05	<0.05	all samples
Metals	Barium	220	55.6	BH21-1 SS2
	Beryllium	2.5	<0.4	all samples
	Boron	36	7	BH21-42 SS1
	Cadmium	1.2	<0.5	all samples
	Chromium	70	19	BH21-42 SS1
	Cobalt	21	9.2	BH21-42 SS1
	Copper	92	35.3	BH21-42 SS1
	Lead	120	15	BH21-42 SS1
	Molybdenum	2	<0.5	all samples
	Nickel	82	20	BH21-42 SS1
	Silver	0.5	<0.5	all samples
	Thallium	1	<0.5	all samples
	Uranium	2.5	0.6	BH21-1 SS2
	Vanadium	86	25.3	BH21-42 SS1
	Zinc	290	51	BH21-42 SS1
As, Se, Sb	Antimony	1.3	<0.8	all samples
	Arsenic	18	9	BH21-44 SS1
	Selenium	1.5	<0.8	all samples
PAHs	Acenaphthene	0.072	<0.05	all samples
	Acenaphthylene	0.093	<0.05	all samples
	Anthracene	0.16	<0.05	all samples
	Benz(a)anthracene	0.36	<0.05	all samples
	Benzo(a)pyrene	0.3	0.08	BH21-12 SS1
	Benzo(b)fluoranthene	0.47	0.13	BH21-12 SS1
	Benzo(g,h,i)perylene	0.68	0.11	BH21-12 SS1
	Benzo(k)fluoranthene	0.48	<0.05	all samples
	Chrysene	2.8	0.06	BH21-43 SS1
	Dibenz(a,h)anthracene	0.1	<0.05	all samples
	Fluoranthene	0.56	0.07	BH21-43 SS1
	Fluorene	0.12	<0.05	all samples
	Indeno(1,2,3-cd)pyrene	0.23	0.09	BH21-12 SS1
	Methylnaphthalene, 2-(1-)	0.59	<0.05	all samples
	Naphthalene	0.09	<0.05	all samples
	Phenanthrene	0.69	<0.05	all samples
	Pyrene	1	0.07	BH21-43 SS1
PHCs	F1 (C6 to C10) minus BTEX	25	<10	all samples
	F2 (C10 to C16)	10	<10	all samples
	F3 (C16 to C34)	240	61	BH21-12 SS3
	F4 (C34 to C50)	120	22	BH21-12 SS3
	Acetone	0.5	<0.1	all samples
	Bromodichloromethane	0.05	<0.01	all samples
	Bromoform	0.05	<0.01	all samples
	Bromomethane	0.05	<0.01	all samples
	Carbon Tetrachloride	0.05	<0.0005	all samples
	Chlorobenzene	0.05	<0.01	all samples
	Chloroform	0.05	<0.01	all samples
	Dibromochloromethane	0.05	<0.01	all samples
	Dichlorobenzene, 1,2-	0.05	<0.01	all samples

**Table 14A Summary of Maximum Concentrations in Soil**

Group	Parameter	Table 1 RPIICC	Maximum Concentration	Location
VOCs	Dichlorobenzene, 1,3-	0.05	<0.01	all samples
	Dichlorobenzene, 1,4-	0.05	<0.01	all samples
	Dichlorodifluoromethane	0.05	<0.01	all samples
	Dichloroethane, 1,1-	0.05	<0.01	all samples
	Dichloroethane, 1,2-	0.05	<0.002	all samples
	Dichloroethylene, 1,1-	0.05	<0.01	all samples
	Dichloroethylene, Cis- 1,2-	0.05	<0.01	all samples
	Dichloroethylene, Trans- 1,2-	0.05	<0.01	all samples
	Dichloropropane, 1,2-	0.05	<0.01	all samples
	1,3-Dichloropropene (Cis + Trans)	0.05	<0.01	all samples
	Ethylene Dibromide	0.05	<0.01	all samples
	Hexane, n-	0.05	-	all samples
	Methyl Ethyl Ketone	0.5	<0.1	all samples
	Methyl Isobutyl Ketone	0.5	<0.1	all samples
	Methyl tert-butyl Ether	0.05	<0.01	all samples
	Methylene Chloride	0.05	<0.01	all samples
	Styrene	0.05	<0.01	all samples
	Tetrachloroethane, 1,1,1,2-	0.05	<0.01	all samples
	Tetrachloroethane, 1,1,2,2-	0.05	<0.01	all samples
	Tetrachloroethylene	0.05	-	all samples
	Trichloroethane, 1,1,1-	0.05	<0.01	all samples
Trichloroethane, 1,1,2-	0.05	<0.01	all samples	
Trichloroethylene	0.05	<0.01	all samples	
Trichlorofluoromethane	0.25	<0.01	all samples	
Vinyl Chloride	0.02	<0.0002	all samples	
ORPs	Chromium, Hexavalent	0.66	<0.2	all samples
	Cyanide, Free	0.051	<0.040	all samples
	Electrical Conductivity (2:1)	0.57	0.508	BH21-1 SS2
	Mercury	0.27	<0.10	all samples
	Sodium Adsorption Ratio	2.4	0.233	BH21-1 SS2
	pH, 2:1 CaCl2 Extraction	*	7.67	BH21-1 SS2
PCBs	Polychlorinated Biphenyls	0.3	<0.10	all samples

See "Notes for Soil and Groundwater Summary Tables" included at the beginning of this Section

**Table 15A Summary of Maximum Concentrations in Groundwater**

Group	Parameter	Table 1 GW	Maximum Concentration	Location
BTEX	Benzene	0.5	<0.20	all samples
	Ethylbenzene	0.5	<0.10	all samples
	Toluene	0.8	0.41	BH21-44
	Xylene Mixture	72	<0.20	all samples
Metals	Barium	610	119	BH21-12
	Beryllium	0.5	<0.50	all samples
	Boron	1700	221	BH21-12
	Cadmium	0.5	<0.20	all samples
	Chromium	11	<2.0	all samples
	Cobalt	3.8	0.67	BH21-44
	Copper	5	1.7	BH21-12
	Lead	1.9	<0.50	all samples
	Molybdenum	23	5.87	BH21-12
	Nickel	14	1.9	BH21-12
	Silver	0.3	<0.20	all samples
	Thallium	0.5	<0.30	all samples
	Uranium	8.9	1.74	BH21-12
	Vanadium	3.9	1.01	BH21-44
	Zinc	160	<5.0	all samples
As, Se, Sb	Antimony	1.5	<1.0	all samples
	Arsenic	13	7.8	BH21-12
	Selenium	5	3.3	BH21-44
Na	Sodium	490000	30100	BH21-12
PAHs	Acenaphthene	4.1	<0.20	all samples
	Acenaphthylene	1	<0.20	all samples
	Anthracene	0.1	<0.10	all samples
	Benz(a)anthracene	0.2	<0.20	all samples
	Benzo(a)pyrene	0.01	<0.01	all samples
	Benzo(b)fluoranthene	0.1	<0.10	all samples
	Benzo(g,h,i)perylene	0.2	<0.20	all samples
	Benzo(k)fluoranthene	0.1	<0.10	all samples
	Chrysene	0.1	<0.10	all samples
	Dibenz(a,h)anthracene	0.2	<0.20	all samples
	Fluoranthene	0.4	<0.20	all samples
	Fluorene	120	<0.20	all samples
	Indeno(1,2,3-cd)pyrene	0.2	<0.20	all samples
	Methyl Naphthalene, 2-and 1-	2	<0.20	all samples
	Naphthalene	7	<0.20	all samples
	Phenanthrene	0.1	<0.10	all samples
Pyrene	0.2	<0.20	all samples	
PHCs	F1 (C6 to C10) minus BTEX	420	<25	all samples
	F2 (C10 to C16)	150	<100	all samples
	F3 (C16 to C34)	500	<100	all samples
	F4 (C34 to C50)	500	<100	all samples
	Acetone	2700	<1.0	all samples
	Bromodichloromethane	2	<0.20	all samples
	Bromoform	5	<0.10	all samples
	Bromomethane	0.89	<0.20	all samples
	Carbon Tetrachloride	0.2	<0.20	all samples
	Chlorobenzene	0.5	<0.10	all samples
	Chloroform	2	<0.20	all samples

**Table 15A Summary of Maximum Concentrations in Groundwater**

Group	Parameter	Table 1 GW	Maximum Concentration	Location
VOCs	Dibromochloromethane	2	<0.10	all samples
	Dichlorobenzene, 1,2-	0.5	<0.10	all samples
	Dichlorobenzene, 1,3-	0.5	<0.10	all samples
	Dichlorobenzene, 1,4-	0.5	<0.10	all samples
	Dichlorodifluoromethane	590	<0.20	all samples
	Dichloroethane, 1,1-	0.5	<0.30	all samples
	Dichloroethane, 1,2-	0.5	<0.20	all samples
	Dichloroethylene, 1,1-	0.5	<0.30	all samples
	Dichloroethylene, cis- 1,2-	1.6	<0.20	all samples
	Dichloroethylene, trans- 1,2-	1.6	<0.20	all samples
	Dichloropropane, 1,2-	0.5	<0.20	all samples
	Dichloropropene, 1,3-	0.5	<0.30	all samples
	Ethylene Dibromide	0.2	<0.10	all samples
	Hexane, n-	5	<0.20	all samples
	Methyl Ethyl Ketone	400	<1.0	all samples
	Methyl Isobutyl Ketone	640	<1.0	all samples
	Methyl tert-butyl ether	15	<0.20	all samples
	Methylene Chloride	5	<0.30	all samples
	Styrene	0.5	<0.10	all samples
	Tetrachloroethane, 1,1,1,2-	1.1	<0.10	all samples
	Tetrachloroethane, 1,1,1,2,2-	0.5	<0.10	all samples
	Tetrachloroethylene	0.5	<0.20	all samples
	Trichloroethane, 1,1,1-	0.5	<0.30	all samples
	Trichloroethane, 1,1,2-	0.5	<0.20	all samples
	Trichloroethylene	0.5	<0.20	all samples
	Trichlorofluoromethane	150	<0.40	all samples
	Vinyl Chloride	0.5	<0.17	all samples
ORPs	Chloride	790000	7770	BH21-44
	Chromium VI	25	<2.0	all samples
	Cyanide	5	<2.0	all samples
	Mercury	0.1	<0.02	all samples
PCBs	Polychlorinated Biphenyls	0.2	<0.10	all samples

See "Notes for Soil and Groundwater Summary Tables" included at the beginning of this Section

**Notes for Soil & Groundwater Summary Tables - Mississauga (A-series)**

1. mbgs = metres below ground surface
2. ORPs = other regulated parameters
3. PHCs = petroleum hydrocarbons
4. VOCs = volatile organic compounds
5. PAHs = polycyclic aromatic hydrocarbons
7. APEC = area of potential environmental concern
6. - = parameter not analyzed
7. \* = pH criteria for surface soils (0 - 1.5 mbgs) is 5 to 9, for subsurface soil (below 1.5 mbgs) is 5 to 11
8. Units for all soil analyses are in µg/g (ppm) unless otherwise indicated
9. Units for all groundwater analyses are in µg/L (ppb) unless otherwise indicated
10. Table 2 RPI CT = Full Depth Generic Site Condition Standards in a Potable Ground Water Condition with Coarse Textured Soils as contained in Table 2 of the Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act, published by the MECP on April 15, 2011
11. For soil and groundwater analytical results: **bold** = Concentration exceeds the 2011 MECP Table 2 SCS

**Table 1A Monitoring Well Installation and Groundwater Levels**

Monitoring Well ID		BH21-12	BH21-44	
Installed By		WSP	WSP	
Installation Date		18-Nov-21	17-Nov-21	
Well Status		Active	Active	
Well Inner Diameter	(mm)	50	50	
Casing Type (Flushmount / Monument)		Flushmount	Flushmount	
Top of Pipe Elevation	(masl)	173.241	172.853	
Ground Surface Elevation	(masl)	173.341	172.953	
Bottom of Concrete Seal/Top of Bentonite Seal	(mbgs)	1.3	0.3	
	(masl)	172.041	172.653	
Bottom of Bentonite Seal/Top of Sand Pack	(mbgs)	1.6	1.6	
	(masl)	171.8	171.4	
Top of Well Screen	(mbgs)	2.2	2.2	
	(masl)	171.1	170.8	
Screen Length	(m)	3.0	3.0	
Bottom of Screen	(mbgs)	5.2	5.2	
	(masl)	168.2	167.8	
22-Nov-21	Depth of GW	(mbgs)	4.3	1.6
	GW Elevation	(masl)	169.0	171.4
23-Nov-21	Depth of GW	(mbgs)	4.3	1.8
	GW Elevation	(masl)	169.0	171.2
7-Dec-21	Depth of GW	(mbgs)	4.3	1.5
	GW Elevation	(masl)	169.0	171.4

See "Notes for Soil and Groundwater Summary"

**Table 2A Summary of Soil Samples Submitted for Chemical Analysis**

Borehole	Sample	Depth	Date	Parameters						APEC #
				M&ORP	PHCs	VOCs	PAHs	PCBs	OCPs	
BH21-1	SS1	0.0 - 0.6	17-Nov-21	-	-	-	-	✓	✓	13, 14, 38, 98, 114
	SS2	0.6 - 1.2		✓	-	-	✓	-	-	
	SS3	1.2 - 1.8		-	✓	-	-	-	-	
BH21-12	SS1	0.0 - 0.6	18-Nov-21	-	-	-	✓	-	-	13, 14, 38, 114
	SS3	1.5 - 2.1		-	✓	-	-	-	-	
BH21-42	SS1	0.0 - 0.6	18-Nov-21	✓	-	-	-	-	-	13, 14, 38, 114
	SS3	1.5 - 2.1		-	✓	-	-	-	-	
BH21-43	SS1	0.0 - 0.6	17-Nov-21	-	-	-	✓	✓	✓	13, 14, 38, 114
	SS2	0.8 - 1.4		✓	-	-	-	-	-	
	SS6	4.6 - 5.2		-	✓	✓	-	-	-	
BH21-44	SS1	0.0 - 0.6	17-Nov-21	✓	-	-	-	-	-	13, 14, 38, 114
	SS4	2.3 - 2.9		-	✓	-	-	-	-	

See "Notes for Soil and Groundwater Summary Tables" included at the beginning of this Section





**Table 3A Summary of Groundwater Samples Submitted for Chemical Analysis**

Monitoring Well ID	Screened Interval (mbgs)	Date	Parameters					APEC #	
			M&ORP	PHCs	VOCs	PAHs	PCBs		OCPs
BH21-12	2.2 - 5.2	23-Nov-21	✓	✓	-	✓	✓	✓	13, 14, 38, 114
BH21-44	2.2 - 5.2	23-Nov-21	✓	✓	-	✓	✓	✓	13, 14, 38, 114

See "Notes for Soil and Groundwater Summary Tables" included at the beginning of this Section

**Table 4A Soil Analytical Results - Metals & ORPs**

Parameter		BH21-1 SS2	BH21-42 SS1	BH21-43 SS2	BH21-44 SS1
Date of Collection	Table 2 RPI CT	Nov 17, 2021	Nov 18, 2021	Nov 17, 2021	Nov 17, 2021
Date Reported		Nov 29, 2021	Nov 26, 2021	Nov 29, 2021	Nov 29, 2021
Sampling Depth (mbgs)		0.8 - 1.4	0.0 - 0.6	0.8 - 1.4	0.0 - 0.6
Analytical Report Reference No.		21T831518	21T831991	21T831518	21T831518
Antimony	7.5	<0.8	<0.8	<0.8	<0.8
Arsenic	18	5	7	3	9
Barium	390	55.6	49.2	28.8	37.7
Beryllium	4	<0.4	<0.4	<0.4	<0.4
Boron	120	6	7	<5	5
Boron (Hot Water Extractable)	1.5	<0.10	<0.10	<0.10	0.10
Cadmium	1.2	<0.5	<0.5	<0.5	<0.5
Chromium	160	17	19	8	13
Cobalt	22	9.1	9.2	3.1	6.2
Copper	140	20.3	35.3	7.2	28.4
Lead	120	7	15	4	14
Molybdenum	6.9	<0.5	<0.5	<0.5	<0.5
Nickel	100	17	20	6	12
Selenium	2.4	<0.8	<0.8	<0.8	<0.8
Silver	20	<0.5	<0.5	<0.5	<0.5
Thallium	1	<0.5	<0.5	<0.5	<0.5
Uranium	23	0.6	<0.50	<0.50	<0.50
Vanadium	86	22.2	25.3	15.5	18.9
Zinc	340	45	51	25	39
Chromium, Hexavalent	8	<0.2	<0.2	<0.2	<0.2
Cyanide, Free	0.051	<0.040	<0.040	<0.040	<0.040
Mercury	0.27	<0.10	<0.10	<0.10	<0.10
Electrical Conductivity (2:1)	0.7	0.508	0.110	0.103	0.107
Sodium Adsorption Ratio	5	0.233	0.090	0.089	0.068
pH, 2:1 CaCl2 Extraction	*	7.67	7.62	7.53	7.63

See "Notes for Soil and Groundwater Summary Tables" included at the beginning of this Section

**Table 5A Soil Analytical Results - PHCs & BTEX**

Parameter		BH21-1 SS3	BH21-12 SS3	BH21-42 SS3	BH21-43 SS6	BH21-44 SS4
Date of Collection	Table 2 RPI CT	Nov 17, 2021	Nov 18, 2021	Nov 18, 2021	Nov 17, 2021	Nov 17, 2021
Date Reported		Nov 29, 2021	Nov 26, 2021	Nov 26, 2021	Nov 29, 2021	Nov 29, 2021
Sampling Depth (mbgs)		1.5 - 2.1	1.5 - 2.1	1.5 - 2.1	4.6 - 5.2	2.3 - 2.9
Analytical Report Reference No.		21T831518	21T831991	21T831991	21T831518	21T831518
Benzene	0.21	<0.005	<0.005	<0.005	<0.005	<0.005
Toluene	2.3	<0.05	<0.05	<0.05	<0.05	<0.05
Ethylbenzene	1.1	<0.01	<0.01	<0.01	<0.01	<0.01
Total Xylenes	3.1	<0.05	<0.05	<0.05	<0.05	<0.05
F1 (C6 to C10) minus BTEX	55	<10	<10	<10	<10	<10
F2 (C10 to C16)	98	<10	<10	<10	<10	<10
F3 (C16 to C34)	300	31	61	32	16	<10
F4 (C34 to C50)	2800	11	22	12	15	<10

See "Notes for Soil and Groundwater Summary Tables" included at the beginning of this Section

**Table 6A Soil Analytical Results - VOCs**

Parameter	BH21-43 SS6	
Date of Collection	Table 2 RPI CT	Nov 17, 2021
Date Reported		Nov 29, 2021
Sampling Depth (mbgs)		4.6 - 5.2
Analytical Report Reference No.		21T831518
Acetone	16	<0.1
Benzene	0.21	<0.005
Bromodichloromethane	1.5	<0.01
Bromoform	0.27	<0.01
Bromomethane	0.05	<0.01
Carbon Tetrachloride	0.05	<0.0005
Chlorobenzene	2.4	<0.01
Chloroform	0.05	<0.01
Dibromochloromethane	2.3	<0.01
Dichlorobenzene, 1,2-	1.2	<0.01
Dichlorobenzene, 1,3-	4.8	<0.01
Dichlorobenzene, 1,4-	0.083	<0.01
Dichlorodifluoromethane	16	<0.01
Dichloroethane, 1,1-	0.47	<0.01
Dichloroethane, 1,2-	0.05	<0.002
Dichloroethylene, 1,1-	0.05	<0.01
Dichloroethylene, Cis- 1,2-	1.9	<0.01
Dichloroethylene, Trans- 1,2-	0.084	<0.01
Dichloropropane, 1,2-	0.05	<0.01
1,3-Dichloropropene (Cis + Trans)	0.05	<0.01
Ethylbenzene	1.1	<0.01
Ethylene Dibromide	0.05	<0.01
Hexane, n-	2.8	-
Methyl Ethyl Ketone	16	<0.1
Methyl Isobutyl Ketone	1.7	<0.1
Methyl tert-butyl Ether	0.75	<0.01
Methylene Chloride	0.1	<0.01
Styrene	0.7	<0.01
Tetrachloroethane, 1,1,1,2-	0.058	<0.01
Tetrachloroethane, 1,1,2,2-	0.05	<0.01
Tetrachloroethylene	0.28	-
Toluene	2.3	<0.01
Trichloroethane, 1,1,1-	0.38	<0.01
Trichloroethane, 1,1,2-	0.05	<0.01
Trichloroethylene	0.061	<0.01
Trichlorofluoromethane	4	<0.01
Vinyl Chloride	0.02	<0.0002
Xylene mixture	3.1	<0.01

See "Notes for Soil and Groundwater Summary Tables" included at the beginning of this Section

**Table 7A Soil Analytical Results - PAHs**

Parameter		BH21-1 SS1	BH21-12 SS1	BH21-43 SS1
Date of Collection	Table 2 RPI CT	Nov 17, 2021	Nov 18, 2021	Nov 17, 2021
Date Reported		Nov 29, 2021	Nov 26, 2021	Nov 29, 2021
Sampling Depth (mbgs)		0.8 - 1.4	0.0 - 0.6	0.0 - 0.6
Analytical Report Reference No.		21T831518	21T831991	21T831518
Naphthalene	0.6	<0.05	<0.05	<0.05
Acenaphthylene	0.15	<0.05	<0.05	<0.05
Acenaphthene	7.9	<0.05	<0.05	<0.05
Fluorene	62	<0.05	<0.05	<0.05
Phenanthrene	6.2	<0.05	<0.05	<0.05
Anthracene	0.67	<0.05	<0.05	<0.05
Fluoranthene	0.69	<0.05	0.06	0.07
Pyrene	78	<0.05	0.06	0.07
Benz(a)anthracene	0.5	<0.05	<0.05	<0.05
Chrysene	7	<0.05	<0.05	0.06
Benzo(b)fluoranthene	0.78	<0.05	0.13	0.11
Benzo(k)fluoranthene	0.78	<0.05	<0.05	<0.05
Benzo(a)pyrene	0.3	<0.05	0.08	0.05
Indeno(1,2,3-cd)pyrene	0.38	<0.05	0.09	0.06
Dibenz(a,h)anthracene	0.1	<0.05	<0.05	<0.05
Benzo(g,h,i)perylene	6.6	<0.05	0.11	0.07
Methylnaphthalene, 2-(1-)	0.99	<0.05	<0.05	<0.05

See "Notes for Soil and Groundwater Summary Tables" included at the beginning of this Section

**Table 8A Soil Analytical Results - PCBs and OC Pesticides**

Parameter		BH21-1 SS1	BH21-43 SS1
Date of Collection	Table 2 RPI CT	Nov 17, 2021	Nov 17, 2021
Date Reported		Nov 29, 2021	Nov 29, 2021
Sampling Depth (m bgs)		0.0 - 0.6	0.0 - 0.6
Analytical Report Reference No.		21T831518	21T831518
Polychlorinated Biphenyls	0.35	<0.10	<0.10
Aldrin	0.05	<0.005	<0.005
Chlordane	0.05	<0.007	<0.007
DDD	3.3	<0.007	<0.007
DDE	0.26	<0.007	<0.007
DDT	1.4	<0.007	<0.007
Dieldrin	0.05	<0.005	<0.005
Endosulfan	0.04	<0.005	<0.005
Endrin	0.04	<0.005	<0.005
Heptachlor	0.15	<0.005	<0.005
Heptachlor Epoxide	0.05	<0.005	<0.005
Hexachlorobenzene	0.52	<0.005	<0.005
Hexachlorobutadiene	0.012	<0.01	<0.01
Hexachlorocyclohexane Gamma-	0.056	<0.005	<0.005
Hexachloroethane	0.089	<0.01	<0.01
Methoxychlor	0.13	<0.005	<0.005

See "Notes for Soil and Groundwater Summary Tables" included at the beginning of this Section

**Table 9A Groundwater Analytical Results - Metals & ORPs**

Parameter		BH21-12	BH21-44
Date of Collection	Table 2 Potable GW CT	Nov 23, 2021	Nov 23, 2021
Date Reported		Dec 03, 2021	Dec 03, 2021
Screened Depth (mbgs)		2.2 - 5.2	2.2 - 5.2
Analytical Report Reference No.		21T834096	21T834096
Antimony	6	<1.0	<1.0
Arsenic	25	7.8	2
Barium	1000	119	101
Beryllium	4	<0.50	<0.50
Boron	5000	221	38
Cadmium	2.7	<0.20	<0.20
Chromium	50	<2.0	<2.0
Chromium VI	25	<2.0	<2.0
Cobalt	3.8	<0.50	0.67
Copper	87	1.7	<1.0
Cyanide	66	<2.0	<2.0
Lead	10	<0.50	<0.50
Mercury	0.29	<0.02	<0.02
Molybdenum	70	5.87	0.8
Nickel	100	1.9	<1.0
Selenium	10	1.6	3.3
Silver	1.5	<0.20	<0.20
Thallium	2	<0.30	<0.30
Uranium	20	1.74	1.65
Vanadium	6.2	0.78	1.01
Zinc	1100	<5.0	<5.0
Sodium	490000	30100	8980
Chloride	790000	7260	7770

See "Notes for Soil and Groundwater Summary Tables" included at the beginning of this Section

**Table 10A Groundwater Analytical Results - PHCs&BTEX**

Parameter		BH21-12	BH21-44
Date of Collection	Table 2 Potable GW CT	Nov 23, 2021	Nov 23, 2021
Date Reported		Dec 03, 2021	Dec 03, 2021
Screened Depth (mbgs)		2.2 - 5.2	2.2 - 5.2
Analytical Report Reference No.		21T834096	21T834096
Benzene	5	<0.20	<0.20
Toluene	24	<0.20	0.41
Ethylbenzene	2.4	<0.10	<0.10
Xylene Mixture	300	<0.20	<0.20
F1 (C6 to C10) minus BTEX	750	<25	<25
F2 (C10 to C16)	150	<100	<100
F3 (C16 to C34)	500	<100	<100
F4 (C34 to C50)	500	<100	<100

*See "Notes for Soil and Groundwater Summary Tables" included at the beginning of this Section*



**Table 11A Groundwater Analytical Results - VOCs**

NO MISSISSAUGA DATA

**Table 12A Groundwater Analytical Results - PAHs**

Parameter		BH21-12	BH21-44
Date of Collection	Table 2 Potable GW CT	Nov 23, 2021	Nov 23, 2021
Date Reported		Dec 03, 2021	Dec 03, 2021
Screened Depth (mbgs)		2.2 - 5.2	2.2 - 5.2
Analytical Report Reference No.		21T834096	21T834096
Acenaphthene	4.1	<0.20	<0.20
Acenaphthylene	1	<0.20	<0.20
Anthracene	2.4	<0.10	<0.10
Benz(a)anthracene	1	<0.20	<0.20
Benzo(a)pyrene	0.01	<0.01	<0.01
Benzo(b)fluoranthene	0.1	<0.10	<0.10
Benzo(g,h,i)perylene	0.2	<0.20	<0.20
Benzo(k)fluoranthene	0.1	<0.10	<0.10
Chrysene	0.1	<0.10	<0.10
Dibenz(a,h)anthracene	0.2	<0.20	<0.20
Fluoranthene	0.41	<0.20	<0.20
Fluorene	120	<0.20	<0.20
Indeno(1,2,3-cd)pyrene	0.2	<0.20	<0.20
Methyl Naphthalene, 2-and 1-	3.2	<0.20	<0.20
Naphthalene	11	<0.20	<0.20
Phenanthrene	1	<0.10	<0.10
Pyrene	4.1	<0.20	<0.20

See "Notes for Soil and Groundwater Summary Tables" included at the beginning of this Section

Table 13A Groundwater Analytical Results - PCBs and OC Pesticides

Parameter		BH21-12	BH21-44
Date of Collection	Table 2 Potable GW CT	Nov 23, 2021	Nov 23, 2021
Date Reported		Dec 03, 2021	Dec 03, 2021
Screened Depth (mbgs)		2.2 - 5.2	2.2 - 5.2
Analytical Report Reference No.		21T834096	21T834096
Polychlorinated Biphenyls	3	<0.1	<0.1
Aldrin	0.35	<0.01	<0.01
Chlordane	7	<0.04	<0.04
DDD	10	<0.05	<0.05
DDE	10	<0.01	<0.01
DDT	2.8	<0.04	<0.04
Dieldrin	0.35	<0.02	<0.02
Endosulfan	1.5	<0.05	<0.05
Endrin	0.48	<0.05	<0.05
Heptachlor	1.5	<0.01	<0.01
Heptachlor Epoxide	0.048	<0.01	<0.01
Hexachlorobenzene	1	<0.01	<0.01
Hexachlorobutadiene	0.44	<0.01	<0.01
Hexachlorocyclohexane Gamma-	1.2	<0.01	<0.01
Hexachloroethane	2.1	<0.01	<0.01
Methoxychlor	6.5	<0.04	<0.04

See "Notes for Soil and Groundwater Summary Tables" included at the end of this Section

Table 14A Summary of Maximum Concentrations in Soil

Group	Parameter	Table 2 RPI CT	Maximum Concentration	Location
BTEX	Benzene	0.21	<0.005	all samples
	Ethylbenzene	1.1	<0.01	all samples
	Toluene	2.3	<0.05	all samples
	Total Xylenes	3.1	<0.05	all samples
Metals	Barium	390	55.6	BH21-1 SS2
	Beryllium	4	<0.4	all samples
	Boron	120	7	BH21-42 SS1
	Cadmium	1.2	<0.5	all samples
	Chromium	160	19	BH21-42 SS1
	Cobalt	22	9.2	BH21-42 SS1
	Copper	140	35.3	BH21-42 SS1
	Lead	120	15	BH21-42 SS1
	Molybdenum	6.9	<0.5	all samples
	Nickel	100	20	BH21-42 SS1
	Silver	20	<0.5	all samples
	Thallium	1	<0.5	all samples
	Uranium	23	0.6	BH21-1 SS2
	Vanadium	86	25.3	BH21-42 SS1
	Zinc	340	51	BH21-42 SS1
As, Se, Sb	Antimony	7.5	<0.8	all samples
	Arsenic	18	9	BH21-44 SS1
	Selenium	2.4	<0.8	all samples
PAHs	Acenaphthene	7.9	<0.05	all samples
	Acenaphthylene	0.15	<0.05	all samples
	Anthracene	0.67	<0.05	all samples
	Benz(a)anthracene	0.5	<0.05	all samples
	Benzo(a)pyrene	0.3	0.08	BH21-12 SS1
	Benzo(b)fluoranthene	0.78	0.13	BH21-12 SS1
	Benzo(g,h,i)perylene	6.6	0.11	BH21-12 SS1
	Benzo(k)fluoranthene	0.78	<0.05	all samples
	Chrysene	7	0.06	BH21-43 SS1
	Dibenz(a,h)anthracene	0.1	<0.05	all samples
	Fluoranthene	0.69	0.07	BH21-43 SS1
	Fluorene	62	<0.05	all samples
	Indeno(1,2,3-cd)pyrene	0.38	0.09	BH21-12 SS1
	Methylnaphthalene, 2-(1-)	0.99	<0.05	all samples
	Naphthalene	0.6	<0.05	all samples
	Phenanthrene	6.2	<0.05	all samples
	Pyrene	78	0.07	BH21-43 SS1
PHCs	F1 (C6 to C10) minus BTEX	55	<10	all samples
	F2 (C10 to C16)	98	<10	all samples
	F3 (C16 to C34)	300	61	BH21-12 SS3
	F4 (C34 to C50)	2800	22	BH21-12 SS3
	Acetone	16	<0.1	all samples
	Bromodichloromethane	1.5	<0.01	all samples
	Bromoform	0.27	<0.01	all samples
	Bromomethane	0.05	<0.01	all samples
	Carbon Tetrachloride	0.05	<0.0005	all samples
	Chlorobenzene	2.4	<0.01	all samples
	Chloroform	0.05	<0.01	all samples
	Dibromochloromethane	2.3	<0.01	all samples
	Dichlorobenzene, 1,2-	1.2	<0.01	all samples

Table 14A Summary of Maximum Concentrations in Soil

Group	Parameter	Table 2 RPI CT	Maximum Concentration	Location
VOCs	Dichlorobenzene, 1,3-	4.8	<0.01	all samples
	Dichlorobenzene, 1,4-	0.083	<0.01	all samples
	Dichlorodifluoromethane	16	<0.01	all samples
	Dichloroethane, 1,1-	0.47	<0.01	all samples
	Dichloroethane, 1,2-	0.05	<0.002	all samples
	Dichloroethylene, 1,1-	0.05	<0.01	all samples
	Dichloroethylene, Cis- 1,2-	1.9	<0.01	all samples
	Dichloroethylene, Trans- 1,2-	0.084	<0.01	all samples
	Dichloropropane, 1,2-	0.05	<0.01	all samples
	1,3-Dichloropropene (Cis + Trans)	0.05	<0.01	all samples
	Ethylene Dibromide	0.05	<0.01	all samples
	Hexane, n-	2.8	-	all samples
	Methyl Ethyl Ketone	16	<0.1	all samples
	Methyl Isobutyl Ketone	1.7	<0.1	all samples
	Methyl tert-butyl Ether	0.75	<0.01	all samples
	Methylene Chloride	0.1	<0.01	all samples
	Styrene	0.7	<0.01	all samples
	Tetrachloroethane, 1,1,1,2-	0.058	<0.01	all samples
	Tetrachloroethane, 1,1,2,2-	0.05	<0.01	all samples
	Tetrachloroethylene	0.28	-	all samples
	Trichloroethane, 1,1,1-	0.38	<0.01	all samples
	Trichloroethane, 1,1,2-	0.05	<0.01	all samples
	Trichloroethylene	0.061	<0.01	all samples
Trichlorofluoromethane	4	<0.01	all samples	
Vinyl Chloride	0.02	<0.0002	all samples	
ORPs	Chromium, Hexavalent	8	<0.2	all samples
	Cyanide, Free	0.051	<0.040	all samples
	Electrical Conductivity (2:1)	0.7	0.508	BH21-1 SS2
	Mercury	0.27	<0.10	all samples
	Sodium Adsorption Ratio	5	0.233	BH21-1 SS2
	pH, 2:1 CaCl2 Extraction	*	7.67	BH21-1 SS2
PCBs	Polychlorinated Biphenyls	0.35	<0.10	all samples

See "Notes for Soil and Groundwater Summary Tables" included at the beginning of this Section

**Table 15A Summary of Maximum Concentrations in Groundwater**

Group	Parameter	Table 2 Potable GW CT	Maximum Concentration	Location
BTEX	Benzene	5	<0.20	all samples
	Ethylbenzene	2.4	<0.10	all samples
	Toluene	24	0.41	BH21-44
	Xylene Mixture	300	<0.20	all samples
Metals	Barium	1000	119	BH21-12
	Beryllium	4	<0.50	all samples
	Boron	5000	221	BH21-12
	Cadmium	2.7	<0.20	all samples
	Chromium	50	<2.0	all samples
	Cobalt	3.8	0.67	BH21-44
	Copper	87	1.7	BH21-12
	Lead	10	<0.50	all samples
	Molybdenum	70	5.87	BH21-12
	Nickel	100	1.9	BH21-12
	Silver	1.5	<0.20	all samples
	Thallium	2	<0.30	all samples
	Uranium	20	1.74	BH21-12
	Vanadium	6.2	1.01	BH21-44
	Zinc	1100	<5.0	all samples
As, Se, Sb	Antimony	6	<1.0	all samples
	Arsenic	25	7.8	BH21-12
	Selenium	10	3.3	BH21-44
Na	Sodium	490000	30100	BH21-12
PAHs	Acenaphthene	4.1	<0.20	all samples
	Acenaphthylene	1	<0.20	all samples
	Anthracene	2.4	<0.10	all samples
	Benz(a)anthracene	1	<0.20	all samples
	Benzo(a)pyrene	0.01	<0.01	all samples
	Benzo(b)fluoranthene	0.1	<0.10	all samples
	Benzo(g,h,i)perylene	0.2	<0.20	all samples
	Benzo(k)fluoranthene	0.1	<0.10	all samples
	Chrysene	0.1	<0.10	all samples
	Dibenz(a,h)anthracene	0.2	<0.20	all samples
	Fluoranthene	0.41	<0.20	all samples
	Fluorene	120	<0.20	all samples
	Indeno(1,2,3-cd)pyrene	0.2	<0.20	all samples
	Methyl Naphthalene, 2-and 1-	3.2	<0.20	all samples
	Naphthalene	11	<0.20	all samples
	Phenanthrene	1	<0.10	all samples
Pyrene	4.1	<0.20	all samples	
PHCs	F1 (C6 to C10) minus BTEX	750	<25	all samples
	F2 (C10 to C16)	150	<100	all samples
	F3 (C16 to C34)	500	<100	all samples
	F4 (C34 to C50)	500	<100	all samples
	Acetone	2700	<1.0	all samples
	Bromodichloromethane	16	<0.20	all samples
	Bromoform	25	<0.10	all samples
	Bromomethane	0.89	<0.20	all samples
	Carbon Tetrachloride	0.79	<0.20	all samples
	Chlorobenzene	30	<0.10	all samples
	Chloroform	2.4	<0.20	all samples

**Table 15A Summary of Maximum Concentrations in Groundwater**

Group	Parameter	Table 2 Potable GW CT	Maximum Concentration	Location
VOCs	Dibromochloromethane	25	<0.10	all samples
	Dichlorobenzene, 1,2-	3	<0.10	all samples
	Dichlorobenzene, 1,3-	59	<0.10	all samples
	Dichlorobenzene, 1,4-	1	<0.10	all samples
	Dichlorodifluoromethane	590	<0.20	all samples
	Dichloroethane, 1,1-	5	<0.30	all samples
	Dichloroethane, 1,2-	1.6	<0.20	all samples
	Dichloroethylene, 1,1-	1.6	<0.30	all samples
	Dichloroethylene, cis- 1,2-	1.6	<0.20	all samples
	Dichloroethylene, trans- 1,2-	1.6	<0.20	all samples
	Dichloropropane, 1,2-	5	<0.20	all samples
	Dichloropropene, 1,3-	0.5	<0.30	all samples
	Ethylene Dibromide	0.2	<0.10	all samples
	Hexane, n-	51	<0.20	all samples
	Methyl Ethyl Ketone	1800	<1.0	all samples
	Methyl Isobutyl Ketone	640	<1.0	all samples
	Methyl tert-butyl ether	15	<0.20	all samples
	Methylene Chloride	50	<0.30	all samples
	Styrene	5.4	<0.10	all samples
	Tetrachloroethane, 1,1,1,2-	1.1	<0.10	all samples
	Tetrachloroethane, 1,1,2,2-	1	<0.10	all samples
	Tetrachloroethylene	1.6	<0.20	all samples
	Trichloroethane, 1,1,1-	200	<0.30	all samples
	Trichloroethane, 1,1,2-	4.7	<0.20	all samples
	Trichloroethylene	1.6	<0.20	all samples
	Trichlorofluoromethane	150	<0.40	all samples
Vinyl Chloride	0.5	<0.17	all samples	
ORPs	Chloride	790000	7770	BH21-44
	Chromium VI	25	<2.0	all samples
	Cyanide	66	<2.0	all samples
	Mercury	0.29	<0.02	all samples
PCBs	Polychlorinated Biphenyls	0.2	<0.10	all samples

See "Notes for Soil and Groundwater Summary Tables" included at the beginning of this Section

**Notes for Soil & Groundwater Summary Tables - Mississauga (A-series)**

1. mbgs = metres below ground surface
2. ORPs = other regulated parameters
3. PHCs = petroleum hydrocarbons
4. VOCs = volatile organic compounds
5. PAHs = polycyclic aromatic hydrocarbons
7. APEC = area of potential environmental concern
6. - = parameter not analyzed
7. \* = pH criteria for surface soils (0 - 1.5 mbgs) is 5 to 9, for subsurface soil (below 1.5 mbgs) is 5 to 11
8. Units for all soil analyses are in µg/g (ppm) unless otherwise indicated
9. Units for all groundwater analyses are in µg/L (ppb) unless otherwise indicated
10. Table 8 RPIICC = Generic Site Condition Standards for Use within 30 m of a Water Body in a Potable Groundwater Condition as contained in Table 8 of the Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act, published by the MECP on April 15, 2011
  
11. For soil and groundwater analytical results: **bold** = Concentration exceeds the 2011 MECP Table 8 SCS



**Table 1A Monitoring Well Installation and Groundwater Levels**

Monitoring Well ID		BH21-12	BH21-44	
Installed By		WSP	WSP	
Installation Date		18-Nov-21	17-Nov-21	
Well Status		Active	Active	
Well Inner Diameter	(mm)	50	50	
Casing Type (Flushmount / Monument)		Flushmount	Flushmount	
Top of Pipe Elevation	(masl)	173.241	172.853	
Ground Surface Elevation	(masl)	173.341	172.953	
Bottom of Concrete Seal/Top of Bentonite Seal	(mbgs)	1.3	0.3	
	(masl)	172.041	172.653	
Bottom of Bentonite Seal/Top of Sand Pack	(mbgs)	1.6	1.6	
	(masl)	171.8	171.4	
Top of Well Screen	(mbgs)	2.2	2.2	
	(masl)	171.1	170.8	
Screen Length	(m)	3.0	3.0	
Bottom of Screen	(mbgs)	5.2	5.2	
	(masl)	168.2	167.8	
22-Nov-21	Depth of GW	(mbgs)	4.3	1.6
	GW Elevation	(masl)	169.0	171.4
23-Nov-21	Depth of GW	(mbgs)	4.3	1.8
	GW Elevation	(masl)	169.0	171.2
7-Dec-21	Depth of GW	(mbgs)	4.3	1.5
	GW Elevation	(masl)	169.0	171.4

See "Notes for Soil and Groundwater Summary"

**Table 2A Summary of Soil Samples Submitted for Chemical Analysis**

Borehole	Sample	Depth	Date	Parameters						APEC #
				M&ORP	PHCs	VOCs	PAHs	PCBs	OCPs	
BH21-1	SS1	0.0 - 0.6	17-Nov-21	-	-	-	-	✓	✓	13, 14, 38, 98, 114
	SS2	0.6 - 1.2		✓	-	-	✓	-	-	
	SS3	1.2 - 1.8		-	✓	-	-	-	-	
BH21-12	SS1	0.0 - 0.6	18-Nov-21	-	-	-	✓	-	-	13, 14, 38, 114
	SS3	1.5 - 2.1		-	✓	-	-	-	-	
BH21-42	SS1	0.0 - 0.6	18-Nov-21	✓	-	-	-	-	-	13, 14, 38, 114
	SS3	1.5 - 2.1		-	✓	-	-	-	-	
BH21-43	SS1	0.0 - 0.6	17-Nov-21	-	-	-	✓	✓	✓	13, 14, 38, 114
	SS2	0.8 - 1.4		✓	-	-	-	-	-	
	SS6	4.6 - 5.2		-	✓	✓	-	-	-	
BH21-44	SS1	0.0 - 0.6	17-Nov-21	✓	-	-	-	-	-	13, 14, 38, 114
	SS4	2.3 - 2.9		-	✓	-	-	-	-	

See "Notes for Soil and Groundwater Summary Tables" included at the beginning of this Section

**Table 3A Summary of Groundwater Samples Submitted for Chemical Analysis**

Monitoring Well ID	Screened Interval (mbgs)	Date	Parameters					APEC #	
			M&ORP	PHCs	VOCs	PAHs	PCBs		OCPs
BH21-12	2.2 - 5.2	23-Nov-21	✓	✓	-	✓	✓	✓	13, 14, 38, 114
BH21-44	2.2 - 5.2	23-Nov-21	✓	✓	-	✓	✓	✓	13, 14, 38, 114

See "Notes for Soil and Groundwater Summary Tables" included at the beginning of this Section

**Table 4A Soil Analytical Results - Metals & ORPs**

Parameter		BH21-1 SS2	BH21-42 SS1	BH21-43 SS2	BH21-44 SS1
Date of Collection	Table 8 RPIICC	Nov 17, 2021	Nov 18, 2021	Nov 17, 2021	Nov 17, 2021
Date Reported		Nov 29, 2021	Nov 26, 2021	Nov 29, 2021	Nov 29, 2021
Sampling Depth (mbgs)		0.8 - 1.4	0.0 - 0.6	0.8 - 1.4	0.0 - 0.6
Analytical Report Reference No.		21T831518	21T831991	21T831518	21T831518
Antimony	1.3	<0.8	<0.8	<0.8	<0.8
Arsenic	18	5	7	3	9
Barium	220	55.6	49.2	28.8	37.7
Beryllium	2.5	<0.4	<0.4	<0.4	<0.4
Boron	36	6	7	<5	5
Boron (Hot Water Extractable)	1.5	<0.10	<0.10	<0.10	0.10
Cadmium	1.2	<0.5	<0.5	<0.5	<0.5
Chromium	70	17	19	8	13
Cobalt	22	9.1	9.2	3.1	6.2
Copper	92	20.3	35.3	7.2	28.4
Lead	120	7	15	4	14
Molybdenum	2	<0.5	<0.5	<0.5	<0.5
Nickel	82	17	20	6	12
Selenium	1.5	<0.8	<0.8	<0.8	<0.8
Silver	0.5	<0.5	<0.5	<0.5	<0.5
Thallium	1	<0.5	<0.5	<0.5	<0.5
Uranium	2.5	0.6	<0.50	<0.50	<0.50
Vanadium	86	22.2	25.3	15.5	18.9
Zinc	290	45	51	25	39
Chromium, Hexavalent	0.66	<0.2	<0.2	<0.2	<0.2
Cyanide, Free	0.051	<0.040	<0.040	<0.040	<0.040
Mercury	0.27	<0.10	<0.10	<0.10	<0.10
Electrical Conductivity (2:1)	0.7	0.508	0.110	0.103	0.107
Sodium Adsorption Ratio	5	0.233	0.090	0.089	0.068
pH, 2:1 CaCl2 Extraction	*	7.67	7.62	7.53	7.63

See "Notes for Soil and Groundwater Summary Tables" included at the beginning of this Section

**Table 5A Soil Analytical Results - PHCs & BTEX**

Parameter		BH21-1 SS3	BH21-12 SS3	BH21-42 SS3	BH21-43 SS6	BH21-44 SS4
Date of Collection	Table 8 RPIICC	Nov 17, 2021	Nov 18, 2021	Nov 18, 2021	Nov 17, 2021	Nov 17, 2021
Date Reported		Nov 29, 2021	Nov 26, 2021	Nov 26, 2021	Nov 29, 2021	Nov 29, 2021
Sampling Depth (mbgs)		1.5 - 2.1	1.5 - 2.1	1.5 - 2.1	4.6 - 5.2	2.3 - 2.9
Analytical Report Reference No.		21T831518	21T831991	21T831991	21T831518	21T831518
Benzene	0.02	<0.005	<0.005	<0.005	<0.005	<0.005
Toluene	0.2	<0.05	<0.05	<0.05	<0.05	<0.05
Ethylbenzene	0.05	<0.01	<0.01	<0.01	<0.01	<0.01
Total Xylenes	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
F1 (C6 to C10) minus BTEX	25	<10	<10	<10	<10	<10
F2 (C10 to C16)	10	<10	<10	<10	<10	<10
F3 (C16 to C34)	240	31	61	32	16	<10
F4 (C34 to C50)	120	11	22	12	15	<10

See "Notes for Soil and Groundwater Summary Tables" included at the beginning of this Section

**Table 6A Soil Analytical Results - VOCs**

Parameter	BH21-43 SS6	
Date of Collection	Table 8 RPIICC	Nov 17, 2021
Date Reported		Nov 29, 2021
Sampling Depth (mbgs)		4.6 - 5.2
Analytical Report Reference No.		21T831518
Acetone	0.5	<0.1
Benzene	0.02	<0.005
Bromodichloromethane	0.05	<0.01
Bromoform	0.05	<0.01
Bromomethane	0.05	<0.01
Carbon Tetrachloride	0.05	<0.0005
Chlorobenzene	0.05	<0.01
Chloroform	0.05	<0.01
Dibromochloromethane	0.05	<0.01
Dichlorobenzene, 1,2-	0.05	<0.01
Dichlorobenzene, 1,3-	0.05	<0.01
Dichlorobenzene, 1,4-	0.05	<0.01
Dichlorodifluoromethane	0.05	<0.01
Dichloroethane, 1,1-	0.05	<0.01
Dichloroethane, 1,2-	0.05	<0.002
Dichloroethylene, 1,1-	0.05	<0.01
Dichloroethylene, Cis- 1,2-	0.05	<0.01
Dichloroethylene, Trans- 1,2-	0.05	<0.01
Dichloropropane, 1,2-	0.05	<0.01
1,3-Dichloropropene (Cis + Trans)	0.05	<0.01
Ethylbenzene	0.05	<0.01
Ethylene Dibromide	0.05	<0.01
Hexane, n-	0.05	-
Methyl Ethyl Ketone	0.5	<0.1
Methyl Isobutyl Ketone	0.5	<0.1
Methyl tert-butyl Ether	0.05	<0.01
Methylene Chloride	0.05	<0.01
Styrene	0.05	<0.01
Tetrachloroethane, 1,1,1,2-	0.05	<0.01
Tetrachloroethane, 1,1,2,2-	0.05	<0.01
Tetrachloroethylene	0.05	-
Toluene	0.2	<0.01
Trichloroethane, 1,1,1-	0.05	<0.01
Trichloroethane, 1,1,2-	0.05	<0.01
Trichloroethylene	0.05	<0.01
Trichlorofluoromethane	0.25	<0.01
Vinyl Chloride	0.02	<0.0002
Xylene mixture	0.05	<0.01

See "Notes for Soil and Groundwater Summary Tables" included at the beginning of this Section

**Table 7A Soil Analytical Results - PAHs**

Parameter		BH21-1 SS1	BH21-12 SS1	BH21-43 SS1
Date of Collection	Table 8 RPIICC	Nov 17, 2021	Nov 18, 2021	Nov 17, 2021
Date Reported		Nov 29, 2021	Nov 26, 2021	Nov 29, 2021
Sampling Depth (mbgs)		0.8 - 1.4	0.0 - 0.6	0.0 - 0.6
Analytical Report Reference No.		21T831518	21T831991	21T831518
Naphthalene	0.09	<0.05	<0.05	<0.05
Acenaphthylene	0.093	<0.05	<0.05	<0.05
Acenaphthene	0.072	<0.05	<0.05	<0.05
Fluorene	0.19	<0.05	<0.05	<0.05
Phenanthrene	0.69	<0.05	<0.05	<0.05
Anthracene	0.22	<0.05	<0.05	<0.05
Fluoranthene	0.69	<0.05	0.06	0.07
Pyrene	1	<0.05	0.06	0.07
Benz(a)anthracene	0.36	<0.05	<0.05	<0.05
Chrysene	2.8	<0.05	<0.05	0.06
Benzo(b)fluoranthene	0.47	<0.05	0.13	0.11
Benzo(k)fluoranthene	0.48	<0.05	<0.05	<0.05
Benzo(a)pyrene	0.3	<0.05	0.08	0.05
Indeno(1,2,3-cd)pyrene	0.23	<0.05	0.09	0.06
Dibenz(a,h)anthracene	0.1	<0.05	<0.05	<0.05
Benzo(g,h,i)perylene	0.68	<0.05	0.11	0.07
Methylnaphthalene, 2-(1-)	0.59	<0.05	<0.05	<0.05

See "Notes for Soil and Groundwater Summary Tables" included at the beginning of this Section

**Table 8A Soil Analytical Results - PCBs and OC Pesticides**

Parameter		BH21-1 SS1	BH21-43 SS1
Date of Collection	Table 8 RPIICC	Nov 17, 2021	Nov 17, 2021
Date Reported		Nov 29, 2021	Nov 29, 2021
Sampling Depth (m bgs)		0.0 - 0.6	0.0 - 0.6
Analytical Report Reference No.		21T831518	21T831518
Polychlorinated Biphenyls	0.3	<0.10	<0.10
Aldrin	0.05	<0.005	<0.005
Chlordane	0.05	<0.007	<0.007
DDD	0.05	<0.007	<0.007
DDE	0.05	<0.007	<0.007
DDT	1.4	<0.007	<0.007
Dieldrin	0.05	<0.005	<0.005
Endosulfan	0.04	<0.005	<0.005
Endrin	0.04	<0.005	<0.005
Heptachlor	0.05	<0.005	<0.005
Heptachlor Epoxide	0.05	<0.005	<0.005
Hexachlorobenzene	0.02	<0.005	<0.005
Hexachlorobutadiene	0.01	<0.01	<0.01
Hexachlorocyclohexane Gamma-	0.01	<0.005	<0.005
Hexachloroethane	0.01	<0.01	<0.01
Methoxychlor	0.05	<0.005	<0.005

See "Notes for Soil and Groundwater Summary Tables" included at the beginning of this Section



**Table 9A Groundwater Analytical Results - Metals & ORPs**

Parameter		BH21-12	BH21-44
Date of Collection	Table 8 Potable GW	Nov 23, 2021	Nov 23, 2021
Date Reported		Dec 03, 2021	Dec 03, 2021
Screened Depth (mbgs)		2.2 - 5.2	2.2 - 5.2
Analytical Report Reference No.		21T834096	21T834096
Antimony	6	<1.0	<1.0
Arsenic	25	7.8	2
Barium	1000	119	101
Beryllium	4	<0.50	<0.50
Boron	5000	221	38
Cadmium	2.1	<0.20	<0.20
Chromium	50	<2.0	<2.0
Chromium VI	25	<2.0	<2.0
Cobalt	3.8	<0.50	0.67
Copper	69	1.7	<1.0
Cyanide	52	<2.0	<2.0
Lead	10	<0.50	<0.50
Mercury	0.29	<0.02	<0.02
Molybdenum	70	5.87	0.8
Nickel	100	1.9	<1.0
Selenium	10	1.6	3.3
Silver	1.2	<0.20	<0.20
Thallium	2	<0.30	<0.30
Uranium	20	1.74	1.65
Vanadium	6.2	0.78	1.01
Zinc	890	<5.0	<5.0
Sodium	490000	30100	8980
Chloride	790000	7260	7770

See "Notes for Soil and Groundwater Summary Tables" included at the beginning of this Section

**Table 10A Groundwater Analytical Results - PHCs&BTEX**

Parameter		BH21-12	BH21-44
Date of Collection	Table 8 Potable GW	Nov 23, 2021	Nov 23, 2021
Date Reported		Dec 03, 2021	Dec 03, 2021
Screened Depth (mbgs)		2.2 - 5.2	2.2 - 5.2
Analytical Report Reference No.		21T834096	21T834096
Benzene	5	<0.20	<0.20
Toluene	22	<0.20	0.41
Ethylbenzene	2.4	<0.10	<0.10
Xylene Mixture	300	<0.20	<0.20
F1 (C6 to C10) minus BTEX	420	<25	<25
F2 (C10 to C16)	150	<100	<100
F3 (C16 to C34)	500	<100	<100
F4 (C34 to C50)	500	<100	<100

*See "Notes for Soil and Groundwater Summary Tables" included at the beginning of this Section*

**Table 11A Groundwater Analytical Results - VOCs**

NO MISSISSAUGA DATA

**Table 12A Groundwater Analytical Results - PAHs**

Parameter		BH21-12	BH21-44
Date of Collection	Table 8 Potable GW	Nov 23, 2021	Nov 23, 2021
Date Reported		Dec 03, 2021	Dec 03, 2021
Screened Depth (mbgs)		2.2 - 5.2	2.2 - 5.2
Analytical Report Reference No.		21T834096	21T834096
Acenaphthene	4.1	<0.20	<0.20
Acenaphthylene	1	<0.20	<0.20
Anthracene	1	<0.10	<0.10
Benz(a)anthracene	1	<0.20	<0.20
Benzo(a)pyrene	0.01	<0.01	<0.01
Benzo(b)fluoranthene	0.1	<0.10	<0.10
Benzo(g,h,i)perylene	0.2	<0.20	<0.20
Benzo(k)fluoranthene	0.1	<0.10	<0.10
Chrysene	0.1	<0.10	<0.10
Dibenz(a,h)anthracene	0.2	<0.20	<0.20
Fluoranthene	0.41	<0.20	<0.20
Fluorene	120	<0.20	<0.20
Indeno(1,2,3-cd)pyrene	0.2	<0.20	<0.20
Methyl Naphthalene, 2-and 1-	3.2	<0.20	<0.20
Naphthalene	11	<0.20	<0.20
Phenanthrene	1	<0.10	<0.10
Pyrene	4.1	<0.20	<0.20

See "Notes for Soil and Groundwater Summary Tables" included at the beginning of this Section

Table 13A Groundwater Analytical Results - PCBs and OC Pesticides

Parameter		BH21-12	BH21-44
Date of Collection	Table 8 Potable GW	Nov 23, 2021	Nov 23, 2021
Date Reported		Dec 03, 2021	Dec 03, 2021
Screened Depth (mbgs)		2.2 - 5.2	2.2 - 5.2
Analytical Report Reference No.		21T834096	21T834096
Polychlorinated Biphenyls	0.2	<0.1	<0.1
Aldrin	0.35	<0.01	<0.01
Chlordane	0.06	<0.04	<0.04
DDD	1.8	<0.05	<0.05
DDE	10	<0.01	<0.01
DDT	0.05	<0.04	<0.04
Dieldrin	0.35	<0.02	<0.02
Endosulfan	0.56	<0.05	<0.05
Endrin	0.36	<0.05	<0.05
Heptachlor	0.038	<0.01	<0.01
Heptachlor Epoxide	0.038	<0.01	<0.01
Hexachlorobenzene	1	<0.01	<0.01
Hexachlorobutadiene	0.44	<0.01	<0.01
Hexachlorocyclohexane Gamma-	0.95	<0.01	<0.01
Hexachloroethane	2.1	<0.01	<0.01
Methoxychlor	0.3	<0.04	<0.04

See "Notes for Soil and Groundwater Summary Tables" included at the end of this Section

**Table 14A Summary of Maximum Concentrations in Soil**

Group	Parameter	Table 8 RPIICC	Maximum Concentration	Location
BTEX	Benzene	0.02	<0.005	all samples
	Ethylbenzene	0.05	<0.01	all samples
	Toluene	0.2	<0.05	all samples
	Total Xylenes	0.05	<0.05	all samples
Metals	Barium	220	55.6	BH21-1 SS2
	Beryllium	2.5	<0.4	all samples
	Boron	36	7	BH21-42 SS1
	Cadmium	1.2	<0.5	all samples
	Chromium	70	19	BH21-42 SS1
	Cobalt	22	9.2	BH21-42 SS1
	Copper	92	35.3	BH21-42 SS1
	Lead	120	15	BH21-42 SS1
	Molybdenum	2	<0.5	all samples
	Nickel	82	20	BH21-42 SS1
	Silver	0.5	<0.5	all samples
	Thallium	1	<0.5	all samples
	Uranium	2.5	0.6	BH21-1 SS2
	Vanadium	86	25.3	BH21-42 SS1
	Zinc	290	51	BH21-42 SS1
As, Se, Sb	Antimony	1.3	<0.8	all samples
	Arsenic	18	9	BH21-44 SS1
	Selenium	1.5	<0.8	all samples
PAHs	Acenaphthene	0.072	<0.05	all samples
	Acenaphthylene	0.093	<0.05	all samples
	Anthracene	0.22	<0.05	all samples
	Benz(a)anthracene	0.36	<0.05	all samples
	Benzo(a)pyrene	0.3	0.08	BH21-12 SS1
	Benzo(b)fluoranthene	0.47	0.13	BH21-12 SS1
	Benzo(g,h,i)perylene	0.68	0.11	BH21-12 SS1
	Benzo(k)fluoranthene	0.48	<0.05	all samples
	Chrysene	2.8	0.06	BH21-43 SS1
	Dibenz(a,h)anthracene	0.1	<0.05	all samples
	Fluoranthene	0.69	0.07	BH21-43 SS1
	Fluorene	0.19	<0.05	all samples
	Indeno(1,2,3-cd)pyrene	0.23	0.09	BH21-12 SS1
	Methylnaphthalene, 2-(1-)	0.59	<0.05	all samples
	Naphthalene	0.09	<0.05	all samples
	Phenanthrene	0.69	<0.05	all samples
	Pyrene	1	0.07	BH21-43 SS1
PHCs	F1 (C6 to C10) minus BTEX	25	<10	all samples
	F2 (C10 to C16)	10	<10	all samples
	F3 (C16 to C34)	240	61	BH21-12 SS3
	F4 (C34 to C50)	120	22	BH21-12 SS3
	Acetone	0.5	<0.1	all samples
	Bromodichloromethane	0.05	<0.01	all samples
	Bromoform	0.05	<0.01	all samples
	Bromomethane	0.05	<0.01	all samples
	Carbon Tetrachloride	0.05	<0.0005	all samples
	Chlorobenzene	0.05	<0.01	all samples
	Chloroform	0.05	<0.01	all samples
	Dibromochloromethane	0.05	<0.01	all samples
	Dichlorobenzene, 1,2-	0.05	<0.01	all samples

**Table 14A Summary of Maximum Concentrations in Soil**

Group	Parameter	Table 8 RPIICC	Maximum Concentration	Location
VOCs	Dichlorobenzene, 1,3-	0.05	<0.01	all samples
	Dichlorobenzene, 1,4-	0.05	<0.01	all samples
	Dichlorodifluoromethane	0.05	<0.01	all samples
	Dichloroethane, 1,1-	0.05	<0.01	all samples
	Dichloroethane, 1,2-	0.05	<0.002	all samples
	Dichloroethylene, 1,1-	0.05	<0.01	all samples
	Dichloroethylene, Cis- 1,2-	0.05	<0.01	all samples
	Dichloroethylene, Trans- 1,2-	0.05	<0.01	all samples
	Dichloropropane, 1,2-	0.05	<0.01	all samples
	1,3-Dichloropropene (Cis + Trans)	0.05	<0.01	all samples
	Ethylene Dibromide	0.05	<0.01	all samples
	Hexane, n-	0.05	-	all samples
	Methyl Ethyl Ketone	0.5	<0.1	all samples
	Methyl Isobutyl Ketone	0.5	<0.1	all samples
	Methyl tert-butyl Ether	0.05	<0.01	all samples
	Methylene Chloride	0.05	<0.01	all samples
	Styrene	0.05	<0.01	all samples
	Tetrachloroethane, 1,1,1,2-	0.05	<0.01	all samples
	Tetrachloroethane, 1,1,2,2-	0.05	<0.01	all samples
	Tetrachloroethylene	0.05	-	all samples
	Trichloroethane, 1,1,1-	0.05	<0.01	all samples
	Trichloroethane, 1,1,2-	0.05	<0.01	all samples
	Trichloroethylene	0.05	<0.01	all samples
Trichlorofluoromethane	0.25	<0.01	all samples	
Vinyl Chloride	0.02	<0.0002	all samples	
ORPs	Chromium, Hexavalent	0.66	<0.2	all samples
	Cyanide, Free	0.051	<0.040	all samples
	Electrical Conductivity (2:1)	0.7	0.508	BH21-1 SS2
	Mercury	0.27	<0.10	all samples
	Sodium Adsorption Ratio	5	0.233	BH21-1 SS2
	pH, 2:1 CaCl2 Extraction	*	7.67	BH21-1 SS2
PCBs	Polychlorinated Biphenyls	0.3	<0.10	all samples

See "Notes for Soil and Groundwater Summary Tables" included at the beginning of this Section

**Table 15A Summary of Maximum Concentrations in Groundwater**

Group	Parameter	Table 8 Potable GW	Maximum Concentration	Location
BTEX	Benzene	5	<0.20	all samples
	Ethylbenzene	2.4	<0.10	all samples
	Toluene	22	0.41	BH21-44
	Xylene Mixture	300	<0.20	all samples
Metals	Barium	1000	119	BH21-12
	Beryllium	4	<0.50	all samples
	Boron	5000	221	BH21-12
	Cadmium	2.1	<0.20	all samples
	Chromium	50	<2.0	all samples
	Cobalt	3.8	0.67	BH21-44
	Copper	69	1.7	BH21-12
	Lead	10	<0.50	all samples
	Molybdenum	70	5.87	BH21-12
	Nickel	100	1.9	BH21-12
	Silver	1.2	<0.20	all samples
	Thallium	2	<0.30	all samples
	Uranium	20	1.74	BH21-12
	Vanadium	6.2	1.01	BH21-44
	Zinc	890	<5.0	all samples
As, Se, Sb	Antimony	6	<1.0	all samples
	Arsenic	25	7.8	BH21-12
	Selenium	10	3.3	BH21-44
Na	Sodium	490000	30100	BH21-12
PAHs	Acenaphthene	4.1	<0.20	all samples
	Acenaphthylene	1	<0.20	all samples
	Anthracene	1	<0.10	all samples
	Benz(a)anthracene	1	<0.20	all samples
	Benzo(a)pyrene	0.01	<0.01	all samples
	Benzo(b)fluoranthene	0.1	<0.10	all samples
	Benzo(g,h,i)perylene	0.2	<0.20	all samples
	Benzo(k)fluoranthene	0.1	<0.10	all samples
	Chrysene	0.1	<0.10	all samples
	Dibenz(a,h)anthracene	0.2	<0.20	all samples
	Fluoranthene	0.41	<0.20	all samples
	Fluorene	120	<0.20	all samples
	Indeno(1,2,3-cd)pyrene	0.2	<0.20	all samples
	Methyl Naphthalene, 2-and 1-	3.2	<0.20	all samples
	Naphthalene	11	<0.20	all samples
	Phenanthrene	1	<0.10	all samples
Pyrene	4.1	<0.20	all samples	
PHCs	F1 (C6 to C10) minus BTEX	420	<25	all samples
	F2 (C10 to C16)	150	<100	all samples
	F3 (C16 to C34)	500	<100	all samples
	F4 (C34 to C50)	500	<100	all samples
	Acetone	2700	<1.0	all samples
	Bromodichloromethane	16	<0.20	all samples
	Bromoform	25	<0.10	all samples
	Bromomethane	0.89	<0.20	all samples
	Carbon Tetrachloride	0.79	<0.20	all samples
	Chlorobenzene	30	<0.10	all samples
Chloroform	2.4	<0.20	all samples	



**Table 15A Summary of Maximum Concentrations in Groundwater**

Group	Parameter	Table 8 Potable GW	Maximum Concentration	Location
VOCs	Dibromochloromethane	25	<0.10	all samples
	Dichlorobenzene, 1,2-	3	<0.10	all samples
	Dichlorobenzene, 1,3-	59	<0.10	all samples
	Dichlorobenzene, 1,4-	1	<0.10	all samples
	Dichlorodifluoromethane	590	<0.20	all samples
	Dichloroethane, 1,1-	5	<0.30	all samples
	Dichloroethane, 1,2-	1.6	<0.20	all samples
	Dichloroethylene, 1,1-	1.6	<0.30	all samples
	Dichloroethylene, cis- 1,2-	1.6	<0.20	all samples
	Dichloroethylene, trans- 1,2-	1.6	<0.20	all samples
	Dichloropropane, 1,2-	5	<0.20	all samples
	Dichloropropene, 1,3-	0.5	<0.30	all samples
	Ethylene Dibromide	0.2	<0.10	all samples
	Hexane, n-	51	<0.20	all samples
	Methyl Ethyl Ketone	1800	<1.0	all samples
	Methyl Isobutyl Ketone	640	<1.0	all samples
	Methyl tert-butyl ether	15	<0.20	all samples
	Methylene Chloride	50	<0.30	all samples
	Styrene	5.4	<0.10	all samples
	Tetrachloroethane, 1,1,1,2-	1.1	<0.10	all samples
	Tetrachloroethane, 1,1,2,2-	1	<0.10	all samples
	Tetrachloroethylene	1.6	<0.20	all samples
	Trichloroethane, 1,1,1-	200	<0.30	all samples
	Trichloroethane, 1,1,2-	4.7	<0.20	all samples
	Trichloroethylene	1.6	<0.20	all samples
	Trichlorofluoromethane	150	<0.40	all samples
	Vinyl Chloride	0.5	<0.17	all samples
ORPs	Chloride	790000	7770	BH21-44
	Chromium VI	25	<2.0	all samples
	Cyanide	52	<2.0	all samples
	Mercury	0.29	<0.02	all samples
PCBs	Polychlorinated Biphenyls	0.2	<0.10	all samples

See "Notes for Soil and Groundwater Summary Tables" included at the beginning of this Section

**Notes for Soil & Groundwater Summary Tables - Brampton (B-series)**

1. mbgs = metres below ground surface
2. ORPs = other regulated parameters
3. PHCs = petroleum hydrocarbons
4. VOCs = volatile organic compounds
5. PAHs = polycyclic aromatic hydrocarbons
7. APEC = area of potential environmental concern
6. - = parameter not analyzed
7. \* = pH criteria for surface soils (0 - 1.5 mbgs) is 5 to 9, for subsurface soil (below 1.5 mbgs) is 5 to 11
8. Units for all soil analyses are in µg/g (ppm) unless otherwise indicated
9. Units for all groundwater analyses are in µg/L (ppb) unless otherwise indicated
10. Table 1 RPIICC = Full Depth Background Site Condition Standards as contained in Table 1 of the Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act, published by the MECP on April 15, 2011
11. For soil and groundwater analytical results: **bold** = Concentration exceeds the 2011 MECP Table 1 SCS

Table 1B Monitoring Well Installation and Groundwater Levels

Monitoring Well ID		BH21-2	BH21-3	BH21-6	BH21-7	BH21-8	BH21-16	BH21-22	BH21-45
Installed By		WSP	WSP	WSP	WSP	WSP	WSP	WSP	WSP
Installation Date		2-Dec-21	2-Dec-21	1-Dec-21	29-Nov-21	29-Nov-21	1-Dec-21	22-Nov-21	22-Nov-21
Well Status		Active	Active	Active	Active	Active	Active	Active	Active
Well Inner Diameter	(mm)	50	50	50	50	50	50	50	50
Casing Type (Flushmount / Monument)		Monument	Monument	Flushmount	Monument	Monument	Flushmount	Monument	Flushmount
Top of Pipe Elevation	(masl)	184.852	187.353	216.625	218.769	220.065	218.014	244.619	218.032
Ground Surface Elevation	(masl)	183.942	186.453	216.805	217.859	219.165	218.114	243.709	218.122
Bottom of Concrete Seal/Top of Bentonite Seal	(mbgs)	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
	(masl)	183.642	186.153	216.505	217.559	218.865	217.814	243.409	217.822
Bottom of Bentonite Seal/Top of Sand Pack	(mbgs)	2.2	3.7	2.5	2.2	5.5	5.5	2.8	5.5
	(masl)	181.8	182.8	214.3	215.7	213.7	212.6	240.9	212.6
Top of Well Screen	(mbgs)	2.8	4.3	3.1	2.8	6.1	6.1	3.4	6.1
	(masl)	181.1	182.2	213.7	215.1	213.1	212.0	240.3	212.0
Screen Length	(m)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Bottom of Screen	(mbgs)	5.8	7.3	6.1	5.8	9.1	9.1	6.4	9.1
	(masl)	178.2	179.1	210.7	212.1	210.1	209.0	237.3	209.0
30-Nov-21	Depth of GW	(mbgs)	-	-	-	-	-	0.7	4.3
	GW Elevation	(masl)	-	-	-	-	-	243.0	213.8
1-Dec-21	Depth of GW	(mbgs)	-	-	-	1.3	2.4	-	5.3
	GW Elevation	(masl)	-	-	-	216.6	216.7	-	212.9
2-Dec-21	Depth of GW	(mbgs)	-	-	0.3	1.1	2.3	5.0	-
	GW Elevation	(masl)	-	-	216.5	216.7	216.9	213.2	-
6-Dec-21	Depth of GW	(mbgs)	2.4	DRY	-	-	-	-	-
	GW Elevation	(masl)	181.3	-	-	-	-	-	-
7-Dec-21	Depth of GW	(mbgs)	2.4	DRY	0.2	1.1	2.3	5.0	1.0
	GW Elevation	(masl)	181.6	-	216.6	216.8	216.9	213.2	242.7

See "Notes for Soil and Groundwater Summary"

Table 2B Summary of Soil Samples Submitted for Chemical Analysis

Borehole	Sample	Depth	Date	Parameters						APEC #
				M&ORP	PHCs	VOCs	PAHs	PCBs	OCPs	
BH21-2	SS2	0.8 - 1.4	2-Dec-21	✓	-	-	✓	-	-	13, 14, 30, 38, 114
	SS5	3.0 - 3.7		-	✓	-	-	-	-	
	QAQC-11			-	✓	-	-	-	-	
BH21-3	SS1	0.0 - 0.6	2-Dec-21	✓	-	-	-	-	-	13, 14, 38, 114
	QAQC-12	4.6 - 5.2		✓	-	-	-	-	-	
	SS6			-	✓	-	-	-	-	
BH21-4	SS1	0.0 - 0.6	6-Dec-21	✓	-	-	✓	-	-	13, 14, 38, 44, 114
	SS2	0.6 - 1.2		-	-	-	✓	✓		
	SS3	1.2 - 1.8		-	✓	-	-	-		
BH21-5	SS1	0.0 - 0.6	6-Dec-21	✓	-	✓	-	-	-	13, 14, 38, 47, 114
	SS2	0.6 - 1.2		-	✓	-	-	-		
	SS3	1.2 - 1.8		-	-	-	✓	✓		
BH21-6	SS1	0.0 - 0.6	1-Dec-21	-	-	-	✓	-	-	10, 13, 14, 38, 114
	SS2	0.8 - 1.4		✓	-	-	-	-		
	SS6	4.6 - 5.2		-	✓	-	-	-		
BH21-7	SS1	0.0 - 0.6	29-Nov-21	-	-	-	✓	✓	✓	4, 13, 14, 38, 114
	SS2	0.8 - 1.4		✓	-	-	-	-		
	SS5	3.0 - 3.7		-	✓	✓	-	-		
BH21-8	SS1	0.0 - 0.6	29-Nov-21	-	-	-	✓	-	-	42, 13, 14, 38, 114
	SS2	0.8 - 1.4		✓	-	-	-	-		
	SS7	6.1 - 6.7		-	✓	✓	-	-		
BH21-16	SS1	0.0 - 0.6	1-Dec-21	✓	-	-	-	-	-	13, 14, 26, 38, 114
	SS2	0.8 - 1.4		-	-	-	✓	-	-	
	QAQC-10			-	-	-	✓	-	-	
	SS8	7.6 - 8.2		-	✓	✓	-	-	-	
BH21-17	S1	0.0 - 0.6	5-Nov-21	✓	-	-	-	-	-	13, 14, 38, 49, 114
	S2	0.6 - 1.2		-	-	-	✓	✓		
	S3	1.2 - 1.8		-	-	-	✓	-		
BH21-18	SS1	0.0 - 0.6	24-Nov-21	✓	-	-	-	-	-	2, 13, 14, 38, 114
	SS2	0.8 - 1.4		-	✓	-	✓	✓		
BH21-19	SS1	0.0 - 0.6	24-Nov-21	-	-	-	✓	-	-	8, 13, 14, 38, 114
	SS2	0.8 - 1.4		✓	✓	-	-	-		
BH21-20	SS1	0.0 - 0.6	23-Nov-21	✓	-	-	-	-	-	5, 13, 14, 38, 114
	QAQC-6			✓	-	-	-	-	-	
	SS2	0.8 - 1.4		-	-	-	✓	✓	✓	
	QAQC-7			-	-	-	✓	✓	✓	
	SS3	1.5 - 2.1		-	✓	-	-	-	-	
	QAQC-8			-	✓	-	-	-	-	
SS4	2.3 - 2.9	✓	-	-	-	-	-			
BH21-21	SS1	0.0 - 0.6	23-Nov-21	-	-	-	✓	✓	✓	13, 14, 20, 38, 114
	SS3	1.5 - 2.1		✓	✓	✓	-	-	-	
BH21-22	SS1	0.0 - 0.6	22-Nov-21	✓	-	-	-	-	-	13, 14, 27, 38, 114
	SS3	1.5 - 2.1		-	-	-	✓	✓	✓	
	SS5	3.0 - 3.7		-	✓	✓	-	-	-	
BH21-23	S1	0.0 - 0.6	5-Nov-21	-	-	-	✓	-	-	13, 14, 38, 53, 114
	S2	0.6 - 1.2		✓	-	-	-	-		
	S3	1.2 - 1.8		-	-	-	-	✓	✓	
BH21-24	S1	0.0 - 0.6	5-Nov-21	-	-	-	-	✓	✓	13, 14, 38, 56, 114
	S2	0.6 - 1.2		-	-	-	✓	-	-	
	S3	1.2 - 1.8		✓	-	-	-	-	-	
BH21-45	SS1	0.0 - 0.6	22-Nov-21	-	-	-	✓	✓	✓	13, 14, 17, 38, 114
	SS2	0.8 - 1.4		✓	-	-	✓	-	-	
	SS8	7.6 - 8.2		-	✓	✓	-	-	-	
	SS9	9.1 - 9.8		-	✓	✓	-	-	-	

See "Notes for Soil and Groundwater Summary Tables" included at the beginning of this Section

Table 3B: Summary of Groundwater Samples Submitted for Chemical Analysis

Monitoring Well ID	Screened Interval (mbgs)	Date	Parameters						APEC #
			M&ORP	PHCs	VOCs	PAHs	PCBs	OCPs	
BH21-2	2.8 - 5.8	7-Dec-21	-	✓	-	-	-	-	13, 14, 30, 38, 114
BH21-6	3.1 - 6.1	6-Dec-21	✓	✓	-	-	-	-	10, 13, 14, 38, 114
BH21-7	2.8 - 5.8	2-Dec-21	✓	✓	✓	✓	✓	✓	4, 13, 14, 38, 114
BH21-8	6.1 - 9.1	2-Dec-21	✓	✓	✓	✓	-	-	42, 13, 14, 38, 114
BH21-16	6.1 - 9.1	6-Dec-21	✓	✓	✓	✓	-	-	13, 14, 26, 38, 114
BH21-22	3.4 - 6.4	1-Dec-21	✓	✓	✓	✓	-	-	13, 14, 27, 38, 114
BH21-45	6.1 - 9.1	1-Dec-21	✓	✓	✓	✓	✓	-	13, 14, 38, 114

See "Notes for Soil and Groundwater Summary Tables" included at the beginning of this Section

Table 4B Soil Analytical Results - Metals &amp; ORPs

Parameter		BH21-2 SS2	BH21-3 SS3	QAQC-12	BH21-4 SS1	BH21-5 SS1	BH21-6 SS2	BH21-7 SS2
Date of Collection	Table 1 RPIICC	Dec 02, 2021	Dec 02, 2021		Dec 06, 2021	Dec 06, 2021	Dec 01, 2021	Nov 29, 2021
Date Reported		Dec 15, 2021	Dec 15, 2021		Dec 18, 2021	Dec 18, 2021	Dec 23, 2021	Dec 14, 2021
Sampling Depth (mbgs)		0.8 - 1.4	0.0 - 0.6		0.0 - 0.6	0.0 - 0.6	0.8 - 1.4	0.8 - 1.4
Analytical Report Reference No.		21T839096	21T839096		21T840564	21T840564	21T839096	21T836919
Antimony	1.3	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8
Arsenic	18	6	4	6	4	7	4	6
Barium	220	89.8	77.5	52.7	37.4	60	54.5	57.1
Beryllium	2.5	0.8	0.6	0.5	0.5	0.7	<0.4	0.7
Boron	36	10	8	7	<5	7	7	11
Boron (Hot Water Extractable)	NA	0.42	0.12	0.17	0.12	0.26	0.17	0.25
Cadmium	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Chromium	70	20	17	15	12	18	14	22
Cobalt	21	9.2	7.8	7.8	5.6	6.6	8.1	10.4
Copper	92	42.9	24.8	33.3	24.7	23.3	32	29.1
Lead	120	60	9	12	9	18	8	10
Molybdenum	2	0.6	<0.5	<0.5	<0.5	0.6	<0.5	<0.5
Nickel	82	19	17	22	12	14	15	21
Selenium	1.5	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8
Silver	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Thallium	1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Uranium	2.5	0.6	<0.50	<0.50	<0.50	<0.50	<0.50	0.59
Vanadium	86	30.4	25.5	22.4	20.4	28.1	23.8	31.9
Zinc	290	95	44	43	32	51	39	55
Chromium, Hexavalent	0.66	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Cyanide, Free	0.051	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040
Mercury	0.27	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Electrical Conductivity (2:1)	0.57	0.353	0.216	0.185	0.124	0.200	0.327	0.245
Sodium Adsorption Ratio	2.4	1.560	0.438	0.300	0.143	0.116	2.140	2.170
pH, 2:1 CaCl <sub>2</sub> Extraction	*	7.29	7.25	7.32	7.19	7.04	7.61	7.19

See "Notes for Soil and Groundwater Summary Tables" included at the beginning of this Section

Table 4B Soil Analytical Results - Metals &amp; ORPs

Parameter		BH21-8 SS2	BH21-16 SS1	BH21-17 S1	BH21-18 SS1	BH21-19 SS2	BH21-20 SS1	QAQC-6
Date of Collection	Table 1 RPIICC	Nov 29, 2021	Dec 01, 2021	Nov 05, 2021	Nov 24, 2021	Nov 24, 2021	Nov 23, 2021	
Date Reported		Dec 14, 2021	Dec 15, 2021	Nov 16, 2021	Dec 03, 2021	Dec 03, 2021	Dec 03, 2021	
Sampling Depth (mbgs)		0.8 - 1.4	0.0 - 0.6	0.0 - 0.6	0.0 - 0.6	0.8 - 1.4	0.0 - 0.6	
Analytical Report Reference No.		21T836919	21T839096	21T826519	21T834550	21T834550	21T834550	
Antimony	1.3	<0.8	<b>2.8</b>	<0.8	<0.8	<0.8	<0.8	<0.8
Arsenic	18	6	8	7	6	6	6	5
Barium	220	57.4	88.5	62.8	94.5	82.7	71.9	71.5
Beryllium	2.5	0.5	0.5	0.6	0.6	0.6	<0.4	<0.4
Boron	36	10	9	9	7	11	<5	<5
Boron (Hot Water Extractable)	NA	0.21	0.50	0.66	0.26	0.11	0.21	0.22
Cadmium	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Chromium	70	19	35	20	25	25	20	20
Cobalt	21	10.0	10.6	7.9	11.5	13.3	16.5	11.8
Copper	92	31.5	69	28.8	33.4	25.2	48.7	25.8
Lead	120	12	79	22	10	11	18	17
Molybdenum	2	<0.5	<b>3.7</b>	0.7	<0.5	<0.5	0.6	0.6
Nickel	82	20	31	19	24	26	<b>142</b>	25
Selenium	1.5	<0.8	0.8	<0.8	<0.8	<0.8	<0.8	<0.8
Silver	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Thallium	1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Uranium	2.5	<0.50	<0.50	<0.50	0.5	0.6	0.5	<0.50
Vanadium	86	28.4	33.8	29	35.1	35.8	30.9	30.7
Zinc	290	51	<b>468</b>	77	66	59	61	67
Chromium, Hexavalent	0.66	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Cyanide, Free	0.051	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040
Mercury	0.27	<0.10	0.22	<0.10	<0.10	<0.10	<0.10	<0.10
Electrical Conductivity (2:1)	0.57	0.117	0.290	0.186	0.154	0.110	0.154	0.157
Sodium Adsorption Ratio	2.4	0.122	1.640	0.055	1.000	0.186	0.105	0.107
pH, 2:1 CaCl <sub>2</sub> Extraction	*	7.12	7.50	7.16	7.55	7.56	7.44	7.36

See "Notes for Soil and Groundwater Summary Tables" included at the beginning of this Section

Table 4B Soil Analytical Results - Metals &amp; ORPs

Parameter		BH21-20 SS4	BH21-21 SS3	BH21-22 SS1	BH21-23 S2	BH21-24 S3	BH21-45 SS2
Date of Collection	Table 1 RPIICC	Nov 23, 2021	Nov 23, 2021	Nov 22, 2021	Nov 05, 2021	Nov 05, 2021	Nov 22, 2021
Date Reported		Dec 20, 2021	Dec 03, 2021	Dec 03, 2021	Nov 16, 2021	Nov 16, 2021	Dec 03, 2021
Sampling Depth (mbgs)		2.3 - 2.9	1.5 - 2.1	0.0 - 0.6	0.6 - 1.2	1.2 - 1.8	0.8 - 1.4
Analytical Report Reference No.		21T841262	21T834550	21T834550	21T826519	21T826519	21T834550
Antimony	1.3	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8
Arsenic	18	5	5	6	7	6	7
Barium	220	95.4	56.1	96.2	54.8	41.5	83
Beryllium	2.5	0.6	<0.4	0.5	0.6	0.4	0.5
Boron	36	24	8	9	10	7	9
Boron (Hot Water Extractable)	NA	0.26	<0.10	0.12	0.26	<0.10	0.44
Cadmium	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Chromium	70	25	14	24	22	16	25
Cobalt	21	14.8	7.6	11.9	11.2	9.8	15.3
Copper	92	10.6	23.4	29.7	36.6	34.8	33.8
Lead	120	12	10	10	9	7	11
Molybdenum	2	1.2	<0.5	<0.5	0.7	<0.5	<0.5
Nickel	82	27	13	23	25	20	33
Selenium	1.5	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8
Silver	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Thallium	1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Uranium	2.5	0.8	<0.50	0.6	0.5	<0.50	0.7
Vanadium	86	40.2	22.7	34.9	29.5	23.4	34
Zinc	290	63	35	57	63	53	68
Chromium, Hexavalent	0.66	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Cyanide, Free	0.051	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040
Mercury	0.27	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Electrical Conductivity (2:1)	0.57	0.125	0.088	0.125	0.157	0.103	0.314
Sodium Adsorption Ratio	2.4	0.344	0.095	0.182	0.370	0.095	1.200
pH, 2:1 CaCl <sub>2</sub> Extraction	*	7.13	7.62	7.64	7.59	7.66	7.60

See "Notes for Soil and Groundwater Summary Tables" included at the beginning of this Section



**Table 5B Soil Analytical Results - PHCs & BTEX**

Parameter		BH21-2 SS5	BH21-3 SS6	BH21-4 SS3	BH21-5 SS2	BH21-6 SS6	BH21-7 SS5	BH21-8 SS7	BH21-16 SS8
Date of Collection	Table 1 RPIICC	Dec 02, 2021	Dec 02, 2021	Dec 06, 2021	Dec 06, 2021	Dec 01, 2021	Nov 29, 2021	Nov 29, 2021	Dec 01, 2021
Date Reported		Dec 15, 2021	Dec 15, 2021	Dec 18, 2021	Dec 18, 2021	Dec 15, 2021	Dec 14, 2021	Dec 14, 2021	Dec 15, 2021
Sampling Depth (mbgs)		3.0 - 3.7	4.6 - 5.2	1.8 - 1.8	0.6 - 1.2	4.6 - 5.2	3.0 - 3.7	6.1 - 6.7	7.6 - 8.2
Analytical Report Reference No.		21T839096	21T839096	21T840564	21T840564	21T839096	21T836919	21T836919	21T839096
Benzene	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
Ethylbenzene	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Total Xylenes	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
F1 (C6 to C10) minus BTEX	25	<5	<5	<5	<5	<5	<5	<5	<5
F2 (C10 to C16)	10	<10	<10	<10	<10	<10	<10	<10	<10
F3 (C16 to C34)	240	<50	<50	<50	<50	<50	<50	<50	<50
F4 (C34 to C50)	120	<50	<50	<50	<50	<50	<50	<50	<50

See "Notes for Soil and Groundwater Summary Tables" included at the beginning of this Section

**Table 5B Soil Analytical Results - PHCs & BTE**

Parameter		BH21-17 S2	BH21-18 SS2	BH21-19 SS2	BH21-20 SS3	QAQC-8	BH21-21 SS3	BH21-22 SS5	BH21-23 S3
Date of Collection	Table 1 RPIICC	Nov 05, 2021	Nov 24, 2021	Nov 24, 2021	Nov 23, 2021	Nov 23, 2021	Nov 23, 2021	Nov 22, 2021	Nov 05, 2021
Date Reported		Nov 30, 2021	Dec 03, 2021	Dec 03, 2021	Dec 03, 2021	Dec 03, 2021	Dec 03, 2021	Dec 03, 2021	Nov 30, 2021
Sampling Depth (mbgs)		0.6 - 1.2	0.8 - 1.4	0.8 - 1.4	1.5 - 2.1	1.5 - 2.1	3.0 - 3.7	1.2 - 1.8	
Analytical Report Reference No.		21T832162	21T834550	21T834550	21T834550	21T834550	21T834550	21T834550	21T832162
Benzene	0.02	<0.005	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.005
Toluene	0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Ethylbenzene	0.05	<0.01	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.01
Total Xylenes	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
F1 (C6 to C10) minus BTEX	25	<10	<5	<5	<5	<5	<5	<5	<10
F2 (C10 to C16)	10	<10	<10	<10	<10	<10	<10	<10	<10
F3 (C16 to C34)	240	13	<50	<50	<50	<50	<50	<50	<10
F4 (C34 to C50)	120	<10	<50	<50	<50	<50	<50	<50	<10

See "Notes for Soil and Groundwater Summary Tables" included at the beginning of this Section

**Table 5B Soil Analytical Results - PHCs & BTE**

Parameter		BH21-24 S3	BH21-45 SS8	BH21-45 SS9
Date of Collection	Table 1 RPIICC	Nov 05, 2021	Nov 22, 2021	Nov 22, 2021
Date Reported		Nov 30, 2021	Dec 03, 2021	Dec 20, 2021
Sampling Depth (mbgs)		1.2 - 1.8	7.6 - 8.2	9.1 - 9.8
Analytical Report Reference No.		21T832162	21T834550	21T841262
Benzene	0.02	<0.005	<0.02	<0.02
Toluene	0.2	<0.05	<0.05	<0.05
Ethylbenzene	0.05	<0.01	<b>0.9</b>	<0.05
Total Xylenes	0.05	<0.05	<b>5.55</b>	<0.05
F1 (C6 to C10) minus BTEX	25	<10	<b>51</b>	<5
F2 (C10 to C16)	10	<10	<10	<10
F3 (C16 to C34)	240	14	<50	<50
F4 (C34 to C50)	120	<10	<50	<50

See "Notes for Soil and Groundwater Summary Tables" included at the beginning of this Section

Table 6B Soil Analytical Results - VOCs

Parameter		BH21-7 SS5	BH21-8 SS7	BH21-16 SS8	BH21-21 SS3	BH21-22 SS5	BH21-45 SS8	BH21-45 SS9
Date of Collection	Table 1 RPIICC	Nov 29, 2021	Nov 29, 2021	Dec 01, 2021	Nov 23, 2021	Nov 22, 2021	Nov 22, 2021	Nov 22, 2021
Date Reported		Dec 14, 2021	Dec 14, 2021	Dec 15, 2021	Dec 03, 2021	Dec 03, 2021	Dec 03, 2021	Dec 20, 2021
Sampling Depth (mbgs)		3.0 - 3.7	6.1 - 6.7	7.6 - 8.2	1.5 - 2.1	3.0 - 3.7	7.6 - 8.2	9.1 - 9.8
Analytical Report Reference No.		21T836919	21T836919	21T839096	21T834550	21T834550	21T834550	21T841262
Acetone	0.5	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Benzene	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Bromodichloromethane	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
Bromomethane	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
Chlorobenzene	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Chloroform	0.05	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04
Dibromochloromethane	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Dichlorobenzene, 1,2-	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Dichlorobenzene, 1,3-	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Dichlorobenzene, 1,4-	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
Dichloroethane, 1,1-	0.05	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Dichloroethane, 1,2-	0.05	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
Dichloroethylene, 1,1-	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Dichloroethylene, Cis- 1,2-	0.05	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Dichloroethylene, Trans- 1,2-	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Dichloropropane, 1,2-	0.05	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
1,3-Dichloropropene (Cis + Trans)	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	0.9	<0.05
Ethylene Dibromide	0.05	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04
Hexane, n-	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Methyl Ethyl Ketone	0.5	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Methyl Isobutyl Ketone	0.5	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Methyl tert-butyl Ether	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
Styrene	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Tetrachloroethane, 1,1,1,2-	0.05	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04
Tetrachloroethane, 1,1,2,2-	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
Toluene	0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Trichloroethane, 1,1,1-	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Trichloroethane, 1,1,2-	0.05	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04
Trichloroethylene	0.05	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
Trichlorofluoromethane	0.25	<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
Xylene mixture	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	5.55	<0.05

See "Notes for Soil and Groundwater Summary Tables" included at the beginning of this Section

Table 7B Soil Analytical Results - PAHs

Parameter		BH21-2 SS2	BH21-4 SS1	BH21-5 SS1	BH21-6 SS2	BH21-7 SS1	BH21-8 SS1
Date of Collection	Table 1 RPIICC	Dec 02, 2021	Dec 06, 2021	Dec 06, 2021	Dec 01, 2021	Nov 29, 2021	Nov 29, 2021
Date Reported		Dec 15, 2021	Dec 18, 2021	Dec 18, 2021	Dec 23, 2021	Dec 14, 2021	Dec 14, 2021
Sampling Depth (mbgs)		0.8 - 1.4	0.0 - 0.6	0.0 - 0.6	0.8 - 1.4	0.0 - 0.6	0.0 - 0.6
Analytical Report Reference No.		21T839096	21T840564	21T840564	21T839096	21T836919	21T836919
Naphthalene	0.09	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Acenaphthylene	0.093	<0.05	<0.05	<0.05	<0.05	0.06	<0.05
Acenaphthene	0.072	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Fluorene	0.12	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Phenanthrene	0.69	<0.05	<0.05	<0.05	<0.05	0.40	0.22
Anthracene	0.16	<0.05	<0.05	<0.05	<0.05	<b>0.18</b>	0.10
Fluoranthene	0.56	<0.05	<0.05	<0.05	<0.05	<b>1.05</b>	<b>0.89</b>
Pyrene	1	<0.05	<0.05	<0.05	<0.05	0.96	0.77
Benz(a)anthracene	0.36	<0.05	<0.05	<0.05	<0.05	<b>0.56</b>	<b>0.46</b>
Chrysene	2.8	<0.05	<0.05	<0.05	<0.05	0.41	0.36
Benzo(b)fluoranthene	0.47	<0.05	<0.05	<0.05	<0.05	<b>0.60</b>	<b>0.66</b>
Benzo(k)fluoranthene	0.48	<0.05	<0.05	<0.05	<0.05	0.23	0.24
Benzo(a)pyrene	0.3	<0.05	<0.05	<0.05	<0.05	<b>0.40</b>	<b>0.40</b>
Indeno(1,2,3-cd)pyrene	0.23	<0.05	<0.05	<0.05	<0.05	0.22	<b>0.26</b>
Dibenz(a,h)anthracene	0.1	<0.05	<0.05	<0.05	<0.05	0.05	0.05
Benzo(g,h,i)perylene	0.68	<0.05	<0.05	<0.05	<0.05	0.27	0.34
Methylnaphthalene, 2-(1-)	0.59	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05

See "Notes for Soil and Groundwater Summary Tables" included at the beginning of this Section

Table 7B Soil Analytical Results - PAHs

Parameter		BH21-16 SS2	QAQC-10	BH21-17 S3	BH21-18 SS2	BH21-19 SS1	BH21-20 SS2	QAQC-7
Date of Collection	Table 1 RPIICC	Dec 02, 2021		Nov 05, 2021	Nov 24, 2021	Nov 24, 2021	Nov 23, 2021	
Date Reported		Dec 15, 2021		Nov 16, 2021	Dec 03, 2021	Dec 03, 2021	Dec 03, 2021	
Sampling Depth (mbgs)		0.8 - 1.4		1.2 - 1.8	0.8 - 1.4	0.0 - 0.6	0.8 - 1.4	
Analytical Report Reference No.		21T839096		21T826519	21T834550	21T834550	21T834550	
Naphthalene	0.09	<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
Acenaphthene	0.072	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Fluorene	0.12	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Phenanthrene	0.69	<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
Fluoranthene	0.56	<0.05	<0.05	<0.05	<0.05	0.14	<0.05	<0.05
Pyrene	1	<0.05	<0.05	<0.05	<0.05	0.16	<0.05	<0.05
Benz(a)anthracene	0.36	<0.05	<0.05	<0.05	<0.05	0.17	<0.05	<0.05
Chrysene	2.8	<0.05	<0.05	<0.05	<0.05	0.07	<0.05	<0.05
Benzo(b)fluoranthene	0.47	<0.05	<0.05	<0.05	<0.05	0.1	<0.05	<0.05
Benzo(k)fluoranthene	0.48	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Benzo(a)pyrene	0.3	<0.05	<0.05	<0.05	<0.05	0.07	<0.05	<0.05
Indeno(1,2,3-cd)pyrene	0.23	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Dibenz(a,h)anthracene	0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Benzo(g,h,i)perylene	0.68	<0.05	<0.05	<0.05	<0.05	0.05	<0.05	<0.05
Methylnaphthalene, 2-(1-)	0.59	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05

See "Notes for Soil and Groundwater Summary Tables" included at the beginning of this Section

Table 7B Soil Analytical Results - PAHs

Parameter		BH21-21 SS1	BH21-22 SS3	BH21-23 S1	BH21-24 S2	BH21-45 SS1	BH21-45 SS2
Date of Collection	Table 1 RPIICC	Nov 23, 2021	Nov 22, 2021	Nov 05, 2021	Nov 05, 2021	Nov 22, 2021	Nov 22, 2021
Date Reported		Dec 03, 2021	Dec 03, 2021	Nov 16, 2021	Nov 16, 2021	Dec 03, 2021	Dec 20, 2021
Sampling Depth (mbgs)		0.0 - 0.6	1.5 - 2.1	0.0 - 0.6	0.6 - 1.2	0.0 - 0.6	0.8 - 1.4
Analytical Report Reference No.		21T834550	21T834550	21T826519	21T826519	21T834550	21T841262
Naphthalene	0.09	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Acenaphthylene	0.093	<0.05	<0.05	<0.05	<0.05	0.09	<0.05
Acenaphthene	0.072	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Fluorene	0.12	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Phenanthrene	0.69	<0.05	<0.05	<0.05	<0.05	0.24	<0.05
Anthracene	0.16	<0.05	<0.05	<0.05	<0.05	0.13	<0.05
Fluoranthene	0.56	<0.05	<0.05	<0.05	<0.05	<b>0.57</b>	<0.05
Pyrene	1	<0.05	<0.05	<0.05	<0.05	0.6	<0.05
Benz(a)anthracene	0.36	<0.05	<0.05	<0.05	<0.05	<b>0.39</b>	<0.05
Chrysene	2.8	<0.05	<0.05	<0.05	<0.05	0.35	<0.05
Benzo(b)fluoranthene	0.47	<0.05	<0.05	0.09	<0.05	0.45	<0.05
Benzo(k)fluoranthene	0.48	<0.05	<0.05	0.09	<0.05	0.19	<0.05
Benzo(a)pyrene	0.3	<0.05	<0.05	0.05	<0.05	<b>0.33</b>	<0.05
Indeno(1,2,3-cd)pyrene	0.23	<0.05	<0.05	<0.05	<0.05	0.19	<0.05
Dibenz(a,h)anthracene	0.1	<0.05	<0.05	<0.05	<0.05	0.06	<0.05
Benzo(g,h,i)perylene	0.68	<0.05	<0.05	<0.05	<0.05	0.23	<0.05
Methylnaphthalene, 2-(1-)	0.59	<0.05	<0.05	<0.05	<0.05	0.15	<0.05

See "Notes for Soil and Groundwater Summary Tables" included at the beginning of this Section

Table 8B Soil Analytical Results - PCBs and OC Pesticides

Parameter		BH21-4 SS2	BH21-5 SS3	BH21-7 SS1	BH21-17 S2	BH21-20 SS2	QAQC-7	BH21-23 S3	BH21-24 S1	BH21-45 SS1
Date of Collection	Table 1 RPIICC	Dec 06, 2021	Dec 06, 2021	Nov 29, 2021	Nov 05, 2021	Nov 23, 2021		Nov 05, 2021	Nov 05, 2021	Nov 22, 2021
Date Reported		Dec 18, 2021	Dec 18, 2021	Dec 14, 2021	Nov 16, 2021	Dec 03, 2021		Nov 16, 2021	Nov 16, 2021	Dec 03, 2021
Sampling Depth (m bgs)		0.6 - 1.6	1.2 - 1.8	0.0 - 0.6	0.6 - 1.2	0.8 - 1.4		1.2 - 1.8	0.0 - 0.6	0.0 - 0.6
Analytical Report Reference No.		21T840564	21T840564	21T836919	21T826519	21T834550		21T826519	21T826519	21T834550
Polychlorinated Biphenyls	0.3	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Aldrin	0.05	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Chlordane	0.05	<0.007	<0.007	<0.007	<0.007	<0.007	<0.007	<0.007	<0.007	<0.007
DDD	0.05	<0.007	<0.007	<0.007	<0.007	<0.007	<0.007	<0.007	<0.007	<0.007
DDE	0.05	<0.007	<0.007	<0.007	<0.007	<0.007	<0.007	<0.007	<0.007	<0.007
DDT	1.4	<0.007	<0.007	<0.007	<0.007	<0.007	<0.007	<0.007	<0.007	<0.007
Dieldrin	0.05	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Endosulfan	0.04	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Endrin	0.04	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Heptachlor	0.05	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Heptachlor Epoxide	0.05	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Hexachlorobenzene	0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Hexachlorobutadiene	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Hexachlorocyclohexane Gamma-	0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Hexachloroethane	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Methoxychlor	0.05	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005

See "Notes for Soil and Groundwater Summary Tables" included at the beginning of this Section



Table 9B Groundwater Analytical Results - Metals & ORPs

Parameter		BH21-6	BH21-7	BH21-8	BH21-16	BH21-22	BH21-45	QA/QC	BH21-45	
Date of Collection	Table 1 GW	Dec 06, 2021	Dec 02, 2021	Dec 02, 2021	Dec 06, 2021	Feb 11, 2022	Dec 01, 2021	Dec 01, 2021	Feb 11, 2022	
Date Reported		Dec 21, 2021	Dec 15, 2021	Dec 15, 2021	Dec 21, 2021	Feb 14, 2022	Dec 16, 2021	Dec 16, 2021	Feb 14, 2022	
Screened Depth (mbgs)		3.1 - 6.1	2.8 - 5.8	6.1 - 9.1	6.1 - 9.1		3.4 - 6.4	6.1 - 9.1		
Analytical Report Reference No.		21T841270	21T839088	21T839088	21T841270	22T862998	21T838602	21T838602	22T862998	
Antimony	1.5	<1.0	<1.0	<1.0	1.1	-	<1.0	<1.0	<1.0	-
Arsenic	13	4.7	<1.0	4.3	<1.0	-	1.1	4.7	1.6	-
Barium	610	271	254	109	63.9	-	91.9	80.5	62.4	-
Beryllium	0.5	<0.50	<0.50	<0.50	<0.50	-	<0.50	<0.50	<0.50	-
Boron	1700	279	362	131	1676	-	219	682	115	-
Cadmium	0.5	<0.20	<0.20	<0.20	<0.20	-	<0.20	<0.20	<0.20	-
Chromium	11	25.3	<2.0	<2.0	<2.0	-	<2.0	<2.0	<2.0	-
Chromium VI	25	5.43	<2.0	<2.0	<2.0	-	<2.0	<2.0	<2.0	-
Cobalt	3.8	4.53	0.52	0.63	<0.50	-	1.06	0.66	2.87	-
Copper	5	2.7	1.9	<1.0	<1.0	-	<1.0	<1.0	<1.0	-
Cyanide	5	<2.0	<2.0	<2.0	<2.0	-	<2.0	<2.0	<2.0	-
Lead	1.9	0.93	<0.50	<0.50	<0.50	-	<0.50	<0.50	<0.50	-
Mercury	0.1	<0.02	<0.02	<0.02	<0.02	-	<0.02	<0.02	<0.02	-
Molybdenum	23	6.45	14.2	7.84	24.7	32.1	4.41	28	4.27	57.1
Nickel	14	6.9	2.8	9.7	1.1	-	1.9	4.7	4.2	-
Selenium	5	<1.0	<1.0	<1.0	1.6	-	<1.0	<1.0	<1.0	-
Silver	0.3	<0.20	<0.20	<0.20	<0.20	-	<0.20	<0.20	<0.20	-
Thallium	0.5	<0.30	<0.30	<0.30	<0.30	-	<0.30	<0.30	<0.30	-
Uranium	8.9	3.52	3.19	1.11	1.86	-	2.18	1.5	0.96	-
Vanadium	3.9	3.29	1.42	0.62	0.62	-	0.63	0.83	<0.40	-
Zinc	160	6.1	<5.0	<5.0	<5.0	-	<5.0	<5.0	<5.0	-
Sodium	490000	342000	417000	23000	210000	-	43800	205000	77700	-
Chloride	790000	1460000	768000	72700	286000	-	63300	326000	156000	-

See "Notes for Soil and Groundwater Summary Tables" included at the beginning of this Section

Table 10B Groundwater Analytical Results - PHCs&BTEX

Parameter		BH21-2	BH21-6	QAQC-2	BH21-7	QAQC-1	BH21-8	BH21-16	BH21-22	BH21-45	QA/QC
Date of Collection	Table 1 GW	Dec 07, 2021	Dec 06, 2021		Dec 02, 2021		Dec 02, 2021	Dec 06, 2021	Dec 01, 2021		Dec 01, 2021
Date Reported		Dec 21, 2021	Dec 21, 2021		Dec 15, 2021		Dec 15, 2021	Dec 21, 2021	Dec 16, 2021		Dec 16, 2021
Screened Depth (mbgs)		2.8 - 5.8	3.1 - 6.1		2.8 - 5.8		6.1 - 9.1	6.1 - 9.1	3.4 - 6.4		6.1 - 9.1
Analytical Report Reference No.		21T841270	21T841270		21T839088		21T839088	21T841270	21T838602		21T838602
Benzene	0.5	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Toluene	0.8	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Ethylbenzene	0.5	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Xylene Mixture	72	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
F1 (C6 to C10) minus BTEX	420	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25
F2 (C10 to C16)	150	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100
F3 (C16 to C34)	500	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100
F4 (C34 to C50)	500	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100

See "Notes for Soil and Groundwater Summary Tables" included at the beginning of this Section

Table 11B Groundwater Analytical Results - VOCs

Parameter		BH21-7	BH21-8	BH21-16	QAQC-1	BH21-22	BH21-45	QA/QC	Trip Blank	Trip Blank	Trip Blank
Date of Collection	Table 1 GW	Dec 02, 2021	Dec 02, 2021	Dec 06, 2021		Dec 01, 2021	Dec 01, 2021		Nov 23, 2021	Nov 30, 2021	Dec 04, 2021
Date Reported		Dec 15, 2021	Dec 15, 2021	Dec 21, 2021		Dec 16, 2021	Dec 16, 2021		Dec 03, 2021	Dec 16, 2021	Dec 21, 2021
Screened Depth (mbgs)		2.8 - 5.8	6.1 - 9.1	6.1 - 9.1		3.4 - 6.4	6.1 - 9.1		-	-	-
Analytical Report Reference No.		21T839088	21T839088	21T841270		21T838602	21T838602		21T834096	21T838602	21T841270
Acetone	2700	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Benzene	0.5	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Bromodichloromethane	2	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Bromoform	5	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Bromomethane	0.89	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Carbon Tetrachloride	0.2	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Chlorobenzene	0.5	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Chloroform	2	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Dibromochloromethane	2	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Dichlorobenzene, 1,2-	0.5	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Dichlorobenzene, 1,3-	0.5	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Dichlorobenzene, 1,4-	0.5	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Dichlorodifluoromethane	590	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Dichloroethane, 1,1-	0.5	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30
Dichloroethane, 1,2-	0.5	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Dichloroethylene, 1,1-	0.5	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30
Dichloroethylene, cis- 1,2-	1.6	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Dichloroethylene, trans- 1,2-	1.6	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Dichloropropane, 1,2-	0.5	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Dichloropropene, 1,3-	0.5	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30
Ethylbenzene	0.5	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Ethylene Dibromide	0.2	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Hexane, n-	5	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Methyl Ethyl Ketone	400	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Methyl Isobutyl Ketone	640	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Methyl tert-butyl ether	15	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Methylene Chloride	5	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30
Styrene	0.5	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Tetrachloroethane, 1,1,1,2-	1.1	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Tetrachloroethane, 1,1,2,2-	0.5	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Tetrachloroethylene	0.5	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Toluene	0.8	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Trichloroethane, 1,1,1-	0.5	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30
Trichloroethane, 1,1,2-	0.5	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Trichloroethylene	0.5	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Trichlorofluoromethane	150	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40
Vinyl Chloride	0.5	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17
Xylene Mixture	72	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20

See "Notes for Soil and Groundwater Summary Tables" included at the beginning of this Section

Table 12B Groundwater Analytical Results - PAHs

Parameter		BH21-7	BH21-8	QAQC-2	BH21-16	BH21-22	BH21-45	QA/QC	BH21-45
Date of Collection	Table 1 GW	Dec 02, 2021	Dec 02, 2021		Dec 06, 2021	Dec 01, 2021	Dec 01, 2021		Feb 11, 2022
Date Reported		Dec 15, 2021	Dec 15, 2021		Dec 21, 2021	Dec 16, 2021	Dec 16, 2021		Feb 14, 2022
Screened Depth (mbgs)		2.8 - 5.8	6.1 - 9.1		6.1 - 9.1	3.4 - 6.4	6.1 - 9.1		
Analytical Report Reference No.		21T839088	21T839088		21T841270	21T838602	21T838602		22T862998
Acenaphthene	4.1	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Acenaphthylene	1	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Anthracene	0.1	<0.10	<0.10	<0.10	<0.10	<0.10	1.79	1	<0.10
Benz(a)anthracene	0.2	<0.20	<0.20	<0.20	<0.20	<0.20	2.4	1.67	<0.20
Benzo(a)pyrene	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	3.67	2.8	<0.01
Benzo(b)fluoranthene	0.1	<0.10	<0.10	<0.10	<0.10	<0.10	4.92	3.29	<0.10
Benzo(g,h,i)perylene	0.2	<0.20	<0.20	<0.20	<0.20	<0.20	2.48	1.89	<0.20
Benzo(k)fluoranthene	0.1	<0.10	<0.10	<0.10	<0.10	<0.10	2.19	1.86	<0.10
Chrysene	0.1	<0.10	<0.10	<0.10	<0.10	<0.10	5.59	4.01	<0.10
Dibenz(a,h)anthracene	0.2	<0.20	<0.20	<0.20	<0.20	<0.20	0.32	0.21	<0.20
Fluoranthene	0.4	<0.20	<0.20	<0.20	<0.20	<0.20	17.9	11.2	<0.20
Fluorene	120	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	0.56	<0.20
Indeno(1,2,3-cd)pyrene	0.2	<0.20	<0.20	<0.20	<0.20	<0.20	1.8	1.35	<0.20
Methyl Naphthalene, 2-and 1-	2	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Naphthalene	7	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Phenanthrene	0.1	<0.10	<0.10	<0.10	<0.10	<0.10	12	9.08	<0.10
Pyrene	0.2	<0.20	<0.20	<0.20	<0.20	<0.20	14.6	9.52	<0.20

See "Notes for Soil and Groundwater Summary Tables" included at the beginning of this Section

Table 13B Groundwater Analytical Results - PCBs and OC Pesticides

Parameter		BH21-7	BH21-45	QA/QC
Date of Collection	Table 1 GW	Dec 02, 2021	Dec 01, 2021	
Date Reported		Dec 15, 2021	Dec 16, 2021	
Screened Depth (mbgs)		2.8 - 5.8	6.1 - 9.1	
Analytical Report Reference No.		21T839088	21T838602	
Polychlorinated Biphenyls	0.2	<0.1	<0.1	<0.1
Aldrin	0.01	<0.01	-	-
Chlordane	0.06	<0.04	-	-
DDD	1.8	<0.05	-	-
DDE	10	<0.01	-	-
DDT	0.05	<0.04	-	-
Dieldrin	0.05	<0.02	-	-
Endosulfan	0.05	<0.05	-	-
Endrin	0.05	<0.05	-	-
Heptachlor	0.01	<0.01	-	-
Heptachlor Epoxide	0.01	<0.01	-	-
Hexachlorobenzene	0.01	<0.01	-	-
Hexachlorobutadiene	0.01	<0.01	-	-
Hexachlorocyclohexane Gamma-	0.01	<0.01	-	-
Hexachloroethane	0.01	<0.01	-	-
Methoxychlor	0.05	<0.04	-	-

See "Notes for Soil and Groundwater Summary Tables" included at the end of this Section

Table 14B Summary of Maximum Concentrations in Soil

Group	Parameter	Table 1 RPIICC	Maximum Concentration	Location
BTEX	Benzene	0.02	<0.02	all samples
	Ethylbenzene	0.05	0.9	BH21-45 SS8
	Toluene	0.2	<0.05	all samples
	Total Xylenes	0.05	5.55	BH21-45 SS8
Metals	Barium	220	96.2	BH21-22 SS1
	Beryllium	2.5	0.8	BH21-2 SS2
	Boron	36	24	BH21-20 SS4
	Cadmium	1.2	<0.5	all samples
	Chromium	70	35	BH21-16 SS1
	Cobalt	21	16.5	BH21-20 SS1
	Copper	92	69	BH21-16 SS1
	Lead	120	79	BH21-16 SS1
	Molybdenum	2	3.7	BH21-16 SS1
	Nickel	82	142	BH21-20 SS1
	Silver	0.5	<0.5	all samples
	Thallium	1	<0.5	all samples
	Uranium	2.5	0.79	BH21-20 SS4
	Vanadium	86	40.2	BH21-20 SS4
	Zinc	290	468	BH21-16 SS1
As, Se, Sb	Antimony	1.3	2.8	BH21-16 SS1
	Arsenic	18	8	BH21-16 SS1
	Selenium	1.5	0.8	BH21-16 SS1
PAHs	Acenaphthene	0.072	<0.05	all samples
	Acenaphthylene	0.093	0.09	BH21-45 SS1
	Anthracene	0.16	0.18	BH21-7 SS1
	Benz(a)anthracene	0.36	0.56	BH21-7 SS1
	Benzo(a)pyrene	0.3	0.4	BH21-7 SS1
	Benzo(b)fluoranthene	0.47	0.66	BH21-8 SS1
	Benzo(g,h,i)perylene	0.68	0.34	BH21-8 SS1
	Benzo(k)fluoranthene	0.48	0.24	BH21-8 SS1
	Chrysene	2.8	0.41	BH21-7 SS1
	Dibenz(a,h)anthracene	0.1	0.06	BH21-45 SS1
	Fluoranthene	0.56	1.05	BH21-7 SS1
	Fluorene	0.12	<0.05	all samples
	Indeno(1,2,3-cd)pyrene	0.23	0.26	BH21-8 SS1
	Methylnaphthalene, 2-(1-)	0.59	0.15	BH21-45 SS1
	Naphthalene	0.09	<0.05	all samples
	Phenanthrene	0.69	0.4	BH21-7 SS1
	Pyrene	1	0.96	BH21-7 SS1
PHCs	F1 (C6 to C10) minus BTEX	25	51	BH21-45 SS8
	F2 (C10 to C16)	10	<10	all samples
	F3 (C16 to C34)	240	14	BH21-24 S3
	F4 (C34 to C50)	120	<50	all samples
	Acetone	0.5	<0.50	all samples
	Bromodichloromethane	0.05	<0.05	all samples
	Bromoform	0.05	<0.05	all samples
	Bromomethane	0.05	<0.05	all samples
	Carbon Tetrachloride	0.05	<0.05	all samples
	Chlorobenzene	0.05	<0.05	all samples
	Chloroform	0.05	<0.04	all samples
	Dibromochloromethane	0.05	<0.05	all samples
	Dichlorobenzene, 1,2-	0.05	<0.05	all samples

Table 14B Summary of Maximum Concentrations in Soil

Group	Parameter	Table 1 RPIICC	Maximum Concentration	Location
VOCs	Dichlorobenzene, 1,3-	0.05	<0.05	all samples
	Dichlorobenzene, 1,4-	0.05	<0.05	all samples
	Dichlorodifluoromethane	0.05	<0.05	all samples
	Dichloroethane, 1,1-	0.05	<0.02	all samples
	Dichloroethane, 1,2-	0.05	<0.03	all samples
	Dichloroethylene, 1,1-	0.05	<0.05	all samples
	Dichloroethylene, Cis- 1,2-	0.05	<0.02	all samples
	Dichloroethylene, Trans- 1,2-	0.05	<0.05	BH21-45 SS8
	Dichloropropane, 1,2-	0.05	<0.03	all samples
	1,3-Dichloropropene (Cis + Trans)	0.05	<0.05	BH21-45 SS8
	Ethylene Dibromide	0.05	<0.04	all samples
	Hexane, n-	0.05	<0.05	all samples
	Methyl Ethyl Ketone	0.5	<0.50	all samples
	Methyl Isobutyl Ketone	0.5	<0.50	all samples
	Methyl tert-butyl Ether	0.05	<0.05	all samples
	Methylene Chloride	0.05	<0.05	all samples
	Styrene	0.05	<0.05	all samples
	Tetrachloroethane, 1,1,1,2-	0.05	<0.04	all samples
	Tetrachloroethane, 1,1,2,2-	0.05	<0.05	all samples
	Tetrachloroethylene	0.05	<0.05	all samples
	Trichloroethane, 1,1,1-	0.05	<0.05	all samples
	Trichloroethane, 1,1,2-	0.05	<0.04	all samples
	Trichloroethylene	0.05	<0.03	all samples
Trichlorofluoromethane	0.25	<0.05	all samples	
Vinyl Chloride	0.02	<0.02	all samples	
ORPs	Chromium, Hexavalent	0.66	<0.2	all samples
	Cyanide, Free	0.051	<0.040	all samples
	Electrical Conductivity (2:1)	0.57	0.353	BH21-2 SS2
	Mercury	0.27	0.22	BH21-16 SS1
	Sodium Adsorption Ratio	2.4	2.17	BH21-7 SS2
	pH, 2:1 CaCl2 Extraction	*	7.66	BH21-24 S3
PCBs	Polychlorinated Biphenyls	0.3	<0.10	all samples

See "Notes for Soil and Groundwater Summary Tables" included at the beginning of this Section

Table 15B Summary of Maximum Concentrations in Groundwater

Group	Parameter	Table 1 GW	Maximum Concentration	Location
BTEX	Benzene	0.5	<0.20	all samples
	Ethylbenzene	0.5	<0.10	all samples
	Toluene	0.8	<0.20	all samples
	Xylene Mixture	72	<0.20	all samples
Metals	Barium	610	271	BH21-22
	Beryllium	0.5	<0.50	all samples
	Boron	1700	1676	BH21-16
	Cadmium	0.5	<0.20	all samples
	Chromium	11	25.3	all samples
	Cobalt	3.8	4.53	QA/QC
	Copper	5	2.7	all samples
	Lead	1.9	0.93	all samples
	Molybdenum	23	57.1	BH21-45
	Nickel	14	9.7	BH21-45
	Silver	0.3	<0.20	all samples
	Thallium	0.5	<0.30	all samples
	Uranium	8.9	3.52	BH21-22
	Vanadium	3.9	3.29	BH21-45
Zinc	160	6.1	all samples	
As, Se, Sb	Antimony	1.5	1.1	BH21-16
	Arsenic	13	4.7	BH21-45
	Selenium	5	1.6	BH21-16
Na	Sodium	490000	417000	BH21-16
PAHs	Acenaphthene	4.1	<0.20	all samples
	Acenaphthylene	1	<0.20	all samples
	Anthracene	0.1	1.79	BH21-45
	Benz(a)anthracene	0.2	2.4	BH21-45
	Benzo(a)pyrene	0.01	3.67	BH21-45
	Benzo(b)fluoranthene	0.1	4.92	BH21-45
	Benzo(g,h,i)perylene	0.2	2.48	BH21-45
	Benzo(k)fluoranthene	0.1	2.19	BH21-45
	Chrysene	0.1	5.59	BH21-45
	Dibenz(a,h)anthracene	0.2	0.32	BH21-45
	Fluoranthene	0.4	17.9	BH21-45
	Fluorene	120	0.56	QA/QC
	Indeno(1,2,3-cd)pyrene	0.2	1.8	BH21-45
	Methyl Naphthalene, 2-and 1-	2	<0.20	all samples
	Naphthalene	7	<0.20	all samples
	Phenanthrene	0.1	12	BH21-45
	Pyrene	0.2	14.6	BH21-45
PHCs	F1 (C6 to C10) minus BTEX	420	<25	all samples
	F2 (C10 to C16)	150	<100	all samples
	F3 (C16 to C34)	500	<100	all samples
	F4 (C34 to C50)	500	<100	all samples
	Acetone	2700	<1.0	all samples
	Bromodichloromethane	2	<0.20	all samples
	Bromoform	5	<0.10	all samples
	Bromomethane	0.89	<0.20	all samples
	Carbon Tetrachloride	0.2	<0.20	all samples
	Chlorobenzene	0.5	<0.10	all samples
	Chloroform	2	<0.20	all samples
	Dibromochloromethane	2	<0.10	all samples



Table 15B Summary of Maximum Concentrations in Groundwater

Group	Parameter	Table 1 GW	Maximum Concentration	Location
VOCs	Dichlorobenzene, 1,2-	0.5	<0.10	all samples
	Dichlorobenzene, 1,3-	0.5	<0.10	all samples
	Dichlorobenzene, 1,4-	0.5	<0.10	all samples
	Dichlorodifluoromethane	590	<0.20	all samples
	Dichloroethane, 1,1-	0.5	<0.30	all samples
	Dichloroethane, 1,2-	0.5	<0.20	all samples
	Dichloroethylene, 1,1-	0.5	<0.30	all samples
	Dichloroethylene, cis- 1,2-	1.6	<0.20	all samples
	Dichloroethylene, trans- 1,2-	1.6	<0.20	all samples
	Dichloropropane, 1,2-	0.5	<0.20	all samples
	Dichloropropene, 1,3-	0.5	<0.30	all samples
	Ethylene Dibromide	0.2	<0.10	all samples
	Hexane, n-	5	<0.20	all samples
	Methyl Ethyl Ketone	400	<1.0	all samples
	Methyl Isobutyl Ketone	640	<1.0	all samples
	Methyl tert-butyl ether	15	<0.20	all samples
	Methylene Chloride	5	<0.30	all samples
	Styrene	0.5	<0.10	all samples
	Tetrachloroethane, 1,1,1,2-	1.1	<0.10	all samples
	Tetrachloroethane, 1,1,1,2,2-	0.5	<0.10	all samples
	Tetrachloroethylene	0.5	<0.20	all samples
	Trichloroethane, 1,1,1-	0.5	<0.30	all samples
	Trichloroethane, 1,1,2-	0.5	<0.20	all samples
Trichloroethylene	0.5	<0.20	all samples	
Trichlorofluoromethane	150	<0.40	all samples	
Vinyl Chloride	0.5	<0.17	all samples	
ORPs	Chloride	790000	1460000	BH21-45
	Chromium VI	25	5.43	all samples
	Cyanide	5	<2.0	all samples
	Mercury	0.1	<0.02	all samples
PCBs	Polychlorinated Biphenyls	0.2	<0.10	all samples

See "Notes for Soil and Groundwater Summary Tables" included at the beginning of this Section

**Notes for Soil & Groundwater Summary Tables - Brampton (B-series)**

1. mbgs = metres below ground surface
2. ORPs = other regulated parameters
3. PHCs = petroleum hydrocarbons
4. VOCs = volatile organic compounds
5. PAHs = polycyclic aromatic hydrocarbons
7. APEC = area of potential environmental concern
6. - = parameter not analyzed
7. \* = pH criteria for surface soils (0 - 1.5 mbgs) is 5 to 9, for subsurface soil (below 1.5 mbgs) is 5 to 11
8. Units for all soil analyses are in µg/g (ppm) unless otherwise indicated
9. Units for all groundwater analyses are in µg/L (ppb) unless otherwise indicated
10. Table 2 RPI CT = Full Depth Generic Site Condition Standards in a Potable Ground Water Condition with Coarse Textured Soils as contained in Table 2 of the Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act, published by the MECP on April 15, 2011
11. For soil and groundwater analytical results: **bold** = Concentration exceeds the 2011 MECP Table 2 SCS

**Table 1B Monitoring Well Installation and Groundwater Levels**

Monitoring Well ID		BH21-2	BH21-3	BH21-6	BH21-7	BH21-8	BH21-16	BH21-22	BH21-45
Installed By		WSP	WSP	WSP	WSP	WSP	WSP	WSP	WSP
Installation Date		2-Dec-21	2-Dec-21	1-Dec-21	29-Nov-21	29-Nov-21	1-Dec-21	22-Nov-21	22-Nov-21
Well Status		Active	Active	Active	Active	Active	Active	Active	Active
Well Inner Diameter	(mm)	50	50	50	50	50	50	50	50
Casing Type (Flushmount / Monument)		Monument	Monument	Flushmount	Monument	Monument	Flushmount	Monument	Flushmount
Top of Pipe Elevation	(masl)	184.852	187.353	216.625	218.769	220.065	218.014	244.619	218.032
Ground Surface Elevation	(masl)	183.942	186.453	216.805	217.859	219.165	218.114	243.709	218.122
Bottom of Concrete Seal/Top of Bentonite Seal	(mbgs)	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
	(masl)	183.642	186.153	216.505	217.559	218.865	217.814	243.409	217.822
Bottom of Bentonite Seal/Top of Sand Pack	(mbgs)	2.2	3.7	2.5	2.2	5.5	5.5	2.8	5.5
	(masl)	181.8	182.8	214.3	215.7	213.7	212.6	240.9	212.6
Top of Well Screen	(mbgs)	2.8	4.3	3.1	2.8	6.1	6.1	3.4	6.1
	(masl)	181.1	182.2	213.7	215.1	213.1	212.0	240.3	212.0
Screen Length	(m)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Bottom of Screen	(mbgs)	5.8	7.3	6.1	5.8	9.1	9.1	6.4	9.1
	(masl)	178.2	179.1	210.7	212.1	210.1	209.0	237.3	209.0
30-Nov-21	Depth of GW	(mbgs)	-	-	-	-	-	0.7	4.3
	GW Elevation	(masl)	-	-	-	-	-	243.0	213.8
1-Dec-21	Depth of GW	(mbgs)	-	-	-	1.3	2.4	-	5.3
	GW Elevation	(masl)	-	-	-	216.6	216.7	-	212.9
2-Dec-21	Depth of GW	(mbgs)	-	-	0.3	1.1	2.3	5.0	-
	GW Elevation	(masl)	-	-	216.5	216.7	216.9	213.2	-
6-Dec-21	Depth of GW	(mbgs)	2.4	DRY	-	-	-	-	-
	GW Elevation	(masl)	181.3	-	-	-	-	-	-
7-Dec-21	Depth of GW	(mbgs)	2.4	DRY	0.2	1.1	2.3	5.0	1.0
	GW Elevation	(masl)	181.6	-	216.6	216.8	216.9	213.2	242.7

See "Notes for Soil and Groundwater Summary"

Table 2B Summary of Soil Samples Submitted for Chemical Analysis

Borehole	Sample	Depth	Date	Parameters						APEC #
				M&ORP	PHCs	VOCs	PAHs	PCBs	OCPs	
BH21-2	SS2	0.8 - 1.4	2-Dec-21	✓	-	-	✓	-	-	13, 14, 30, 38, 114
	SS5	3.0 - 3.7		-	✓	-	-	-	-	
	QAQC-11			-	✓	-	-	-	-	
BH21-3	SS1	0.0 - 0.6	2-Dec-21	✓	-	-	-	-	-	13, 14, 38, 114
	QAQC-12	4.6 - 5.2		✓	-	-	-	-	-	
	SS6			-	✓	-	-	-	-	
BH21-4	SS1	0.0 - 0.6	6-Dec-21	✓	-	-	✓	-	-	13, 14, 38, 44, 114
	SS2	0.6 - 1.2		-	-	-	✓	✓		
	SS3	1.2 - 1.8		-	✓	-	-	-		
BH21-5	SS1	0.0 - 0.6	6-Dec-21	✓	-	✓	-	-	-	13, 14, 38, 47, 114
	SS2	0.6 - 1.2		-	✓	-	-	-		
	SS3	1.2 - 1.8		-	-	-	✓	✓		
BH21-6	SS1	0.0 - 0.6	1-Dec-21	-	-	-	✓	-	-	10, 13, 14, 38, 114
	SS2	0.8 - 1.4		✓	-	-	-	-		
	SS6	4.6 - 5.2		-	✓	-	-	-		
BH21-7	SS1	0.0 - 0.6	29-Nov-21	-	-	-	✓	✓	✓	4, 13, 14, 38, 114
	SS2	0.8 - 1.4		✓	-	-	-	-		
	SS5	3.0 - 3.7		-	✓	✓	-	-		
BH21-8	SS1	0.0 - 0.6	29-Nov-21	-	-	-	✓	-	-	42, 13, 14, 38, 114
	SS2	0.8 - 1.4		✓	-	-	-	-		
	SS7	6.1 - 6.7		-	✓	✓	-	-		
BH21-16	SS1	0.0 - 0.6	1-Dec-21	✓	-	-	-	-	-	13, 14, 26, 38, 114
	SS2	0.8 - 1.4		-	-	-	✓	-	-	
	QAQC-10			-	-	-	✓	-	-	
	SS8	7.6 - 8.2		-	✓	✓	-	-	-	
BH21-17	S1	0.0 - 0.6	5-Nov-21	✓	-	-	-	-	-	13, 14, 38, 49, 114
	S2	0.6 - 1.2		-	-	-	✓	✓		
	S3	1.2 - 1.8		-	-	-	✓	-		
BH21-18	SS1	0.0 - 0.6	24-Nov-21	✓	-	-	-	-	-	2, 13, 14, 38, 114
	SS2	0.8 - 1.4		-	✓	-	✓	✓		
BH21-19	SS1	0.0 - 0.6	24-Nov-21	-	-	-	✓	-	-	8, 13, 14, 38, 114
	SS2	0.8 - 1.4		✓	✓	-	-	-		
BH21-20	SS1	0.0 - 0.6	23-Nov-21	✓	-	-	-	-	-	5, 13, 14, 38, 114
	QAQC-6			✓	-	-	-	-	-	
	SS2	0.8 - 1.4		-	-	-	✓	✓	✓	
	QAQC-7			-	-	-	✓	✓	✓	
	SS3	1.5 - 2.1		-	✓	-	-	-	-	
	QAQC-8			-	✓	-	-	-	-	
SS4	2.3 - 2.9	✓	-	-	-	-	-			
BH21-21	SS1	0.0 - 0.6	23-Nov-21	-	-	-	✓	✓	✓	13, 14, 20, 38, 114
	SS3	1.5 - 2.1		✓	✓	✓	-	-	-	
BH21-22	SS1	0.0 - 0.6	22-Nov-21	✓	-	-	-	-	-	13, 14, 27, 38, 114
	SS3	1.5 - 2.1		-	-	-	✓	✓	✓	
	SS5	3.0 - 3.7		-	✓	✓	-	-	-	
BH21-23	S1	0.0 - 0.6	5-Nov-21	-	-	-	✓	-	-	13, 14, 38, 53, 114
	S2	0.6 - 1.2		✓	-	-	-	-		
	S3	1.2 - 1.8		-	-	-	-	✓	✓	
BH21-24	S1	0.0 - 0.6	5-Nov-21	-	-	-	-	✓	✓	13, 14, 38, 56, 114
	S2	0.6 - 1.2		-	-	-	✓	-	-	
	S3	1.2 - 1.8		✓	-	-	-	-	-	
BH21-45	SS1	0.0 - 0.6	22-Nov-21	-	-	-	✓	✓	✓	13, 14, 17, 38, 114
	SS2	0.8 - 1.4		✓	-	-	✓	-	-	
	SS8	7.6 - 8.2		-	✓	✓	-	-	-	
	SS9	9.1 - 9.8		-	✓	✓	-	-	-	

See "Notes for Soil and Groundwater Summary Tables" included at the beginning of this Section

Table 3B: Summary of Groundwater Samples Submitted for Chemical Analysis

Monitoring Well ID	Screened Interval (mbgs)	Date	Parameters					APEC #	
			M&ORP	PHCs	VOCs	PAHs	PCBs		OCPs
BH21-2	2.8 - 5.8	7-Dec-21	-	✓	-	-	-	-	13, 14, 30, 38, 114
BH21-6	3.1 - 6.1	6-Dec-21	✓	✓	-	-	-	-	10, 13, 14, 38, 114
BH21-7	2.8 - 5.8	2-Dec-21	✓	✓	✓	✓	✓	✓	4, 13, 14, 38, 114
BH21-8	6.1 - 9.1	2-Dec-21	✓	✓	✓	✓	-	-	42, 13, 14, 38, 114
BH21-16	6.1 - 9.1	6-Dec-21	✓	✓	✓	✓	-	-	13, 14, 26, 38, 114
BH21-22	3.4 - 6.4	1-Dec-21	✓	✓	✓	✓	-	-	13, 14, 27, 38, 114
BH21-45	6.1 - 9.1	1-Dec-21	✓	✓	✓	✓	✓	-	13, 14, 38, 114

See "Notes for Soil and Groundwater Summary Tables" included at the beginning of this Section

Table 4B Soil Analytical Results - Metals &amp; ORPs

Parameter		BH21-2 SS2	BH21-3 SS3	QAQC-12	BH21-4 SS1	BH21-5 SS1	BH21-6 SS2	BH21-7 SS2
Date of Collection	Table 2 RPI CT	Dec 02, 2021	Dec 02, 2021		Dec 06, 2021	Dec 06, 2021	Dec 01, 2021	Nov 29, 2021
Date Reported		Dec 15, 2021	Dec 15, 2021		Dec 18, 2021	Dec 18, 2021	Dec 23, 2021	Dec 14, 2021
Sampling Depth (mbgs)		0.8 - 1.4	0.0 - 0.6		0.0 - 0.6	0.0 - 0.6	0.8 - 1.4	0.8 - 1.4
Analytical Report Reference No.		21T839096	21T839096		21T840564	21T840564	21T839096	21T836919
Antimony	7.5	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8
Arsenic	18	6	4	6	4	7	4	6
Barium	390	89.8	77.5	52.7	37.4	60	54.5	57.1
Beryllium	4	0.8	0.6	0.5	0.5	0.7	<0.4	0.7
Boron	120	10	8	7	<5	7	7	11
Boron (Hot Water Extractable)	1.5	0.42	0.12	0.17	0.12	0.26	0.17	0.25
Cadmium	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Chromium	160	20	17	15	12	18	14	22
Cobalt	22	9.2	7.8	7.8	5.6	6.6	8.1	10.4
Copper	140	42.9	24.8	33.3	24.7	23.3	32	29.1
Lead	120	60	9	12	9	18	8	10
Molybdenum	6.9	0.6	<0.5	<0.5	<0.5	0.6	<0.5	<0.5
Nickel	100	19	17	22	12	14	15	21
Selenium	2.4	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8
Silver	20	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Thallium	1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Uranium	23	0.6	<0.50	<0.50	<0.50	<0.50	<0.50	0.59
Vanadium	86	30.4	25.5	22.4	20.4	28.1	23.8	31.9
Zinc	340	95	44	43	32	51	39	55
Chromium, Hexavalent	8	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Cyanide, Free	0.051	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040
Mercury	0.27	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Electrical Conductivity (2:1)	0.7	0.353	0.216	0.185	0.124	0.200	0.327	0.245
Sodium Adsorption Ratio	5	1.560	0.438	0.300	0.143	0.116	2.140	2.170
pH, 2:1 CaCl <sub>2</sub> Extraction	*	7.29	7.25	7.32	7.19	7.04	7.61	7.19

See "Notes for Soil and Groundwater Summary Tables" included at the beginning of this Section

Table 4B Soil Analytical Results - Metals &amp; ORPs

Parameter		BH21-8 SS2	BH21-16 SS1	BH21-17 S1	BH21-18 SS1	BH21-19 SS2	BH21-20 SS1	QAQC-6
Date of Collection	Table 2 RPI CT	Nov 29, 2021	Dec 01, 2021	Nov 05, 2021	Nov 24, 2021	Nov 24, 2021	Nov 23, 2021	
Date Reported		Dec 14, 2021	Dec 15, 2021	Nov 16, 2021	Dec 03, 2021	Dec 03, 2021	Dec 03, 2021	
Sampling Depth (mbgs)		0.8 - 1.4	0.0 - 0.6	0.0 - 0.6	0.0 - 0.6	0.8 - 1.4	0.0 - 0.6	
Analytical Report Reference No.		21T836919	21T839096	21T826519	21T834550	21T834550	21T834550	
Antimony	7.5	<0.8	2.8	<0.8	<0.8	<0.8	<0.8	<0.8
Arsenic	18	6	8	7	6	6	6	5
Barium	390	57.4	88.5	62.8	94.5	82.7	71.9	71.5
Beryllium	4	0.5	0.5	0.6	0.6	0.6	<0.4	<0.4
Boron	120	10	9	9	7	11	<5	<5
Boron (Hot Water Extractable)	1.5	0.21	0.50	0.66	0.26	0.11	0.21	0.22
Cadmium	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Chromium	160	19	35	20	25	25	20	20
Cobalt	22	10.0	10.6	7.9	11.5	13.3	16.5	11.8
Copper	140	31.5	69	28.8	33.4	25.2	48.7	25.8
Lead	120	12	79	22	10	11	18	17
Molybdenum	6.9	<0.5	3.7	0.7	<0.5	<0.5	0.6	0.6
Nickel	100	20	31	19	24	26	142	25
Selenium	2.4	<0.8	0.8	<0.8	<0.8	<0.8	<0.8	<0.8
Silver	20	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Thallium	1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Uranium	23	<0.50	<0.50	<0.50	0.5	0.6	0.5	<0.50
Vanadium	86	28.4	33.8	29	35.1	35.8	30.9	30.7
Zinc	340	51	468	77	66	59	61	67
Chromium, Hexavalent	8	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Cyanide, Free	0.051	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040
Mercury	0.27	<0.10	0.22	<0.10	<0.10	<0.10	<0.10	<0.10
Electrical Conductivity (2:1)	0.7	0.117	0.290	0.186	0.154	0.110	0.154	0.157
Sodium Adsorption Ratio	5	0.122	1.640	0.055	1.000	0.186	0.105	0.107
pH, 2:1 CaCl <sub>2</sub> Extraction	*	7.12	7.50	7.16	7.55	7.56	7.44	7.36

See "Notes for Soil and Groundwater Summary Tables" included at the beginning of this Section

Table 4B Soil Analytical Results - Metals &amp; ORPs

Parameter		BH21-20 SS4	BH21-21 SS3	BH21-22 SS1	BH21-23 S2	BH21-24 S3	BH21-45 SS2
Date of Collection	Table 2 RPI CT	Nov 23, 2021	Nov 23, 2021	Nov 22, 2021	Nov 05, 2021	Nov 05, 2021	Nov 22, 2021
Date Reported		Dec 20, 2021	Dec 03, 2021	Dec 03, 2021	Nov 16, 2021	Nov 16, 2021	Dec 03, 2021
Sampling Depth (mbgs)		2.3 - 2.9	1.5 - 2.1	0.0 - 0.6	0.6 - 1.2	1.2 - 1.8	0.8 - 1.4
Analytical Report Reference No.		21T841262	21T834550	21T834550	21T826519	21T826519	21T834550
Antimony	7.5	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8
Arsenic	18	5	5	6	7	6	7
Barium	390	95.4	56.1	96.2	54.8	41.5	83
Beryllium	4	0.6	<0.4	0.5	0.6	0.4	0.5
Boron	120	24	8	9	10	7	9
Boron (Hot Water Extractable)	1.5	0.26	<0.10	0.12	0.26	<0.10	0.44
Cadmium	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Chromium	160	25	14	24	22	16	25
Cobalt	22	14.8	7.6	11.9	11.2	9.8	15.3
Copper	140	10.6	23.4	29.7	36.6	34.8	33.8
Lead	120	12	10	10	9	7	11
Molybdenum	6.9	1.2	<0.5	<0.5	0.7	<0.5	<0.5
Nickel	100	27	13	23	25	20	33
Selenium	2.4	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8
Silver	20	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Thallium	1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Uranium	23	0.8	<0.50	0.6	0.5	<0.50	0.7
Vanadium	86	40.2	22.7	34.9	29.5	23.4	34
Zinc	340	63	35	57	63	53	68
Chromium, Hexavalent	8	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Cyanide, Free	0.051	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040
Mercury	0.27	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Electrical Conductivity (2:1)	0.7	0.125	0.088	0.125	0.157	0.103	0.314
Sodium Adsorption Ratio	5	0.344	0.095	0.182	0.370	0.095	1.200
pH, 2:1 CaCl <sub>2</sub> Extraction	*	7.13	7.62	7.64	7.59	7.66	7.60

See "Notes for Soil and Groundwater Summary Tables" included at the beginning of this Section



**Table 5B Soil Analytical Results - PHCs & BTEX**

Parameter		BH21-2 SS5	BH21-3 SS6	BH21-4 SS3	BH21-5 SS2	BH21-6 SS6	BH21-7 SS5	BH21-8 SS7	BH21-16 SS8
Date of Collection	Table 2 RPI CT	Dec 02, 2021	Dec 02, 2021	Dec 06, 2021	Dec 06, 2021	Dec 01, 2021	Nov 29, 2021	Nov 29, 2021	Dec 01, 2021
Date Reported		Dec 15, 2021	Dec 15, 2021	Dec 18, 2021	Dec 18, 2021	Dec 15, 2021	Dec 14, 2021	Dec 14, 2021	Dec 15, 2021
Sampling Depth (mbgs)		3.0 - 3.7	4.6 - 5.2	1.8 - 1.8	0.6 - 1.2	4.6 - 5.2	3.0 - 3.7	6.1 - 6.7	7.6 - 8.2
Analytical Report Reference No.		21T839096	21T839096	21T840564	21T840564	21T839096	21T836919	21T836919	21T839096
Benzene	0.21	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Toluene	2.3	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Ethylbenzene	1.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Total Xylenes	3.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
F1 (C6 to C10) minus BTEX	55	<5	<5	<5	<5	<5	<5	<5	<5
F2 (C10 to C16)	98	<10	<10	<10	<10	<10	<10	<10	<10
F3 (C16 to C34)	300	<50	<50	<50	<50	<50	<50	<50	<50
F4 (C34 to C50)	2800	<50	<50	<50	<50	<50	<50	<50	<50

See "Notes for Soil and Groundwater Summary Tables" included at the beginning of this Section

**Table 5B Soil Analytical Results - PHCs & BTE**

Parameter		BH21-17 S2	BH21-18 SS2	BH21-19 SS2	BH21-20 SS3	QAQC-8	BH21-21 SS3	BH21-22 SS5	BH21-23 S3
Date of Collection	Table 2 RPI CT	Nov 05, 2021	Nov 24, 2021	Nov 24, 2021	Nov 23, 2021	Nov 23, 2021	Nov 23, 2021	Nov 22, 2021	Nov 05, 2021
Date Reported		Nov 30, 2021	Dec 03, 2021	Dec 03, 2021	Dec 03, 2021	Dec 03, 2021	Dec 03, 2021	Dec 03, 2021	Nov 30, 2021
Sampling Depth (mbgs)		0.6 - 1.2	0.8 - 1.4	0.8 - 1.4	1.5 - 2.1	1.5 - 2.1	3.0 - 3.7	1.2 - 1.8	
Analytical Report Reference No.		21T832162	21T834550	21T834550	21T834550	21T834550	21T834550	21T834550	21T832162
Benzene	0.21	<0.005	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.005
Toluene	2.3	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Ethylbenzene	1.1	<0.01	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.01
Total Xylenes	3.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
F1 (C6 to C10) minus BTEX	55	<10	<5	<5	<5	<5	<5	<5	<10
F2 (C10 to C16)	98	<10	<10	<10	<10	<10	<10	<10	<10
F3 (C16 to C34)	300	13	<50	<50	<50	<50	<50	<50	<10
F4 (C34 to C50)	2800	<10	<50	<50	<50	<50	<50	<50	<10

See "Notes for Soil and Groundwater Summary Tables" included at the beginning of this Section

**Table 5B Soil Analytical Results - PHCs & BTE**

Parameter		BH21-24 S3	BH21-45 SS8	BH21-45 SS9
Date of Collection	Table 2 RPI CT	Nov 05, 2021	Nov 22, 2021	Nov 22, 2021
Date Reported		Nov 30, 2021	Dec 03, 2021	Dec 20, 2021
Sampling Depth (mbgs)		1.2 - 1.8	7.6 - 8.2	9.1 - 9.8
Analytical Report Reference No.		21T832162	21T834550	21T841262
Benzene	0.21	<0.005	<0.02	<0.02
Toluene	2.3	<0.05	<0.05	<0.05
Ethylbenzene	1.1	<0.01	0.9	<0.05
Total Xylenes	3.1	<0.05	<b>5.55</b>	<0.05
F1 (C6 to C10) minus BTEX	55	<10	51	<5
F2 (C10 to C16)	98	<10	<10	<10
F3 (C16 to C34)	300	14	<50	<50
F4 (C34 to C50)	2800	<10	<50	<50

See "Notes for Soil and Groundwater Summary Tables" included at the beginning of this Section

Table 6B Soil Analytical Results - VOCs

Parameter		BH21-7 SS5	BH21-8 SS7	BH21-16 SS8	BH21-21 SS3	BH21-22 SS5	BH21-45 SS8	BH21-45 SS9
Date of Collection	Table 2 RPI CT	Nov 29, 2021	Nov 29, 2021	Dec 01, 2021	Nov 23, 2021	Nov 22, 2021	Nov 22, 2021	Nov 22, 2021
Date Reported		Dec 14, 2021	Dec 14, 2021	Dec 15, 2021	Dec 03, 2021	Dec 03, 2021	Dec 03, 2021	Dec 20, 2021
Sampling Depth (mbgs)		3.0 - 3.7	6.1 - 6.7	7.6 - 8.2	1.5 - 2.1	3.0 - 3.7	7.6 - 8.2	9.1 - 9.8
Analytical Report Reference No.		21T836919	21T836919	21T839096	21T834550	21T834550	21T834550	21T841262
Acetone	16	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Benzene	0.21	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Bromodichloromethane	1.5	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Bromoform	0.27	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Bromomethane	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
Chlorobenzene	2.4	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Chloroform	0.05	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04
Dibromochloromethane	2.3	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Dichlorobenzene, 1,2-	1.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Dichlorobenzene, 1,3-	4.8	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Dichlorobenzene, 1,4-	0.083	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Dichlorodifluoromethane	16	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Dichloroethane, 1,1-	0.47	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Dichloroethane, 1,2-	0.05	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
Dichloroethylene, 1,1-	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Dichloroethylene, Cis- 1,2-	1.9	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Dichloroethylene, Trans- 1,2-	0.084	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Dichloropropane, 1,2-	0.05	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
1,3-Dichloropropene (Cis + Trans)	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Ethylbenzene	1.1	<0.05	<0.05	<0.05	<0.05	<0.05	0.9	<0.05
Ethylene Dibromide	0.05	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04
Hexane, n-	2.8	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Methyl Ethyl Ketone	16	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Methyl Isobutyl Ketone	1.7	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Methyl tert-butyl Ether	0.75	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Methylene Chloride	0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Styrene	0.7	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Tetrachloroethane, 1,1,1,2-	0.058	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04
Tetrachloroethane, 1,1,2,2-	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Tetrachloroethylene	0.28	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Toluene	2.3	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Trichloroethane, 1,1,1-	0.38	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Trichloroethane, 1,1,2-	0.05	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04
Trichloroethylene	0.061	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
Trichlorofluoromethane	4	<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
Xylene mixture	3.1	<0.05	<0.05	<0.05	<0.05	<0.05	5.55	<0.05

See "Notes for Soil and Groundwater Summary Tables" included at the beginning of this Section

Table 7B Soil Analytical Results - PAHs

Parameter		BH21-2 SS2	BH21-4 SS1	BH21-5 SS1	BH21-6 SS2	BH21-7 SS1	BH21-8 SS1
Date of Collection	Table 2 RPI CT	Dec 02, 2021	Dec 06, 2021	Dec 06, 2021	Dec 01, 2021	Nov 29, 2021	Nov 29, 2021
Date Reported		Dec 15, 2021	Dec 18, 2021	Dec 18, 2021	Dec 23, 2021	Dec 14, 2021	Dec 14, 2021
Sampling Depth (mbgs)		0.8 - 1.4	0.0 - 0.6	0.0 - 0.6	0.8 - 1.4	0.0 - 0.6	0.0 - 0.6
Analytical Report Reference No.		21T839096	21T840564	21T840564	21T839096	21T836919	21T836919
Naphthalene	0.6	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Acenaphthylene	0.15	<0.05	<0.05	<0.05	<0.05	0.06	<0.05
Acenaphthene	7.9	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Fluorene	62	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Phenanthrene	6.2	<0.05	<0.05	<0.05	<0.05	0.40	0.22
Anthracene	0.67	<0.05	<0.05	<0.05	<0.05	0.18	0.10
Fluoranthene	0.69	<0.05	<0.05	<0.05	<0.05	<b>1.05</b>	<b>0.89</b>
Pyrene	78	<0.05	<0.05	<0.05	<0.05	0.96	0.77
Benz(a)anthracene	0.5	<0.05	<0.05	<0.05	<0.05	<b>0.56</b>	0.46
Chrysene	7	<0.05	<0.05	<0.05	<0.05	0.41	0.36
Benzo(b)fluoranthene	0.78	<0.05	<0.05	<0.05	<0.05	0.60	0.66
Benzo(k)fluoranthene	0.78	<0.05	<0.05	<0.05	<0.05	0.23	0.24
Benzo(a)pyrene	0.3	<0.05	<0.05	<0.05	<0.05	<b>0.40</b>	<b>0.40</b>
Indeno(1,2,3-cd)pyrene	0.38	<0.05	<0.05	<0.05	<0.05	0.22	0.26
Dibenz(a,h)anthracene	0.1	<0.05	<0.05	<0.05	<0.05	0.05	0.05
Benzo(g,h,i)perylene	6.6	<0.05	<0.05	<0.05	<0.05	0.27	0.34
Methylnaphthalene, 2-(1-)	0.99	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05

See "Notes for Soil and Groundwater Summary Tables" included at the beginning of this Section

Table 7B Soil Analytical Results - PAHs

Parameter		BH21-16 SS2	QAQC-10	BH21-17 S3	BH21-18 SS2	BH21-19 SS1	BH21-20 SS2	QAQC-7
Date of Collection	Table 2 RPI CT	Dec 02, 2021		Nov 05, 2021	Nov 24, 2021	Nov 24, 2021	Nov 23, 2021	
Date Reported		Dec 15, 2021		Nov 16, 2021	Dec 03, 2021	Dec 03, 2021	Dec 03, 2021	
Sampling Depth (mbgs)		0.8 - 1.4		1.2 - 1.8	0.8 - 1.4	0.0 - 0.6	0.8 - 1.4	
Analytical Report Reference No.		21T839096		21T826519	21T834550	21T834550	21T834550	
Naphthalene	0.6	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Acenaphthylene	0.15	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Acenaphthene	7.9	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Fluorene	62	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Phenanthrene	6.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Anthracene	0.67	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Fluoranthene	0.69	<0.05	<0.05	<0.05	<0.05	0.14	<0.05	<0.05
Pyrene	78	<0.05	<0.05	<0.05	<0.05	0.16	<0.05	<0.05
Benz(a)anthracene	0.5	<0.05	<0.05	<0.05	<0.05	0.17	<0.05	<0.05
Chrysene	7	<0.05	<0.05	<0.05	<0.05	0.07	<0.05	<0.05
Benzo(b)fluoranthene	0.78	<0.05	<0.05	<0.05	<0.05	0.1	<0.05	<0.05
Benzo(k)fluoranthene	0.78	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Benzo(a)pyrene	0.3	<0.05	<0.05	<0.05	<0.05	0.07	<0.05	<0.05
Indeno(1,2,3-cd)pyrene	0.38	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Dibenz(a,h)anthracene	0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Benzo(g,h,i)perylene	6.6	<0.05	<0.05	<0.05	<0.05	0.05	<0.05	<0.05
Methylnaphthalene, 2-(1-)	0.99	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05

See "Notes for Soil and Groundwater Summary Tables" included at the beginning of this Section

Table 7B Soil Analytical Results - PAHs

Parameter		BH21-21 SS1	BH21-22 SS3	BH21-23 S1	BH21-24 S2	BH21-45 SS1	BH21-45 SS2
Date of Collection	Table 2 RPI CT	Nov 23, 2021	Nov 22, 2021	Nov 05, 2021	Nov 05, 2021	Nov 22, 2021	Nov 22, 2021
Date Reported		Dec 03, 2021	Dec 03, 2021	Nov 16, 2021	Nov 16, 2021	Dec 03, 2021	Dec 20, 2021
Sampling Depth (mbgs)		0.0 - 0.6	1.5 - 2.1	0.0 - 0.6	0.6 - 1.2	0.0 - 0.6	0.8 - 1.4
Analytical Report Reference No.		21T834550	21T834550	21T826519	21T826519	21T834550	21T841262
Naphthalene	0.6	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Acenaphthylene	0.15	<0.05	<0.05	<0.05	<0.05	0.09	<0.05
Acenaphthene	7.9	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Fluorene	62	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Phenanthrene	6.2	<0.05	<0.05	<0.05	<0.05	0.24	<0.05
Anthracene	0.67	<0.05	<0.05	<0.05	<0.05	0.13	<0.05
Fluoranthene	0.69	<0.05	<0.05	<0.05	<0.05	0.57	<0.05
Pyrene	78	<0.05	<0.05	<0.05	<0.05	0.6	<0.05
Benz(a)anthracene	0.5	<0.05	<0.05	<0.05	<0.05	0.39	<0.05
Chrysene	7	<0.05	<0.05	<0.05	<0.05	0.35	<0.05
Benzo(b)fluoranthene	0.78	<0.05	<0.05	0.09	<0.05	0.45	<0.05
Benzo(k)fluoranthene	0.78	<0.05	<0.05	0.09	<0.05	0.19	<0.05
Benzo(a)pyrene	0.3	<0.05	<0.05	0.05	<0.05	<b>0.33</b>	<0.05
Indeno(1,2,3-cd)pyrene	0.38	<0.05	<0.05	<0.05	<0.05	0.19	<0.05
Dibenz(a,h)anthracene	0.1	<0.05	<0.05	<0.05	<0.05	0.06	<0.05
Benzo(g,h,i)perylene	6.6	<0.05	<0.05	<0.05	<0.05	0.23	<0.05
Methylnaphthalene, 2-(1-)	0.99	<0.05	<0.05	<0.05	<0.05	0.15	<0.05

See "Notes for Soil and Groundwater Summary Tables" included at the beginning of this Section

Table 8B Soil Analytical Results - PCBs and OC Pesticides

Parameter		BH21-4 SS2	BH21-5 SS3	BH21-7 SS1	BH21-17 S2	BH21-20 SS2	QAQC-7	BH21-23 S3	BH21-24 S1	BH21-45 SS1
Date of Collection	Table 2 RPI CT	Dec 06, 2021	Dec 06, 2021	Nov 29, 2021	Nov 05, 2021	Nov 23, 2021		Nov 05, 2021	Nov 05, 2021	Nov 22, 2021
Date Reported		Dec 18, 2021	Dec 18, 2021	Dec 14, 2021	Nov 16, 2021	Dec 03, 2021		Nov 16, 2021	Nov 16, 2021	Dec 03, 2021
Sampling Depth (m bgs)		0.6 - 1.6	1.2 - 1.8	0.0 - 0.6	0.6 - 1.2	0.8 - 1.4		1.2 - 1.8	0.0 - 0.6	0.0 - 0.6
Analytical Report Reference No.		21T840564	21T840564	21T836919	21T826519	21T834550		21T826519	21T826519	21T834550
Polychlorinated Biphenyls	0.35	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Aldrin	0.05	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Chlordane	0.05	<0.007	<0.007	<0.007	<0.007	<0.007	<0.007	<0.007	<0.007	<0.007
DDD	3.3	<0.007	<0.007	<0.007	<0.007	<0.007	<0.007	<0.007	<0.007	<0.007
DDE	0.26	<0.007	<0.007	<0.007	<0.007	<0.007	<0.007	<0.007	<0.007	<0.007
DDT	1.4	<0.007	<0.007	<0.007	<0.007	<0.007	<0.007	<0.007	<0.007	<0.007
Dieldrin	0.05	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Endosulfan	0.04	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Endrin	0.04	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Heptachlor	0.15	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Heptachlor Epoxide	0.05	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Hexachlorobenzene	0.52	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Hexachlorobutadiene	0.012	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Hexachlorocyclohexane Gamma-	0.056	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Hexachloroethane	0.089	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Methoxychlor	0.13	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005

See "Notes for Soil and Groundwater Summary Tables" included at the beginning of this Section



Table 9B Groundwater Analytical Results - Metals & ORPs

Parameter		BH21-6	BH21-7	BH21-8	BH21-16	BH21-22	BH21-45	QA/QC	BH21-45	
Date of Collection	Table 2 Potable GW CT	Dec 06, 2021	Dec 02, 2021	Dec 02, 2021	Dec 06, 2021	Feb 11, 2022	Dec 01, 2021	Dec 01, 2021	Feb 11, 2022	
Date Reported		Dec 21, 2021	Dec 15, 2021	Dec 15, 2021	Dec 21, 2021	Feb 14, 2022	Dec 16, 2021	Dec 16, 2021	Feb 14, 2022	
Screened Depth (mbgs)		3.1 - 6.1	2.8 - 5.8	6.1 - 9.1	6.1 - 9.1		3.4 - 6.4	6.1 - 9.1		
Analytical Report Reference No.		21T841270	21T839088	21T839088	21T841270	22T862998	21T838602	21T838602		
Antimony	6	<1.0	<1.0	<1.0	1.1	-	<1.0	<1.0	<1.0	-
Arsenic	25	4.7	<1.0	4.3	<1.0	-	1.1	4.7	1.6	-
Barium	1000	271	254	109	63.9	-	91.9	80.5	62.4	-
Beryllium	4	<0.50	<0.50	<0.50	<0.50	-	<0.50	<0.50	<0.50	-
Boron	5000	279	362	131	1676	-	219	682	115	-
Cadmium	2.7	<0.20	<0.20	<0.20	<0.20	-	<0.20	<0.20	<0.20	-
Chromium	50	25.3	<2.0	<2.0	<2.0	-	<2.0	<2.0	<2.0	-
Chromium VI	25	5.43	<2.0	<2.0	<2.0	-	<2.0	<2.0	<2.0	-
Cobalt	3.8	4.53	0.52	0.63	<0.50	-	1.06	0.66	2.87	-
Copper	87	2.7	1.9	<1.0	<1.0	-	<1.0	<1.0	<1.0	-
Cyanide	66	<2.0	<2.0	<2.0	<2.0	-	<2.0	<2.0	<2.0	-
Lead	10	0.93	<0.50	<0.50	<0.50	-	<0.50	<0.50	<0.50	-
Mercury	0.29	<0.02	<0.02	<0.02	<0.02	-	<0.02	<0.02	<0.02	-
Molybdenum	70	6.45	14.2	7.84	24.7	32.1	4.41	28	4.27	57.1
Nickel	100	6.9	2.8	9.7	1.1	-	1.9	4.7	4.2	-
Selenium	10	<1.0	<1.0	<1.0	1.6	-	<1.0	<1.0	<1.0	-
Silver	1.5	<0.20	<0.20	<0.20	<0.20	-	<0.20	<0.20	<0.20	-
Thallium	2	<0.30	<0.30	<0.30	<0.30	-	<0.30	<0.30	<0.30	-
Uranium	20	3.52	3.19	1.11	1.86	-	2.18	1.5	0.96	-
Vanadium	6.2	3.29	1.42	0.62	0.62	-	0.63	0.83	<0.40	-
Zinc	1100	6.1	<5.0	<5.0	<5.0	-	<5.0	<5.0	<5.0	-
Sodium	490000	342000	417000	23000	210000	-	43800	205000	77700	-
Chloride	790000	1460000	768000	72700	286000	-	63300	326000	156000	-

See "Notes for Soil and Groundwater Summary Tables" included at the beginning of this Section

Table 10B Groundwater Analytical Results - PHCs&BTEX

Parameter		BH21-2	BH21-6	QAQC-2	BH21-7	QAQC-1	BH21-8	BH21-16	BH21-22	BH21-45	QA/QC
Date of Collection	Table 2 Potable GW CT	Dec 07, 2021	Dec 06, 2021		Dec 02, 2021		Dec 02, 2021	Dec 06, 2021	Dec 01, 2021		Dec 01, 2021
Date Reported		Dec 21, 2021	Dec 21, 2021		Dec 15, 2021		Dec 15, 2021	Dec 21, 2021	Dec 16, 2021		Dec 16, 2021
Screened Depth (mbgs)		2.8 - 5.8	3.1 - 6.1		2.8 - 5.8		6.1 - 9.1	6.1 - 9.1	3.4 - 6.4		6.1 - 9.1
Analytical Report Reference No.		21T841270	21T841270		21T839088		21T839088	21T841270	21T838602		21T838602
Benzene	5	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Toluene	24	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Ethylbenzene	2.4	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Xylene Mixture	300	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
F1 (C6 to C10) minus BTEX	750	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25
F2 (C10 to C16)	150	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100
F3 (C16 to C34)	500	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100
F4 (C34 to C50)	500	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100

See "Notes for Soil and Groundwater Summary Tables" included at the beginning of this Section

Table 11B Groundwater Analytical Results - VOCs

Parameter		BH21-7	BH21-8	BH21-16	QAQC-1	BH21-22	BH21-45	QA/QC	Trip Blank	Trip Blank	Trip Blank
Date of Collection	Table 2 Potable GW CT	Dec 02, 2021	Dec 02, 2021	Dec 06, 2021		Dec 01, 2021	Dec 01, 2021		Nov 23, 2021	Nov 30, 2021	Dec 04, 2021
Date Reported		Dec 15, 2021	Dec 15, 2021	Dec 21, 2021		Dec 16, 2021	Dec 16, 2021		Dec 03, 2021	Dec 16, 2021	Dec 21, 2021
Screened Depth (mbgs)		2.8 - 5.8	6.1 - 9.1	6.1 - 9.1		3.4 - 6.4	6.1 - 9.1		-	-	-
Analytical Report Reference No.		21T839088	21T839088	21T841270		21T838602	21T838602		21T834096	21T838602	21T841270
Acetone	2700	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Benzene	5	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Bromodichloromethane	16	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Bromoform	25	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Bromomethane	0.89	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Carbon Tetrachloride	0.79	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Chlorobenzene	30	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Chloroform	2.4	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Dibromochloromethane	25	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Dichlorobenzene, 1,2-	3	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Dichlorobenzene, 1,3-	59	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Dichlorobenzene, 1,4-	1	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Dichlorodifluoromethane	590	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Dichloroethane, 1,1-	5	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30
Dichloroethane, 1,2-	1.6	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Dichloroethylene, 1,1-	1.6	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30
Dichloroethylene, cis- 1,2-	1.6	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Dichloroethylene, trans- 1,2-	1.6	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Dichloropropane, 1,2-	5	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Dichloropropene, 1,3-	0.5	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30
Ethylbenzene	2.4	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Ethylene Dibromide	0.2	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Hexane, n-	51	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Methyl Ethyl Ketone	1800	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Methyl Isobutyl Ketone	640	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Methyl tert-butyl ether	15	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Methylene Chloride	50	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30
Styrene	5.4	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Tetrachloroethane, 1,1,1,2-	1.1	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Tetrachloroethane, 1,1,2,2-	1	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Tetrachloroethylene	1.6	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Toluene	24	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Trichloroethane, 1,1,1-	200	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30
Trichloroethane, 1,1,2-	4.7	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Trichloroethylene	1.6	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Trichlorofluoromethane	150	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40
Vinyl Chloride	0.5	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17
Xylene Mixture	300	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20

See "Notes for Soil and Groundwater Summary Tables" included at the beginning of this Section

Table 12B Groundwater Analytical Results - PAHs

Parameter		BH21-7	BH21-8	QAQC-2	BH21-16	BH21-22	BH21-45	QA/QC	BH21-45
Date of Collection	Table 2 Potable GW CT	Dec 02, 2021	Dec 02, 2021		Dec 06, 2021	Dec 01, 2021	Dec 01, 2021		Feb 11, 2022
Date Reported		Dec 15, 2021	Dec 15, 2021		Dec 21, 2021	Dec 16, 2021	Dec 16, 2021		Feb 14, 2022
Screened Depth (mbgs)		2.8 - 5.8	6.1 - 9.1		6.1 - 9.1	3.4 - 6.4	6.1 - 9.1		
Analytical Report Reference No.		21T839088	21T839088		21T841270	21T838602	21T838602		22T862998
Acenaphthene	4.1	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Acenaphthylene	1	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Anthracene	2.4	<0.10	<0.10	<0.10	<0.10	<0.10	1.79	1	<0.10
Benz(a)anthracene	1	<0.20	<0.20	<0.20	<0.20	<0.20	2.4	1.67	<0.20
Benzo(a)pyrene	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	3.67	2.8	<0.01
Benzo(b)fluoranthene	0.1	<0.10	<0.10	<0.10	<0.10	<0.10	4.92	3.29	<0.10
Benzo(g,h,i)perylene	0.2	<0.20	<0.20	<0.20	<0.20	<0.20	2.48	1.89	<0.20
Benzo(k)fluoranthene	0.1	<0.10	<0.10	<0.10	<0.10	<0.10	2.19	1.86	<0.10
Chrysene	0.1	<0.10	<0.10	<0.10	<0.10	<0.10	5.59	4.01	<0.10
Dibenz(a,h)anthracene	0.2	<0.20	<0.20	<0.20	<0.20	<0.20	0.32	0.21	<0.20
Fluoranthene	0.41	<0.20	<0.20	<0.20	<0.20	<0.20	17.9	11.2	<0.20
Fluorene	120	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	0.56	<0.20
Indeno(1,2,3-cd)pyrene	0.2	<0.20	<0.20	<0.20	<0.20	<0.20	1.8	1.35	<0.20
Methyl Naphthalene, 2-and 1-	3.2	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Naphthalene	11	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Phenanthrene	1	<0.10	<0.10	<0.10	<0.10	<0.10	12	9.08	<0.10
Pyrene	4.1	<0.20	<0.20	<0.20	<0.20	<0.20	14.6	9.52	<0.20

See "Notes for Soil and Groundwater Summary Tables" included at the beginning of this Section

Table 13B Groundwater Analytical Results - PCBs and OC Pesticides

Parameter		BH21-7	BH21-45	QA/QC
Date of Collection	Table 2 Potable GW CT	Dec 02, 2021	Dec 01, 2021	
Date Reported		Dec 15, 2021	Dec 16, 2021	
Screened Depth (mbgs)		2.8 - 5.8	6.1 - 9.1	
Analytical Report Reference No.		21T839088	21T838602	
Polychlorinated Biphenyls	3	<0.1	<0.1	<0.1
Aldrin	0.35	<0.01	-	-
Chlordane	7	<0.04	-	-
DDD	10	<0.05	-	-
DDE	10	<0.01	-	-
DDT	2.8	<0.04	-	-
Dieldrin	0.35	<0.02	-	-
Endosulfan	1.5	<0.05	-	-
Endrin	0.48	<0.05	-	-
Heptachlor	1.5	<0.01	-	-
Heptachlor Epoxide	0.048	<0.01	-	-
Hexachlorobenzene	1	<0.01	-	-
Hexachlorobutadiene	0.44	<0.01	-	-
Hexachlorocyclohexane Gamma-	1.2	<0.01	-	-
Hexachloroethane	2.1	<0.01	-	-
Methoxychlor	6.5	<0.04	-	-

See "Notes for Soil and Groundwater Summary Tables" included at the end of this Section

Table 14B Summary of Maximum Concentrations in Soil

Group	Parameter	Table 2 RPI CT	Maximum Concentration	Location
BTEX	Benzene	0.21	<0.02	all samples
	Ethylbenzene	1.1	0.9	BH21-45 SS8
	Toluene	2.3	<0.05	all samples
	Total Xylenes	3.1	5.55	BH21-45 SS8
Metals	Barium	390	96.2	BH21-22 SS1
	Beryllium	4	0.8	BH21-2 SS2
	Boron	120	24	BH21-20 SS4
	Cadmium	1.2	<0.5	all samples
	Chromium	160	35	BH21-16 SS1
	Cobalt	22	16.5	BH21-20 SS1
	Copper	140	69	BH21-16 SS1
	Lead	120	79	BH21-16 SS1
	Molybdenum	6.9	3.7	BH21-16 SS1
	Nickel	100	142	BH21-20 SS1
	Silver	20	<0.5	all samples
	Thallium	1	<0.5	all samples
	Uranium	23	0.79	BH21-20 SS4
	Vanadium	86	40.2	BH21-20 SS4
	Zinc	340	468	BH21-16 SS1
As, Se, Sb	Antimony	7.5	2.8	BH21-16 SS1
	Arsenic	18	8	BH21-16 SS1
	Selenium	2.4	0.8	BH21-16 SS1
PAHs	Acenaphthene	7.9	<0.05	all samples
	Acenaphthylene	0.15	0.09	BH21-45 SS1
	Anthracene	0.67	0.18	BH21-7 SS1
	Benz(a)anthracene	0.5	0.56	BH21-7 SS1
	Benzo(a)pyrene	0.3	0.4	BH21-7 SS1
	Benzo(b)fluoranthene	0.78	0.66	BH21-8 SS1
	Benzo(g,h,i)perylene	6.6	0.34	BH21-8 SS1
	Benzo(k)fluoranthene	0.78	0.24	BH21-8 SS1
	Chrysene	7	0.41	BH21-7 SS1
	Dibenz(a,h)anthracene	0.1	0.06	BH21-45 SS1
	Fluoranthene	0.69	1.05	BH21-7 SS1
	Fluorene	62	<0.05	all samples
	Indeno(1,2,3-cd)pyrene	0.38	0.26	BH21-8 SS1
	Methylnaphthalene, 2-(1-)	0.99	0.15	BH21-45 SS1
	Naphthalene	0.6	<0.05	all samples
	Phenanthrene	6.2	0.4	BH21-7 SS1
	Pyrene	78	0.96	BH21-7 SS1
PHCs	F1 (C6 to C10) minus BTEX	55	51	BH21-45 SS8
	F2 (C10 to C16)	98	<10	all samples
	F3 (C16 to C34)	300	14	BH21-24 S3
	F4 (C34 to C50)	2800	<50	all samples
	Acetone	16	<0.50	all samples
	Bromodichloromethane	1.5	<0.05	all samples
	Bromoform	0.27	<0.05	all samples
	Bromomethane	0.05	<0.05	all samples
	Carbon Tetrachloride	0.05	<0.05	all samples
	Chlorobenzene	2.4	<0.05	all samples
	Chloroform	0.05	<0.04	all samples
	Dibromochloromethane	2.3	<0.05	all samples
	Dichlorobenzene, 1,2-	1.2	<0.05	all samples

Table 14B Summary of Maximum Concentrations in Soil

Group	Parameter	Table 2 RPI CT	Maximum Concentration	Location
VOCs	Dichlorobenzene, 1,3-	4.8	<0.05	all samples
	Dichlorobenzene, 1,4-	0.083	<0.05	all samples
	Dichlorodifluoromethane	16	<0.05	all samples
	Dichloroethane, 1,1-	0.47	<0.02	all samples
	Dichloroethane, 1,2-	0.05	<0.03	all samples
	Dichloroethylene, 1,1-	0.05	<0.05	all samples
	Dichloroethylene, Cis- 1,2-	1.9	<0.02	all samples
	Dichloroethylene, Trans- 1,2-	0.084	<0.05	BH21-45 SS8
	Dichloropropane, 1,2-	0.05	<0.03	all samples
	1,3-Dichloropropene (Cis + Trans)	0.05	<0.05	BH21-45 SS8
	Ethylene Dibromide	0.05	<0.04	all samples
	Hexane, n-	2.8	<0.05	all samples
	Methyl Ethyl Ketone	16	<0.50	all samples
	Methyl Isobutyl Ketone	1.7	<0.50	all samples
	Methyl tert-butyl Ether	0.75	<0.05	all samples
	Methylene Chloride	0.1	<0.05	all samples
	Styrene	0.7	<0.05	all samples
	Tetrachloroethane, 1,1,1,2-	0.058	<0.04	all samples
	Tetrachloroethane, 1,1,2,2-	0.05	<0.05	all samples
	Tetrachloroethylene	0.28	<0.05	all samples
	Trichloroethane, 1,1,1-	0.38	<0.05	all samples
	Trichloroethane, 1,1,2-	0.05	<0.04	all samples
	Trichloroethylene	0.061	<0.03	all samples
Trichlorofluoromethane	4	<0.05	all samples	
Vinyl Chloride	0.02	<0.02	all samples	
ORPs	Chromium, Hexavalent	8	<0.2	all samples
	Cyanide, Free	0.051	<0.040	all samples
	Electrical Conductivity (2:1)	0.7	0.353	BH21-2 SS2
	Mercury	0.27	0.22	BH21-16 SS1
	Sodium Adsorption Ratio	5	2.17	BH21-7 SS2
	pH, 2:1 CaCl2 Extraction	*	7.66	BH21-24 S3
PCBs	Polychlorinated Biphenyls	0.35	<0.10	all samples

See "Notes for Soil and Groundwater Summary Tables" included at the beginning of this Section

Table 15B Summary of Maximum Concentrations in Groundwater

Group	Parameter	Table 2 Potable GW CT	Maximum Concentration	Location
BTEX	Benzene	5	<0.20	all samples
	Ethylbenzene	2.4	<0.10	all samples
	Toluene	24	<0.20	all samples
	Xylene Mixture	300	<0.20	all samples
Metals	Barium	1000	271	BH21-22
	Beryllium	4	<0.50	all samples
	Boron	5000	1676	BH21-16
	Cadmium	2.7	<0.20	all samples
	Chromium	50	25.3	all samples
	Cobalt	3.8	4.53	QA/QC
	Copper	87	2.7	all samples
	Lead	10	0.93	all samples
	Molybdenum	70	57.1	BH21-45
	Nickel	100	9.7	BH21-45
	Silver	1.5	<0.20	all samples
	Thallium	2	<0.30	all samples
	Uranium	20	3.52	BH21-22
	Vanadium	6.2	3.29	BH21-45
Zinc	1100	6.1	all samples	
As, Se, Sb	Antimony	6	1.1	BH21-16
	Arsenic	25	4.7	BH21-45
	Selenium	10	1.6	BH21-16
Na	Sodium	490000	417000	BH21-16
PAHs	Acenaphthene	4.1	<0.20	all samples
	Acenaphthylene	1	<0.20	all samples
	Anthracene	2.4	1.79	BH21-45
	Benz(a)anthracene	1	2.4	BH21-45
	Benzo(a)pyrene	0.01	3.67	BH21-45
	Benzo(b)fluoranthene	0.1	4.92	BH21-45
	Benzo(g,h,i)perylene	0.2	2.48	BH21-45
	Benzo(k)fluoranthene	0.1	2.19	BH21-45
	Chrysene	0.1	5.59	BH21-45
	Dibenz(a,h)anthracene	0.2	0.32	BH21-45
	Fluoranthene	0.41	17.9	BH21-45
	Fluorene	120	0.56	QA/QC
	Indeno(1,2,3-cd)pyrene	0.2	1.8	BH21-45
	Methyl Naphthalene, 2-and 1-	3.2	<0.20	all samples
	Naphthalene	11	<0.20	all samples
	Phenanthrene	1	12	BH21-45
	Pyrene	4.1	14.6	BH21-45
PHCs	F1 (C6 to C10) minus BTEX	750	<25	all samples
	F2 (C10 to C16)	150	<100	all samples
	F3 (C16 to C34)	500	<100	all samples
	F4 (C34 to C50)	500	<100	all samples
	Acetone	2700	<1.0	all samples
	Bromodichloromethane	16	<0.20	all samples
	Bromoform	25	<0.10	all samples
	Bromomethane	0.89	<0.20	all samples
	Carbon Tetrachloride	0.79	<0.20	all samples
	Chlorobenzene	30	<0.10	all samples
	Chloroform	2.4	<0.20	all samples
	Dibromochloromethane	25	<0.10	all samples



Table 15B Summary of Maximum Concentrations in Groundwater

Group	Parameter	Table 2 Potable GW CT	Maximum Concentration	Location
VOCs	Dichlorobenzene, 1,2-	3	<0.10	all samples
	Dichlorobenzene, 1,3-	59	<0.10	all samples
	Dichlorobenzene, 1,4-	1	<0.10	all samples
	Dichlorodifluoromethane	590	<0.20	all samples
	Dichloroethane, 1,1-	5	<0.30	all samples
	Dichloroethane, 1,2-	1.6	<0.20	all samples
	Dichloroethylene, 1,1-	1.6	<0.30	all samples
	Dichloroethylene, cis- 1,2-	1.6	<0.20	all samples
	Dichloroethylene, trans- 1,2-	1.6	<0.20	all samples
	Dichloropropane, 1,2-	5	<0.20	all samples
	Dichloropropene, 1,3-	0.5	<0.30	all samples
	Ethylene Dibromide	0.2	<0.10	all samples
	Hexane, n-	51	<0.20	all samples
	Methyl Ethyl Ketone	1800	<1.0	all samples
	Methyl Isobutyl Ketone	640	<1.0	all samples
	Methyl tert-butyl ether	15	<0.20	all samples
	Methylene Chloride	50	<0.30	all samples
	Styrene	5.4	<0.10	all samples
	Tetrachloroethane, 1,1,1,2-	1.1	<0.10	all samples
	Tetrachloroethane, 1,1,1,2,2-	1	<0.10	all samples
	Tetrachloroethylene	1.6	<0.20	all samples
	Trichloroethane, 1,1,1-	200	<0.30	all samples
	Trichloroethane, 1,1,2-	4.7	<0.20	all samples
Trichloroethylene	1.6	<0.20	all samples	
Trichlorofluoromethane	150	<0.40	all samples	
Vinyl Chloride	0.5	<0.17	all samples	
ORPs	Chloride	790000	1460000	BH21-45
	Chromium VI	25	5.43	all samples
	Cyanide	66	<2.0	all samples
	Mercury	0.29	<0.02	all samples
PCBs	Polychlorinated Biphenyls	0.2	<0.10	all samples

See "Notes for Soil and Groundwater Summary Tables" included at the beginning of this Section

**Notes for Soil & Groundwater Summary Tables - Brampton (B-series)**

1. mbgs = metres below ground surface
2. ORPs = other regulated parameters
3. PHCs = petroleum hydrocarbons
4. VOCs = volatile organic compounds
5. PAHs = polycyclic aromatic hydrocarbons
7. APEC = area of potential environmental concern
6. - = parameter not analyzed
7. \* = pH criteria for surface soils (0 - 1.5 mbgs) is 5 to 9, for subsurface soil (below 1.5 mbgs) is 5 to 11
8. Units for all soil analyses are in µg/g (ppm) unless otherwise indicated
9. Units for all groundwater analyses are in µg/L (ppb) unless otherwise indicated
10. Table 8 RPIICC = Generic Site Condition Standards for Use within 30 m of a Water Body in a Potable Groundwater Condition as contained in Table 8 of the Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act, published by the MECP on April 15, 2011
11. For soil and groundwater analytical results: **bold** = Concentration exceeds the 2011 MECP Table 8 SCS

Table 1B Monitoring Well Installation and Groundwater Levels

Monitoring Well ID		BH21-2	BH21-3	BH21-6	BH21-7	BH21-8	BH21-16	BH21-22	BH21-45
Installed By		WSP	WSP	WSP	WSP	WSP	WSP	WSP	WSP
Installation Date		2-Dec-21	2-Dec-21	1-Dec-21	29-Nov-21	29-Nov-21	1-Dec-21	22-Nov-21	22-Nov-21
Well Status		Active	Active	Active	Active	Active	Active	Active	Active
Well Inner Diameter	(mm)	50	50	50	50	50	50	50	50
Casing Type (Flushmount / Monument)		Monument	Monument	Flushmount	Monument	Monument	Flushmount	Monument	Flushmount
Top of Pipe Elevation	(masl)	184.852	187.353	216.625	218.769	220.065	218.014	244.619	218.032
Ground Surface Elevation	(masl)	183.942	186.453	216.805	217.859	219.165	218.114	243.709	218.122
Bottom of Concrete Seal/Top of Bentonite Seal	(mbgs)	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
	(masl)	183.642	186.153	216.505	217.559	218.865	217.814	243.409	217.822
Bottom of Bentonite Seal/Top of Sand Pack	(mbgs)	2.2	3.7	2.5	2.2	5.5	5.5	2.8	5.5
	(masl)	181.8	182.8	214.3	215.7	213.7	212.6	240.9	212.6
Top of Well Screen	(mbgs)	2.8	4.3	3.1	2.8	6.1	6.1	3.4	6.1
	(masl)	181.1	182.2	213.7	215.1	213.1	212.0	240.3	212.0
Screen Length	(m)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Bottom of Screen	(mbgs)	5.8	7.3	6.1	5.8	9.1	9.1	6.4	9.1
	(masl)	178.2	179.1	210.7	212.1	210.1	209.0	237.3	209.0
30-Nov-21	Depth of GW	(mbgs)	-	-	-	-	-	0.7	4.3
	GW Elevation	(masl)	-	-	-	-	-	243.0	213.8
1-Dec-21	Depth of GW	(mbgs)	-	-	-	1.3	2.4	-	5.3
	GW Elevation	(masl)	-	-	-	216.6	216.7	-	212.9
2-Dec-21	Depth of GW	(mbgs)	-	-	0.3	1.1	2.3	5.0	-
	GW Elevation	(masl)	-	-	216.5	216.7	216.9	213.2	-
6-Dec-21	Depth of GW	(mbgs)	2.4	DRY	-	-	-	-	-
	GW Elevation	(masl)	181.3	-	-	-	-	-	-
7-Dec-21	Depth of GW	(mbgs)	2.4	DRY	0.2	1.1	2.3	5.0	1.0
	GW Elevation	(masl)	181.6	-	216.6	216.8	216.9	213.2	242.7

See "Notes for Soil and Groundwater Summary"

Table 2B Summary of Soil Samples Submitted for Chemical Analysis

Borehole	Sample	Depth	Date	Parameters						APEC #
				M&ORP	PHCs	VOCs	PAHs	PCBs	OCPs	
BH21-2	SS2	0.8 - 1.4	2-Dec-21	✓	-	-	✓	-	-	13, 14, 30, 38, 114
	SS5	3.0 - 3.7		-	✓	-	-	-	-	
	QAQC-11			-	✓	-	-	-	-	
BH21-3	SS1	0.0 - 0.6	2-Dec-21	✓	-	-	-	-	-	13, 14, 38, 114
	QAQC-12	4.6 - 5.2		✓	-	-	-	-	-	
	SS6			-	✓	-	-	-	-	
BH21-4	SS1	0.0 - 0.6	6-Dec-21	✓	-	-	✓	-	-	13, 14, 38, 44, 114
	SS2	0.6 - 1.2		-	-	-	-	✓	✓	
	SS3	1.2 - 1.8		-	✓	-	-	-	-	
BH21-5	SS1	0.0 - 0.6	6-Dec-21	✓	-	✓	-	-	-	13, 14, 38, 47, 114
	SS2	0.6 - 1.2		-	✓	-	-	-	-	
	SS3	1.2 - 1.8		-	-	-	-	✓	✓	
BH21-6	SS1	0.0 - 0.6	1-Dec-21	-	-	-	✓	-	-	10, 13, 14, 38, 114
	SS2	0.8 - 1.4		✓	-	-	-	-	-	
	SS6	4.6 - 5.2		-	✓	-	-	-	-	
BH21-7	SS1	0.0 - 0.6	29-Nov-21	-	-	-	✓	✓	✓	4, 13, 14, 38, 114
	SS2	0.8 - 1.4		✓	-	-	-	-	-	
	SS5	3.0 - 3.7		-	✓	✓	-	-	-	
BH21-8	SS1	0.0 - 0.6	29-Nov-21	-	-	-	✓	-	-	42, 13, 14, 38, 114
	SS2	0.8 - 1.4		✓	-	-	-	-	-	
	SS7	6.1 - 6.7		-	✓	✓	-	-	-	
BH21-16	SS1	0.0 - 0.6	1-Dec-21	✓	-	-	-	-	-	13, 14, 26, 38, 114
	SS2	0.8 - 1.4		-	-	-	✓	-	-	
	QAQC-10			-	-	-	✓	-	-	
	SS8	7.6 - 8.2		-	✓	✓	-	-	-	
BH21-17	S1	0.0 - 0.6	5-Nov-21	✓	-	-	-	-	-	13, 14, 38, 49, 114
	S2	0.6 - 1.2		-	-	-	-	✓	✓	
	S3	1.2 - 1.8		-	-	-	✓	-	-	
BH21-18	SS1	0.0 - 0.6	24-Nov-21	✓	-	-	-	-	-	2, 13, 14, 38, 114
	SS2	0.8 - 1.4		-	✓	-	✓	✓	✓	
BH21-19	SS1	0.0 - 0.6	24-Nov-21	-	-	-	✓	-	-	8, 13, 14, 38, 114
	SS2	0.8 - 1.4		✓	✓	-	-	-	-	
BH21-20	SS1	0.0 - 0.6	23-Nov-21	✓	-	-	-	-	-	5, 13, 14, 38, 114
	QAQC-6			✓	-	-	-	-	-	
	SS2	0.8 - 1.4		-	-	-	✓	✓	✓	
	QAQC-7			-	-	-	✓	✓	✓	
	SS3	1.5 - 2.1		-	✓	-	-	-	-	
	QAQC-8			-	✓	-	-	-	-	
SS4	2.3 - 2.9	✓	-	-	-	-	-			
BH21-21	SS1	0.0 - 0.6	23-Nov-21	-	-	-	✓	✓	✓	13, 14, 20, 38, 114
	SS3	1.5 - 2.1		✓	✓	✓	-	-	-	
BH21-22	SS1	0.0 - 0.6	22-Nov-21	✓	-	-	-	-	-	13, 14, 27, 38, 114
	SS3	1.5 - 2.1		-	-	-	✓	✓	✓	
	SS5	3.0 - 3.7		-	✓	✓	-	-	-	
BH21-23	S1	0.0 - 0.6	5-Nov-21	-	-	-	✓	-	-	13, 14, 38, 53, 114
	S2	0.6 - 1.2		✓	-	-	-	-	-	
	S3	1.2 - 1.8		-	-	-	-	✓	✓	
BH21-24	S1	0.0 - 0.6	5-Nov-21	-	-	-	-	✓	✓	13, 14, 38, 56, 114
	S2	0.6 - 1.2		-	-	-	✓	-	-	
	S3	1.2 - 1.8		✓	-	-	-	-	-	
BH21-45	SS1	0.0 - 0.6	22-Nov-21	-	-	-	✓	✓	✓	13, 14, 17, 38, 114
	SS2	0.8 - 1.4		✓	-	-	✓	-	-	
	SS8	7.6 - 8.2		-	✓	✓	-	-	-	
	SS9	9.1 - 9.8		-	✓	✓	-	-	-	

See "Notes for Soil and Groundwater Summary Tables" included at the beginning of this Section

Table 3B: Summary of Groundwater Samples Submitted for Chemical Analysis

Monitoring Well ID	Screened Interval (mbgs)	Date	Parameters						APEC #
			M&ORP	PHCs	VOCs	PAHs	PCBs	OCPs	
BH21-2	2.8 - 5.8	7-Dec-21	-	✓	-	-	-	-	13, 14, 30, 38, 114
BH21-6	3.1 - 6.1	6-Dec-21	✓	✓	-	-	-	-	10, 13, 14, 38, 114
BH21-7	2.8 - 5.8	2-Dec-21	✓	✓	✓	✓	✓	✓	4, 13, 14, 38, 114
BH21-8	6.1 - 9.1	2-Dec-21	✓	✓	✓	✓	-	-	42, 13, 14, 38, 114
BH21-16	6.1 - 9.1	6-Dec-21	✓	✓	✓	✓	-	-	13, 14, 26, 38, 114
BH21-22	3.4 - 6.4	1-Dec-21	✓	✓	✓	✓	-	-	13, 14, 27, 38, 114
BH21-45	6.1 - 9.1	1-Dec-21	✓	✓	✓	✓	✓	-	13, 14, 38, 114

See "Notes for Soil and Groundwater Summary Tables" included at the beginning of this Section

Table 4B Soil Analytical Results - Metals &amp; ORPs

Parameter		BH21-2 SS2	BH21-3 SS3	QAQC-12	BH21-4 SS1	BH21-5 SS1	BH21-6 SS2	BH21-7 SS2
Date of Collection	Table 8 RPIICC	Dec 02, 2021	Dec 02, 2021	Dec 06, 2021	Dec 06, 2021	Dec 01, 2021	Nov 29, 2021	
Date Reported		Dec 15, 2021	Dec 15, 2021	Dec 18, 2021	Dec 18, 2021	Dec 23, 2021	Dec 14, 2021	
Sampling Depth (mbgs)		0.8 - 1.4	0.0 - 0.6	0.0 - 0.6	0.0 - 0.6	0.8 - 1.4	0.8 - 1.4	
Analytical Report Reference No.		21T839096	21T839096	21T840564	21T840564	21T839096	21T836919	
Antimony	1.3	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8
Arsenic	18	6	4	6	4	7	4	6
Barium	220	89.8	77.5	52.7	37.4	60	54.5	57.1
Beryllium	2.5	0.8	0.6	0.5	0.5	0.7	<0.4	0.7
Boron	36	10	8	7	<5	7	7	11
Boron (Hot Water Extractable)	1.5	0.42	0.12	0.17	0.12	0.26	0.17	0.25
Cadmium	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Chromium	70	20	17	15	12	18	14	22
Cobalt	22	9.2	7.8	7.8	5.6	6.6	8.1	10.4
Copper	92	42.9	24.8	33.3	24.7	23.3	32	29.1
Lead	120	60	9	12	9	18	8	10
Molybdenum	2	0.6	<0.5	<0.5	<0.5	0.6	<0.5	<0.5
Nickel	82	19	17	22	12	14	15	21
Selenium	1.5	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8
Silver	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Thallium	1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Uranium	2.5	0.6	<0.50	<0.50	<0.50	<0.50	<0.50	0.59
Vanadium	86	30.4	25.5	22.4	20.4	28.1	23.8	31.9
Zinc	290	95	44	43	32	51	39	55
Chromium, Hexavalent	0.66	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Cyanide, Free	0.051	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040
Mercury	0.27	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Electrical Conductivity (2:1)	0.7	0.353	0.216	0.185	0.124	0.200	0.327	0.245
Sodium Adsorption Ratio	5	1.560	0.438	0.300	0.143	0.116	2.140	2.170
pH, 2:1 CaCl <sub>2</sub> Extraction	*	7.29	7.25	7.32	7.19	7.04	7.61	7.19

See "Notes for Soil and Groundwater Summary Tables" included at the beginning of this Section

Table 4B Soil Analytical Results - Metals &amp; ORPs

Parameter		BH21-8 SS2	BH21-16 SS1	BH21-17 S1	BH21-18 SS1	BH21-19 SS2	BH21-20 SS1	QAQC-6
Date of Collection	Table 8 RPIICC	Nov 29, 2021	Dec 01, 2021	Nov 05, 2021	Nov 24, 2021	Nov 24, 2021	Nov 23, 2021	
Date Reported		Dec 14, 2021	Dec 15, 2021	Nov 16, 2021	Dec 03, 2021	Dec 03, 2021	Dec 03, 2021	
Sampling Depth (mbgs)		0.8 - 1.4	0.0 - 0.6	0.0 - 0.6	0.0 - 0.6	0.8 - 1.4	0.0 - 0.6	
Analytical Report Reference No.		21T836919	21T839096	21T826519	21T834550	21T834550	21T834550	
Antimony	1.3	<0.8	<b>2.8</b>	<0.8	<0.8	<0.8	<0.8	<0.8
Arsenic	18	6	8	7	6	6	6	5
Barium	220	57.4	88.5	62.8	94.5	82.7	71.9	71.5
Beryllium	2.5	0.5	0.5	0.6	0.6	0.6	<0.4	<0.4
Boron	36	10	9	9	7	11	<5	<5
Boron (Hot Water Extractable)	1.5	0.21	0.50	0.66	0.26	0.11	0.21	0.22
Cadmium	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Chromium	70	19	35	20	25	25	20	20
Cobalt	22	10.0	10.6	7.9	11.5	13.3	16.5	11.8
Copper	92	31.5	69	28.8	33.4	25.2	48.7	25.8
Lead	120	12	79	22	10	11	18	17
Molybdenum	2	<0.5	<b>3.7</b>	0.7	<0.5	<0.5	0.6	0.6
Nickel	82	20	31	19	24	26	<b>142</b>	25
Selenium	1.5	<0.8	0.8	<0.8	<0.8	<0.8	<0.8	<0.8
Silver	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Thallium	1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Uranium	2.5	<0.50	<0.50	<0.50	0.5	0.6	0.5	<0.50
Vanadium	86	28.4	33.8	29	35.1	35.8	30.9	30.7
Zinc	290	51	<b>468</b>	77	66	59	61	67
Chromium, Hexavalent	0.66	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Cyanide, Free	0.051	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040
Mercury	0.27	<0.10	0.22	<0.10	<0.10	<0.10	<0.10	<0.10
Electrical Conductivity (2:1)	0.7	0.117	0.290	0.186	0.154	0.110	0.154	0.157
Sodium Adsorption Ratio	5	0.122	1.640	0.055	1.000	0.186	0.105	0.107
pH, 2:1 CaCl <sub>2</sub> Extraction	*	7.12	7.50	7.16	7.55	7.56	7.44	7.36

See "Notes for Soil and Groundwater Summary Tables" included at the beginning of this Section

Table 4B Soil Analytical Results - Metals &amp; ORPs

Parameter		BH21-20 SS4	BH21-21 SS3	BH21-22 SS1	BH21-23 S2	BH21-24 S3	BH21-45 SS2
Date of Collection	Table 8 RPIICC	Nov 23, 2021	Nov 23, 2021	Nov 22, 2021	Nov 05, 2021	Nov 05, 2021	Nov 22, 2021
Date Reported		Dec 20, 2021	Dec 03, 2021	Dec 03, 2021	Nov 16, 2021	Nov 16, 2021	Dec 03, 2021
Sampling Depth (mbgs)		2.3 - 2.9	1.5 - 2.1	0.0 - 0.6	0.6 - 1.2	1.2 - 1.8	0.8 - 1.4
Analytical Report Reference No.		21T841262	21T834550	21T834550	21T826519	21T826519	21T834550
Antimony	1.3	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8
Arsenic	18	5	5	6	7	6	7
Barium	220	95.4	56.1	96.2	54.8	41.5	83
Beryllium	2.5	0.6	<0.4	0.5	0.6	0.4	0.5
Boron	36	24	8	9	10	7	9
Boron (Hot Water Extractable)	1.5	0.26	<0.10	0.12	0.26	<0.10	0.44
Cadmium	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Chromium	70	25	14	24	22	16	25
Cobalt	22	14.8	7.6	11.9	11.2	9.8	15.3
Copper	92	10.6	23.4	29.7	36.6	34.8	33.8
Lead	120	12	10	10	9	7	11
Molybdenum	2	1.2	<0.5	<0.5	0.7	<0.5	<0.5
Nickel	82	27	13	23	25	20	33
Selenium	1.5	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8
Silver	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Thallium	1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Uranium	2.5	0.8	<0.50	0.6	0.5	<0.50	0.7
Vanadium	86	40.2	22.7	34.9	29.5	23.4	34
Zinc	290	63	35	57	63	53	68
Chromium, Hexavalent	0.66	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Cyanide, Free	0.051	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040
Mercury	0.27	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Electrical Conductivity (2:1)	0.7	0.125	0.088	0.125	0.157	0.103	0.314
Sodium Adsorption Ratio	5	0.344	0.095	0.182	0.370	0.095	1.200
pH, 2:1 CaCl <sub>2</sub> Extraction	*	7.13	7.62	7.64	7.59	7.66	7.60

See "Notes for Soil and Groundwater Summary Tables"  
included at the beginning of this Section



**Table 5B Soil Analytical Results - PHCs & BTEX**

Parameter		BH21-2 SS5	BH21-3 SS6	BH21-4 SS3	BH21-5 SS2	BH21-6 SS6	BH21-7 SS5	BH21-8 SS7	BH21-16 SS8
Date of Collection	Table 8 RPIICC	Dec 02, 2021	Dec 02, 2021	Dec 06, 2021	Dec 06, 2021	Dec 01, 2021	Nov 29, 2021	Nov 29, 2021	Dec 01, 2021
Date Reported		Dec 15, 2021	Dec 15, 2021	Dec 18, 2021	Dec 18, 2021	Dec 15, 2021	Dec 14, 2021	Dec 14, 2021	Dec 15, 2021
Sampling Depth (mbgs)		3.0 - 3.7	4.6 - 5.2	1.8 - 1.8	0.6 - 1.2	4.6 - 5.2	3.0 - 3.7	6.1 - 6.7	7.6 - 8.2
Analytical Report Reference No.		21T839096	21T839096	21T840564	21T840564	21T839096	21T836919	21T836919	21T839096
Benzene	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
Ethylbenzene	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Total Xylenes	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
F1 (C6 to C10) minus BTEX	25	<5	<5	<5	<5	<5	<5	<5	<5
F2 (C10 to C16)	10	<10	<10	<10	<10	<10	<10	<10	<10
F3 (C16 to C34)	240	<50	<50	<50	<50	<50	<50	<50	<50
F4 (C34 to C50)	120	<50	<50	<50	<50	<50	<50	<50	<50

See "Notes for Soil and Groundwater Summary Tables" included at the beginning of this Section

**Table 5B Soil Analytical Results - PHCs & BTE**

Parameter		BH21-17 S2	BH21-18 SS2	BH21-19 SS2	BH21-20 SS3	QAQC-8	BH21-21 SS3	BH21-22 SS5	BH21-23 S3
Date of Collection	Table 8 RPIICC	Nov 05, 2021	Nov 24, 2021	Nov 24, 2021	Nov 23, 2021	Nov 23, 2021	Nov 23, 2021	Nov 22, 2021	Nov 05, 2021
Date Reported		Nov 30, 2021	Dec 03, 2021	Dec 03, 2021	Dec 03, 2021	Dec 03, 2021	Dec 03, 2021	Dec 03, 2021	Nov 30, 2021
Sampling Depth (mbgs)		0.6 - 1.2	0.8 - 1.4	0.8 - 1.4	1.5 - 2.1	1.5 - 2.1	3.0 - 3.7	1.2 - 1.8	
Analytical Report Reference No.		21T832162	21T834550	21T834550	21T834550	21T834550	21T834550	21T834550	21T832162
Benzene	0.02	<0.005	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.005
Toluene	0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Ethylbenzene	0.05	<0.01	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.01
Total Xylenes	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
F1 (C6 to C10) minus BTEX	25	<10	<5	<5	<5	<5	<5	<5	<10
F2 (C10 to C16)	10	<10	<10	<10	<10	<10	<10	<10	<10
F3 (C16 to C34)	240	13	<50	<50	<50	<50	<50	<50	<10
F4 (C34 to C50)	120	<10	<50	<50	<50	<50	<50	<50	<10

See "Notes for Soil and Groundwater Summary Tables" included at the beginning of this Section

**Table 5B Soil Analytical Results - PHCs & BTE**

Parameter		BH21-24 S3	BH21-45 SS8	BH21-45 SS9
Date of Collection	Table 8 RPIICC	Nov 05, 2021	Nov 22, 2021	Nov 22, 2021
Date Reported		Nov 30, 2021	Dec 03, 2021	Dec 20, 2021
Sampling Depth (mbgs)		1.2 - 1.8	7.6 - 8.2	9.1 - 9.8
Analytical Report Reference No.		21T832162	21T834550	21T841262
Benzene	0.02	<0.005	<0.02	<0.02
Toluene	0.2	<0.05	<0.05	<0.05
Ethylbenzene	0.05	<0.01	<b>0.9</b>	<0.05
Total Xylenes	0.05	<0.05	<b>5.55</b>	<0.05
F1 (C6 to C10) minus BTEX	25	<10	<b>51</b>	<5
F2 (C10 to C16)	10	<10	<10	<10
F3 (C16 to C34)	240	14	<50	<50
F4 (C34 to C50)	120	<10	<50	<50

See "Notes for Soil and Groundwater Summary Tables" included at the beginning of this Section

Table 6B Soil Analytical Results - VOCs

Parameter		BH21-7 SS5	BH21-8 SS7	BH21-16 SS8	BH21-21 SS3	BH21-22 SS5	BH21-45 SS8	BH21-45 SS9
Date of Collection	Table 8 RPIICC	Nov 29, 2021	Nov 29, 2021	Dec 01, 2021	Nov 23, 2021	Nov 22, 2021	Nov 22, 2021	Nov 22, 2021
Date Reported		Dec 14, 2021	Dec 14, 2021	Dec 15, 2021	Dec 03, 2021	Dec 03, 2021	Dec 03, 2021	Dec 20, 2021
Sampling Depth (mbgs)		3.0 - 3.7	6.1 - 6.7	7.6 - 8.2	1.5 - 2.1	3.0 - 3.7	7.6 - 8.2	9.1 - 9.8
Analytical Report Reference No.		21T836919	21T836919	21T839096	21T834550	21T834550	21T834550	21T841262
Acetone	0.5	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Benzene	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Bromodichloromethane	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
Bromomethane	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
Chlorobenzene	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Chloroform	0.05	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04
Dibromochloromethane	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Dichlorobenzene, 1,2-	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Dichlorobenzene, 1,3-	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Dichlorobenzene, 1,4-	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
Dichloroethane, 1,1-	0.05	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Dichloroethane, 1,2-	0.05	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
Dichloroethylene, 1,1-	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Dichloroethylene, Cis- 1,2-	0.05	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Dichloroethylene, Trans- 1,2-	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Dichloropropane, 1,2-	0.05	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
1,3-Dichloropropene (Cis + Trans)	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	0.9	<0.05
Ethylene Dibromide	0.05	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04
Hexane, n-	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Methyl Ethyl Ketone	0.5	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Methyl Isobutyl Ketone	0.5	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Methyl tert-butyl Ether	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
Styrene	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Tetrachloroethane, 1,1,1,2-	0.05	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04
Tetrachloroethane, 1,1,2,2-	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
Toluene	0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Trichloroethane, 1,1,1-	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Trichloroethane, 1,1,2-	0.05	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04
Trichloroethylene	0.05	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
Trichlorofluoromethane	0.25	<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
Xylene mixture	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	5.55	<0.05

See "Notes for Soil and Groundwater Summary Tables" included at the beginning of this Section

Table 7B Soil Analytical Results - PAHs

Parameter		BH21-2 SS2	BH21-4 SS1	BH21-5 SS1	BH21-6 SS2	BH21-7 SS1	BH21-8 SS1	BH21-16 SS2
Date of Collection	Table 8 RPIICC	Dec 02, 2021	Dec 06, 2021	Dec 06, 2021	Dec 01, 2021	Nov 29, 2021	Nov 29, 2021	Dec 02
Date Reported		Dec 15, 2021	Dec 18, 2021	Dec 18, 2021	Dec 23, 2021	Dec 14, 2021	Dec 14, 2021	Dec 15
Sampling Depth (mbgs)		0.8 - 1.4	0.0 - 0.6	0.0 - 0.6	0.8 - 1.4	0.0 - 0.6	0.0 - 0.6	0.8 -
Analytical Report Reference No.		21T839096	21T840564	21T840564	21T839096	21T836919	21T836919	21T83
Naphthalene	0.09	<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	0.06	<0.05	<0.05
Acenaphthene	0.072	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Fluorene	0.19	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Phenanthrene	0.69	<0.05	<0.05	<0.05	<0.05	0.40	0.22	<0.05
Anthracene	0.22	<0.05	<0.05	<0.05	<0.05	0.18	0.10	<0.05
Fluoranthene	0.69	<0.05	<0.05	<0.05	<0.05	<b>1.05</b>	<b>0.89</b>	<0.05
Pyrene	1	<0.05	<0.05	<0.05	<0.05	0.96	0.77	<0.05
Benz(a)anthracene	0.36	<0.05	<0.05	<0.05	<0.05	<b>0.56</b>	<b>0.46</b>	<0.05
Chrysene	2.8	<0.05	<0.05	<0.05	<0.05	0.41	0.36	<0.05
Benzo(b)fluoranthene	0.47	<0.05	<0.05	<0.05	<0.05	<b>0.60</b>	<b>0.66</b>	<0.05
Benzo(k)fluoranthene	0.48	<0.05	<0.05	<0.05	<0.05	0.23	0.24	<0.05
Benzo(a)pyrene	0.3	<0.05	<0.05	<0.05	<0.05	<b>0.40</b>	<b>0.40</b>	<0.05
Indeno(1,2,3-cd)pyrene	0.23	<0.05	<0.05	<0.05	<0.05	0.22	<b>0.26</b>	<0.05
Dibenz(a,h)anthracene	0.1	<0.05	<0.05	<0.05	<0.05	0.05	0.05	<0.05
Benzo(g,h,i)perylene	0.68	<0.05	<0.05	<0.05	<0.05	0.27	0.34	<0.05
Methylnaphthalene, 2-(1-)	0.59	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05

See "Notes for Soil and Groundwater Summary Tables" included at the beginning of this Section

Table 7B Soil Analytical Results - PAHs

Parameter		QAQC-10	BH21-17 S3	BH21-18 SS2	BH21-19 SS1	BH21-20 SS2	QAQC-7
Date of Collection	Table 8 RPIICC	Nov 05, 2021	Nov 05, 2021	Nov 24, 2021	Nov 24, 2021	Nov 23, 2021	
Date Reported		Nov 16, 2021	Nov 16, 2021	Dec 03, 2021	Dec 03, 2021	Dec 03, 2021	
Sampling Depth (mbgs)		1.4	1.2 - 1.8	0.8 - 1.4	0.0 - 0.6	0.8 - 1.4	
Analytical Report Reference No.		89096	21T826519	21T834550	21T834550	21T834550	
Naphthalene	0.09	<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
Acenaphthene	0.072	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Fluorene	0.19	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Phenanthrene	0.69	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Anthracene	0.22	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Fluoranthene	0.69	<0.05	<0.05	<0.05	0.14	<0.05	<0.05
Pyrene	1	<0.05	<0.05	<0.05	0.16	<0.05	<0.05
Benz(a)anthracene	0.36	<0.05	<0.05	<0.05	0.17	<0.05	<0.05
Chrysene	2.8	<0.05	<0.05	<0.05	0.07	<0.05	<0.05
Benzo(b)fluoranthene	0.47	<0.05	<0.05	<0.05	0.1	<0.05	<0.05
Benzo(k)fluoranthene	0.48	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Benzo(a)pyrene	0.3	<0.05	<0.05	<0.05	0.07	<0.05	<0.05
Indeno(1,2,3-cd)pyrene	0.23	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Dibenz(a,h)anthracene	0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Benzo(g,h,i)perylene	0.68	<0.05	<0.05	<0.05	0.05	<0.05	<0.05
Methylnaphthalene, 2-(1-)	0.59	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05

See "Notes for Soil and Groundwater Summary Tables" included at the beginning of this Section

Table 7B Soil Analytical Results - PAHs

Parameter		BH21-21 SS1	BH21-22 SS3	BH21-23 S1	BH21-24 S2	BH21-45 SS1	BH21-45 SS2
Date of Collection	Table 8 RPIICC	Nov 23, 2021	Nov 22, 2021	Nov 05, 2021	Nov 05, 2021	Nov 22, 2021	Nov 22, 2021
Date Reported		Dec 03, 2021	Dec 03, 2021	Nov 16, 2021	Nov 16, 2021	Dec 03, 2021	Dec 20, 2021
Sampling Depth (mbgs)		0.0 - 0.6	1.5 - 2.1	0.0 - 0.6	0.6 - 1.2	0.0 - 0.6	0.8 - 1.4
Analytical Report Reference No.		21T834550	21T834550	21T826519	21T826519	21T834550	21T841262
Naphthalene	0.09	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Acenaphthylene	0.093	<0.05	<0.05	<0.05	<0.05	0.09	<0.05
Acenaphthene	0.072	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Fluorene	0.19	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Phenanthrene	0.69	<0.05	<0.05	<0.05	<0.05	0.24	<0.05
Anthracene	0.22	<0.05	<0.05	<0.05	<0.05	0.13	<0.05
Fluoranthene	0.69	<0.05	<0.05	<0.05	<0.05	0.57	<0.05
Pyrene	1	<0.05	<0.05	<0.05	<0.05	0.6	<0.05
Benz(a)anthracene	0.36	<0.05	<0.05	<0.05	<0.05	<b>0.39</b>	<0.05
Chrysene	2.8	<0.05	<0.05	<0.05	<0.05	0.35	<0.05
Benzo(b)fluoranthene	0.47	<0.05	<0.05	0.09	<0.05	0.45	<0.05
Benzo(k)fluoranthene	0.48	<0.05	<0.05	0.09	<0.05	0.19	<0.05
Benzo(a)pyrene	0.3	<0.05	<0.05	0.05	<0.05	<b>0.33</b>	<0.05
Indeno(1,2,3-cd)pyrene	0.23	<0.05	<0.05	<0.05	<0.05	0.19	<0.05
Dibenz(a,h)anthracene	0.1	<0.05	<0.05	<0.05	<0.05	0.06	<0.05
Benzo(g,h,i)perylene	0.68	<0.05	<0.05	<0.05	<0.05	0.23	<0.05
Methylnaphthalene, 2-(1-)	0.59	<0.05	<0.05	<0.05	<0.05	0.15	<0.05

See "Notes for Soil and Groundwater Summary Tables" included at the beginning of this Section

Table 8B Soil Analytical Results - PCBs and OC Pesticides

Parameter		BH21-4 SS2	BH21-5 SS3	BH21-7 SS1	BH21-17 S2	BH21-20 SS2	QAQC-7	BH21-23 S3	BH21-24 S1	BH21-45 SS1
Date of Collection	Table 8 RPIICC	Dec 06, 2021	Dec 06, 2021	Nov 29, 2021	Nov 05, 2021	Nov 23, 2021		Nov 05, 2021	Nov 05, 2021	Nov 22, 2021
Date Reported		Dec 18, 2021	Dec 18, 2021	Dec 14, 2021	Nov 16, 2021	Dec 03, 2021		Nov 16, 2021	Nov 16, 2021	Dec 03, 2021
Sampling Depth (m bgs)		0.6 - 1.6	1.2 - 1.8	0.0 - 0.6	0.6 - 1.2	0.8 - 1.4		1.2 - 1.8	0.0 - 0.6	0.0 - 0.6
Analytical Report Reference No.		21T840564	21T840564	21T836919	21T826519	21T834550		21T826519	21T826519	21T834550
Polychlorinated Biphenyls	0.3	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Aldrin	0.05	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Chlordane	0.05	<0.007	<0.007	<0.007	<0.007	<0.007	<0.007	<0.007	<0.007	<0.007
DDD	0.05	<0.007	<0.007	<0.007	<0.007	<0.007	<0.007	<0.007	<0.007	<0.007
DDE	0.05	<0.007	<0.007	<0.007	<0.007	<0.007	<0.007	<0.007	<0.007	<0.007
DDT	1.4	<0.007	<0.007	<0.007	<0.007	<0.007	<0.007	<0.007	<0.007	<0.007
Dieldrin	0.05	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Endosulfan	0.04	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Endrin	0.04	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Heptachlor	0.05	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Heptachlor Epoxide	0.05	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Hexachlorobenzene	0.02	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Hexachlorobutadiene	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Hexachlorocyclohexane Gamma-	0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Hexachloroethane	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Methoxychlor	0.05	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005

See "Notes for Soil and Groundwater Summary Tables" included at the beginning of this Section



Table 9B Groundwater Analytical Results - Metals & ORPs

Parameter		BH21-6	BH21-7	BH21-8	BH21-16	BH21-22	BH21-45	QA/QC	BH21-45	
Date of Collection		Dec 06, 2021	Dec 02, 2021	Dec 02, 2021	Dec 06, 2021	Feb 11, 2022	Dec 01, 2021	Dec 01, 2021	Feb 11, 2022	
Date Reported	Table 8	Dec 21, 2021	Dec 15, 2021	Dec 15, 2021	Dec 21, 2021	Feb 14, 2022	Dec 16, 2021	Dec 16, 2021	Feb 14, 2022	
Screened Depth (mbgs)	Potable GW	3.1 - 6.1	2.8 - 5.8	6.1 - 9.1	6.1 - 9.1		3.4 - 6.4	6.1 - 9.1		
Analytical Report Reference No.		21T841270	21T839088	21T839088	21T841270	22T862998	21T838602	21T838602		
Antimony	6	<1.0	<1.0	<1.0	1.1	-	<1.0	<1.0	<1.0	-
Arsenic	25	4.7	<1.0	4.3	<1.0	-	1.1	4.7	1.6	-
Barium	1000	271	254	109	63.9	-	91.9	80.5	62.4	-
Beryllium	4	<0.50	<0.50	<0.50	<0.50	-	<0.50	<0.50	<0.50	-
Boron	5000	279	362	131	1676	-	219	682	115	-
Cadmium	2.1	<0.20	<0.20	<0.20	<0.20	-	<0.20	<0.20	<0.20	-
Chromium	50	25.3	<2.0	<2.0	<2.0	-	<2.0	<2.0	<2.0	-
Chromium VI	25	5.43	<2.0	<2.0	<2.0	-	<2.0	<2.0	<2.0	-
Cobalt	3.8	4.53	0.52	0.63	<0.50	-	1.06	0.66	2.87	-
Copper	69	2.7	1.9	<1.0	<1.0	-	<1.0	<1.0	<1.0	-
Cyanide	52	<2.0	<2.0	<2.0	<2.0	-	<2.0	<2.0	<2.0	-
Lead	10	0.93	<0.50	<0.50	<0.50	-	<0.50	<0.50	<0.50	-
Mercury	0.29	<0.02	<0.02	<0.02	<0.02	-	<0.02	<0.02	<0.02	-
Molybdenum	70	6.45	14.2	7.84	24.7	32.1	4.41	28	4.27	57.1
Nickel	100	6.9	2.8	9.7	1.1	-	1.9	4.7	4.2	-
Selenium	10	<1.0	<1.0	<1.0	1.6	-	<1.0	<1.0	<1.0	-
Silver	1.2	<0.20	<0.20	<0.20	<0.20	-	<0.20	<0.20	<0.20	-
Thallium	2	<0.30	<0.30	<0.30	<0.30	-	<0.30	<0.30	<0.30	-
Uranium	20	3.52	3.19	1.11	1.86	-	2.18	1.5	0.96	-
Vanadium	6.2	3.29	1.42	0.62	0.62	-	0.63	0.83	<0.40	-
Zinc	890	6.1	<5.0	<5.0	<5.0	-	<5.0	<5.0	<5.0	-
Sodium	490000	342000	417000	23000	210000	-	43800	205000	77700	-
Chloride	790000	1460000	768000	72700	286000	-	63300	326000	156000	-

See "Notes for Soil and Groundwater Summary Tables" included at the beginning of this Section

Table 10B Groundwater Analytical Results - PHCs&BTEX

Parameter		BH21-2	BH21-6	QAQC-2	BH21-7	QAQC-1	BH21-8	BH21-16	BH21-22	BH21-45	QA/QC
Date of Collection		Dec 07, 2021	Dec 06, 2021		Dec 02, 2021		Dec 02, 2021	Dec 06, 2021	Dec 01, 2021		Dec 01, 2021
Date Reported	Table 8	Dec 21, 2021	Dec 21, 2021		Dec 15, 2021		Dec 15, 2021	Dec 21, 2021	Dec 16, 2021		Dec 16, 2021
Screened Depth (mbgs)	Potable GW	2.8 - 5.8	3.1 - 6.1		2.8 - 5.8		6.1 - 9.1	6.1 - 9.1	3.4 - 6.4		6.1 - 9.1
Analytical Report Reference No.		21T841270	21T841270		21T839088		21T839088	21T841270	21T838602		21T838602
Benzene	5	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Toluene	22	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Ethylbenzene	2.4	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Xylene Mixture	300	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
F1 (C6 to C10) minus BTEX	420	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25
F2 (C10 to C16)	150	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100
F3 (C16 to C34)	500	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100
F4 (C34 to C50)	500	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100

See "Notes for Soil and Groundwater Summary Tables" included at the beginning of this Section

Table 11B Groundwater Analytical Results - VOCs

Parameter		BH21-7	BH21-8	BH21-16	QAQC-1	BH21-22	BH21-45	QA/QC	Trip Blank	Trip Blank	Trip Blank
Date of Collection		Dec 02, 2021	Dec 02, 2021	Dec 06, 2021		Dec 01, 2021	Dec 01, 2021		Nov 23, 2021	Nov 30, 2021	Dec 04, 2021
Date Reported	Table 8	Dec 15, 2021	Dec 15, 2021	Dec 21, 2021		Dec 16, 2021	Dec 16, 2021		Dec 03, 2021	Dec 16, 2021	Dec 21, 2021
Screened Depth (mbgs)	Potable GW	2.8 - 5.8	6.1 - 9.1	6.1 - 9.1		3.4 - 6.4	6.1 - 9.1		-	-	-
Analytical Report Reference No.		21T839088	21T839088	21T841270		21T838602	21T838602		21T834096	21T838602	21T841270
Acetone	2700	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Benzene	5	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Bromodichloromethane	16	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Bromoform	25	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Bromomethane	0.89	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Carbon Tetrachloride	0.79	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Chlorobenzene	30	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Chloroform	2.4	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Dibromochloromethane	25	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Dichlorobenzene, 1,2-	3	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Dichlorobenzene, 1,3-	59	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Dichlorobenzene, 1,4-	1	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Dichlorodifluoromethane	590	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Dichloroethane, 1,1-	5	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30
Dichloroethane, 1,2-	1.6	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Dichloroethylene, 1,1-	1.6	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30
Dichloroethylene, cis- 1,2-	1.6	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Dichloroethylene, trans- 1,2-	1.6	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Dichloropropane, 1,2-	5	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Dichloropropene, 1,3-	0.5	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30
Ethylbenzene	2.4	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Ethylene Dibromide	0.2	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Hexane, n-	51	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Methyl Ethyl Ketone	1800	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Methyl Isobutyl Ketone	640	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Methyl tert-butyl ether	15	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Methylene Chloride	50	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30
Styrene	5.4	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Tetrachloroethane, 1,1,1,2-	1.1	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Tetrachloroethane, 1,1,2,2-	1	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Tetrachloroethylene	1.6	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Toluene	22	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Trichloroethane, 1,1,1-	200	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30
Trichloroethane, 1,1,2-	4.7	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Trichloroethylene	1.6	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Trichlorofluoromethane	150	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40
Vinyl Chloride	0.5	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17
Xylene Mixture	300	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20

See "Notes for Soil and Groundwater Summary Tables" included at the beginning of this Section

Table 12B Groundwater Analytical Results - PAHs

Parameter		BH21-7	BH21-8	QAQC-2	BH21-16	BH21-22	BH21-45	QA/QC	BH21-45
Date of Collection	Table 8 Potable GW	Dec 02, 2021	Dec 02, 2021		Dec 06, 2021	Dec 01, 2021	Dec 01, 2021		Feb 11, 2022
Date Reported		Dec 15, 2021	Dec 15, 2021		Dec 21, 2021	Dec 16, 2021	Dec 16, 2021		Feb 14, 2022
Screened Depth (mbgs)		2.8 - 5.8	6.1 - 9.1		6.1 - 9.1	3.4 - 6.4	6.1 - 9.1		
Analytical Report Reference No.		21T839088	21T839088		21T841270	21T838602	21T838602		22T862998
Acenaphthene	4.1	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Acenaphthylene	1	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Anthracene	1	<0.10	<0.10	<0.10	<0.10	<0.10	1.79	1	<0.10
Benz(a)anthracene	1	<0.20	<0.20	<0.20	<0.20	<0.20	2.4	1.67	<0.20
Benzo(a)pyrene	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	3.67	2.8	<0.01
Benzo(b)fluoranthene	0.1	<0.10	<0.10	<0.10	<0.10	<0.10	4.92	3.29	<0.10
Benzo(g,h,i)perylene	0.2	<0.20	<0.20	<0.20	<0.20	<0.20	2.48	1.89	<0.20
Benzo(k)fluoranthene	0.1	<0.10	<0.10	<0.10	<0.10	<0.10	2.19	1.86	<0.10
Chrysene	0.1	<0.10	<0.10	<0.10	<0.10	<0.10	5.59	4.01	<0.10
Dibenz(a,h)anthracene	0.2	<0.20	<0.20	<0.20	<0.20	<0.20	0.32	0.21	<0.20
Fluoranthene	0.41	<0.20	<0.20	<0.20	<0.20	<0.20	17.9	11.2	<0.20
Fluorene	120	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	0.56	<0.20
Indeno(1,2,3-cd)pyrene	0.2	<0.20	<0.20	<0.20	<0.20	<0.20	1.8	1.35	<0.20
Methyl Naphthalene, 2-and 1-	3.2	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Naphthalene	11	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Phenanthrene	1	<0.10	<0.10	<0.10	<0.10	<0.10	12	9.08	<0.10
Pyrene	4.1	<0.20	<0.20	<0.20	<0.20	<0.20	14.6	9.52	<0.20

See "Notes for Soil and Groundwater Summary Tables" included at the beginning of this Section

Table 13B Groundwater Analytical Results - PCBs and OC Pesticides

Parameter		BH21-7	BH21-45	QA/QC
Date of Collection	Table 8 Potable GW	Dec 02, 2021	Dec 01, 2021	
Date Reported		Dec 15, 2021	Dec 16, 2021	
Screened Depth (mbgs)		2.8 - 5.8	6.1 - 9.1	
Analytical Report Reference No.		21T839088	21T838602	
Polychlorinated Biphenyls	0.2	<0.1	<0.1	<0.1
Aldrin	0.35	<0.01	-	-
Chlordane	0.06	<0.04	-	-
DDD	1.8	<0.05	-	-
DDE	10	<0.01	-	-
DDT	0.05	<0.04	-	-
Dieldrin	0.35	<0.02	-	-
Endosulfan	0.56	<0.05	-	-
Endrin	0.36	<0.05	-	-
Heptachlor	0.038	<0.01	-	-
Heptachlor Epoxide	0.038	<0.01	-	-
Hexachlorobenzene	1	<0.01	-	-
Hexachlorobutadiene	0.44	<0.01	-	-
Hexachlorocyclohexane Gamma-	0.95	<0.01	-	-
Hexachloroethane	2.1	<0.01	-	-
Methoxychlor	0.3	<0.04	-	-

See "Notes for Soil and Groundwater Summary Tables" included at the end of this Section

Table 14B Summary of Maximum Concentrations in Soil

Group	Parameter	Table 8 RPIICC	Maximum Concentration	Location
BTEX	Benzene	0.02	<0.02	all samples
	Ethylbenzene	0.05	0.9	BH21-45 SS8
	Toluene	0.2	<0.05	all samples
	Total Xylenes	0.05	5.55	BH21-45 SS8
Metals	Barium	220	96.2	BH21-22 SS1
	Beryllium	2.5	0.8	BH21-2 SS2
	Boron	36	24	BH21-20 SS4
	Cadmium	1.2	<0.5	all samples
	Chromium	70	35	BH21-16 SS1
	Cobalt	22	16.5	BH21-20 SS1
	Copper	92	69	BH21-16 SS1
	Lead	120	79	BH21-16 SS1
	Molybdenum	2	3.7	BH21-16 SS1
	Nickel	82	142	BH21-20 SS1
	Silver	0.5	<0.5	all samples
	Thallium	1	<0.5	all samples
	Uranium	2.5	0.79	BH21-20 SS4
	Vanadium	86	40.2	BH21-20 SS4
Zinc	290	468	BH21-16 SS1	
As, Se, Sb	Antimony	1.3	2.8	BH21-16 SS1
	Arsenic	18	8	BH21-16 SS1
	Selenium	1.5	0.8	BH21-16 SS1
PAHs	Acenaphthene	0.072	<0.05	all samples
	Acenaphthylene	0.093	0.09	BH21-45 SS1
	Anthracene	0.22	0.18	BH21-7 SS1
	Benz(a)anthracene	0.36	0.56	BH21-7 SS1
	Benzo(a)pyrene	0.3	0.4	BH21-7 SS1
	Benzo(b)fluoranthene	0.47	0.66	BH21-8 SS1
	Benzo(g,h,i)perylene	0.68	0.34	BH21-8 SS1
	Benzo(k)fluoranthene	0.48	0.24	BH21-8 SS1
	Chrysene	2.8	0.41	BH21-7 SS1
	Dibenz(a,h)anthracene	0.1	0.06	BH21-45 SS1
	Fluoranthene	0.69	1.05	BH21-7 SS1
	Fluorene	0.19	<0.05	all samples
	Indeno(1,2,3-cd)pyrene	0.23	0.26	BH21-8 SS1
	Methylnaphthalene, 2-(1-)	0.59	0.15	BH21-45 SS1
	Naphthalene	0.09	<0.05	all samples
	Phenanthrene	0.69	0.4	BH21-7 SS1
	Pyrene	1	0.96	BH21-7 SS1
PHCs	F1 (C6 to C10) minus BTEX	25	51	BH21-45 SS8
	F2 (C10 to C16)	10	<10	all samples
	F3 (C16 to C34)	240	14	BH21-24 S3
	F4 (C34 to C50)	120	<50	all samples
	Acetone	0.5	<0.50	all samples
	Bromodichloromethane	0.05	<0.05	all samples
	Bromoform	0.05	<0.05	all samples
	Bromomethane	0.05	<0.05	all samples
	Carbon Tetrachloride	0.05	<0.05	all samples
	Chlorobenzene	0.05	<0.05	all samples
	Chloroform	0.05	<0.04	all samples
	Dibromochloromethane	0.05	<0.05	all samples
	Dichlorobenzene, 1,2-	0.05	<0.05	all samples

Table 14B Summary of Maximum Concentrations in Soil

Group	Parameter	Table 8 RPIICC	Maximum Concentration	Location
VOCs	Dichlorobenzene, 1,3-	0.05	<0.05	all samples
	Dichlorobenzene, 1,4-	0.05	<0.05	all samples
	Dichlorodifluoromethane	0.05	<0.05	all samples
	Dichloroethane, 1,1-	0.05	<0.02	all samples
	Dichloroethane, 1,2-	0.05	<0.03	all samples
	Dichloroethylene, 1,1-	0.05	<0.05	all samples
	Dichloroethylene, Cis- 1,2-	0.05	<0.02	all samples
	Dichloroethylene, Trans- 1,2-	0.05	<0.05	BH21-45 SS8
	Dichloropropane, 1,2-	0.05	<0.03	all samples
	1,3-Dichloropropene (Cis + Trans)	0.05	<0.05	BH21-45 SS8
	Ethylene Dibromide	0.05	<0.04	all samples
	Hexane, n-	0.05	<0.05	all samples
	Methyl Ethyl Ketone	0.5	<0.50	all samples
	Methyl Isobutyl Ketone	0.5	<0.50	all samples
	Methyl tert-butyl Ether	0.05	<0.05	all samples
	Methylene Chloride	0.05	<0.05	all samples
	Styrene	0.05	<0.05	all samples
	Tetrachloroethane, 1,1,1,2-	0.05	<0.04	all samples
	Tetrachloroethane, 1,1,2,2-	0.05	<0.05	all samples
	Tetrachloroethylene	0.05	<0.05	all samples
	Trichloroethane, 1,1,1-	0.05	<0.05	all samples
	Trichloroethane, 1,1,2-	0.05	<0.04	all samples
	Trichloroethylene	0.05	<0.03	all samples
Trichlorofluoromethane	0.25	<0.05	all samples	
Vinyl Chloride	0.02	<0.02	all samples	
ORPs	Chromium, Hexavalent	0.66	<0.2	all samples
	Cyanide, Free	0.051	<0.040	all samples
	Electrical Conductivity (2:1)	0.7	0.353	BH21-2 SS2
	Mercury	0.27	0.22	BH21-16 SS1
	Sodium Adsorption Ratio	5	2.17	BH21-7 SS2
	pH, 2:1 CaCl <sub>2</sub> Extraction	*	7.66	BH21-24 S3
PCBs	Polychlorinated Biphenyls	0.3	<0.10	all samples

See "Notes for Soil and Groundwater Summary Tables" included at the beginning of this Section

Table 15B Summary of Maximum Concentrations in Groundwater

Group	Parameter	Table 8 Potable GW	Maximum Concentration	Location
BTEX	Benzene	5	<0.20	all samples
	Ethylbenzene	2.4	<0.10	all samples
	Toluene	22	<0.20	all samples
	Xylene Mixture	300	<0.20	all samples
Metals	Barium	1000	271	BH21-22
	Beryllium	4	<0.50	all samples
	Boron	5000	1676	BH21-16
	Cadmium	2.1	<0.20	all samples
	Chromium	50	25.3	all samples
	Cobalt	3.8	4.53	QA/QC
	Copper	69	2.7	all samples
	Lead	10	0.93	all samples
	Molybdenum	70	57.1	BH21-45
	Nickel	100	9.7	BH21-45
	Silver	1.2	<0.20	all samples
	Thallium	2	<0.30	all samples
	Uranium	20	3.52	BH21-22
	Vanadium	6.2	3.29	BH21-45
Zinc	890	6.1	all samples	
As, Se, Sb	Antimony	6	1.1	BH21-16
	Arsenic	25	4.7	BH21-45
	Selenium	10	1.6	BH21-16
Na	Sodium	490000	417000	BH21-16
PAHs	Acenaphthene	4.1	<0.20	all samples
	Acenaphthylene	1	<0.20	all samples
	Anthracene	1	1.79	BH21-45
	Benz(a)anthracene	1	2.4	BH21-45
	Benzo(a)pyrene	0.01	3.67	BH21-45
	Benzo(b)fluoranthene	0.1	4.92	BH21-45
	Benzo(g,h,i)perylene	0.2	2.48	BH21-45
	Benzo(k)fluoranthene	0.1	2.19	BH21-45
	Chrysene	0.1	5.59	BH21-45
	Dibenz(a,h)anthracene	0.2	0.32	BH21-45
	Fluoranthene	0.41	17.9	BH21-45
	Fluorene	120	0.56	QA/QC
	Indeno(1,2,3-cd)pyrene	0.2	1.8	BH21-45
	Methyl Naphthalene, 2-and 1-	3.2	<0.20	all samples
	Naphthalene	11	<0.20	all samples
	Phenanthrene	1	12	BH21-45
	Pyrene	4.1	14.6	BH21-45
PHCs	F1 (C6 to C10) minus BTEX	420	<25	all samples
	F2 (C10 to C16)	150	<100	all samples
	F3 (C16 to C34)	500	<100	all samples
	F4 (C34 to C50)	500	<100	all samples
	Acetone	2700	<1.0	all samples
	Bromodichloromethane	16	<0.20	all samples
	Bromoform	25	<0.10	all samples
	Bromomethane	0.89	<0.20	all samples
	Carbon Tetrachloride	0.79	<0.20	all samples
	Chlorobenzene	30	<0.10	all samples
	Chloroform	2.4	<0.20	all samples
	Dibromochloromethane	25	<0.10	all samples



Table 15B Summary of Maximum Concentrations in Groundwater

Group	Parameter	Table 8 Potable GW	Maximum Concentration	Location
VOCs	Dichlorobenzene, 1,2-	3	<0.10	all samples
	Dichlorobenzene, 1,3-	59	<0.10	all samples
	Dichlorobenzene, 1,4-	1	<0.10	all samples
	Dichlorodifluoromethane	590	<0.20	all samples
	Dichloroethane, 1,1-	5	<0.30	all samples
	Dichloroethane, 1,2-	1.6	<0.20	all samples
	Dichloroethylene, 1,1-	1.6	<0.30	all samples
	Dichloroethylene, cis- 1,2-	1.6	<0.20	all samples
	Dichloroethylene, trans- 1,2-	1.6	<0.20	all samples
	Dichloropropane, 1,2-	5	<0.20	all samples
	Dichloropropene, 1,3-	0.5	<0.30	all samples
	Ethylene Dibromide	0.2	<0.10	all samples
	Hexane, n-	51	<0.20	all samples
	Methyl Ethyl Ketone	1800	<1.0	all samples
	Methyl Isobutyl Ketone	640	<1.0	all samples
	Methyl tert-butyl ether	15	<0.20	all samples
	Methylene Chloride	50	<0.30	all samples
	Styrene	5.4	<0.10	all samples
	Tetrachloroethane, 1,1,1,2-	1.1	<0.10	all samples
	Tetrachloroethane, 1,1,2,2-	1	<0.10	all samples
	Tetrachloroethylene	1.6	<0.20	all samples
	Trichloroethane, 1,1,1-	200	<0.30	all samples
	Trichloroethane, 1,1,2-	4.7	<0.20	all samples
Trichloroethylene	1.6	<0.20	all samples	
Trichlorofluoromethane	150	<0.40	all samples	
Vinyl Chloride	0.5	<0.17	all samples	
ORPs	Chloride	790000	1460000	BH21-45
	Chromium VI	25	5.43	all samples
	Cyanide	52	<2.0	all samples
	Mercury	0.29	<0.02	all samples
PCBs	Polychlorinated Biphenyls	0.2	<0.10	all samples

See "Notes for Soil and Groundwater Summary Tables" included at the beginning of this Section

**Notes for Soil & Groundwater Summary Tables - Caledon (C-series)**

1. mbgs = metres below ground surface
2. ORPs = other regulated parameters
3. PHCs = petroleum hydrocarbons
4. VOCs = volatile organic compounds
5. PAHs = polycyclic aromatic hydrocarbons
7. APEC = area of potential environmental concern
6. - = parameter not analyzed
7. \* = pH criteria for surface soils (0 - 1.5 mbgs) is 5 to 9, for subsurface soil (below 1.5 mbgs) is 5 to 11
8. Units for all soil analyses are in µg/g (ppm) unless otherwise indicated
9. Units for all groundwater analyses are in µg/L (ppb) unless otherwise indicated
10. Table 1 RPIICC = Full Depth Background Site Condition Standards as contained in Table 1 of the Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act, published by the MECP on April 15, 2011
11. For soil and groundwater analytical results: **bold** = Concentration exceeds the 2011 MECP Table 1 SCS

**Table 1C Monitoring Well Installation and Groundwater Levels**

Monitoring Well ID		BH21-9	BH21-11	BH21-13	BH21-25	BH21-28	BH21-30	BH21-32	BH21-36
Installed By		WSP	WSP	WSP	WSP	WSP	WSP	WSP	WSP
Installation Date		4-Nov-21	4-Nov-21	15-Nov-21	16-Nov-21	8-Nov-21	8-Nov-21	15-Nov-21	16-Nov-21
Well Status		Active	Active	Active	Active	Active	Active	Active	Active
Well Inner Diameter	(mm)	50	50	50	50	50	50	50	50
Casing Type (Flushmount / Monument)		Monument	Monument	Monument	Monument	Monument	Flushmount	Monument	Monument
Top of Pipe Elevation	(masl)	423.843	397.847	404.757	255.396	282.313	286.873	274.654	326.921
Ground Surface Elevation	(masl)	422.953	396.937	403.897	256.306	281.403	286.973	273.744	326.001
Bottom of Concrete Seal/Top of Bentonite Seal	(mbgs)	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
	(masl)	422.653	396.637	403.597	256.006	281.103	286.673	273.444	325.701
Bottom of Bentonite Seal/Top of Sand Pack	(mbgs)	1.3	4.9	3.1	4.0	5.5	5.5	2.4	4.0
	(masl)	421.7	392.0	400.8	252.3	275.9	281.5	271.4	322.0
Top of Well Screen	(mbgs)	1.9	5.5	3.7	4.6	6.1	6.1	3.0	4.6
	(masl)	421.1	391.4	400.2	251.7	275.3	280.9	270.7	321.4
Screen Length	(m)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Bottom of Screen	(mbgs)	4.9	8.5	6.7	7.6	9.1	9.1	6.0	7.6
	(masl)	418.1	388.4	397.2	248.7	272.3	277.9	267.7	318.4
22-Nov-21	Depth of GW	(mbgs)	-	-	-	-	-	DRY	6.5
	GW Elevation	(masl)	-	-	-	-	-	-	319.5
23-Nov-21	Depth of GW	(mbgs)	-	-	-	-	-	DRY	6.6
	GW Elevation	(masl)	-	-	-	-	-	-	319.4
29-Nov-21	Depth of GW	(mbgs)	-	-	-	0.6	2.2	-	-
	GW Elevation	(masl)	-	-	-	280.8	284.8	-	-
30-Nov-21	Depth of GW	(mbgs)	-	-	2.2	-	-	-	-
	GW Elevation	(masl)	-	-	254.1	-	-	-	-
1-Dec-21	Depth of GW	(mbgs)	-	-	-	-	-	-	-
	GW Elevation	(masl)	-	-	-	-	-	-	-
2-Dec-21	Depth of GW	(mbgs)	-	-	-	-	-	-	-
	GW Elevation	(masl)	-	-	-	-	-	-	-
6-Dec-21	Depth of GW	(mbgs)	-	-	-	-	-	-	-
	GW Elevation	(masl)	-	-	-	-	-	-	-
7-Dec-21	Depth of GW	(mbgs)	2.0	4.3	5.1	2.2	0.0	2.3	DRY
	GW Elevation	(masl)	421.0	392.6	398.8	254.1	281.7	284.7	-

See "Notes for Soil and Groundwater Summary"

Table 2C Summary of Soil Samples Submitted for Chemical Analysis

Borehole	Sample	Depth	Date	Parameters						APEC #
				M&ORP	PHCs	VOCs	PAHs	PCBs	OCPs	
BH21-9	SS1	0.0 - 0.6	4-Nov-21	-	-	-	-	✓	✓	3, 13, 14, 38, 114
	SS2	0.8 - 1.4		✓	-	-	-	-	-	
	SS3	1.5 - 2.1		-	-	-	✓	-	-	
	SS4	2.3 - 2.9		-	-	-	✓	-	-	
	SS5	3.0 - 3.7		-	✓	-	-	-	-	
BH21-10	S1	0.0 - 0.6	27-Oct-21	✓	-	-	-	-	-	13, 14, 38, 105, 114
	S2	0.6 - 1.2		✓	-	-	-	✓	✓	
	S3	1.2 - 1.8		✓	✓	-	✓	-	-	
BH21-11	SS1	0.0 - 0.6	4-Nov-21	✓	-	-	-	-	-	13, 14, 38, 114
	SS2	0.8 - 1.4		-	-	-	✓	✓	✓	
	SS5	3.0 - 3.7		-	✓	-	-	-	-	
BH21-13	SS1	0.0 - 0.6	15-Nov-21	-	-	-	✓	-	-	13, 14, 38, 112, 114
	SS2	0.8 - 1.4		✓	-	-	-	-	-	
	SS5	3.0 - 3.7		-	✓	✓	-	-	-	
BH21-14	S1	0.0 - 0.6	27-Oct-21	-	-	-	-	✓	✓	13, 14, 38, 96, 114
	S2	0.6 - 1.2		✓	-	-	-	-	-	
	S3	1.2 - 1.8		-	-	-	✓	-	-	
BH21-15	S2	0.6 - 1.2	27-Oct-21	-	-	-	✓	✓	✓	13, 14, 38, 93, 114
	S3	1.2 - 1.8		✓	-	-	-	-	-	
BH21-25	SS1	0.0 - 0.6	16-Nov-21	-	-	-	✓	-	-	13, 14, 38, 108, 114
	SS2	0.8 - 1.4		✓	-	-	-	-	-	
	SS6	4.6 - 5.2		-	✓	✓	-	-	-	
BH21-26	S1	0.0 - 0.6	28-Oct-21	-	-	-	-	✓	✓	13, 14, 38, 60, 114
	S2	0.6 - 1.2		-	-	-	✓	-	-	
	S3	1.2 - 1.8		✓	-	-	-	-	-	
BH21-27	S1	0.0 - 0.6	28-Oct-21	✓	-	-	-	-	-	13, 14, 38, 63, 114
	S2	0.6 - 1.2		-	-	-	-	✓	✓	
	S3	1.2 - 1.8		-	-	-	✓	-	-	
BH21-28	SS1	0.0 - 0.6	8-Nov-21	✓	-	-	-	-	-	1, 13, 14, 38, 114
	QAQC-3			✓	-	-	-	-	-	
	SS2	0.8 - 1.4		-	✓	-	-	-	-	
	QAQC-4			-	✓	-	-	-	-	
	SS3	1.5 - 2.1		-	-	-	✓	✓	✓	
QAQC-5	-		-	-	✓	✓	✓			
BH21-29	S1	0.0 - 0.6	28-Oct-21	-	-	-	-	✓	✓	13, 14, 38, 66, 114
	S2	0.6 - 1.2		✓	-	-	-	-	-	
	S3	1.2 - 1.8		-	-	-	✓	-	-	
BH21-30	SS1	0.0 - 0.6	8-Nov-21	-	-	-	✓	✓	✓	13, 14, 33, 38, 114
	SS2	0.8 - 1.4		✓	-	-	-	-	-	
	SS3	1.5 - 2.1		-	✓	-	-	-	-	
BH21-31	S1	0.0 - 0.6	5-Nov-21	✓	-	-	-	-	-	13, 14, 38, 69, 114
	S2	0.6 - 1.2		-	-	-	-	✓	✓	
	S3	1.2 - 1.8		-	✓	-	✓	-	-	
BH21-32	SS1	0.0 - 0.6	15-Nov-21	✓	-	-	-	-	-	13, 14, 38, 109, 114
	SS2	0.8 - 1.4		✓	-	-	-	-	-	
	SS3	1.5 - 2.1		-	-	-	✓	-	-	
	SS4	2.3 - 2.9		-	✓	✓	-	-	-	
BH21-33	S1	0.0 - 0.6	28-Oct-21	-	-	-	✓	-	-	13, 14, 38, 72, 114
	S2	0.6 - 1.2		-	-	-	-	✓	✓	
	S3	1.2 - 1.8		✓	-	-	-	-	-	
BH21-34	S1	0.0 - 0.6	28-Oct-21	-	-	-	-	✓	✓	13, 14, 38, 75, 114
	QAQC-1			-	-	-	-	✓	✓	
	S2	0.6 - 1.2		✓	-	-	-	-	-	
	QAQC-S2			✓	-	-	-	-	-	
	S3	1.2 - 1.8		-	-	-	✓	-	-	
QAQC-S3	-		-	-	✓	-	-			

**Table 2C Summary of Soil Samples Submitted for Chemical Analysis**

Borehole	Sample	Depth	Date	Parameters						APEC #
				M&ORP	PHCs	VOCs	PAHs	PCBs	OCPs	
BH21-35	S1	0.0 - 0.6	27-Oct-21	✓	-	-	-	-	-	13, 14, 38, 78, 114
	S2	0.6 - 1.2		-	-	-	-	✓	✓	
	S3	1.2 - 1.8		-	-	-	✓	-	-	
BH21-36	SS1	0.0 - 0.6	16-Nov-21	✓	-	-	-	-	-	13, 14, 38, 110, 114
	SS2	0.8 - 1.4		✓	-	-	-	-	-	
	SS3	1.5 - 2.1		-	-	-	✓	-	-	
	SS6	4.6 - 5.2		-	✓	✓	-	-	-	
BH21-37	S1	0.0 - 0.6	27-Oct-21	-	-	-	-	✓	✓	13, 14, 38, 81, 114
	S2	0.6 - 1.2		✓	-	-	-	-	-	
	S3	1.2 - 1.8		-	-	-	✓	-	-	
BH21-38	S1	0.0 - 0.6	27-Oct-21	-	-	-	✓	-	-	13, 14, 38, 84, 114
	S2	0.6 - 1.2		-	-	-	-	✓	✓	
	S3	1.2 - 1.8		✓	-	-	-	-	-	
BH21-39	S1	0.0 - 0.6	5-Nov-21	✓	-	-	-	-	-	13, 14, 38, 111, 114
	S3	1.2 - 1.8		-	-	-	✓	✓	✓	
BH21-40	S1	0.0 - 0.6	27-Oct-21	-	-	-	✓	✓	✓	13, 14, 38, 87, 114
	S3	1.2 - 1.8		✓	-	-	✓	-	-	
BH21-41	S1	0.0 - 0.6	5-Nov-21	-	-	-	✓	-	-	13, 14, 38, 90, 114
	S2	0.6 - 1.2		✓	✓	-	-	✓	✓	

See "Notes for Soil and Groundwater Summary Tables" included at the beginning of this Section

**Table 3C: Summary of Groundwater Samples Submitted for Chemical Analysis**

Monitoring Well ID	Screened Interval (mbgs)	Date	Parameters					APEC #	
			M&ORP	PHCs	VOCs	PAHs	PCBs		OCPs
BH21-9	1.9 - 4.9	30-Nov-21	✓	✓	✓	✓	✓	-	3, 13, 14, 38, 114
BH21-11	5.5 - 8.5	30-Nov-21	✓	✓	-	✓	✓	-	13, 14, 38, 114
BH21-13	3.7 - 6.7	30-Nov-21	✓	✓	✓	✓	-	-	13, 14, 38, 112, 114
BH21-25	4.6 - 7.6	1-Dec-21	✓	✓	✓	✓	-	-	13, 14, 38, 108, 114
BH21-28	6.1 - 9.1	1-Dec-21	✓	✓	✓	✓	✓	-	1, 13, 14, 38, 114
BH21-30	6.1 - 9.1	1-Dec-21	-	✓	-	-	-	-	13, 14, 33, 38, 114
BH21-36	4.6 - 7.6	23-Nov-21	✓	✓	✓	✓	-	-	13, 14, 38, 110, 114

See "Notes for Soil and Groundwater Summary Tables" included at the beginning of this Section

**Table 4C Soil Analytical Results - Metals & ORPs**

Parameter		BH21-9 SS2	BH21-10 S1	BH21-10 S3	BH21-11 SS1	BH21-13 SS2	BH21-14 S2	BH21-15 S3
Date of Collection	Table 1 RPIICC	Nov 04, 2021	Oct 27, 2021	Oct 27, 2021	Nov 04, 2021	Nov 15, 2021	Oct 27, 2021	Oct 27, 2021
Date Reported		Nov 16, 2021	Nov 08, 2021	Dec 20, 2021	Nov 16, 2021	Nov 27, 2021	Nov 08, 2021	Nov 08, 2021
Sampling Depth (mbgs)		0.8 - 1.4	0.0 - 0.6	1.2 - 1.8	0.0 - 0.6	0.8 - 1.4	0.6 - 1.2	1.2 - 1.8
Analytical Report Reference No.		21T826519	21T822752		21T826519	21T830287	21T822752	21T822752
Antimony	1.3	<0.8	<b>3.5</b>	<0.8	<0.8	<0.8	<0.8	<0.8
Arsenic	18	3	<b>24</b>	8	2	2	3	4
Barium	220	25.4	44.5	27	10.1	10.6	49.6	26.5
Beryllium	2.5	<0.4	1.4	<0.4	<0.4	<0.4	<0.4	<0.4
Boron	36	<5	12	8	<5	<5	<5	<5
Boron (Hot Water Extractable)	NA	0.18	0.37	0.21	<0.10	<0.10	0.13	<0.10
Cadmium	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Chromium	70	12	15	10	<5	5	14	7
Cobalt	21	4.6	9.3	5.2	1.9	1.7	4.6	3.3
Copper	92	8	64.7	23.7	9	3.4	8.6	17
Lead	120	7	52	15	2	3	8	5
Molybdenum	2	<0.5	<b>11</b>	1	<0.5	<0.5	<0.5	<0.5
Nickel	82	9	29	7	2	3	9	5
Selenium	1.5	<0.8	<b>2.1</b>	<0.8	<0.8	<0.8	<0.8	<0.8
Silver	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Thallium	1	<0.5	0.6	<0.5	<0.5	<0.5	<0.5	<0.5
Uranium	2.5	<0.50	0.7	<0.50	<0.50	<0.50	<0.50	<0.50
Vanadium	86	24.7	26.7	15.3	10.4	10.9	26.6	14.4
Zinc	290	28	70	54	18	13	46	22
Chromium, Hexavalent	0.66	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Cyanide, Free	0.051	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040
Mercury	0.27	<0.10	<0.10	<0.10	<0.10	<0.10	0.11	<0.10
Electrical Conductivity (2:1)	0.57	0.096	0.255	0.210	0.061	0.078	0.103	0.073
Sodium Adsorption Ratio	2.4	0.07	0.061	0.295	0.055	0.205	0.043	0.061
pH, 2:1 CaCl2 Extraction	*	7.29	7.24	7.39	7.82	7.77	7.27	7.80

See "Notes for Soil and Groundwater Summary Tables" included at the beginning of this Section

**Table 4C Soil Analytical Results - Metals & ORPs**

Parameter		BH21-25 SS2	BH21-26 S3	BH21-27 S1	BH21-28 SS1	QAQC-3	BH21-29 S2	BH21-30 SS2	BH21-31 S1
Date of Collection	Table 1 RPIICC	Nov 16, 2021	Oct 28, 2021	Oct 28, 2021	Nov 08, 2021		Oct 28, 2021	Nov 08, 2021	Nov 05, 2021
Date Reported		Nov 26, 2021	Nov 08, 2021	Nov 08, 2021	Nov 20, 2021		Nov 08, 2021	Nov 20, 2021	Nov 16, 2021
Sampling Depth (mbgs)		0.8 - 1.4	1.2 - 1.8	0.0 - 0.6	0.0 - 0.6		0.6 - 1.2	0.8 - 1.4	0.0 - 0.6
Analytical Report Reference No.		21T830891	21T822752	21T822752	21T827359		21T822752	21T827359	21T826519
Antimony	1.3	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8
Arsenic	18	8	4	12	10	10	5	6	8
Barium	220	85.3	47.6	54.2	73.4	65.4	99	147	58.8
Beryllium	2.5	0.5	<0.4	0.5	0.8	0.7	0.7	1.4	0.5
Boron	36	<5	5	6	12	10	9	12	7
Boron (Hot Water Extractable)	NA	0.35	<0.10	0.26	0.44	0.47	0.13	<0.10	0.12
Cadmium	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Chromium	70	23	16	19	23	21	26	32	17
Cobalt	21	12.6	9.4	6.8	16.3	6.8	11.1	14.1	10.0
Copper	92	35.5	37.1	24.7	40.9	31.3	26.1	28.4	28.5
Lead	120	12	7	15	29	26	9	12	9
Molybdenum	2	<0.5	<0.5	<0.5	0.7	0.6	<0.5	<0.5	<0.5
Nickel	82	26	18	15	31	17	24	33	21
Selenium	1.5	<0.8	<0.8	<0.8	0.9	<0.8	<0.8	<0.8	<0.8
Silver	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Thallium	1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Uranium	2.5	0.5	<0.50	<0.50	0.6	<0.50	<0.50	0.6	<0.50
Vanadium	86	32.8	23	28.1	30.2	27.3	36.5	42.7	24.8
Zinc	290	70	47	58	92	81	57	71	51
Chromium, Hexavalent	0.66	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Cyanide, Free	0.051	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040
Mercury	0.27	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Electrical Conductivity (2:1)	0.57	0.174	0.106	0.192	0.342	0.336	0.129	0.165	0.107
Sodium Adsorption Ratio	2.4	0.267	0.084	0.103	0.396	0.393	0.105	0.458	0.060
pH, 2:1 CaCl2 Extraction	*	7.50	7.79	7.70	7.28	7.60	7.71	7.25	7.60

See "Notes for Soil and Groundwater Summary Tables" included at the beginning of this Section



**Table 4C Soil Analytical Results - Metals & ORPs**

Parameter		BH21-32 SS1	BH21-32 SS2	BH21-33 S3	BH21-34 S2	QAQC-2	BH21-35 S1	BH21-36 SS1	BH21-36 SS1
Date of Collection	Table 1 RPIICC	Nov 15, 2021	Nov 15, 2021	Oct 28, 2021	Oct 28, 2021	Oct 27, 2021	Nov 16, 2021	Nov 16, 2021	
Date Reported		Nov 27, 2021	Dec 20, 2021	Nov 08, 2021	Nov 08, 2021	Nov 08, 2021	Nov 26, 2021	Dec 20, 2021	
Sampling Depth (mbgs)		0.0 - 0.6	0.8 - 1.4	1.2 - 1.8	0.6 - 1.2	0.0 - 0.6	0.0 - 0.6	0.8 - 1.4	
Analytical Report Reference No.		21T830287	21T839249	21T822752	21T822752	21T822752	21T830891	21T839249	
Antimony	1.3	1.9	<0.8	<0.8	<0.8	<0.8	<0.8	1.1	<0.8
Arsenic	18	6	2	5	4	3	13	11	4
Barium	220	43.1	35.6	99.2	58.5	57	53.8	103	26.3
Beryllium	2.5	<0.4	<0.4	0.6	0.4	0.4	0.5	<0.4	<0.4
Boron	36	9	<5	9	10	11	21	6	7
Boron (Hot Water Extractable)	NA	0.40	0.16	<0.10	<0.10	<0.10	0.35	0.23	0.15
Cadmium	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Chromium	70	12	11	23	17	16	12	12	11
Cobalt	21	5.8	4.5	11.9	7.4	7.4	10.2	5.1	5.4
Copper	92	48.3	16.7	25.3	17.4	17	44.3	53.7	26.2
Lead	120	65	9	9	5	5	13	205	13
Molybdenum	2	1.4	<0.5	<0.5	<0.5	<0.5	1.1	1.2	<0.5
Nickel	82	21	9	24	14	13	19	11	9
Selenium	1.5	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8
Silver	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Thallium	1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Uranium	2.5	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Vanadium	86	17.7	20.5	33.6	26.5	25.2	15.4	18.7	21.4
Zinc	290	67	34	52	38	36	63	179	39
Chromium, Hexavalent	0.66	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Cyanide, Free	0.051	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040
Mercury	0.27	0.32	<0.10	<0.10	<0.10	<0.10	<0.10	0.23	<0.10
Electrical Conductivity (2:1)	0.57	0.184	0.134	0.115	0.108	0.101	0.217	0.156	0.115
Sodium Adsorption Ratio	2.4	0.193	0.199	0.155	0.072	0.070	0.095	0.076	0.139
pH, 2:1 CaCl2 Extraction	*	7.60	7.15	7.80	7.87	7.91	7.87	7.70	7.08

See "Notes for Soil and Groundwater Summary Tables" included at the beginning of this Section

**Table 4C Soil Analytical Results - Metals & ORPs**

Parameter		BH21-37 S2	BH21-38 S3	BH21-39 S1	BH21-40 S3	BH21-41 S2
Date of Collection	Table 1 RPIICC	Oct 27, 2021	Oct 27, 2021	Nov 05, 2021	Oct 27, 2021	Nov 05, 2021
Date Reported		Nov 08, 2021	Nov 08, 2021	Nov 16, 2021	Nov 08, 2021	Nov 16, 2021
Sampling Depth (mbgs)		0.6 - 1.2	1.2 - 1.8	0.0 - 0.6	1.2 - 1.8	0.6 - 1.2
Analytical Report Reference No.		21T822752	21T822752	21T826519	21T822752	21T826519
Antimony	1.3	1	<0.8	<0.8	<0.8	<0.8
Arsenic	18	12	3	6	6	<b>26</b>
Barium	220	41.3	16.9	40.7	29.6	18.3
Beryllium	2.5	<0.4	<0.4	0.4	<0.4	<0.4
Boron	36	7	<5	15	7	10
Boron (Hot Water Extractable)	NA	0.18	<0.10	0.36	0.20	0.13
Cadmium	1.2	<0.5	<0.5	<0.5	<0.5	<0.5
Chromium	70	11	6	14	11	23
Cobalt	21	5.4	2.5	6.3	4.5	8.3
Copper	92	25.1	9	12.3	27.2	24
Lead	120	18	4	7	20	52
Molybdenum	2	0.9	<0.5	<0.5	0.9	<b>2.1</b>
Nickel	82	11	4	13	10	8
Selenium	1.5	<0.8	<0.8	<0.8	<0.8	<0.8
Silver	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Thallium	1	<0.5	<0.5	<0.5	<0.5	<0.5
Uranium	2.5	<0.50	<0.50	<0.50	<0.50	<0.50
Vanadium	86	19.1	9.4	21.3	19.3	25.2
Zinc	290	33	14	48	33	121
Chromium, Hexavalent	0.66	<0.2	<0.2	<0.2	<0.2	<0.2
Cyanide, Free	0.051	<0.040	<0.040	<0.040	<0.040	<0.040
Mercury	0.27	<0.10	<0.10	<0.10	<0.10	<0.10
Electrical Conductivity (2:1)	0.57	0.136	0.082	0.210	0.328	0.152
Sodium Adsorption Ratio	2.4	0.036	0.051	0.758	0.025	0.121
pH, 2:1 CaCl2 Extraction	*	7.46	7.66	7.49	7.62	7.69

See "Notes for Soil and Groundwater Summary Tables" included at the beginning of this Section

**Table 5C Soil Analytical Results - PHCs & BTEX**

Parameter		BH21-9 SS5	BH21-10 S3	BH21-11 SS5	BH21-13 SS5	BH21-14 S3	BH21-25 SS6	BH21-26 S3	BH21-27 S3
Date of Collection	Table 1 RPIICC	Nov 04, 2021	Oct 27, 2021	Nov 04, 2021	Nov 15, 2021	Oct 27, 2021	Nov 16, 2021	Oct 28, 2021	Oct 28, 2021
Date Reported		Nov 16, 2021	Nov 30, 2021	Nov 16, 2021	Nov 27, 2021	Nov 30, 2021	Nov 26, 2021	Nov 30, 2021	Nov 30, 2021
Sampling Depth (mbgs)		3.0 - 3.7	1.2 - 1.8	3.0 - 3.7	3.0 - 3.7	1.2 - 1.8	4.6 - 5.2	1.2 - 1.8	1.2 - 1.8
Analytical Report Reference No.		21T826519	21T832162	21T826519	21T830287	21T832162	21T830891	21T832162	21T832162
Benzene	0.02	<0.02	<0.005	<0.02	<0.02	<0.005	<0.02	<0.005	<0.005
Toluene	0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Ethylbenzene	0.05	<0.05	<0.01	<0.05	<0.05	<0.01	<0.05	<0.01	<0.01
Total Xylenes	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
F1 (C6 to C10) minus BTEX	25	<5	<10	<5	<5	<10	<5	<10	<10
F2 (C10 to C16)	10	<10	<10	<10	<10	<10	<10	<10	<10
F3 (C16 to C34)	240	<50	42	<50	<50	14	<50	<10	<10
F4 (C34 to C50)	120	<50	<10	<50	<50	<10	<50	<10	<10

See "Notes for Soil and Groundwater Summary"

**Table 5C Soil Analytical Results - PHCs & BTEX**

Parameter		BH21-28 SS2	QAQC-4	BH21-29 S3	BH21-30 SS3	BH21-31 S2	BH21-31 S3	BH21-32 SS4	BH21-33 S2
Date of Collection	Table 1 RPIICC	Nov 08, 2021		Oct 28, 2021	Nov 08, 2021	Nov 05, 2021	Nov 05, 2021	Nov 15, 2021	Oct 28, 2021
Date Reported		Nov 20, 2021		Nov 30, 2021	Nov 20, 2021	Nov 08, 2021	Dec 20, 2021	Nov 27, 2021	Nov 30, 2021
Sampling Depth (mbgs)		0.8 - 1.4		1.2 - 1.8	1.5 - 2.1	0.6 - 1.2	1.2 - 1.8	2.3 - 2.9	0.6 - 1.2
Analytical Report Reference No.		21T827359		21T832162	21T827359	21T832162	21T839249	21T830287	21T832162
Benzene	0.02	<0.02	<0.02	<0.005	<0.02	<0.005	<0.02	<0.02	<0.005
Toluene	0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Ethylbenzene	0.05	<0.05	<0.05	<0.01	<0.05	<0.01	<0.05	<0.05	<0.01
Total Xylenes	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
F1 (C6 to C10) minus BTEX	25	<5	<5	<10	<5	<10	8	<5	<10
F2 (C10 to C16)	10	<10	<10	<10	<10	13	<10	<10	<10
F3 (C16 to C34)	240	<50	<50	17	<50	39	<50	<50	24
F4 (C34 to C50)	120	<50	<50	<10	<50	<10	<50	<50	<10

See "Notes for Soil and Groundwater Summary"

**Table 5C Soil Analytical Results - PHCs & BTEX**

Parameter		BH21-34 S3	BH21-35 S2	BH21-36 SS6	BH21-37 S3	BH21-39 S3	BH21-41 S1
Date of Collection	Table 1 RPIICC	Oct 28, 2021	Nov 05, 2021	Nov 16, 2021	Oct 28, 2021	Nov 05, 2021	Nov 05, 2021
Date Reported		Nov 30, 2021	Nov 30, 2021	Nov 26, 2021	Nov 30, 2021	Nov 30, 2021	Nov 30, 2021
Sampling Depth (mbgs)		1.2 - 1.8	0.6 - 1.2	4.6 - 5.2	1.2 - 1.8	1.2 - 1.8	0.0 - 0.6
Analytical Report Reference No.		21T832162	21T832162	21T830891	21T832162	21T832162	21T832162
Benzene	0.02	<0.005	<0.005	<0.02	<0.005	<0.005	0.006
Toluene	0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Ethylbenzene	0.05	<0.01	<0.01	<0.05	<0.01	<0.01	0.01
Total Xylenes	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<b>0.22</b>
F1 (C6 to C10) minus BTEX	25	<10	<10	<5	<10	<10	10
F2 (C10 to C16)	10	<10	<10	<10	<10	<10	<10
F3 (C16 to C34)	240	11	21	<50	15	24	75
F4 (C34 to C50)	120	<10	<10	<50	<10	<10	<10

See "Notes for Soil and Groundwater Summary"

Table 6C Soil Analytical Results - VOCs

Parameter		BH21-13 SS5	BH21-25 SS6	BH21-32 SS4	BH21-36 SS6
Date of Collection	Table 1 RPIICC	Nov 15, 2021	Nov 16, 2021	Nov 15, 2021	Nov 16, 2021
Date Reported		Nov 27, 2021	Nov 26, 2021	Nov 27, 2021	Nov 26, 2021
Sampling Depth (mbgs)		3.0 - 3.7	4.6 - 5.2	2.3 - 2.9	4.6 - 5.2
Analytical Report Reference No.		21T830287	21T830891	21T830287	21T830891
Acetone	0.5	<0.50	<0.50	<0.50	<0.50
Benzene	0.02	<0.02	<0.02	<0.02	<0.02
Bromodichloromethane	0.05	<0.05	<0.05	<0.05	<0.05
Bromoform	0.05	<0.05	<0.05	<0.05	<0.05
Bromomethane	0.05	<0.05	<0.05	<0.05	<0.05
Carbon Tetrachloride	0.05	<0.05	<0.05	<0.05	<0.05
Chlorobenzene	0.05	<0.05	<0.05	<0.05	<0.05
Chloroform	0.05	<0.04	<0.04	<0.04	<0.04
Dibromochloromethane	0.05	<0.05	<0.05	<0.05	<0.05
Dichlorobenzene, 1,2-	0.05	<0.05	<0.05	<0.05	<0.05
Dichlorobenzene, 1,3-	0.05	<0.05	<0.05	<0.05	<0.05
Dichlorobenzene, 1,4-	0.05	<0.05	<0.05	<0.05	<0.05
Dichlorodifluoromethane	0.05	<0.05	<0.05	<0.05	<0.05
Dichloroethane, 1,1-	0.05	<0.02	<0.02	<0.02	<0.02
Dichloroethane, 1,2-	0.05	<0.03	<0.03	<0.03	<0.03
Dichloroethylene, 1,1-	0.05	<0.05	<0.05	<0.05	<0.05
Dichloroethylene, Cis- 1,2-	0.05	<0.02	<0.02	<0.02	<0.02
Dichloroethylene, Trans- 1,2-	0.05	<0.05	<0.05	<0.05	<0.05
Dichloropropane, 1,2-	0.05	<0.03	<0.03	<0.03	<0.03
1,3-Dichloropropene (Cis + Trans)	0.05	<0.05	<0.05	<0.05	<0.05
Ethylbenzene	0.05	<0.05	<0.05	<0.05	<0.05
Ethylene Dibromide	0.05	<0.04	<0.04	<0.04	<0.04
Hexane, n-	0.05	<0.05	<0.05	<0.05	<0.05
Methyl Ethyl Ketone	0.5	<0.50	<0.50	<0.50	<0.50
Methyl Isobutyl Ketone	0.5	<0.50	<0.50	<0.50	<0.50
Methyl tert-butyl Ether	0.05	<0.05	<0.05	<0.05	<0.05
Methylene Chloride	0.05	<0.05	<0.05	<0.05	<0.05
Styrene	0.05	<0.05	<0.05	<0.05	<0.05
Tetrachloroethane, 1,1,1,2-	0.05	<0.04	<0.04	<0.04	<0.04
Tetrachloroethane, 1,1,2,2-	0.05	<0.05	<0.05	<0.05	<0.05
Tetrachloroethylene	0.05	<0.05	<0.05	<0.05	<0.05
Toluene	0.2	<0.05	<0.05	<0.05	<0.05
Trichloroethane, 1,1,1-	0.05	<0.05	<0.05	<0.05	<0.05
Trichloroethane, 1,1,2-	0.05	<0.04	<0.04	<0.04	<0.04
Trichloroethylene	0.05	<0.03	<0.03	<0.03	<0.03
Trichlorofluoromethane	0.25	<0.05	<0.05	<0.05	<0.05
Vinyl Chloride	0.02	<0.02	<0.02	<0.02	<0.02
Xylene mixture	0.05	<0.05	<0.05	<0.05	<0.05

See "Notes for Soil and Groundwater Summary"

Table 7C Soil Analytical Results - PAHs

Parameter		BH21-9 SS3	BH21-9 SS4	BH21-10 S3	BH21-11 SS2	BH21-13 SS1	BH21-14 S3	BH21-15 S2
Date of Collection	Table 1 RPIICC	Nov 05, 2021	Nov 05, 2021	Oct 27, 2021	Nov 04, 2021	Nov 15, 2021	Oct 27, 2021	Oct 27, 2021
Date Reported		Nov 16, 2021	Dec 20, 2021	Nov 08, 2021	Nov 16, 2021	Nov 27, 2021	Nov 08, 2021	Nov 08, 2021
Sampling Depth (mbgs)		1.5 - 2.1	2.3 - 2.9	1.2 - 1.8	0.8 - 1.4	0.0 - 0.6	1.2 - 1.8	0.6 - 1.2
Analytical Report Reference No.		21T826519	21T839249	21T822752	21T826519	21T830287	21T822752	21T822752
Naphthalene	0.09	<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
Acenaphthene	0.072	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Fluorene	0.12	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Phenanthrene	0.69	0.1	0.22	<0.05	<0.05	<0.05	<0.05	<0.05
Anthracene	0.16	0.18	0.07	<0.05	<0.05	<0.05	<0.05	<0.05
Fluoranthene	0.56	0.19	0.44	<0.05	<0.05	<0.05	<0.05	<0.05
Pyrene	1	0.18	0.41	<0.05	<0.05	<0.05	<0.05	<0.05
Benz(a)anthracene	0.36	<0.05	0.2	<0.05	<0.05	<0.05	<0.05	<0.05
Chrysene	2.8	<0.05	0.12	<0.05	<0.05	<0.05	<0.05	<0.05
Benzo(b)fluoranthene	0.47	0.05	0.18	<0.05	<0.05	<0.05	<0.05	<0.05
Benzo(k)fluoranthene	0.48	0.06	0.09	<0.05	<0.05	<0.05	<0.05	<0.05
Benzo(a)pyrene	0.3	<0.05	0.16	<0.05	<0.05	<0.05	<0.05	<0.05
Indeno(1,2,3-cd)pyrene	0.23	<0.05	0.07	<0.05	<0.05	<0.05	<0.05	<0.05
Dibenz(a,h)anthracene	0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Benzo(g,h,i)perylene	0.68	<0.05	0.08	<0.05	<0.05	<0.05	<0.05	<0.05
Methylnaphthalene, 2-(1-)	0.59	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05

See "Notes for Soil and Groundwater Summary"

Table 7C Soil Analytical Results - PAHs

Parameter		BH21-25 SS1	BH21-26 S1	BH21-27 S2	BH21-28 SS3	QAQC-5	BH21-29 S1	BH21-30 SS1
Date of Collection	Table 1 RPIICC	Nov 16, 2021	Oct 28, 2021	Oct 28, 2021	Nov 08, 2021		Oct 28, 2021	Nov 08, 2021
Date Reported		Nov 26, 2021	Nov 08, 2021	Nov 08, 2021	Nov 20, 2021		Nov 08, 2021	Nov 20, 2021
Sampling Depth (mbgs)		0.0 - 0.6	0.0 - 0.6	0.6 - 1.2	1.5 - 2.1		0.0 - 0.6	0.0 - 0.6
Analytical Report Reference No.		21T830891	21T822752	21T822752	21T827359		21T822752	21T827359
Naphthalene	0.09	<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
Acenaphthene	0.072	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Fluorene	0.12	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Phenanthrene	0.69	<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
Fluoranthene	0.56	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Pyrene	1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.05
Benz(a)anthracene	0.36	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Chrysene	2.8	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Benzo(b)fluoranthene	0.47	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Benzo(k)fluoranthene	0.48	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Benzo(a)pyrene	0.3	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Indeno(1,2,3-cd)pyrene	0.23	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Dibenz(a,h)anthracene	0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Benzo(g,h,i)perylene	0.68	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Methylnaphthalene, 2-(1-)	0.59	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05

See "Notes for Soil and Groundwater Summary"



Table 7C Soil Analytical Results - PAHs

Parameter		BH21-31 S3	BH21-32 SS3	BH21-33 S1	BH21-34 S3	QAQC-3	BH21-35 S3	BH21-36 SS3
Date of Collection	Table 1 RPIICC	Nov 05, 2021	Nov 15, 2021	Oct 28, 2021	Oct 28, 2021		Oct 27, 2021	Nov 16, 2021
Date Reported		Nov 16, 2021	Nov 27, 2021	Nov 08, 2021	Nov 08, 2021		Nov 08, 2021	Nov 26, 2021
Sampling Depth (mbgs)		1.2 - 1.8	1.5 - 2.1	0.0 - 0.6	1.2 - 1.8		1.2 - 1.8	1.5 - 2.1
Analytical Report Reference No.		21T826519	21T830287	21T822752	21T822752		21T822752	21T830891
Naphthalene	0.09	<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
Acenaphthene	0.072	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Fluorene	0.12	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Phenanthrene	0.69	<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
Fluoranthene	0.56	<0.05	<0.05	<0.05	<0.05	<0.05	0.25	<0.05
Pyrene	1	<0.05	<0.05	<0.05	<0.05	<0.05	0.18	<0.05
Benz(a)anthracene	0.36	<0.05	<0.05	<0.05	<0.05	<0.05	0.08	<0.05
Chrysene	2.8	<0.05	<0.05	<0.05	<0.05	<0.05	0.14	<0.05
Benzo(b)fluoranthene	0.47	<0.05	<0.05	<0.05	<0.05	<0.05	0.19	<0.05
Benzo(k)fluoranthene	0.48	<0.05	<0.05	<0.05	<0.05	<0.05	0.17	<0.05
Benzo(a)pyrene	0.3	<0.05	<0.05	<0.05	<0.05	<0.05	0.06	<0.05
Indeno(1,2,3-cd)pyrene	0.23	<0.05	<0.05	<0.05	<0.05	<0.05	0.06	<0.05
Dibenz(a,h)anthracene	0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Benzo(g,h,i)perylene	0.68	<0.05	<0.05	<0.05	<0.05	<0.05	0.06	<0.05
Methylnaphthalene, 2-(1-)	0.59	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05

See "Notes for Soil and Groundwater Summary"

Table 7C Soil Analytical Results - PAHs

Parameter		BH21-37 S3	BH21-38 S1	BH21-39 S3	BH21-40 S1	BH21-40 S3	BH21-41 S1
Date of Collection	Table 1 RPIICC	Oct 27, 2021	Oct 27, 2021	Nov 05, 2021	Oct 27, 2021	Oct 27, 2021	Nov 05, 2021
Date Reported		Nov 08, 2021	Nov 08, 2021	Nov 16, 2021	Dec 20, 2021	Nov 08, 2021	Nov 16, 2021
Sampling Depth (mbgs)		1.2 - 1.8	0.0 - 0.6	1.2 - 1.8	0.0 - 0.6	1.2 - 1.8	0.0 - 0.6
Analytical Report Reference No.		21T822752	21T822752	21T826519	21T839249	21T822752	21T826519
Naphthalene	0.09	<0.05	0.07	<0.05	<b>0.31</b>	<b>0.1</b>	0.08
Acenaphthylene	0.093	<0.05	<0.05	<0.05	<b>0.14</b>	0.06	0.08
Acenaphthene	0.072	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Fluorene	0.12	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Phenanthrene	0.69	<0.05	0.07	<0.05	<b>0.78</b>	0.19	0.08
Anthracene	0.16	<0.05	0.05	<0.05	<b>0.27</b>	0.12	0.06
Fluoranthene	0.56	<0.05	0.14	<0.05	<b>2.11</b>	0.47	0.38
Pyrene	1	<0.05	0.12	<0.05	<b>1.94</b>	0.37	0.36
Benzo(a)anthracene	0.36	<0.05	0.07	<0.05	<b>1.13</b>	0.19	0.18
Chrysene	2.8	<0.05	0.11	<0.05	1.25	0.16	0.14
Benzo(b)fluoranthene	0.47	<0.05	0.21	<0.05	<b>1.61</b>	<b>0.53</b>	0.25
Benzo(k)fluoranthene	0.48	<0.05	0.23	<0.05	<b>0.63</b>	<b>0.5</b>	0.24
Benzo(a)pyrene	0.3	<0.05	<0.05	<0.05	<b>0.86</b>	0.09	<0.05
Indeno(1,2,3-cd)pyrene	0.23	<0.05	0.09	<0.05	<b>0.48</b>	0.2	0.08
Dibenz(a,h)anthracene	0.1	<0.05	<0.05	<0.05	<b>0.13</b>	0.05	<0.05
Benzo(g,h,i)perylene	0.68	<0.05	0.13	<0.05	0.55	0.2	0.08
Methylnaphthalene, 2-(1-)	0.59	<0.05	<0.05	<0.05	<b>0.82</b>	0.32	0.18

See "Notes for Soil and Groundwater Summary"

**Table 8C Soil Analytical Results - PCBs and OC Pesticides**

Parameter		BH21-9 SS1	BH21-10 S2	BH21-11 SS2	BH21-14 S1	BH21-15 S2	BH21-26 S1	BH21-27 S2
Date of Collection	Table 1 RPIICC	Nov 05, 2021	Oct 27, 2021	Nov 04, 2021	Oct 27, 2021	Oct 27, 2021	Oct 28, 2021	Oct 28, 2021
Date Reported		Nov 16, 2021	Nov 08, 2021	Nov 16, 2021	Nov 08, 2021	Nov 08, 2021	Nov 08, 2021	Nov 08, 2021
Sampling Depth (m bgs)		0.0 - 0.6	0.6 - 1.2	0.8 - 1.4	0.0 - 0.6	0.6 - 1.2	0.0 - 0.6	0.6 - 1.2
Analytical Report Reference No.		21T826519	21T822752	21T826519	21T822752	21T822752	21T822752	21T822752
Polychlorinated Biphenyls	0.3	<0.10	<0.10	-	<0.10	<0.10	<0.10	<0.10
Aldrin	0.05	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Chlordane	0.05	<0.007	<0.007	<0.007	<0.007	<0.007	<0.007	<0.007
DDD	0.05	<0.007	<0.007	<0.007	<0.007	<0.007	<0.007	<0.007
DDE	0.05	<0.007	<0.007	<0.007	<0.007	<0.007	<0.007	<0.007
DDT	1.4	<0.007	<0.007	<0.007	<0.007	<0.007	<0.007	<0.007
Dieldrin	0.05	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Endosulfan	0.04	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Endrin	0.04	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Heptachlor	0.05	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Heptachlor Epoxide	0.05	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Hexachlorobenzene	0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Hexachlorobutadiene	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Hexachlorocyclohexane Gamma-	0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Hexachloroethane	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Methoxychlor	0.05	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005

See "Notes for Soil and Groundwater Summary Tables" included at the beginning of this Section

**Table 8C Soil Analytical Results - PCBs and OC**

Parameter		BH21-28 SS3	QAQC-5	BH21-29 S1	BH21-30 SS1	BH21-31 S2	BH21-33 S2	BH21-34 S1	QAQC-1
Date of Collection	Table 1 RPIICC	Nov 08, 2021		Oct 28, 2021	Nov 08, 2021	Nov 05, 2021	Oct 28, 2021	Oct 28, 2021	
Date Reported		Nov 20, 2021		Nov 08, 2021	Nov 20, 2021	Nov 16, 2021	Nov 08, 2021	Nov 08, 2021	
Sampling Depth (m bgs)		1.5 - 2.1		0.0 - 0.6	0.0 - 0.6	0.6 - 1.2	0.6 - 1.2	0.0 - 0.6	
Analytical Report Reference No.		21T827359		21T822752	21T827359	21T826519	21T822752	21T822752	
Polychlorinated Biphenyls	0.3	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Aldrin	0.05	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Chlordane	0.05	<0.007	<0.007	<0.007	<0.007	<0.007	<0.007	<0.007	<0.007
DDD	0.05	<0.007	<0.007	<0.007	<0.007	<0.007	<0.007	<0.007	<0.007
DDE	0.05	<0.007	<0.007	<0.007	<0.007	<0.007	<0.007	<0.007	<0.007
DDT	1.4	<0.007	<0.007	<0.007	<0.007	<0.007	<0.007	<0.007	<0.007
Dieldrin	0.05	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Endosulfan	0.04	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Endrin	0.04	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Heptachlor	0.05	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Heptachlor Epoxide	0.05	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Hexachlorobenzene	0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Hexachlorobutadiene	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Hexachlorocyclohexane Gamma-	0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Hexachloroethane	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Methoxychlor	0.05	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005

See "Notes for Soil and Groundwater Summary Tables" included at the beginning of this Section

**Table 8C Soil Analytical Results - PCBs and OC**

Parameter		BH21-35 S2	BH21-37 S2	BH21-38 S3	BH21-39 S3	BH21-40 S1	BH21-41 SS2
Date of Collection	Table 1 RPIICC	Oct 27, 2021	Oct 27, 2021	Oct 27, 2021	Nov 05, 2021	Oct 27, 2021	Nov 05, 2021
Date Reported		Nov 08, 2021	Nov 08, 2021	Nov 08, 2021	Nov 16, 2021	Nov 08, 2021	Nov 16, 2021
Sampling Depth (m bgs)		0.6 - 1.2	0.6 - 1.2	1.2 - 1.8	1.2 - 1.8	0.0 - 0.6	0.8 - 1.4
Analytical Report Reference No.		21T822752	21T822752	21T822752	21T826519	21T822752	21T826519
Polychlorinated Biphenyls	0.3	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Aldrin	0.05	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Chlordane	0.05	<0.007	<0.007	<0.007	<0.007	<0.007	<0.007
DDD	0.05	<0.007	<0.007	<0.007	<0.007	<0.007	<0.007
DDE	0.05	<0.007	<0.007	<0.007	<0.007	<0.007	<0.007
DDT	1.4	<0.007	<0.007	<0.007	<0.007	<0.007	<0.007
Dieldrin	0.05	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Endosulfan	0.04	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Endrin	0.04	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Heptachlor	0.05	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Heptachlor Epoxide	0.05	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Hexachlorobenzene	0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Hexachlorobutadiene	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Hexachlorocyclohexane Gamma-	0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Hexachloroethane	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Methoxychlor	0.05	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005

See "Notes for Soil and Groundwater Summary Tables" included at the beginning of this Section

**Table 9C Groundwater Analytical Results - Metals & ORPs**

Parameter		BH21-9	BH21-11	BH21-13	BH21-25	BH21-28
Date of Collection	Table 1 GW	Nov 30, 2021	Nov 30, 2021	Nov 30, 2021	Dec 01, 2021	Dec 01, 2021
Date Reported		Dec 16, 2021	Dec 16, 2021	Dec 16, 2021	Dec 16, 2021	Dec 16, 2021
Screened Depth (mbgs)		1.9 - 4.9	5.5 - 8.5	3.7 - 6.7	4.6 - 7.6	6.1 - 9.1
Analytical Report Reference No.		21T838602	21T838602	21T838602	21T838602	21T838602
Antimony	1.5	<1.0	<1.0	<1.0	<1.0	<1.0
Arsenic	13	<1.0	<1.0	<1.0	<1.0	5.7
Barium	610	54	134	102	189	79.5
Beryllium	0.5	<0.50	<0.50	<0.50	<0.50	<0.50
Boron	1700	85	61	36	117	222
Cadmium	0.5	<0.20	<0.20	<0.20	<0.20	<0.20
Chromium	11	<2.0	<2.0	<2.0	<2.0	<2.0
Chromium VI	25	<2.0	<2.0	<2.0	<2.0	<2.0
Cobalt	3.8	2.06	<0.50	<0.50	<0.50	<0.50
Copper	5	<1.0	1.3	<1.0	<1.0	<1.0
Cyanide	5	<2.0	<2.0	<2.0	<2.0	<2.0
Lead	1.9	<0.50	<0.50	0.53	<0.50	<0.50
Mercury	0.1	<0.02	<0.02	<0.02	<0.02	<0.02
Molybdenum	23	3.5	<0.50	0.7	5.47	4.81
Nickel	14	3.9	1.2	<1.0	1.3	<1.0
Selenium	5	1	1.7	<1.0	<1.0	<1.0
Silver	0.3	<0.20	<0.20	<0.20	<0.20	<0.20
Thallium	0.5	<0.30	<0.30	<0.30	<0.30	<0.30
Uranium	8.9	0.73	<0.50	0.88	5.02	<0.50
Vanadium	3.9	<0.40	<0.40	<0.40	<0.40	<0.40
Zinc	160	<5.0	<5.0	<5.0	<5.0	<5.0
Sodium	490000	92000	135000	349000	18600	33000
Chloride	790000	162000	285000	557000	12800	17600

See "Notes for Soil and Groundwater Summary"

**Table 10C Groundwater Analytical Results - PHCs&BTEX**

Parameter		BH21-9	BH21-11	BH21-13	BH21-25	BH21-28	BH21-30	BH21-36
Date of Collection	Table 1 GW	Nov 30, 2021	Nov 30, 2021	Nov 30, 2021	Dec 01, 2021	Dec 01, 2021	Dec 13, 2021	Nov 23, 2021
Date Reported		Dec 16, 2021	Dec 16, 2021	Dec 16, 2021	Dec 16, 2021	Dec 16, 2021	Dec 15, 2021	Dec 03, 2021
Screened Depth (mbgs)		1.9 - 4.9	5.5 - 8.5	3.7 - 6.7	4.6 - 7.6	6.1 - 9.1	6.1 - 9.1	4.6 - 7.6
Analytical Report Reference No.		21T838602	21T838602	21T838602	21T838602	21T838602	21T843989	21T834096
Benzene	0.5	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Toluene	0.8	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Ethylbenzene	0.5	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Xylene Mixture	72	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
F1 (C6 to C10) minus BTEX	420	<25	<25	<25	<25	<25	<25	<25
F2 (C10 to C16)	150	<100	<100	<100	<100	<100	<100	<100
F3 (C16 to C34)	500	<100	<100	<100	<100	<100	<100	<100
F4 (C34 to C50)	500	<100	<100	<100	<100	<100	<100	<100

See "Notes for Soil and Groundwater Summary

Table 11C Groundwater Analytical Results - VOCs

Parameter		BH21-36	BH21-9	BH21-13	BH21-25	BH21-28
Date of Collection	Table 1 GW	Nov 23, 2021	Nov 30, 2021	Nov 30, 2021	Dec 01, 2021	Dec 01, 2021
Date Reported		Dec 03, 2021	Dec 16, 2021	Dec 16, 2021	Dec 16, 2021	Dec 16, 2021
Screened Depth (mbgs)		4.6 - 7.6	1.9 - 4.9	3.7 - 6.7	4.6 - 7.6	6.1 - 9.1
Analytical Report Reference No.		21T834096	21T838602	21T838602	21T838602	21T838602
Acetone	2700	<1.0	<1.0	<1.0	<1.0	<1.0
Benzene	0.5	<0.20	<0.20	<0.20	<0.20	<0.20
Bromodichloromethane	2	<0.20	<0.20	<0.20	<0.20	<0.20
Bromoform	5	<0.10	<0.10	<0.10	<0.10	<0.10
Bromomethane	0.89	<0.20	<0.20	<0.20	<0.20	<0.20
Carbon Tetrachloride	0.2	<0.20	<0.20	<0.20	<0.20	<0.20
Chlorobenzene	0.5	<0.10	<0.10	<0.10	<0.10	<0.10
Chloroform	2	<0.20	<0.20	<0.20	<0.20	<0.20
Dibromochloromethane	2	<0.10	<0.10	<0.10	<0.10	<0.10
Dichlorobenzene, 1,2-	0.5	<0.10	<0.10	<0.10	<0.10	<0.10
Dichlorobenzene, 1,3-	0.5	<0.10	<0.10	<0.10	<0.10	<0.10
Dichlorobenzene, 1,4-	0.5	<0.10	<0.10	<0.10	<0.10	<0.10
Dichlorodifluoromethane	590	<0.20	<0.20	<0.20	<0.20	<0.20
Dichloroethane, 1,1-	0.5	<0.30	<0.30	<0.30	<0.30	<0.30
Dichloroethane, 1,2-	0.5	<0.20	<0.20	<0.20	<0.20	<0.20
Dichloroethylene, 1,1-	0.5	<0.30	<0.30	<0.30	<0.30	<0.30
Dichloroethylene, cis- 1,2-	1.6	<0.20	<0.20	<0.20	<0.20	<0.20
Dichloroethylene, trans- 1,2-	1.6	<0.20	<0.20	<0.20	<0.20	<0.20
Dichloropropane, 1,2-	0.5	<0.20	<0.20	<0.20	<0.20	<0.20
Dichloropropene, 1,3-	0.5	<0.30	<0.30	<0.30	<0.30	<0.30
Ethylbenzene	0.5	<0.10	<0.10	<0.10	<0.10	<0.10
Ethylene Dibromide	0.2	<0.10	<0.10	<0.10	<0.10	<0.10
Hexane, n-	5	<0.20	<0.20	<0.20	<0.20	<0.20
Methyl Ethyl Ketone	400	<1.0	<1.0	<1.0	<1.0	<1.0
Methyl Isobutyl Ketone	640	<1.0	<1.0	<1.0	<1.0	<1.0
Methyl tert-butyl ether	15	<0.20	<0.20	<0.20	<0.20	<0.20
Methylene Chloride	5	<0.30	<0.30	<0.30	<0.30	<0.30
Styrene	0.5	<0.10	<0.10	<0.10	<0.10	<0.10
Tetrachloroethane, 1,1,1,2-	1.1	<0.10	<0.10	<0.10	<0.10	<0.10
Tetrachloroethane, 1,1,2,2-	0.5	<0.10	<0.10	<0.10	<0.10	<0.10
Tetrachloroethylene	0.5	<0.20	<0.20	<0.20	<0.20	<0.20
Toluene	0.8	<0.20	<0.20	<0.20	<0.20	<0.20
Trichloroethane, 1,1,1-	0.5	<0.30	<0.30	<0.30	<0.30	<0.30
Trichloroethane, 1,1,2-	0.5	<0.20	<0.20	<0.20	<0.20	<0.20
Trichloroethylene	0.5	<0.20	<0.20	<0.20	<0.20	<0.20
Trichlorofluoromethane	150	<0.40	<0.40	<0.40	<0.40	<0.40
Vinyl Chloride	0.5	<0.17	<0.17	<0.17	<0.17	<0.17
Xylene Mixture	72	<0.20	<0.20	<0.20	<0.20	<0.20

See "Notes for Soil and Groundwater Summary



**Table 12C Groundwater Analytical Results - PAHs**

Parameter		BH21-9	BH21-11	BH21-13	BH21-25	BH21-28	BH21-36
Date of Collection	Table 1 GW	Nov 30, 2021	Nov 30, 2021	Nov 30, 2021	Dec 01, 2021	Dec 01, 2021	Nov 23, 2021
Date Reported		Dec 16, 2021	Dec 16, 2021	Dec 16, 2021	Dec 16, 2021	Dec 16, 2021	Dec 03, 2021
Screened Depth (mbgs)		1.9 - 4.9	5.5 - 8.5	3.7 - 6.7	4.6 - 7.6	6.1 - 9.1	4.6 - 7.6
Analytical Report Reference No.		21T838602	21T838602	21T838602	21T838602	21T838602	21T834096
Acenaphthene	4.1	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Acenaphthylene	1	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Anthracene	0.1	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Benz(a)anthracene	0.2	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Benzo(a)pyrene	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Benzo(b)fluoranthene	0.1	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Benzo(g,h,i)perylene	0.2	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Benzo(k)fluoranthene	0.1	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Chrysene	0.1	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Dibenz(a,h)anthracene	0.2	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Fluoranthene	0.4	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Fluorene	120	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Indeno(1,2,3-cd)pyrene	0.2	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Methyl Naphthalene, 2-and 1-	2	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Naphthalene	7	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Phenanthrene	0.1	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Pyrene	0.2	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20

See "Notes for Soil and Groundwater Summary"

Table 13C Groundwater Analytical Results - PCBs and OC Pesticides

Parameter		BH21-9	BH21-11	BH21-28
Date of Collection	Table 1 GW	Nov 30, 2021	Nov 30, 2021	Dec 01, 2021
Date Reported		Dec 16, 2021	Dec 16, 2021	Dec 16, 2021
Screened Depth (mbgs)		1.9 - 4.9	5.5 - 8.5	6.1 - 9.1
Analytical Report Reference No.		21T838602	21T838602	21T838602
Polychlorinated Biphenyls	0.2	<0.1	<0.1	<0.1
Aldrin	0.01	-	-	-
Chlordane	0.06	-	-	-
DDD	1.8	-	-	-
DDE	10	-	-	-
DDT	0.05	-	-	-
Dieldrin	0.05	-	-	-
Endosulfan	0.05	-	-	-
Endrin	0.05	-	-	-
Heptachlor	0.01	-	-	-
Heptachlor Epoxide	0.01	-	-	-
Hexachlorobenzene	0.01	-	-	-
Hexachlorobutadiene	0.01	-	-	-
Hexachlorocyclohexane Gamma-	0.01	-	-	-
Hexachloroethane	0.01	-	-	-
Methoxychlor	0.05	-	-	-

See "Notes for Soil and Groundwater Summary Tables" included at the end of this Section

**Table 14C Summary of Maximum Concentrations in Soil**

Group	Parameter	Table 1 RPIICC	Maximum Concentration	Location
BTEX	Benzene	0.02	0.006	BH21-41 S1
	Ethylbenzene	0.05	0.01	BH21-41 S1
	Toluene	0.2	<0.05	all samples
	Total Xylenes	0.05	0.22	BH21-41 S1
Metals	Barium	220	147	BH21-30 SS2
	Beryllium	2.5	1.4	BH21-10 S1
	Boron	36	21	BH21-35 S1
	Cadmium	1.2	<0.5	all samples
	Chromium	70	32	BH21-30 SS2
	Cobalt	21	16.3	BH21-28 SS1
	Copper	92	64.7	BH21-10 S1
	Lead	120	205	BH21-36 SS1
	Molybdenum	2	11	BH21-10 S1
	Nickel	82	33	BH21-30 SS2
	Silver	0.5	<0.5	all samples
	Thallium	1	0.6	BH21-10 S1
	Uranium	2.5	0.73	BH21-10 S1
	Vanadium	86	42.7	BH21-30 SS2
	Zinc	290	179	BH21-36 SS1
As, Se, Sb	Antimony	1.3	3.5	BH21-10 S1
	Arsenic	18	26	BH21-41 S2
	Selenium	1.5	2.1	BH21-10 S1
PAHs	Acenaphthene	0.072	<0.05	all samples
	Acenaphthylene	0.093	0.14	BH21-40 S1
	Anthracene	0.16	0.27	BH21-40 S1
	Benz(a)anthracene	0.36	1.13	BH21-40 S1
	Benzo(a)pyrene	0.3	0.86	BH21-40 S1
	Benzo(b)fluoranthene	0.47	1.61	BH21-40 S1
	Benzo(g,h,i)perylene	0.68	0.55	BH21-40 S1
	Benzo(k)fluoranthene	0.48	0.63	BH21-40 S1
	Chrysene	2.8	1.25	BH21-40 S1
	Dibenz(a,h)anthracene	0.1	0.13	BH21-40 S1
	Fluoranthene	0.56	2.11	BH21-40 S1
	Fluorene	0.12	<0.05	all samples
	Indeno(1,2,3-cd)pyrene	0.23	0.48	BH21-40 S1
	Methylnaphthalene, 2-(1-)	0.59	0.82	BH21-40 S1
	Naphthalene	0.09	0.31	BH21-40 S1
	Phenanthrene	0.69	0.78	BH21-40 S1
	Pyrene	1	1.94	BH21-40 S1
PHCs	F1 (C6 to C10) minus BTEX	25	10	BH21-41 S1
	F2 (C10 to C16)	10	13	BH21-31 S2
	F3 (C16 to C34)	240	75	BH21-41 S1
	F4 (C34 to C50)	120	<50	all samples
	Acetone	0.5	<0.50	all samples
	Bromodichloromethane	0.05	<0.05	all samples
	Bromoform	0.05	<0.05	all samples
	Bromomethane	0.05	<0.05	all samples
	Carbon Tetrachloride	0.05	<0.05	all samples
	Chlorobenzene	0.05	<0.05	all samples
	Chloroform	0.05	<0.04	all samples
	Dibromochloromethane	0.05	<0.05	all samples
	Dichlorobenzene, 1,2-	0.05	<0.05	all samples

**Table 14C Summary of Maximum Concentrations in Soil**

Group	Parameter	Table 1 RPIICC	Maximum Concentration	Location
VOCs	Dichlorobenzene, 1,3-	0.05	<0.05	all samples
	Dichlorobenzene, 1,4-	0.05	<0.05	all samples
	Dichlorodifluoromethane	0.05	<0.05	all samples
	Dichloroethane, 1,1-	0.05	<0.02	all samples
	Dichloroethane, 1,2-	0.05	<0.03	all samples
	Dichloroethylene, 1,1-	0.05	<0.05	all samples
	Dichloroethylene, Cis- 1,2-	0.05	<0.02	all samples
	Dichloroethylene, Trans- 1,2-	0.05	<0.05	all samples
	Dichloropropane, 1,2-	0.05	<0.03	all samples
	1,3-Dichloropropene (Cis + Trans)	0.05	<0.05	all samples
	Ethylene Dibromide	0.05	<0.04	all samples
	Hexane, n-	0.05	<0.05	all samples
	Methyl Ethyl Ketone	0.5	<0.50	all samples
	Methyl Isobutyl Ketone	0.5	<0.50	all samples
	Methyl tert-butyl Ether	0.05	<0.05	all samples
	Methylene Chloride	0.05	<0.05	all samples
	Styrene	0.05	<0.05	all samples
	Tetrachloroethane, 1,1,1,2-	0.05	<0.04	all samples
	Tetrachloroethane, 1,1,2,2-	0.05	<0.05	all samples
	Tetrachloroethylene	0.05	<0.05	all samples
	Trichloroethane, 1,1,1-	0.05	<0.05	all samples
	Trichloroethane, 1,1,2-	0.05	<0.04	all samples
	Trichloroethylene	0.05	<0.03	all samples
Trichlorofluoromethane	0.25	<0.05	all samples	
Vinyl Chloride	0.02	<0.02	all samples	
ORPs	Chromium, Hexavalent	0.66	<0.2	all samples
	Cyanide, Free	0.051	<0.040	all samples
	Electrical Conductivity (2:1)	0.57	0.342	BH21-28 SS1
	Mercury	0.27	0.32	BH21-32 SS1
	Sodium Adsorption Ratio	2.4	0.758	BH21-39 S1
	pH, 2:1 CaCl2 Extraction	*	7.91	QAQC-2
PCBs	Polychlorinated Biphenyls	0.3	<0.10	all samples

See "Notes for Soil and Groundwater Summary Tables" included at the beginning of this Section

**Table 15C Summary of Maximum Concentrations in Groundwater**

Group	Parameter	Table 1 GW	Maximum Concentration	Location
BTEX	Benzene	0.5	<0.20	all samples
	Ethylbenzene	0.5	<0.10	all samples
	Toluene	0.8	<0.20	all samples
	Xylene Mixture	72	<0.10	all samples
Metals	Barium	610	189	BH21-25
	Beryllium	0.5	<0.50	all samples
	Boron	1700	222	BH21-28
	Cadmium	0.5	<0.20	all samples
	Chromium	11	<2.0	all samples
	Cobalt	3.8	2.06	all samples
	Copper	5	1.3	all samples
	Lead	1.9	0.53	BH21-13
	Molybdenum	23	5.47	BH21-25
	Nickel	14	3.9	BH21-25
	Silver	0.3	<0.20	all samples
	Thallium	0.5	<0.30	all samples
	Uranium	8.9	5.02	BH21-25
	Vanadium	3.9	<0.40	all samples
Zinc	160	<5.0	all samples	
As, Se, Sb	Antimony	1.5	<1.0	all samples
	Arsenic	13	5.7	BH21-28
	Selenium	5	1.7	all samples
Na	Sodium	490000	349000	BH21-13
PAHs	Acenaphthene	4.1	<0.20	all samples
	Acenaphthylene	1	<0.20	all samples
	Anthracene	0.1	<0.10	all samples
	Benz(a)anthracene	0.2	<0.20	all samples
	Benzo(a)pyrene	0.01	<0.01	all samples
	Benzo(b)fluoranthene	0.1	<0.10	all samples
	Benzo(g,h,i)perylene	0.2	<0.20	all samples
	Benzo(k)fluoranthene	0.1	<0.10	all samples
	Chrysene	0.1	<0.10	all samples
	Dibenz(a,h)anthracene	0.2	<0.20	all samples
	Fluoranthene	0.4	<0.20	all samples
	Fluorene	120	<0.20	all samples
	Indeno(1,2,3-cd)pyrene	0.2	<0.20	all samples
	Methyl Naphthalene, 2-and 1-	2	<0.20	all samples
	Naphthalene	7	<0.20	all samples
	Phenanthrene	0.1	<0.10	all samples
	Pyrene	0.2	<0.20	all samples
PHCs	F1 (C6 to C10) minus BTEX	420	<25	all samples
	F2 (C10 to C16)	150	<100	all samples
	F3 (C16 to C34)	500	<100	all samples
	F4 (C34 to C50)	500	<100	all samples
	Acetone	2700	<1.0	all samples
	Bromodichloromethane	2	<0.20	all samples
	Bromoform	5	<0.10	all samples
	Bromomethane	0.89	<0.20	all samples
	Carbon Tetrachloride	0.2	<0.20	all samples
	Chlorobenzene	0.5	<0.10	all samples
	Chloroform	2	<0.20	all samples
	Dibromochloromethane	2	<0.10	all samples

**Table 15C Summary of Maximum Concentrations in Groundwater**

Group	Parameter	Table 1 GW	Maximum Concentration	Location
VOCs	Dichlorobenzene, 1,2-	0.5	<0.10	all samples
	Dichlorobenzene, 1,3-	0.5	<0.10	all samples
	Dichlorobenzene, 1,4-	0.5	<0.10	all samples
	Dichlorodifluoromethane	590	<0.20	all samples
	Dichloroethane, 1,1-	0.5	<0.30	all samples
	Dichloroethane, 1,2-	0.5	<0.20	all samples
	Dichloroethylene, 1,1-	0.5	<0.30	all samples
	Dichloroethylene, cis- 1,2-	1.6	<0.20	all samples
	Dichloroethylene, trans- 1,2-	1.6	<0.20	all samples
	Dichloropropane, 1,2-	0.5	<0.20	all samples
	Dichloropropene, 1,3-	0.5	<0.30	all samples
	Ethylene Dibromide	0.2	<0.10	all samples
	Hexane, n-	5	<0.20	all samples
	Methyl Ethyl Ketone	400	<1.0	all samples
	Methyl Isobutyl Ketone	640	<1.0	all samples
	Methyl tert-butyl ether	15	<0.20	all samples
	Methylene Chloride	5	<0.30	all samples
	Styrene	0.5	<0.10	all samples
	Tetrachloroethane, 1,1,1,2-	1.1	<0.10	all samples
	Tetrachloroethane, 1,1,1,2,2-	0.5	<0.10	all samples
	Tetrachloroethylene	0.5	<0.20	all samples
	Trichloroethane, 1,1,1-	0.5	<0.30	all samples
	Trichloroethane, 1,1,2-	0.5	<0.20	all samples
Trichloroethylene	0.5	<0.20	all samples	
Trichlorofluoromethane	150	<0.40	all samples	
Vinyl Chloride	0.5	<0.17	all samples	
ORPs	Chloride	790000	557000	BH21-13
	Chromium VI	25	<2.0	all samples
	Cyanide	5	<2.0	all samples
	Mercury	0.1	<0.02	all samples
PCBs	Polychlorinated Biphenyls	0.2	<0.10	all samples

See "Notes for Soil and Groundwater Summary Tables" included at the beginning of this Section

**Notes for Soil & Groundwater Summary Tables - Caledon (C-series)**

1. mbgs = metres below ground surface
2. ORPs = other regulated parameters
3. PHCs = petroleum hydrocarbons
4. VOCs = volatile organic compounds
5. PAHs = polycyclic aromatic hydrocarbons
7. APEC = area of potential environmental concern
6. - = parameter not analyzed
7. \* = pH criteria for surface soils (0 - 1.5 mbgs) is 5 to 9, for subsurface soil (below 1.5 mbgs) is 5 to 11
8. Units for all soil analyses are in µg/g (ppm) unless otherwise indicated
9. Units for all groundwater analyses are in µg/L (ppb) unless otherwise indicated
10. Table 2 RPI CT = Full Depth Generic Site Condition Standards in a Potable Ground Water Condition with Coarse Textured Soils as contained in Table 2 of the Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act, published by the MECP on April 15, 2011
11. For soil and groundwater analytical results: **bold** = Concentration exceeds the 2011 MECP Table 2 SCS

**Table 1C Monitoring Well Installation and Groundwater Levels**

Monitoring Well ID		BH21-9	BH21-11	BH21-13	BH21-25	BH21-28	BH21-30	BH21-32	BH21-36
Installed By		WSP	WSP	WSP	WSP	WSP	WSP	WSP	WSP
Installation Date		4-Nov-21	4-Nov-21	15-Nov-21	16-Nov-21	8-Nov-21	8-Nov-21	15-Nov-21	16-Nov-21
Well Status		Active	Active	Active	Active	Active	Active	Active	Active
Well Inner Diameter	(mm)	50	50	50	50	50	50	50	50
Casing Type (Flushmount / Monument)		Monument	Monument	Monument	Monument	Monument	Flushmount	Monument	Monument
Top of Pipe Elevation	(masl)	423.843	397.847	404.757	255.396	282.313	286.873	274.654	326.921
Ground Surface Elevation	(masl)	422.953	396.937	403.897	256.306	281.403	286.973	273.744	326.001
Bottom of Concrete Seal/Top of Bentonite Seal	(mbgs)	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
	(masl)	422.653	396.637	403.597	256.006	281.103	286.673	273.444	325.701
Bottom of Bentonite Seal/Top of Sand Pack	(mbgs)	1.3	4.9	3.1	4.0	5.5	5.5	2.4	4.0
	(masl)	421.7	392.0	400.8	252.3	275.9	281.5	271.4	322.0
Top of Well Screen	(mbgs)	1.9	5.5	3.7	4.6	6.1	6.1	3.0	4.6
	(masl)	421.1	391.4	400.2	251.7	275.3	280.9	270.7	321.4
Screen Length	(m)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Bottom of Screen	(mbgs)	4.9	8.5	6.7	7.6	9.1	9.1	6.0	7.6
	(masl)	418.1	388.4	397.2	248.7	272.3	277.9	267.7	318.4
22-Nov-21	Depth of GW	(mbgs)	-	-	-	-	-	DRY	6.5
	GW Elevation	(masl)	-	-	-	-	-	-	319.5
23-Nov-21	Depth of GW	(mbgs)	-	-	-	-	-	DRY	6.6
	GW Elevation	(masl)	-	-	-	-	-	-	319.4
29-Nov-21	Depth of GW	(mbgs)	-	-	-	0.6	2.2	-	-
	GW Elevation	(masl)	-	-	-	280.8	284.8	-	-
30-Nov-21	Depth of GW	(mbgs)	-	-	2.2	-	-	-	-
	GW Elevation	(masl)	-	-	254.1	-	-	-	-
1-Dec-21	Depth of GW	(mbgs)	-	-	-	-	-	-	-
	GW Elevation	(masl)	-	-	-	-	-	-	-
2-Dec-21	Depth of GW	(mbgs)	-	-	-	-	-	-	-
	GW Elevation	(masl)	-	-	-	-	-	-	-
6-Dec-21	Depth of GW	(mbgs)	-	-	-	-	-	-	-
	GW Elevation	(masl)	-	-	-	-	-	-	-
7-Dec-21	Depth of GW	(mbgs)	2.0	4.3	5.1	2.2	0.0	2.3	DRY
	GW Elevation	(masl)	421.0	392.6	398.8	254.1	281.7	284.7	-

See "Notes for Soil and Groundwater Summary"



Table 2C Summary of Soil Samples Submitted for Chemical Analysis

Borehole	Sample	Depth	Date	Parameters						APEC #
				M&ORP	PHCs	VOCs	PAHs	PCBs	OCPs	
BH21-9	SS1	0.0 - 0.6	4-Nov-21	-	-	-	-	✓	✓	3, 13, 14, 38, 114
	SS2	0.8 - 1.4		✓	-	-	-	-	-	
	SS3	1.5 - 2.1		-	-	-	✓	-	-	
	SS4	2.3 - 2.9		-	-	-	✓	-	-	
	SS5	3.0 - 3.7		-	✓	-	-	-	-	
BH21-10	S1	0.0 - 0.6	27-Oct-21	✓	-	-	-	-	-	13, 14, 38, 105, 114
	S2	0.6 - 1.2		✓	-	-	-	✓	✓	
	S3	1.2 - 1.8		✓	✓	-	✓	-	-	
BH21-11	SS1	0.0 - 0.6	4-Nov-21	✓	-	-	-	-	-	13, 14, 38, 114
	SS2	0.8 - 1.4		-	-	-	✓	✓	✓	
	SS5	3.0 - 3.7		-	✓	-	-	-	-	
BH21-13	SS1	0.0 - 0.6	15-Nov-21	-	-	-	✓	-	-	13, 14, 38, 112, 114
	SS2	0.8 - 1.4		✓	-	-	-	-	-	
	SS5	3.0 - 3.7		-	✓	✓	-	-	-	
BH21-14	S1	0.0 - 0.6	27-Oct-21	-	-	-	-	✓	✓	13, 14, 38, 96, 114
	S2	0.6 - 1.2		✓	-	-	-	-	-	
	S3	1.2 - 1.8		-	-	-	✓	-	-	
BH21-15	S2	0.6 - 1.2	27-Oct-21	-	-	-	✓	✓	✓	13, 14, 38, 93, 114
	S3	1.2 - 1.8		✓	-	-	-	-	-	
BH21-25	SS1	0.0 - 0.6	16-Nov-21	-	-	-	✓	-	-	13, 14, 38, 108, 114
	SS2	0.8 - 1.4		✓	-	-	-	-	-	
	SS6	4.6 - 5.2		-	✓	✓	-	-	-	
BH21-26	S1	0.0 - 0.6	28-Oct-21	-	-	-	-	✓	✓	13, 14, 38, 60, 114
	S2	0.6 - 1.2		-	-	-	✓	-	-	
	S3	1.2 - 1.8		✓	-	-	-	-	-	
BH21-27	S1	0.0 - 0.6	28-Oct-21	✓	-	-	-	-	-	13, 14, 38, 63, 114
	S2	0.6 - 1.2		-	-	-	-	✓	✓	
	S3	1.2 - 1.8		-	-	-	✓	-	-	
BH21-28	SS1	0.0 - 0.6	8-Nov-21	✓	-	-	-	-	-	1, 13, 14, 38, 114
	QAQC-3			✓	-	-	-	-	-	
	SS2	0.8 - 1.4		-	✓	-	-	-	-	
	QAQC-4			-	✓	-	-	-	-	
	SS3	1.5 - 2.1		-	-	-	✓	✓	✓	
QAQC-5	-		-	-	✓	✓	✓			
BH21-29	S1	0.0 - 0.6	28-Oct-21	-	-	-	-	✓	✓	13, 14, 38, 66, 114
	S2	0.6 - 1.2		✓	-	-	-	-	-	
	S3	1.2 - 1.8		-	-	-	✓	-	-	
BH21-30	SS1	0.0 - 0.6	8-Nov-21	-	-	-	✓	✓	✓	13, 14, 33, 38, 114
	SS2	0.8 - 1.4		✓	-	-	-	-	-	
	SS3	1.5 - 2.1		-	✓	-	-	-	-	
BH21-31	S1	0.0 - 0.6	5-Nov-21	✓	-	-	-	-	-	13, 14, 38, 69, 114
	S2	0.6 - 1.2		-	-	-	-	✓	✓	
	S3	1.2 - 1.8		-	✓	-	✓	-	-	
BH21-32	SS1	0.0 - 0.6	15-Nov-21	✓	-	-	-	-	-	13, 14, 38, 109, 114
	SS2	0.8 - 1.4		✓	-	-	-	-	-	
	SS3	1.5 - 2.1		-	-	-	✓	-	-	
	SS4	2.3 - 2.9		-	✓	✓	-	-	-	
BH21-33	S1	0.0 - 0.6	28-Oct-21	-	-	-	✓	-	-	13, 14, 38, 72, 114
	S2	0.6 - 1.2		-	-	-	-	✓	✓	
	S3	1.2 - 1.8		✓	-	-	-	-	-	
BH21-34	S1	0.0 - 0.6	28-Oct-21	-	-	-	-	✓	✓	13, 14, 38, 75, 114
	QAQC-1			-	-	-	-	✓	✓	
	S2	0.6 - 1.2		✓	-	-	-	-	-	
	QAQC-S2			✓	-	-	-	-	-	
	S3	1.2 - 1.8		-	-	-	✓	-	-	
QAQC-S3	-		-	-	✓	-	-			

**Table 2C Summary of Soil Samples Submitted for Chemical Analysis**

Borehole	Sample	Depth	Date	Parameters						APEC #
				M&ORP	PHCs	VOCs	PAHs	PCBs	OCPs	
BH21-35	S1	0.0 - 0.6	27-Oct-21	✓	-	-	-	-	-	13, 14, 38, 78, 114
	S2	0.6 - 1.2		-	-	-	-	✓	✓	
	S3	1.2 - 1.8		-	-	-	✓	-	-	
BH21-36	SS1	0.0 - 0.6	16-Nov-21	✓	-	-	-	-	-	13, 14, 38, 110, 114
	SS2	0.8 - 1.4		✓	-	-	-	-	-	
	SS3	1.5 - 2.1		-	-	-	✓	-	-	
	SS6	4.6 - 5.2		-	✓	✓	-	-	-	
BH21-37	S1	0.0 - 0.6	27-Oct-21	-	-	-	-	✓	✓	13, 14, 38, 81, 114
	S2	0.6 - 1.2		✓	-	-	-	-	-	
	S3	1.2 - 1.8		-	-	-	✓	-	-	
BH21-38	S1	0.0 - 0.6	27-Oct-21	-	-	-	✓	-	-	13, 14, 38, 84, 114
	S2	0.6 - 1.2		-	-	-	-	✓	✓	
	S3	1.2 - 1.8		✓	-	-	-	-	-	
BH21-39	S1	0.0 - 0.6	5-Nov-21	✓	-	-	-	-	-	13, 14, 38, 111, 114
	S3	1.2 - 1.8		-	-	-	✓	✓	✓	
BH21-40	S1	0.0 - 0.6	27-Oct-21	-	-	-	✓	✓	✓	13, 14, 38, 87, 114
	S3	1.2 - 1.8		✓	-	-	✓	-	-	
BH21-41	S1	0.0 - 0.6	5-Nov-21	-	-	-	✓	-	-	13, 14, 38, 90, 114
	S2	0.6 - 1.2		✓	✓	-	-	✓	✓	

See "Notes for Soil and Groundwater Summary Tables" included at the beginning of this Section

**Table 3C: Summary of Groundwater Samples Submitted for Chemical Analysis**

Monitoring Well ID	Screened Interval (mbgs)	Date	Parameters					APEC #	
			M&ORP	PHCs	VOCs	PAHs	PCBs		OCPs
BH21-9	1.9 - 4.9	30-Nov-21	✓	✓	✓	✓	✓	-	3, 13, 14, 38, 114
BH21-11	5.5 - 8.5	30-Nov-21	✓	✓	-	✓	✓	-	13, 14, 38, 114
BH21-13	3.7 - 6.7	30-Nov-21	✓	✓	✓	✓	-	-	13, 14, 38, 112, 114
BH21-25	4.6 - 7.6	1-Dec-21	✓	✓	✓	✓	-	-	13, 14, 38, 108, 114
BH21-28	6.1 - 9.1	1-Dec-21	✓	✓	✓	✓	✓	-	1, 13, 14, 38, 114
BH21-30	6.1 - 9.1	1-Dec-21	-	✓	-	-	-	-	13, 14, 33, 38, 114
BH21-36	4.6 - 7.6	23-Nov-21	✓	✓	✓	✓	-	-	13, 14, 38, 110, 114

See "Notes for Soil and Groundwater Summary Tables" included at the beginning of this Section

**Table 4C Soil Analytical Results - Metals & ORPs**

Parameter		BH21-9 SS2	BH21-10 S1	BH21-10 S3	BH21-11 SS1	BH21-13 SS2	BH21-14 S2	BH21-15 S3
Date of Collection	Table 2 RPI CT	Nov 04, 2021	Oct 27, 2021	Oct 27, 2021	Nov 04, 2021	Nov 15, 2021	Oct 27, 2021	Oct 27, 2021
Date Reported		Nov 16, 2021	Nov 08, 2021	Dec 20, 2021	Nov 16, 2021	Nov 27, 2021	Nov 08, 2021	Nov 08, 2021
Sampling Depth (mbgs)		0.8 - 1.4	0.0 - 0.6	1.2 - 1.8	0.0 - 0.6	0.8 - 1.4	0.6 - 1.2	1.2 - 1.8
Analytical Report Reference No.		21T826519	21T822752		21T826519	21T830287	21T822752	21T822752
Antimony	7.5	<0.8	3.5	<0.8	<0.8	<0.8	<0.8	<0.8
Arsenic	18	3	24	8	2	2	3	4
Barium	390	25.4	44.5	27	10.1	10.6	49.6	26.5
Beryllium	4	<0.4	1.4	<0.4	<0.4	<0.4	<0.4	<0.4
Boron	120	<5	12	8	<5	<5	<5	<5
Boron (Hot Water Extractable)	1.5	0.18	0.37	0.21	<0.10	<0.10	0.13	<0.10
Cadmium	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Chromium	160	12	15	10	<5	5	14	7
Cobalt	22	4.6	9.3	5.2	1.9	1.7	4.6	3.3
Copper	140	8	64.7	23.7	9	3.4	8.6	17
Lead	120	7	52	15	2	3	8	5
Molybdenum	6.9	<0.5	11	1	<0.5	<0.5	<0.5	<0.5
Nickel	100	9	29	7	2	3	9	5
Selenium	2.4	<0.8	2.1	<0.8	<0.8	<0.8	<0.8	<0.8
Silver	20	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Thallium	1	<0.5	0.6	<0.5	<0.5	<0.5	<0.5	<0.5
Uranium	23	<0.50	0.7	<0.50	<0.50	<0.50	<0.50	<0.50
Vanadium	86	24.7	26.7	15.3	10.4	10.9	26.6	14.4
Zinc	340	28	70	54	18	13	46	22
Chromium, Hexavalent	8	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Cyanide, Free	0.051	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040
Mercury	0.27	<0.10	<0.10	<0.10	<0.10	<0.10	0.11	<0.10
Electrical Conductivity (2:1)	0.7	0.096	0.255	0.210	0.061	0.078	0.103	0.073
Sodium Adsorption Ratio	5	0.07	0.061	0.295	0.055	0.205	0.043	0.061
pH, 2:1 CaCl2 Extraction	*	7.29	7.24	7.39	7.82	7.77	7.27	7.80

See "Notes for Soil and Groundwater Summary Tables" included at the beginning of this Section

**Table 4C Soil Analytical Results - Metals & ORPs**

Parameter		BH21-25 SS2	BH21-26 S3	BH21-27 S1	BH21-28 SS1	QAQC-3	BH21-29 S2	BH21-30 SS2	BH21-31 S1
Date of Collection	Table 2 RPI CT	Nov 16, 2021	Oct 28, 2021	Oct 28, 2021	Nov 08, 2021		Oct 28, 2021	Nov 08, 2021	Nov 05, 2021
Date Reported		Nov 26, 2021	Nov 08, 2021	Nov 08, 2021	Nov 20, 2021		Nov 08, 2021	Nov 20, 2021	Nov 16, 2021
Sampling Depth (mbgs)		0.8 - 1.4	1.2 - 1.8	0.0 - 0.6	0.0 - 0.6		0.6 - 1.2	0.8 - 1.4	0.0 - 0.6
Analytical Report Reference No.		21T830891	21T822752	21T822752	21T827359		21T822752	21T827359	21T826519
Antimony	7.5	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8
Arsenic	18	8	4	12	10	10	5	6	8
Barium	390	85.3	47.6	54.2	73.4	65.4	99	147	58.8
Beryllium	4	0.5	<0.4	0.5	0.8	0.7	0.7	1.4	0.5
Boron	120	<5	5	6	12	10	9	12	7
Boron (Hot Water Extractable)	1.5	0.35	<0.10	0.26	0.44	0.47	0.13	<0.10	0.12
Cadmium	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Chromium	160	23	16	19	23	21	26	32	17
Cobalt	22	12.6	9.4	6.8	16.3	6.8	11.1	14.1	10.0
Copper	140	35.5	37.1	24.7	40.9	31.3	26.1	28.4	28.5
Lead	120	12	7	15	29	26	9	12	9
Molybdenum	6.9	<0.5	<0.5	<0.5	0.7	0.6	<0.5	<0.5	<0.5
Nickel	100	26	18	15	31	17	24	33	21
Selenium	2.4	<0.8	<0.8	<0.8	0.9	<0.8	<0.8	<0.8	<0.8
Silver	20	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Thallium	1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Uranium	23	0.5	<0.50	<0.50	0.6	<0.50	<0.50	0.6	<0.50
Vanadium	86	32.8	23	28.1	30.2	27.3	36.5	42.7	24.8
Zinc	340	70	47	58	92	81	57	71	51
Chromium, Hexavalent	8	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Cyanide, Free	0.051	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040
Mercury	0.27	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Electrical Conductivity (2:1)	0.7	0.174	0.106	0.192	0.342	0.336	0.129	0.165	0.107
Sodium Adsorption Ratio	5	0.267	0.084	0.103	0.396	0.393	0.105	0.458	0.060
pH, 2:1 CaCl2 Extraction	*	7.50	7.79	7.70	7.28	7.60	7.71	7.25	7.60

See "Notes for Soil and Groundwater Summary Tables" included at the beginning of this Section

**Table 4C Soil Analytical Results - Metals & ORPs**

Parameter		BH21-32 SS1	BH21-32 SS2	BH21-33 S3	BH21-34 S2	QAQC-2	BH21-35 S1	BH21-36 SS1	BH21-36 SS1
Date of Collection	Table 2 RPI CT	Nov 15, 2021	Nov 15, 2021	Oct 28, 2021	Oct 28, 2021	Oct 27, 2021	Nov 16, 2021	Nov 16, 2021	
Date Reported		Nov 27, 2021	Dec 20, 2021	Nov 08, 2021	Nov 08, 2021	Nov 08, 2021	Nov 26, 2021	Dec 20, 2021	
Sampling Depth (mbgs)		0.0 - 0.6	0.8 - 1.4	1.2 - 1.8	0.6 - 1.2	0.0 - 0.6	0.0 - 0.6	0.8 - 1.4	
Analytical Report Reference No.		21T830287	21T839249	21T822752	21T822752	21T822752	21T830891	21T839249	
Antimony	7.5	1.9	<0.8	<0.8	<0.8	<0.8	<0.8	1.1	<0.8
Arsenic	18	6	2	5	4	3	13	11	4
Barium	390	43.1	35.6	99.2	58.5	57	53.8	103	26.3
Beryllium	4	<0.4	<0.4	0.6	0.4	0.4	0.5	<0.4	<0.4
Boron	120	9	<5	9	10	11	21	6	7
Boron (Hot Water Extractable)	1.5	0.40	0.16	<0.10	<0.10	<0.10	0.35	0.23	0.15
Cadmium	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Chromium	160	12	11	23	17	16	12	12	11
Cobalt	22	5.8	4.5	11.9	7.4	7.4	10.2	5.1	5.4
Copper	140	48.3	16.7	25.3	17.4	17	44.3	53.7	26.2
Lead	120	65	9	9	5	5	13	<b>205</b>	13
Molybdenum	6.9	1.4	<0.5	<0.5	<0.5	<0.5	1.1	1.2	<0.5
Nickel	100	21	9	24	14	13	19	11	9
Selenium	2.4	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8
Silver	20	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Thallium	1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Uranium	23	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Vanadium	86	17.7	20.5	33.6	26.5	25.2	15.4	18.7	21.4
Zinc	340	67	34	52	38	36	63	179	39
Chromium, Hexavalent	8	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Cyanide, Free	0.051	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040
Mercury	0.27	<b>0.32</b>	<0.10	<0.10	<0.10	<0.10	<0.10	0.23	<0.10
Electrical Conductivity (2:1)	0.7	0.184	0.134	0.115	0.108	0.101	0.217	0.156	0.115
Sodium Adsorption Ratio	5	0.193	0.199	0.155	0.072	0.070	0.095	0.076	0.139
pH, 2:1 CaCl2 Extraction	*	7.60	7.15	7.80	7.87	7.91	7.87	7.70	7.08

See "Notes for Soil and Groundwater Summary Tables" included at the beginning of this Section

**Table 4C Soil Analytical Results - Metals & ORPs**

Parameter		BH21-37 S2	BH21-38 S3	BH21-39 S1	BH21-40 S3	BH21-41 S2
Date of Collection	Table 2 RPI CT	Oct 27, 2021	Oct 27, 2021	Nov 05, 2021	Oct 27, 2021	Nov 05, 2021
Date Reported		Nov 08, 2021	Nov 08, 2021	Nov 16, 2021	Nov 08, 2021	Nov 16, 2021
Sampling Depth (mbgs)		0.6 - 1.2	1.2 - 1.8	0.0 - 0.6	1.2 - 1.8	0.6 - 1.2
Analytical Report Reference No.		21T822752	21T822752	21T826519	21T822752	21T826519
Antimony	7.5	1	<0.8	<0.8	<0.8	<0.8
Arsenic	18	12	3	6	6	<b>26</b>
Barium	390	41.3	16.9	40.7	29.6	18.3
Beryllium	4	<0.4	<0.4	0.4	<0.4	<0.4
Boron	120	7	<5	15	7	10
Boron (Hot Water Extractable)	1.5	0.18	<0.10	0.36	0.20	0.13
Cadmium	1.2	<0.5	<0.5	<0.5	<0.5	<0.5
Chromium	160	11	6	14	11	23
Cobalt	22	5.4	2.5	6.3	4.5	8.3
Copper	140	25.1	9	12.3	27.2	24
Lead	120	18	4	7	20	52
Molybdenum	6.9	0.9	<0.5	<0.5	0.9	2.1
Nickel	100	11	4	13	10	8
Selenium	2.4	<0.8	<0.8	<0.8	<0.8	<0.8
Silver	20	<0.5	<0.5	<0.5	<0.5	<0.5
Thallium	1	<0.5	<0.5	<0.5	<0.5	<0.5
Uranium	23	<0.50	<0.50	<0.50	<0.50	<0.50
Vanadium	86	19.1	9.4	21.3	19.3	25.2
Zinc	340	33	14	48	33	121
Chromium, Hexavalent	8	<0.2	<0.2	<0.2	<0.2	<0.2
Cyanide, Free	0.051	<0.040	<0.040	<0.040	<0.040	<0.040
Mercury	0.27	<0.10	<0.10	<0.10	<0.10	<0.10
Electrical Conductivity (2:1)	0.7	0.136	0.082	0.210	0.328	0.152
Sodium Adsorption Ratio	5	0.036	0.051	0.758	0.025	0.121
pH, 2:1 CaCl2 Extraction	*	7.46	7.66	7.49	7.62	7.69

See "Notes for Soil and Groundwater Summary Tables" included at the beginning of this Section

**Table 5C Soil Analytical Results - PHCs & BTEX**

Parameter		BH21-9 SS5	BH21-10 S3	BH21-11 SS5	BH21-13 SS5	BH21-14 S3	BH21-25 SS6	BH21-26 S3	BH21-27 S3
Date of Collection	Table 2 RPI CT	Nov 04, 2021	Oct 27, 2021	Nov 04, 2021	Nov 15, 2021	Oct 27, 2021	Nov 16, 2021	Oct 28, 2021	Oct 28, 2021
Date Reported		Nov 16, 2021	Nov 30, 2021	Nov 16, 2021	Nov 27, 2021	Nov 30, 2021	Nov 26, 2021	Nov 30, 2021	Nov 30, 2021
Sampling Depth (mbgs)		3.0 - 3.7	1.2 - 1.8	3.0 - 3.7	3.0 - 3.7	1.2 - 1.8	4.6 - 5.2	1.2 - 1.8	1.2 - 1.8
Analytical Report Reference No.		21T826519	21T832162	21T826519	21T830287	21T832162	21T830891	21T832162	21T832162
Benzene	0.21	<0.02	<0.005	<0.02	<0.02	<0.005	<0.02	<0.005	<0.005
Toluene	2.3	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Ethylbenzene	1.1	<0.05	<0.01	<0.05	<0.05	<0.01	<0.05	<0.01	<0.01
Total Xylenes	3.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
F1 (C6 to C10) minus BTEX	55	<5	<10	<5	<5	<10	<5	<10	<10
F2 (C10 to C16)	98	<10	<10	<10	<10	<10	<10	<10	<10
F3 (C16 to C34)	300	<50	42	<50	<50	14	<50	<10	<10
F4 (C34 to C50)	2800	<50	<10	<50	<50	<10	<50	<10	<10

See "Notes for Soil and Groundwater Summary"



**Table 5C Soil Analytical Results - PHCs & BTEX**

Parameter		BH21-28 SS2	QAQC-4	BH21-29 S3	BH21-30 SS3	BH21-31 S2	BH21-31 S3	BH21-32 SS4	BH21-33 S2
Date of Collection	Table 2 RPI CT	Nov 08, 2021		Oct 28, 2021	Nov 08, 2021	Nov 05, 2021	Nov 05, 2021	Nov 15, 2021	Oct 28, 2021
Date Reported		Nov 20, 2021		Nov 30, 2021	Nov 20, 2021	Nov 08, 2021	Dec 20, 2021	Nov 27, 2021	Nov 30, 2021
Sampling Depth (mbgs)		0.8 - 1.4		1.2 - 1.8	1.5 - 2.1	0.6 - 1.2	1.2 - 1.8	2.3 - 2.9	0.6 - 1.2
Analytical Report Reference No.		21T827359		21T832162	21T827359	21T832162	21T839249	21T830287	21T832162
Benzene	0.21	<0.02	<0.02	<0.005	<0.02	<0.005	<0.02	<0.02	<0.005
Toluene	2.3	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Ethylbenzene	1.1	<0.05	<0.05	<0.01	<0.05	<0.01	<0.05	<0.05	<0.01
Total Xylenes	3.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
F1 (C6 to C10) minus BTEX	55	<5	<5	<10	<5	<10	8	<5	<10
F2 (C10 to C16)	98	<10	<10	<10	<10	13	<10	<10	<10
F3 (C16 to C34)	300	<50	<50	17	<50	39	<50	<50	24
F4 (C34 to C50)	2800	<50	<50	<10	<50	<10	<50	<50	<10

See "Notes for Soil and Groundwater Summary"

**Table 5C Soil Analytical Results - PHCs & BTEX**

Parameter		BH21-34 S3	BH21-35 S2	BH21-36 SS6	BH21-37 S3	BH21-39 S3	BH21-41 S1
Date of Collection	Table 2 RPI CT	Oct 28, 2021	Nov 05, 2021	Nov 16, 2021	Oct 28, 2021	Nov 05, 2021	Nov 05, 2021
Date Reported		Nov 30, 2021	Nov 30, 2021	Nov 26, 2021	Nov 30, 2021	Nov 30, 2021	Nov 30, 2021
Sampling Depth (mbgs)		1.2 - 1.8	0.6 - 1.2	4.6 - 5.2	1.2 - 1.8	1.2 - 1.8	0.0 - 0.6
Analytical Report Reference No.		21T832162	21T832162	21T830891	21T832162	21T832162	21T832162
Benzene	0.21	<0.005	<0.005	<0.02	<0.005	<0.005	0.006
Toluene	2.3	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Ethylbenzene	1.1	<0.01	<0.01	<0.05	<0.01	<0.01	0.01
Total Xylenes	3.1	<0.05	<0.05	<0.05	<0.05	<0.05	0.22
F1 (C6 to C10) minus BTEX	55	<10	<10	<5	<10	<10	10
F2 (C10 to C16)	98	<10	<10	<10	<10	<10	<10
F3 (C16 to C34)	300	11	21	<50	15	24	75
F4 (C34 to C50)	2800	<10	<10	<50	<10	<10	<10

See "Notes for Soil and Groundwater Summary"

Table 6C Soil Analytical Results - VOCs

Parameter		BH21-13 SS5	BH21-25 SS6	BH21-32 SS4	BH21-36 SS6
Date of Collection	Table 2 RPI CT	Nov 15, 2021	Nov 16, 2021	Nov 15, 2021	Nov 16, 2021
Date Reported		Nov 27, 2021	Nov 26, 2021	Nov 27, 2021	Nov 26, 2021
Sampling Depth (mbgs)		3.0 - 3.7	4.6 - 5.2	2.3 - 2.9	4.6 - 5.2
Analytical Report Reference No.		21T830287	21T830891	21T830287	21T830891
Acetone	16	<0.50	<0.50	<0.50	<0.50
Benzene	0.21	<0.02	<0.02	<0.02	<0.02
Bromodichloromethane	1.5	<0.05	<0.05	<0.05	<0.05
Bromoform	0.27	<0.05	<0.05	<0.05	<0.05
Bromomethane	0.05	<0.05	<0.05	<0.05	<0.05
Carbon Tetrachloride	0.05	<0.05	<0.05	<0.05	<0.05
Chlorobenzene	2.4	<0.05	<0.05	<0.05	<0.05
Chloroform	0.05	<0.04	<0.04	<0.04	<0.04
Dibromochloromethane	2.3	<0.05	<0.05	<0.05	<0.05
Dichlorobenzene, 1,2-	1.2	<0.05	<0.05	<0.05	<0.05
Dichlorobenzene, 1,3-	4.8	<0.05	<0.05	<0.05	<0.05
Dichlorobenzene, 1,4-	0.083	<0.05	<0.05	<0.05	<0.05
Dichlorodifluoromethane	16	<0.05	<0.05	<0.05	<0.05
Dichloroethane, 1,1-	0.47	<0.02	<0.02	<0.02	<0.02
Dichloroethane, 1,2-	0.05	<0.03	<0.03	<0.03	<0.03
Dichloroethylene, 1,1-	0.05	<0.05	<0.05	<0.05	<0.05
Dichloroethylene, Cis- 1,2-	1.9	<0.02	<0.02	<0.02	<0.02
Dichloroethylene, Trans- 1,2-	0.084	<0.05	<0.05	<0.05	<0.05
Dichloropropane, 1,2-	0.05	<0.03	<0.03	<0.03	<0.03
1,3-Dichloropropene (Cis + Trans)	0.05	<0.05	<0.05	<0.05	<0.05
Ethylbenzene	1.1	<0.05	<0.05	<0.05	<0.05
Ethylene Dibromide	0.05	<0.04	<0.04	<0.04	<0.04
Hexane, n-	2.8	<0.05	<0.05	<0.05	<0.05
Methyl Ethyl Ketone	16	<0.50	<0.50	<0.50	<0.50
Methyl Isobutyl Ketone	1.7	<0.50	<0.50	<0.50	<0.50
Methyl tert-butyl Ether	0.75	<0.05	<0.05	<0.05	<0.05
Methylene Chloride	0.1	<0.05	<0.05	<0.05	<0.05
Styrene	0.7	<0.05	<0.05	<0.05	<0.05
Tetrachloroethane, 1,1,1,2-	0.058	<0.04	<0.04	<0.04	<0.04
Tetrachloroethane, 1,1,2,2-	0.05	<0.05	<0.05	<0.05	<0.05
Tetrachloroethylene	0.28	<0.05	<0.05	<0.05	<0.05
Toluene	2.3	<0.05	<0.05	<0.05	<0.05
Trichloroethane, 1,1,1-	0.38	<0.05	<0.05	<0.05	<0.05
Trichloroethane, 1,1,2-	0.05	<0.04	<0.04	<0.04	<0.04
Trichloroethylene	0.061	<0.03	<0.03	<0.03	<0.03
Trichlorofluoromethane	4	<0.05	<0.05	<0.05	<0.05
Vinyl Chloride	0.02	<0.02	<0.02	<0.02	<0.02
Xylene mixture	3.1	<0.05	<0.05	<0.05	<0.05

See "Notes for Soil and Groundwater Summary"

**Table 7C Soil Analytical Results - PAHs**

Parameter		BH21-9 SS3	BH21-9 SS4	BH21-10 S3	BH21-11 SS2	BH21-13 SS1	BH21-14 S3	BH21-15 S2
Date of Collection	Table 2 RPI CT	Nov 05, 2021	Nov 05, 2021	Oct 27, 2021	Nov 04, 2021	Nov 15, 2021	Oct 27, 2021	Oct 27, 2021
Date Reported		Nov 16, 2021	Dec 20, 2021	Nov 08, 2021	Nov 16, 2021	Nov 27, 2021	Nov 08, 2021	Nov 08, 2021
Sampling Depth (mbgs)		1.5 - 2.1	2.3 - 2.9	1.2 - 1.8	0.8 - 1.4	0.0 - 0.6	1.2 - 1.8	0.6 - 1.2
Analytical Report Reference No.		21T826519	21T839249	21T822752	21T826519	21T830287	21T822752	21T822752
Naphthalene	0.6	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Acenaphthylene	0.15	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Acenaphthene	7.9	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Fluorene	62	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Phenanthrene	6.2	0.1	0.22	<0.05	<0.05	<0.05	<0.05	<0.05
Anthracene	0.67	0.18	0.07	<0.05	<0.05	<0.05	<0.05	<0.05
Fluoranthene	0.69	0.19	0.44	<0.05	<0.05	<0.05	<0.05	<0.05
Pyrene	78	0.18	0.41	<0.05	<0.05	<0.05	<0.05	<0.05
Benz(a)anthracene	0.5	<0.05	0.2	<0.05	<0.05	<0.05	<0.05	<0.05
Chrysene	7	<0.05	0.12	<0.05	<0.05	<0.05	<0.05	<0.05
Benzo(b)fluoranthene	0.78	0.05	0.18	<0.05	<0.05	<0.05	<0.05	<0.05
Benzo(k)fluoranthene	0.78	0.06	0.09	<0.05	<0.05	<0.05	<0.05	<0.05
Benzo(a)pyrene	0.3	<0.05	0.16	<0.05	<0.05	<0.05	<0.05	<0.05
Indeno(1,2,3-cd)pyrene	0.38	<0.05	0.07	<0.05	<0.05	<0.05	<0.05	<0.05
Dibenz(a,h)anthracene	0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Benzo(g,h,i)perylene	6.6	<0.05	0.08	<0.05	<0.05	<0.05	<0.05	<0.05
Methylnaphthalene, 2-(1-)	0.99	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05

See "Notes for Soil and Groundwater Summary"

Table 7C Soil Analytical Results - PAHs

Parameter		BH21-25 SS1	BH21-26 S1	BH21-27 S2	BH21-28 SS3	QAQC-5	BH21-29 S1	BH21-30 SS1
Date of Collection	Table 2 RPI CT	Nov 16, 2021	Oct 28, 2021	Oct 28, 2021	Nov 08, 2021	Nov 08, 2021	Oct 28, 2021	Nov 08, 2021
Date Reported		Nov 26, 2021	Nov 08, 2021	Nov 08, 2021	Nov 20, 2021	Nov 20, 2021	Nov 08, 2021	Nov 20, 2021
Sampling Depth (mbgs)		0.0 - 0.6	0.0 - 0.6	0.6 - 1.2	1.5 - 2.1	1.5 - 2.1	0.0 - 0.6	0.0 - 0.6
Analytical Report Reference No.		21T830891	21T822752	21T822752	21T827359	21T827359	21T822752	21T827359
Naphthalene	0.6	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Acenaphthylene	0.15	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Acenaphthene	7.9	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Fluorene	62	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Phenanthrene	6.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Anthracene	0.67	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Fluoranthene	0.69	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Pyrene	78	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.05
Benz(a)anthracene	0.5	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Chrysene	7	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Benzo(b)fluoranthene	0.78	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Benzo(k)fluoranthene	0.78	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Benzo(a)pyrene	0.3	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Indeno(1,2,3-cd)pyrene	0.38	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Dibenz(a,h)anthracene	0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Benzo(g,h,i)perylene	6.6	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Methylnaphthalene, 2-(1-)	0.99	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05

See "Notes for Soil and Groundwater Summary"

Table 7C Soil Analytical Results - PAHs

Parameter		BH21-31 S3	BH21-32 SS3	BH21-33 S1	BH21-34 S3	QAQC-3	BH21-35 S3	BH21-36 SS3
Date of Collection	Table 2 RPI CT	Nov 05, 2021	Nov 15, 2021	Oct 28, 2021	Oct 28, 2021		Oct 27, 2021	Nov 16, 2021
Date Reported		Nov 16, 2021	Nov 27, 2021	Nov 08, 2021	Nov 08, 2021		Nov 08, 2021	Nov 26, 2021
Sampling Depth (mbgs)		1.2 - 1.8	1.5 - 2.1	0.0 - 0.6	1.2 - 1.8		1.2 - 1.8	1.5 - 2.1
Analytical Report Reference No.		21T826519	21T830287	21T822752	21T822752		21T822752	21T830891
Naphthalene	0.6	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Acenaphthylene	0.15	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Acenaphthene	7.9	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Fluorene	62	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Phenanthrene	6.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Anthracene	0.67	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Fluoranthene	0.69	<0.05	<0.05	<0.05	<0.05	<0.05	0.25	<0.05
Pyrene	78	<0.05	<0.05	<0.05	<0.05	<0.05	0.18	<0.05
Benz(a)anthracene	0.5	<0.05	<0.05	<0.05	<0.05	<0.05	0.08	<0.05
Chrysene	7	<0.05	<0.05	<0.05	<0.05	<0.05	0.14	<0.05
Benzo(b)fluoranthene	0.78	<0.05	<0.05	<0.05	<0.05	<0.05	0.19	<0.05
Benzo(k)fluoranthene	0.78	<0.05	<0.05	<0.05	<0.05	<0.05	0.17	<0.05
Benzo(a)pyrene	0.3	<0.05	<0.05	<0.05	<0.05	<0.05	0.06	<0.05
Indeno(1,2,3-cd)pyrene	0.38	<0.05	<0.05	<0.05	<0.05	<0.05	0.06	<0.05
Dibenz(a,h)anthracene	0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Benzo(g,h,i)perylene	6.6	<0.05	<0.05	<0.05	<0.05	<0.05	0.06	<0.05
Methylnaphthalene, 2-(1-)	0.99	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05

See "Notes for Soil and Groundwater Summary"

Table 7C Soil Analytical Results - PAHs

Parameter		BH21-37 S3	BH21-38 S1	BH21-39 S3	BH21-40 S1	BH21-40 S3	BH21-41 S1
Date of Collection	Table 2 RPI CT	Oct 27, 2021	Oct 27, 2021	Nov 05, 2021	Oct 27, 2021	Oct 27, 2021	Nov 05, 2021
Date Reported		Nov 08, 2021	Nov 08, 2021	Nov 16, 2021	Dec 20, 2021	Nov 08, 2021	Nov 16, 2021
Sampling Depth (mbgs)		1.2 - 1.8	0.0 - 0.6	1.2 - 1.8	0.0 - 0.6	1.2 - 1.8	0.0 - 0.6
Analytical Report Reference No.		21T822752	21T822752	21T826519	21T839249	21T822752	21T826519
Naphthalene	0.6	<0.05	0.07	<0.05	0.31	0.1	0.08
Acenaphthylene	0.15	<0.05	<0.05	<0.05	0.14	0.06	0.08
Acenaphthene	7.9	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Fluorene	62	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Phenanthrene	6.2	<0.05	0.07	<0.05	0.78	0.19	0.08
Anthracene	0.67	<0.05	0.05	<0.05	0.27	0.12	0.06
Fluoranthene	0.69	<0.05	0.14	<0.05	2.11	0.47	0.38
Pyrene	78	<0.05	0.12	<0.05	1.94	0.37	0.36
Benzo(a)anthracene	0.5	<0.05	0.07	<0.05	1.13	0.19	0.18
Chrysene	7	<0.05	0.11	<0.05	1.25	0.16	0.14
Benzo(b)fluoranthene	0.78	<0.05	0.21	<0.05	1.61	0.53	0.25
Benzo(k)fluoranthene	0.78	<0.05	0.23	<0.05	0.63	0.5	0.24
Benzo(a)pyrene	0.3	<0.05	<0.05	<0.05	0.86	0.09	<0.05
Indeno(1,2,3-cd)pyrene	0.38	<0.05	0.09	<0.05	0.48	0.2	0.08
Dibenz(a,h)anthracene	0.1	<0.05	<0.05	<0.05	0.13	0.05	<0.05
Benzo(g,h,i)perylene	6.6	<0.05	0.13	<0.05	0.55	0.2	0.08
Methylnaphthalene, 2-(1-)	0.99	<0.05	<0.05	<0.05	0.82	0.32	0.18

See "Notes for Soil and Groundwater Summary"

**Table 8C Soil Analytical Results - PCBs and OC Pesticides**

Parameter		BH21-9 SS1	BH21-10 S2	BH21-11 SS2	BH21-14 S1	BH21-15 S2	BH21-26 S1	BH21-27 S2
Date of Collection	Table 2 RPI CT	Nov 05, 2021	Oct 27, 2021	Nov 04, 2021	Oct 27, 2021	Oct 27, 2021	Oct 28, 2021	Oct 28, 2021
Date Reported		Nov 16, 2021	Nov 08, 2021	Nov 16, 2021	Nov 08, 2021	Nov 08, 2021	Nov 08, 2021	Nov 08, 2021
Sampling Depth (m bgs)		0.0 - 0.6	0.6 - 1.2	0.8 - 1.4	0.0 - 0.6	0.6 - 1.2	0.0 - 0.6	0.6 - 1.2
Analytical Report Reference No.		21T826519	21T822752	21T826519	21T822752	21T822752	21T822752	21T822752
Polychlorinated Biphenyls	0.35	<0.10	<0.10	-	<0.10	<0.10	<0.10	<0.10
Aldrin	0.05	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Chlordane	0.05	<0.007	<0.007	<0.007	<0.007	<0.007	<0.007	<0.007
DDD	3.3	<0.007	<0.007	<0.007	<0.007	<0.007	<0.007	<0.007
DDE	0.26	<0.007	<0.007	<0.007	<0.007	<0.007	<0.007	<0.007
DDT	1.4	<0.007	<0.007	<0.007	<0.007	<0.007	<0.007	<0.007
Dieldrin	0.05	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Endosulfan	0.04	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Endrin	0.04	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Heptachlor	0.15	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Heptachlor Epoxide	0.05	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Hexachlorobenzene	0.52	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Hexachlorobutadiene	0.012	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Hexachlorocyclohexane Gamma-	0.056	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Hexachloroethane	0.089	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Methoxychlor	0.13	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005

See "Notes for Soil and Groundwater Summary Tables" included at the beginning of this Section



**Table 8C Soil Analytical Results - PCBs and OC**

Parameter		BH21-28 SS3	QAQC-5	BH21-29 S1	BH21-30 SS1	BH21-31 S2	BH21-33 S2	BH21-34 S1	QAQC-1
Date of Collection	Table 2 RPI CT	Nov 08, 2021		Oct 28, 2021	Nov 08, 2021	Nov 05, 2021	Oct 28, 2021	Oct 28, 2021	
Date Reported		Nov 20, 2021		Nov 08, 2021	Nov 20, 2021	Nov 16, 2021	Nov 08, 2021	Nov 08, 2021	
Sampling Depth (m bgs)		1.5 - 2.1		0.0 - 0.6	0.0 - 0.6	0.6 - 1.2	0.6 - 1.2	0.0 - 0.6	
Analytical Report Reference No.		21T827359		21T822752	21T827359	21T826519	21T822752	21T822752	
Polychlorinated Biphenyls	0.35	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Aldrin	0.05	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Chlordane	0.05	<0.007	<0.007	<0.007	<0.007	<0.007	<0.007	<0.007	<0.007
DDD	3.3	<0.007	<0.007	<0.007	<0.007	<0.007	<0.007	<0.007	<0.007
DDE	0.26	<0.007	<0.007	<0.007	<0.007	<0.007	<0.007	<0.007	<0.007
DDT	1.4	<0.007	<0.007	<0.007	<0.007	<0.007	<0.007	<0.007	<0.007
Dieldrin	0.05	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Endosulfan	0.04	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Endrin	0.04	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Heptachlor	0.15	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Heptachlor Epoxide	0.05	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Hexachlorobenzene	0.52	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Hexachlorobutadiene	0.012	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Hexachlorocyclohexane Gamma-	0.056	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Hexachloroethane	0.089	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Methoxychlor	0.13	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005

See "Notes for Soil and Groundwater Summary Tables" included at the beginning of this Section

**Table 8C Soil Analytical Results - PCBs and OC**

Parameter		BH21-35 S2	BH21-37 S2	BH21-38 S3	BH21-39 S3	BH21-40 S1	BH21-41 SS2
Date of Collection	Table 2 RPI CT	Oct 27, 2021	Oct 27, 2021	Oct 27, 2021	Nov 05, 2021	Oct 27, 2021	Nov 05, 2021
Date Reported		Nov 08, 2021	Nov 08, 2021	Nov 08, 2021	Nov 16, 2021	Nov 08, 2021	Nov 16, 2021
Sampling Depth (m bgs)		0.6 - 1.2	0.6 - 1.2	1.2 - 1.8	1.2 - 1.8	0.0 - 0.6	0.8 - 1.4
Analytical Report Reference No.		21T822752	21T822752	21T822752	21T826519	21T822752	21T826519
Polychlorinated Biphenyls	0.35	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Aldrin	0.05	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Chlordane	0.05	<0.007	<0.007	<0.007	<0.007	<0.007	<0.007
DDD	3.3	<0.007	<0.007	<0.007	<0.007	<0.007	<0.007
DDE	0.26	<0.007	<0.007	<0.007	<0.007	<0.007	<0.007
DDT	1.4	<0.007	<0.007	<0.007	<0.007	<0.007	<0.007
Dieldrin	0.05	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Endosulfan	0.04	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Endrin	0.04	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Heptachlor	0.15	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Heptachlor Epoxide	0.05	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Hexachlorobenzene	0.52	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Hexachlorobutadiene	0.012	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Hexachlorocyclohexane Gamma-	0.056	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Hexachloroethane	0.089	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Methoxychlor	0.13	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005

See "Notes for Soil and Groundwater Summary Tables" included at the beginning of this Section

**Table 9C Groundwater Analytical Results - Metals & ORPs**

Parameter		BH21-9	BH21-11	BH21-13	BH21-25	BH21-28
Date of Collection	Table 2 Potable GW CT	Nov 30, 2021	Nov 30, 2021	Nov 30, 2021	Dec 01, 2021	Dec 01, 2021
Date Reported		Dec 16, 2021	Dec 16, 2021	Dec 16, 2021	Dec 16, 2021	Dec 16, 2021
Screened Depth (mbgs)		1.9 - 4.9	5.5 - 8.5	3.7 - 6.7	4.6 - 7.6	6.1 - 9.1
Analytical Report Reference No.		21T838602	21T838602	21T838602	21T838602	21T838602
Antimony	6	<1.0	<1.0	<1.0	<1.0	<1.0
Arsenic	25	<1.0	<1.0	<1.0	<1.0	5.7
Barium	1000	54	134	102	189	79.5
Beryllium	4	<0.50	<0.50	<0.50	<0.50	<0.50
Boron	5000	85	61	36	117	222
Cadmium	2.7	<0.20	<0.20	<0.20	<0.20	<0.20
Chromium	50	<2.0	<2.0	<2.0	<2.0	<2.0
Chromium VI	25	<2.0	<2.0	<2.0	<2.0	<2.0
Cobalt	3.8	2.06	<0.50	<0.50	<0.50	<0.50
Copper	87	<1.0	1.3	<1.0	<1.0	<1.0
Cyanide	66	<2.0	<2.0	<2.0	<2.0	<2.0
Lead	10	<0.50	<0.50	0.53	<0.50	<0.50
Mercury	0.29	<0.02	<0.02	<0.02	<0.02	<0.02
Molybdenum	70	3.5	<0.50	0.7	5.47	4.81
Nickel	100	3.9	1.2	<1.0	1.3	<1.0
Selenium	10	1	1.7	<1.0	<1.0	<1.0
Silver	1.5	<0.20	<0.20	<0.20	<0.20	<0.20
Thallium	2	<0.30	<0.30	<0.30	<0.30	<0.30
Uranium	20	0.73	<0.50	0.88	5.02	<0.50
Vanadium	6.2	<0.40	<0.40	<0.40	<0.40	<0.40
Zinc	1100	<5.0	<5.0	<5.0	<5.0	<5.0
Sodium	490000	92000	135000	349000	18600	33000
Chloride	790000	162000	285000	557000	12800	17600

See "Notes for Soil and Groundwater Summary"

**Table 10C Groundwater Analytical Results - PHCs&BTEX**

Parameter		BH21-9	BH21-11	BH21-13	BH21-25	BH21-28	BH21-30	BH21-36
Date of Collection	Table 2 Potable GW CT	Nov 30, 2021	Nov 30, 2021	Nov 30, 2021	Dec 01, 2021	Dec 01, 2021	Dec 13, 2021	Nov 23, 2021
Date Reported		Dec 16, 2021	Dec 16, 2021	Dec 16, 2021	Dec 16, 2021	Dec 16, 2021	Dec 15, 2021	Dec 03, 2021
Screened Depth (mbgs)		1.9 - 4.9	5.5 - 8.5	3.7 - 6.7	4.6 - 7.6	6.1 - 9.1	6.1 - 9.1	4.6 - 7.6
Analytical Report Reference No.		21T838602	21T838602	21T838602	21T838602	21T838602	21T843989	21T834096
Benzene	5	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Toluene	24	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Ethylbenzene	2.4	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Xylene Mixture	300	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
F1 (C6 to C10) minus BTEX	750	<25	<25	<25	<25	<25	<25	<25
F2 (C10 to C16)	150	<100	<100	<100	<100	<100	<100	<100
F3 (C16 to C34)	500	<100	<100	<100	<100	<100	<100	<100
F4 (C34 to C50)	500	<100	<100	<100	<100	<100	<100	<100

See "Notes for Soil and Groundwater Summary"

Table 11C Groundwater Analytical Results - VOCs

Parameter		BH21-36	BH21-9	BH21-13	BH21-25	BH21-28
Date of Collection	Table 2 Potable GW CT	Nov 23, 2021	Nov 30, 2021	Nov 30, 2021	Dec 01, 2021	Dec 01, 2021
Date Reported		Dec 03, 2021	Dec 16, 2021	Dec 16, 2021	Dec 16, 2021	Dec 16, 2021
Screened Depth (mbgs)		4.6 - 7.6	1.9 - 4.9	3.7 - 6.7	4.6 - 7.6	6.1 - 9.1
Analytical Report Reference No.		21T834096	21T838602	21T838602	21T838602	21T838602
Acetone	2700	<1.0	<1.0	<1.0	<1.0	<1.0
Benzene	5	<0.20	<0.20	<0.20	<0.20	<0.20
Bromodichloromethane	16	<0.20	<0.20	<0.20	<0.20	<0.20
Bromoform	25	<0.10	<0.10	<0.10	<0.10	<0.10
Bromomethane	0.89	<0.20	<0.20	<0.20	<0.20	<0.20
Carbon Tetrachloride	0.79	<0.20	<0.20	<0.20	<0.20	<0.20
Chlorobenzene	30	<0.10	<0.10	<0.10	<0.10	<0.10
Chloroform	2.4	<0.20	<0.20	<0.20	<0.20	<0.20
Dibromochloromethane	25	<0.10	<0.10	<0.10	<0.10	<0.10
Dichlorobenzene, 1,2-	3	<0.10	<0.10	<0.10	<0.10	<0.10
Dichlorobenzene, 1,3-	59	<0.10	<0.10	<0.10	<0.10	<0.10
Dichlorobenzene, 1,4-	1	<0.10	<0.10	<0.10	<0.10	<0.10
Dichlorodifluoromethane	590	<0.20	<0.20	<0.20	<0.20	<0.20
Dichloroethane, 1,1-	5	<0.30	<0.30	<0.30	<0.30	<0.30
Dichloroethane, 1,2-	1.6	<0.20	<0.20	<0.20	<0.20	<0.20
Dichloroethylene, 1,1-	1.6	<0.30	<0.30	<0.30	<0.30	<0.30
Dichloroethylene, cis- 1,2-	1.6	<0.20	<0.20	<0.20	<0.20	<0.20
Dichloroethylene, trans- 1,2-	1.6	<0.20	<0.20	<0.20	<0.20	<0.20
Dichloropropane, 1,2-	5	<0.20	<0.20	<0.20	<0.20	<0.20
Dichloropropene, 1,3-	0.5	<0.30	<0.30	<0.30	<0.30	<0.30
Ethylbenzene	2.4	<0.10	<0.10	<0.10	<0.10	<0.10
Ethylene Dibromide	0.2	<0.10	<0.10	<0.10	<0.10	<0.10
Hexane, n-	51	<0.20	<0.20	<0.20	<0.20	<0.20
Methyl Ethyl Ketone	1800	<1.0	<1.0	<1.0	<1.0	<1.0
Methyl Isobutyl Ketone	640	<1.0	<1.0	<1.0	<1.0	<1.0
Methyl tert-butyl ether	15	<0.20	<0.20	<0.20	<0.20	<0.20
Methylene Chloride	50	<0.30	<0.30	<0.30	<0.30	<0.30
Styrene	5.4	<0.10	<0.10	<0.10	<0.10	<0.10
Tetrachloroethane, 1,1,1,2-	1.1	<0.10	<0.10	<0.10	<0.10	<0.10
Tetrachloroethane, 1,1,2,2-	1	<0.10	<0.10	<0.10	<0.10	<0.10
Tetrachloroethylene	1.6	<0.20	<0.20	<0.20	<0.20	<0.20
Toluene	24	<0.20	<0.20	<0.20	<0.20	<0.20
Trichloroethane, 1,1,1-	200	<0.30	<0.30	<0.30	<0.30	<0.30
Trichloroethane, 1,1,2-	4.7	<0.20	<0.20	<0.20	<0.20	<0.20
Trichloroethylene	1.6	<0.20	<0.20	<0.20	<0.20	<0.20
Trichlorofluoromethane	150	<0.40	<0.40	<0.40	<0.40	<0.40
Vinyl Chloride	0.5	<0.17	<0.17	<0.17	<0.17	<0.17
Xylene Mixture	300	<0.20	<0.20	<0.20	<0.20	<0.20

See "Notes for Soil and Groundwater Summary

**Table 12C Groundwater Analytical Results - PAHs**

Parameter		BH21-9	BH21-11	BH21-13	BH21-25	BH21-28	BH21-36
Date of Collection	Table 2 Potable GW CT	Nov 30, 2021	Nov 30, 2021	Nov 30, 2021	Dec 01, 2021	Dec 01, 2021	Nov 23, 2021
Date Reported		Dec 16, 2021	Dec 16, 2021	Dec 16, 2021	Dec 16, 2021	Dec 16, 2021	Dec 03, 2021
Screened Depth (mbgs)		1.9 - 4.9	5.5 - 8.5	3.7 - 6.7	4.6 - 7.6	6.1 - 9.1	4.6 - 7.6
Analytical Report Reference No.		21T838602	21T838602	21T838602	21T838602	21T838602	21T834096
Acenaphthene	4.1	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Acenaphthylene	1	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Anthracene	2.4	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Benz(a)anthracene	1	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Benzo(a)pyrene	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Benzo(b)fluoranthene	0.1	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Benzo(g,h,i)perylene	0.2	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Benzo(k)fluoranthene	0.1	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Chrysene	0.1	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Dibenz(a,h)anthracene	0.2	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Fluoranthene	0.41	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Fluorene	120	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Indeno(1,2,3-cd)pyrene	0.2	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Methyl Naphthalene, 2-and 1-	3.2	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Naphthalene	11	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Phenanthrene	1	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Pyrene	4.1	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20

See "Notes for Soil and Groundwater Summary"

Table 13C Groundwater Analytical Results - PCBs and OC Pesticides

Parameter		BH21-9	BH21-11	BH21-28
Date of Collection	Table 2 Potable GW CT	Nov 30, 2021	Nov 30, 2021	Dec 01, 2021
Date Reported		Dec 16, 2021	Dec 16, 2021	Dec 16, 2021
Screened Depth (mbgs)		1.9 - 4.9	5.5 - 8.5	6.1 - 9.1
Analytical Report Reference No.		21T838602	21T838602	21T838602
Polychlorinated Biphenyls	3	<0.1	<0.1	<0.1
Aldrin	0.35	-	-	-
Chlordane	7	-	-	-
DDD	10	-	-	-
DDE	10	-	-	-
DDT	2.8	-	-	-
Dieldrin	0.35	-	-	-
Endosulfan	1.5	-	-	-
Endrin	0.48	-	-	-
Heptachlor	1.5	-	-	-
Heptachlor Epoxide	0.048	-	-	-
Hexachlorobenzene	1	-	-	-
Hexachlorobutadiene	0.44	-	-	-
Hexachlorocyclohexane Gamma-	1.2	-	-	-
Hexachloroethane	2.1	-	-	-
Methoxychlor	6.5	-	-	-

See "Notes for Soil and Groundwater Summary Tables" included at the end of this Section

**Table 14C Summary of Maximum Concentrations in Soil**

Group	Parameter	Table 2 RPI CT	Maximum Concentration	Location
BTEX	Benzene	0.21	0.006	BH21-41 S1
	Ethylbenzene	1.1	0.01	BH21-41 S1
	Toluene	2.3	<0.05	all samples
	Total Xylenes	3.1	0.22	BH21-41 S1
Metals	Barium	390	147	BH21-30 SS2
	Beryllium	4	1.4	BH21-10 S1
	Boron	120	21	BH21-35 S1
	Cadmium	1.2	<0.5	all samples
	Chromium	160	32	BH21-30 SS2
	Cobalt	22	16.3	BH21-28 SS1
	Copper	140	64.7	BH21-10 S1
	Lead	120	205	BH21-36 SS1
	Molybdenum	6.9	11	BH21-10 S1
	Nickel	100	33	BH21-30 SS2
	Silver	20	<0.5	all samples
	Thallium	1	0.6	BH21-10 S1
	Uranium	23	0.73	BH21-10 S1
	Vanadium	86	42.7	BH21-30 SS2
Zinc	340	179	BH21-36 SS1	
As, Se, Sb	Antimony	7.5	3.5	BH21-10 S1
	Arsenic	18	26	BH21-41 S2
	Selenium	2.4	2.1	BH21-10 S1
PAHs	Acenaphthene	7.9	<0.05	all samples
	Acenaphthylene	0.15	0.14	BH21-40 S1
	Anthracene	0.67	0.27	BH21-40 S1
	Benz(a)anthracene	0.5	1.13	BH21-40 S1
	Benzo(a)pyrene	0.3	0.86	BH21-40 S1
	Benzo(b)fluoranthene	0.78	1.61	BH21-40 S1
	Benzo(g,h,i)perylene	6.6	0.55	BH21-40 S1
	Benzo(k)fluoranthene	0.78	0.63	BH21-40 S1
	Chrysene	7	1.25	BH21-40 S1
	Dibenz(a,h)anthracene	0.1	0.13	BH21-40 S1
	Fluoranthene	0.69	2.11	BH21-40 S1
	Fluorene	62	<0.05	all samples
	Indeno(1,2,3-cd)pyrene	0.38	0.48	BH21-40 S1
	Methylnaphthalene, 2-(1-)	0.99	0.82	BH21-40 S1
	Naphthalene	0.6	0.31	BH21-40 S1
	Phenanthrene	6.2	0.78	BH21-40 S1
Pyrene	78	1.94	BH21-40 S1	
PHCs	F1 (C6 to C10) minus BTEX	55	10	BH21-41 S1
	F2 (C10 to C16)	98	13	BH21-31 S2
	F3 (C16 to C34)	300	75	BH21-41 S1
	F4 (C34 to C50)	2800	<50	all samples
	Acetone	16	<0.50	all samples
	Bromodichloromethane	1.5	<0.05	all samples
	Bromoform	0.27	<0.05	all samples
	Bromomethane	0.05	<0.05	all samples
	Carbon Tetrachloride	0.05	<0.05	all samples
	Chlorobenzene	2.4	<0.05	all samples
	Chloroform	0.05	<0.04	all samples
	Dibromochloromethane	2.3	<0.05	all samples
	Dichlorobenzene, 1,2-	1.2	<0.05	all samples



**Table 14C Summary of Maximum Concentrations in Soil**

Group	Parameter	Table 2 RPI CT	Maximum Concentration	Location
VOCs	Dichlorobenzene, 1,3-	4.8	<0.05	all samples
	Dichlorobenzene, 1,4-	0.083	<0.05	all samples
	Dichlorodifluoromethane	16	<0.05	all samples
	Dichloroethane, 1,1-	0.47	<0.02	all samples
	Dichloroethane, 1,2-	0.05	<0.03	all samples
	Dichloroethylene, 1,1-	0.05	<0.05	all samples
	Dichloroethylene, Cis- 1,2-	1.9	<0.02	all samples
	Dichloroethylene, Trans- 1,2-	0.084	<0.05	all samples
	Dichloropropane, 1,2-	0.05	<0.03	all samples
	1,3-Dichloropropene (Cis + Trans)	0.05	<0.05	all samples
	Ethylene Dibromide	0.05	<0.04	all samples
	Hexane, n-	2.8	<0.05	all samples
	Methyl Ethyl Ketone	16	<0.50	all samples
	Methyl Isobutyl Ketone	1.7	<0.50	all samples
	Methyl tert-butyl Ether	0.75	<0.05	all samples
	Methylene Chloride	0.1	<0.05	all samples
	Styrene	0.7	<0.05	all samples
	Tetrachloroethane, 1,1,1,2-	0.058	<0.04	all samples
	Tetrachloroethane, 1,1,2,2-	0.05	<0.05	all samples
	Tetrachloroethylene	0.28	<0.05	all samples
	Trichloroethane, 1,1,1-	0.38	<0.05	all samples
	Trichloroethane, 1,1,2-	0.05	<0.04	all samples
	Trichloroethylene	0.061	<0.03	all samples
Trichlorofluoromethane	4	<0.05	all samples	
Vinyl Chloride	0.02	<0.02	all samples	
ORPs	Chromium, Hexavalent	8	<0.2	all samples
	Cyanide, Free	0.051	<0.040	all samples
	Electrical Conductivity (2:1)	0.7	0.342	BH21-28 SS1
	Mercury	0.27	0.32	BH21-32 SS1
	Sodium Adsorption Ratio	5	0.758	BH21-39 S1
	pH, 2:1 CaCl2 Extraction	*	7.91	QAQC-2
PCBs	Polychlorinated Biphenyls	0.35	<0.10	all samples

See "Notes for Soil and Groundwater Summary Tables" included at the beginning of this Section

**Table 15C Summary of Maximum Concentrations in Groundwater**

Group	Parameter	Table 2 Potable GW CT	Maximum Concentration	Location
BTEX	Benzene	5	<0.20	all samples
	Ethylbenzene	2.4	<0.10	all samples
	Toluene	24	<0.20	all samples
	Xylene Mixture	300	<0.10	all samples
Metals	Barium	1000	189	BH21-25
	Beryllium	4	<0.50	all samples
	Boron	5000	222	BH21-28
	Cadmium	2.7	<0.20	all samples
	Chromium	50	<2.0	all samples
	Cobalt	3.8	2.06	all samples
	Copper	87	1.3	all samples
	Lead	10	0.53	BH21-13
	Molybdenum	70	5.47	BH21-25
	Nickel	100	3.9	BH21-25
	Silver	1.5	<0.20	all samples
	Thallium	2	<0.30	all samples
	Uranium	20	5.02	BH21-25
	Vanadium	6.2	<0.40	all samples
Zinc	1100	<5.0	all samples	
As, Se, Sb	Antimony	6	<1.0	all samples
	Arsenic	25	5.7	BH21-28
	Selenium	10	1.7	all samples
Na	Sodium	490000	349000	BH21-13
PAHs	Acenaphthene	4.1	<0.20	all samples
	Acenaphthylene	1	<0.20	all samples
	Anthracene	2.4	<0.10	all samples
	Benz(a)anthracene	1	<0.20	all samples
	Benzo(a)pyrene	0.01	<0.01	all samples
	Benzo(b)fluoranthene	0.1	<0.10	all samples
	Benzo(g,h,i)perylene	0.2	<0.20	all samples
	Benzo(k)fluoranthene	0.1	<0.10	all samples
	Chrysene	0.1	<0.10	all samples
	Dibenz(a,h)anthracene	0.2	<0.20	all samples
	Fluoranthene	0.41	<0.20	all samples
	Fluorene	120	<0.20	all samples
	Indeno(1,2,3-cd)pyrene	0.2	<0.20	all samples
	Methyl Naphthalene, 2-and 1-	3.2	<0.20	all samples
	Naphthalene	11	<0.20	all samples
	Phenanthrene	1	<0.10	all samples
	Pyrene	4.1	<0.20	all samples
PHCs	F1 (C6 to C10) minus BTEX	750	<25	all samples
	F2 (C10 to C16)	150	<100	all samples
	F3 (C16 to C34)	500	<100	all samples
	F4 (C34 to C50)	500	<100	all samples
	Acetone	2700	<1.0	all samples
	Bromodichloromethane	16	<0.20	all samples
	Bromoform	25	<0.10	all samples
	Bromomethane	0.89	<0.20	all samples
	Carbon Tetrachloride	0.79	<0.20	all samples
	Chlorobenzene	30	<0.10	all samples
	Chloroform	2.4	<0.20	all samples
	Dibromochloromethane	25	<0.10	all samples

**Table 15C Summary of Maximum Concentrations in Groundwater**

Group	Parameter	Table 2 Potable GW CT	Maximum Concentration	Location
VOCs	Dichlorobenzene, 1,2-	3	<0.10	all samples
	Dichlorobenzene, 1,3-	59	<0.10	all samples
	Dichlorobenzene, 1,4-	1	<0.10	all samples
	Dichlorodifluoromethane	590	<0.20	all samples
	Dichloroethane, 1,1-	5	<0.30	all samples
	Dichloroethane, 1,2-	1.6	<0.20	all samples
	Dichloroethylene, 1,1-	1.6	<0.30	all samples
	Dichloroethylene, cis- 1,2-	1.6	<0.20	all samples
	Dichloroethylene, trans- 1,2-	1.6	<0.20	all samples
	Dichloropropane, 1,2-	5	<0.20	all samples
	Dichloropropene, 1,3-	0.5	<0.30	all samples
	Ethylene Dibromide	0.2	<0.10	all samples
	Hexane, n-	51	<0.20	all samples
	Methyl Ethyl Ketone	1800	<1.0	all samples
	Methyl Isobutyl Ketone	640	<1.0	all samples
	Methyl tert-butyl ether	15	<0.20	all samples
	Methylene Chloride	50	<0.30	all samples
	Styrene	5.4	<0.10	all samples
	Tetrachloroethane, 1,1,1,2-	1.1	<0.10	all samples
	Tetrachloroethane, 1,1,2,2-	1	<0.10	all samples
	Tetrachloroethylene	1.6	<0.20	all samples
	Trichloroethane, 1,1,1-	200	<0.30	all samples
	Trichloroethane, 1,1,2-	4.7	<0.20	all samples
Trichloroethylene	1.6	<0.20	all samples	
Trichlorofluoromethane	150	<0.40	all samples	
Vinyl Chloride	0.5	<0.17	all samples	
ORPs	Chloride	790000	557000	BH21-13
	Chromium VI	25	<2.0	all samples
	Cyanide	66	<2.0	all samples
	Mercury	0.29	<0.02	all samples
PCBs	Polychlorinated Biphenyls	0.2	<0.10	all samples

See "Notes for Soil and Groundwater Summary Tables" included at the beginning of this Section

**Notes for Soil & Groundwater Summary Tables - Caledon (C-series)**

1. mbgs = metres below ground surface
2. ORPs = other regulated parameters
3. PHCs = petroleum hydrocarbons
4. VOCs = volatile organic compounds
5. PAHs = polycyclic aromatic hydrocarbons
7. APEC = area of potential environmental concern
6. - = parameter not analyzed
7. \* = pH criteria for surface soils (0 - 1.5 mbgs) is 5 to 9, for subsurface soil (below 1.5 mbgs) is 5 to 11
8. Units for all soil analyses are in µg/g (ppm) unless otherwise indicated
9. Units for all groundwater analyses are in µg/L (ppb) unless otherwise indicated
10. Table 8 RPIICC = Generic Site Condition Standards for Use within 30 m of a Water Body in a Potable Groundwater Condition as contained in Table 8 of the Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act, published by the MECP on April 15, 2011
11. For soil and groundwater analytical results: **bold** = Concentration exceeds the 2011 MECP Table 8 SCS

**Table 1C Monitoring Well Installation and Groundwater Levels**

Monitoring Well ID		BH21-9	BH21-11	BH21-13	BH21-25	BH21-28	BH21-30	BH21-32	BH21-36
Installed By		WSP	WSP	WSP	WSP	WSP	WSP	WSP	WSP
Installation Date		4-Nov-21	4-Nov-21	15-Nov-21	16-Nov-21	8-Nov-21	8-Nov-21	15-Nov-21	16-Nov-21
Well Status		Active	Active	Active	Active	Active	Active	Active	Active
Well Inner Diameter	(mm)	50	50	50	50	50	50	50	50
Casing Type (Flushmount / Monument)		Monument	Monument	Monument	Monument	Monument	Flushmount	Monument	Monument
Top of Pipe Elevation	(masl)	423.843	397.847	404.757	255.396	282.313	286.873	274.654	326.921
Ground Surface Elevation	(masl)	422.953	396.937	403.897	256.306	281.403	286.973	273.744	326.001
Bottom of Concrete Seal/Top of Bentonite Seal	(mbgs)	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
	(masl)	422.653	396.637	403.597	256.006	281.103	286.673	273.444	325.701
Bottom of Bentonite Seal/Top of Sand Pack	(mbgs)	1.3	4.9	3.1	4.0	5.5	5.5	2.4	4.0
	(masl)	421.7	392.0	400.8	252.3	275.9	281.5	271.4	322.0
Top of Well Screen	(mbgs)	1.9	5.5	3.7	4.6	6.1	6.1	3.0	4.6
	(masl)	421.1	391.4	400.2	251.7	275.3	280.9	270.7	321.4
Screen Length	(m)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Bottom of Screen	(mbgs)	4.9	8.5	6.7	7.6	9.1	9.1	6.0	7.6
	(masl)	418.1	388.4	397.2	248.7	272.3	277.9	267.7	318.4
22-Nov-21	Depth of GW	(mbgs)	-	-	-	-	-	DRY	6.5
	GW Elevation	(masl)	-	-	-	-	-	-	319.5
23-Nov-21	Depth of GW	(mbgs)	-	-	-	-	-	DRY	6.6
	GW Elevation	(masl)	-	-	-	-	-	-	319.4
29-Nov-21	Depth of GW	(mbgs)	-	-	-	0.6	2.2	-	-
	GW Elevation	(masl)	-	-	-	280.8	284.8	-	-
30-Nov-21	Depth of GW	(mbgs)	-	-	2.2	-	-	-	-
	GW Elevation	(masl)	-	-	254.1	-	-	-	-
1-Dec-21	Depth of GW	(mbgs)	-	-	-	-	-	-	-
	GW Elevation	(masl)	-	-	-	-	-	-	-
2-Dec-21	Depth of GW	(mbgs)	-	-	-	-	-	-	-
	GW Elevation	(masl)	-	-	-	-	-	-	-
6-Dec-21	Depth of GW	(mbgs)	-	-	-	-	-	-	-
	GW Elevation	(masl)	-	-	-	-	-	-	-
7-Dec-21	Depth of GW	(mbgs)	2.0	4.3	5.1	2.2	0.0	2.3	DRY
	GW Elevation	(masl)	421.0	392.6	398.8	254.1	281.7	284.7	-

See "Notes for Soil and Groundwater Summary"

Table 2C Summary of Soil Samples Submitted for Chemical Analysis

Borehole	Sample	Depth	Date	Parameters						APEC #
				M&ORP	PHCs	VOCs	PAHs	PCBs	OCPs	
BH21-9	SS1	0.0 - 0.6	4-Nov-21	-	-	-	-	✓	✓	3, 13, 14, 38, 114
	SS2	0.8 - 1.4		✓	-	-	-	-	-	
	SS3	1.5 - 2.1		-	-	-	✓	-	-	
	SS4	2.3 - 2.9		-	-	-	✓	-	-	
	SS5	3.0 - 3.7		-	✓	-	-	-	-	
BH21-10	S1	0.0 - 0.6	27-Oct-21	✓	-	-	-	-	-	13, 14, 38, 105, 114
	S2	0.6 - 1.2		✓	-	-	-	✓	✓	
	S3	1.2 - 1.8		✓	✓	-	✓	-	-	
BH21-11	SS1	0.0 - 0.6	4-Nov-21	✓	-	-	-	-	-	13, 14, 38, 114
	SS2	0.8 - 1.4		-	-	-	✓	✓	✓	
	SS5	3.0 - 3.7		-	✓	-	-	-	-	
BH21-13	SS1	0.0 - 0.6	15-Nov-21	-	-	-	✓	-	-	13, 14, 38, 112, 114
	SS2	0.8 - 1.4		✓	-	-	-	-	-	
	SS5	3.0 - 3.7		-	✓	✓	-	-	-	
BH21-14	S1	0.0 - 0.6	27-Oct-21	-	-	-	-	✓	✓	13, 14, 38, 96, 114
	S2	0.6 - 1.2		✓	-	-	-	-	-	
	S3	1.2 - 1.8		-	-	-	✓	-	-	
BH21-15	S2	0.6 - 1.2	27-Oct-21	-	-	-	✓	✓	✓	13, 14, 38, 93, 114
	S3	1.2 - 1.8		✓	-	-	-	-	-	
BH21-25	SS1	0.0 - 0.6	16-Nov-21	-	-	-	✓	-	-	13, 14, 38, 108, 114
	SS2	0.8 - 1.4		✓	-	-	-	-	-	
	SS6	4.6 - 5.2		-	✓	✓	-	-	-	
BH21-26	S1	0.0 - 0.6	28-Oct-21	-	-	-	-	✓	✓	13, 14, 38, 60, 114
	S2	0.6 - 1.2		-	-	-	✓	-	-	
	S3	1.2 - 1.8		✓	-	-	-	-	-	
BH21-27	S1	0.0 - 0.6	28-Oct-21	✓	-	-	-	-	-	13, 14, 38, 63, 114
	S2	0.6 - 1.2		-	-	-	-	✓	✓	
	S3	1.2 - 1.8		-	-	-	✓	-	-	
BH21-28	SS1	0.0 - 0.6	8-Nov-21	✓	-	-	-	-	-	1, 13, 14, 38, 114
	QAQC-3			✓	-	-	-	-	-	
	SS2	0.8 - 1.4		-	✓	-	-	-	-	
	QAQC-4			-	✓	-	-	-	-	
	SS3	1.5 - 2.1		-	-	-	✓	✓	✓	
QAQC-5	-		-	-	✓	✓	✓			
BH21-29	S1	0.0 - 0.6	28-Oct-21	-	-	-	-	✓	✓	13, 14, 38, 66, 114
	S2	0.6 - 1.2		✓	-	-	-	-	-	
	S3	1.2 - 1.8		-	-	-	✓	-	-	
BH21-30	SS1	0.0 - 0.6	8-Nov-21	-	-	-	✓	✓	✓	13, 14, 33, 38, 114
	SS2	0.8 - 1.4		✓	-	-	-	-	-	
	SS3	1.5 - 2.1		-	✓	-	-	-	-	
BH21-31	S1	0.0 - 0.6	5-Nov-21	✓	-	-	-	-	-	13, 14, 38, 69, 114
	S2	0.6 - 1.2		-	-	-	-	✓	✓	
	S3	1.2 - 1.8		-	✓	-	✓	-	-	
BH21-32	SS1	0.0 - 0.6	15-Nov-21	✓	-	-	-	-	-	13, 14, 38, 109, 114
	SS2	0.8 - 1.4		✓	-	-	-	-	-	
	SS3	1.5 - 2.1		-	-	-	✓	-	-	
	SS4	2.3 - 2.9		-	✓	✓	-	-	-	
BH21-33	S1	0.0 - 0.6	28-Oct-21	-	-	-	✓	-	-	13, 14, 38, 72, 114
	S2	0.6 - 1.2		-	-	-	-	✓	✓	
	S3	1.2 - 1.8		✓	-	-	-	-	-	
BH21-34	S1	0.0 - 0.6	28-Oct-21	-	-	-	-	✓	✓	13, 14, 38, 75, 114
	QAQC-1			-	-	-	-	✓	✓	
	S2	0.6 - 1.2		✓	-	-	-	-	-	
	QAQC-S2			✓	-	-	-	-	-	
	S3	1.2 - 1.8		-	-	-	✓	-	-	
QAQC-S3	-		-	-	✓	-	-			

**Table 2C Summary of Soil Samples Submitted for Chemical Analysis**

Borehole	Sample	Depth	Date	Parameters						APEC #
				M&ORP	PHCs	VOCs	PAHs	PCBs	OCPs	
BH21-35	S1	0.0 - 0.6	27-Oct-21	✓	-	-	-	-	-	13, 14, 38, 78, 114
	S2	0.6 - 1.2		-	-	-	-	✓	✓	
	S3	1.2 - 1.8		-	-	-	✓	-	-	
BH21-36	SS1	0.0 - 0.6	16-Nov-21	✓	-	-	-	-	-	13, 14, 38, 110, 114
	SS2	0.8 - 1.4		✓	-	-	-	-	-	
	SS3	1.5 - 2.1		-	-	-	✓	-	-	
	SS6	4.6 - 5.2		-	✓	✓	-	-	-	
BH21-37	S1	0.0 - 0.6	27-Oct-21	-	-	-	-	✓	✓	13, 14, 38, 81, 114
	S2	0.6 - 1.2		✓	-	-	-	-	-	
	S3	1.2 - 1.8		-	-	-	✓	-	-	
BH21-38	S1	0.0 - 0.6	27-Oct-21	-	-	-	✓	-	-	13, 14, 38, 84, 114
	S2	0.6 - 1.2		-	-	-	-	✓	✓	
	S3	1.2 - 1.8		✓	-	-	-	-	-	
BH21-39	S1	0.0 - 0.6	5-Nov-21	✓	-	-	-	-	-	13, 14, 38, 111, 114
	S3	1.2 - 1.8		-	-	-	✓	✓	✓	
BH21-40	S1	0.0 - 0.6	27-Oct-21	-	-	-	✓	✓	✓	13, 14, 38, 87, 114
	S3	1.2 - 1.8		✓	-	-	✓	-	-	
BH21-41	S1	0.0 - 0.6	5-Nov-21	-	-	-	✓	-	-	13, 14, 38, 90, 114
	S2	0.6 - 1.2		✓	✓	-	-	✓	✓	

See "Notes for Soil and Groundwater Summary Tables" included at the beginning of this Section

**Table 3C: Summary of Groundwater Samples Submitted for Chemical Analysis**

Monitoring Well ID	Screened Interval (mbgs)	Date	Parameters					APEC #	
			M&ORP	PHCs	VOCs	PAHs	PCBs		OCPs
BH21-9	1.9 - 4.9	30-Nov-21	✓	✓	✓	✓	✓	-	3, 13, 14, 38, 114
BH21-11	5.5 - 8.5	30-Nov-21	✓	✓	-	✓	✓	-	13, 14, 38, 114
BH21-13	3.7 - 6.7	30-Nov-21	✓	✓	✓	✓	-	-	13, 14, 38, 112, 114
BH21-25	4.6 - 7.6	1-Dec-21	✓	✓	✓	✓	-	-	13, 14, 38, 108, 114
BH21-28	6.1 - 9.1	1-Dec-21	✓	✓	✓	✓	✓	-	1, 13, 14, 38, 114
BH21-30	6.1 - 9.1	1-Dec-21	-	✓	-	-	-	-	13, 14, 33, 38, 114
BH21-36	4.6 - 7.6	23-Nov-21	✓	✓	✓	✓	-	-	13, 14, 38, 110, 114

See "Notes for Soil and Groundwater Summary Tables" included at the beginning of this Section



**Table 4C Soil Analytical Results - Metals & ORPs**

Parameter		BH21-9 SS2	BH21-10 S1	BH21-10 S3	BH21-11 SS1	BH21-13 SS2	BH21-14 S2	BH21-15 S3
Date of Collection	Table 8 RPIICC	Nov 04, 2021	Oct 27, 2021	Oct 27, 2021	Nov 04, 2021	Nov 15, 2021	Oct 27, 2021	Oct 27, 2021
Date Reported		Nov 16, 2021	Nov 08, 2021	Dec 20, 2021	Nov 16, 2021	Nov 27, 2021	Nov 08, 2021	Nov 08, 2021
Sampling Depth (mbgs)		0.8 - 1.4	0.0 - 0.6	1.2 - 1.8	0.0 - 0.6	0.8 - 1.4	0.6 - 1.2	1.2 - 1.8
Analytical Report Reference No.		21T826519	21T822752		21T826519	21T830287	21T822752	21T822752
Antimony	1.3	<0.8	<b>3.5</b>	<0.8	<0.8	<0.8	<0.8	<0.8
Arsenic	18	3	<b>24</b>	8	2	2	3	4
Barium	220	25.4	44.5	27	10.1	10.6	49.6	26.5
Beryllium	2.5	<0.4	1.4	<0.4	<0.4	<0.4	<0.4	<0.4
Boron	36	<5	12	8	<5	<5	<5	<5
Boron (Hot Water Extractable)	1.5	0.18	0.37	0.21	<0.10	<0.10	0.13	<0.10
Cadmium	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Chromium	70	12	15	10	<5	5	14	7
Cobalt	22	4.6	9.3	5.2	1.9	1.7	4.6	3.3
Copper	92	8	64.7	23.7	9	3.4	8.6	17
Lead	120	7	52	15	2	3	8	5
Molybdenum	2	<0.5	<b>11</b>	1	<0.5	<0.5	<0.5	<0.5
Nickel	82	9	29	7	2	3	9	5
Selenium	1.5	<0.8	<b>2.1</b>	<0.8	<0.8	<0.8	<0.8	<0.8
Silver	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Thallium	1	<0.5	0.6	<0.5	<0.5	<0.5	<0.5	<0.5
Uranium	2.5	<0.50	0.7	<0.50	<0.50	<0.50	<0.50	<0.50
Vanadium	86	24.7	26.7	15.3	10.4	10.9	26.6	14.4
Zinc	290	28	70	54	18	13	46	22
Chromium, Hexavalent	0.66	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Cyanide, Free	0.051	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040
Mercury	0.27	<0.10	<0.10	<0.10	<0.10	<0.10	0.11	<0.10
Electrical Conductivity (2:1)	0.7	0.096	0.255	0.210	0.061	0.078	0.103	0.073
Sodium Adsorption Ratio	5	0.07	0.061	0.295	0.055	0.205	0.043	0.061
pH, 2:1 CaCl2 Extraction	*	7.29	7.24	7.39	7.82	7.77	7.27	7.80

See "Notes for Soil and Groundwater Summary Tables" included at the beginning of this Section

**Table 4C Soil Analytical Results - Metals & ORPs**

Parameter		BH21-25 SS2	BH21-26 S3	BH21-27 S1	BH21-28 SS1	QAQC-3	BH21-29 S2	BH21-30 SS2	BH21-31 S1
Date of Collection	Table 8 RPIICC	Nov 16, 2021	Oct 28, 2021	Oct 28, 2021	Nov 08, 2021		Oct 28, 2021	Nov 08, 2021	Nov 05, 2021
Date Reported		Nov 26, 2021	Nov 08, 2021	Nov 08, 2021	Nov 20, 2021		Nov 08, 2021	Nov 20, 2021	Nov 16, 2021
Sampling Depth (mbgs)		0.8 - 1.4	1.2 - 1.8	0.0 - 0.6	0.0 - 0.6		0.6 - 1.2	0.8 - 1.4	0.0 - 0.6
Analytical Report Reference No.		21T830891	21T822752	21T822752	21T827359		21T822752	21T827359	21T826519
Antimony	1.3	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8
Arsenic	18	8	4	12	10	10	5	6	8
Barium	220	85.3	47.6	54.2	73.4	65.4	99	147	58.8
Beryllium	2.5	0.5	<0.4	0.5	0.8	0.7	0.7	1.4	0.5
Boron	36	<5	5	6	12	10	9	12	7
Boron (Hot Water Extractable)	1.5	0.35	<0.10	0.26	0.44	0.47	0.13	<0.10	0.12
Cadmium	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Chromium	70	23	16	19	23	21	26	32	17
Cobalt	22	12.6	9.4	6.8	16.3	6.8	11.1	14.1	10.0
Copper	92	35.5	37.1	24.7	40.9	31.3	26.1	28.4	28.5
Lead	120	12	7	15	29	26	9	12	9
Molybdenum	2	<0.5	<0.5	<0.5	0.7	0.6	<0.5	<0.5	<0.5
Nickel	82	26	18	15	31	17	24	33	21
Selenium	1.5	<0.8	<0.8	<0.8	0.9	<0.8	<0.8	<0.8	<0.8
Silver	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Thallium	1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Uranium	2.5	0.5	<0.50	<0.50	0.6	<0.50	<0.50	0.6	<0.50
Vanadium	86	32.8	23	28.1	30.2	27.3	36.5	42.7	24.8
Zinc	290	70	47	58	92	81	57	71	51
Chromium, Hexavalent	0.66	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Cyanide, Free	0.051	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040
Mercury	0.27	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Electrical Conductivity (2:1)	0.7	0.174	0.106	0.192	0.342	0.336	0.129	0.165	0.107
Sodium Adsorption Ratio	5	0.267	0.084	0.103	0.396	0.393	0.105	0.458	0.060
pH, 2:1 CaCl2 Extraction	*	7.50	7.79	7.70	7.28	7.60	7.71	7.25	7.60

See "Notes for Soil and Groundwater Summary Tables" included at the beginning of this Section

**Table 4C Soil Analytical Results - Metals & ORPs**

Parameter		BH21-32 SS1	BH21-32 SS2	BH21-33 S3	BH21-34 S2	QAQC-2	BH21-35 S1	BH21-36 SS1	BH21-36 SS1
Date of Collection	Table 8 RPIICC	Nov 15, 2021	Nov 15, 2021	Oct 28, 2021	Oct 28, 2021	Oct 27, 2021	Nov 16, 2021	Nov 16, 2021	
Date Reported		Nov 27, 2021	Dec 20, 2021	Nov 08, 2021	Nov 08, 2021	Nov 08, 2021	Nov 26, 2021	Dec 20, 2021	
Sampling Depth (mbgs)		0.0 - 0.6	0.8 - 1.4	1.2 - 1.8	0.6 - 1.2	0.0 - 0.6	0.0 - 0.6	0.8 - 1.4	
Analytical Report Reference No.		21T830287	21T839249	21T822752	21T822752	21T822752	21T830891	21T839249	
Antimony	1.3	1.9	<0.8	<0.8	<0.8	<0.8	<0.8	1.1	<0.8
Arsenic	18	6	2	5	4	3	13	11	4
Barium	220	43.1	35.6	99.2	58.5	57	53.8	103	26.3
Beryllium	2.5	<0.4	<0.4	0.6	0.4	0.4	0.5	<0.4	<0.4
Boron	36	9	<5	9	10	11	21	6	7
Boron (Hot Water Extractable)	1.5	0.40	0.16	<0.10	<0.10	<0.10	0.35	0.23	0.15
Cadmium	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Chromium	70	12	11	23	17	16	12	12	11
Cobalt	22	5.8	4.5	11.9	7.4	7.4	10.2	5.1	5.4
Copper	92	48.3	16.7	25.3	17.4	17	44.3	53.7	26.2
Lead	120	65	9	9	5	5	13	205	13
Molybdenum	2	1.4	<0.5	<0.5	<0.5	<0.5	1.1	1.2	<0.5
Nickel	82	21	9	24	14	13	19	11	9
Selenium	1.5	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8
Silver	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Thallium	1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Uranium	2.5	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Vanadium	86	17.7	20.5	33.6	26.5	25.2	15.4	18.7	21.4
Zinc	290	67	34	52	38	36	63	179	39
Chromium, Hexavalent	0.66	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Cyanide, Free	0.051	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040
Mercury	0.27	0.32	<0.10	<0.10	<0.10	<0.10	<0.10	0.23	<0.10
Electrical Conductivity (2:1)	0.7	0.184	0.134	0.115	0.108	0.101	0.217	0.156	0.115
Sodium Adsorption Ratio	5	0.193	0.199	0.155	0.072	0.070	0.095	0.076	0.139
pH, 2:1 CaCl2 Extraction	*	7.60	7.15	7.80	7.87	7.91	7.87	7.70	7.08

See "Notes for Soil and Groundwater Summary Tables" included at the beginning of this Section

**Table 4C Soil Analytical Results - Metals & ORPs**

Parameter		BH21-37 S2	BH21-38 S3	BH21-39 S1	BH21-40 S3	BH21-41 S2
Date of Collection	Table 8 RPIICC	Oct 27, 2021	Oct 27, 2021	Nov 05, 2021	Oct 27, 2021	Nov 05, 2021
Date Reported		Nov 08, 2021	Nov 08, 2021	Nov 16, 2021	Nov 08, 2021	Nov 16, 2021
Sampling Depth (mbgs)		0.6 - 1.2	1.2 - 1.8	0.0 - 0.6	1.2 - 1.8	0.6 - 1.2
Analytical Report Reference No.		21T822752	21T822752	21T826519	21T822752	21T826519
Antimony	1.3	1	<0.8	<0.8	<0.8	<0.8
Arsenic	18	12	3	6	6	<b>26</b>
Barium	220	41.3	16.9	40.7	29.6	18.3
Beryllium	2.5	<0.4	<0.4	0.4	<0.4	<0.4
Boron	36	7	<5	15	7	10
Boron (Hot Water Extractable)	1.5	0.18	<0.10	0.36	0.20	0.13
Cadmium	1.2	<0.5	<0.5	<0.5	<0.5	<0.5
Chromium	70	11	6	14	11	23
Cobalt	22	5.4	2.5	6.3	4.5	8.3
Copper	92	25.1	9	12.3	27.2	24
Lead	120	18	4	7	20	52
Molybdenum	2	0.9	<0.5	<0.5	0.9	<b>2.1</b>
Nickel	82	11	4	13	10	8
Selenium	1.5	<0.8	<0.8	<0.8	<0.8	<0.8
Silver	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Thallium	1	<0.5	<0.5	<0.5	<0.5	<0.5
Uranium	2.5	<0.50	<0.50	<0.50	<0.50	<0.50
Vanadium	86	19.1	9.4	21.3	19.3	25.2
Zinc	290	33	14	48	33	121
Chromium, Hexavalent	0.66	<0.2	<0.2	<0.2	<0.2	<0.2
Cyanide, Free	0.051	<0.040	<0.040	<0.040	<0.040	<0.040
Mercury	0.27	<0.10	<0.10	<0.10	<0.10	<0.10
Electrical Conductivity (2:1)	0.7	0.136	0.082	0.210	0.328	0.152
Sodium Adsorption Ratio	5	0.036	0.051	0.758	0.025	0.121
pH, 2:1 CaCl2 Extraction	*	7.46	7.66	7.49	7.62	7.69

See "Notes for Soil and Groundwater Summary Tables" included at the beginning of this Section

**Table 5C Soil Analytical Results - PHCs & BTEX**

Parameter		BH21-9 SS5	BH21-10 S3	BH21-11 SS5	BH21-13 SS5	BH21-14 S3	BH21-25 SS6	BH21-26 S3	BH21-27 S3
Date of Collection	Table 8 RPIICC	Nov 04, 2021	Oct 27, 2021	Nov 04, 2021	Nov 15, 2021	Oct 27, 2021	Nov 16, 2021	Oct 28, 2021	Oct 28, 2021
Date Reported		Nov 16, 2021	Nov 30, 2021	Nov 16, 2021	Nov 27, 2021	Nov 30, 2021	Nov 26, 2021	Nov 30, 2021	Nov 30, 2021
Sampling Depth (mbgs)		3.0 - 3.7	1.2 - 1.8	3.0 - 3.7	3.0 - 3.7	1.2 - 1.8	4.6 - 5.2	1.2 - 1.8	1.2 - 1.8
Analytical Report Reference No.		21T826519	21T832162	21T826519	21T830287	21T832162	21T830891	21T832162	21T832162
Benzene	0.02	<0.02	<0.005	<0.02	<0.02	<0.005	<0.02	<0.005	<0.005
Toluene	0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Ethylbenzene	0.05	<0.05	<0.01	<0.05	<0.05	<0.01	<0.05	<0.01	<0.01
Total Xylenes	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
F1 (C6 to C10) minus BTEX	25	<5	<10	<5	<5	<10	<5	<10	<10
F2 (C10 to C16)	10	<10	<10	<10	<10	<10	<10	<10	<10
F3 (C16 to C34)	240	<50	42	<50	<50	14	<50	<10	<10
F4 (C34 to C50)	120	<50	<10	<50	<50	<10	<50	<10	<10

See "Notes for Soil and Groundwater Summary"

**Table 5C Soil Analytical Results - PHCs & BTEX**

Parameter		BH21-28 SS2	QAQC-4	BH21-29 S3	BH21-30 SS3	BH21-31 S2	BH21-31 S3	BH21-32 SS4	BH21-33 S2
Date of Collection	Table 8 RPIICC	Nov 08, 2021		Oct 28, 2021	Nov 08, 2021	Nov 05, 2021	Nov 05, 2021	Nov 15, 2021	Oct 28, 2021
Date Reported		Nov 20, 2021		Nov 30, 2021	Nov 20, 2021	Nov 08, 2021	Dec 20, 2021	Nov 27, 2021	Nov 30, 2021
Sampling Depth (mbgs)		0.8 - 1.4		1.2 - 1.8	1.5 - 2.1	0.6 - 1.2	1.2 - 1.8	2.3 - 2.9	0.6 - 1.2
Analytical Report Reference No.		21T827359		21T832162	21T827359	21T832162	21T839249	21T830287	21T832162
Benzene	0.02	<0.02	<0.02	<0.005	<0.02	<0.005	<0.02	<0.02	<0.005
Toluene	0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Ethylbenzene	0.05	<0.05	<0.05	<0.01	<0.05	<0.01	<0.05	<0.05	<0.01
Total Xylenes	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
F1 (C6 to C10) minus BTEX	25	<5	<5	<10	<5	<10	8	<5	<10
F2 (C10 to C16)	10	<10	<10	<10	<10	13	<10	<10	<10
F3 (C16 to C34)	240	<50	<50	17	<50	39	<50	<50	24
F4 (C34 to C50)	120	<50	<50	<10	<50	<10	<50	<50	<10

See "Notes for Soil and Groundwater Summary"

**Table 5C Soil Analytical Results - PHCs & BTEX**

Parameter		BH21-34 S3	BH21-35 S2	BH21-36 SS6	BH21-37 S3	BH21-39 S3	BH21-41 S1
Date of Collection	Table 8 RPIICC	Oct 28, 2021	Nov 05, 2021	Nov 16, 2021	Oct 28, 2021	Nov 05, 2021	Nov 05, 2021
Date Reported		Nov 30, 2021	Nov 30, 2021	Nov 26, 2021	Nov 30, 2021	Nov 30, 2021	Nov 30, 2021
Sampling Depth (mbgs)		1.2 - 1.8	0.6 - 1.2	4.6 - 5.2	1.2 - 1.8	1.2 - 1.8	0.0 - 0.6
Analytical Report Reference No.		21T832162	21T832162	21T830891	21T832162	21T832162	21T832162
Benzene	0.02	<0.005	<0.005	<0.02	<0.005	<0.005	0.006
Toluene	0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Ethylbenzene	0.05	<0.01	<0.01	<0.05	<0.01	<0.01	0.01
Total Xylenes	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<b>0.22</b>
F1 (C6 to C10) minus BTEX	25	<10	<10	<5	<10	<10	10
F2 (C10 to C16)	10	<10	<10	<10	<10	<10	<10
F3 (C16 to C34)	240	11	21	<50	15	24	75
F4 (C34 to C50)	120	<10	<10	<50	<10	<10	<10

See "Notes for Soil and Groundwater Summary"

Table 6C Soil Analytical Results - VOCs

Parameter		BH21-13 SS5	BH21-25 SS6	BH21-32 SS4	BH21-36 SS6
Date of Collection	Table 8 RPI/ICC	Nov 15, 2021	Nov 16, 2021	Nov 15, 2021	Nov 16, 2021
Date Reported		Nov 27, 2021	Nov 26, 2021	Nov 27, 2021	Nov 26, 2021
Sampling Depth (mbgs)		3.0 - 3.7	4.6 - 5.2	2.3 - 2.9	4.6 - 5.2
Analytical Report Reference No.		21T830287	21T830891	21T830287	21T830891
Acetone	0.5	<0.50	<0.50	<0.50	<0.50
Benzene	0.02	<0.02	<0.02	<0.02	<0.02
Bromodichloromethane	0.05	<0.05	<0.05	<0.05	<0.05
Bromoform	0.05	<0.05	<0.05	<0.05	<0.05
Bromomethane	0.05	<0.05	<0.05	<0.05	<0.05
Carbon Tetrachloride	0.05	<0.05	<0.05	<0.05	<0.05
Chlorobenzene	0.05	<0.05	<0.05	<0.05	<0.05
Chloroform	0.05	<0.04	<0.04	<0.04	<0.04
Dibromochloromethane	0.05	<0.05	<0.05	<0.05	<0.05
Dichlorobenzene, 1,2-	0.05	<0.05	<0.05	<0.05	<0.05
Dichlorobenzene, 1,3-	0.05	<0.05	<0.05	<0.05	<0.05
Dichlorobenzene, 1,4-	0.05	<0.05	<0.05	<0.05	<0.05
Dichlorodifluoromethane	0.05	<0.05	<0.05	<0.05	<0.05
Dichloroethane, 1,1-	0.05	<0.02	<0.02	<0.02	<0.02
Dichloroethane, 1,2-	0.05	<0.03	<0.03	<0.03	<0.03
Dichloroethylene, 1,1-	0.05	<0.05	<0.05	<0.05	<0.05
Dichloroethylene, Cis- 1,2-	0.05	<0.02	<0.02	<0.02	<0.02
Dichloroethylene, Trans- 1,2-	0.05	<0.05	<0.05	<0.05	<0.05
Dichloropropane, 1,2-	0.05	<0.03	<0.03	<0.03	<0.03
1,3-Dichloropropene (Cis + Trans)	0.05	<0.05	<0.05	<0.05	<0.05
Ethylbenzene	0.05	<0.05	<0.05	<0.05	<0.05
Ethylene Dibromide	0.05	<0.04	<0.04	<0.04	<0.04
Hexane, n-	0.05	<0.05	<0.05	<0.05	<0.05
Methyl Ethyl Ketone	0.5	<0.50	<0.50	<0.50	<0.50
Methyl Isobutyl Ketone	0.5	<0.50	<0.50	<0.50	<0.50
Methyl tert-butyl Ether	0.05	<0.05	<0.05	<0.05	<0.05
Methylene Chloride	0.05	<0.05	<0.05	<0.05	<0.05
Styrene	0.05	<0.05	<0.05	<0.05	<0.05
Tetrachloroethane, 1,1,1,2-	0.05	<0.04	<0.04	<0.04	<0.04
Tetrachloroethane, 1,1,2,2-	0.05	<0.05	<0.05	<0.05	<0.05
Tetrachloroethylene	0.05	<0.05	<0.05	<0.05	<0.05
Toluene	0.2	<0.05	<0.05	<0.05	<0.05
Trichloroethane, 1,1,1-	0.05	<0.05	<0.05	<0.05	<0.05
Trichloroethane, 1,1,2-	0.05	<0.04	<0.04	<0.04	<0.04
Trichloroethylene	0.05	<0.03	<0.03	<0.03	<0.03
Trichlorofluoromethane	0.25	<0.05	<0.05	<0.05	<0.05
Vinyl Chloride	0.02	<0.02	<0.02	<0.02	<0.02
Xylene mixture	0.05	<0.05	<0.05	<0.05	<0.05

See "Notes for Soil and Groundwater Summary"



**Table 7C Soil Analytical Results - PAHs**

Parameter		BH21-9 SS3	BH21-9 SS4	BH21-10 S3	BH21-11 SS2	BH21-13 SS1	BH21-14 S3	BH21-15 S2
Date of Collection	Table 8 RPIICC	Nov 05, 2021	Nov 05, 2021	Oct 27, 2021	Nov 04, 2021	Nov 15, 2021	Oct 27, 2021	Oct 27, 2021
Date Reported		Nov 16, 2021	Dec 20, 2021	Nov 08, 2021	Nov 16, 2021	Nov 27, 2021	Nov 08, 2021	Nov 08, 2021
Sampling Depth (mbgs)		1.5 - 2.1	2.3 - 2.9	1.2 - 1.8	0.8 - 1.4	0.0 - 0.6	1.2 - 1.8	0.6 - 1.2
Analytical Report Reference No.		21T826519	21T839249	21T822752	21T826519	21T830287	21T822752	21T822752
Naphthalene	0.09	<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
Acenaphthene	0.072	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Fluorene	0.19	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Phenanthrene	0.69	0.1	0.22	<0.05	<0.05	<0.05	<0.05	<0.05
Anthracene	0.22	0.18	0.07	<0.05	<0.05	<0.05	<0.05	<0.05
Fluoranthene	0.69	0.19	0.44	<0.05	<0.05	<0.05	<0.05	<0.05
Pyrene	1	0.18	0.41	<0.05	<0.05	<0.05	<0.05	<0.05
Benzo(a)anthracene	0.36	<0.05	0.2	<0.05	<0.05	<0.05	<0.05	<0.05
Chrysene	2.8	<0.05	0.12	<0.05	<0.05	<0.05	<0.05	<0.05
Benzo(b)fluoranthene	0.47	0.05	0.18	<0.05	<0.05	<0.05	<0.05	<0.05
Benzo(k)fluoranthene	0.48	0.06	0.09	<0.05	<0.05	<0.05	<0.05	<0.05
Benzo(a)pyrene	0.3	<0.05	0.16	<0.05	<0.05	<0.05	<0.05	<0.05
Indeno(1,2,3-cd)pyrene	0.23	<0.05	0.07	<0.05	<0.05	<0.05	<0.05	<0.05
Dibenz(a,h)anthracene	0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Benzo(g,h,i)perylene	0.68	<0.05	0.08	<0.05	<0.05	<0.05	<0.05	<0.05
Methylnaphthalene, 2-(1-)	0.59	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05

See "Notes for Soil and Groundwater Summary"

Table 7C Soil Analytical Results - PAHs

Parameter		BH21-25 SS1	BH21-26 S1	BH21-27 S2	BH21-28 SS3	QAQC-5	BH21-29 S1	BH21-30 SS1
Date of Collection	Table 8 RPIICC	Nov 16, 2021	Oct 28, 2021	Oct 28, 2021	Nov 08, 2021	Nov 08, 2021	Oct 28, 2021	Nov 08, 2021
Date Reported		Nov 26, 2021	Nov 08, 2021	Nov 08, 2021	Nov 20, 2021	Nov 20, 2021	Nov 08, 2021	Nov 20, 2021
Sampling Depth (mbgs)		0.0 - 0.6	0.0 - 0.6	0.6 - 1.2	1.5 - 2.1	1.5 - 2.1	0.0 - 0.6	0.0 - 0.6
Analytical Report Reference No.		21T830891	21T822752	21T822752	21T827359	21T827359	21T822752	21T827359
Naphthalene	0.09	<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
Acenaphthene	0.072	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Fluorene	0.19	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Phenanthrene	0.69	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Anthracene	0.22	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Fluoranthene	0.69	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Pyrene	1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.05
Benz(a)anthracene	0.36	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Chrysene	2.8	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Benzo(b)fluoranthene	0.47	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Benzo(k)fluoranthene	0.48	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Benzo(a)pyrene	0.3	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Indeno(1,2,3-cd)pyrene	0.23	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Dibenz(a,h)anthracene	0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Benzo(g,h,i)perylene	0.68	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Methylnaphthalene, 2-(1-)	0.59	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05

See "Notes for Soil and Groundwater Summary"

Table 7C Soil Analytical Results - PAHs

Parameter		BH21-31 S3	BH21-32 SS3	BH21-33 S1	BH21-34 S3	QAQC-3	BH21-35 S3	BH21-36 SS3
Date of Collection	Table 8 RPIICC	Nov 05, 2021	Nov 15, 2021	Oct 28, 2021	Oct 28, 2021		Oct 27, 2021	Nov 16, 2021
Date Reported		Nov 16, 2021	Nov 27, 2021	Nov 08, 2021	Nov 08, 2021		Nov 08, 2021	Nov 26, 2021
Sampling Depth (mbgs)		1.2 - 1.8	1.5 - 2.1	0.0 - 0.6	1.2 - 1.8		1.2 - 1.8	1.5 - 2.1
Analytical Report Reference No.		21T826519	21T830287	21T822752	21T822752		21T822752	21T830891
Naphthalene	0.09	<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
Acenaphthene	0.072	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Fluorene	0.19	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Phenanthrene	0.69	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Anthracene	0.22	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Fluoranthene	0.69	<0.05	<0.05	<0.05	<0.05	<0.05	0.25	<0.05
Pyrene	1	<0.05	<0.05	<0.05	<0.05	<0.05	0.18	<0.05
Benz(a)anthracene	0.36	<0.05	<0.05	<0.05	<0.05	<0.05	0.08	<0.05
Chrysene	2.8	<0.05	<0.05	<0.05	<0.05	<0.05	0.14	<0.05
Benzo(b)fluoranthene	0.47	<0.05	<0.05	<0.05	<0.05	<0.05	0.19	<0.05
Benzo(k)fluoranthene	0.48	<0.05	<0.05	<0.05	<0.05	<0.05	0.17	<0.05
Benzo(a)pyrene	0.3	<0.05	<0.05	<0.05	<0.05	<0.05	0.06	<0.05
Indeno(1,2,3-cd)pyrene	0.23	<0.05	<0.05	<0.05	<0.05	<0.05	0.06	<0.05
Dibenz(a,h)anthracene	0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Benzo(g,h,i)perylene	0.68	<0.05	<0.05	<0.05	<0.05	<0.05	0.06	<0.05
Methylnaphthalene, 2-(1-)	0.59	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05

See "Notes for Soil and Groundwater Summary"

Table 7C Soil Analytical Results - PAHs

Parameter		BH21-37 S3	BH21-38 S1	BH21-39 S3	BH21-40 S1	BH21-40 S3	BH21-41 S1
Date of Collection	Table 8 RPIICC	Oct 27, 2021	Oct 27, 2021	Nov 05, 2021	Oct 27, 2021	Oct 27, 2021	Nov 05, 2021
Date Reported		Nov 08, 2021	Nov 08, 2021	Nov 16, 2021	Dec 20, 2021	Nov 08, 2021	Nov 16, 2021
Sampling Depth (mbgs)		1.2 - 1.8	0.0 - 0.6	1.2 - 1.8	0.0 - 0.6	1.2 - 1.8	0.0 - 0.6
Analytical Report Reference No.		21T822752	21T822752	21T826519	21T839249	21T822752	21T826519
Naphthalene	0.09	<0.05	0.07	<0.05	0.31	0.1	0.08
Acenaphthylene	0.093	<0.05	<0.05	<0.05	0.14	0.06	0.08
Acenaphthene	0.072	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Fluorene	0.19	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Phenanthrene	0.69	<0.05	0.07	<0.05	0.78	0.19	0.08
Anthracene	0.22	<0.05	0.05	<0.05	0.27	0.12	0.06
Fluoranthene	0.69	<0.05	0.14	<0.05	2.11	0.47	0.38
Pyrene	1	<0.05	0.12	<0.05	1.94	0.37	0.36
Benzo(a)anthracene	0.36	<0.05	0.07	<0.05	1.13	0.19	0.18
Chrysene	2.8	<0.05	0.11	<0.05	1.25	0.16	0.14
Benzo(b)fluoranthene	0.47	<0.05	0.21	<0.05	1.61	0.53	0.25
Benzo(k)fluoranthene	0.48	<0.05	0.23	<0.05	0.63	0.5	0.24
Benzo(a)pyrene	0.3	<0.05	<0.05	<0.05	0.86	0.09	<0.05
Indeno(1,2,3-cd)pyrene	0.23	<0.05	0.09	<0.05	0.48	0.2	0.08
Dibenz(a,h)anthracene	0.1	<0.05	<0.05	<0.05	0.13	0.05	<0.05
Benzo(g,h,i)perylene	0.68	<0.05	0.13	<0.05	0.55	0.2	0.08
Methylnaphthalene, 2-(1-)	0.59	<0.05	<0.05	<0.05	0.82	0.32	0.18

See "Notes for Soil and Groundwater Summary"

**Table 8C Soil Analytical Results - PCBs and OC Pesticides**

Parameter		BH21-9 SS1	BH21-10 S2	BH21-11 SS2	BH21-14 S1	BH21-15 S2	BH21-26 S1	BH21-27 S2
Date of Collection	Table 8 RPIICC	Nov 05, 2021	Oct 27, 2021	Nov 04, 2021	Oct 27, 2021	Oct 27, 2021	Oct 28, 2021	Oct 28, 2021
Date Reported		Nov 16, 2021	Nov 08, 2021	Nov 16, 2021	Nov 08, 2021	Nov 08, 2021	Nov 08, 2021	Nov 08, 2021
Sampling Depth (m bgs)		0.0 - 0.6	0.6 - 1.2	0.8 - 1.4	0.0 - 0.6	0.6 - 1.2	0.0 - 0.6	0.6 - 1.2
Analytical Report Reference No.		21T826519	21T822752	21T826519	21T822752	21T822752	21T822752	21T822752
Polychlorinated Biphenyls	0.3	<0.10	<0.10	-	<0.10	<0.10	<0.10	<0.10
Aldrin	0.05	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Chlordane	0.05	<0.007	<0.007	<0.007	<0.007	<0.007	<0.007	<0.007
DDD	0.05	<0.007	<0.007	<0.007	<0.007	<0.007	<0.007	<0.007
DDE	0.05	<0.007	<0.007	<0.007	<0.007	<0.007	<0.007	<0.007
DDT	1.4	<0.007	<0.007	<0.007	<0.007	<0.007	<0.007	<0.007
Dieldrin	0.05	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Endosulfan	0.04	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Endrin	0.04	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Heptachlor	0.05	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Heptachlor Epoxide	0.05	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Hexachlorobenzene	0.02	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Hexachlorobutadiene	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Hexachlorocyclohexane Gamma-	0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Hexachloroethane	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Methoxychlor	0.05	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005

See "Notes for Soil and Groundwater Summary Tables" included at the beginning of this Section

**Table 8C Soil Analytical Results - PCBs and OC**

Parameter		BH21-28 SS3	QAQC-5	BH21-29 S1	BH21-30 SS1	BH21-31 S2	BH21-33 S2	BH21-34 S1	QAQC-1
Date of Collection	Table 8 RPIICC	Nov 08, 2021		Oct 28, 2021	Nov 08, 2021	Nov 05, 2021	Oct 28, 2021	Oct 28, 2021	
Date Reported		Nov 20, 2021		Nov 08, 2021	Nov 20, 2021	Nov 16, 2021	Nov 08, 2021	Nov 08, 2021	
Sampling Depth (m bgs)		1.5 - 2.1		0.0 - 0.6	0.0 - 0.6	0.6 - 1.2	0.6 - 1.2	0.0 - 0.6	
Analytical Report Reference No.		21T827359		21T822752	21T827359	21T826519	21T822752	21T822752	
Polychlorinated Biphenyls	0.3	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Aldrin	0.05	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Chlordane	0.05	<0.007	<0.007	<0.007	<0.007	<0.007	<0.007	<0.007	<0.007
DDD	0.05	<0.007	<0.007	<0.007	<0.007	<0.007	<0.007	<0.007	<0.007
DDE	0.05	<0.007	<0.007	<0.007	<0.007	<0.007	<0.007	<0.007	<0.007
DDT	1.4	<0.007	<0.007	<0.007	<0.007	<0.007	<0.007	<0.007	<0.007
Dieldrin	0.05	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Endosulfan	0.04	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Endrin	0.04	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Heptachlor	0.05	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Heptachlor Epoxide	0.05	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Hexachlorobenzene	0.02	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Hexachlorobutadiene	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Hexachlorocyclohexane Gamma-	0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Hexachloroethane	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Methoxychlor	0.05	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005

See "Notes for Soil and Groundwater Summary Tables" included at the beginning of this Section

**Table 8C Soil Analytical Results - PCBs and OC**

Parameter		BH21-35 S2	BH21-37 S2	BH21-38 S3	BH21-39 S3	BH21-40 S1	BH21-41 SS2
Date of Collection	Table 8 RPIICC	Oct 27, 2021	Oct 27, 2021	Oct 27, 2021	Nov 05, 2021	Oct 27, 2021	Nov 05, 2021
Date Reported		Nov 08, 2021	Nov 08, 2021	Nov 08, 2021	Nov 16, 2021	Nov 08, 2021	Nov 16, 2021
Sampling Depth (m bgs)		0.6 - 1.2	0.6 - 1.2	1.2 - 1.8	1.2 - 1.8	0.0 - 0.6	0.8 - 1.4
Analytical Report Reference No.		21T822752	21T822752	21T822752	21T826519	21T822752	21T826519
Polychlorinated Biphenyls	0.3	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Aldrin	0.05	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Chlordane	0.05	<0.007	<0.007	<0.007	<0.007	<0.007	<0.007
DDD	0.05	<0.007	<0.007	<0.007	<0.007	<0.007	<0.007
DDE	0.05	<0.007	<0.007	<0.007	<0.007	<0.007	<0.007
DDT	1.4	<0.007	<0.007	<0.007	<0.007	<0.007	<0.007
Dieldrin	0.05	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Endosulfan	0.04	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Endrin	0.04	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Heptachlor	0.05	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Heptachlor Epoxide	0.05	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Hexachlorobenzene	0.02	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Hexachlorobutadiene	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Hexachlorocyclohexane Gamma-	0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Hexachloroethane	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Methoxychlor	0.05	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005

See "Notes for Soil and Groundwater Summary Tables" included at the beginning of this Section

**Table 9C Groundwater Analytical Results - Metals & ORPs**

Parameter		BH21-9	BH21-11	BH21-13	BH21-25	BH21-28
Date of Collection	Table 8 Potable GW	Nov 30, 2021	Nov 30, 2021	Nov 30, 2021	Dec 01, 2021	Dec 01, 2021
Date Reported		Dec 16, 2021	Dec 16, 2021	Dec 16, 2021	Dec 16, 2021	Dec 16, 2021
Screened Depth (mbgs)		1.9 - 4.9	5.5 - 8.5	3.7 - 6.7	4.6 - 7.6	6.1 - 9.1
Analytical Report Reference No.		21T838602	21T838602	21T838602	21T838602	21T838602
Antimony	6	<1.0	<1.0	<1.0	<1.0	<1.0
Arsenic	25	<1.0	<1.0	<1.0	<1.0	5.7
Barium	1000	54	134	102	189	79.5
Beryllium	4	<0.50	<0.50	<0.50	<0.50	<0.50
Boron	5000	85	61	36	117	222
Cadmium	2.1	<0.20	<0.20	<0.20	<0.20	<0.20
Chromium	50	<2.0	<2.0	<2.0	<2.0	<2.0
Chromium VI	25	<2.0	<2.0	<2.0	<2.0	<2.0
Cobalt	3.8	2.06	<0.50	<0.50	<0.50	<0.50
Copper	69	<1.0	1.3	<1.0	<1.0	<1.0
Cyanide	52	<2.0	<2.0	<2.0	<2.0	<2.0
Lead	10	<0.50	<0.50	0.53	<0.50	<0.50
Mercury	0.29	<0.02	<0.02	<0.02	<0.02	<0.02
Molybdenum	70	3.5	<0.50	0.7	5.47	4.81
Nickel	100	3.9	1.2	<1.0	1.3	<1.0
Selenium	10	1	1.7	<1.0	<1.0	<1.0
Silver	1.2	<0.20	<0.20	<0.20	<0.20	<0.20
Thallium	2	<0.30	<0.30	<0.30	<0.30	<0.30
Uranium	20	0.73	<0.50	0.88	5.02	<0.50
Vanadium	6.2	<0.40	<0.40	<0.40	<0.40	<0.40
Zinc	890	<5.0	<5.0	<5.0	<5.0	<5.0
Sodium	490000	92000	135000	349000	18600	33000
Chloride	790000	162000	285000	557000	12800	17600

See "Notes for Soil and Groundwater Summary"



**Table 10C Groundwater Analytical Results - PHCs&BTEX**

Parameter		BH21-9	BH21-11	BH21-13	BH21-25	BH21-28	BH21-30	BH21-36
Date of Collection	Table 8 Potable GW	Nov 30, 2021	Nov 30, 2021	Nov 30, 2021	Dec 01, 2021	Dec 01, 2021	Dec 13, 2021	Nov 23, 2021
Date Reported		Dec 16, 2021	Dec 16, 2021	Dec 16, 2021	Dec 16, 2021	Dec 16, 2021	Dec 15, 2021	Dec 03, 2021
Screened Depth (mbgs)		1.9 - 4.9	5.5 - 8.5	3.7 - 6.7	4.6 - 7.6	6.1 - 9.1	6.1 - 9.1	4.6 - 7.6
Analytical Report Reference No.		21T838602	21T838602	21T838602	21T838602	21T838602	21T843989	21T834096
Benzene	5	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Toluene	22	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Ethylbenzene	2.4	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Xylene Mixture	300	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
F1 (C6 to C10) minus BTEX	420	<25	<25	<25	<25	<25	<25	<25
F2 (C10 to C16)	150	<100	<100	<100	<100	<100	<100	<100
F3 (C16 to C34)	500	<100	<100	<100	<100	<100	<100	<100
F4 (C34 to C50)	500	<100	<100	<100	<100	<100	<100	<100

See "Notes for Soil and Groundwater Summary"

Table 11C Groundwater Analytical Results - VOCs

Parameter		BH21-36	BH21-9	BH21-13	BH21-25	BH21-28
Date of Collection	Table 8 Potable GW	Nov 23, 2021	Nov 30, 2021	Nov 30, 2021	Dec 01, 2021	Dec 01, 2021
Date Reported		Dec 03, 2021	Dec 16, 2021	Dec 16, 2021	Dec 16, 2021	Dec 16, 2021
Screened Depth (mbgs)		4.6 - 7.6	1.9 - 4.9	3.7 - 6.7	4.6 - 7.6	6.1 - 9.1
Analytical Report Reference No.		21T834096	21T838602	21T838602	21T838602	21T838602
Acetone	2700	<1.0	<1.0	<1.0	<1.0	<1.0
Benzene	5	<0.20	<0.20	<0.20	<0.20	<0.20
Bromodichloromethane	16	<0.20	<0.20	<0.20	<0.20	<0.20
Bromoform	25	<0.10	<0.10	<0.10	<0.10	<0.10
Bromomethane	0.89	<0.20	<0.20	<0.20	<0.20	<0.20
Carbon Tetrachloride	0.79	<0.20	<0.20	<0.20	<0.20	<0.20
Chlorobenzene	30	<0.10	<0.10	<0.10	<0.10	<0.10
Chloroform	2.4	<0.20	<0.20	<0.20	<0.20	<0.20
Dibromochloromethane	25	<0.10	<0.10	<0.10	<0.10	<0.10
Dichlorobenzene, 1,2-	3	<0.10	<0.10	<0.10	<0.10	<0.10
Dichlorobenzene, 1,3-	59	<0.10	<0.10	<0.10	<0.10	<0.10
Dichlorobenzene, 1,4-	1	<0.10	<0.10	<0.10	<0.10	<0.10
Dichlorodifluoromethane	590	<0.20	<0.20	<0.20	<0.20	<0.20
Dichloroethane, 1,1-	5	<0.30	<0.30	<0.30	<0.30	<0.30
Dichloroethane, 1,2-	1.6	<0.20	<0.20	<0.20	<0.20	<0.20
Dichloroethylene, 1,1-	1.6	<0.30	<0.30	<0.30	<0.30	<0.30
Dichloroethylene, cis- 1,2-	1.6	<0.20	<0.20	<0.20	<0.20	<0.20
Dichloroethylene, trans- 1,2-	1.6	<0.20	<0.20	<0.20	<0.20	<0.20
Dichloropropane, 1,2-	5	<0.20	<0.20	<0.20	<0.20	<0.20
Dichloropropene, 1,3-	0.5	<0.30	<0.30	<0.30	<0.30	<0.30
Ethylbenzene	2.4	<0.10	<0.10	<0.10	<0.10	<0.10
Ethylene Dibromide	0.2	<0.10	<0.10	<0.10	<0.10	<0.10
Hexane, n-	51	<0.20	<0.20	<0.20	<0.20	<0.20
Methyl Ethyl Ketone	1800	<1.0	<1.0	<1.0	<1.0	<1.0
Methyl Isobutyl Ketone	640	<1.0	<1.0	<1.0	<1.0	<1.0
Methyl tert-butyl ether	15	<0.20	<0.20	<0.20	<0.20	<0.20
Methylene Chloride	50	<0.30	<0.30	<0.30	<0.30	<0.30
Styrene	5.4	<0.10	<0.10	<0.10	<0.10	<0.10
Tetrachloroethane, 1,1,1,2-	1.1	<0.10	<0.10	<0.10	<0.10	<0.10
Tetrachloroethane, 1,1,2,2-	1	<0.10	<0.10	<0.10	<0.10	<0.10
Tetrachloroethylene	1.6	<0.20	<0.20	<0.20	<0.20	<0.20
Toluene	22	<0.20	<0.20	<0.20	<0.20	<0.20
Trichloroethane, 1,1,1-	200	<0.30	<0.30	<0.30	<0.30	<0.30
Trichloroethane, 1,1,2-	4.7	<0.20	<0.20	<0.20	<0.20	<0.20
Trichloroethylene	1.6	<0.20	<0.20	<0.20	<0.20	<0.20
Trichlorofluoromethane	150	<0.40	<0.40	<0.40	<0.40	<0.40
Vinyl Chloride	0.5	<0.17	<0.17	<0.17	<0.17	<0.17
Xylene Mixture	300	<0.20	<0.20	<0.20	<0.20	<0.20

See "Notes for Soil and Groundwater Summary

**Table 12C Groundwater Analytical Results - PAHs**

Parameter		BH21-9	BH21-11	BH21-13	BH21-25	BH21-28	BH21-36
Date of Collection	Table 8 Potable GW	Nov 30, 2021	Nov 30, 2021	Nov 30, 2021	Dec 01, 2021	Dec 01, 2021	Nov 23, 2021
Date Reported		Dec 16, 2021	Dec 16, 2021	Dec 16, 2021	Dec 16, 2021	Dec 16, 2021	Dec 03, 2021
Screened Depth (mbgs)		1.9 - 4.9	5.5 - 8.5	3.7 - 6.7	4.6 - 7.6	6.1 - 9.1	4.6 - 7.6
Analytical Report Reference No.		21T838602	21T838602	21T838602	21T838602	21T838602	21T834096
Acenaphthene	4.1	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Acenaphthylene	1	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Anthracene	1	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Benz(a)anthracene	1	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Benzo(a)pyrene	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Benzo(b)fluoranthene	0.1	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Benzo(g,h,i)perylene	0.2	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Benzo(k)fluoranthene	0.1	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Chrysene	0.1	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Dibenz(a,h)anthracene	0.2	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Fluoranthene	0.41	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Fluorene	120	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Indeno(1,2,3-cd)pyrene	0.2	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Methyl Naphthalene, 2-and 1-	3.2	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Naphthalene	11	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Phenanthrene	1	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Pyrene	4.1	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20

See "Notes for Soil and Groundwater Summary"

Table 13C Groundwater Analytical Results - PCBs and OC Pesticides

Parameter		BH21-9	BH21-11	BH21-28
Date of Collection	Table 8 Potable GW	Nov 30, 2021	Nov 30, 2021	Dec 01, 2021
Date Reported		Dec 16, 2021	Dec 16, 2021	Dec 16, 2021
Screened Depth (mbgs)		1.9 - 4.9	5.5 - 8.5	6.1 - 9.1
Analytical Report Reference No.		21T838602	21T838602	21T838602
Polychlorinated Biphenyls	0.2	<0.1	<0.1	<0.1
Aldrin	0.35	-	-	-
Chlordane	0.06	-	-	-
DDD	1.8	-	-	-
DDE	10	-	-	-
DDT	0.05	-	-	-
Dieldrin	0.35	-	-	-
Endosulfan	0.56	-	-	-
Endrin	0.36	-	-	-
Heptachlor	0.038	-	-	-
Heptachlor Epoxide	0.038	-	-	-
Hexachlorobenzene	1	-	-	-
Hexachlorobutadiene	0.44	-	-	-
Hexachlorocyclohexane Gamma-	0.95	-	-	-
Hexachloroethane	2.1	-	-	-
Methoxychlor	0.3	-	-	-

See "Notes for Soil and Groundwater Summary Tables" included at the end of this Section

**Table 14C Summary of Maximum Concentrations in Soil**

Group	Parameter	Table 8 RPIICC	Maximum Concentration	Location
BTEX	Benzene	0.02	0.006	BH21-41 S1
	Ethylbenzene	0.05	0.01	BH21-41 S1
	Toluene	0.2	<0.05	all samples
	Total Xylenes	0.05	0.22	BH21-41 S1
Metals	Barium	220	147	BH21-30 SS2
	Beryllium	2.5	1.4	BH21-10 S1
	Boron	36	21	BH21-35 S1
	Cadmium	1.2	<0.5	all samples
	Chromium	70	32	BH21-30 SS2
	Cobalt	22	16.3	BH21-28 SS1
	Copper	92	64.7	BH21-10 S1
	Lead	120	205	BH21-36 SS1
	Molybdenum	2	11	BH21-10 S1
	Nickel	82	33	BH21-30 SS2
	Silver	0.5	<0.5	all samples
	Thallium	1	0.6	BH21-10 S1
	Uranium	2.5	0.73	BH21-10 S1
	Vanadium	86	42.7	BH21-30 SS2
	Zinc	290	179	BH21-36 SS1
As, Se, Sb	Antimony	1.3	3.5	BH21-10 S1
	Arsenic	18	26	BH21-41 S2
	Selenium	1.5	2.1	BH21-10 S1
PAHs	Acenaphthene	0.072	<0.05	all samples
	Acenaphthylene	0.093	0.14	BH21-40 S1
	Anthracene	0.22	0.27	BH21-40 S1
	Benz(a)anthracene	0.36	1.13	BH21-40 S1
	Benzo(a)pyrene	0.3	0.86	BH21-40 S1
	Benzo(b)fluoranthene	0.47	1.61	BH21-40 S1
	Benzo(g,h,i)perylene	0.68	0.55	BH21-40 S1
	Benzo(k)fluoranthene	0.48	0.63	BH21-40 S1
	Chrysene	2.8	1.25	BH21-40 S1
	Dibenz(a,h)anthracene	0.1	0.13	BH21-40 S1
	Fluoranthene	0.69	2.11	BH21-40 S1
	Fluorene	0.19	<0.05	all samples
	Indeno(1,2,3-cd)pyrene	0.23	0.48	BH21-40 S1
	Methylnaphthalene, 2-(1-)	0.59	0.82	BH21-40 S1
	Naphthalene	0.09	0.31	BH21-40 S1
	Phenanthrene	0.69	0.78	BH21-40 S1
	Pyrene	1	1.94	BH21-40 S1
PHCs	F1 (C6 to C10) minus BTEX	25	10	BH21-41 S1
	F2 (C10 to C16)	10	13	BH21-31 S2
	F3 (C16 to C34)	240	75	BH21-41 S1
	F4 (C34 to C50)	120	<50	all samples
	Acetone	0.5	<0.50	all samples
	Bromodichloromethane	0.05	<0.05	all samples
	Bromoform	0.05	<0.05	all samples
	Bromomethane	0.05	<0.05	all samples
	Carbon Tetrachloride	0.05	<0.05	all samples
	Chlorobenzene	0.05	<0.05	all samples
	Chloroform	0.05	<0.04	all samples
	Dibromochloromethane	0.05	<0.05	all samples
	Dichlorobenzene, 1,2-	0.05	<0.05	all samples

**Table 14C Summary of Maximum Concentrations in Soil**

Group	Parameter	Table 8 RPIICC	Maximum Concentration	Location
VOCs	Dichlorobenzene, 1,3-	0.05	<0.05	all samples
	Dichlorobenzene, 1,4-	0.05	<0.05	all samples
	Dichlorodifluoromethane	0.05	<0.05	all samples
	Dichloroethane, 1,1-	0.05	<0.02	all samples
	Dichloroethane, 1,2-	0.05	<0.03	all samples
	Dichloroethylene, 1,1-	0.05	<0.05	all samples
	Dichloroethylene, Cis- 1,2-	0.05	<0.02	all samples
	Dichloroethylene, Trans- 1,2-	0.05	<0.05	all samples
	Dichloropropane, 1,2-	0.05	<0.03	all samples
	1,3-Dichloropropene (Cis + Trans)	0.05	<0.05	all samples
	Ethylene Dibromide	0.05	<0.04	all samples
	Hexane, n-	0.05	<0.05	all samples
	Methyl Ethyl Ketone	0.5	<0.50	all samples
	Methyl Isobutyl Ketone	0.5	<0.50	all samples
	Methyl tert-butyl Ether	0.05	<0.05	all samples
	Methylene Chloride	0.05	<0.05	all samples
	Styrene	0.05	<0.05	all samples
	Tetrachloroethane, 1,1,1,2-	0.05	<0.04	all samples
	Tetrachloroethane, 1,1,2,2-	0.05	<0.05	all samples
	Tetrachloroethylene	0.05	<0.05	all samples
	Trichloroethane, 1,1,1-	0.05	<0.05	all samples
	Trichloroethane, 1,1,2-	0.05	<0.04	all samples
	Trichloroethylene	0.05	<0.03	all samples
Trichlorofluoromethane	0.25	<0.05	all samples	
Vinyl Chloride	0.02	<0.02	all samples	
ORPs	Chromium, Hexavalent	0.66	<0.2	all samples
	Cyanide, Free	0.051	<0.040	all samples
	Electrical Conductivity (2:1)	0.7	0.342	BH21-28 SS1
	Mercury	0.27	0.32	BH21-32 SS1
	Sodium Adsorption Ratio	5	0.758	BH21-39 S1
	pH, 2:1 CaCl2 Extraction	*	7.91	QAQC-2
PCBs	Polychlorinated Biphenyls	0.3	<0.10	all samples

See "Notes for Soil and Groundwater Summary Tables" included at the beginning of this Section

**Table 15C Summary of Maximum Concentrations in Groundwater**

Group	Parameter	Table 8 Potable GW	Maximum Concentration	Location
BTEX	Benzene	5	<0.20	all samples
	Ethylbenzene	2.4	<0.10	all samples
	Toluene	22	<0.20	all samples
	Xylene Mixture	300	<0.10	all samples
Metals	Barium	1000	189	BH21-25
	Beryllium	4	<0.50	all samples
	Boron	5000	222	BH21-28
	Cadmium	2.1	<0.20	all samples
	Chromium	50	<2.0	all samples
	Cobalt	3.8	2.06	all samples
	Copper	69	1.3	all samples
	Lead	10	0.53	BH21-13
	Molybdenum	70	5.47	BH21-25
	Nickel	100	3.9	BH21-25
	Silver	1.2	<0.20	all samples
	Thallium	2	<0.30	all samples
	Uranium	20	5.02	BH21-25
	Vanadium	6.2	<0.40	all samples
Zinc	890	<5.0	all samples	
As, Se, Sb	Antimony	6	<1.0	all samples
	Arsenic	25	5.7	BH21-28
	Selenium	10	1.7	all samples
Na	Sodium	490000	349000	BH21-13
PAHs	Acenaphthene	4.1	<0.20	all samples
	Acenaphthylene	1	<0.20	all samples
	Anthracene	1	<0.10	all samples
	Benz(a)anthracene	1	<0.20	all samples
	Benzo(a)pyrene	0.01	<0.01	all samples
	Benzo(b)fluoranthene	0.1	<0.10	all samples
	Benzo(g,h,i)perylene	0.2	<0.20	all samples
	Benzo(k)fluoranthene	0.1	<0.10	all samples
	Chrysene	0.1	<0.10	all samples
	Dibenz(a,h)anthracene	0.2	<0.20	all samples
	Fluoranthene	0.41	<0.20	all samples
	Fluorene	120	<0.20	all samples
	Indeno(1,2,3-cd)pyrene	0.2	<0.20	all samples
	Methyl Naphthalene, 2-and 1-	3.2	<0.20	all samples
	Naphthalene	11	<0.20	all samples
	Phenanthrene	1	<0.10	all samples
	Pyrene	4.1	<0.20	all samples
PHCs	F1 (C6 to C10) minus BTEX	420	<25	all samples
	F2 (C10 to C16)	150	<100	all samples
	F3 (C16 to C34)	500	<100	all samples
	F4 (C34 to C50)	500	<100	all samples
	Acetone	2700	<1.0	all samples
	Bromodichloromethane	16	<0.20	all samples
	Bromoform	25	<0.10	all samples
	Bromomethane	0.89	<0.20	all samples
	Carbon Tetrachloride	0.79	<0.20	all samples
	Chlorobenzene	30	<0.10	all samples
	Chloroform	2.4	<0.20	all samples
	Dibromochloromethane	25	<0.10	all samples

**Table 15C Summary of Maximum Concentrations in Groundwater**

Group	Parameter	Table 8 Potable GW	Maximum Concentration	Location
VOCs	Dichlorobenzene, 1,2-	3	<0.10	all samples
	Dichlorobenzene, 1,3-	59	<0.10	all samples
	Dichlorobenzene, 1,4-	1	<0.10	all samples
	Dichlorodifluoromethane	590	<0.20	all samples
	Dichloroethane, 1,1-	5	<0.30	all samples
	Dichloroethane, 1,2-	1.6	<0.20	all samples
	Dichloroethylene, 1,1-	1.6	<0.30	all samples
	Dichloroethylene, cis- 1,2-	1.6	<0.20	all samples
	Dichloroethylene, trans- 1,2-	1.6	<0.20	all samples
	Dichloropropane, 1,2-	5	<0.20	all samples
	Dichloropropene, 1,3-	0.5	<0.30	all samples
	Ethylene Dibromide	0.2	<0.10	all samples
	Hexane, n-	51	<0.20	all samples
	Methyl Ethyl Ketone	1800	<1.0	all samples
	Methyl Isobutyl Ketone	640	<1.0	all samples
	Methyl tert-butyl ether	15	<0.20	all samples
	Methylene Chloride	50	<0.30	all samples
	Styrene	5.4	<0.10	all samples
	Tetrachloroethane, 1,1,1,2-	1.1	<0.10	all samples
	Tetrachloroethane, 1,1,1,2,2-	1	<0.10	all samples
	Tetrachloroethylene	1.6	<0.20	all samples
	Trichloroethane, 1,1,1-	200	<0.30	all samples
	Trichloroethane, 1,1,2-	4.7	<0.20	all samples
Trichloroethylene	1.6	<0.20	all samples	
Trichlorofluoromethane	150	<0.40	all samples	
Vinyl Chloride	0.5	<0.17	all samples	
ORPs	Chloride	790000	557000	BH21-13
	Chromium VI	25	<2.0	all samples
	Cyanide	52	<2.0	all samples
	Mercury	0.29	<0.02	all samples
PCBs	Polychlorinated Biphenyls	0.2	<0.10	all samples

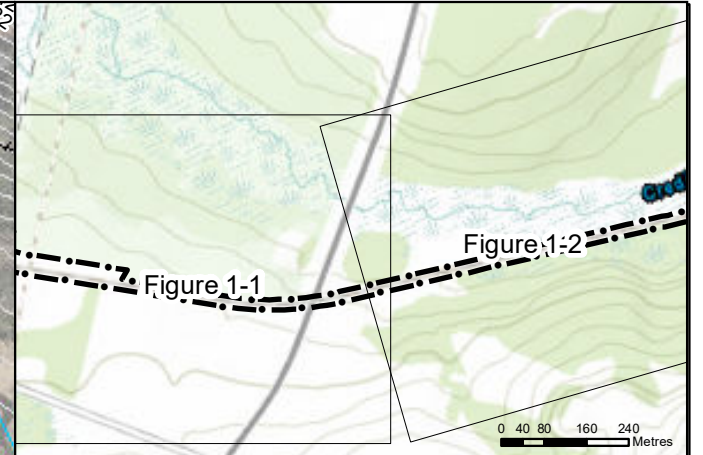
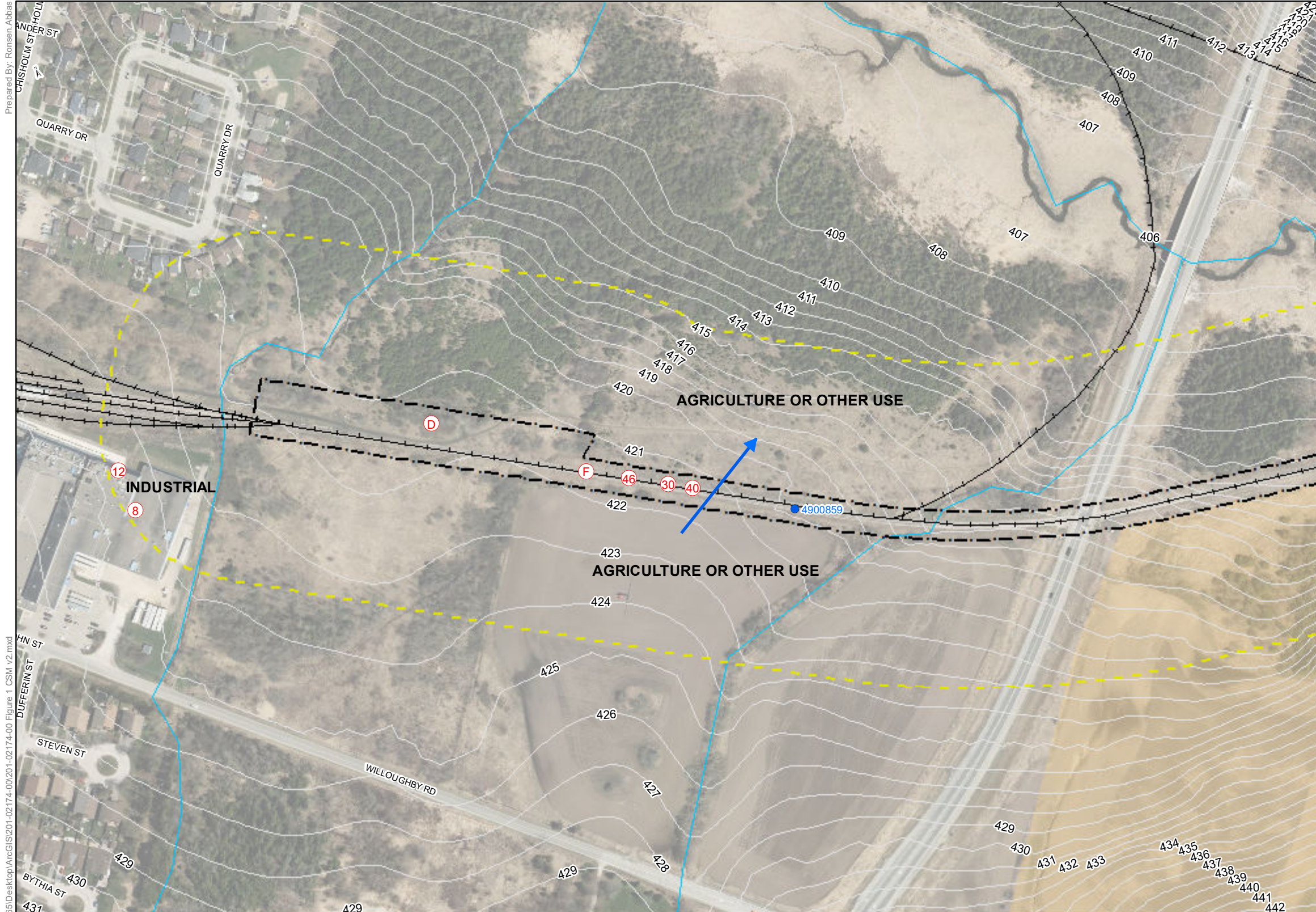
See "Notes for Soil and Groundwater Summary Tables" included at the beginning of this Section



# FIGURES







- POTENTIALLY CONTAMINATING ACTIVITIES (PCAS):**
- ③ AIRSTRIPS AND HANGARS OPERATION
  - ⑤ ASPHALT AND BITUMEN MANUFACTURING
  - ⑧ CHEMICAL MANUFACTURING, PROCESSING AND BULK STORAGE
  - ⑩ COMMERCIAL AUTOBODY SHOPS
  - ⑫ CONCRETE, CEMENT AND LIME MANUFACTURING
  - ⑭ CRUDE OIL REFINING, PROCESSING AND BULK STORAGE
  - ⑰ ELECTRONIC AND COMPUTER EQUIPMENT MANUFACTURING
  - ⑲ GASOLINE AND ASSOCIATED PRODUCTS STORAGE IN FIXED TANKS
  - ⑳ IMPORTATION OF FILL MATERIAL OF UNKNOWN QUALITY
  - ㉑ INK MANUFACTURING, PROCESSING AND BULK STORAGE
  - ㉒ IRON AND STEEL MANUFACTURING AND PROCESSING
  - ㉓ METAL TREATMENT, COATING, PLATING AND FINISHING
  - ㉔ METAL FABRICATION
  - ㉕ MINING, SMELTING AND REFINING; ORE PROCESSING; TAILINGS STORAGE
  - ㉖ OPERATION OF DRY CLEANING EQUIPMENT (WHERE CHEMICALS ARE USED)
  - ㉗ PAINTS MANUFACTURING, PROCESSING AND BULK STORAGE
  - ㉘ PESTICIDES (INCLUDING HERBICIDES, FUNGICIDES AND ANTI-FOULING AGENTS) MANUFACTURING, PROCESSING, BULK STORAGE AND LARGE-SCALE APPLICATIONS
  - ㉙ PLASTICS (INCLUDING FIBREGLASS) MANUFACTURING AND PROCESSING
  - ㉚ PULP, PAPER AND PAPERBOARD MANUFACTURING AND PROCESSING
  - ㉛ RAIL YARDS, TRACKS AND SPURS
  - ㉜ RUBBER MANUFACTURING AND PROCESSING
  - ㉝ SOAP AND DETERGENT MANUFACTURING, PROCESSING AND BULK STORAGE
  - ㉞ SOLVENT MANUFACTURING, PROCESSING AND BULK STORAGE
  - ㉟ TANNERY
  - ㊱ TEXTILE MANUFACTURING AND PROCESSING
  - ㊲ VEHICLES AND ASSOCIATED PARTS MANUFACTURING
  - ㊳ WASTE DISPOSAL AND WASTE MANAGEMENT, INCLUDING THERMAL TREATMENT, LANDFILLING AND TRANSFER OF WASTE, OTHER THAN USE OF BIOSOILS AS SOIL CONDITIONERS
  - ㊴ WOOD TREATING AND PRESERVATIVE FACILITY AND BULK STORAGE OF TREATED AND PRESERVED WOOD PRODUCTS
  - Ⓐ SPILLS
  - Ⓑ MISCELLANEOUS MANUFACTURING
  - Ⓒ COAL STORAGE
  - Ⓓ RAIL TIE PILE
  - Ⓔ PCB STORAGE
  - Ⓕ KNOWN CONTAMINATION

TITLE:  
**PHASE ONE CONCEPTUAL SITE MODEL**

PROJECT:  
**CONTAMINANT OVERVIEW STUDY  
FORMER ORANGEVILLE RAIL,  
CALEDON, ONTARIO**

CLIENT:  
**REGION OF PEEL**

	PROJECT NO.:	201-02174-00	REVIEWED BY:	MB
	DATE:	MAY 2020	FIGURE:	1-1

DATA SOURCE:

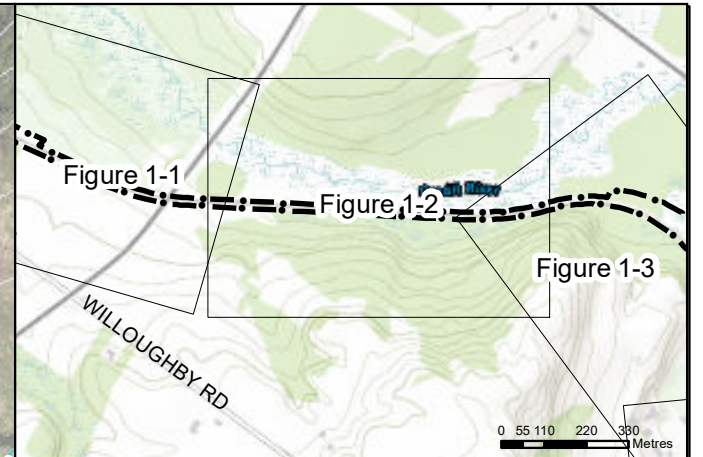
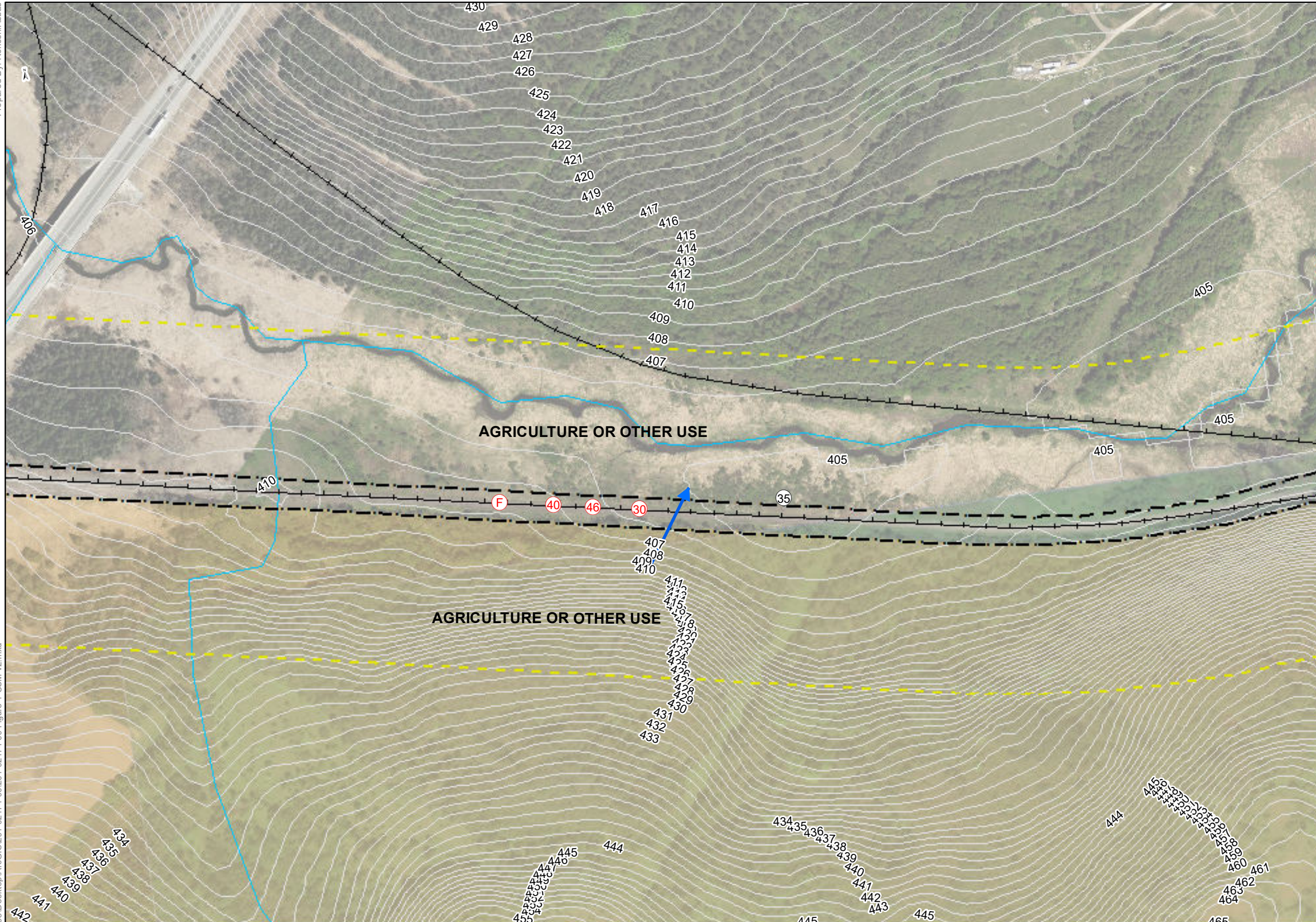
LEGEND:

100m STUDY AREA	RAIL	PCA CONTRIBUTING TO APEC
SUBJECT SITE	Rivers	PCA NOT CONTRIBUTING TO APEC
ANSI	MECP WATER WELL	TANK NOT CONTRIBUTING TO APEC
INFERRED GROUNDWATER FLOW DIRECTION	TANK CONTRIBUTING TO APEC	
1m TOPOGRAPHIC CONTOUR		

0 25 50 100 150 200 Metres

Prepared By: Ronsen, Abbas  
C:\Users\ronsen.abbas\OneDrive - WSP\0365\Desktop\ArcGIS\201-02174-00\201-02174-00 Figure 1\_CSM v2.mxd





- POTENTIALLY CONTAMINATING ACTIVITIES (PCAS):**
- ③ AIRSTRIPS AND HANGARS OPERATION
  - ⑤ ASPHALT AND BITUMEN MANUFACTURING
  - ⑧ CHEMICAL MANUFACTURING, PROCESSING AND BULK STORAGE
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  - ㉔ METAL FABRICATION
  - ㉕ MINING, SMELTING AND REFINING; ORE PROCESSING; TAILINGS STORAGE
  - ㉖ OPERATION OF DRY CLEANING EQUIPMENT (WHERE CHEMICALS ARE USED)
  - ㉗ PAINTS MANUFACTURING, PROCESSING AND BULK STORAGE
  - ㉘ PESTICIDES (INCLUDING HERBICIDES, FUNGICIDES AND ANTI-FOULING AGENTS) MANUFACTURING, PROCESSING, BULK STORAGE AND LARGE-SCALE APPLICATIONS
  - ㉙ PLASTICS (INCLUDING FIBREGLASS) MANUFACTURING AND PROCESSING
  - ㉚ PULP, PAPER AND PAPERBOARD MANUFACTURING AND PROCESSING
  - ㉛ RAIL YARDS, TRACKS AND SPURS
  - ㉜ RUBBER MANUFACTURING AND PROCESSING
  - ㉝ SOAP AND DETERGENT MANUFACTURING, PROCESSING AND BULK STORAGE
  - ㉞ SOLVENT MANUFACTURING, PROCESSING AND BULK STORAGE
  - ㉟ TANNERY
  - ㊱ TEXTILE MANUFACTURING AND PROCESSING
  - ㊲ VEHICLES AND ASSOCIATED PARTS MANUFACTURING
  - ㊳ WASTE DISPOSAL AND WASTE MANAGEMENT, INCLUDING THERMAL TREATMENT, LANDFILLING AND TRANSFER OF WASTE, OTHER THAN USE OF BIOSOILS AS SOIL CONDITIONERS
  - ㊴ WOOD TREATING AND PRESERVATIVE FACILITY AND BULK STORAGE OF TREATED AND PRESERVED WOOD PRODUCTS
  - Ⓐ SPILLS
  - Ⓑ MISCELLANEOUS MANUFACTURING
  - Ⓒ COAL STORAGE
  - Ⓓ RAIL TIE PILE
  - Ⓔ PCB STORAGE
  - Ⓕ KNOWN CONTAMINATION

TITLE:  
**PHASE ONE CONCEPTUAL SITE MODEL**

PROJECT:  
**CONTAMINANT OVERVIEW STUDY  
FORMER ORANGEVILLE RAIL,  
CALEDON, ONTARIO**

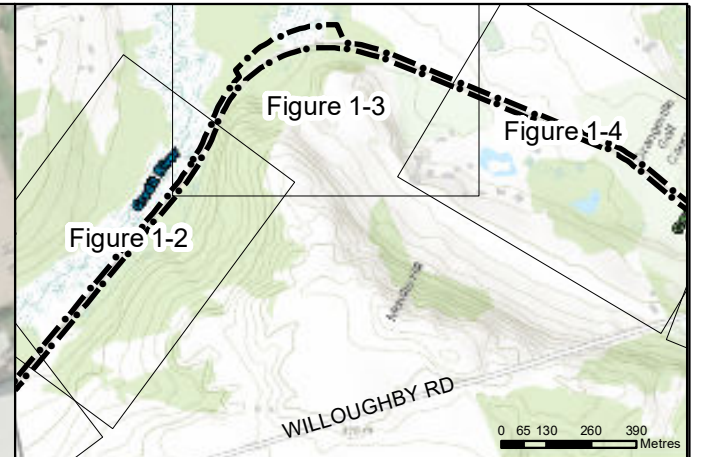
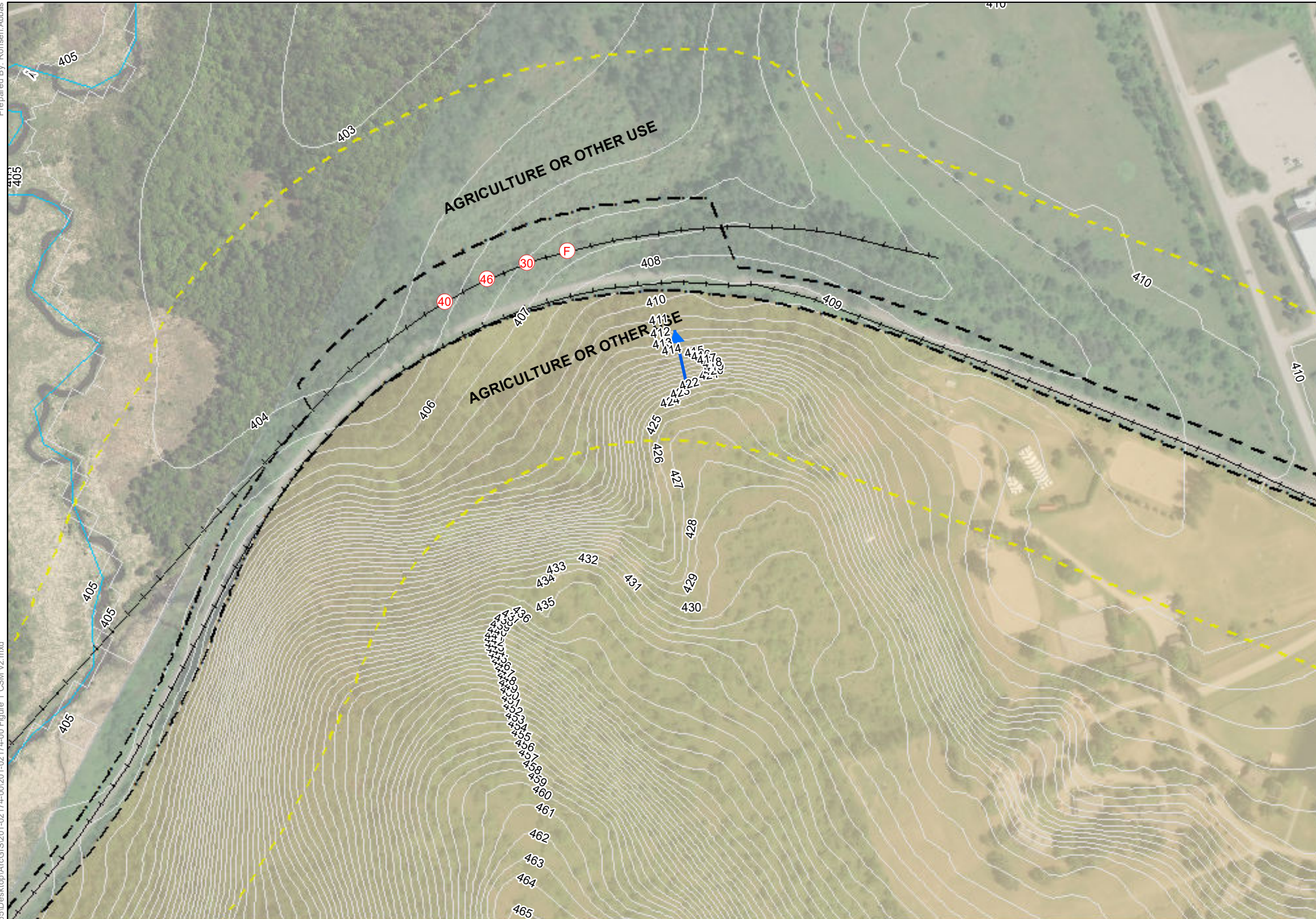
CLIENT:  
**REGION OF PEEL**

DATA SOURCE:

<p><b>LEGEND:</b></p> <ul style="list-style-type: none"> <li> 100m STUDY AREA</li> <li> SUBJECT SITE</li> <li> ANSI</li> <li> INFERRED GROUNDWATER FLOW DIRECTION</li> <li> 1m TOPOGRAPHIC CONTOUR</li> </ul>		<ul style="list-style-type: none"> <li> RAIL</li> <li> Rivers</li> <li> MECP WATER WELL</li> <li> TANK NOT CONTRIBUTING TO APEC</li> <li> TANK CONTRIBUTING TO APEC</li> </ul>	<ul style="list-style-type: none"> <li> PCA CONTRIBUTING TO APEC</li> <li> PCA NOT CONTRIBUTING TO APEC</li> </ul>
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	PROJECT NO.:	201-02174-00	REVIEWED BY:	MB
	DATE:	MAY 2020	FIGURE:	1-2





- POTENTIALLY CONTAMINATING ACTIVITIES (PCAS):**
- ③ AIRSTRIPS AND HANGARS OPERATION
  - ⑤ ASPHALT AND BITUMEN MANUFACTURING
  - ⑧ CHEMICAL MANUFACTURING, PROCESSING AND BULK STORAGE
  - ⑩ COMMERCIAL AUTOBODY SHOPS
  - ⑫ CONCRETE, CEMENT AND LIME MANUFACTURING
  - ⑭ CRUDE OIL REFINING, PROCESSING AND BULK STORAGE
  - ⑰ ELECTRONIC AND COMPUTER EQUIPMENT MANUFACTURING
  - ⑲ GASOLINE AND ASSOCIATED PRODUCTS STORAGE IN FIXED TANKS
  - ⑳ IMPORTATION OF FILL MATERIAL OF UNKNOWN QUALITY
  - ㉑ INK MANUFACTURING, PROCESSING AND BULK STORAGE
  - ㉒ IRON AND STEEL MANUFACTURING AND PROCESSING
  - ㉓ METAL TREATMENT, COATING, PLATING AND FINISHING
  - ㉔ METAL FABRICATION
  - ㉕ MINING, SMELTING AND REFINING; ORE PROCESSING; TAILINGS STORAGE
  - ㉖ OPERATION OF DRY CLEANING EQUIPMENT (WHERE CHEMICALS ARE USED)
  - ㉗ PAINTS MANUFACTURING, PROCESSING AND BULK STORAGE
  - ㉘ PESTICIDES (INCLUDING HERBICIDES, FUNGICIDES AND ANTI-FOULING AGENTS) MANUFACTURING, PROCESSING, BULK STORAGE AND LARGE-SCALE APPLICATIONS
  - ㉙ PLASTICS (INCLUDING FIBREGLASS) MANUFACTURING AND PROCESSING
  - ㉚ PULP, PAPER AND PAPERBOARD MANUFACTURING AND PROCESSING
  - ㉛ RAIL YARDS, TRACKS AND SPURS
  - ㉜ RUBBER MANUFACTURING AND PROCESSING
  - ㉝ SOAP AND DETERGENT MANUFACTURING, PROCESSING AND BULK STORAGE
  - ㉞ SOLVENT MANUFACTURING, PROCESSING AND BULK STORAGE
  - ㉟ TANNERY
  - ㊱ TEXTILE MANUFACTURING AND PROCESSING
  - ㊲ VEHICLES AND ASSOCIATED PARTS MANUFACTURING
  - ㊳ WASTE DISPOSAL AND WASTE MANAGEMENT, INCLUDING THERMAL TREATMENT, LANDFILLING AND TRANSFER OF WASTE, OTHER THAN USE OF BIOSOILS AS SOIL CONDITIONERS
  - ㊴ WOOD TREATING AND PRESERVATIVE FACILITY AND BULK STORAGE OF TREATED AND PRESERVED WOOD PRODUCTS
  - Ⓐ SPILLS
  - Ⓑ MISCELLANEOUS MANUFACTURING
  - Ⓒ COAL STORAGE
  - Ⓓ RAIL TIE PILE
  - Ⓔ PCB STORAGE
  - Ⓕ KNOWN CONTAMINATION

TITLE:  
**PHASE ONE CONCEPTUAL SITE MODEL**

PROJECT:  
**CONTAMINANT OVERVIEW STUDY  
FORMER ORANGEVILLE RAIL,  
CALEDON, ONTARIO**

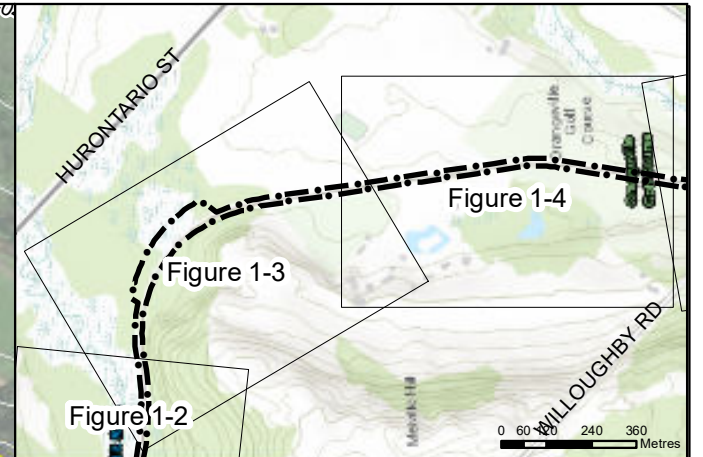
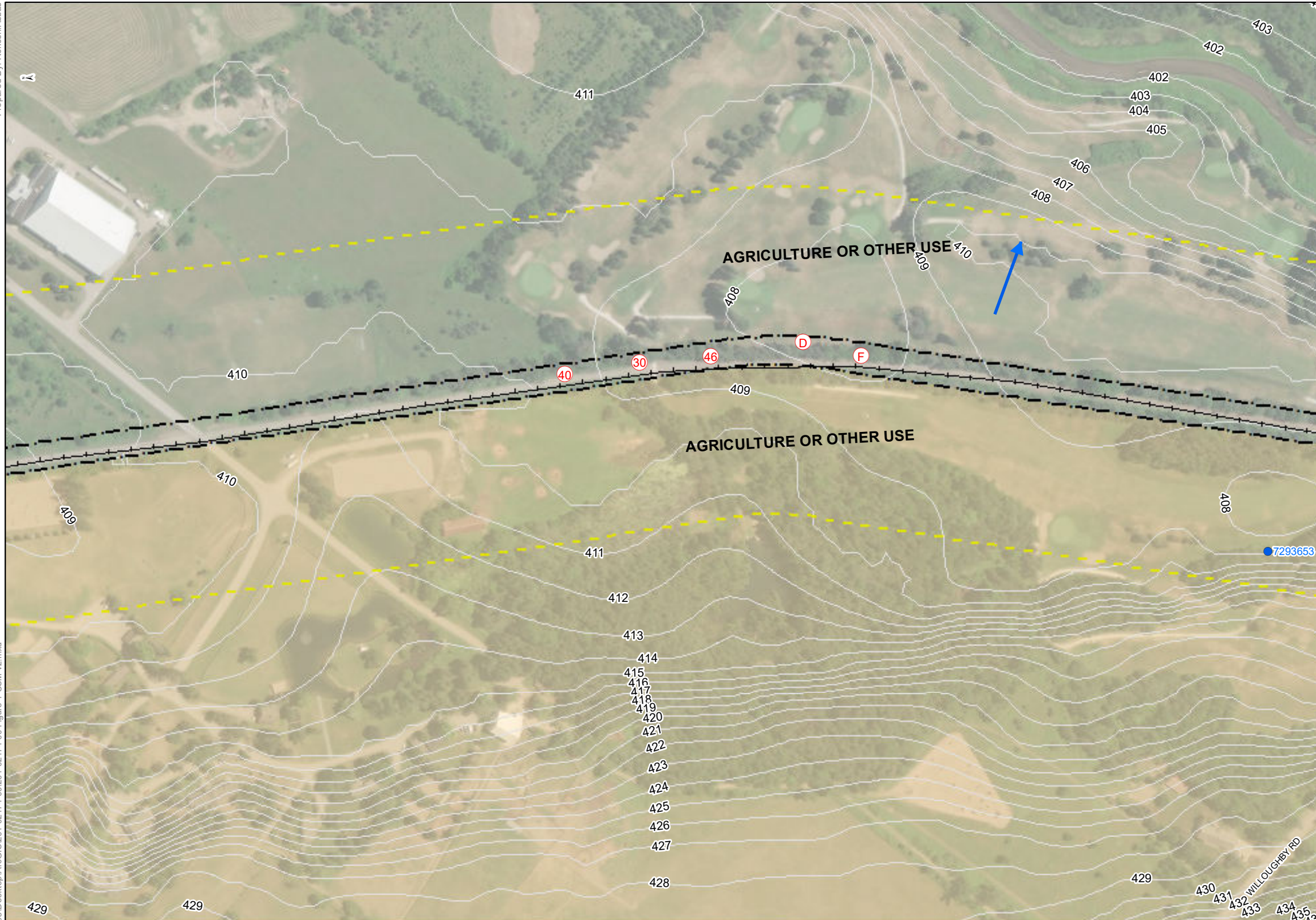
CLIENT:  
**REGION OF PEEL**

DATA SOURCE: 0 25 50 100 150 200 Metres

LEGEND:			
	100m STUDY AREA		PCA CONTRIBUTING TO APEC
	SUBJECT SITE		PCA NOT CONTRIBUTING TO APEC
	ANSI		RAIL
	INFERRED GROUNDWATER FLOW DIRECTION		MECP WATER WELL
	1m TOPOGRAPHIC CONTOUR		TANK NOT CONTRIBUTING TO APEC
	RAIL		TANK CONTRIBUTING TO APEC
	Rivers		

	PROJECT NO.:	201-02174-00	REVIEWED BY:	MB
	DATE:	MAY 2020	FIGURE:	1-3





POTENTIALLY CONTAMINATING ACTIVITIES (PCAS):

- ③ AIRSTRIPS AND HANGARS OPERATION
- ⑤ ASPHALT AND BITUMEN MANUFACTURING
- ⑧ CHEMICAL MANUFACTURING, PROCESSING AND BULK STORAGE
- ⑩ COMMERCIAL AUTOBODY SHOPS
- ⑫ CONCRETE, CEMENT AND LIME MANUFACTURING
- ⑭ CRUDE OIL REFINING, PROCESSING AND BULK STORAGE
- ⑲ ELECTRONIC AND COMPUTER EQUIPMENT MANUFACTURING
- ⑳ GASOLINE AND ASSOCIATED PRODUCTS STORAGE IN FIXED TANKS
- ㉑ IMPORTATION OF FILL MATERIAL OF UNKNOWN QUALITY
- ㉒ INK MANUFACTURING, PROCESSING AND BULK STORAGE
- ㉓ IRON AND STEEL MANUFACTURING AND PROCESSING
- ㉔ METAL TREATMENT, COATING, PLATING AND FINISHING
- ㉕ METAL FABRICATION
- ㉖ MINING, SMELTING AND REFINING; ORE PROCESSING; TAILINGS STORAGE
- ㉗ OPERATION OF DRY CLEANING EQUIPMENT (WHERE CHEMICALS ARE USED)
- ㉘ PAINTS MANUFACTURING, PROCESSING AND BULK STORAGE
- ㉙ PESTICIDES (INCLUDING HERBICIDES, FUNGICIDES AND ANTI-FOULING AGENTS) MANUFACTURING, PROCESSING, BULK STORAGE AND LARGE-SCALE APPLICATIONS
- ㉚ PLASTICS (INCLUDING FIBREGLASS) MANUFACTURING AND PROCESSING
- ㉛ PULP, PAPER AND PAPERBOARD MANUFACTURING AND PROCESSING
- ㉜ RAIL YARDS, TRACKS AND SPURS
- ㉝ RUBBER MANUFACTURING AND PROCESSING
- ㉞ SOAP AND DETERGENT MANUFACTURING, PROCESSING AND BULK STORAGE
- ㉟ SOLVENT MANUFACTURING, PROCESSING AND BULK STORAGE
- ㊱ TANNERY
- ㊲ TEXTILE MANUFACTURING AND PROCESSING
- ㊳ VEHICLES AND ASSOCIATED PARTS MANUFACTURING
- ㊴ WASTE DISPOSAL AND WASTE MANAGEMENT, INCLUDING THERMAL TREATMENT, LANDFILLING AND TRANSFER OF WASTE, OTHER THAN USE OF BIOSOILS AS SOIL CONDITIONERS
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- Ⓐ SPILLS
- Ⓑ MISCELLANEOUS MANUFACTURING
- Ⓒ COAL STORAGE
- Ⓓ RAIL TIE PILE
- Ⓔ PCB STORAGE
- Ⓕ KNOWN CONTAMINATION

TITLE:  
**PHASE ONE CONCEPTUAL SITE MODEL**

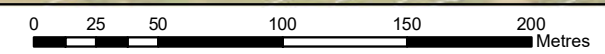
PROJECT:  
**CONTAMINANT OVERVIEW STUDY  
FORMER ORANGEVILLE RAIL,  
CALEDON, ONTARIO**

CLIENT:  
**REGION OF PEEL**

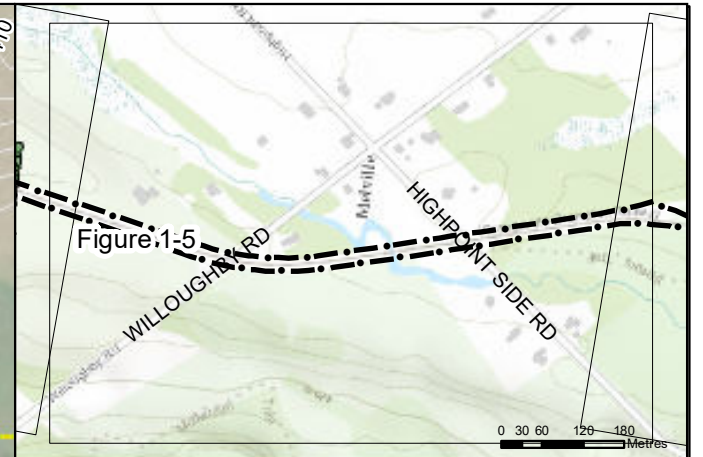
	PROJECT NO.:	201-02174-00	REVIEWED BY:	MB
	DATE:	MAY 2020	FIGURE:	1-4

DATA SOURCE:

- LEGEND:**
- 100m STUDY AREA
  - SUBJECT SITE
  - ANSI
  - INFERRED GROUNDWATER FLOW DIRECTION
  - 1m TOPOGRAPHIC CONTOUR
  - RAIL
  - Rivers
  - MECP WATER WELL
  - TANK NOT CONTRIBUTING TO APEC
  - TANK CONTRIBUTING TO APEC
  - PCA CONTRIBUTING TO APEC
  - PCA NOT CONTRIBUTING TO APEC







- POTENTIALLY CONTAMINATING ACTIVITIES (PCAS):**
- (3) AIRSTRIPS AND HANGARS OPERATION
  - (5) ASPHALT AND BITUMEN MANUFACTURING
  - (8) CHEMICAL MANUFACTURING, PROCESSING AND BULK STORAGE
  - (10) COMMERCIAL AUTOBODY SHOPS
  - (12) CONCRETE, CEMENT AND LIME MANUFACTURING
  - (14) CRUDE OIL REFINING, PROCESSING AND BULK STORAGE
  - (19) ELECTRONIC AND COMPUTER EQUIPMENT MANUFACTURING
  - (28) GASOLINE AND ASSOCIATED PRODUCTS STORAGE IN FIXED TANKS
  - (30) IMPORTATION OF FILL MATERIAL OF UNKNOWN QUALITY
  - (31) INK MANUFACTURING, PROCESSING AND BULK STORAGE
  - (32) IRON AND STEEL MANUFACTURING AND PROCESSING
  - (33) METAL TREATMENT, COATING, PLATING AND FINISHING
  - (34) METAL FABRICATION
  - (35) MINING, SMELTING AND REFINING; ORE PROCESSING; TAILINGS STORAGE
  - (37) OPERATION OF DRY CLEANING EQUIPMENT (WHERE CHEMICALS ARE USED)
  - (39) PAINTS MANUFACTURING, PROCESSING AND BULK STORAGE
  - (40) PESTICIDES (INCLUDING HERBICIDES, FUNGICIDES AND ANTI-FOULING AGENTS) MANUFACTURING, PROCESSING, BULK STORAGE AND LARGE-SCALE APPLICATIONS
  - (43) PLASTICS (INCLUDING FIBREGLASS) MANUFACTURING AND PROCESSING
  - (45) PULP, PAPER AND PAPERBOARD MANUFACTURING AND PROCESSING
  - (46) RAIL YARDS, TRACKS AND SPURS
  - (47) RUBBER MANUFACTURING AND PROCESSING
  - (50) SOAP AND DETERGENT MANUFACTURING, PROCESSING AND BULK STORAGE
  - (51) SOLVENT MANUFACTURING, PROCESSING AND BULK STORAGE
  - (53) TANNERY
  - (54) TEXTILE MANUFACTURING AND PROCESSING
  - (57) VEHICLES AND ASSOCIATED PARTS MANUFACTURING
  - (58) WASTE DISPOSAL AND WASTE MANAGEMENT, INCLUDING THERMAL TREATMENT, LANDFILLING AND TRANSFER OF WASTE, OTHER THAN USE OF BIOSOILS AS SOIL CONDITIONERS
  - (59) WOOD TREATING AND PRESERVATIVE FACILITY AND BULK STORAGE OF TREATED AND PRESERVED WOOD PRODUCTS
  - (A) SPILLS
  - (B) MISCELLANEOUS MANUFACTURING
  - (C) COAL STORAGE
  - (D) RAIL TIE PILE
  - (E) PCB STORAGE
  - (F) KNOWN CONTAMINATION

TITLE:  
**PHASE ONE CONCEPTUAL SITE MODEL**

PROJECT:  
**CONTAMINANT OVERVIEW STUDY  
FORMER ORANGEVILLE RAIL,  
CALEDON, ONTARIO**

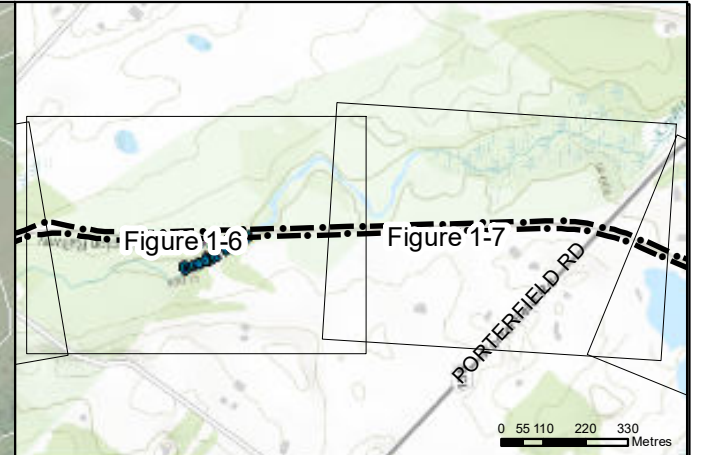
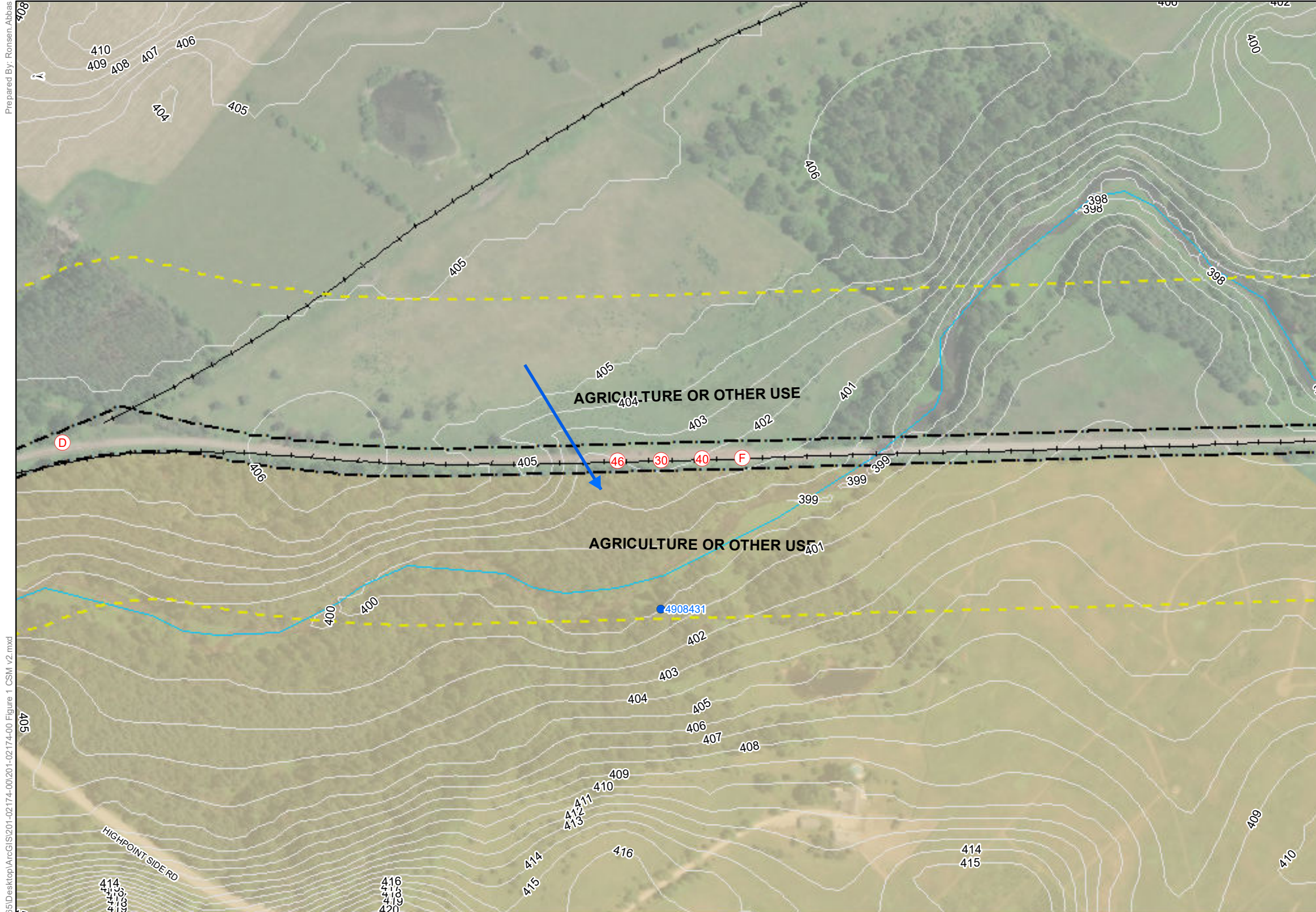
CLIENT:  
**REGION OF PEEL**

DATA SOURCE: 0 25 50 100 150 200 Metres

LEGEND:		
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	PROJECT NO.:	201-02174-00	REVIEWED BY:
	DATE:	MAY 2020	FIGURE:
			1-5





- POTENTIALLY CONTAMINATING ACTIVITIES (PCAS):**
- ③ AIRSTRIPS AND HANGARS OPERATION
  - ⑤ ASPHALT AND BITUMEN MANUFACTURING
  - ⑧ CHEMICAL MANUFACTURING, PROCESSING AND BULK STORAGE
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  - ㊵ WOOD TREATING AND PRESERVATIVE FACILITY AND BULK STORAGE OF TREATED AND PRESERVED WOOD PRODUCTS
  - Ⓐ SPILLS
  - Ⓑ MISCELLANEOUS MANUFACTURING
  - Ⓒ COAL STORAGE
  - Ⓓ RAIL TIE PILE
  - Ⓔ PCB STORAGE
  - Ⓕ KNOWN CONTAMINATION

**TITLE:**  
PHASE ONE CONCEPTUAL SITE MODEL

**PROJECT:**  
CONTAMINANT OVERVIEW STUDY  
FORMER ORANGEVILLE RAIL,  
CALEDON, ONTARIO

**CLIENT:**  
REGION OF PEEL

	PROJECT NO.:	REVIEWED BY:
	201-02174-00	MB
	DATE:	FIGURE:
	MAY 2020	1-6

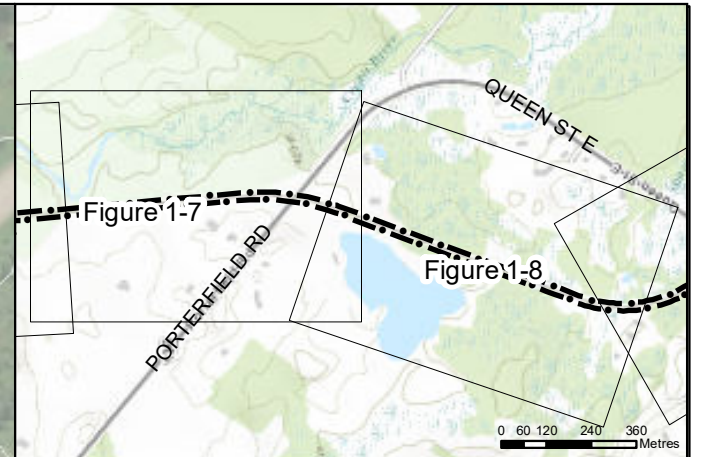
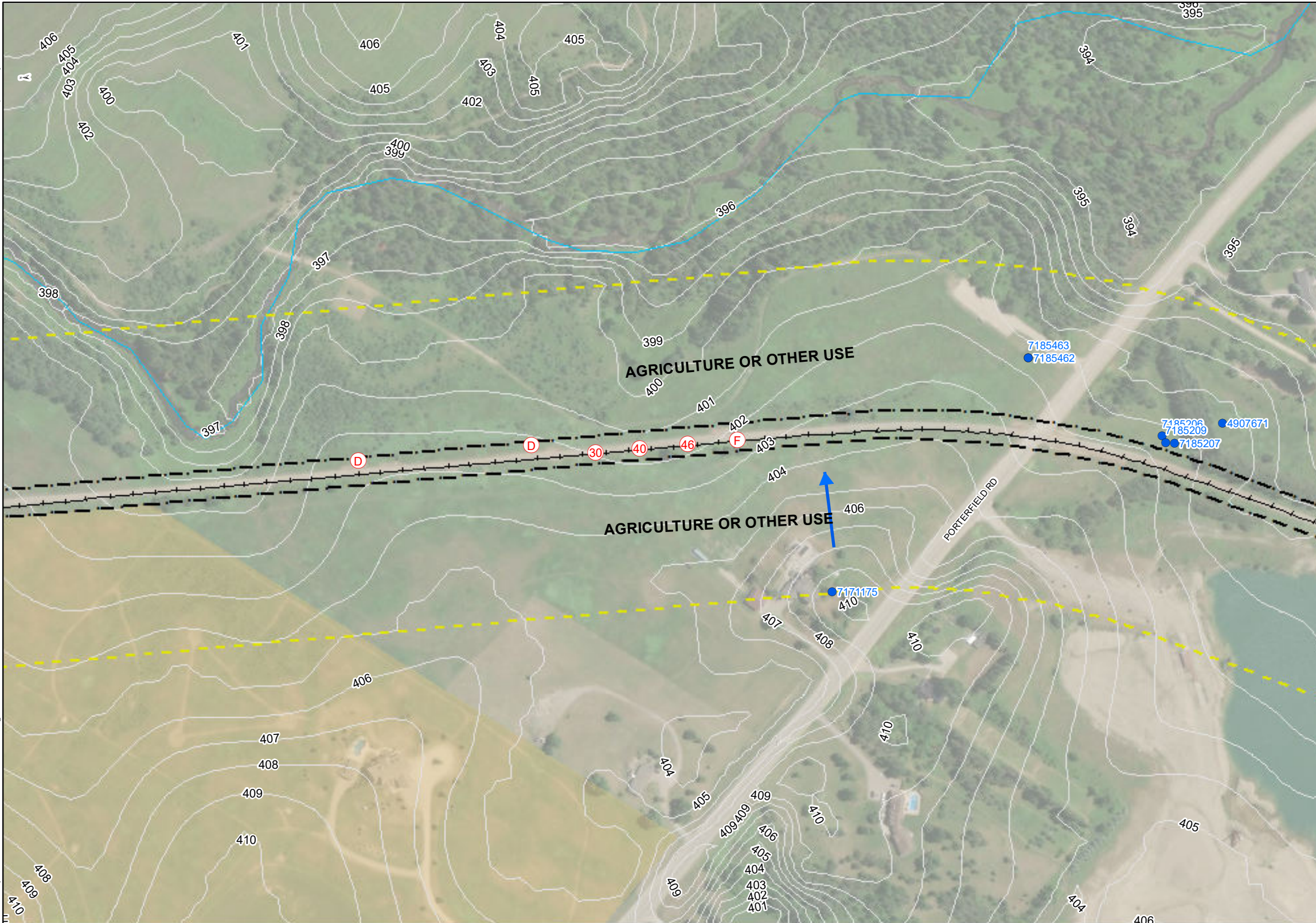
**DATA SOURCE:**

**LEGEND:**

100m STUDY AREA	RAIL	PCA CONTRIBUTING TO APEC
SUBJECT SITE	Rivers	PCA NOT CONTRIBUTING TO APEC
ANSI	MECP WATER WELL	
INFERRED GROUNDWATER FLOW DIRECTION	TANK NOT CONTRIBUTING TO APEC	
1m TOPOGRAPHIC CONTOUR	TANK CONTRIBUTING TO APEC	

Prepared By: Ronsen, Abbas  
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POTENTIALLY CONTAMINATING ACTIVITIES (PCAS):

- ③ AIRSTRIPS AND HANGARS OPERATION
- ⑤ ASPHALT AND BITUMEN MANUFACTURING
- ⑧ CHEMICAL MANUFACTURING, PROCESSING AND BULK STORAGE
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- Ⓑ MISCELLANEOUS MANUFACTURING
- Ⓒ COAL STORAGE
- Ⓓ RAIL TIE PILE
- Ⓔ PCB STORAGE
- Ⓕ KNOWN CONTAMINATION

TITLE:  
**PHASE ONE CONCEPTUAL SITE MODEL**

PROJECT:  
**CONTAMINANT OVERVIEW STUDY  
FORMER ORANGEVILLE RAIL,  
CALEDON, ONTARIO**

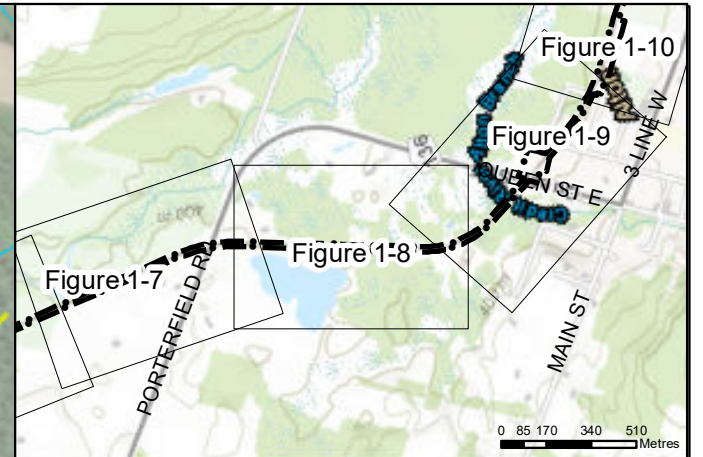
CLIENT:  
**REGION OF PEEL**

	PROJECT NO.:	REVIEWED BY:
	201-02174-00	MB
	DATE:	FIGURE:
	MAY 2020	1-7

DATA SOURCE:

- LEGEND:**
- 100m STUDY AREA
    - SUBJECT SITE
    - ANSI
    - INFERRED GROUNDWATER FLOW DIRECTION
    - 1m TOPOGRAPHIC CONTOUR
  - RAIL
    - Rivers
    - MECP WATER WELL
    - TANK NOT CONTRIBUTING TO APEC
    - TANK CONTRIBUTING TO APEC
  - PCA CONTRIBUTING TO APEC
    - PCA NOT CONTRIBUTING TO APEC





POTENTIALLY CONTAMINATING ACTIVITIES (PCAS):

- ③ AIRSTRIPS AND HANGARS OPERATION
- ④ ASPHALT AND BITUMEN MANUFACTURING
- ⑧ CHEMICAL MANUFACTURING, PROCESSING AND BULK STORAGE
- ⑩ COMMERCIAL AUTOBODY SHOPS
- ⑫ CONCRETE, CEMENT AND LIME MANUFACTURING
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- ㉕ METAL FABRICATION
- ㉖ MINING, SMELTING AND REFINING; ORE PROCESSING; TAILINGS STORAGE
- ㉗ OPERATION OF DRY CLEANING EQUIPMENT (WHERE CHEMICALS ARE USED)
- ㉘ PAINTS MANUFACTURING, PROCESSING AND BULK STORAGE
- ㉙ PESTICIDES (INCLUDING HERBICIDES, FUNGICIDES AND ANTI-FOULING AGENTS) MANUFACTURING, PROCESSING, BULK STORAGE AND LARGE-SCALE APPLICATIONS
- ㉚ PLASTICS (INCLUDING FIBREGLASS) MANUFACTURING AND PROCESSING
- ㉛ PULP, PAPER AND PAPERBOARD MANUFACTURING AND PROCESSING
- ㉜ RAIL YARDS, TRACKS AND SPURS
- ㉝ RUBBER MANUFACTURING AND PROCESSING
- ㉞ SOAP AND DETERGENT MANUFACTURING, PROCESSING AND BULK STORAGE
- ㉟ SOLVENT MANUFACTURING, PROCESSING AND BULK STORAGE
- ㊱ TANNERY
- ㊲ TEXTILE MANUFACTURING AND PROCESSING
- ㊳ VEHICLES AND ASSOCIATED PARTS MANUFACTURING
- ㊴ WASTE DISPOSAL AND WASTE MANAGEMENT, INCLUDING THERMAL TREATMENT, LANDFILLING AND TRANSFER OF WASTE, OTHER THAN USE OF BIOSOILS AS SOIL CONDITIONERS
- ㊵ WOOD TREATING AND PRESERVATIVE FACILITY AND BULK STORAGE OF TREATED AND PRESERVED WOOD PRODUCTS
- Ⓐ SPILLS
- Ⓑ MISCELLANEOUS MANUFACTURING
- Ⓒ COAL STORAGE
- Ⓓ RAIL TIE PILE
- Ⓔ PCB STORAGE
- Ⓕ KNOWN CONTAMINATION

TITLE:  
**PHASE ONE CONCEPTUAL SITE MODEL**

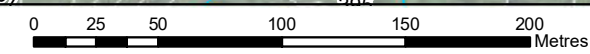
PROJECT:  
**CONTAMINANT OVERVIEW STUDY  
FORMER ORANGEVILLE RAIL,  
CALEDON, ONTARIO**

CLIENT:  
**REGION OF PEEL**

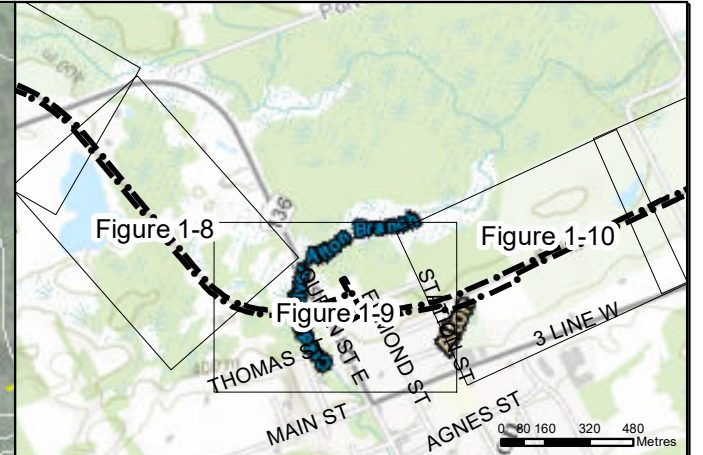
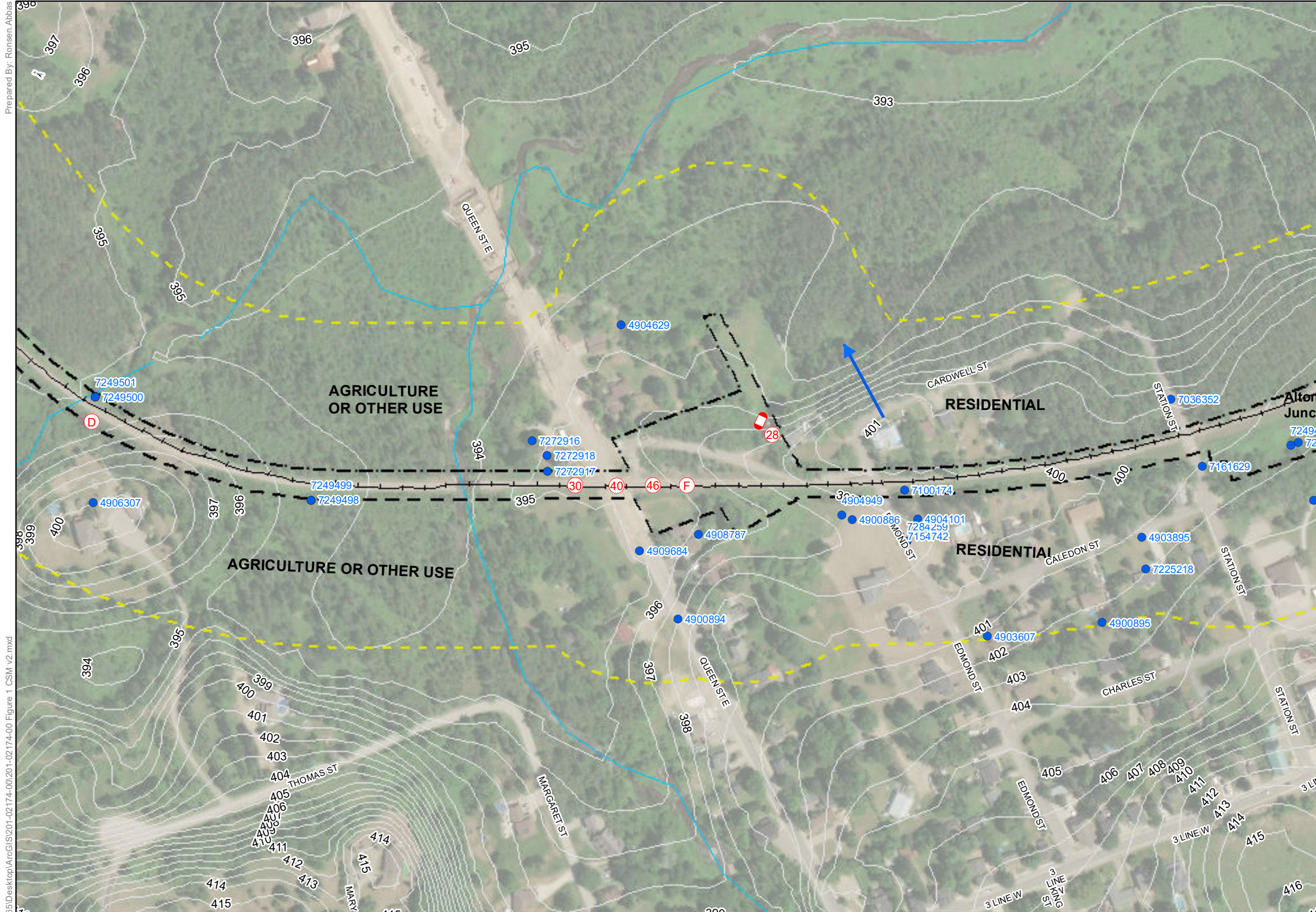
	PROJECT NO.:	REVIEWED BY:
	201-02174-00	MB
	DATE:	FIGURE:
	MAY 2020	1-8

DATA SOURCE:

- LEGEND:
- 100m STUDY AREA
    - SUBJECT SITE
    - ANSI
    - INFERRED GROUNDWATER FLOW DIRECTION
    - 1m TOPOGRAPHIC CONTOUR
  - RAIL
    - Rivers
    - MECP WATER WELL
    - TANK NOT CONTRIBUTING TO APEC
    - TANK CONTRIBUTING TO APEC
  - PCA CONTRIBUTING TO APEC
    - PCA NOT CONTRIBUTING TO APEC







- POTENTIALLY CONTAMINATING ACTIVITIES (PCAS):**
- ③ AIRSTRIPS AND HANGARS OPERATION
  - ④ ASPHALT AND BITUMEN MANUFACTURING
  - ⑧ CHEMICAL MANUFACTURING, PROCESSING AND BULK STORAGE
  - ⑩ COMMERCIAL AUTOBODY SHOPS
  - ⑫ CONCRETE, CEMENT AND LIME MANUFACTURING
  - ⑭ CRUDE OIL REFINING, PROCESSING AND BULK STORAGE
  - ⑲ ELECTRONIC AND COMPUTER EQUIPMENT MANUFACTURING
  - ⑳ GASOLINE AND ASSOCIATED PRODUCTS STORAGE IN FIXED TANKS
  - ㉑ IMPORTATION OF FILL MATERIAL OF UNKNOWN QUALITY
  - ㉒ INK MANUFACTURING, PROCESSING AND BULK STORAGE
  - ㉓ IRON AND STEEL MANUFACTURING AND PROCESSING
  - ㉔ METAL TREATMENT, COATING, PLATING AND FINISHING
  - ㉕ METAL FABRICATION
  - ㉖ MINING, SMELTING AND REFINING; ORE PROCESSING; TAILINGS STORAGE
  - ㉗ OPERATION OF DRY CLEANING EQUIPMENT (WHERE CHEMICALS ARE USED)
  - ㉘ PAINTS MANUFACTURING, PROCESSING AND BULK STORAGE
  - ㉙ PESTICIDES (INCLUDING HERBICIDES, FUNGICIDES AND ANTI-FOULING AGENTS) MANUFACTURING, PROCESSING, BULK STORAGE AND LARGE-SCALE APPLICATIONS
  - ㉚ PLASTICS (INCLUDING FIBREGLASS) MANUFACTURING AND PROCESSING
  - ㉛ PULP, PAPER AND PAPERBOARD MANUFACTURING AND PROCESSING
  - ㉜ RAIL YARDS, TRACKS AND SPURS
  - ㉝ RUBBER MANUFACTURING AND PROCESSING
  - ㉞ SOAP AND DETERGENT MANUFACTURING, PROCESSING AND BULK STORAGE
  - ㉟ SOLVENT MANUFACTURING, PROCESSING AND BULK STORAGE
  - ㊱ TANNERY
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  - ㊳ VEHICLES AND ASSOCIATED PARTS MANUFACTURING
  - ㊴ WASTE DISPOSAL AND WASTE MANAGEMENT, INCLUDING THERMAL TREATMENT, LANDFILLING AND TRANSFER OF WASTE, OTHER THAN USE OF BIOSOILS AS SOIL CONDITIONERS
  - ㊵ WOOD TREATING AND PRESERVATIVE FACILITY AND BULK STORAGE OF TREATED AND PRESERVED WOOD PRODUCTS
  - Ⓐ SPILLS
  - Ⓑ MISCELLANEOUS MANUFACTURING
  - Ⓒ COAL STORAGE
  - Ⓓ RAIL TIE PILE
  - Ⓔ PCB STORAGE
  - Ⓕ KNOWN CONTAMINATION

TITLE:  
**PHASE ONE CONCEPTUAL SITE MODEL**

PROJECT:  
**CONTAMINANT OVERVIEW STUDY  
FORMER ORANGEVILLE RAIL,  
CALEDON, ONTARIO**

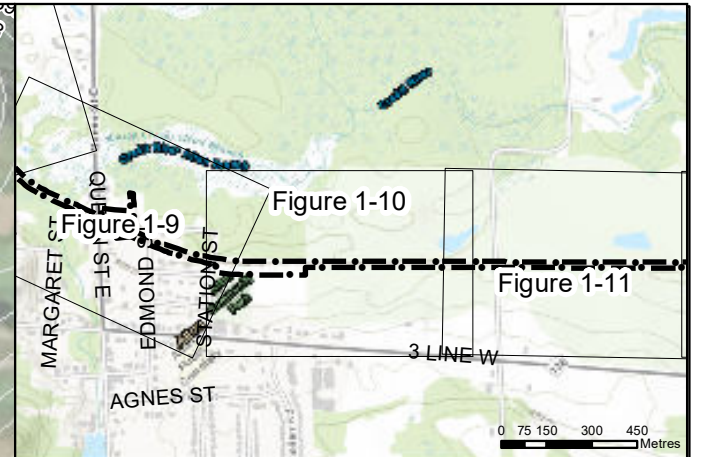
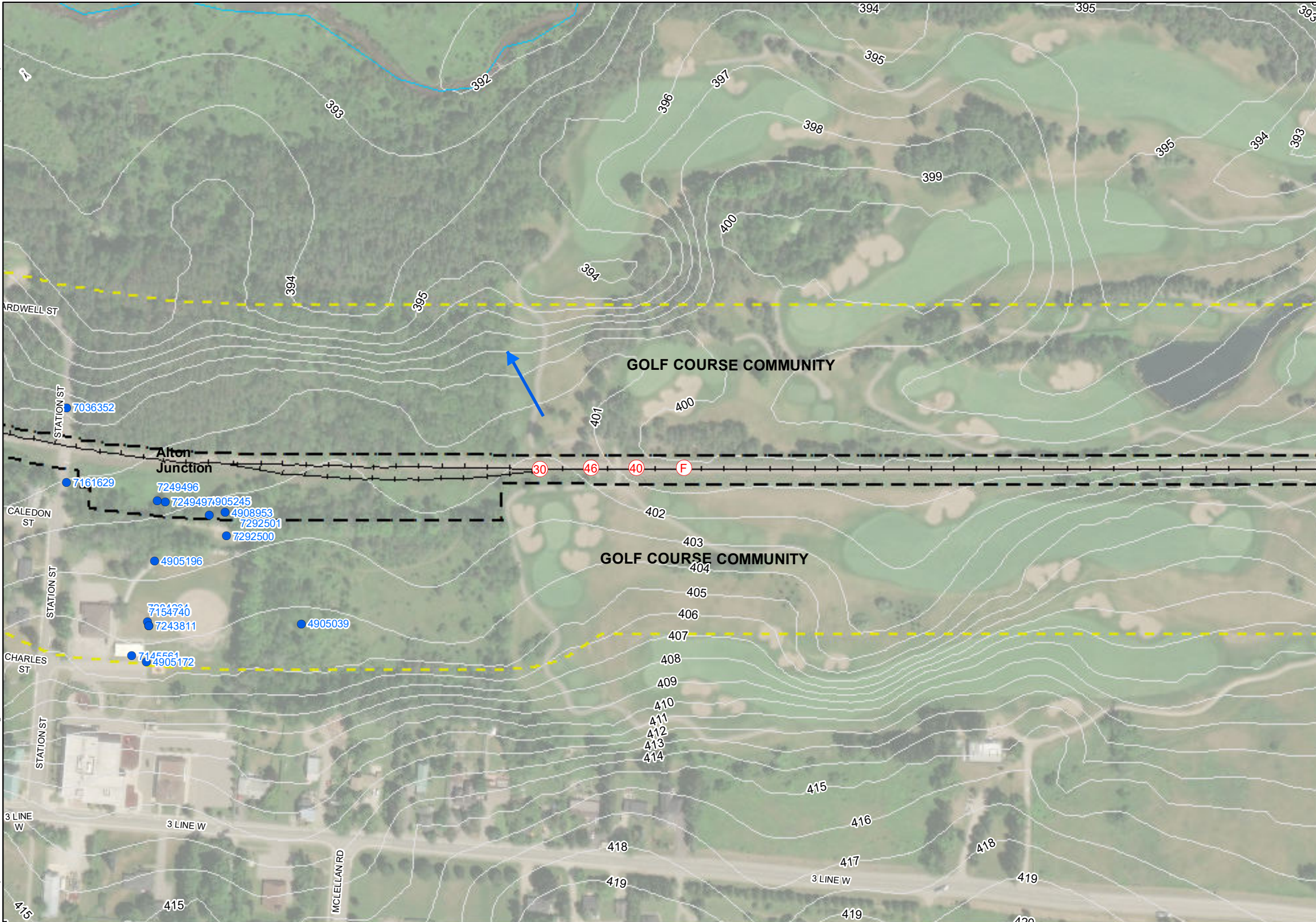
CLIENT:  
**REGION OF PEEL**

	PROJECT NO.:	201-02174-00	REVIEWED BY:	MB
	DATE:	MAY 2020	FIGURE:	1-9

- DATA SOURCE:**
- LEGEND:**
- 100m STUDY AREA
  - SUBJECT SITE
  - ANSI
  - INFERRED GROUNDWATER FLOW DIRECTION
  - 1m TOPOGRAPHIC CONTOUR
  - RAIL
  - Rivers
  - MECP WATER WELL
  - TANK NOT CONTRIBUTING TO APEC
  - TANK CONTRIBUTING TO APEC
  - PCA CONTRIBUTING TO APEC
  - PCA NOT CONTRIBUTING TO APEC

Prepared By: Ronsen, Abbas  
C:\Users\ronsen.abbas\OneDrive - WSP\0365\Desktop\ArcGIS\201-02174-00\201-02174-00 Figure 1\_CSM v2.mxd





- POTENTIALLY CONTAMINATING ACTIVITIES (PCAS):**
- ③ AIRSTRIPS AND HANGARS OPERATION
  - ④ ASPHALT AND BITUMEN MANUFACTURING
  - ⑧ CHEMICAL MANUFACTURING, PROCESSING AND BULK STORAGE
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  - ⑫ CONCRETE, CEMENT AND LIME MANUFACTURING
  - ⑭ CRUDE OIL REFINING, PROCESSING AND BULK STORAGE
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  - ㊵ WOOD TREATING AND PRESERVATIVE FACILITY AND BULK STORAGE OF TREATED AND PRESERVED WOOD PRODUCTS
  - Ⓐ SPILLS
  - Ⓑ MISCELLANEOUS MANUFACTURING
  - Ⓒ COAL STORAGE
  - Ⓓ RAIL TIE PILE
  - Ⓔ PCB STORAGE
  - Ⓕ KNOWN CONTAMINATION

TITLE:  
**PHASE ONE CONCEPTUAL SITE MODEL**

PROJECT:  
**CONTAMINANT OVERVIEW STUDY  
FORMER ORANGEVILLE RAIL,  
CALEDON, ONTARIO**

CLIENT:  
**REGION OF PEEL**

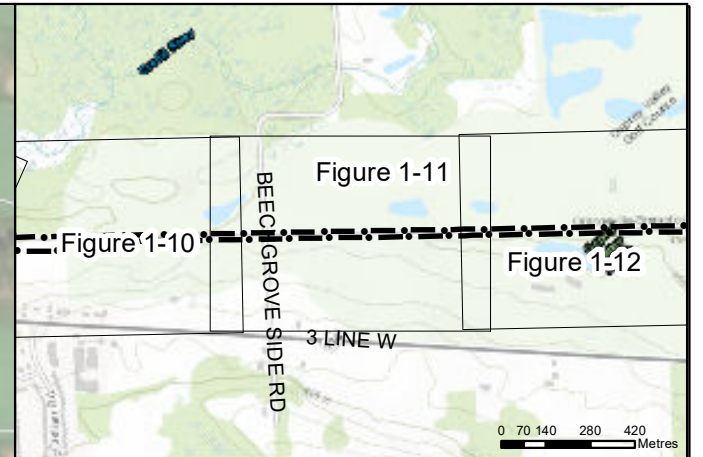
DATA SOURCE:

- LEGEND:**
- 100m STUDY AREA
  - SUBJECT SITE
  - ANSI
  - INFERRED GROUNDWATER FLOW DIRECTION
  - 1m TOPOGRAPHIC CONTOUR
  - RAIL
  - Rivers
  - MECP WATER WELL
  - TANK NOT CONTRIBUTING TO APEC
  - TANK CONTRIBUTING TO APEC
  - PCA CONTRIBUTING TO APEC
  - PCA NOT CONTRIBUTING TO APEC

0 25 50 100 150 200 Metres

	PROJECT NO.:	201-02174-00	REVIEWED BY:	MB
	DATE:	MAY 2020	FIGURE:	1-10





- POTENTIALLY CONTAMINATING ACTIVITIES (PCAS):**
- ③ AIRSTRIPS AND HANGARS OPERATION
  - ④ ASPHALT AND BITUMEN MANUFACTURING
  - ⑧ CHEMICAL MANUFACTURING, PROCESSING AND BULK STORAGE
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TITLE:  
**PHASE ONE CONCEPTUAL SITE MODEL**

PROJECT:  
**CONTAMINANT OVERVIEW STUDY  
FORMER ORANGEVILLE RAIL,  
CALEDON, ONTARIO**

CLIENT:  
**REGION OF PEEL**

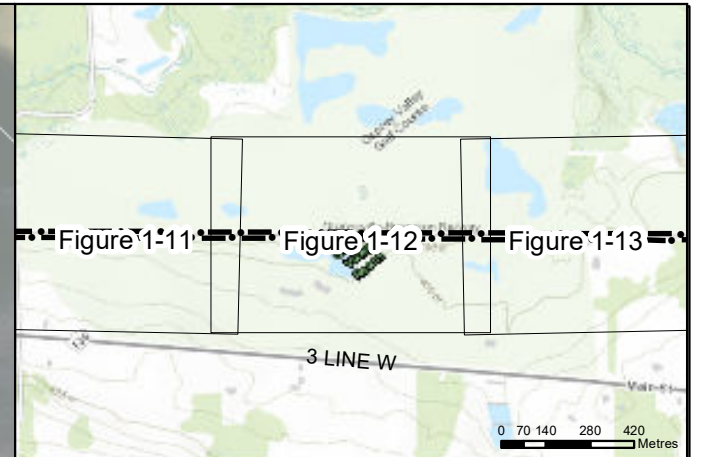
	PROJECT NO.:	REVIEWED BY:
	201-02174-00	MB
	DATE:	FIGURE:
	MAY 2020	1-11

DATA SOURCE:

<p><b>LEGEND:</b></p> <ul style="list-style-type: none"> <li> 100m STUDY AREA</li> <li> SUBJECT SITE</li> <li> ANSI</li> <li> INFERRED GROUNDWATER FLOW DIRECTION</li> <li> 1m TOPOGRAPHIC CONTOUR</li> </ul>	<ul style="list-style-type: none"> <li> RAIL</li> <li> Rivers</li> <li> MECP WATER WELL</li> <li> TANK NOT CONTRIBUTING TO APEC</li> <li> TANK CONTRIBUTING TO APEC</li> </ul>	<ul style="list-style-type: none"> <li> PCA CONTRIBUTING TO APEC</li> <li> PCA NOT CONTRIBUTING TO APEC</li> </ul>
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0 25 50 100 150 200 Metres





POTENTIALLY CONTAMINATING ACTIVITIES (PCAS):

- ③ AIRSTRIPS AND HANGARS OPERATION
- ⑤ ASPHALT AND BITUMEN MANUFACTURING
- ⑧ CHEMICAL MANUFACTURING, PROCESSING AND BULK STORAGE
- ⑩ COMMERCIAL AUTOBODY SHOPS
- ⑫ CONCRETE, CEMENT AND LIME MANUFACTURING
- ⑭ CRUDE OIL REFINING, PROCESSING AND BULK STORAGE
- ⑲ ELECTRONIC AND COMPUTER EQUIPMENT MANUFACTURING
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- ㉞ SOAP AND DETERGENT MANUFACTURING, PROCESSING AND BULK STORAGE
- ㉟ SOLVENT MANUFACTURING, PROCESSING AND BULK STORAGE
- ㊱ TANNERY
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- Ⓔ PCB STORAGE
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TITLE:  
**PHASE ONE CONCEPTUAL SITE MODEL**

PROJECT:  
**CONTAMINANT OVERVIEW STUDY  
FORMER ORANGEVILLE RAIL,  
CALEDON, ONTARIO**

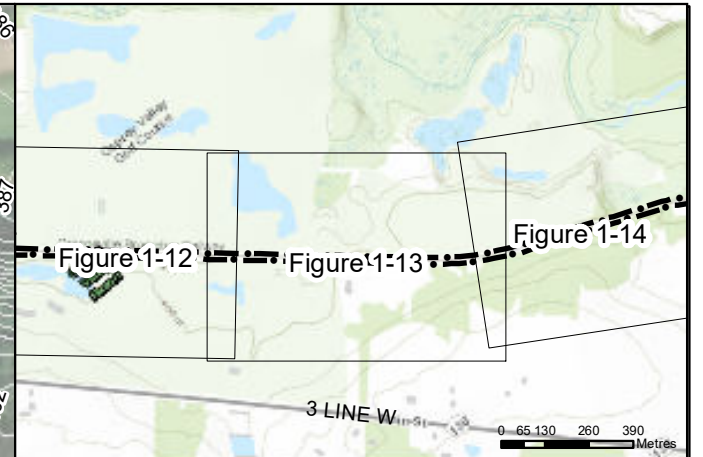
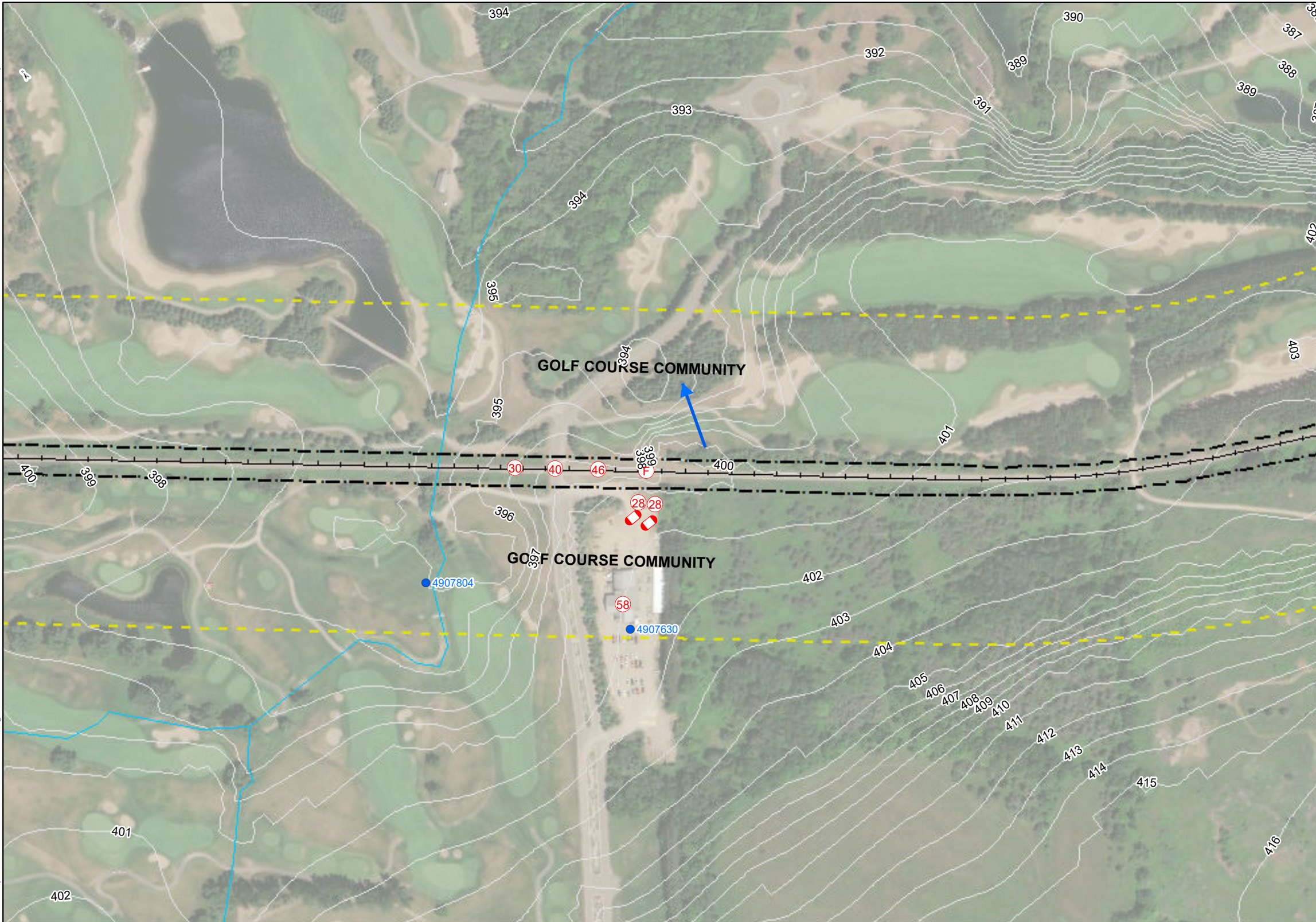
CLIENT:  
**REGION OF PEEL**

	PROJECT NO.:	201-02174-00	REVIEWED BY:	MB
	DATE:	MAY 2020	FIGURE:	1-12

DATA SOURCE:

- LEGEND:**
- 100m STUDY AREA
  - RAIL
  - PCA CONTRIBUTING TO APEC
  - SUBJECT SITE
  - Rivers
  - PCA NOT CONTRIBUTING TO APEC
  - ANSI
  - MECP WATER WELL
  - TANK NOT CONTRIBUTING TO APEC
  - INFERRED GROUNDWATER FLOW DIRECTION
  - TANK CONTRIBUTING TO APEC
  - 1m TOPOGRAPHIC CONTOUR





- POTENTIALLY CONTAMINATING ACTIVITIES (PCAS):**
- (3) AIRSTRIPS AND HANGARS OPERATION
  - (5) ASPHALT AND BITUMEN MANUFACTURING
  - (8) CHEMICAL MANUFACTURING, PROCESSING AND BULK STORAGE
  - (10) COMMERCIAL AUTOBODY SHOPS
  - (12) CONCRETE, CEMENT AND LIME MANUFACTURING
  - (14) CRUDE OIL REFINING, PROCESSING AND BULK STORAGE
  - (19) ELECTRONIC AND COMPUTER EQUIPMENT MANUFACTURING
  - (28) GASOLINE AND ASSOCIATED PRODUCTS STORAGE IN FIXED TANKS
  - (30) IMPORTATION OF FILL MATERIAL OF UNKNOWN QUALITY
  - (31) INK MANUFACTURING, PROCESSING AND BULK STORAGE
  - (32) IRON AND STEEL MANUFACTURING AND PROCESSING
  - (33) METAL TREATMENT, COATING, PLATING AND FINISHING
  - (34) METAL FABRICATION
  - (35) MINING, SMELTING AND REFINING; ORE PROCESSING; TAILINGS STORAGE
  - (37) OPERATION OF DRY CLEANING EQUIPMENT (WHERE CHEMICALS ARE USED)
  - (39) PAINTS MANUFACTURING, PROCESSING AND BULK STORAGE
  - (40) PESTICIDES (INCLUDING HERBICIDES, FUNGICIDES AND ANTI-FOULING AGENTS) MANUFACTURING, PROCESSING, BULK STORAGE AND LARGE-SCALE APPLICATIONS
  - (43) PLASTICS (INCLUDING FIBREGLASS) MANUFACTURING AND PROCESSING
  - (45) PULP, PAPER AND PAPERBOARD MANUFACTURING AND PROCESSING
  - (46) RAIL YARDS, TRACKS AND SPURS
  - (47) RUBBER MANUFACTURING AND PROCESSING
  - (50) SOAP AND DETERGENT MANUFACTURING, PROCESSING AND BULK STORAGE
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  - (59) WOOD TREATING AND PRESERVATIVE FACILITY AND BULK STORAGE OF TREATED AND PRESERVED WOOD PRODUCTS
  - (A) SPILLS
  - (B) MISCELLANEOUS MANUFACTURING
  - (C) COAL STORAGE
  - (D) RAIL TIE PILE
  - (E) PCB STORAGE
  - (F) KNOWN CONTAMINATION

TITLE:  
**PHASE ONE CONCEPTUAL SITE MODEL**

PROJECT:  
**CONTAMINANT OVERVIEW STUDY  
FORMER ORANGEVILLE RAIL,  
CALEDON, ONTARIO**

CLIENT:  
**REGION OF PEEL**

	PROJECT NO.:	REVIEWED BY:
	201-02174-00	MB
	DATE:	FIGURE:
	MAY 2020	1-13

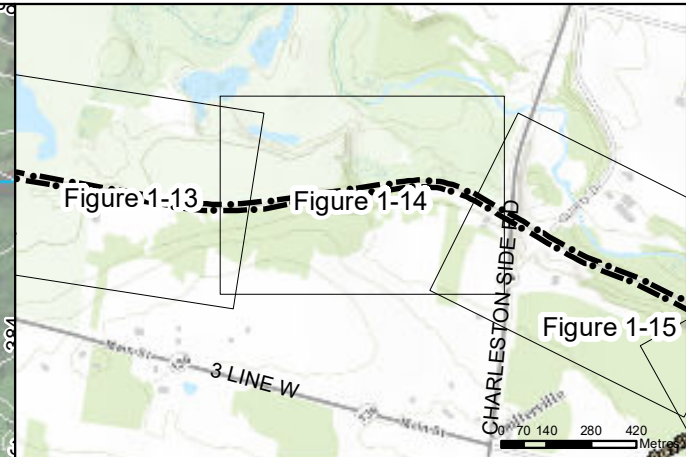
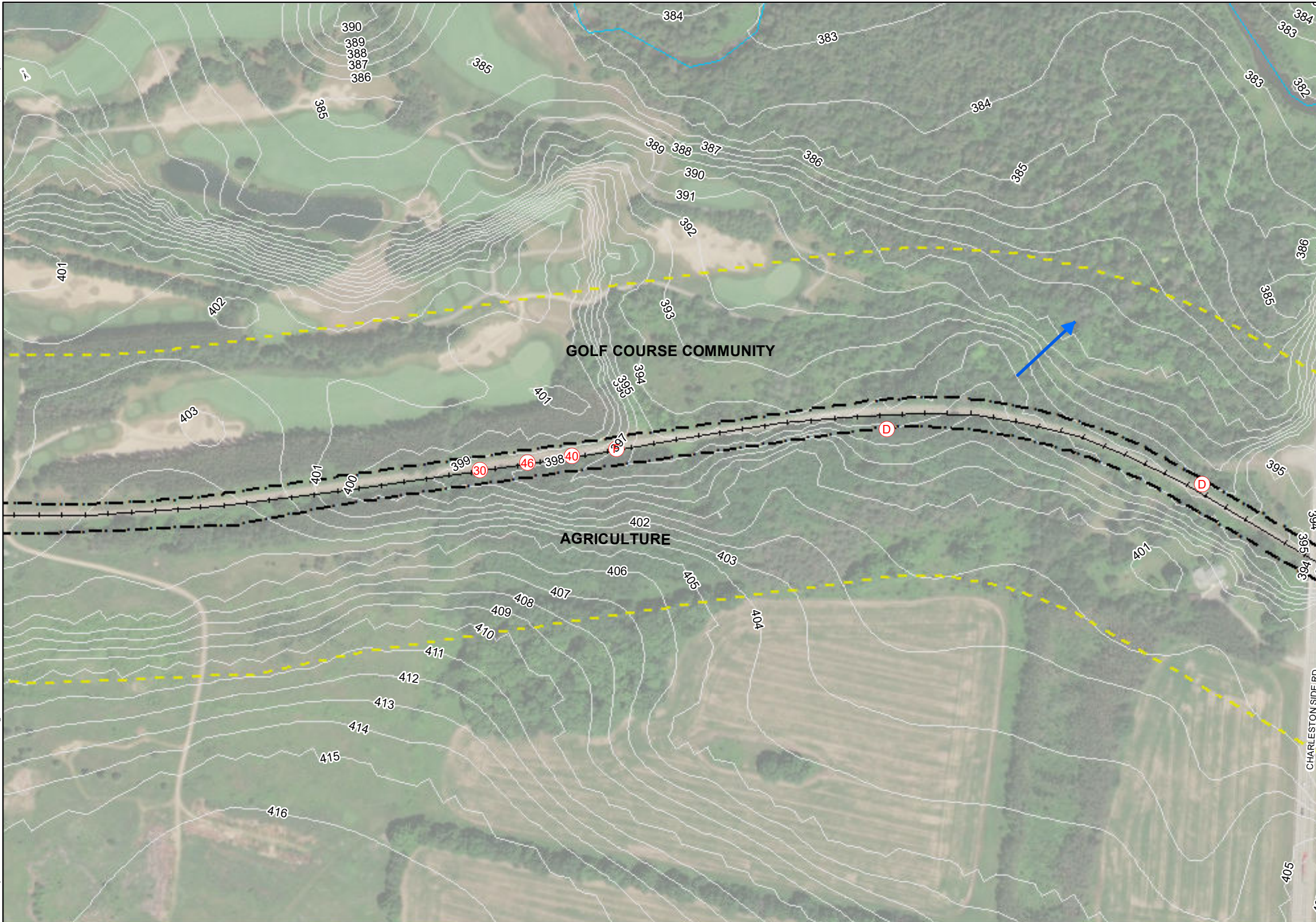
DATA SOURCE:

0 25 50 100 150 200 Metres

**LEGEND:**

- 100m STUDY AREA
- SUBJECT SITE
- ANSI
- INFERRED GROUNDWATER FLOW DIRECTION
- 1m TOPOGRAPHIC CONTOUR
- RAIL
- Rivers
- MECPC WATER WELL
- TANK NOT CONTRIBUTING TO APEC
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- POTENTIALLY CONTAMINATING ACTIVITIES (PCAS):**
- ③ AIRSTRIPS AND HANGARS OPERATION
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  - ㊳ VEHICLES AND ASSOCIATED PARTS MANUFACTURING
  - ㊴ WASTE DISPOSAL AND WASTE MANAGEMENT INCLUDING THERMAL TREATMENT, LANDFILLING AND TRANSFER OF WASTE, OTHER THAN USE OF BIOSOILS AS SOIL CONDITIONERS
  - ㊵ WOOD TREATING AND PRESERVATIVE FACILITY AND BULK STORAGE OF TREATED AND PRESERVED WOOD PRODUCTS
  - Ⓐ SPILLS
  - Ⓑ MISCELLANEOUS MANUFACTURING
  - Ⓒ COAL STORAGE
  - Ⓓ RAIL TIE PILE
  - Ⓔ PCB STORAGE
  - Ⓕ KNOWN CONTAMINATION

TITLE:  
**PHASE ONE CONCEPTUAL SITE MODEL**

PROJECT:  
**CONTAMINANT OVERVIEW STUDY  
FORMER ORANGEVILLE RAIL,  
CALEDON, ONTARIO**

CLIENT:  
**REGION OF PEEL**

	PROJECT NO.:	201-02174-00	REVIEWED BY:	MB
	DATE:	MAY 2020	FIGURE:	1-14

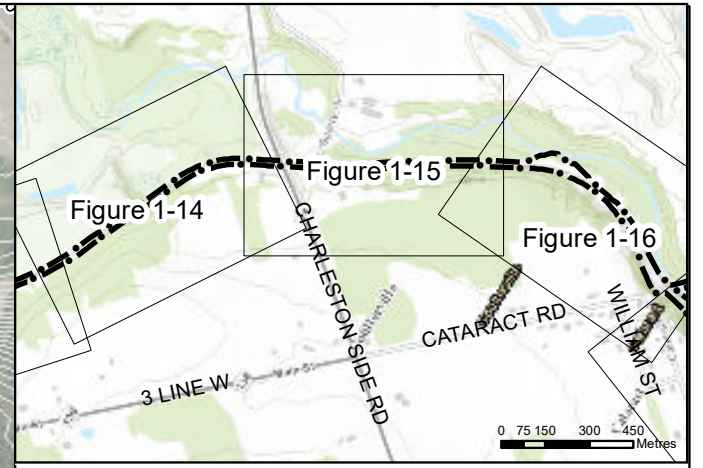
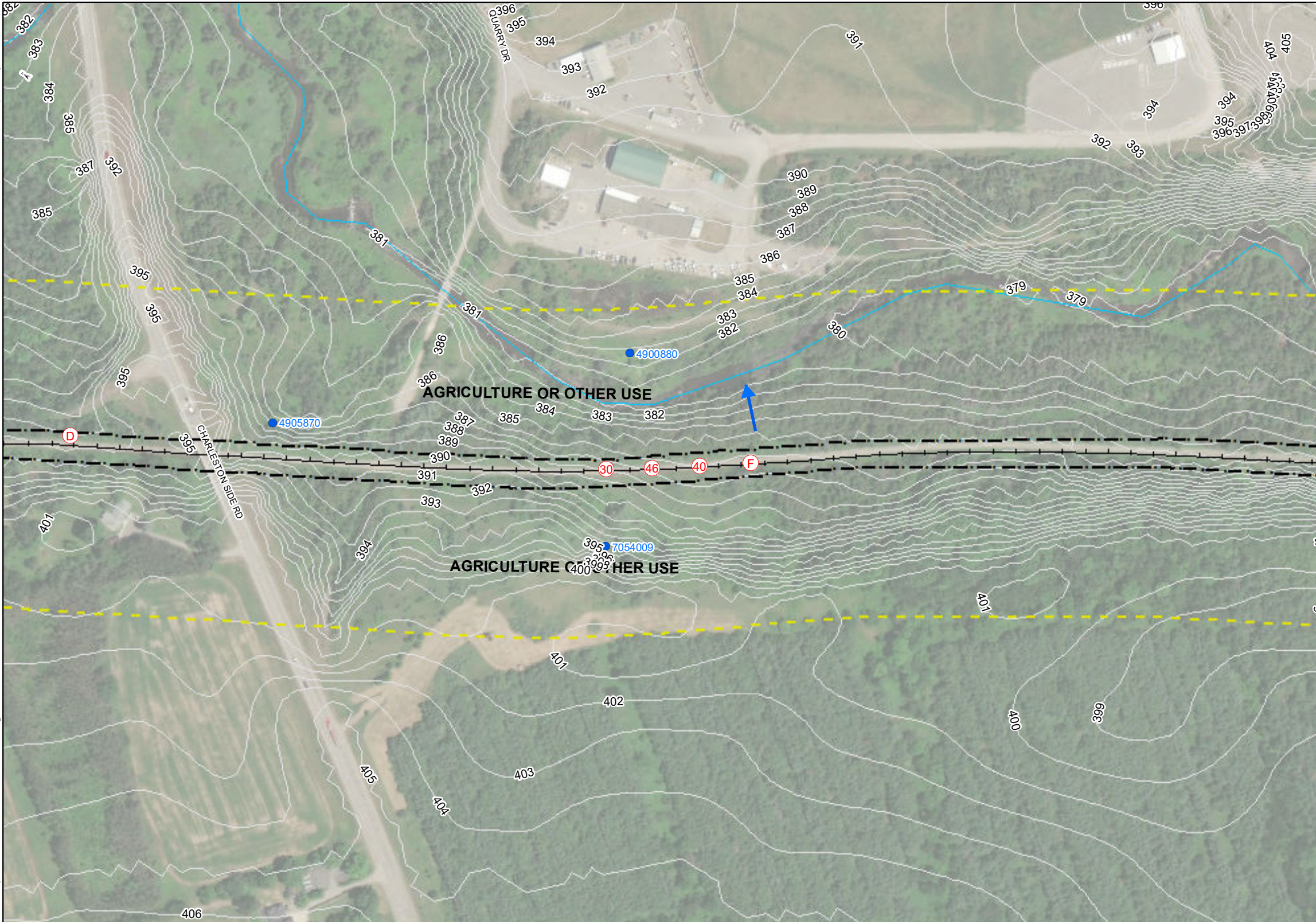


**DATA SOURCE:**

**LEGEND:**

100m STUDY AREA	RAIL	PCA CONTRIBUTING TO APEC
SUBJECT SITE	Rivers	PCA NOT CONTRIBUTING TO APEC
ANSI	MECP WATER WELL	
INFERRED GROUNDWATER FLOW DIRECTION	TANK NOT CONTRIBUTING TO APEC	
1m TOPOGRAPHIC CONTOUR	TANK CONTRIBUTING TO APEC	





- POTENTIALLY CONTAMINATING ACTIVITIES (PCAS):**
- ③ AIRSTRIPS AND HANGARS OPERATION
  - ⑤ ASPHALT AND BITUMEN MANUFACTURING
  - ⑧ CHEMICAL MANUFACTURING, PROCESSING AND BULK STORAGE
  - ⑩ COMMERCIAL AUTOBODY SHOPS
  - ⑫ CONCRETE, CEMENT AND LIME MANUFACTURING
  - ⑭ CRUDE OIL REFINING, PROCESSING AND BULK STORAGE
  - ⑲ ELECTRONIC AND COMPUTER EQUIPMENT MANUFACTURING
  - ⑳ GASOLINE AND ASSOCIATED PRODUCTS STORAGE IN FIXED TANKS
  - ㉑ IMPORTATION OF FILL MATERIAL OF UNKNOWN QUALITY
  - ㉒ INK MANUFACTURING, PROCESSING AND BULK STORAGE
  - ㉓ IRON AND STEEL MANUFACTURING AND PROCESSING
  - ㉔ METAL TREATMENT, COATING, PLATING AND FINISHING
  - ㉕ METAL FABRICATION
  - ㉖ MINING, SMELTING AND REFINING; ORE PROCESSING; TAILINGS STORAGE
  - ㉗ OPERATION OF DRY CLEANING EQUIPMENT (WHERE CHEMICALS ARE USED)
  - ㉘ PAINTS MANUFACTURING, PROCESSING AND BULK STORAGE
  - ㉙ PESTICIDES (INCLUDING HERBICIDES, FUNGICIDES AND ANTI-FOULING AGENTS) MANUFACTURING, PROCESSING, BULK STORAGE AND LARGE-SCALE APPLICATIONS
  - ㉚ PLASTICS (INCLUDING FIBREGLASS) MANUFACTURING AND PROCESSING
  - ㉛ PULP, PAPER AND PAPERBOARD MANUFACTURING AND PROCESSING
  - ㉜ RAIL YARDS, TRACKS AND SPURS
  - ㉝ RUBBER MANUFACTURING AND PROCESSING
  - ㉞ SOAP AND DETERGENT MANUFACTURING, PROCESSING AND BULK STORAGE
  - ㉟ SOLVENT MANUFACTURING, PROCESSING AND BULK STORAGE
  - ㊱ TANNERY
  - ㊲ TEXTILE MANUFACTURING AND PROCESSING
  - ㊳ VEHICLES AND ASSOCIATED PARTS MANUFACTURING
  - ㊴ WASTE DISPOSAL AND WASTE MANAGEMENT, INCLUDING THERMAL TREATMENT, LANDFILLING AND TRANSFER OF WASTE, OTHER THAN USE OF BIOSOILS AS SOIL CONDITIONERS
  - ㊵ WOOD TREATING AND PRESERVATIVE FACILITY AND BULK STORAGE OF TREATED AND PRESERVED WOOD PRODUCTS
  - Ⓐ SPILLS
  - Ⓑ MISCELLANEOUS MANUFACTURING
  - Ⓒ COAL STORAGE
  - Ⓓ RAIL TIE PILE
  - Ⓔ PCB STORAGE
  - Ⓕ KNOWN CONTAMINATION

TITLE:  
**PHASE ONE CONCEPTUAL SITE MODEL**

PROJECT:  
**CONTAMINANT OVERVIEW STUDY  
FORMER ORANGEVILLE RAIL,  
CALEDON, ONTARIO**

CLIENT:  
**REGION OF PEEL**

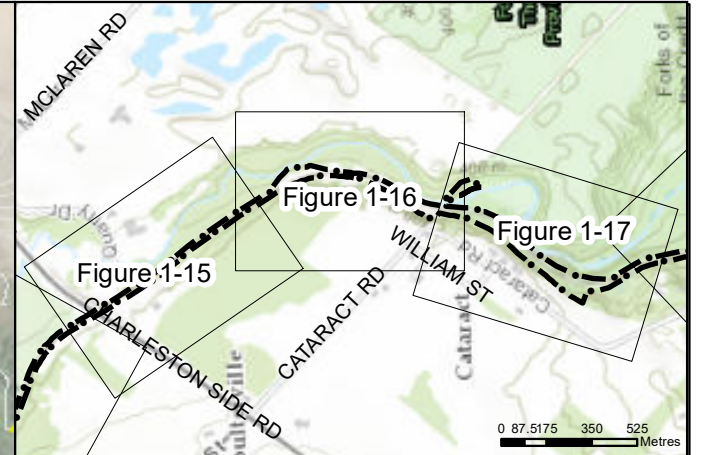
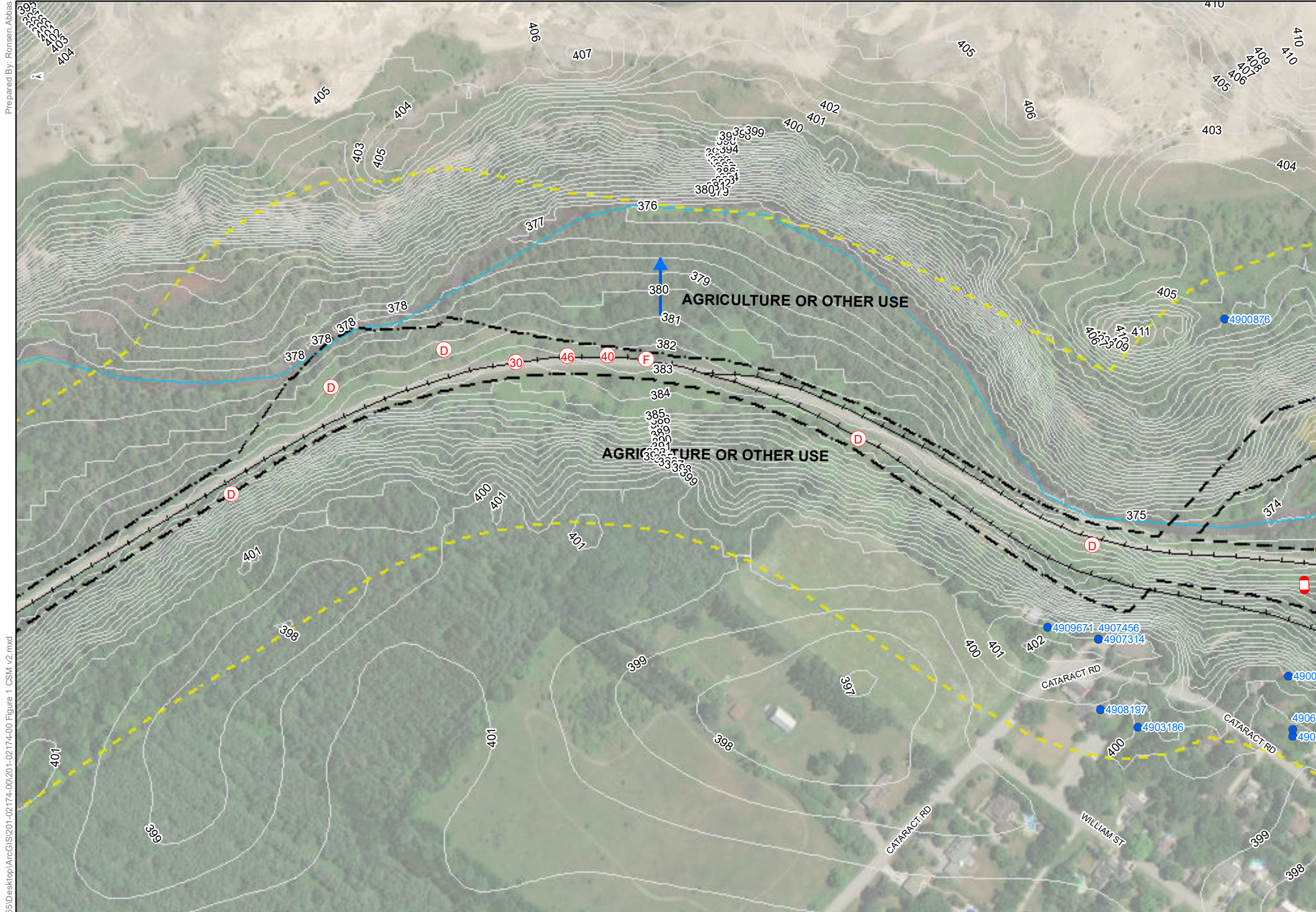
	PROJECT NO.:	REVIEWED BY:
	201-02174-00	MB
	DATE:	FIGURE:
	MAY 2020	1-15

DATA SOURCE:

**LEGEND:**

100m STUDY AREA	RAIL	PCA CONTRIBUTING TO APEC
SUBJECT SITE	Rivers	PCA NOT CONTRIBUTING TO APEC
ANSI	MECP WATER WELL	
INFERRED GROUNDWATER FLOW DIRECTION	TANK NOT CONTRIBUTING TO APEC	
1m TOPOGRAPHIC CONTOUR	TANK CONTRIBUTING TO APEC	





- POTENTIALLY CONTAMINATING ACTIVITIES (PCAS):**
- ③ AIRSTRIPS AND HANGARS OPERATION
  - ⑤ ASPHALT AND BITUMEN MANUFACTURING
  - ⑧ CHEMICAL MANUFACTURING, PROCESSING AND BULK STORAGE
  - ⑩ COMMERCIAL AUTOBODY SHOPS
  - ⑫ CONCRETE, CEMENT AND LIME MANUFACTURING
  - ⑭ CRUDE OIL REFINING, PROCESSING AND BULK STORAGE
  - ⑰ ELECTRONIC AND COMPUTER EQUIPMENT MANUFACTURING
  - ⑲ GASOLINE AND ASSOCIATED PRODUCTS STORAGE IN FIXED TANKS
  - ⑳ IMPORTATION OF FILL MATERIAL OF UNKNOWN QUALITY
  - ㉑ INK MANUFACTURING, PROCESSING AND BULK STORAGE
  - ㉒ IRON AND STEEL MANUFACTURING AND PROCESSING
  - ㉓ METAL TREATMENT, COATING, PLATING AND FINISHING
  - ㉔ METAL FABRICATION
  - ㉕ MINING, SMELTING AND REFINING; ORE PROCESSING; TAILINGS STORAGE
  - ㉖ OPERATION OF DRY CLEANING EQUIPMENT (WHERE CHEMICALS ARE USED)
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  - ㉛ PLASTICS (INCLUDING FIBREGLASS) MANUFACTURING AND PROCESSING
  - ㉜ PULP, PAPER AND PAPERBOARD MANUFACTURING AND PROCESSING
  - ㉞ RAIL YARDS, TRACKS AND SPURS
  - ㉟ RUBBER MANUFACTURING AND PROCESSING
  - ㊱ SOAP AND DETERGENT MANUFACTURING, PROCESSING AND BULK STORAGE
  - ㊲ SOLVENT MANUFACTURING, PROCESSING AND BULK STORAGE
  - ㊳ TANNERY
  - ㊴ TEXTILE MANUFACTURING AND PROCESSING
  - ㊵ VEHICLES AND ASSOCIATED PARTS MANUFACTURING
  - ㊶ WASTE DISPOSAL AND WASTE MANAGEMENT, INCLUDING THERMAL TREATMENT, LANDFILLING AND TRANSFER OF WASTE, OTHER THAN USE OF BIOSOILS AS SOIL CONDITIONERS
  - ㊷ WOOD TREATING AND PRESERVATIVE FACILITY AND BULK STORAGE OF TREATED AND PRESERVED WOOD PRODUCTS
  - A SPILLS
  - B MISCELLANEOUS MANUFACTURING
  - C COAL STORAGE
  - D RAIL TIE PILE
  - E PCB STORAGE
  - F KNOWN CONTAMINATION

TITLE:  
**PHASE ONE CONCEPTUAL SITE MODEL**

PROJECT:  
**CONTAMINANT OVERVIEW STUDY  
FORMER ORANGEVILLE RAIL,  
CALEDON, ONTARIO**

CLIENT:  
**REGION OF PEEL**

	PROJECT NO.:	REVIEWED BY:
	201-02174-00	MB
	DATE:	FIGURE:
	MAY 2020	1-16

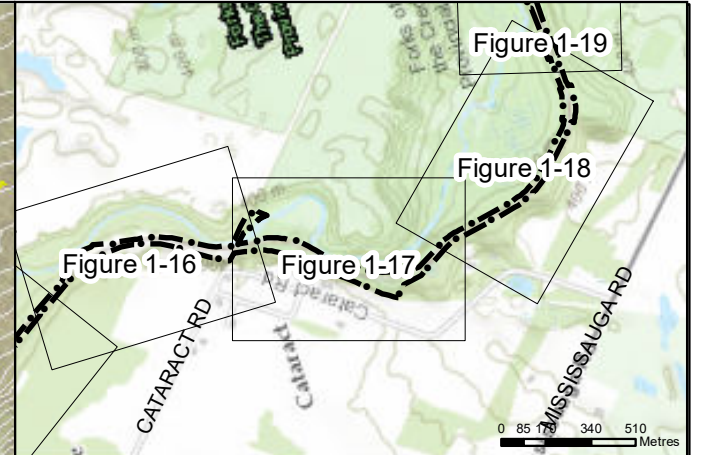
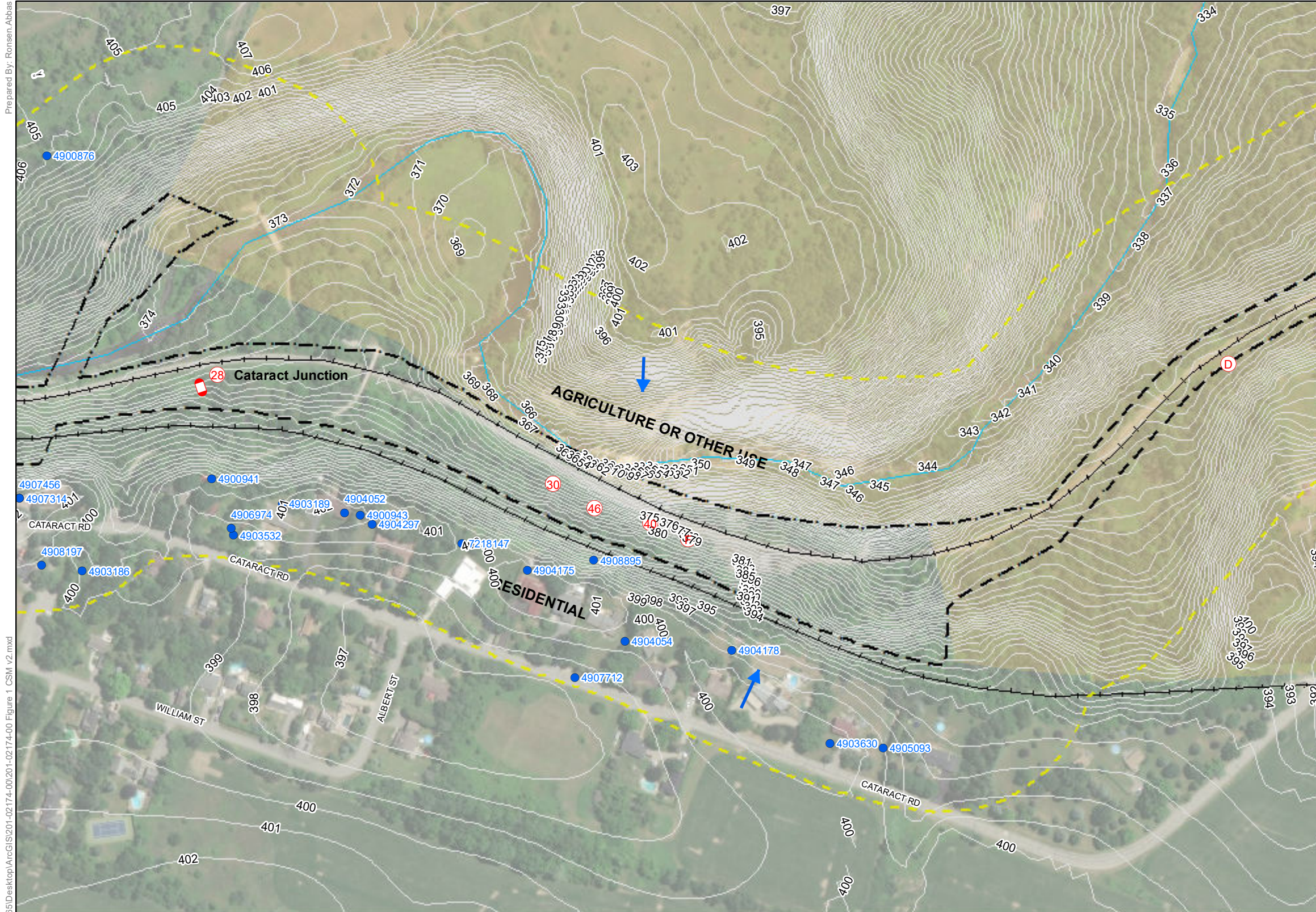
DATA SOURCE:

LEGEND:

100m STUDY AREA	RAIL	PCA CONTRIBUTING TO APEC
SUBJECT SITE	Rivers	PCA NOT CONTRIBUTING TO APEC
ANSI	MECP WATER WELL	
INFERRED GROUNDWATER FLOW DIRECTION	TANK NOT CONTRIBUTING TO APEC	
1m TOPOGRAPHIC CONTOUR	TANK CONTRIBUTING TO APEC	

Prepared By: Ronsen, Abbas  
C:\Users\ronsen.abbas\OneDrive - WSP\0365\Desktop\ArcGIS\201-02174-00\201-02174-00 Figure 1\_CSM v2.mxd





- POTENTIALLY CONTAMINATING ACTIVITIES (PCAS):**
- (3) AIRSTRIPS AND HANGARS OPERATION
  - (4) ASPHALT AND BITUMEN MANUFACTURING
  - (8) CHEMICAL MANUFACTURING, PROCESSING AND BULK STORAGE
  - (10) COMMERCIAL AUTOBODY SHOPS
  - (12) CONCRETE, CEMENT AND LIME MANUFACTURING
  - (14) CRUDE OIL REFINING, PROCESSING AND BULK STORAGE
  - (19) ELECTRONIC AND COMPUTER EQUIPMENT MANUFACTURING
  - (28) GASOLINE AND ASSOCIATED PRODUCTS STORAGE IN FIXED TANKS
  - (30) IMPORTATION OF FILL MATERIAL OF UNKNOWN QUALITY
  - (31) INK MANUFACTURING, PROCESSING AND BULK STORAGE
  - (32) IRON AND STEEL MANUFACTURING AND PROCESSING
  - (33) METAL TREATMENT, COATING, PLATING AND FINISHING
  - (34) METAL FABRICATION
  - (35) MINING, SMELTING AND REFINING; ORE PROCESSING; TAILINGS STORAGE
  - (37) OPERATION OF DRY CLEANING EQUIPMENT (WHERE CHEMICALS ARE USED)
  - (39) PAINTS MANUFACTURING, PROCESSING AND BULK STORAGE
  - (40) PESTICIDES (INCLUDING HERBICIDES, FUNGICIDES AND ANTI-FOULING AGENTS) MANUFACTURING, PROCESSING, BULK STORAGE AND LARGE-SCALE APPLICATIONS
  - (43) PLASTICS (INCLUDING FIBREGLASS) MANUFACTURING AND PROCESSING
  - (45) PULP, PAPER AND PAPERBOARD MANUFACTURING AND PROCESSING
  - (46) RAIL YARDS, TRACKS AND SPURS
  - (47) RUBBER MANUFACTURING AND PROCESSING
  - (50) SOAP AND DETERGENT MANUFACTURING, PROCESSING AND BULK STORAGE
  - (51) SOLVENT MANUFACTURING, PROCESSING AND BULK STORAGE
  - (53) TANNERY
  - (54) TEXTILE MANUFACTURING AND PROCESSING
  - (57) VEHICLES AND ASSOCIATED PARTS MANUFACTURING
  - (58) WASTE DISPOSAL AND WASTE MANAGEMENT, INCLUDING THERMAL TREATMENT, LANDFILLING AND TRANSFER OF WASTE, OTHER THAN USE OF BIOSOILS AS SOIL CONDITIONERS
  - (59) WOOD TREATING AND PRESERVATIVE FACILITY AND BULK STORAGE OF TREATED AND PRESERVED WOOD PRODUCTS
  - (A) SPILLS
  - (B) MISCELLANEOUS MANUFACTURING
  - (C) COAL STORAGE
  - (D) RAIL TIE PILE
  - (E) PCB STORAGE
  - (F) KNOWN CONTAMINATION

TITLE:  
**PHASE ONE CONCEPTUAL SITE MODEL**

PROJECT:  
**CONTAMINANT OVERVIEW STUDY  
FORMER ORANGEVILLE RAIL,  
CALEDON, ONTARIO**

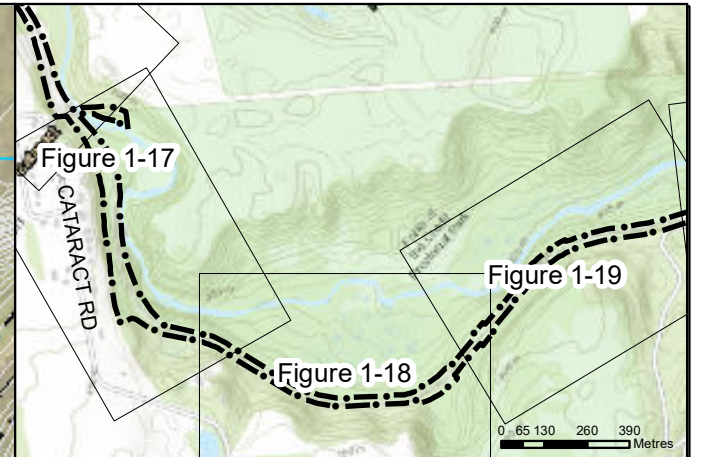
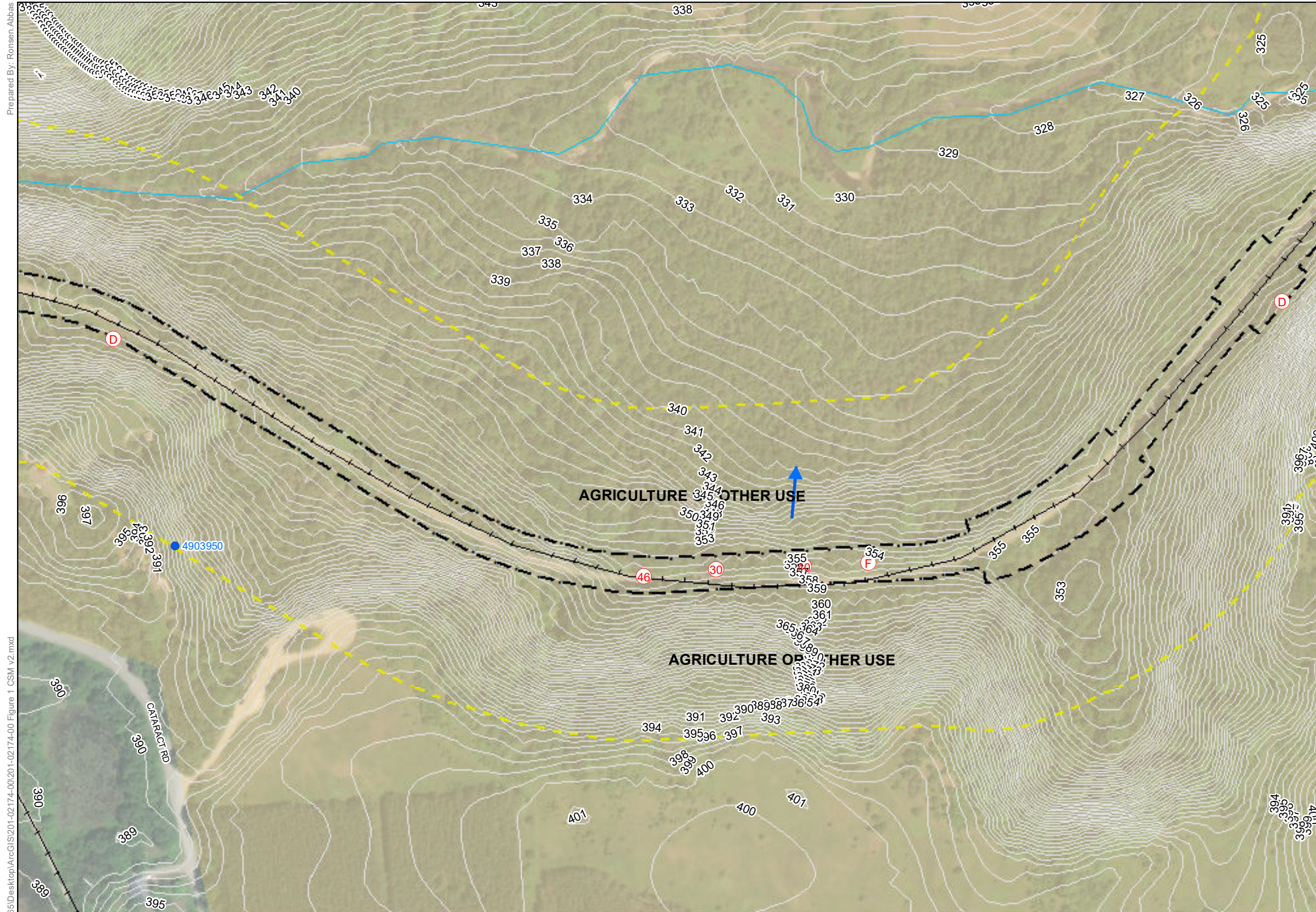
CLIENT:  
**REGION OF PEEL**

	PROJECT NO.:	REVIEWED BY:
	201-02174-00	MB
	DATE:	FIGURE:
	MAY 2020	1-17

- DATA SOURCE:**
- LEGEND:**
- 100m STUDY AREA
  - SUBJECT SITE
  - ANSI
  - INFERRED GROUNDWATER FLOW DIRECTION
  - 1m TOPOGRAPHIC CONTOUR
  - RAIL
  - Rivers
  - MECP WATER WELL
  - TANK NOT CONTRIBUTING TO APEC
  - TANK CONTRIBUTING TO APEC
  - PCA CONTRIBUTING TO APEC
  - PCA NOT CONTRIBUTING TO APEC

Prepared By: Ronsen, Abbas  
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- POTENTIALLY CONTAMINATING ACTIVITIES (PCAS):**
- ③ AIRSTRIPS AND HANGARS OPERATION
  - ④ ASPHALT AND BITUMEN MANUFACTURING
  - ⑧ CHEMICAL MANUFACTURING, PROCESSING AND BULK STORAGE
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  - ㉕ MINING, SMELTING AND REFINING; ORE PROCESSING; TAILINGS STORAGE
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  - ㉗ PAINTS MANUFACTURING, PROCESSING AND BULK STORAGE
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  - ㉙ PLASTICS (INCLUDING FIBREGLOSS) MANUFACTURING AND PROCESSING
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  - ㉜ RUBBER MANUFACTURING AND PROCESSING
  - ㉝ SOAP AND DETERGENT MANUFACTURING, PROCESSING AND BULK STORAGE
  - ㉞ SOLVENT MANUFACTURING, PROCESSING AND BULK STORAGE
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  - Ⓐ SPILLS
  - Ⓑ MISCELLANEOUS MANUFACTURING
  - Ⓒ COAL STORAGE
  - Ⓓ RAIL TIE PILE
  - Ⓔ PCB STORAGE
  - Ⓕ KNOWN CONTAMINATION

TITLE:  
**PHASE ONE CONCEPTUAL SITE MODEL**

PROJECT:  
**CONTAMINANT OVERVIEW STUDY  
FORMER ORANGEVILLE RAIL,  
CALEDON, ONTARIO**

CLIENT:  
**REGION OF PEEL**

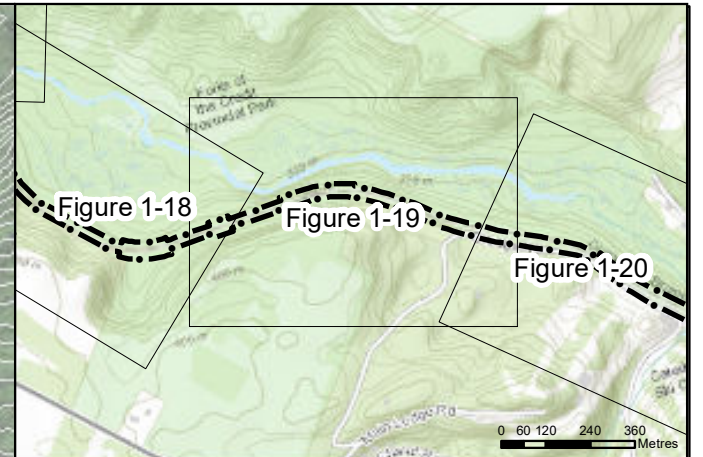
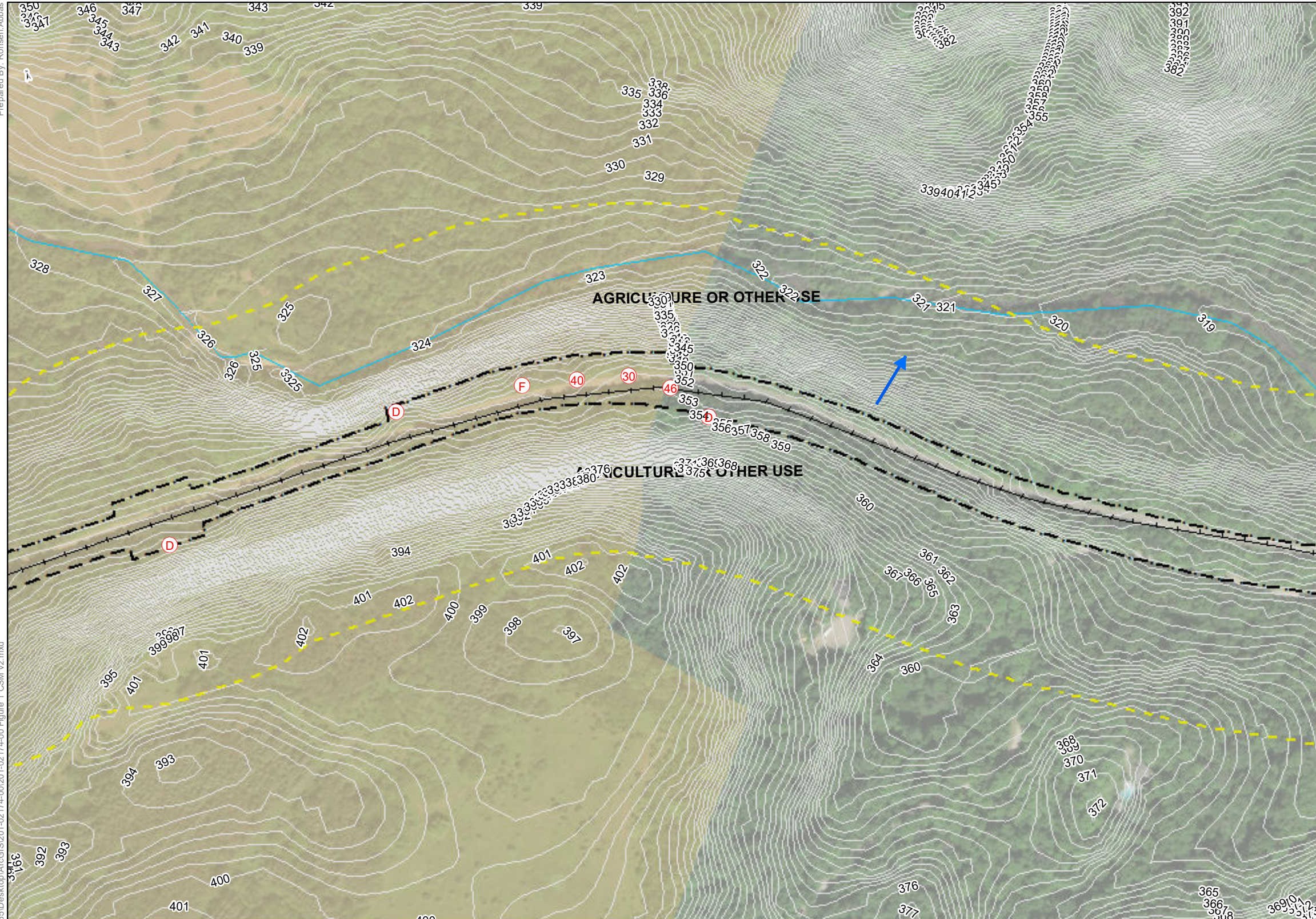
	PROJECT NO.:	201-02174-00	REVIEWED BY:	MB
	DATE:	MAY 2020	FIGURE:	1-18

DATA SOURCE:

**LEGEND:**

100m STUDY AREA	RAIL	PCA CONTRIBUTING TO APEC
SUBJECT SITE	Rivers	PCA NOT CONTRIBUTING TO APEC
ANSI	MECP WATER WELL	
INFERRED GROUNDWATER FLOW DIRECTION	TANK NOT CONTRIBUTING TO APEC	
1m TOPOGRAPHIC CONTOUR	TANK CONTRIBUTING TO APEC	





**POTENTIALLY CONTAMINATING ACTIVITIES (PCAS):**

- ③ AIRSTRIPS AND HANGARS OPERATION
- ⑤ ASPHALT AND BITUMEN MANUFACTURING
- ⑧ CHEMICAL MANUFACTURING, PROCESSING AND BULK STORAGE
- ⑩ COMMERCIAL AUTOBODY SHOPS
- ⑫ CONCRETE, CEMENT AND LIME MANUFACTURING
- ⑭ CRUDE OIL REFINING, PROCESSING AND BULK STORAGE
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- ①① IMPORTATION OF FILL MATERIAL OF UNKNOWN QUALITY
- ①② INK MANUFACTURING, PROCESSING AND BULK STORAGE
- ①③ IRON AND STEEL MANUFACTURING AND PROCESSING
- ①④ METAL TREATMENT, COATING, PLATING AND FINISHING
- ①⑤ METAL FABRICATION
- ①⑥ MINING, SMELTING AND REFINING; ORE PROCESSING; TAILINGS STORAGE
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- ④① PESTICIDES (INCLUDING HERBICIDES, FUNGICIDES AND ANTI-FOULING AGENTS) MANUFACTURING, PROCESSING, BULK STORAGE AND LARGE-SCALE APPLICATIONS
- ④③ PLASTICS (INCLUDING FIBREGLASS) MANUFACTURING AND PROCESSING
- ④⑤ PULP, PAPER AND PAPERBOARD MANUFACTURING AND PROCESSING
- ④⑥ RAIL YARDS, TRACKS AND SPURS
- ④⑦ RUBBER MANUFACTURING AND PROCESSING
- ⑤① SOAP AND DETERGENT MANUFACTURING, PROCESSING AND BULK STORAGE
- ⑤② SOLVENT MANUFACTURING, PROCESSING AND BULK STORAGE
- ⑤③ TANNERY
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TITLE:  
**PHASE ONE CONCEPTUAL SITE MODEL**

PROJECT:  
**CONTAMINANT OVERVIEW STUDY  
FORMER ORANGEVILLE RAIL,  
CALEDON, ONTARIO**

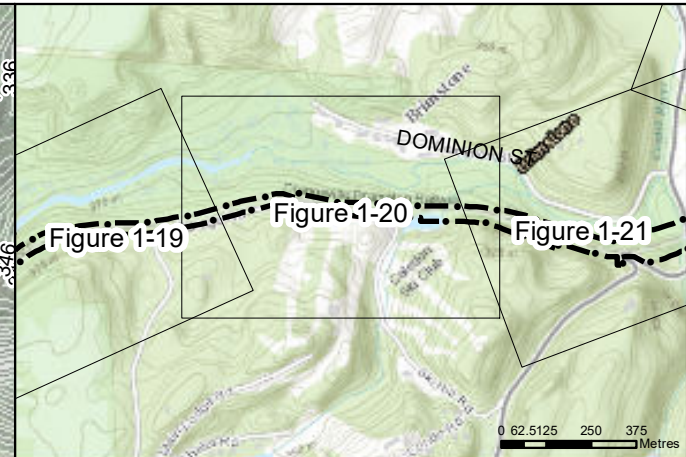
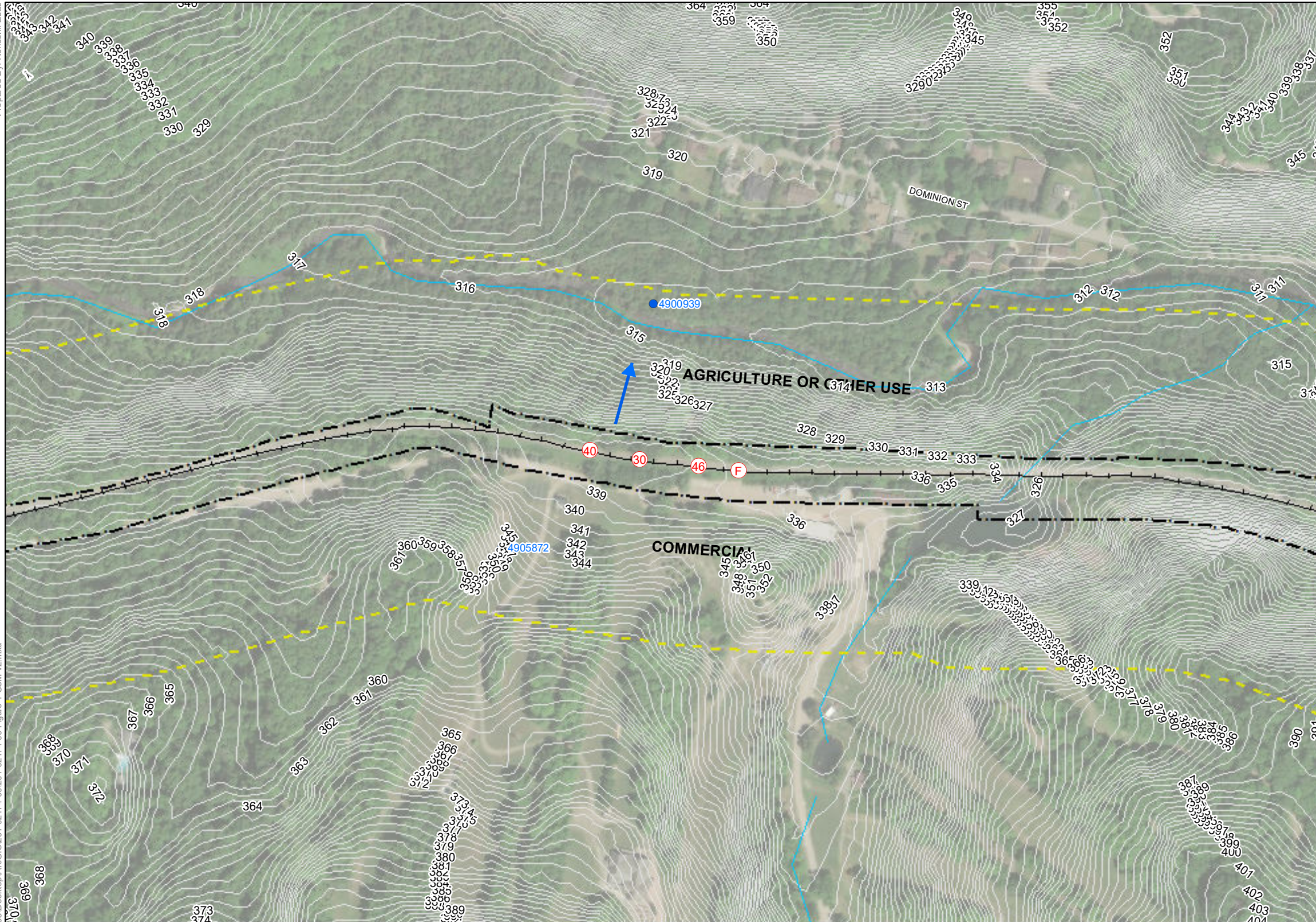
CLIENT:  
**REGION OF PEEL**

	PROJECT NO.:	201-02174-00	REVIEWED BY:	MB
	DATE:	MAY 2020	FIGURE:	1-19

DATA SOURCE:

- LEGEND:**
- 100m STUDY AREA
  - RAIL
  - PCA CONTRIBUTING TO APEC
  - SUBJECT SITE
  - Rivers
  - PCA NOT CONTRIBUTING TO APEC
  - ANSI
  - MECP WATER WELL
  - TANK NOT CONTRIBUTING TO APEC
  - INFERRED GROUNDWATER FLOW DIRECTION
  - TANK CONTRIBUTING TO APEC
  - 1m TOPOGRAPHIC CONTOUR





POTENTIALLY CONTAMINATING ACTIVITIES (PCAS):

- ③ AIRSTRIPS AND HANGARS OPERATION
- ④ ASPHALT AND BITUMEN MANUFACTURING
- ⑧ CHEMICAL MANUFACTURING, PROCESSING AND BULK STORAGE
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- ㉝ RUBBER MANUFACTURING AND PROCESSING
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- ㊵ WOOD TREATING AND PRESERVATIVE FACILITY AND BULK STORAGE OF TREATED AND PRESERVED WOOD PRODUCTS
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- Ⓒ COAL STORAGE
- Ⓓ RAIL TIE PILE
- Ⓔ PCB STORAGE
- Ⓕ KNOWN CONTAMINATION

TITLE:  
**PHASE ONE CONCEPTUAL SITE MODEL**

PROJECT:  
**CONTAMINANT OVERVIEW STUDY  
FORMER ORANGEVILLE RAIL,  
CALEDON, ONTARIO**

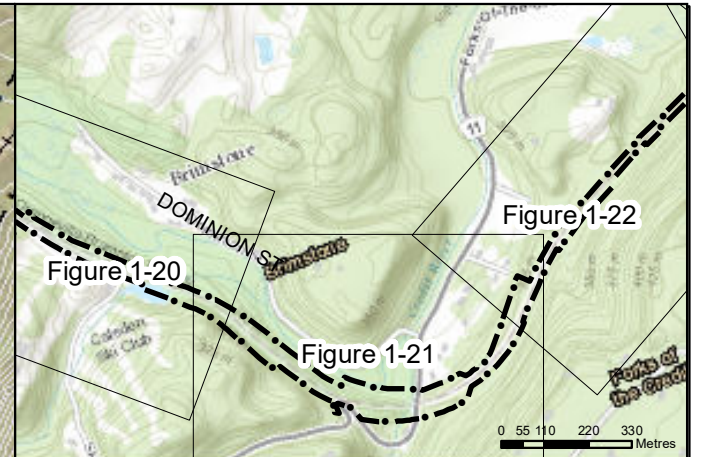
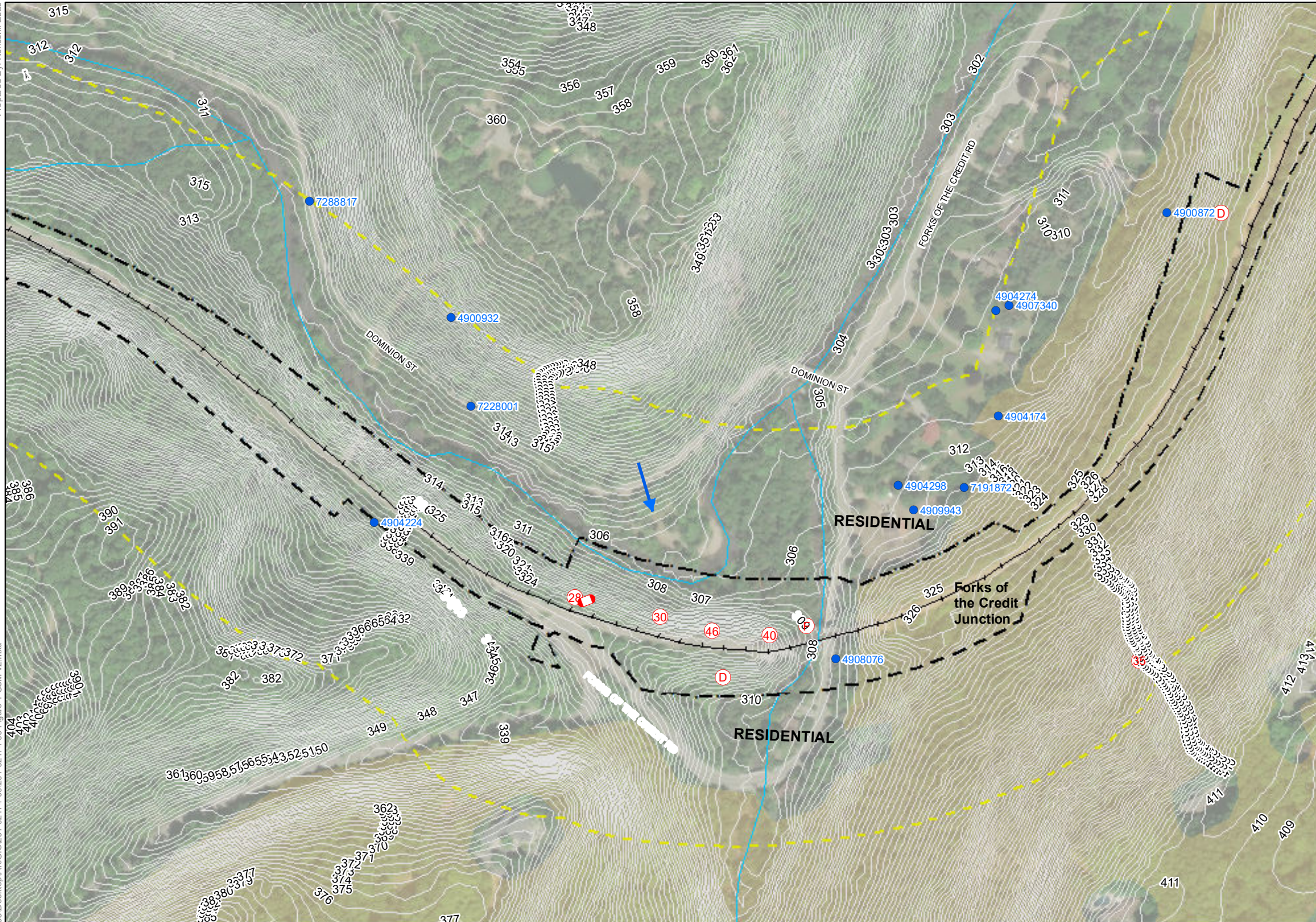
CLIENT:  
**REGION OF PEEL**

	PROJECT NO.:	201-02174-00	REVIEWED BY:	MB
	DATE:	MAY 2020	FIGURE:	1-20

DATA SOURCE:

- LEGEND:
- 100m STUDY AREA
    - SUBJECT SITE
    - ANSI
    - INFERRED GROUNDWATER FLOW DIRECTION
    - 1m TOPOGRAPHIC CONTOUR
  - RAIL
    - Rivers
    - MECP WATER WELL
    - TANK NOT CONTRIBUTING TO APEC
    - TANK CONTRIBUTING TO APEC
  - PCA CONTRIBUTING TO APEC
    - PCA NOT CONTRIBUTING TO APEC





- POTENTIALLY CONTAMINATING ACTIVITIES (PCAS):**
- ③ AIRSTRIPS AND HANGARS OPERATION
  - ⑤ ASPHALT AND BITUMEN MANUFACTURING
  - ⑧ CHEMICAL MANUFACTURING, PROCESSING AND BULK STORAGE
  - ⑩ COMMERCIAL AUTOBODY SHOPS
  - ⑫ CONCRETE, CEMENT AND LIME MANUFACTURING
  - ⑭ CRUDE OIL REFINING, PROCESSING AND BULK STORAGE
  - ⑰ ELECTRONIC AND COMPUTER EQUIPMENT MANUFACTURING
  - ⑲ GASOLINE AND ASSOCIATED PRODUCTS STORAGE IN FIXED TANKS
  - ⑳ IMPORTATION OF FILL MATERIAL OF UNKNOWN QUALITY
  - ㉑ INK MANUFACTURING, PROCESSING AND BULK STORAGE
  - ㉒ IRON AND STEEL MANUFACTURING AND PROCESSING
  - ㉓ METAL TREATMENT, COATING, PLATING AND FINISHING
  - ㉔ METAL FABRICATION
  - ㉕ MINING, SMELTING AND REFINING; ORE PROCESSING; TAILINGS STORAGE
  - ㉖ OPERATION OF DRY CLEANING EQUIPMENT (WHERE CHEMICALS ARE USED)
  - ㉗ PAINTS MANUFACTURING, PROCESSING AND BULK STORAGE
  - ㉘ PESTICIDES (INCLUDING HERBICIDES, FUNGICIDES AND ANTI-FOULING AGENTS) MANUFACTURING, PROCESSING, BULK STORAGE AND LARGE-SCALE APPLICATIONS
  - ㉙ PLASTICS (INCLUDING FIBREGLASS) MANUFACTURING AND PROCESSING
  - ㉚ PULP, PAPER AND PAPERBOARD MANUFACTURING AND PROCESSING
  - ㉛ RAIL YARDS, TRACKS AND SPURS
  - ㉜ RUBBER MANUFACTURING AND PROCESSING
  - ㉝ SOAP AND DETERGENT MANUFACTURING, PROCESSING AND BULK STORAGE
  - ㉞ SOLVENT MANUFACTURING, PROCESSING AND BULK STORAGE
  - ㉟ TANNERY
  - ㊱ TEXTILE MANUFACTURING AND PROCESSING
  - ㊲ VEHICLES AND ASSOCIATED PARTS MANUFACTURING
  - ㊳ WASTE DISPOSAL AND WASTE MANAGEMENT, INCLUDING THERMAL TREATMENT, LANDFILLING AND TRANSFER OF WASTE, OTHER THAN USE OF BIOSOILS AS SOIL CONDITIONERS
  - ㊴ WOOD TREATING AND PRESERVATIVE FACILITY AND BULK STORAGE OF TREATED AND PRESERVED WOOD PRODUCTS
  - Ⓐ SPILLS
  - Ⓑ MISCELLANEOUS MANUFACTURING
  - Ⓒ COAL STORAGE
  - Ⓓ RAIL TIE PILE
  - Ⓔ PCB STORAGE
  - Ⓕ KNOWN CONTAMINATION

TITLE:  
**PHASE ONE CONCEPTUAL SITE MODEL**

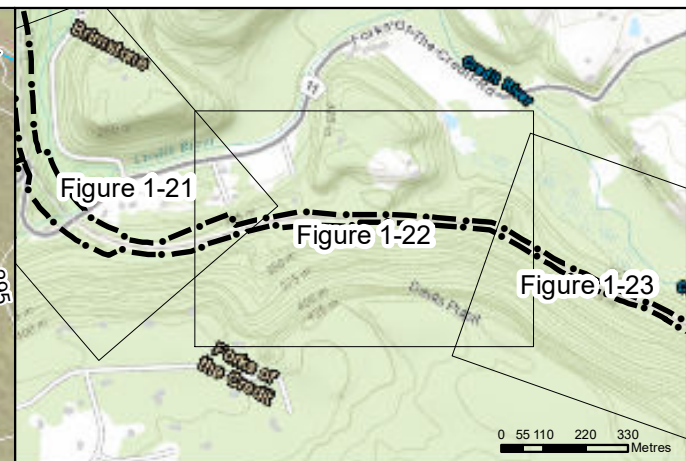
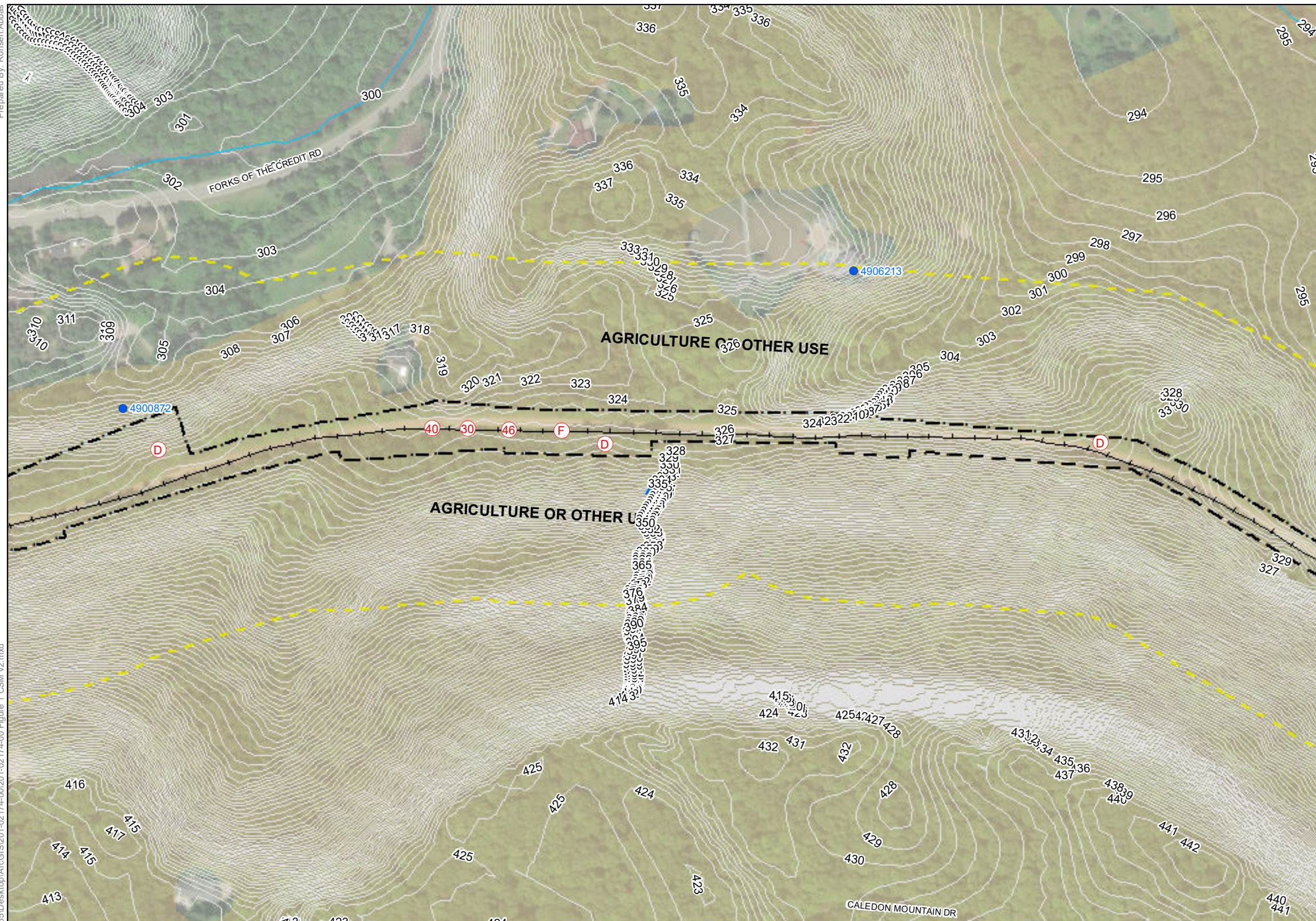
PROJECT:  
**CONTAMINANT OVERVIEW STUDY  
FORMER ORANGEVILLE RAIL,  
CALEDON, ONTARIO**

CLIENT:  
**REGION OF PEEL**

	PROJECT NO.:	201-02174-00	REVIEWED BY:	MB
	DATE:	MAY 2020	FIGURE:	1-21

- DATA SOURCE:
- LEGEND:**
- 100m STUDY AREA
  - SUBJECT SITE
  - ANSI
  - INFERRED GROUNDWATER FLOW DIRECTION
  - 1m TOPOGRAPHIC CONTOUR
  - RAIL
  - MECP WATER WELL
  - TANK NOT CONTRIBUTING TO APEC
  - TANK CONTRIBUTING TO APEC
  - # PCA CONTRIBUTING TO APEC
  - # PCA NOT CONTRIBUTING TO APEC





- POTENTIALLY CONTAMINATING ACTIVITIES (PCAS):**
- ③ AIRSTRIPS AND HANGARS OPERATION
  - ④ ASPHALT AND BITUMEN MANUFACTURING
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  - ⑫ CONCRETE, CEMENT AND LIME MANUFACTURING
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  - ㉕ METAL FABRICATION
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  - ㉙ PESTICIDES (INCLUDING HERBICIDES, FUNGICIDES AND ANTI-FOULING AGENTS) MANUFACTURING, PROCESSING, BULK STORAGE AND LARGE-SCALE APPLICATIONS
  - ㉚ PLASTICS (INCLUDING FIBREGLASS) MANUFACTURING AND PROCESSING
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  - ㉜ RAIL YARDS, TRACKS AND SPURS
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  - ㉞ SOAP AND DETERGENT MANUFACTURING, PROCESSING AND BULK STORAGE
  - ㉟ SOLVENT MANUFACTURING, PROCESSING AND BULK STORAGE
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  - ㊵ WOOD TREATING AND PRESERVATIVE FACILITY AND BULK STORAGE OF TREATED AND PRESERVED WOOD PRODUCTS
  - Ⓐ SPILLS
  - Ⓑ MISCELLANEOUS MANUFACTURING
  - Ⓒ COAL STORAGE
  - Ⓓ RAIL TIE PILE
  - Ⓔ PCB STORAGE
  - Ⓕ KNOWN CONTAMINATION

TITLE:  
**PHASE ONE CONCEPTUAL SITE MODEL**

PROJECT:  
**CONTAMINANT OVERVIEW STUDY  
FORMER ORANGEVILLE RAIL,  
CALEDON, ONTARIO**

CLIENT:  
**REGION OF PEEL**

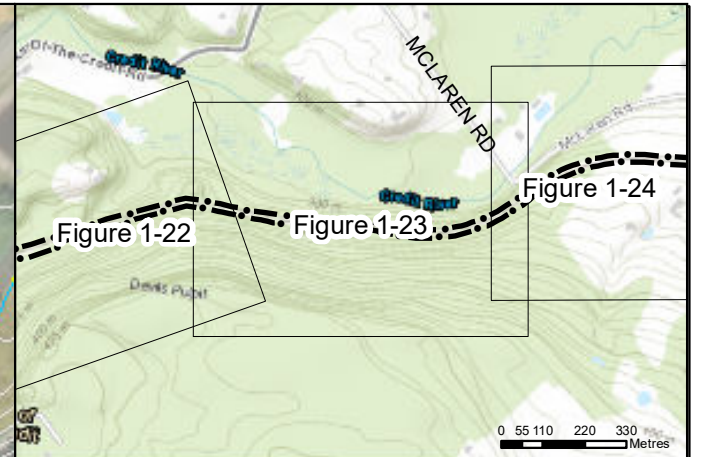
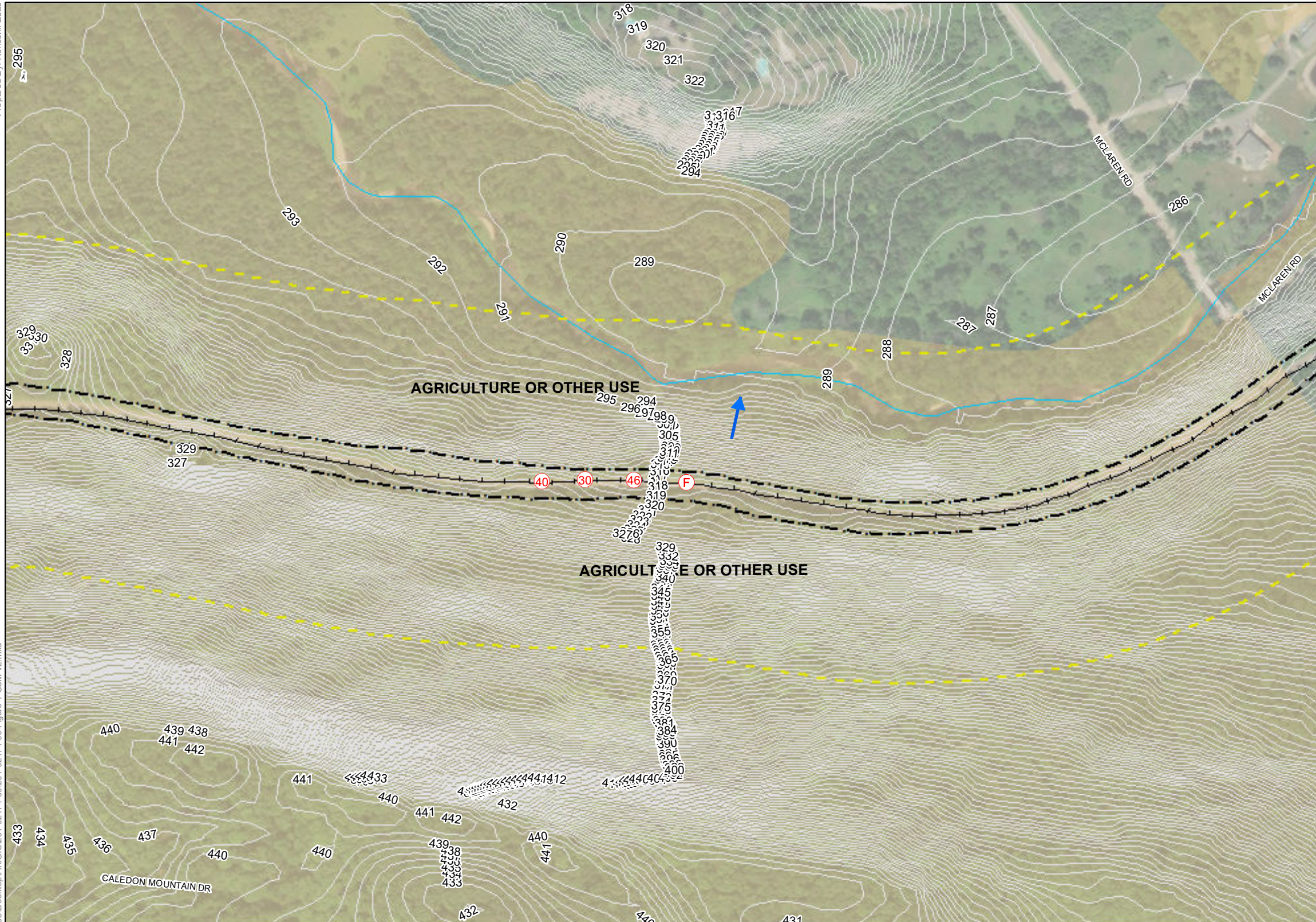
DATA SOURCE:

**LEGEND:**

100m STUDY AREA	RAIL	PCA CONTRIBUTING TO APEC
SUBJECT SITE	Rivers	PCA NOT CONTRIBUTING TO APEC
ANSI	MECP WATER WELL	
INFERRED GROUNDWATER FLOW DIRECTION	TANK NOT CONTRIBUTING TO APEC	
1m TOPOGRAPHIC CONTOUR	TANK CONTRIBUTING TO APEC	

	PROJECT NO.:	201-02174-00	REVIEWED BY:	MB
	DATE:	MAY 2020	FIGURE:	1-22





- POTENTIALLY CONTAMINATING ACTIVITIES (PCAS):**
- ③ AIRSTRIPS AND HANGARS OPERATION
  - ⑤ ASPHALT AND BITUMEN MANUFACTURING
  - ⑧ CHEMICAL MANUFACTURING, PROCESSING AND BULK STORAGE
  - ⑩ COMMERCIAL AUTOBODY SHOPS
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  - ⑭ CRUDE OIL REFINING, PROCESSING AND BULK STORAGE
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  - ㉓ IRON AND STEEL MANUFACTURING AND PROCESSING
  - ㉔ METAL TREATMENT, COATING, PLATING AND FINISHING
  - ㉕ METAL FABRICATION
  - ㉖ MINING, SMELTING AND REFINING; ORE PROCESSING; TAILINGS STORAGE
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  - ④① PESTICIDES (INCLUDING HERBICIDES, FUNGICIDES AND ANTI-FOULING AGENTS) MANUFACTURING, PROCESSING, BULK STORAGE AND LARGE-SCALE APPLICATIONS
  - ④③ PLASTICS (INCLUDING FIBREGLASS) MANUFACTURING AND PROCESSING
  - ④⑤ PULP, PAPER AND PAPERBOARD MANUFACTURING AND PROCESSING
  - ④⑥ RAIL YARDS, TRACKS AND SPURS
  - ④⑦ RUBBER MANUFACTURING AND PROCESSING
  - ⑤① SOAP AND DETERGENT MANUFACTURING, PROCESSING AND BULK STORAGE
  - ⑤② SOLVENT MANUFACTURING, PROCESSING AND BULK STORAGE
  - ⑤③ TANNERY
  - ⑤④ TEXTILE MANUFACTURING AND PROCESSING
  - ⑤⑦ VEHICLES AND ASSOCIATED PARTS MANUFACTURING
  - ⑤⑧ WASTE DISPOSAL AND WASTE MANAGEMENT, INCLUDING THERMAL TREATMENT, LANDFILLING AND TRANSFER OF WASTE, OTHER THAN USE OF BIOSOILS AS SOIL CONDITIONERS
  - ⑤⑨ WOOD TREATING AND PRESERVATIVE FACILITY AND BULK STORAGE OF TREATED AND PRESERVED WOOD PRODUCTS
  - Ⓐ SPILLS
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  - Ⓒ COAL STORAGE
  - Ⓓ RAIL TIE PILE
  - Ⓔ PCB STORAGE
  - Ⓕ KNOWN CONTAMINATION

TITLE:  
**PHASE ONE CONCEPTUAL SITE MODEL**

PROJECT:  
**CONTAMINANT OVERVIEW STUDY  
FORMER ORANGEVILLE RAIL,  
CALEDON, ONTARIO**

CLIENT:  
**REGION OF PEEL**

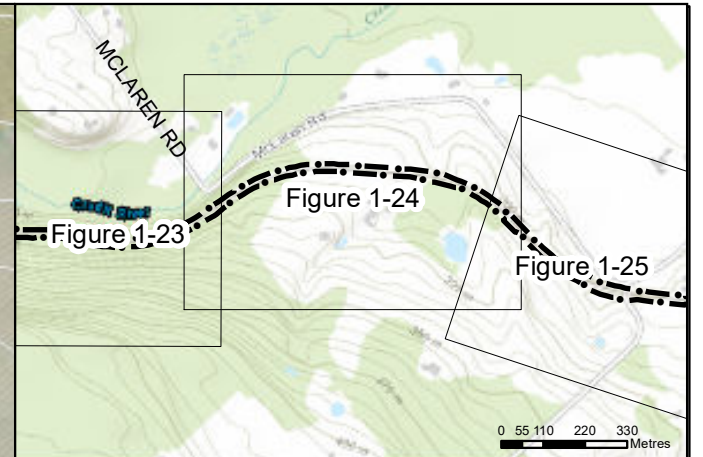
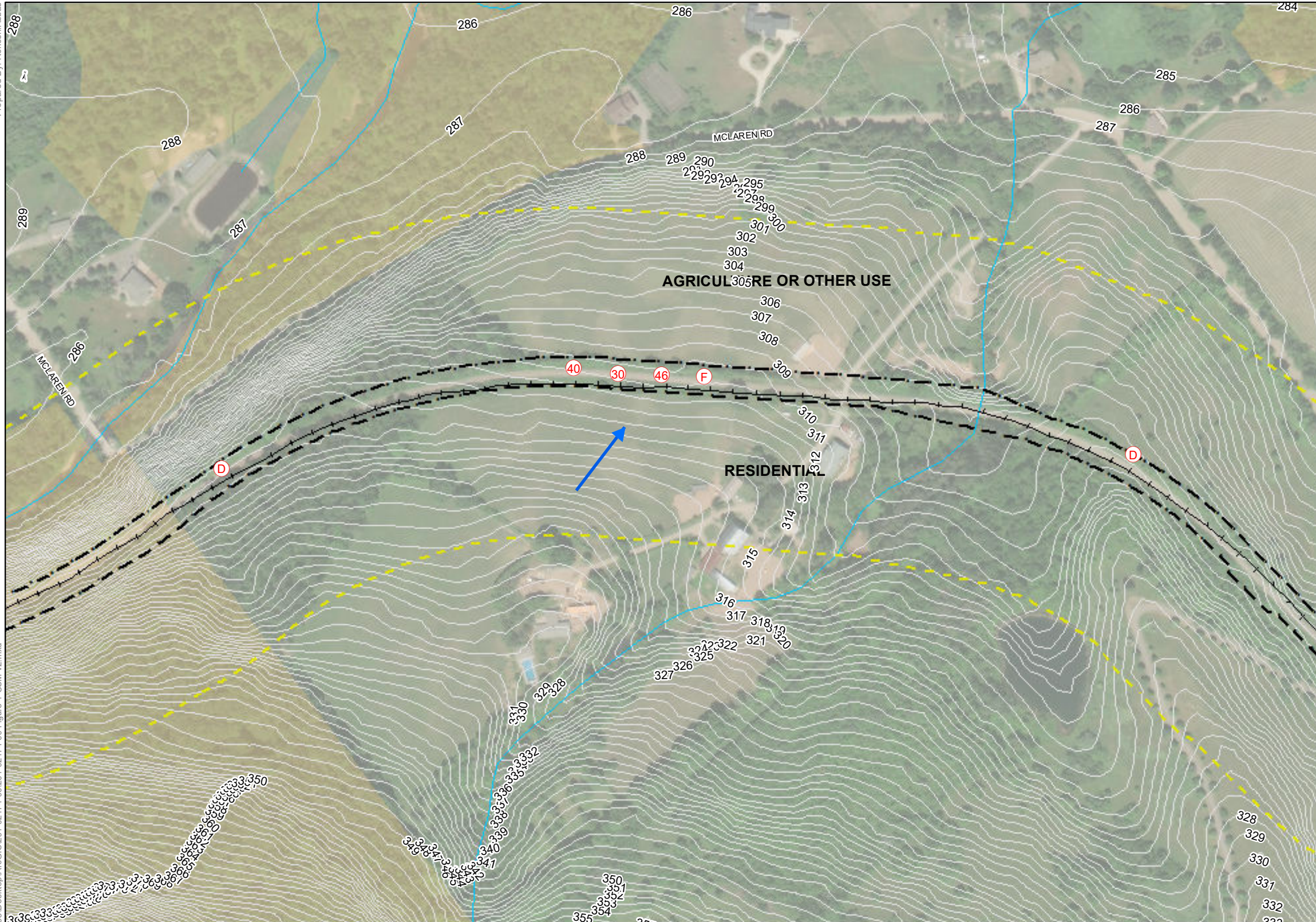
	PROJECT NO.:	REVIEWED BY:
	201-02174-00	MB
DATE:	FIGURE:	
MAY 2020	1-23	

DATA SOURCE:

LEGEND:

- 100m STUDY AREA
- SUBJECT SITE
- ANSI
- INFERRED GROUNDWATER FLOW DIRECTION
- 1m TOPOGRAPHIC CONTOUR
- RAIL
- Rivers
- MECP WATER WELL
- TANK NOT CONTRIBUTING TO APEC
- TANK CONTRIBUTING TO APEC
- PCA CONTRIBUTING TO APEC
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- POTENTIALLY CONTAMINATING ACTIVITIES (PCAS):**
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TITLE:  
**PHASE ONE CONCEPTUAL SITE MODEL**

PROJECT:  
**CONTAMINANT OVERVIEW STUDY  
FORMER ORANGEVILLE RAIL,  
CALEDON, ONTARIO**

CLIENT:  
**REGION OF PEEL**

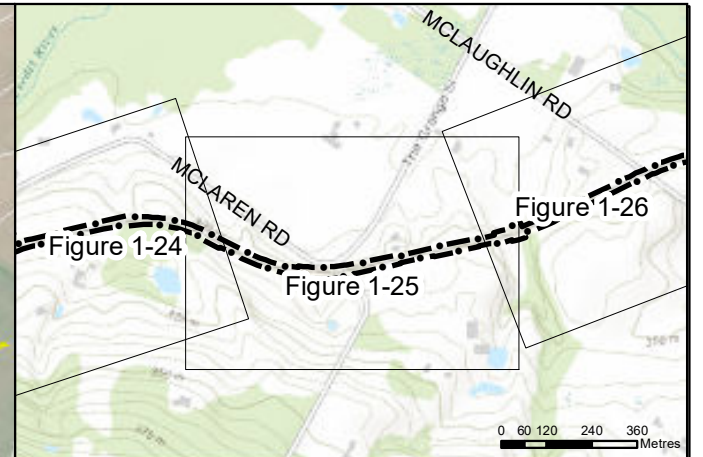
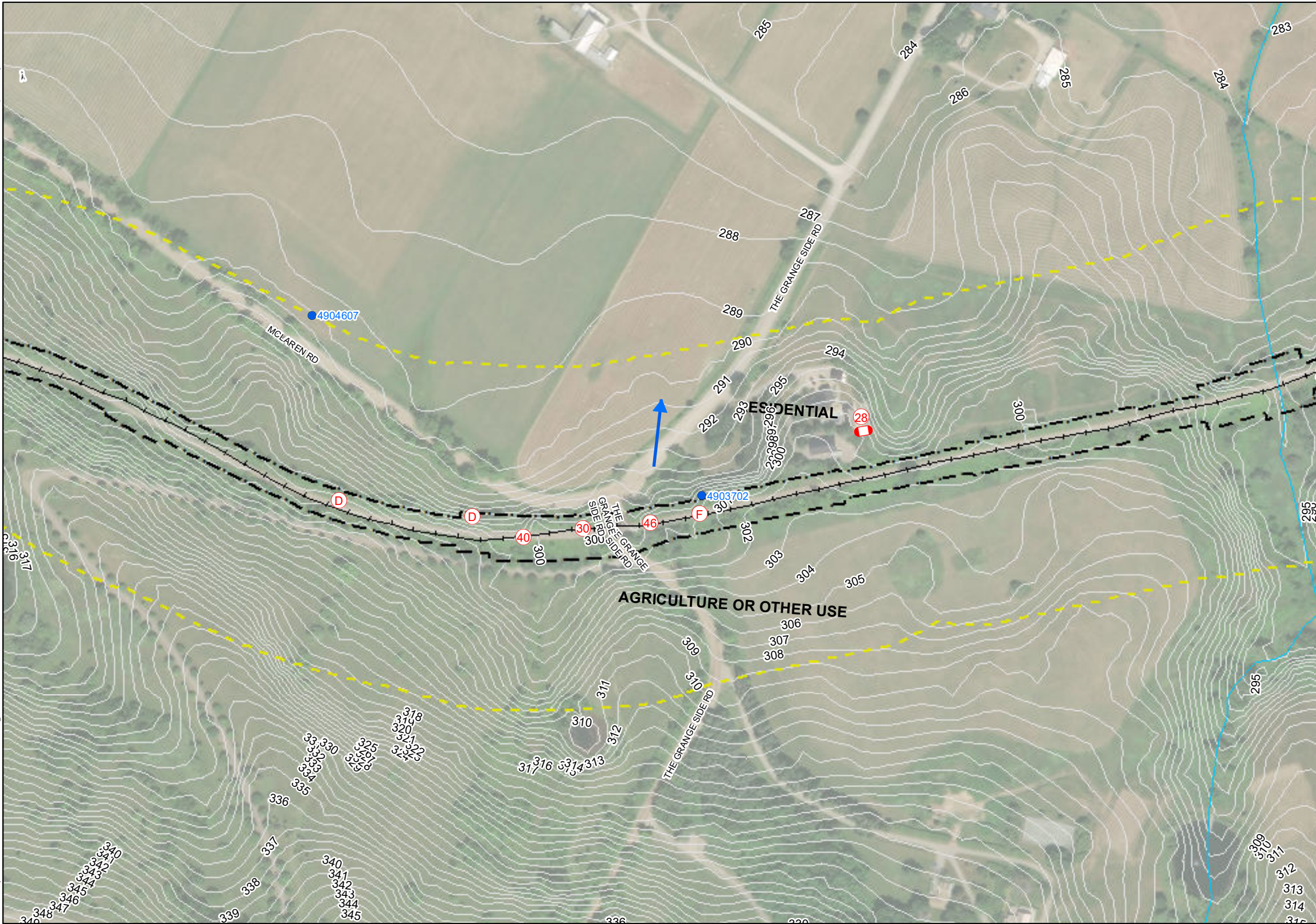
	PROJECT NO.:	201-02174-00	REVIEWED BY:	MB
	DATE:	MAY 2020	FIGURE:	1-24

DATA SOURCE:

**LEGEND:**

100m STUDY AREA	RAIL	PCA CONTRIBUTING TO APEC
SUBJECT SITE	Rivers	PCA NOT CONTRIBUTING TO APEC
ANSI	MECP WATER WELL	
INFERRED GROUNDWATER FLOW DIRECTION	TANK NOT CONTRIBUTING TO APEC	
1m TOPOGRAPHIC CONTOUR	TANK CONTRIBUTING TO APEC	





- POTENTIALLY CONTAMINATING ACTIVITIES (PCAS):**
- ③ AIRSTRIPS AND HANGARS OPERATION
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  - Ⓒ COAL STORAGE
  - Ⓓ RAIL TIE PILE
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TITLE:  
**PHASE ONE CONCEPTUAL SITE MODEL**

PROJECT:  
**CONTAMINANT OVERVIEW STUDY  
FORMER ORANGEVILLE RAIL,  
CALEDON, ONTARIO**

CLIENT:  
**REGION OF PEEL**

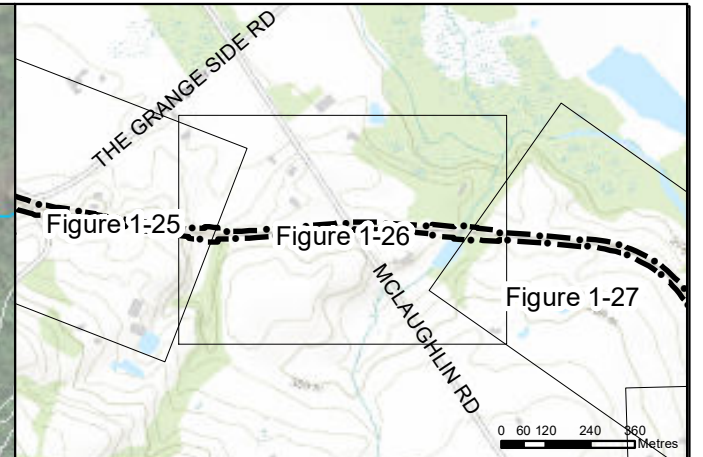
	PROJECT NO.:	201-02174-00	REVIEWED BY:	MB
	DATE:	MAY 2020	FIGURE:	1-25

DATA SOURCE:

LEGEND:

- 100m STUDY AREA
- SUBJECT SITE
- ANSI
- INFERRED GROUNDWATER FLOW DIRECTION
- 1m TOPOGRAPHIC CONTOUR
- RAIL
- Rivers
- MECP WATER WELL
- TANK NOT CONTRIBUTING TO APEC
- TANK CONTRIBUTING TO APEC
- PCA CONTRIBUTING TO APEC
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- ③ AIRSTRIPS AND HANGARS OPERATION
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  - A SPILLS
  - B MISCELLANEOUS MANUFACTURING
  - C COAL STORAGE
  - D RAIL TIE PILE
  - E PCB STORAGE
  - F KNOWN CONTAMINATION

TITLE:  
**PHASE ONE CONCEPTUAL SITE MODEL**

PROJECT:  
**CONTAMINANT OVERVIEW STUDY  
FORMER ORANGEVILLE RAIL,  
CALEDON, ONTARIO**

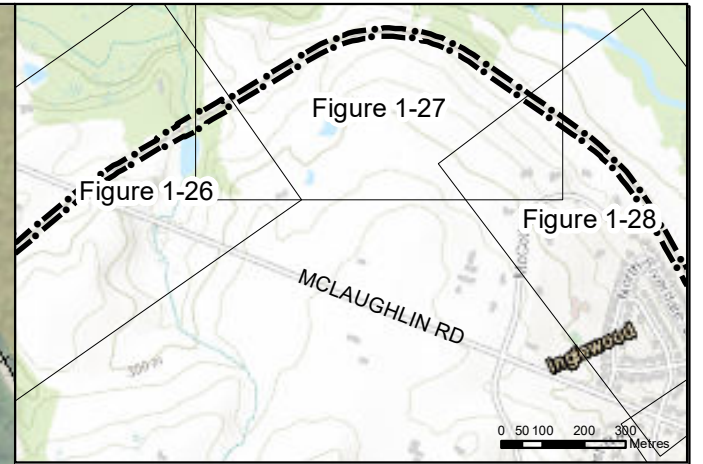
CLIENT:  
**REGION OF PEEL**

DATA SOURCE: 0 25 50 100 150 200 Metres

<p><b>LEGEND:</b></p> <ul style="list-style-type: none"> <li><span style="border: 1px dashed yellow; display: inline-block; width: 20px; height: 10px;"></span> 100m STUDY AREA</li> <li><span style="border: 2px dashed black; display: inline-block; width: 20px; height: 10px;"></span> SUBJECT SITE</li> <li><span style="background-color: orange; display: inline-block; width: 15px; height: 10px;"></span> ANSI</li> <li><span style="color: blue; font-size: 24px;">➔</span> INFERRED GROUNDWATER FLOW DIRECTION</li> <li><span style="border-bottom: 1px solid gray; width: 20px; display: inline-block;"></span> 1m TOPOGRAPHIC CONTOUR</li> </ul>	<ul style="list-style-type: none"> <li><span style="border-bottom: 1px solid black; width: 20px; display: inline-block;"></span> RAIL</li> <li><span style="color: blue; font-size: 24px;">●</span> Rivers</li> <li><span style="color: blue; font-size: 18px;">●</span> MECP WATER WELL</li> <li><span style="border: 1px solid black; border-radius: 50%; width: 15px; height: 15px; display: inline-block;"></span> TANK NOT CONTRIBUTING TO APEC</li> <li><span style="border: 1px solid black; border-radius: 50%; width: 15px; height: 15px; display: inline-block; background-color: red;"></span> TANK CONTRIBUTING TO APEC</li> </ul>	<ul style="list-style-type: none"> <li><span style="border: 1px solid red; border-radius: 50%; width: 15px; height: 15px; display: inline-block;"></span> PCA CONTRIBUTING TO APEC</li> <li><span style="border: 1px solid gray; border-radius: 50%; width: 15px; height: 15px; display: inline-block;"></span> PCA NOT CONTRIBUTING TO APEC</li> </ul>
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	PROJECT NO.:	201-02174-00	REVIEWED BY:	MB
	DATE:	MAY 2020	FIGURE:	1-26





- POTENTIALLY CONTAMINATING ACTIVITIES (PCAS):**
- ③ AIRSTRIPS AND HANGARS OPERATION
  - ⑤ ASPHALT AND BITUMEN MANUFACTURING
  - ⑧ CHEMICAL MANUFACTURING, PROCESSING AND BULK STORAGE
  - ⑩ COMMERCIAL AUTOBODY SHOPS
  - ⑫ CONCRETE, CEMENT AND LIME MANUFACTURING
  - ⑭ CRUDE OIL REFINING, PROCESSING AND BULK STORAGE
  - ⑰ ELECTRONIC AND COMPUTER EQUIPMENT MANUFACTURING
  - ⑲ GASOLINE AND ASSOCIATED PRODUCTS STORAGE IN FIXED TANKS
  - ⑳ IMPORTATION OF FILL MATERIAL OF UNKNOWN QUALITY
  - ㉑ INK MANUFACTURING, PROCESSING AND BULK STORAGE
  - ㉒ IRON AND STEEL MANUFACTURING AND PROCESSING
  - ㉓ METAL TREATMENT, COATING, PLATING AND FINISHING
  - ㉔ METAL FABRICATION
  - ㉕ MINING, SMELTING AND REFINING; ORE PROCESSING; TAILINGS STORAGE
  - ㉖ OPERATION OF DRY CLEANING EQUIPMENT (WHERE CHEMICALS ARE USED)
  - ㉗ PAINTS MANUFACTURING, PROCESSING AND BULK STORAGE
  - ㉘ PESTICIDES (INCLUDING HERBICIDES, FUNGICIDES AND ANTI-FOULING AGENTS) MANUFACTURING, PROCESSING, BULK STORAGE AND LARGE-SCALE APPLICATIONS
  - ㉙ PLASTICS (INCLUDING FIBREGLASS) MANUFACTURING AND PROCESSING
  - ㉚ PULP, PAPER AND PAPERBOARD MANUFACTURING AND PROCESSING
  - ㉛ RAIL YARDS, TRACKS AND SPURS
  - ㉜ RUBBER MANUFACTURING AND PROCESSING
  - ㉝ SOAP AND DETERGENT MANUFACTURING, PROCESSING AND BULK STORAGE
  - ㉞ SOLVENT MANUFACTURING, PROCESSING AND BULK STORAGE
  - ㉟ TANNERY
  - ㊱ TEXTILE MANUFACTURING AND PROCESSING
  - ㊲ VEHICLES AND ASSOCIATED PARTS MANUFACTURING
  - ㊳ WASTE DISPOSAL AND WASTE MANAGEMENT, INCLUDING THERMAL TREATMENT, LANDFILLING AND TRANSFER OF WASTE, OTHER THAN USE OF BIOSOILS AS SOIL CONDITIONERS
  - ㊴ WOOD TREATING AND PRESERVATIVE FACILITY AND BULK STORAGE OF TREATED AND PRESERVED WOOD PRODUCTS
  - Ⓐ SPILLS
  - Ⓑ MISCELLANEOUS MANUFACTURING
  - Ⓒ COAL STORAGE
  - Ⓓ RAIL TIE PILE
  - Ⓔ PCB STORAGE
  - Ⓕ KNOWN CONTAMINATION

TITLE:  
**PHASE ONE CONCEPTUAL SITE MODEL**

PROJECT:  
**CONTAMINANT OVERVIEW STUDY  
FORMER ORANGEVILLE RAIL,  
CALEDON, ONTARIO**

CLIENT:  
**REGION OF PEEL**

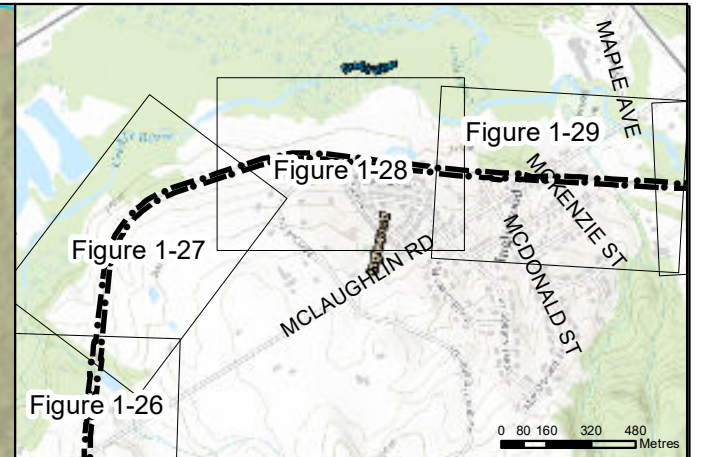
	PROJECT NO.:	REVIEWED BY:
	201-02174-00	MB
	DATE:	FIGURE:
	MAY 2020	1-27

DATA SOURCE:

**LEGEND:**

100m STUDY AREA	RAIL	PCA CONTRIBUTING TO APEC
SUBJECT SITE	Rivers	PCA NOT CONTRIBUTING TO APEC
ANSI	MECP WATER WELL	TANK NOT CONTRIBUTING TO APEC
INFERRED GROUNDWATER FLOW DIRECTION	TANK CONTRIBUTING TO APEC	
1m TOPOGRAPHIC CONTOUR		





- POTENTIALLY CONTAMINATING ACTIVITIES (PCAS):**
- ③ AIRSTRIPS AND HANGARS OPERATION
  - ⑤ ASPHALT AND BITUMEN MANUFACTURING
  - ⑧ CHEMICAL MANUFACTURING, PROCESSING AND BULK STORAGE
  - ⑩ COMMERCIAL AUTOBODY SHOPS
  - ⑫ CONCRETE, CEMENT AND LIME MANUFACTURING
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TITLE:  
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PROJECT:  
**CONTAMINANT OVERVIEW STUDY  
FORMER ORANGEVILLE RAIL,  
CALEDON, ONTARIO**

CLIENT:  
**REGION OF PEEL**

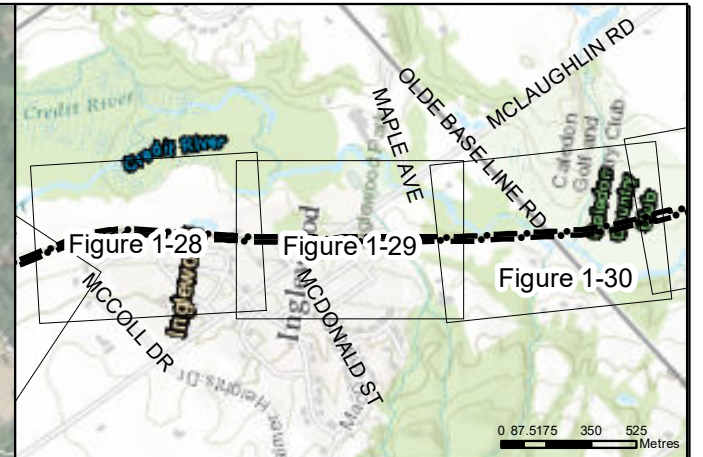
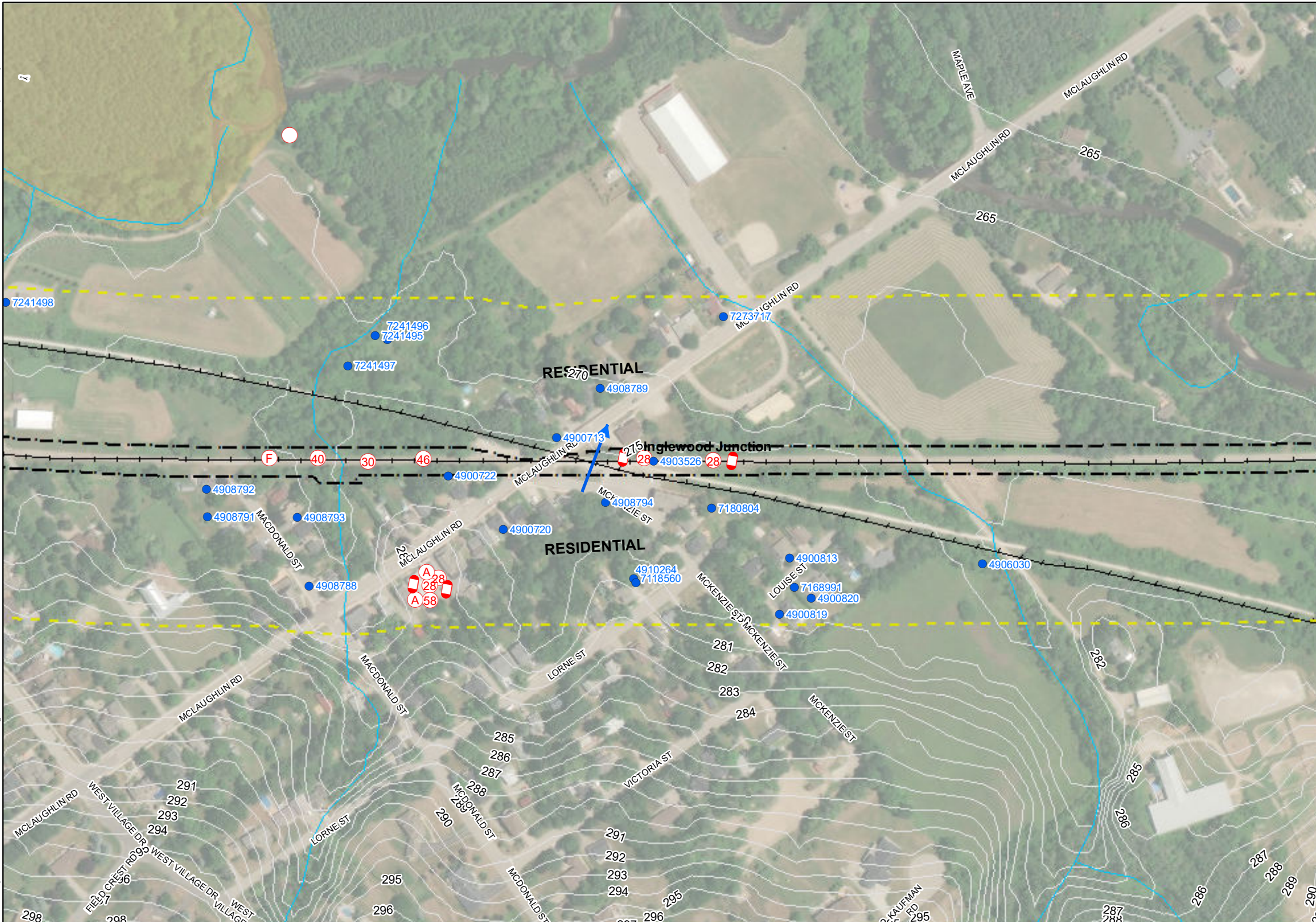
	PROJECT NO.:	201-02174-00	REVIEWED BY:	MB
	DATE:	MAY 2020	FIGURE:	1-28

DATA SOURCE:

LEGEND:

100m STUDY AREA	RAIL	PCA CONTRIBUTING TO APEC
SUBJECT SITE	Rivers	PCA NOT CONTRIBUTING TO APEC
ANSI	MECP WATER WELL	
INFERRED GROUNDWATER FLOW DIRECTION	TANK NOT CONTRIBUTING TO APEC	
1m TOPOGRAPHIC CONTOUR	TANK CONTRIBUTING TO APEC	





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TITLE:  
**PHASE ONE CONCEPTUAL SITE MODEL**

PROJECT:  
**CONTAMINANT OVERVIEW STUDY  
FORMER ORANGEVILLE RAIL,  
CALEDON, ONTARIO**

CLIENT:  
**REGION OF PEEL**

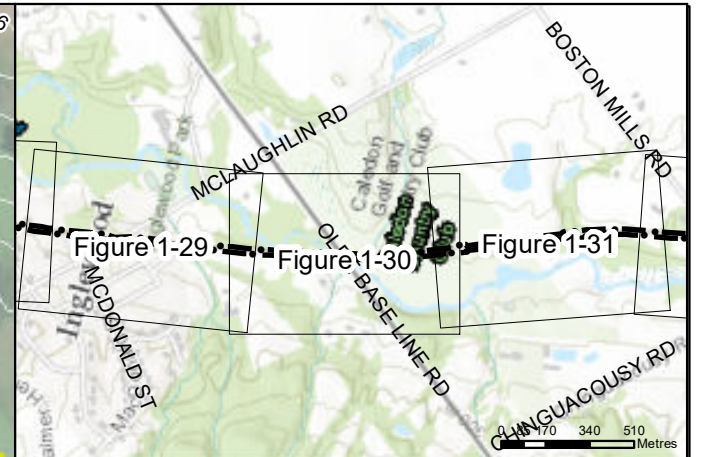
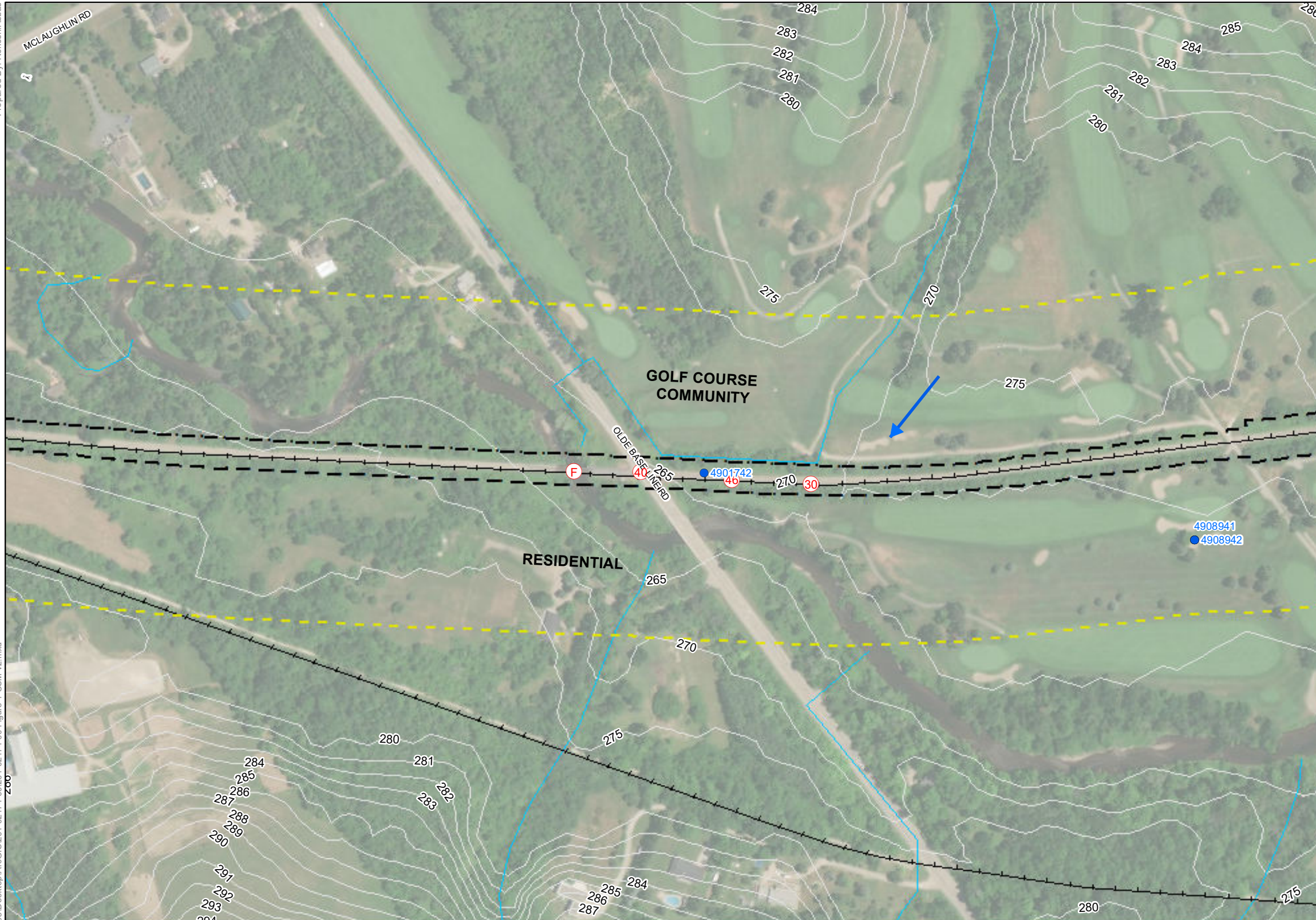
	PROJECT NO.:	REVIEWED BY:
	201-02174-00	MB
DATE:	FIGURE:	
MAY 2020	1-29	

DATA SOURCE:

**LEGEND:**

100m STUDY AREA	RAIL	PCA CONTRIBUTING TO APEC
SUBJECT SITE	Rivers	PCA NOT CONTRIBUTING TO APEC
ANSI	MECP WATER WELL	TANK NOT CONTRIBUTING TO APEC
INFERRED GROUNDWATER FLOW DIRECTION	TANK CONTRIBUTING TO APEC	
1m TOPOGRAPHIC CONTOUR		





POTENTIALLY CONTAMINATING ACTIVITIES (PCAS):

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TITLE:  
**PHASE ONE CONCEPTUAL SITE MODEL**

PROJECT:  
**CONTAMINANT OVERVIEW STUDY  
FORMER ORANGEVILLE RAIL,  
CALEDON, ONTARIO**

CLIENT:  
**REGION OF PEEL**

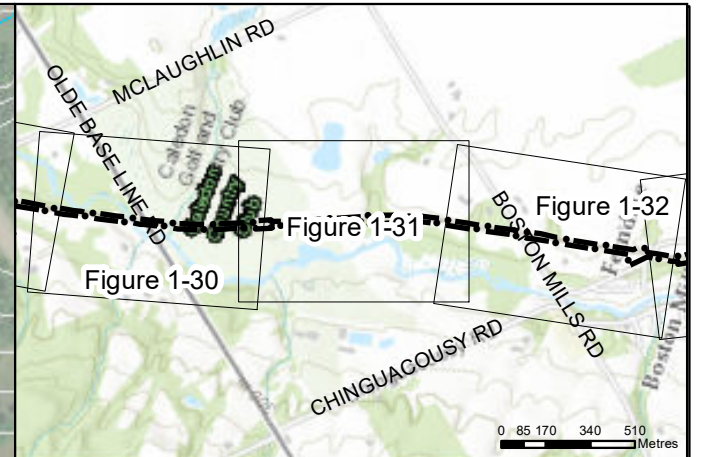
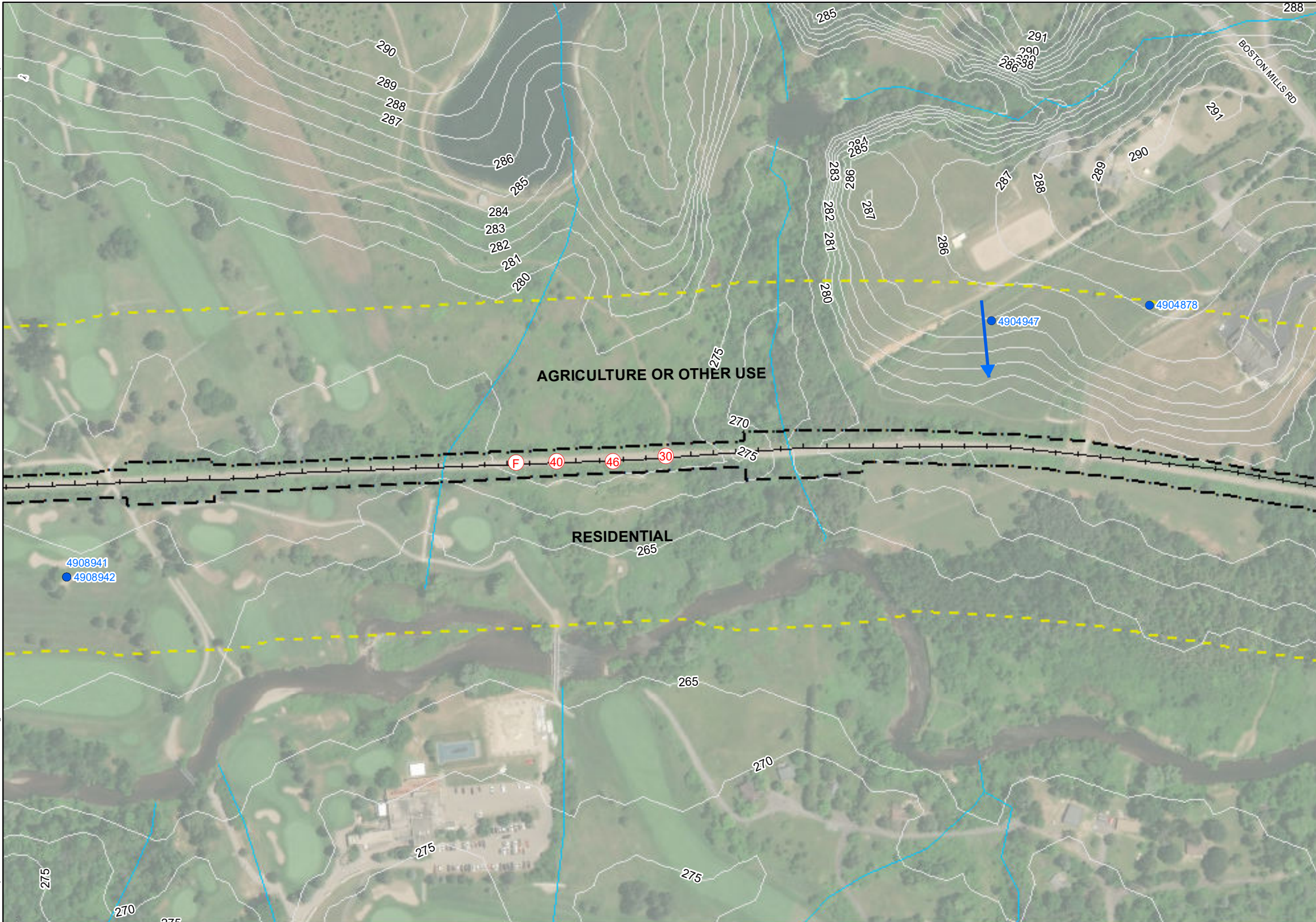
	PROJECT NO.:	201-02174-00	REVIEWED BY:	MB
	DATE:	MAY 2020	FIGURE:	1-30

DATA SOURCE:

LEGEND:

100m STUDY AREA	RAIL	PCA CONTRIBUTING TO APEC
SUBJECT SITE	Rivers	PCA NOT CONTRIBUTING TO APEC
ANSI	MECP WATER WELL	TANK NOT CONTRIBUTING TO APEC
INFERRED GROUNDWATER FLOW DIRECTION	TANK CONTRIBUTING TO APEC	
1m TOPOGRAPHIC CONTOUR		





- POTENTIALLY CONTAMINATING ACTIVITIES (PCAS):**
- ③ AIRSTRIPS AND HANGARS OPERATION
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  - ⑧ CHEMICAL MANUFACTURING, PROCESSING AND BULK STORAGE
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TITLE:  
**PHASE ONE CONCEPTUAL SITE MODEL**

PROJECT:  
**CONTAMINANT OVERVIEW STUDY  
FORMER ORANGEVILLE RAIL,  
CALEDON, ONTARIO**

CLIENT:  
**REGION OF PEEL**

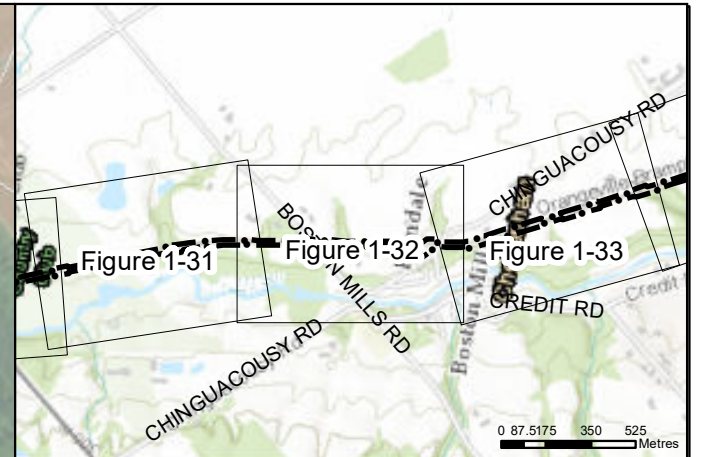
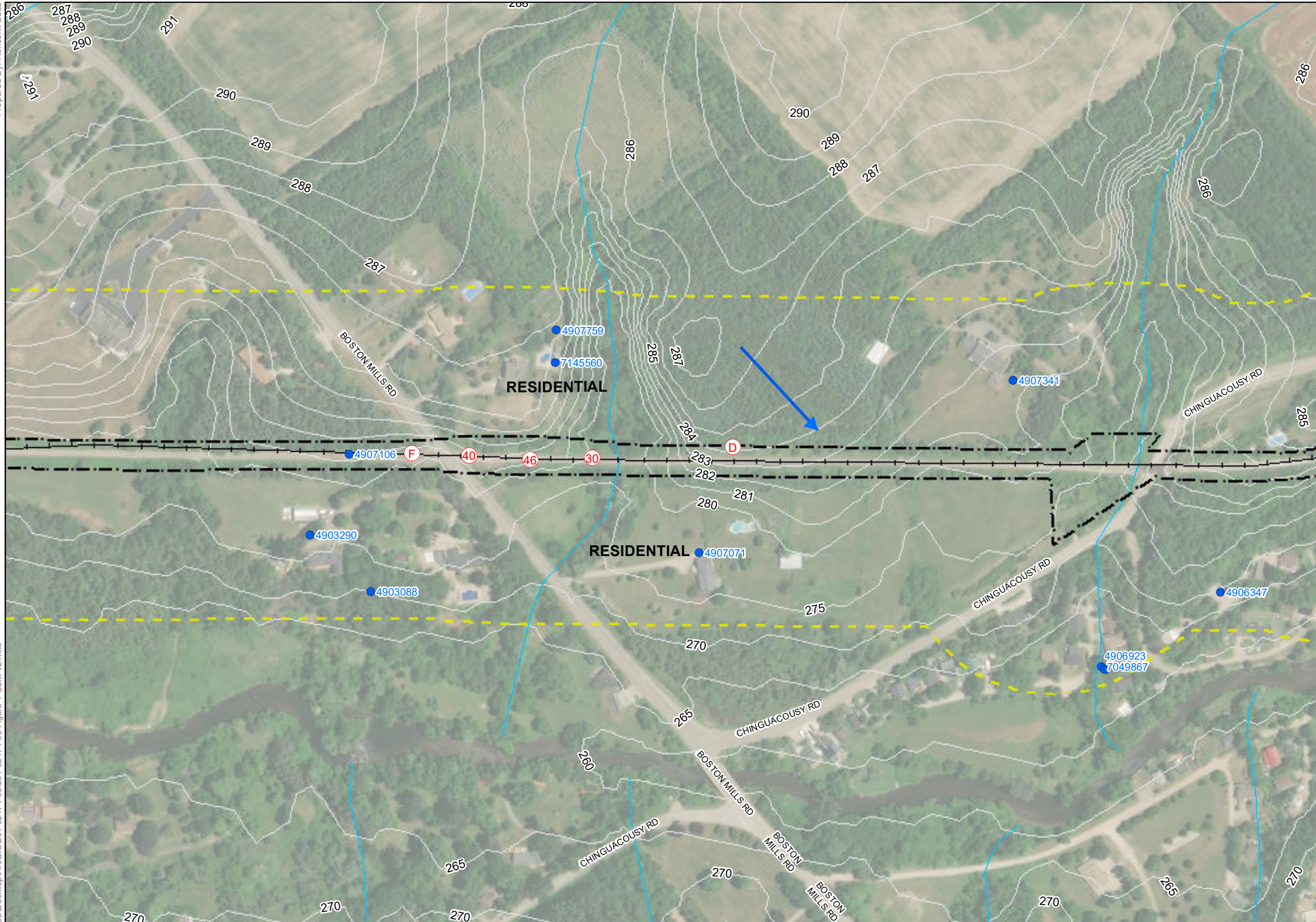
	PROJECT NO.:	201-02174-00	REVIEWED BY:	MB
	DATE:	MAY 2020	FIGURE:	1-31

DATA SOURCE:

**LEGEND:**

100m STUDY AREA	RAIL	PCA CONTRIBUTING TO APEC
SUBJECT SITE	Rivers	PCA NOT CONTRIBUTING TO APEC
ANSI	MECP WATER WELL	TANK NOT CONTRIBUTING TO APEC
INFERRED GROUNDWATER FLOW DIRECTION	TANK CONTRIBUTING TO APEC	
1m TOPOGRAPHIC CONTOUR		





POTENTIALLY CONTAMINATING ACTIVITIES (PCAS):

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TITLE:  
**PHASE ONE CONCEPTUAL SITE MODEL**

PROJECT:  
**CONTAMINANT OVERVIEW STUDY  
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CALEDON, ONTARIO**

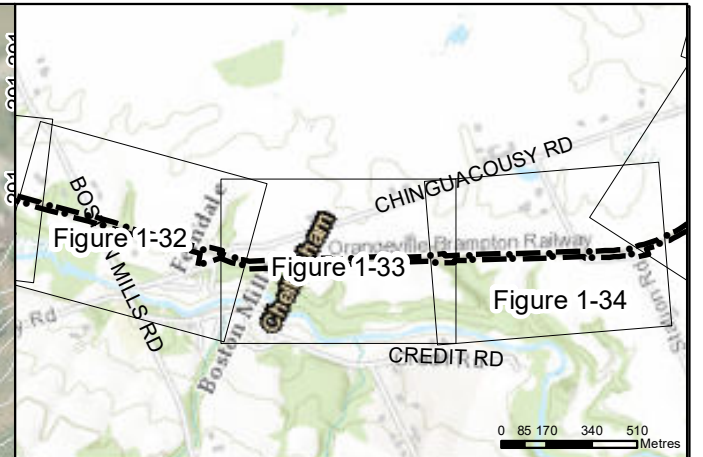
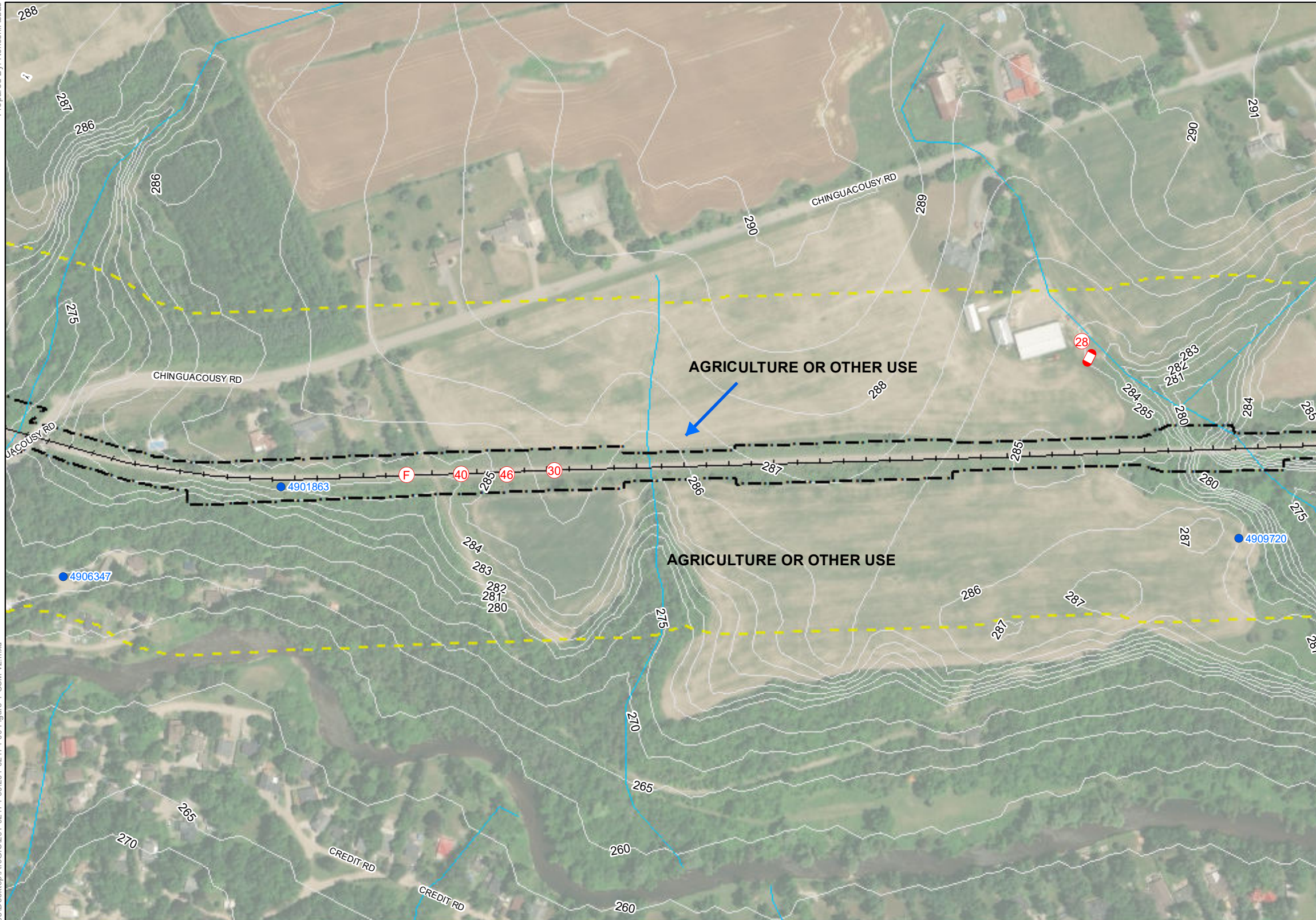
CLIENT:  
**REGION OF PEEL**

	PROJECT NO.:	REVIEWED BY:
	201-02174-00	MB
DATE:	FIGURE:	
MAY 2020	1-32	

DATA SOURCE:

- LEGEND:
- 100m STUDY AREA
  - SUBJECT SITE
  - MECP WATER WELL
  - INFERRED GROUNDWATER FLOW DIRECTION
  - 1m TOPOGRAPHIC CONTOUR
  - RAIL
  - Rivers
  - TANK NOT CONTRIBUTING TO APEC
  - TANK CONTRIBUTING TO APEC
  - PCA CONTRIBUTING TO APEC
  - PCA NOT CONTRIBUTING TO APEC





- POTENTIALLY CONTAMINATING ACTIVITIES (PCAS):**
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  - Ⓑ MISCELLANEOUS MANUFACTURING
  - Ⓒ COAL STORAGE
  - Ⓓ RAIL TIE PILE
  - Ⓔ PCB STORAGE
  - Ⓕ KNOWN CONTAMINATION

TITLE:  
**PHASE ONE CONCEPTUAL SITE MODEL**

PROJECT:  
**CONTAMINANT OVERVIEW STUDY  
FORMER ORANGEVILLE RAIL,  
CALEDON, ONTARIO**

CLIENT:  
**REGION OF PEEL**

	PROJECT NO.:	REVIEWED BY:
	201-02174-00	MB
DATE:	FIGURE:	
MAY 2020	1-33	

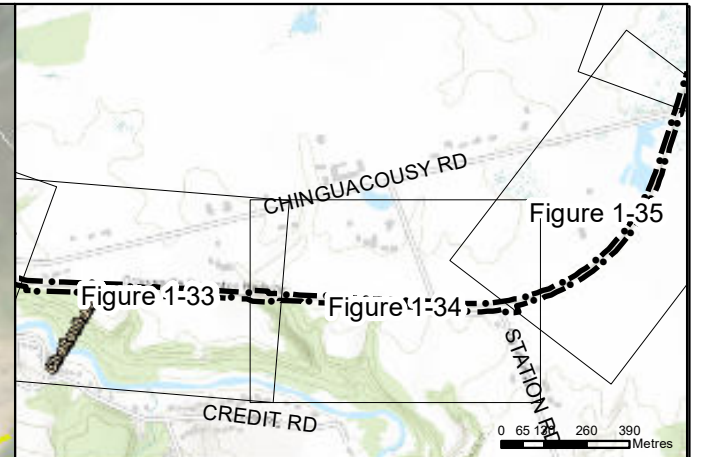
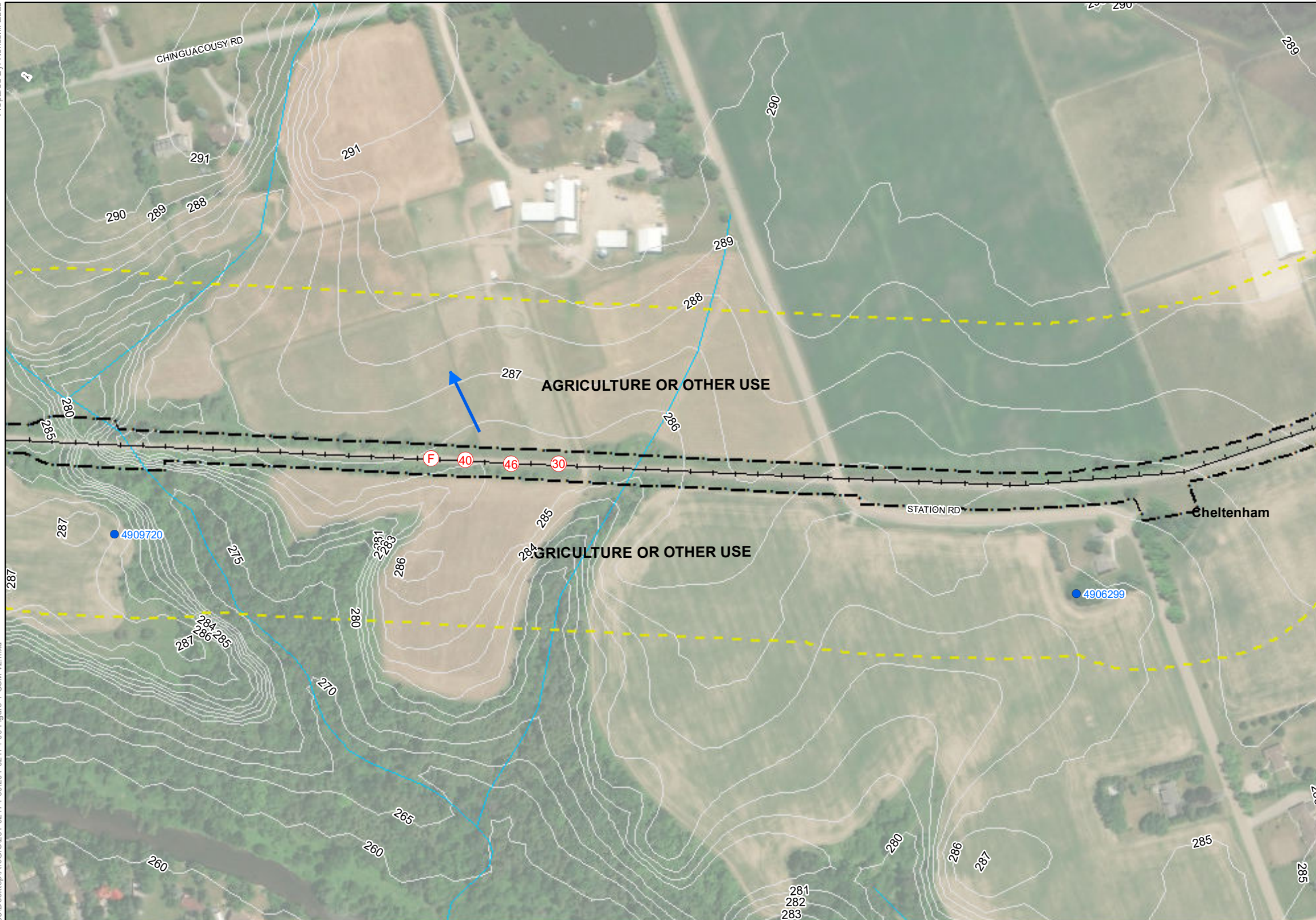
DATA SOURCE:

0 25 50 100 150 200 Metres

**LEGEND:**

100m STUDY AREA	RAIL	PCA CONTRIBUTING TO APEC
SUBJECT SITE	Rivers	PCA NOT CONTRIBUTING TO APEC
ANSI	MECP WATER WELL	PCA NOT CONTRIBUTING TO APEC
INFERRED GROUNDWATER FLOW DIRECTION	TANK NOT CONTRIBUTING TO APEC	
1m TOPOGRAPHIC CONTOUR	TANK CONTRIBUTING TO APEC	





**POTENTIALLY CONTAMINATING ACTIVITIES (PCAS):**

- ③ AIRSTRIPS AND HANGARS OPERATION
- ⑤ ASPHALT AND BITUMEN MANUFACTURING
- ⑧ CHEMICAL MANUFACTURING, PROCESSING AND BULK STORAGE
- ⑩ COMMERCIAL AUTOBODY SHOPS
- ⑫ CONCRETE, CEMENT AND LIME MANUFACTURING
- ⑭ CRUDE OIL REFINING, PROCESSING AND BULK STORAGE
- ⑲ ELECTRONIC AND COMPUTER EQUIPMENT MANUFACTURING
- ⑳ GASOLINE AND ASSOCIATED PRODUCTS STORAGE IN FIXED TANKS
- ㉑ IMPORTATION OF FILL MATERIAL OF UNKNOWN QUALITY
- ㉒ INK MANUFACTURING, PROCESSING AND BULK STORAGE
- ㉓ IRON AND STEEL MANUFACTURING AND PROCESSING
- ㉔ METAL TREATMENT, COATING, PLATING AND FINISHING
- ㉕ METAL FABRICATION
- ㉖ MINING, SMELTING AND REFINING; ORE PROCESSING; TAILINGS STORAGE
- ㉗ OPERATION OF DRY CLEANING EQUIPMENT (WHERE CHEMICALS ARE USED)
- ㉘ PAINTS MANUFACTURING, PROCESSING AND BULK STORAGE
- ㉙ PESTICIDES (INCLUDING HERBICIDES, FUNGICIDES AND ANTI-FOULING AGENTS) MANUFACTURING, PROCESSING, BULK STORAGE AND LARGE-SCALE APPLICATIONS
- ㉚ PLASTICS (INCLUDING FIBREGLASS) MANUFACTURING AND PROCESSING
- ㉛ PULP, PAPER AND PAPERBOARD MANUFACTURING AND PROCESSING
- ㉜ RAIL YARDS, TRACKS AND SPURS
- ㉝ RUBBER MANUFACTURING AND PROCESSING
- ㉞ SOAP AND DETERGENT MANUFACTURING, PROCESSING AND BULK STORAGE
- ㉟ SOLVENT MANUFACTURING, PROCESSING AND BULK STORAGE
- ㊱ TANNERY
- ㊲ TEXTILE MANUFACTURING AND PROCESSING
- ㊳ VEHICLES AND ASSOCIATED PARTS MANUFACTURING
- ㊴ WASTE DISPOSAL AND WASTE MANAGEMENT, INCLUDING THERMAL TREATMENT, LANDFILLING AND TRANSFER OF WASTE, OTHER THAN USE OF BIOSOILS AS SOIL CONDITIONERS
- ㊵ WOOD TREATING AND PRESERVATIVE FACILITY AND BULK STORAGE OF TREATED AND PRESERVED WOOD PRODUCTS
- Ⓐ SPILLS
- Ⓑ MISCELLANEOUS MANUFACTURING
- Ⓒ COAL STORAGE
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TITLE:  
**PHASE ONE CONCEPTUAL SITE MODEL**

PROJECT:  
**CONTAMINANT OVERVIEW STUDY  
FORMER ORANGEVILLE RAIL,  
CALEDON, ONTARIO**

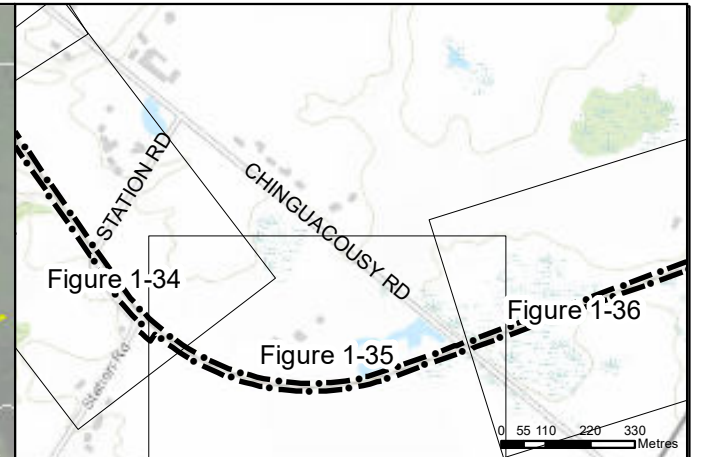
CLIENT:  
**REGION OF PEEL**

	PROJECT NO.:	201-02174-00	REVIEWED BY:	MB
	DATE:	MAY 2020	FIGURE:	1-34

DATA SOURCE:

- LEGEND:**
- 100m STUDY AREA
  - SUBJECT SITE
  - ANSI
  - INFERRED GROUNDWATER FLOW DIRECTION
  - 1m TOPOGRAPHIC CONTOUR
  - RAIL
  - Rivers
  - MECP WATER WELL
  - TANK NOT CONTRIBUTING TO APEC
  - TANK CONTRIBUTING TO APEC
  - PCA CONTRIBUTING TO APEC
  - PCA NOT CONTRIBUTING TO APEC





- POTENTIALLY CONTAMINATING ACTIVITIES (PCAS):**
- ③ AIRSTRIPS AND HANGARS OPERATION
  - ④ ASPHALT AND BITUMEN MANUFACTURING
  - ⑧ CHEMICAL MANUFACTURING, PROCESSING AND BULK STORAGE
  - ⑩ COMMERCIAL AUTOBODY SHOPS
  - ⑫ CONCRETE, CEMENT AND LIME MANUFACTURING
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  - ㉕ METAL FABRICATION
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  - ㉞ SOAP AND DETERGENT MANUFACTURING, PROCESSING AND BULK STORAGE
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  - Ⓒ COAL STORAGE
  - Ⓓ RAIL TIE PILE
  - Ⓔ PCB STORAGE
  - Ⓕ KNOWN CONTAMINATION

TITLE:  
**PHASE ONE CONCEPTUAL SITE MODEL**

PROJECT:  
**CONTAMINANT OVERVIEW STUDY  
FORMER ORANGEVILLE RAIL,  
CALEDON, ONTARIO**

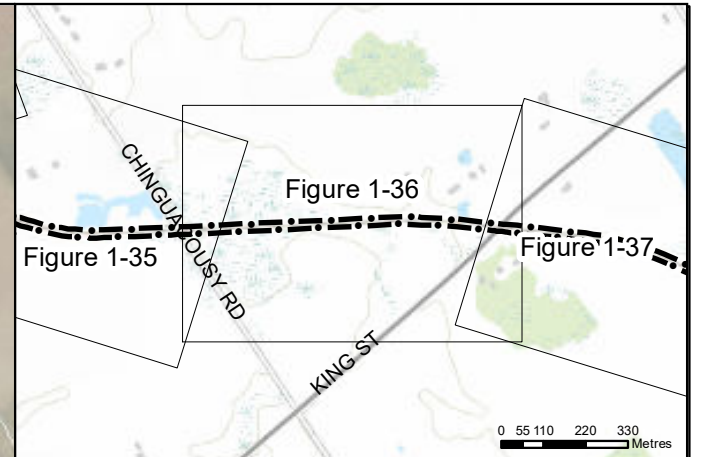
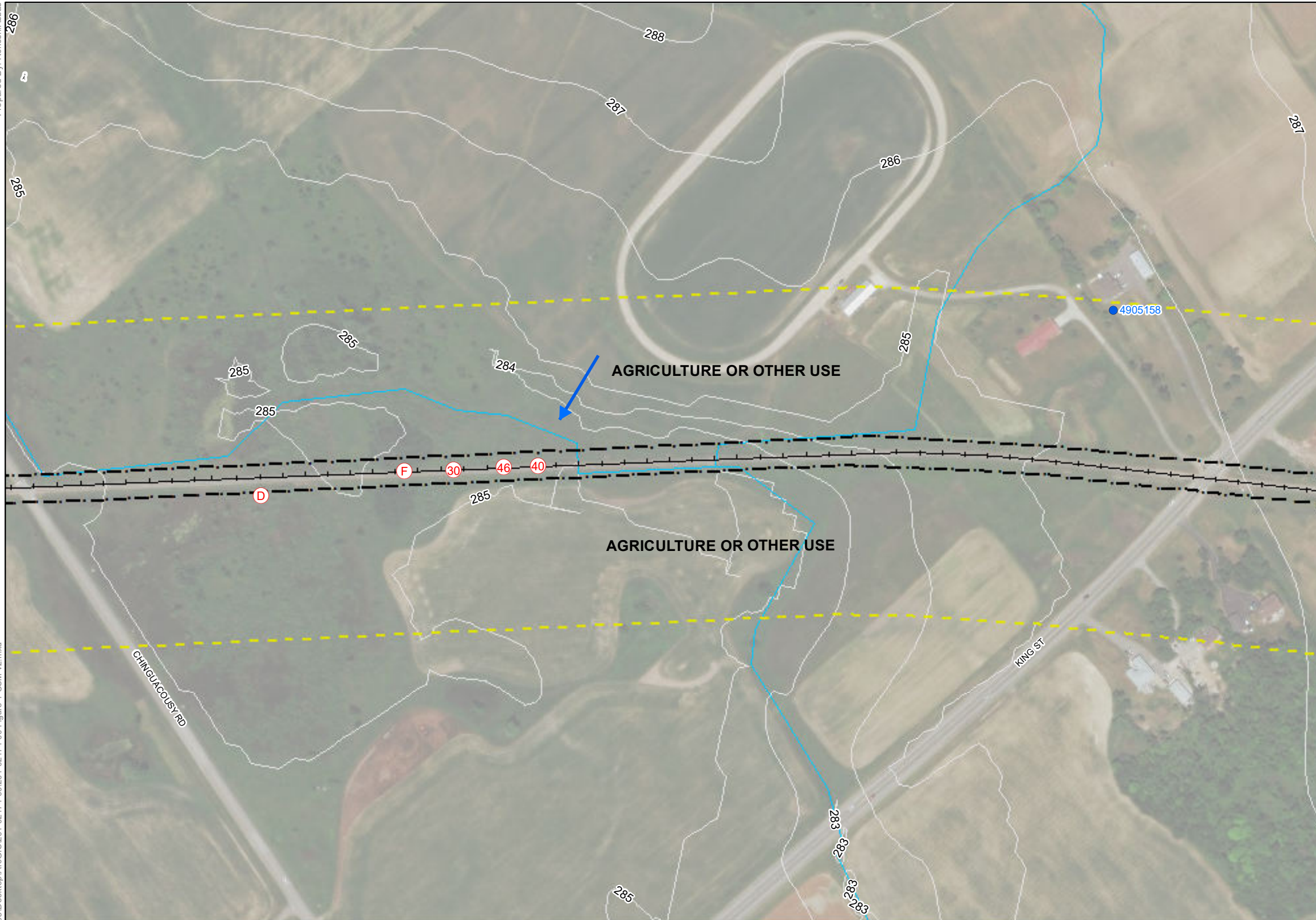
CLIENT:  
**REGION OF PEEL**

	PROJECT NO.:	REVIEWED BY:
	201-02174-00	MB
	DATE:	FIGURE:
	MAY 2020	1-35

DATA SOURCE:

100m STUDY AREA	RAIL	PCA CONTRIBUTING TO APEC
SUBJECT SITE	Rivers	PCA NOT CONTRIBUTING TO APEC
ANSI	MECP WATER WELL	
INFERRED GROUNDWATER FLOW DIRECTION	TANK NOT CONTRIBUTING TO APEC	
1m TOPOGRAPHIC CONTOUR	TANK CONTRIBUTING TO APEC	





**POTENTIALLY CONTAMINATING ACTIVITIES (PCAS):**

- ③ AIRSTRIPS AND HANGARS OPERATION
- ⑤ ASPHALT AND BITUMEN MANUFACTURING
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TITLE:  
**PHASE ONE CONCEPTUAL SITE MODEL**

PROJECT:  
**CONTAMINANT OVERVIEW STUDY  
FORMER ORANGEVILLE RAIL,  
CALEDON, ONTARIO**

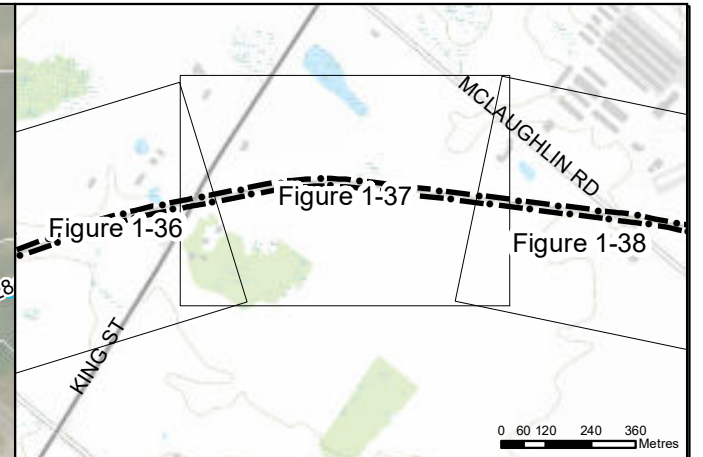
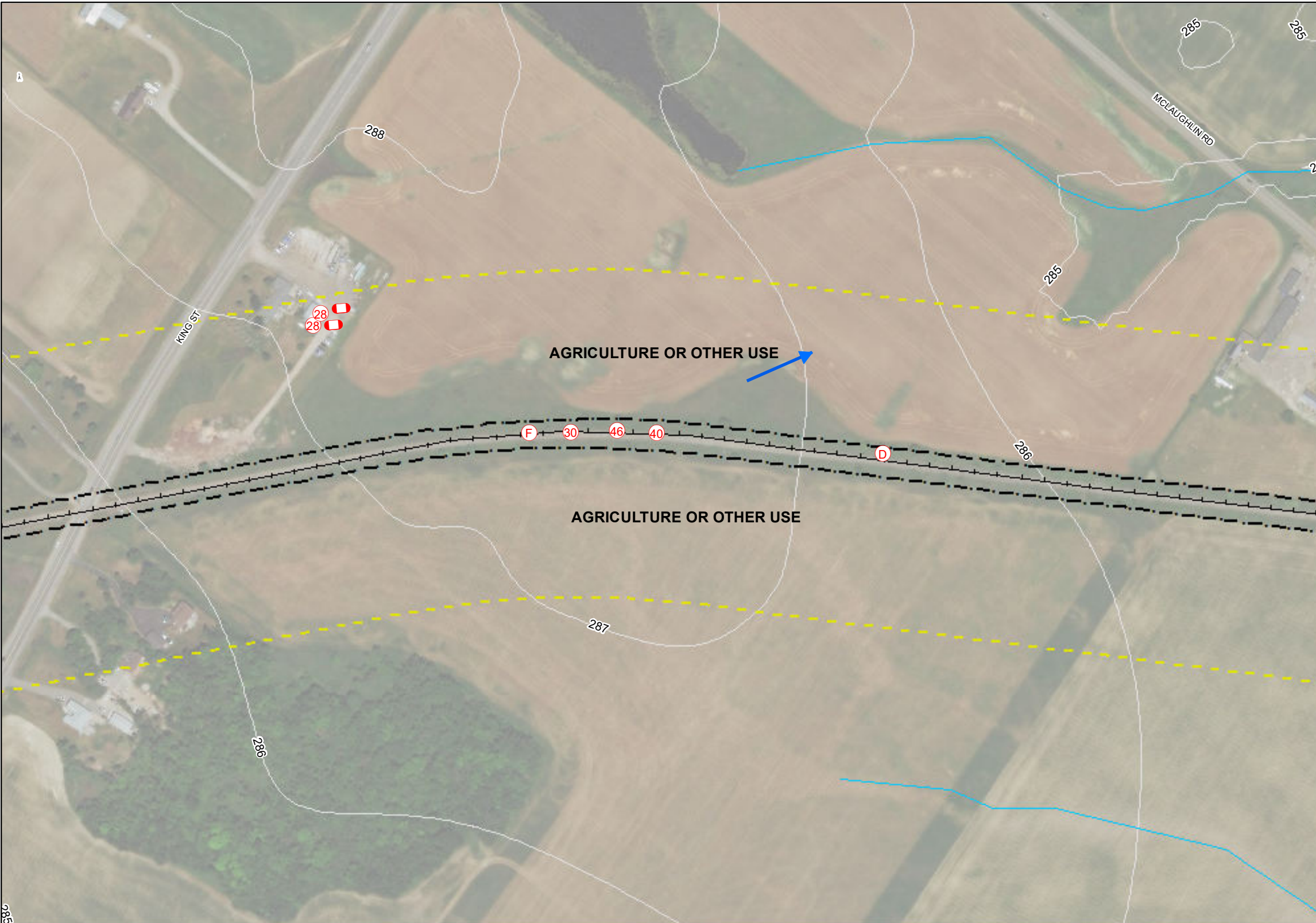
CLIENT:  
**REGION OF PEEL**

DATA SOURCE: 0 25 50 100 150 200 Metres

<p><b>LEGEND:</b></p> <ul style="list-style-type: none"> <li><span style="border: 1px dashed yellow; display: inline-block; width: 20px; height: 10px;"></span> 100m STUDY AREA</li> <li><span style="border: 2px dashed black; display: inline-block; width: 20px; height: 10px;"></span> SUBJECT SITE</li> <li><span style="background-color: orange; display: inline-block; width: 20px; height: 10px;"></span> ANSI</li> <li><span style="color: blue; font-size: 24px;">➔</span> INFERRED GROUNDWATER FLOW DIRECTION</li> <li><span style="border-bottom: 1px solid gray; width: 20px; display: inline-block;"></span> 1m TOPOGRAPHIC CONTOUR</li> <li><span style="border-bottom: 1px dashed gray; width: 20px; display: inline-block;"></span> RAIL</li> <li><span style="color: blue; font-size: 18px;">—</span> Rivers</li> <li><span style="color: blue; font-size: 18px;">●</span> MECP WATER WELL</li> <li><span style="border: 1px solid black; border-radius: 50%; width: 15px; height: 15px; display: inline-block;"></span> TANK NOT CONTRIBUTING TO APEC</li> <li><span style="border: 1px solid black; border-radius: 50%; width: 15px; height: 15px; display: inline-block; background-color: red;"></span> TANK CONTRIBUTING TO APEC</li> <li><span style="border: 1px solid red; border-radius: 50%; width: 15px; height: 15px; display: inline-block;"></span> # PCA CONTRIBUTING TO APEC</li> <li><span style="border: 1px solid black; border-radius: 50%; width: 15px; height: 15px; display: inline-block;"></span> # PCA NOT CONTRIBUTING TO APEC</li> </ul>
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	PROJECT NO.:	201-02174-00	REVIEWED BY:	MB
	DATE:	MAY 2020	FIGURE:	1-36





- POTENTIALLY CONTAMINATING ACTIVITIES (PCAS):**
- ③ AIRSTRIPS AND HANGARS OPERATION
  - ⑤ ASPHALT AND BITUMEN MANUFACTURING
  - ⑧ CHEMICAL MANUFACTURING, PROCESSING AND BULK STORAGE
  - ⑩ COMMERCIAL AUTOBODY SHOPS
  - ⑫ CONCRETE, CEMENT AND LIME MANUFACTURING
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  - ㉑ INK MANUFACTURING, PROCESSING AND BULK STORAGE
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  - ㉝ SOAP AND DETERGENT MANUFACTURING, PROCESSING AND BULK STORAGE
  - ㉞ SOLVENT MANUFACTURING, PROCESSING AND BULK STORAGE
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  - C COAL STORAGE
  - D RAIL TIE PILE
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TITLE:  
**PHASE ONE CONCEPTUAL SITE MODEL**

PROJECT:  
**CONTAMINANT OVERVIEW STUDY  
FORMER ORANGEVILLE RAIL,  
CALEDON, ONTARIO**

CLIENT:  
**REGION OF PEEL**

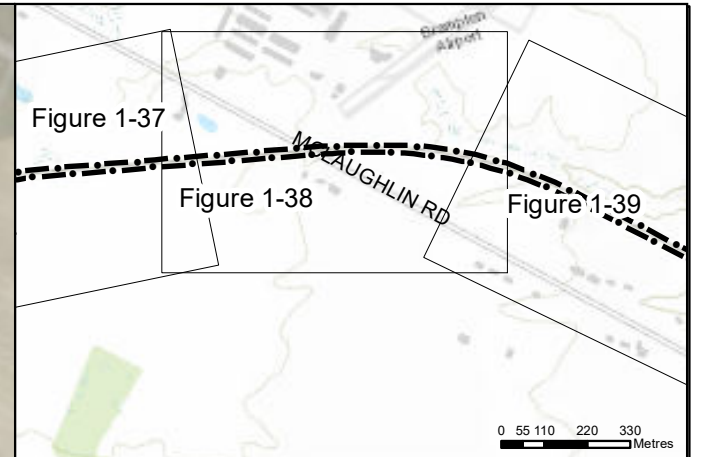
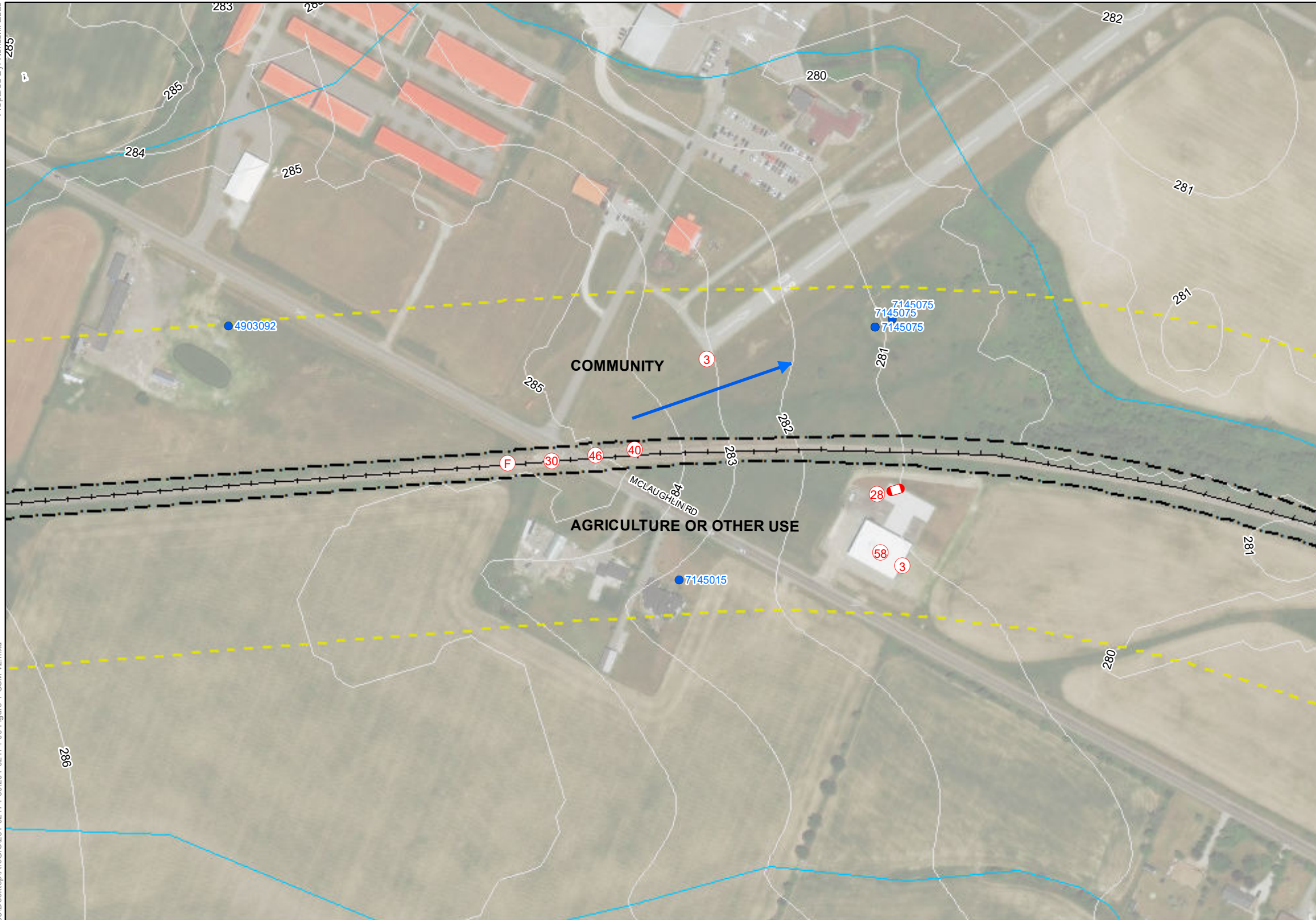
	PROJECT NO.:	REVIEWED BY:
	201-02174-00	MB
	DATE:	FIGURE:
	MAY 2020	1-37

DATA SOURCE:

LEGEND:

100m STUDY AREA	RAIL	PCA CONTRIBUTING TO APEC
SUBJECT SITE	Rivers	PCA NOT CONTRIBUTING TO APEC
ANSI	MECP WATER WELL	
INFERRED GROUNDWATER FLOW DIRECTION	TANK NOT CONTRIBUTING TO APEC	
1m TOPOGRAPHIC CONTOUR	TANK CONTRIBUTING TO APEC	





- POTENTIALLY CONTAMINATING ACTIVITIES (PCAS):**
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TITLE:  
**PHASE ONE CONCEPTUAL SITE MODEL**

PROJECT:  
**CONTAMINANT OVERVIEW STUDY  
FORMER ORANGEVILLE RAIL,  
CALEDON, ONTARIO**

CLIENT:  
**REGION OF PEEL**

	PROJECT NO.:	201-02174-00	REVIEWED BY:	MB
	DATE:	MAY 2020	FIGURE:	1-38

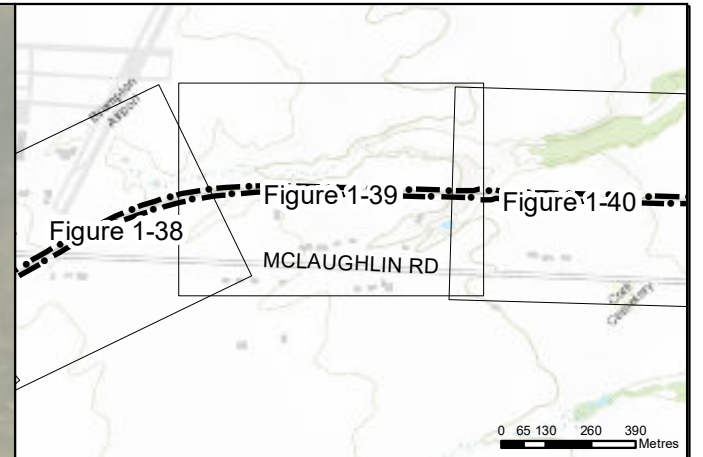
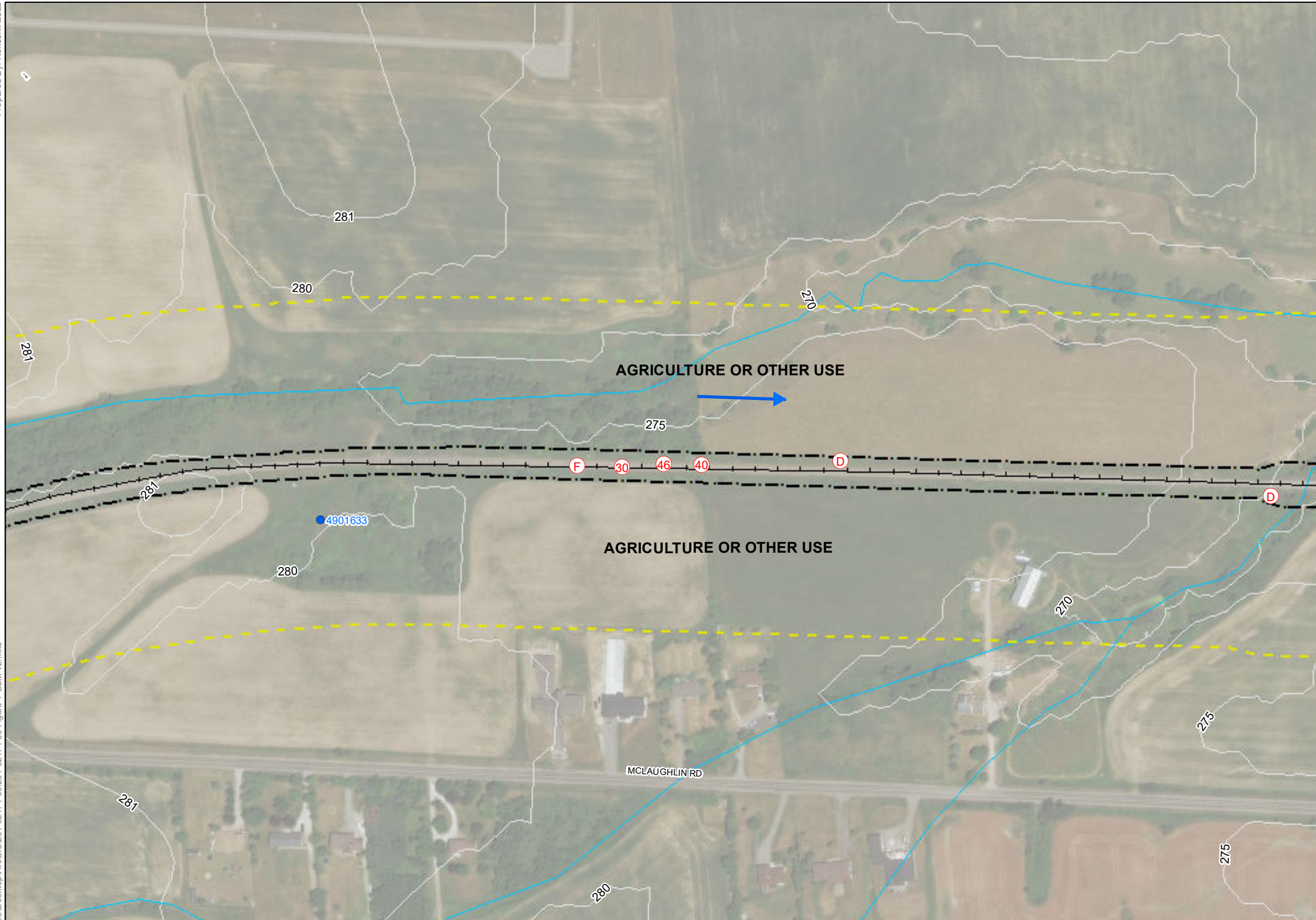
DATA SOURCE:

0 25 50 100 150 200 Metres

**LEGEND:**

100m STUDY AREA	RAIL	PCA CONTRIBUTING TO APEC
SUBJECT SITE	Rivers	PCA NOT CONTRIBUTING TO APEC
ANSI	MECP WATER WELL	TANK NOT CONTRIBUTING TO APEC
INFERRED GROUNDWATER FLOW DIRECTION	TANK CONTRIBUTING TO APEC	
1m TOPOGRAPHIC CONTOUR		





- POTENTIALLY CONTAMINATING ACTIVITIES (PCAS):**
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PROJECT:  
**CONTAMINANT OVERVIEW STUDY  
FORMER ORANGEVILLE RAIL,  
CALEDON, ONTARIO**

CLIENT:  
**REGION OF PEEL**

	PROJECT NO.:	REVIEWED BY:
	201-02174-00	MB
DATE:	FIGURE:	
MAY 2020	1-39	

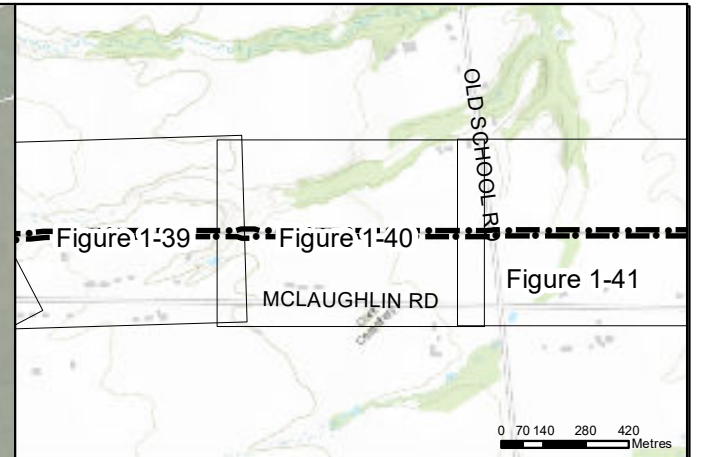
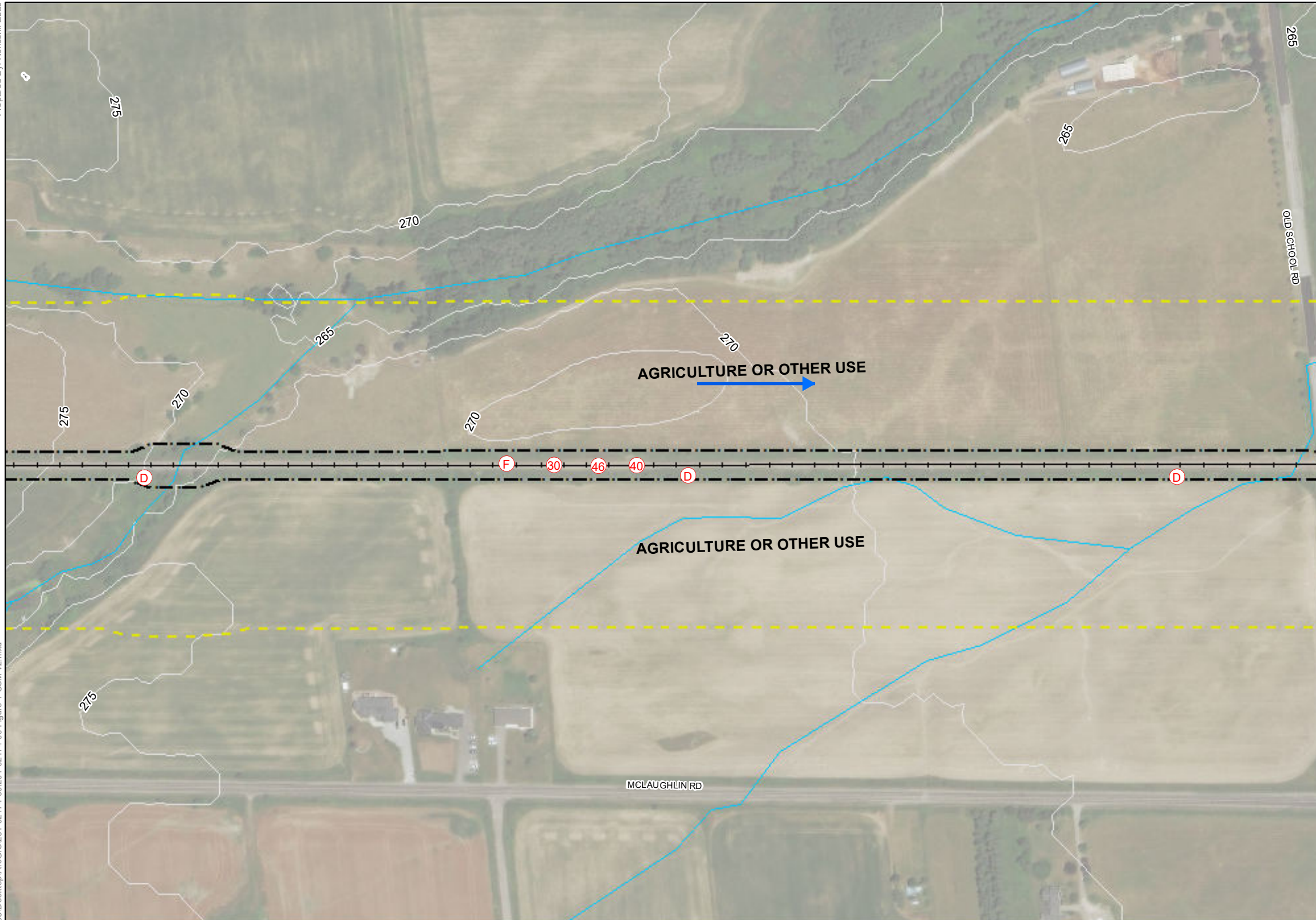
DATA SOURCE:

LEGEND:

100m STUDY AREA	RAIL	PCA CONTRIBUTING TO APEC
SUBJECT SITE	Rivers	PCA NOT CONTRIBUTING TO APEC
ANSI	MECP WATER WELL	TANK NOT CONTRIBUTING TO APEC
INFERRED GROUNDWATER FLOW DIRECTION	TANK CONTRIBUTING TO APEC	
1m TOPOGRAPHIC CONTOUR		

0 25 50 100 150 200 Metres





- POTENTIALLY CONTAMINATING ACTIVITIES (PCAS):**
- ③ AIRSTRIPS AND HANGARS OPERATION
  - ⑤ ASPHALT AND BITUMEN MANUFACTURING
  - ⑧ CHEMICAL MANUFACTURING, PROCESSING AND BULK STORAGE
  - ⑩ COMMERCIAL AUTOBODY SHOPS
  - ⑫ CONCRETE, CEMENT AND LIME MANUFACTURING
  - ⑭ CRUDE OIL REFINING, PROCESSING AND BULK STORAGE
  - ⑲ ELECTRONIC AND COMPUTER EQUIPMENT MANUFACTURING
  - ⑳ GASOLINE AND ASSOCIATED PRODUCTS STORAGE IN FIXED TANKS
  - ㉑ IMPORTATION OF FILL MATERIAL OF UNKNOWN QUALITY
  - ㉒ INK MANUFACTURING, PROCESSING AND BULK STORAGE
  - ㉓ IRON AND STEEL MANUFACTURING AND PROCESSING
  - ㉔ METAL TREATMENT, COATING, PLATING AND FINISHING
  - ㉕ METAL FABRICATION
  - ㉖ MINING, SMELTING AND REFINING; ORE PROCESSING; TAILINGS STORAGE
  - ㉗ OPERATION OF DRY CLEANING EQUIPMENT (WHERE CHEMICALS ARE USED)
  - ㉘ PAINTS MANUFACTURING, PROCESSING AND BULK STORAGE
  - ㉙ PESTICIDES (INCLUDING HERBICIDES, FUNGICIDES AND ANTI-FOULING AGENTS) MANUFACTURING, PROCESSING, BULK STORAGE AND LARGE-SCALE APPLICATIONS
  - ㉚ PLASTICS (INCLUDING FIBREGLASS) MANUFACTURING AND PROCESSING
  - ㉛ PULP, PAPER AND PAPERBOARD MANUFACTURING AND PROCESSING
  - ㉜ RAIL YARDS, TRACKS AND SPURS
  - ㉝ RUBBER MANUFACTURING AND PROCESSING
  - ㉞ SOAP AND DETERGENT MANUFACTURING, PROCESSING AND BULK STORAGE
  - ㉟ SOLVENT MANUFACTURING, PROCESSING AND BULK STORAGE
  - ㊱ TANNERY
  - ㊲ TEXTILE MANUFACTURING AND PROCESSING
  - ㊳ VEHICLES AND ASSOCIATED PARTS MANUFACTURING
  - ㊴ WASTE DISPOSAL AND WASTE MANAGEMENT, INCLUDING THERMAL TREATMENT, LANDFILLING AND TRANSFER OF WASTE, OTHER THAN USE OF BIOSOILS AS SOIL CONDITIONERS
  - ㊵ WOOD TREATING AND PRESERVATIVE FACILITY AND BULK STORAGE OF TREATED AND PRESERVED WOOD PRODUCTS
  - Ⓐ SPILLS
  - Ⓑ MISCELLANEOUS MANUFACTURING
  - Ⓒ COAL STORAGE
  - Ⓓ RAIL TIE PILE
  - Ⓔ PCB STORAGE
  - Ⓕ KNOWN CONTAMINATION

TITLE:  
**PHASE ONE CONCEPTUAL SITE MODEL**

PROJECT:  
**CONTAMINANT OVERVIEW STUDY  
FORMER ORANGEVILLE RAIL,  
CALEDON, ONTARIO**

CLIENT:  
**REGION OF PEEL**

	PROJECT NO.:	201-02174-00	REVIEWED BY:	MB
	DATE:	MAY 2020	FIGURE:	1-40

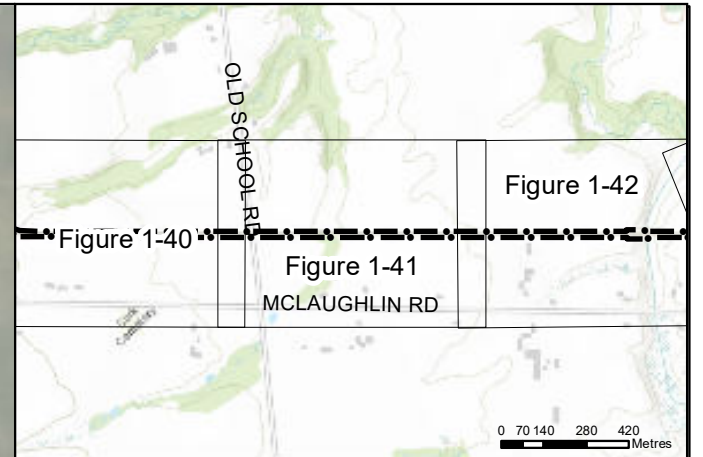
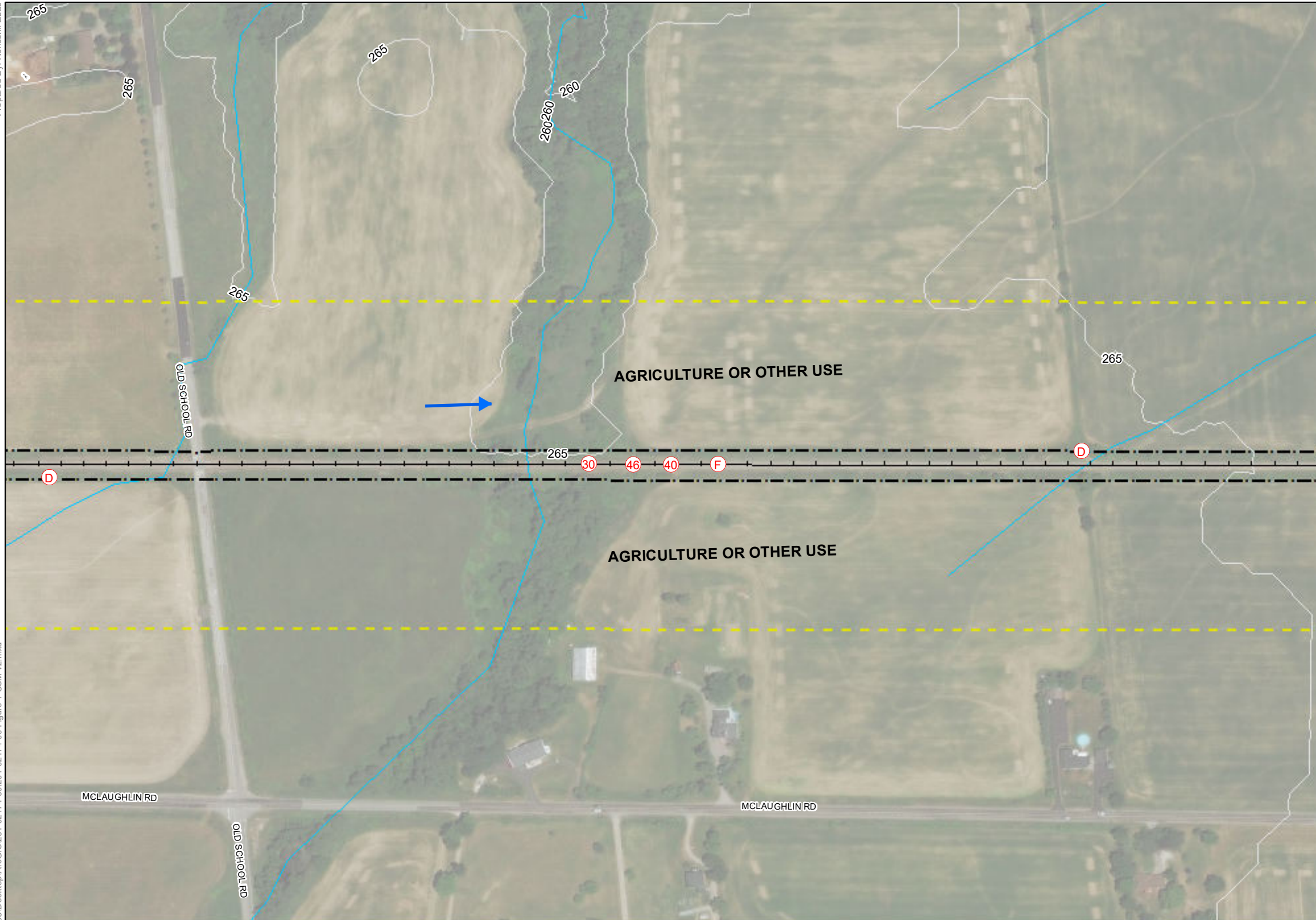
DATA SOURCE:

LEGEND:

100m STUDY AREA	RAIL	PCA CONTRIBUTING TO APEC
SUBJECT SITE	Rivers	PCA NOT CONTRIBUTING TO APEC
ANSI	MECP WATER WELL	
INFERRED GROUNDWATER FLOW DIRECTION	TANK NOT CONTRIBUTING TO APEC	
1m TOPOGRAPHIC CONTOUR	TANK CONTRIBUTING TO APEC	

0 25 50 100 150 200 Metres





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  - ㉕ MINING, SMELTING AND REFINING; ORE PROCESSING; TAILINGS STORAGE
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  - ㉞ SOLVENT MANUFACTURING, PROCESSING AND BULK STORAGE
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  - Ⓓ RAIL TIE PILE
  - Ⓔ PCB STORAGE
  - Ⓕ KNOWN CONTAMINATION

TITLE:  
**PHASE ONE CONCEPTUAL SITE MODEL**

PROJECT:  
**CONTAMINANT OVERVIEW STUDY  
FORMER ORANGEVILLE RAIL,  
CALEDON, ONTARIO**

CLIENT:  
**REGION OF PEEL**

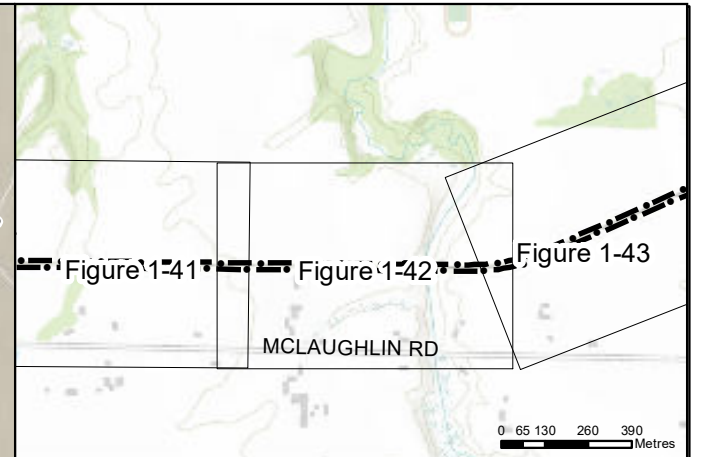
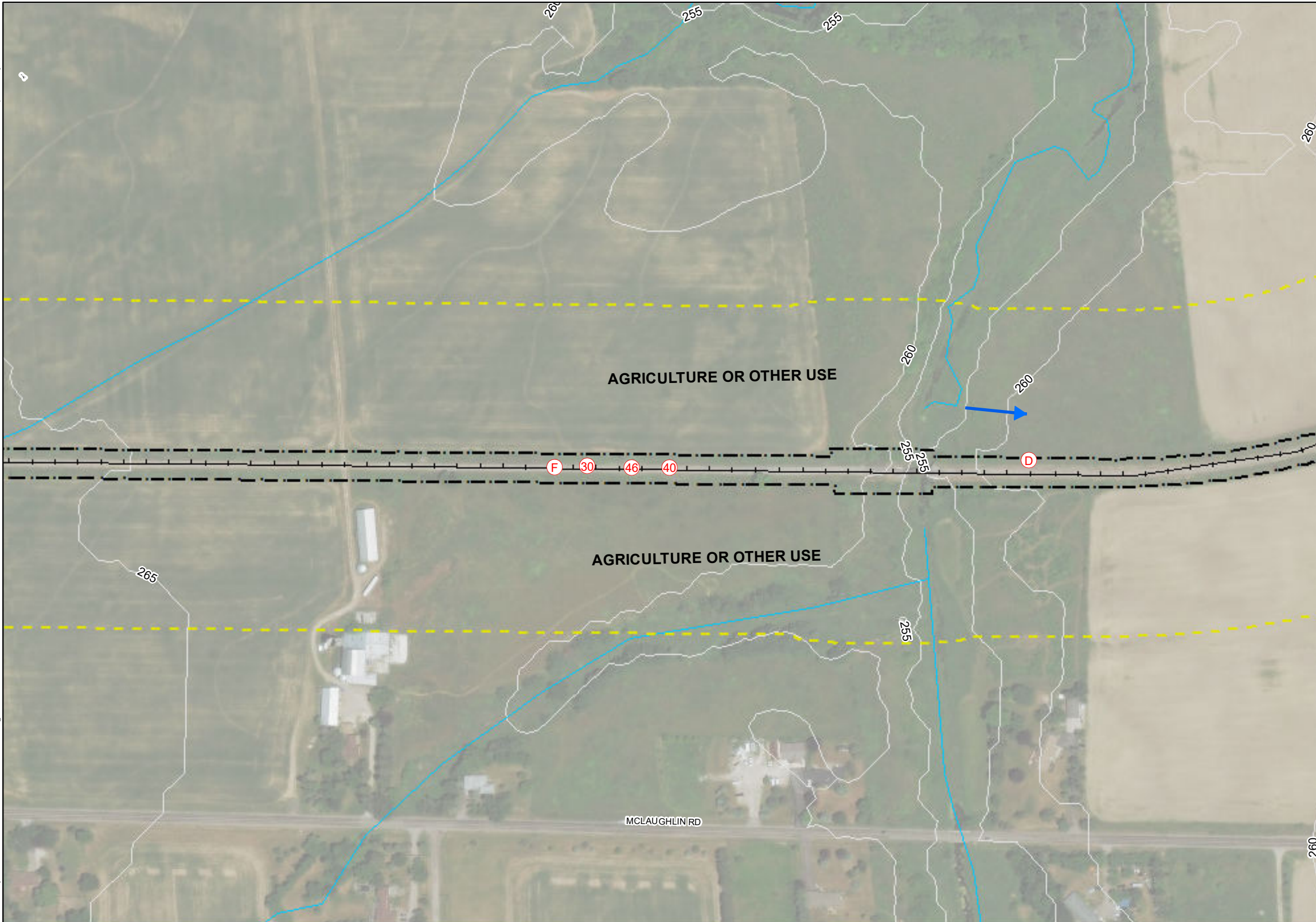
	PROJECT NO.:	REVIEWED BY:
	201-02174-00	MB
DATE:	FIGURE:	
MAY 2020	1-41	

DATA SOURCE: 0 25 50 100 150 200 Metres

**LEGEND:**

100m STUDY AREA	RAIL	PCA CONTRIBUTING TO APEC
SUBJECT SITE	Rivers	PCA NOT CONTRIBUTING TO APEC
ANSI	MECP WATER WELL	TANK NOT CONTRIBUTING TO APEC
INFERRED GROUNDWATER FLOW DIRECTION	TANK CONTRIBUTING TO APEC	
1m TOPOGRAPHIC CONTOUR		





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TITLE:  
**PHASE ONE CONCEPTUAL SITE MODEL**

PROJECT:  
**CONTAMINANT OVERVIEW STUDY  
FORMER ORANGEVILLE RAIL,  
CALEDON, ONTARIO**

CLIENT:  
**REGION OF PEEL**

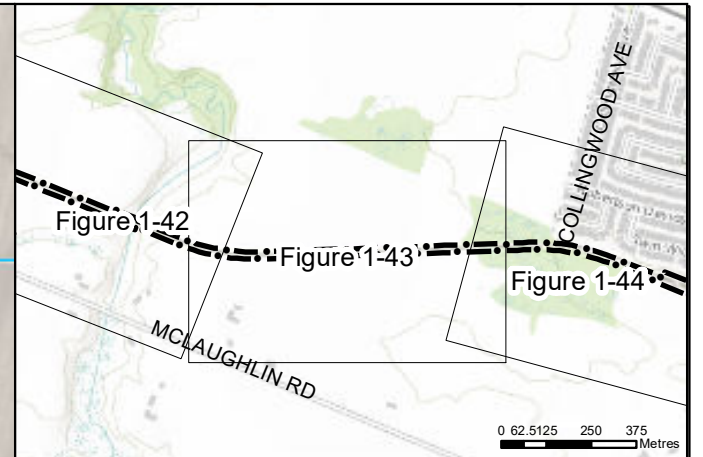
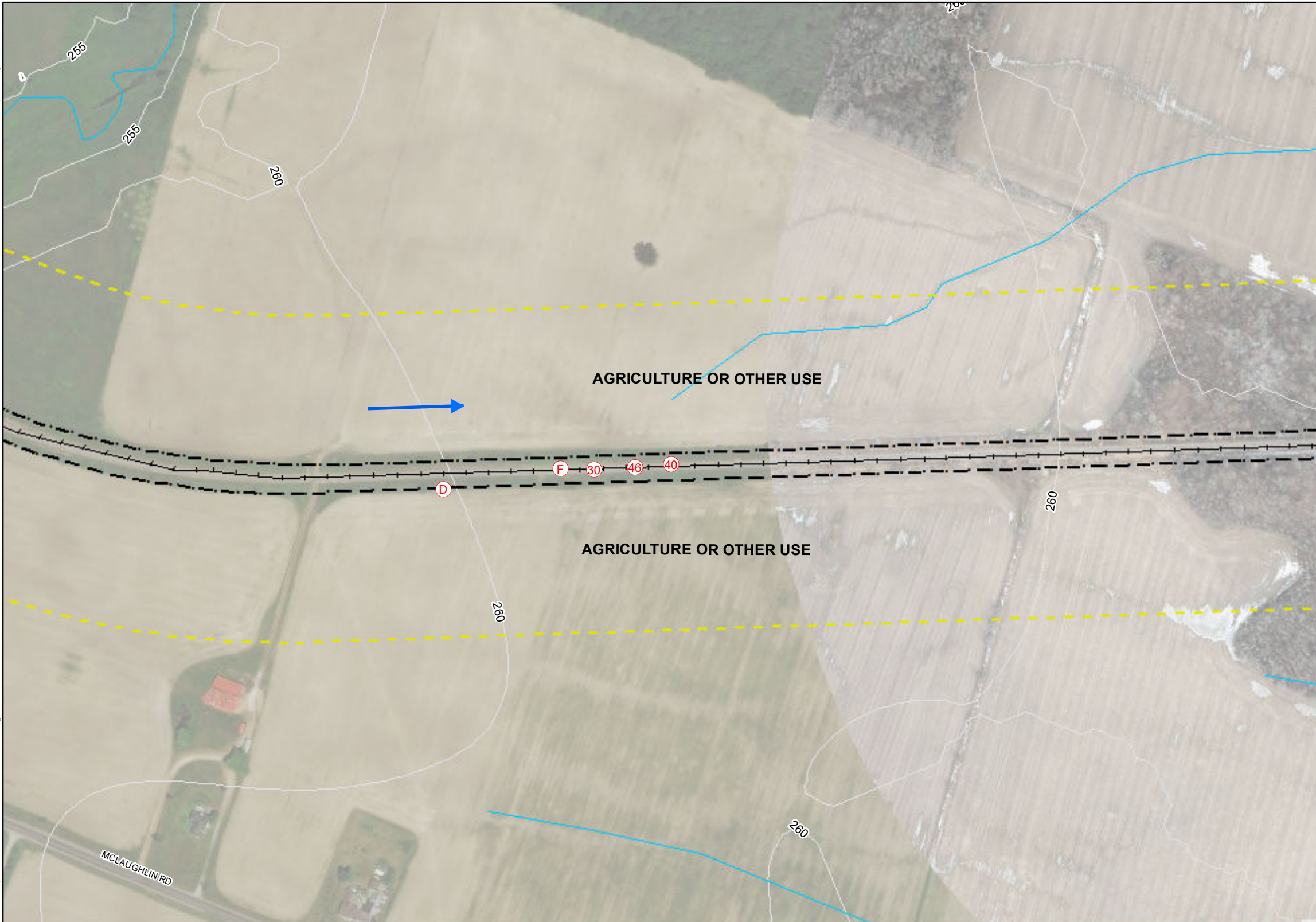
	PROJECT NO.:	201-02174-00	REVIEWED BY:	MB
	DATE:	MAY 2020	FIGURE:	1-42

DATA SOURCE:

**LEGEND:**

100m STUDY AREA	RAIL	PCA CONTRIBUTING TO APEC
SUBJECT SITE	Rivers	PCA NOT CONTRIBUTING TO APEC
ANSI	MECP WATER WELL	TANK NOT CONTRIBUTING TO APEC
INFERRED GROUNDWATER FLOW DIRECTION	TANK CONTRIBUTING TO APEC	
1m TOPOGRAPHIC CONTOUR		





**POTENTIALLY CONTAMINATING ACTIVITIES (PCAS):**

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TITLE:  
**PHASE ONE CONCEPTUAL SITE MODEL**

PROJECT:  
**CONTAMINANT OVERVIEW STUDY  
FORMER ORANGEVILLE RAIL,  
CALEDON, ONTARIO**

CLIENT:  
**REGION OF PEEL**

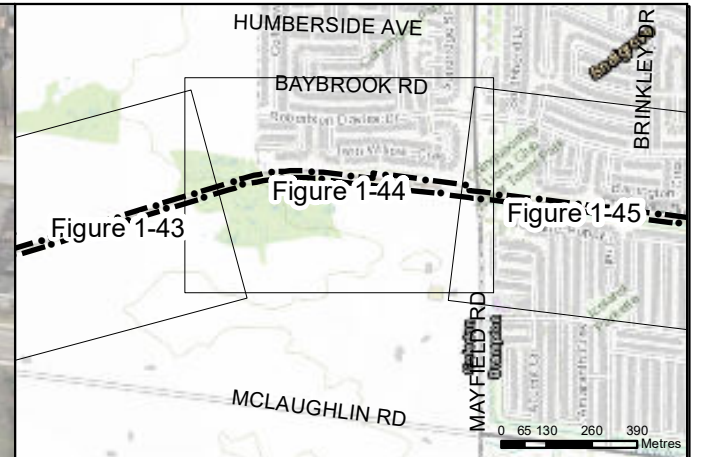
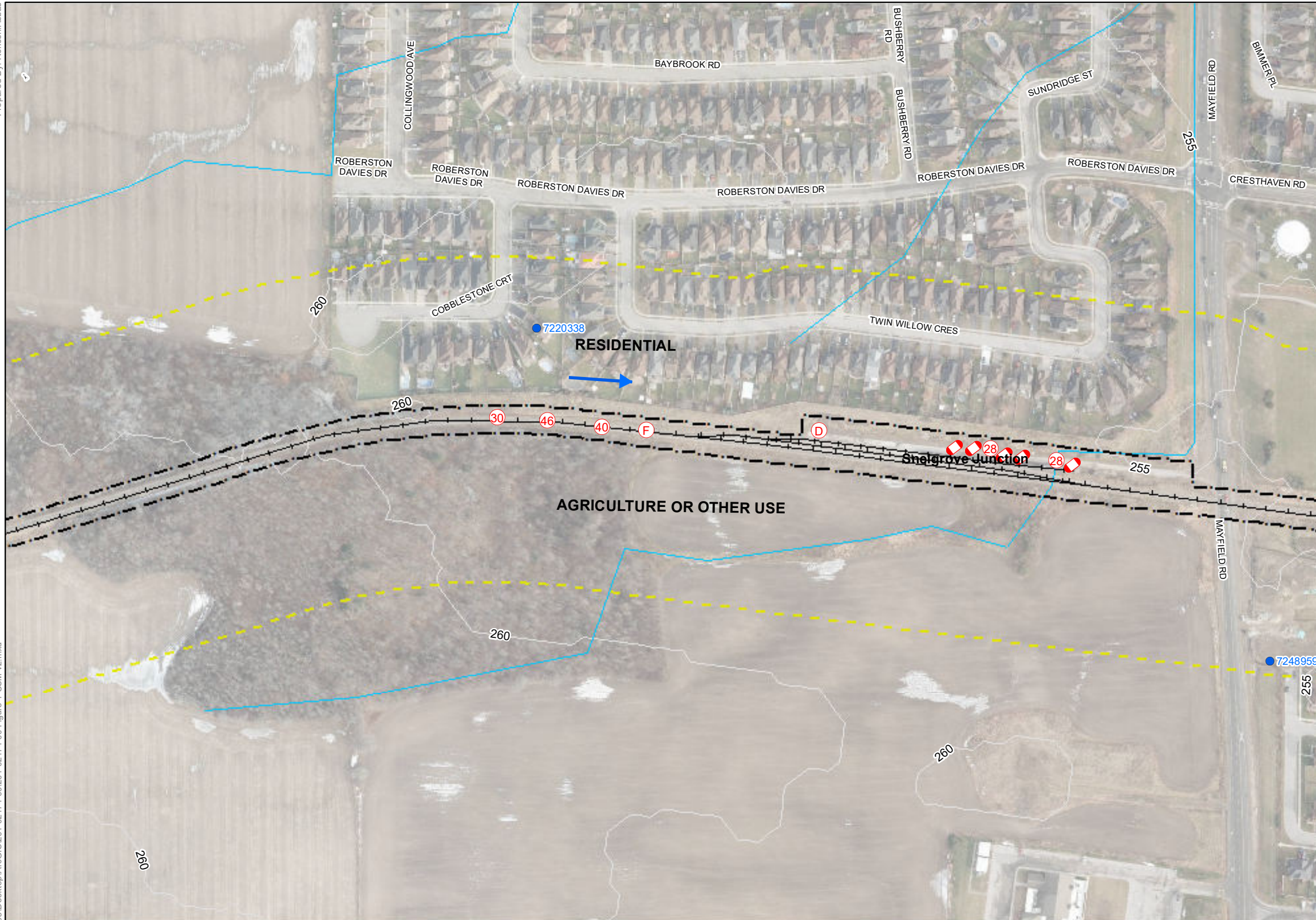
	PROJECT NO.:	REVIEWED BY:
	201-02174-00	MB
	DATE:	FIGURE:
	MAY 2020	1-43

DATA SOURCE:

<p><b>LEGEND:</b></p> <ul style="list-style-type: none"> <li> 100m STUDY AREA</li> <li> SUBJECT SITE</li> <li> ANSI</li> <li> INFERRED GROUNDWATER FLOW DIRECTION</li> <li> 1m TOPOGRAPHIC CONTOUR</li> </ul>	<ul style="list-style-type: none"> <li> RAIL</li> <li> Rivers</li> <li> MECP WATER WELL</li> <li> TANK NOT CONTRIBUTING TO APEC</li> <li> TANK CONTRIBUTING TO APEC</li> </ul>	<ul style="list-style-type: none"> <li> PCA CONTRIBUTING TO APEC</li> <li> PCA NOT CONTRIBUTING TO APEC</li> </ul>
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0 25 50 100 150 200 Metres





- POTENTIALLY CONTAMINATING ACTIVITIES (PCAS):**
- ③ AIRSTRIPS AND HANGARS OPERATION
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  - A SPILLS
  - B MISCELLANEOUS MANUFACTURING
  - C COAL STORAGE
  - D RAIL TIE PILE
  - E PCB STORAGE
  - F KNOWN CONTAMINATION

TITLE:  
**PHASE ONE CONCEPTUAL SITE MODEL**

PROJECT:  
**CONTAMINANT OVERVIEW STUDY  
FORMER ORANGEVILLE RAIL,  
CALEDON, ONTARIO**

CLIENT:  
**REGION OF PEEL**

	PROJECT NO.:	201-02174-00	REVIEWED BY:	MB
	DATE:	MAY 2020	FIGURE:	1-44

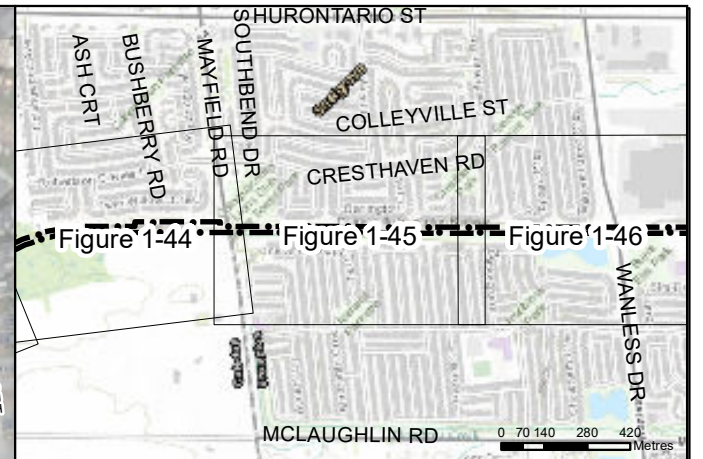
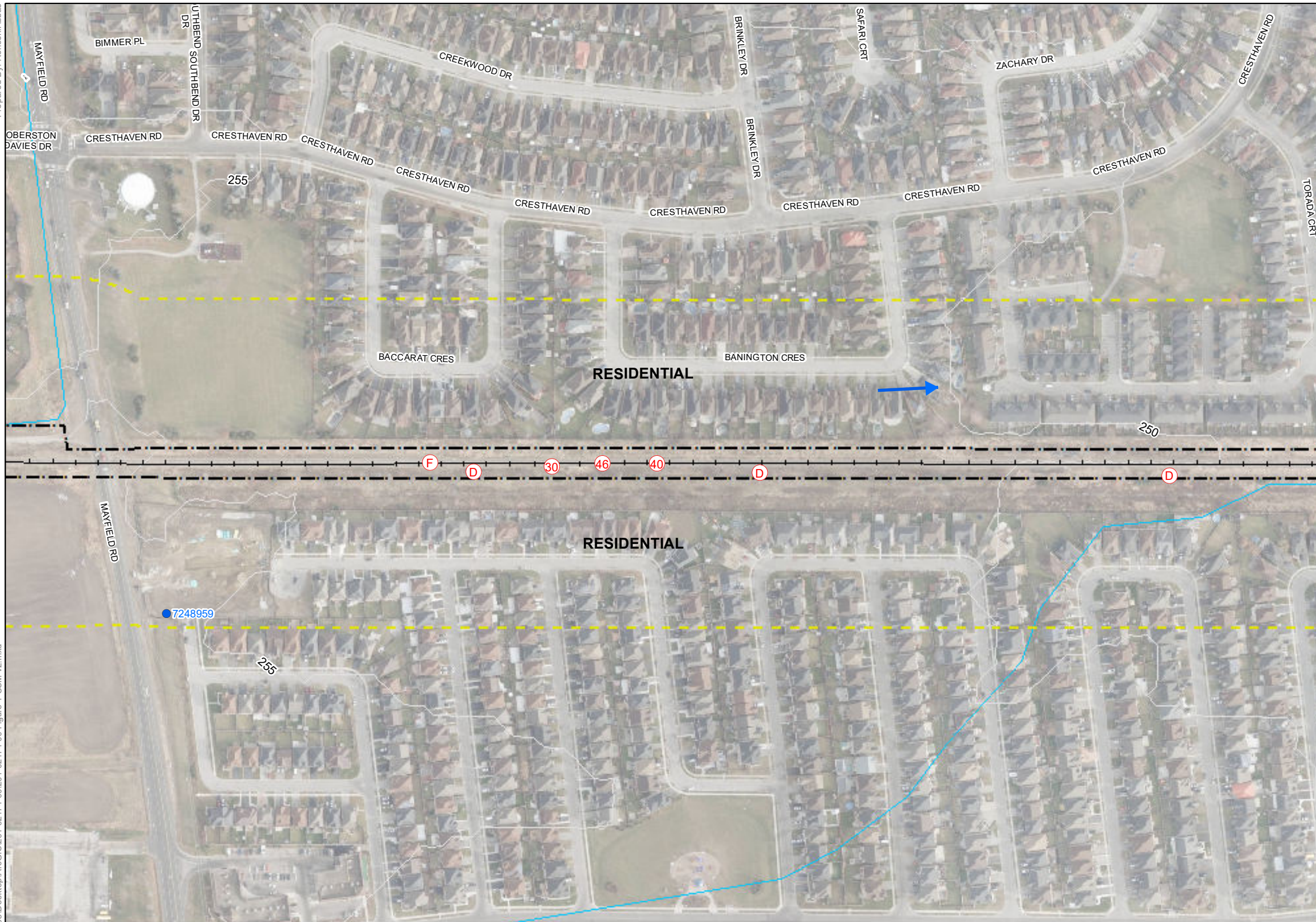
DATA SOURCE:

LEGEND:

100m STUDY AREA	RAIL	PCA CONTRIBUTING TO APEC
SUBJECT SITE	Rivers	PCA NOT CONTRIBUTING TO APEC
ANSI	MECP WATER WELL	TANK NOT CONTRIBUTING TO APEC
INFERRED GROUNDWATER FLOW DIRECTION	TANK CONTRIBUTING TO APEC	
1m TOPOGRAPHIC CONTOUR		

0 25 50 100 150 200 Metres





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TITLE:  
**PHASE ONE CONCEPTUAL SITE MODEL**

PROJECT:  
**CONTAMINANT OVERVIEW STUDY  
FORMER ORANGEVILLE RAIL,  
BRAMPTON, ONTARIO**

CLIENT:  
**REGION OF PEEL**

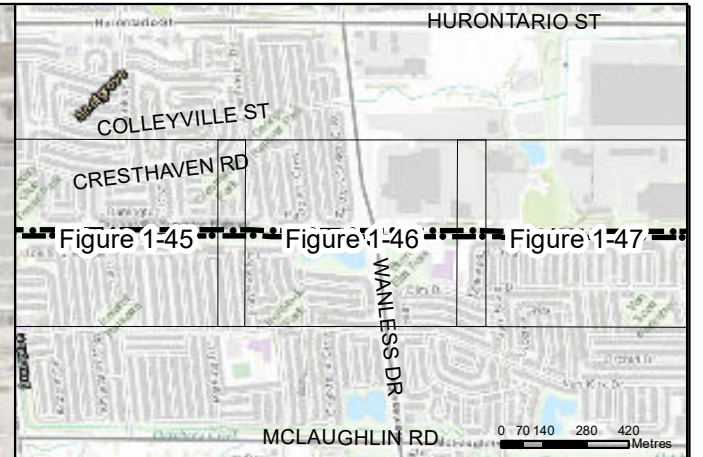
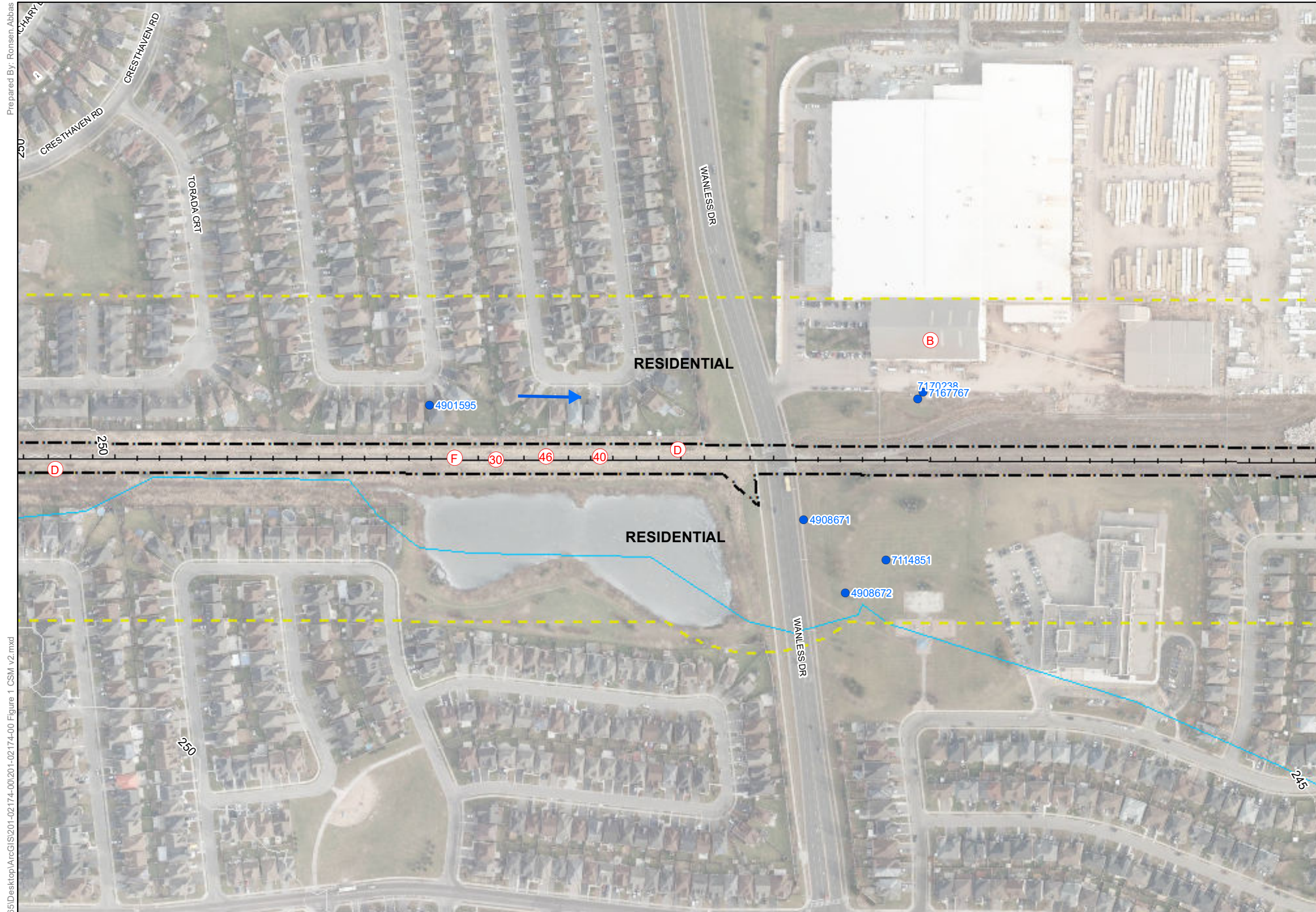
	PROJECT NO.:	REVIEWED BY:
	201-02174-00	MB
DATE:	FIGURE:	
MAY 2020	1-45	

DATA SOURCE:

LEGEND:

- 100m STUDY AREA
- SUBJECT SITE
- ANSI
- INFERRED GROUNDWATER FLOW DIRECTION
- 1m TOPOGRAPHIC CONTOUR
- RAIL
- Rivers
- MECP WATER WELL
- TANK NOT CONTRIBUTING TO APEC
- TANK CONTRIBUTING TO APEC
- PCA CONTRIBUTING TO APEC
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  - ⑭ CRUDE OIL REFINING, PROCESSING AND BULK STORAGE
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  - ⑳ GASOLINE AND ASSOCIATED PRODUCTS STORAGE IN FIXED TANKS
  - ㉑ IMPORTATION OF FILL MATERIAL OF UNKNOWN QUALITY
  - ㉒ INK MANUFACTURING, PROCESSING AND BULK STORAGE
  - ㉓ IRON AND STEEL MANUFACTURING AND PROCESSING
  - ㉔ METAL TREATMENT, COATING, PLATING AND FINISHING
  - ㉕ METAL FABRICATION
  - ㉖ MINING, SMELTING AND REFINING; ORE PROCESSING; TAILINGS STORAGE
  - ㉗ OPERATION OF DRY CLEANING EQUIPMENT (WHERE CHEMICALS ARE USED)
  - ㉘ PAINTS MANUFACTURING, PROCESSING AND BULK STORAGE
  - ㉙ PESTICIDES (INCLUDING HERBICIDES, FUNGICIDES AND ANTI-FOULING AGENTS) MANUFACTURING, PROCESSING, BULK STORAGE AND LARGE-SCALE APPLICATIONS
  - ㉚ PLASTICS (INCLUDING FIBREGLASS) MANUFACTURING AND PROCESSING
  - ㉛ PULP, PAPER AND PAPERBOARD MANUFACTURING AND PROCESSING
  - ㉜ RAIL YARDS, TRACKS AND SPURS
  - ㉝ RUBBER MANUFACTURING AND PROCESSING
  - ㉞ SOAP AND DETERGENT MANUFACTURING, PROCESSING AND BULK STORAGE
  - ㉟ SOLVENT MANUFACTURING, PROCESSING AND BULK STORAGE
  - ㊱ TANNERY
  - ㊲ TEXTILE MANUFACTURING AND PROCESSING
  - ㊳ VEHICLES AND ASSOCIATED PARTS MANUFACTURING
  - ㊴ WASTE DISPOSAL AND WASTE MANAGEMENT, INCLUDING THERMAL TREATMENT, LANDFILLING AND TRANSFER OF WASTE, OTHER THAN USE OF BIOSOILS AS SOIL CONDITIONERS
  - ㊵ WOOD TREATING AND PRESERVATIVE FACILITY AND BULK STORAGE OF TREATED AND PRESERVED WOOD PRODUCTS
  - Ⓐ SPILLS
  - Ⓑ MISCELLANEOUS MANUFACTURING
  - Ⓒ COAL STORAGE
  - Ⓓ RAIL TIE PILE
  - Ⓔ PCB STORAGE
  - Ⓕ KNOWN CONTAMINATION

TITLE:  
**PHASE ONE CONCEPTUAL SITE MODEL**

PROJECT:  
**CONTAMINANT OVERVIEW STUDY  
FORMER ORANGEVILLE RAIL,  
BRAMPTON, ONTARIO**

CLIENT:  
**REGION OF PEEL**

	PROJECT NO.:	201-02174-00	REVIEWED BY:	MB
	DATE:	MAY 2020	FIGURE:	1-46

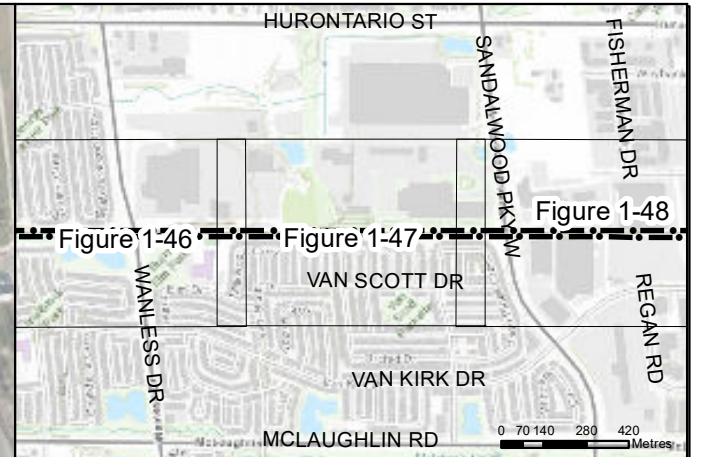
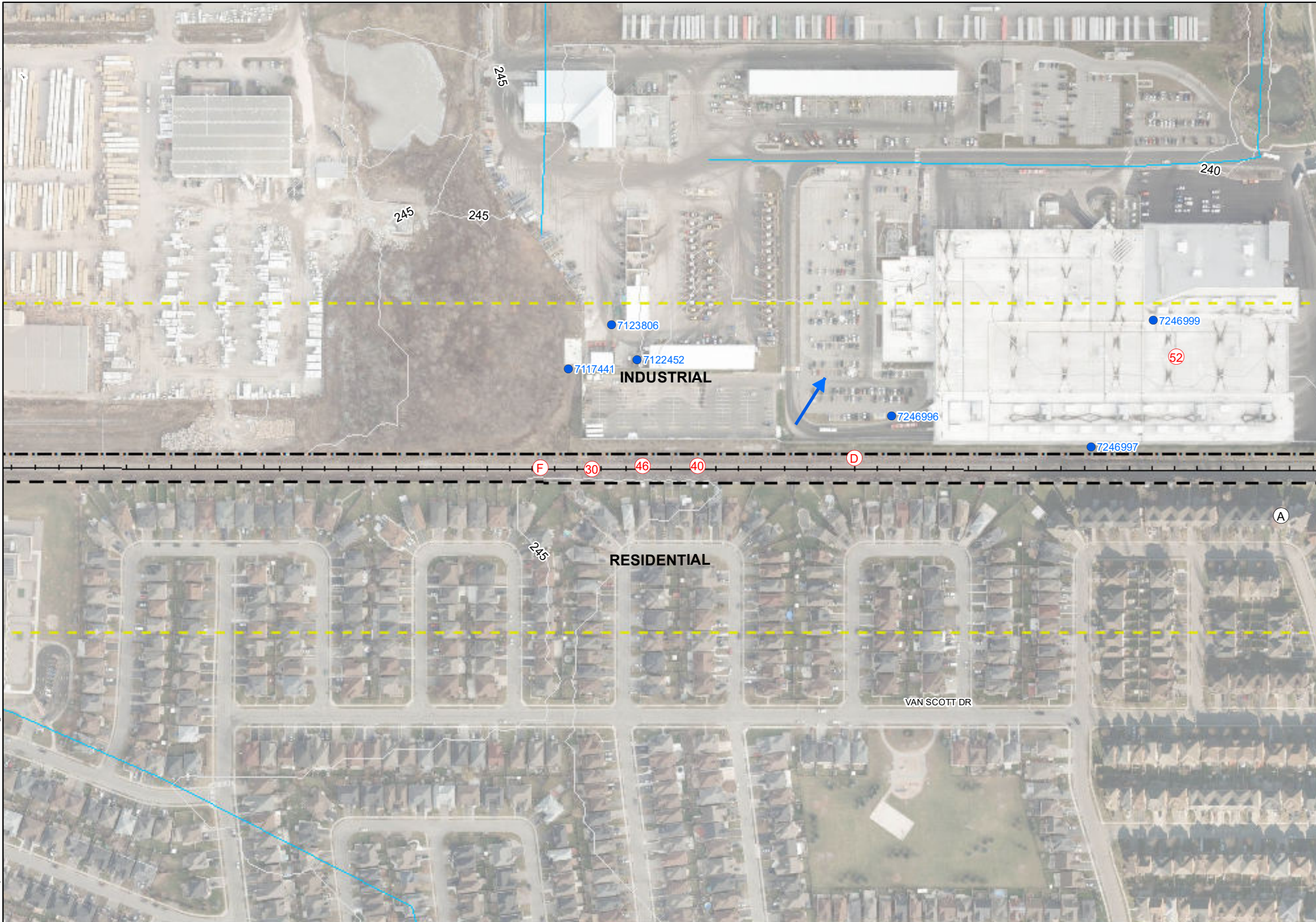
DATA SOURCE:

**LEGEND:**

100m STUDY AREA	RAIL	PCA CONTRIBUTING TO APEC
SUBJECT SITE	Rivers	PCA NOT CONTRIBUTING TO APEC
ANSI	MECP WATER WELL	TANK NOT CONTRIBUTING TO APEC
INFERRED GROUNDWATER FLOW DIRECTION	TANK CONTRIBUTING TO APEC	
1m TOPOGRAPHIC CONTOUR		

C:\Users\rnonsen.abbas\OneDrive - WSP\0365\Desktop\ArcGIS\201-02174-00\201-02174-00 Figure 1\_CSM v2.mxd





- POTENTIALLY CONTAMINATING ACTIVITIES (PCAS):**
- ③ AIRSTRIPS AND HANGARS OPERATION
  - ⑤ ASPHALT AND BITUMEN MANUFACTURING
  - ⑧ CHEMICAL MANUFACTURING, PROCESSING AND BULK STORAGE
  - ⑩ COMMERCIAL AUTOBODY SHOPS
  - ⑫ CONCRETE, CEMENT AND LIME MANUFACTURING
  - ⑭ CRUDE OIL REFINING, PROCESSING AND BULK STORAGE
  - ⑲ ELECTRONIC AND COMPUTER EQUIPMENT MANUFACTURING
  - ⑳ GASOLINE AND ASSOCIATED PRODUCTS STORAGE IN FIXED TANKS
  - ㉑ IMPORTATION OF FILL MATERIAL OF UNKNOWN QUALITY
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  - ㉓ IRON AND STEEL MANUFACTURING AND PROCESSING
  - ㉔ METAL TREATMENT, COATING, PLATING AND FINISHING
  - ㉕ METAL FABRICATION
  - ㉖ MINING, SMELTING AND REFINING; ORE PROCESSING; TAILINGS STORAGE
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  - ㉚ PLASTICS (INCLUDING FIBREGLASS) MANUFACTURING AND PROCESSING
  - ㉛ PULP, PAPER AND PAPERBOARD MANUFACTURING AND PROCESSING
  - ㉜ RAIL YARDS, TRACKS AND SPURS
  - ㉝ RUBBER MANUFACTURING AND PROCESSING
  - ㉞ SOAP AND DETERGENT MANUFACTURING, PROCESSING AND BULK STORAGE
  - ㉟ SOLVENT MANUFACTURING, PROCESSING AND BULK STORAGE
  - ㊱ TANNERY
  - ㊲ TEXTILE MANUFACTURING AND PROCESSING
  - ㊳ VEHICLES AND ASSOCIATED PARTS MANUFACTURING
  - ㊴ WASTE DISPOSAL AND WASTE MANAGEMENT, INCLUDING THERMAL TREATMENT, LANDFILLING AND TRANSFER OF WASTE, OTHER THAN USE OF BIOSOILS AS SOIL CONDITIONERS
  - ㊵ WOOD TREATING AND PRESERVATIVE FACILITY AND BULK STORAGE OF TREATED AND PRESERVED WOOD PRODUCTS
  - A SPILLS
  - B MISCELLANEOUS MANUFACTURING
  - C COAL STORAGE
  - D RAIL TIE PILE
  - E PCB STORAGE
  - F KNOWN CONTAMINATION

TITLE:  
**PHASE ONE CONCEPTUAL SITE MODEL**

PROJECT:  
**CONTAMINANT OVERVIEW STUDY  
FORMER ORANGEVILLE RAIL,  
BRAMPTON, ONTARIO**

CLIENT:  
**REGION OF PEEL**

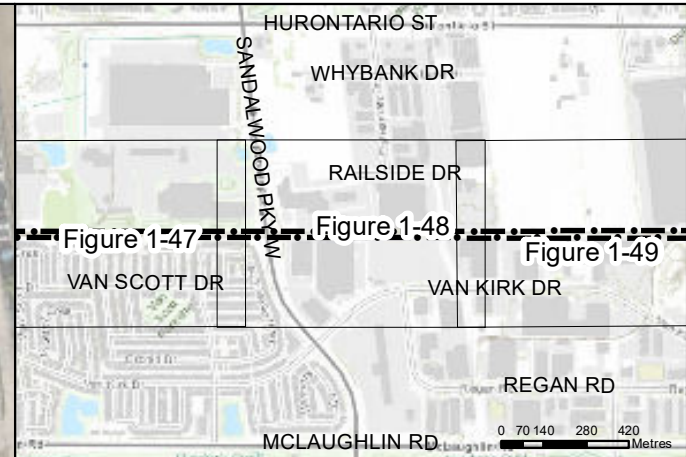
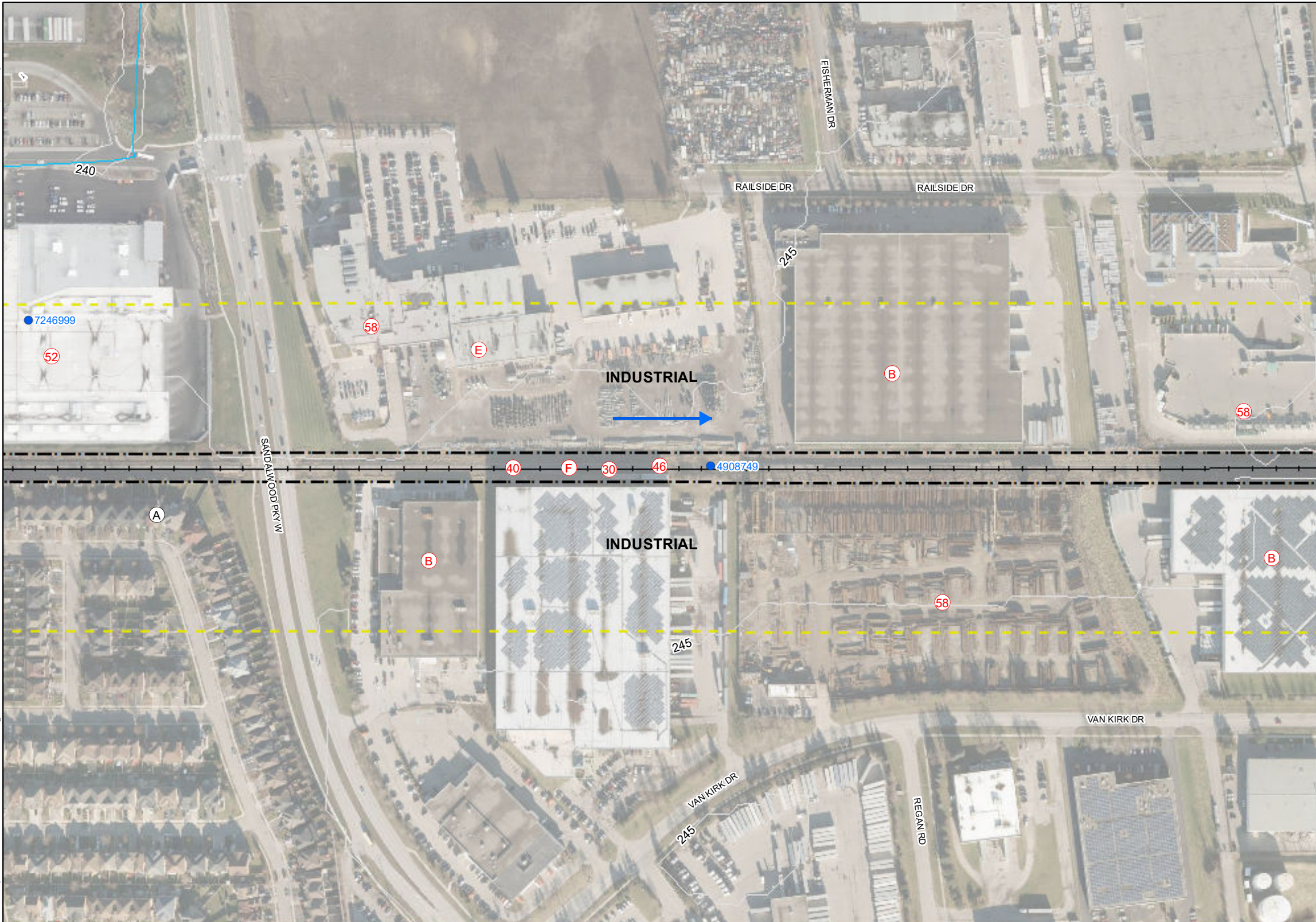
	PROJECT NO.:	REVIEWED BY:
	201-02174-00	MB
	DATE:	FIGURE:
	MAY 2020	1-47

DATA SOURCE:

LEGEND:

- 100m STUDY AREA
- SUBJECT SITE
- ANSI
- INFERRED GROUNDWATER FLOW DIRECTION
- 1m TOPOGRAPHIC CONTOUR
- RAIL
- Rivers
- MECP WATER WELL
- TANK NOT CONTRIBUTING TO APEC
- TANK CONTRIBUTING TO APEC
- PCA CONTRIBUTING TO APEC
- PCA NOT CONTRIBUTING TO APEC





- POTENTIALLY CONTAMINATING ACTIVITIES (PCAS):**
- ③ AIRSTRIPS AND HANGARS OPERATION
  - ⑤ ASPHALT AND BITUMEN MANUFACTURING
  - ⑧ CHEMICAL MANUFACTURING, PROCESSING AND BULK STORAGE
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  - ㉓ METAL TREATMENT, COATING, PLATING AND FINISHING
  - ㉔ METAL FABRICATION
  - ㉕ MINING, SMELTING AND REFINING; ORE PROCESSING; TAILINGS STORAGE
  - ㉖ OPERATION OF DRY CLEANING EQUIPMENT (WHERE CHEMICALS ARE USED)
  - ㉗ PAINTS MANUFACTURING, PROCESSING AND BULK STORAGE
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  - ㉜ RUBBER MANUFACTURING AND PROCESSING
  - ㉝ SOAP AND DETERGENT MANUFACTURING, PROCESSING AND BULK STORAGE
  - ㉞ SOLVENT MANUFACTURING, PROCESSING AND BULK STORAGE
  - ㉟ TANNERY
  - ㊱ TEXTILE MANUFACTURING AND PROCESSING
  - ㊲ VEHICLES AND ASSOCIATED PARTS MANUFACTURING
  - ㊳ WASTE DISPOSAL AND WASTE MANAGEMENT, INCLUDING THERMAL TREATMENT, LANDFILLING AND TRANSFER OF WASTE, OTHER THAN USE OF BIOSOILS AS SOIL CONDITIONERS
  - ㊴ WOOD TREATING AND PRESERVATIVE FACILITY AND BULK STORAGE OF TREATED AND PRESERVED WOOD PRODUCTS
  - Ⓐ SPILLS
  - Ⓑ MISCELLANEOUS MANUFACTURING
  - Ⓒ COAL STORAGE
  - Ⓓ RAIL TIE PILE
  - Ⓔ PCB STORAGE
  - Ⓕ KNOWN CONTAMINATION

TITLE:  
**PHASE ONE CONCEPTUAL SITE MODEL**

PROJECT:  
**CONTAMINANT OVERVIEW STUDY  
FORMER ORANGEVILLE RAIL,  
BRAMPTON, ONTARIO**

CLIENT:  
**REGION OF PEEL**

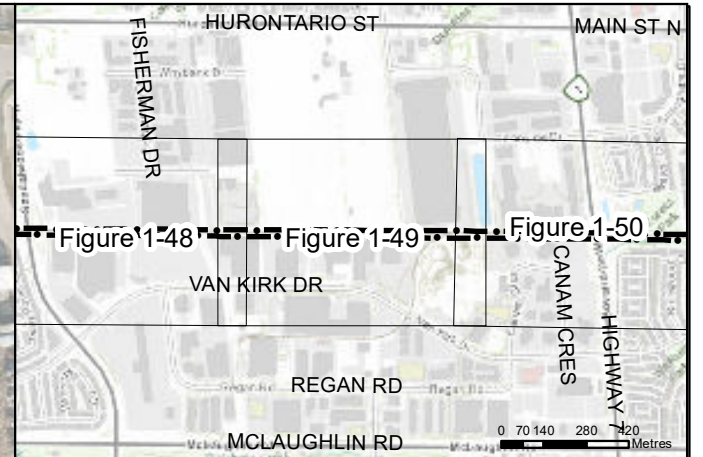
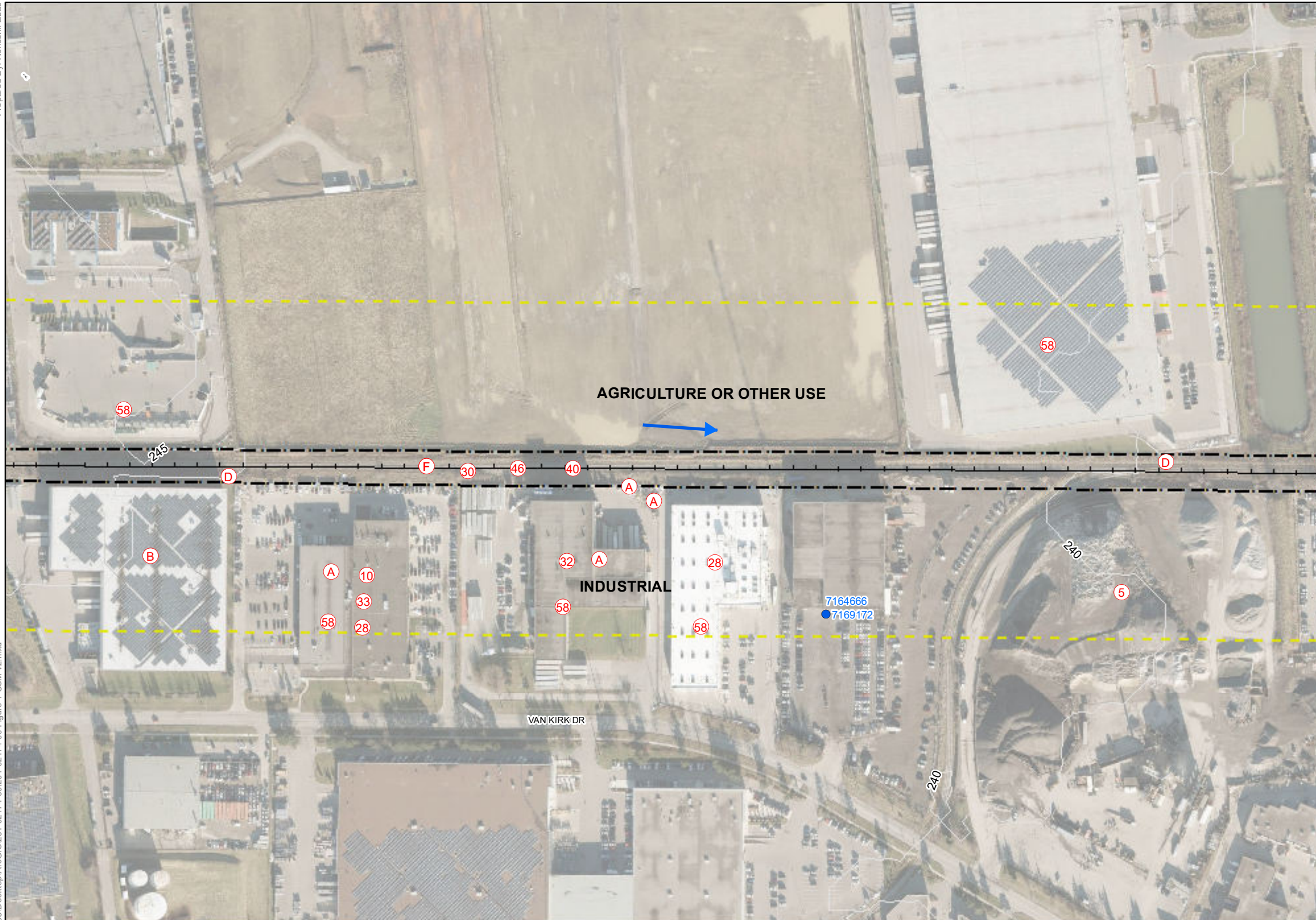
	PROJECT NO.:	201-02174-00	REVIEWED BY:	MB
	DATE:	MAY 2020	FIGURE:	1-48

DATA SOURCE:

LEGEND:

- 100m STUDY AREA
- SUBJECT SITE
- ANSI
- INFERRED GROUNDWATER FLOW DIRECTION
- 1m TOPOGRAPHIC CONTOUR
- RAIL
- Rivers
- MECP WATER WELL
- TANK NOT CONTRIBUTING TO APEC
- TANK CONTRIBUTING TO APEC
- PCA CONTRIBUTING TO APEC
- PCA NOT CONTRIBUTING TO APEC





- POTENTIALLY CONTAMINATING ACTIVITIES (PCAS):**
- 3 AIRSTRIPS AND HANGARS OPERATION
  - 5 ASPHALT AND BITUMEN MANUFACTURING
  - 8 CHEMICAL MANUFACTURING, PROCESSING AND BULK STORAGE
  - 10 COMMERCIAL AUTOBODY SHOPS
  - 12 CONCRETE, CEMENT AND LIME MANUFACTURING
  - 14 CRUDE OIL REFINING, PROCESSING AND BULK STORAGE
  - 19 ELECTRONIC AND COMPUTER EQUIPMENT MANUFACTURING
  - 28 GASOLINE AND ASSOCIATED PRODUCTS STORAGE IN FIXED TANKS
  - 30 IMPORTATION OF FILL MATERIAL OF UNKNOWN QUALITY
  - 31 INK MANUFACTURING, PROCESSING AND BULK STORAGE
  - 32 IRON AND STEEL MANUFACTURING AND PROCESSING
  - 33 METAL TREATMENT, COATING, PLATING AND FINISHING
  - 34 METAL FABRICATION
  - 35 MINING, SMELTING AND REFINING; ORE PROCESSING; TAILINGS STORAGE
  - 37 OPERATION OF DRY CLEANING EQUIPMENT (WHERE CHEMICALS ARE USED)
  - 39 PAINTS MANUFACTURING, PROCESSING AND BULK STORAGE
  - 40 PESTICIDES (INCLUDING HERBICIDES, FUNGICIDES AND ANTI-FOULING AGENTS) MANUFACTURING, PROCESSING, BULK STORAGE AND LARGE-SCALE APPLICATIONS
  - 43 PLASTICS (INCLUDING FIBREGLASS) MANUFACTURING AND PROCESSING
  - 45 PULP, PAPER AND PAPERBOARD MANUFACTURING AND PROCESSING
  - 46 RAIL YARDS, TRACKS AND SPURS
  - 47 RUBBER MANUFACTURING AND PROCESSING
  - 50 SOAP AND DETERGENT MANUFACTURING, PROCESSING AND BULK STORAGE
  - 51 SOLVENT MANUFACTURING, PROCESSING AND BULK STORAGE
  - 53 TANNERY
  - 54 TEXTILE MANUFACTURING AND PROCESSING
  - 57 VEHICLES AND ASSOCIATED PARTS MANUFACTURING
  - 58 WASTE DISPOSAL AND WASTE MANAGEMENT, INCLUDING THERMAL TREATMENT, LANDFILLING AND TRANSFER OF WASTE, OTHER THAN USE OF BIOSOILS AS SOIL CONDITIONERS
  - 59 WOOD TREATING AND PRESERVATIVE FACILITY AND BULK STORAGE OF TREATED AND PRESERVED WOOD PRODUCTS
  - A SPILLS
  - B MISCELLANEOUS MANUFACTURING
  - C COAL STORAGE
  - D RAIL TIE PILE
  - E PCB STORAGE
  - F KNOWN CONTAMINATION

TITLE:  
**PHASE ONE CONCEPTUAL SITE MODEL**

PROJECT:  
**CONTAMINANT OVERVIEW STUDY  
FORMER ORANGEVILLE RAIL,  
BRAMPTON, ONTARIO**

CLIENT:  
**REGION OF PEEL**

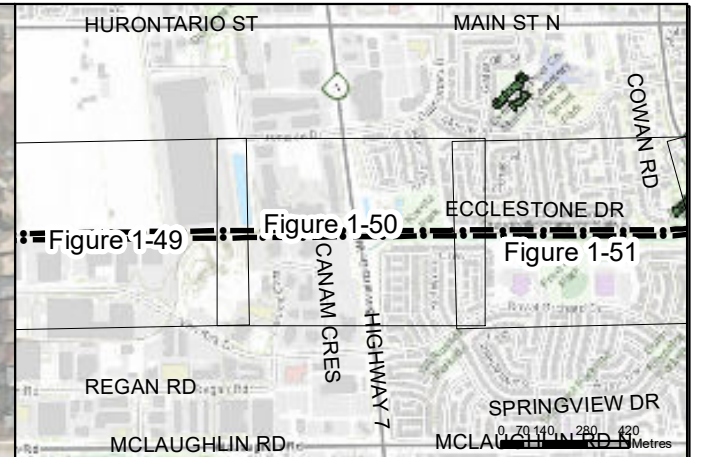
	PROJECT NO.:	REVIEWED BY:
	201-02174-00	MB
	DATE:	FIGURE:
	MAY 2020	1-49

DATA SOURCE:

**LEGEND:**

100m STUDY AREA	RAIL	PCA CONTRIBUTING TO APEC
SUBJECT SITE	Rivers	PCA NOT CONTRIBUTING TO APEC
ANSI	MECP WATER WELL	
INFERRED GROUNDWATER FLOW DIRECTION	TANK NOT CONTRIBUTING TO APEC	
1m TOPOGRAPHIC CONTOUR	TANK CONTRIBUTING TO APEC	





- POTENTIALLY CONTAMINATING ACTIVITIES (PCAS):**
- ③ AIRSTRIPS AND HANGARS OPERATION
  - ④ ASPHALT AND BITUMEN MANUFACTURING
  - ⑧ CHEMICAL MANUFACTURING, PROCESSING AND BULK STORAGE
  - ⑩ COMMERCIAL AUTOBODY SHOPS
  - ⑫ CONCRETE, CEMENT AND LIME MANUFACTURING
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  - ⑲ ELECTRONIC AND COMPUTER EQUIPMENT MANUFACTURING
  - ⑳ GASOLINE AND ASSOCIATED PRODUCTS STORAGE IN FIXED TANKS
  - ㉑ IMPORTATION OF FILL MATERIAL OF UNKNOWN QUALITY
  - ㉒ INK MANUFACTURING, PROCESSING AND BULK STORAGE
  - ㉓ IRON AND STEEL MANUFACTURING AND PROCESSING
  - ㉔ METAL TREATMENT, COATING, PLATING AND FINISHING
  - ㉕ METAL FABRICATION
  - ㉖ MINING, SMELTING AND REFINING; ORE PROCESSING; TAILINGS STORAGE
  - ㉗ OPERATION OF DRY CLEANING EQUIPMENT (WHERE CHEMICALS ARE USED)
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  - ㉟ SOLVENT MANUFACTURING, PROCESSING AND BULK STORAGE
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  - Ⓒ COAL STORAGE
  - Ⓓ RAIL TIE PILE
  - Ⓔ PCB STORAGE
  - Ⓕ KNOWN CONTAMINATION

TITLE:  
**PHASE ONE CONCEPTUAL SITE MODEL**

PROJECT:  
**CONTAMINANT OVERVIEW STUDY  
FORMER ORANGEVILLE RAIL,  
BRAMPTON, ONTARIO**

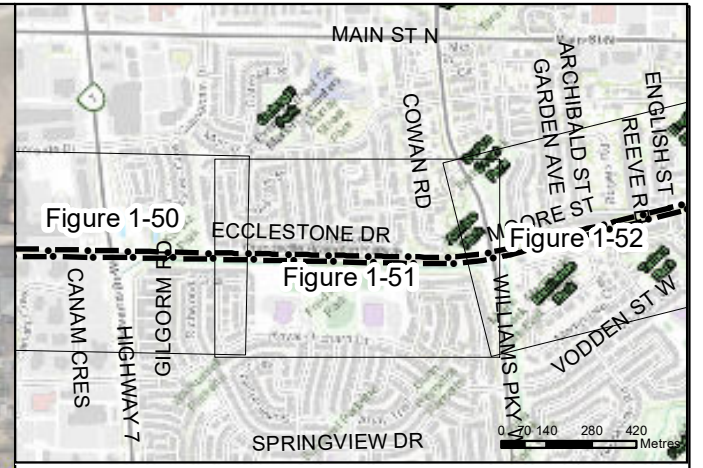
CLIENT:  
**REGION OF PEEL**

	PROJECT NO.:	201-02174-00	REVIEWED BY:	MB
	DATE:	MAY 2020	FIGURE:	1-50

DATA SOURCE:

- LEGEND:**
- 100m STUDY AREA
  - SUBJECT SITE
  - ANSI
  - INFERRED GROUNDWATER FLOW DIRECTION
  - 1m TOPOGRAPHIC CONTOUR
  - RAIL
  - Rivers
  - MECP WATER WELL
  - TANK NOT CONTRIBUTING TO APEC
  - TANK CONTRIBUTING TO APEC
  - PCA CONTRIBUTING TO APEC
  - PCA NOT CONTRIBUTING TO APEC





- POTENTIALLY CONTAMINATING ACTIVITIES (PCAS):**
- ③ AIRSTRIPS AND HANGARS OPERATION
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  - Ⓑ MISCELLANEOUS MANUFACTURING
  - Ⓒ COAL STORAGE
  - Ⓓ RAIL TIE PILE
  - Ⓔ PCB STORAGE
  - Ⓕ KNOWN CONTAMINATION

TITLE:  
**PHASE ONE CONCEPTUAL SITE MODEL**

PROJECT:  
**CONTAMINANT OVERVIEW STUDY  
FORMER ORANGEVILLE RAIL,  
BRAMPTON, ONTARIO**

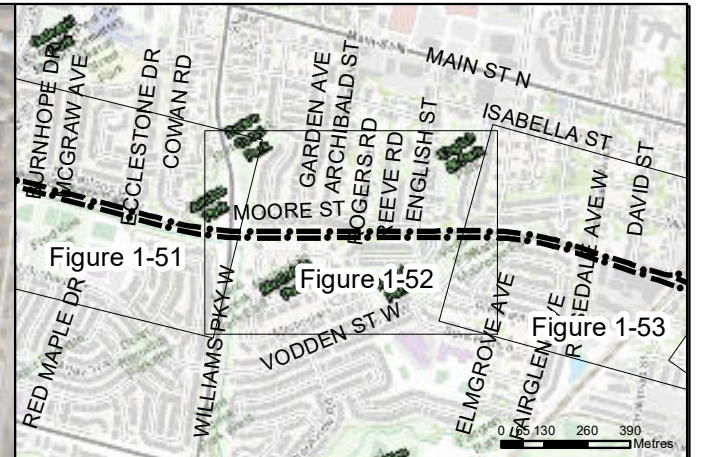
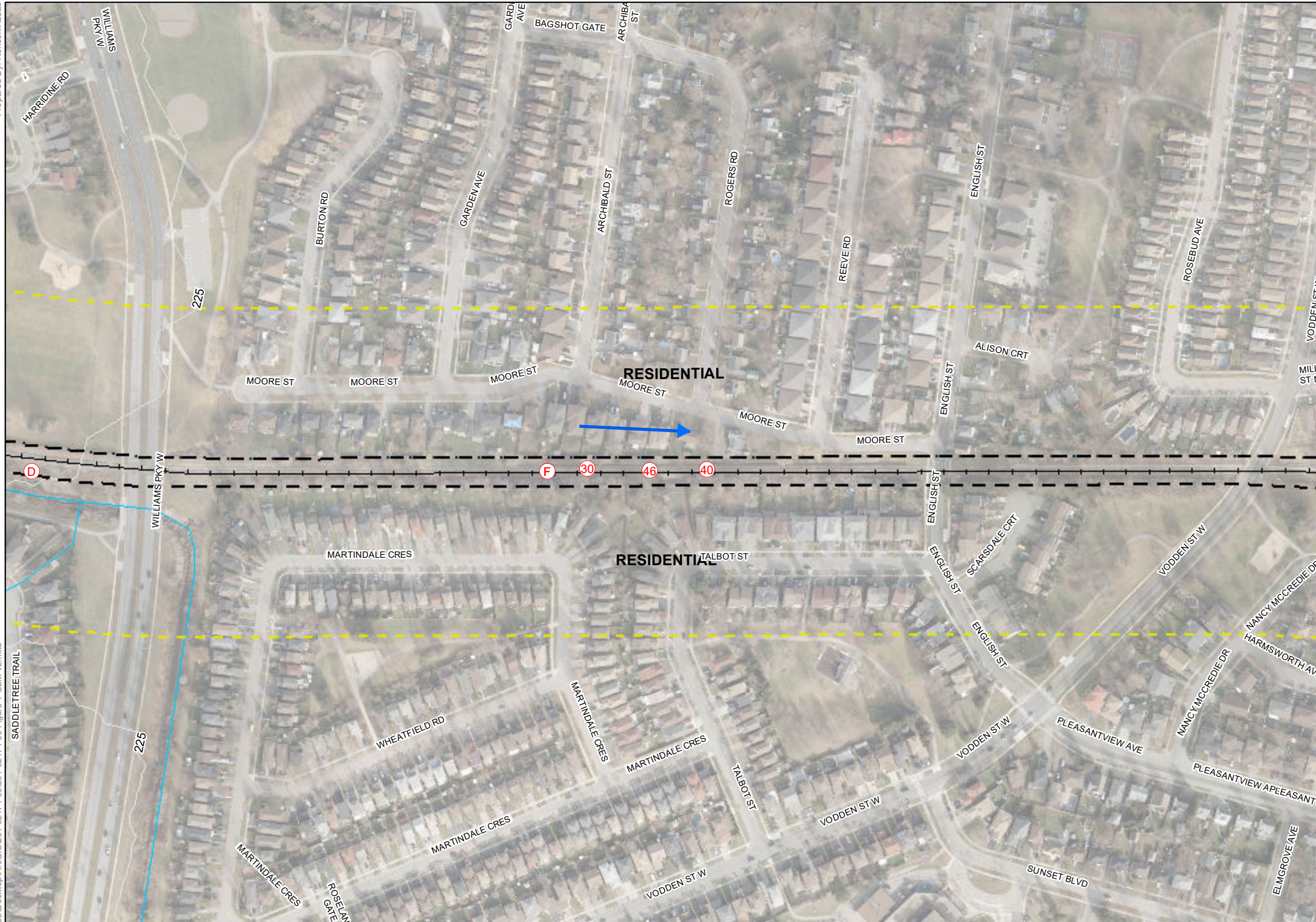
CLIENT:  
**REGION OF PEEL**

- DATA SOURCE:**
- LEGEND:**
- 100m STUDY AREA
  - SUBJECT SITE
  - ANSI
  - INFERRED GROUNDWATER FLOW DIRECTION
  - 1m TOPOGRAPHIC CONTOUR
  - RAIL
  - Rivers
  - MECP WATER WELL
  - TANK NOT CONTRIBUTING TO APEC
  - TANK CONTRIBUTING TO APEC
  - PCA CONTRIBUTING TO APEC
  - PCA NOT CONTRIBUTING TO APEC

- 0 25 50 100 150 200 Metres

	PROJECT NO.:	201-02174-00	REVIEWED BY:	MB
	DATE:	MAY 2020	FIGURE:	1-51





- POTENTIALLY CONTAMINATING ACTIVITIES (PCAS):**
- ③ AIRSTRIPS AND HANGARS OPERATION
  - ④ ASPHALT AND BITUMEN MANUFACTURING
  - ⑧ CHEMICAL MANUFACTURING, PROCESSING AND BULK STORAGE
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  - ㉟ TEXTILE MANUFACTURING AND PROCESSING
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  - Ⓑ MISCELLANEOUS MANUFACTURING
  - Ⓒ COAL STORAGE
  - Ⓓ RAIL TIE PILE
  - Ⓔ PCB STORAGE
  - Ⓕ KNOWN CONTAMINATION

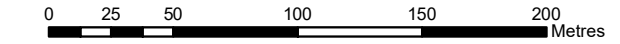
TITLE:  
**PHASE ONE CONCEPTUAL SITE MODEL**

PROJECT:  
**CONTAMINANT OVERVIEW STUDY  
FORMER ORANGEVILLE RAIL,  
MISSISSAUGA, ONTARIO**

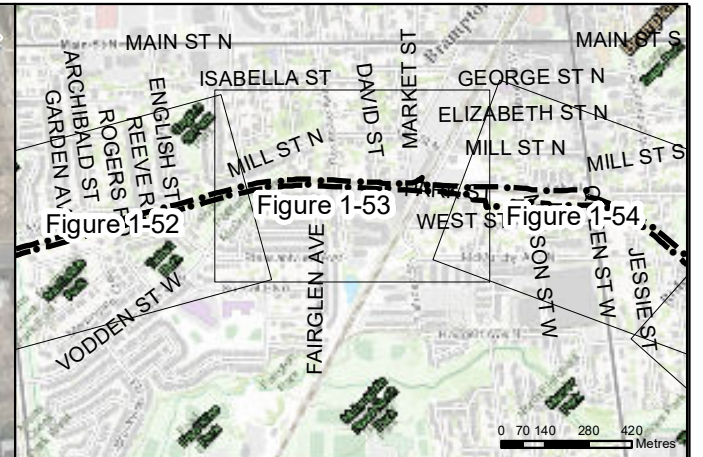
CLIENT:  
**REGION OF PEEL**

	PROJECT NO.:	REVIEWED BY:
	201-02174-00	MB
DATE:	FIGURE:	
MAY 2020	1-52	

- DATA SOURCE:**
- LEGEND:**
- 100m STUDY AREA
  - SUBJECT SITE
  - ANSI
  - INFERRED GROUNDWATER FLOW DIRECTION
  - 1m TOPOGRAPHIC CONTOUR
  - RAIL
  - Rivers
  - MECP WATER WELL
  - TANK NOT CONTRIBUTING TO APEC
  - TANK CONTRIBUTING TO APEC
  - PCA CONTRIBUTING TO APEC
  - PCA NOT CONTRIBUTING TO APEC







- POTENTIALLY CONTAMINATING ACTIVITIES (PCAS):**
- ③ AIRSTRIPS AND HANGARS OPERATION
  - ④ ASPHALT AND BITUMEN MANUFACTURING
  - ⑧ CHEMICAL MANUFACTURING, PROCESSING AND BULK STORAGE
  - ⑩ COMMERCIAL AUTOBODY SHOPS
  - ⑫ CONCRETE, CEMENT AND LIME MANUFACTURING
  - ⑭ CRUDE OIL REFINING, PROCESSING AND BULK STORAGE
  - ⑲ ELECTRONIC AND COMPUTER EQUIPMENT MANUFACTURING
  - ⑳ GASOLINE AND ASSOCIATED PRODUCTS STORAGE IN FIXED TANKS
  - ㉑ IMPORTATION OF FILL MATERIAL OF UNKNOWN QUALITY
  - ㉒ INK MANUFACTURING, PROCESSING AND BULK STORAGE
  - ㉓ IRON AND STEEL MANUFACTURING AND PROCESSING
  - ㉔ METAL TREATMENT, COATING, PLATING AND FINISHING
  - ㉕ METAL FABRICATION
  - ㉖ MINING, SMELTING AND REFINING; ORE PROCESSING; TAILINGS STORAGE
  - ㉗ OPERATION OF DRY CLEANING EQUIPMENT (WHERE CHEMICALS ARE USED)
  - ㉘ PAINTS MANUFACTURING, PROCESSING AND BULK STORAGE
  - ㉙ PESTICIDES (INCLUDING HERBICIDES, FUNGICIDES AND ANTI-FOULING AGENTS) MANUFACTURING, PROCESSING, BULK STORAGE AND LARGE-SCALE APPLICATIONS
  - ㉚ PLASTICS (INCLUDING FIBREGLASS) MANUFACTURING AND PROCESSING
  - ㉛ PULP, PAPER AND PAPERBOARD MANUFACTURING AND PROCESSING
  - ㉜ RAIL YARDS, TRACKS AND SPURS
  - ㉝ RUBBER MANUFACTURING AND PROCESSING
  - ㉞ SOAP AND DETERGENT MANUFACTURING, PROCESSING AND BULK STORAGE
  - ㉟ SOLVENT MANUFACTURING, PROCESSING AND BULK STORAGE
  - ㊱ TANNERY
  - ㊲ TEXTILE MANUFACTURING AND PROCESSING
  - ㊳ VEHICLES AND ASSOCIATED PARTS MANUFACTURING
  - ㊴ WASTE DISPOSAL AND WASTE MANAGEMENT, INCLUDING THERMAL TREATMENT, LANDFILLING AND TRANSFER OF WASTE, OTHER THAN USE OF BIOSOILS AS SOIL CONDITIONERS
  - ㊵ WOOD TREATING AND PRESERVATIVE FACILITY AND BULK STORAGE OF TREATED AND PRESERVED WOOD PRODUCTS
  - Ⓐ SPILLS
  - Ⓑ MISCELLANEOUS MANUFACTURING
  - Ⓒ COAL STORAGE
  - Ⓓ RAIL TIE PILE
  - Ⓔ PCB STORAGE
  - Ⓕ KNOWN CONTAMINATION

TITLE:  
**PHASE ONE CONCEPTUAL SITE MODEL**

PROJECT:  
**CONTAMINANT OVERVIEW STUDY  
FORMER ORANGEVILLE RAIL,  
MISSISSAUGA, ONTARIO**

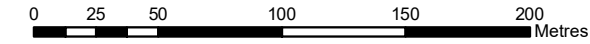
CLIENT:  
**REGION OF PEEL**

	PROJECT NO.:	REVIEWED BY:
	201-02174-00	MB
	DATE:	FIGURE:
	MAY 2020	1-53

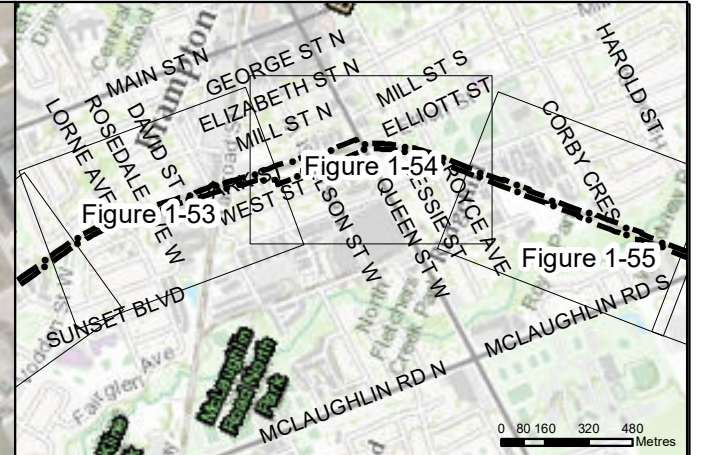
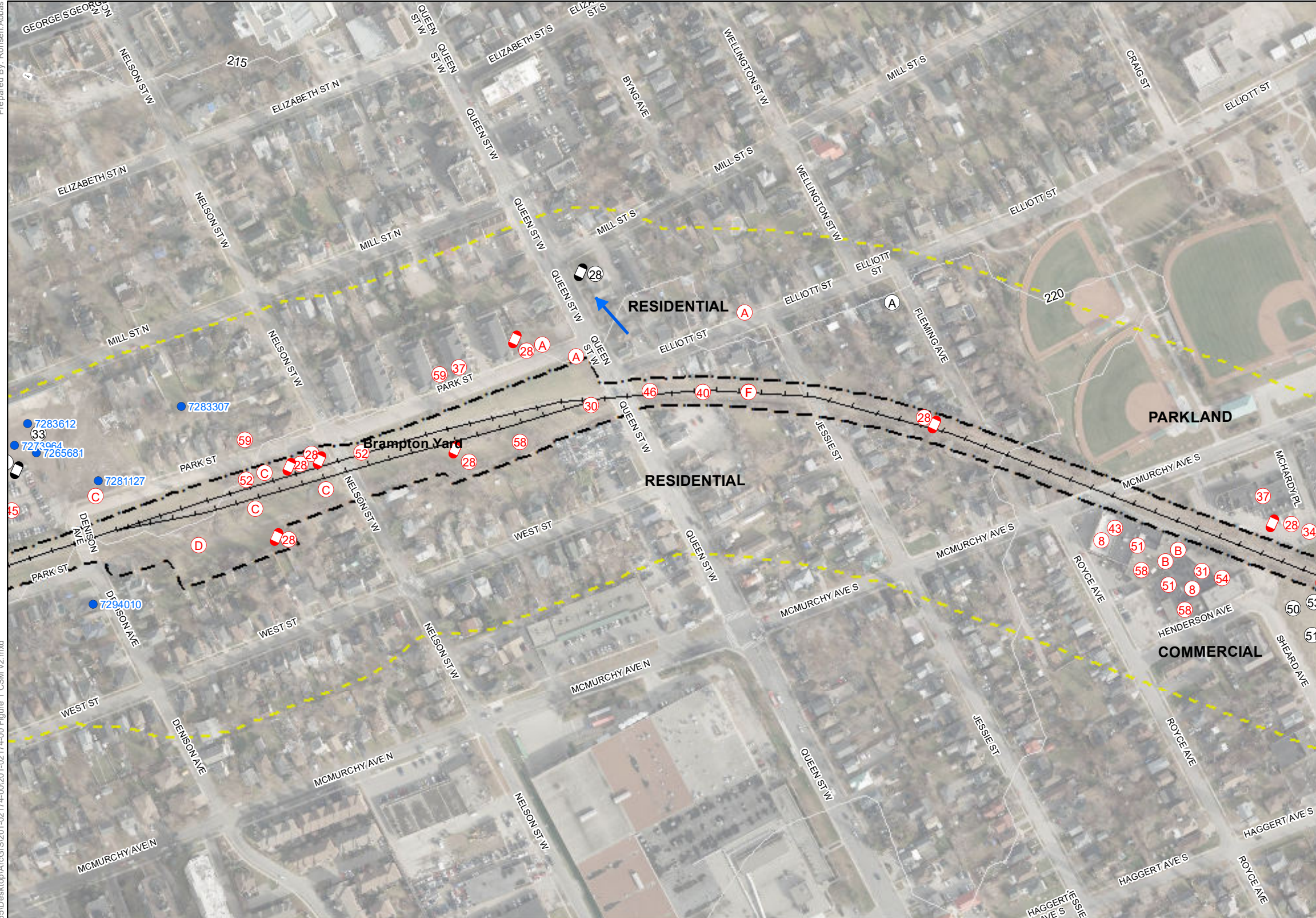
DATA SOURCE:

LEGEND:

- 100m STUDY AREA
- SUBJECT SITE
- ANSI
- INFERRED GROUNDWATER FLOW DIRECTION
- 1m TOPOGRAPHIC CONTOUR
- RAIL
- Rivers
- MECP WATER WELL
- TANK NOT CONTRIBUTING TO APEC
- TANK CONTRIBUTING TO APEC
- PCA CONTRIBUTING TO APEC
- PCA NOT CONTRIBUTING TO APEC







- POTENTIALLY CONTAMINATING ACTIVITIES (PCAS):**
- (3) AIRSTRIPS AND HANGARS OPERATION
  - (5) ASPHALT AND BITUMEN MANUFACTURING
  - (8) CHEMICAL MANUFACTURING, PROCESSING AND BULK STORAGE
  - (10) COMMERCIAL AUTOBODY SHOPS
  - (12) CONCRETE, CEMENT AND LIME MANUFACTURING
  - (14) CRUDE OIL REFINING, PROCESSING AND BULK STORAGE
  - (19) ELECTRONIC AND COMPUTER EQUIPMENT MANUFACTURING
  - (28) GASOLINE AND ASSOCIATED PRODUCTS STORAGE IN FIXED TANKS
  - (30) IMPORTATION OF FILL MATERIAL OF UNKNOWN QUALITY
  - (31) INK MANUFACTURING, PROCESSING AND BULK STORAGE
  - (32) IRON AND STEEL MANUFACTURING AND PROCESSING
  - (33) METAL TREATMENT, COATING, PLATING AND FINISHING
  - (34) METAL FABRICATION
  - (35) MINING, SMELTING AND REFINING; ORE PROCESSING; TAILINGS STORAGE
  - (37) OPERATION OF DRY CLEANING EQUIPMENT (WHERE CHEMICALS ARE USED)
  - (39) PAINTS MANUFACTURING, PROCESSING AND BULK STORAGE
  - (40) PESTICIDES (INCLUDING HERBICIDES, FUNGICIDES AND ANTI-FOULING AGENTS) MANUFACTURING, PROCESSING, BULK STORAGE AND LARGE-SCALE APPLICATIONS
  - (43) PLASTICS (INCLUDING FIBREGLASS) MANUFACTURING AND PROCESSING
  - (45) PULP, PAPER AND PAPERBOARD MANUFACTURING AND PROCESSING
  - (46) RAIL YARDS, TRACKS AND SPURS
  - (47) RUBBER MANUFACTURING AND PROCESSING
  - (50) SOAP AND DETERGENT MANUFACTURING, PROCESSING AND BULK STORAGE
  - (51) SOLVENT MANUFACTURING, PROCESSING AND BULK STORAGE
  - (53) TANNERY
  - (54) TEXTILE MANUFACTURING AND PROCESSING
  - (57) VEHICLES AND ASSOCIATED PARTS MANUFACTURING
  - (58) WASTE DISPOSAL AND WASTE MANAGEMENT, INCLUDING THERMAL TREATMENT, LANDFILLING AND TRANSFER OF WASTE, OTHER THAN USE OF BIOSOILS AS SOIL CONDITIONERS
  - (59) WOOD TREATING AND PRESERVATIVE FACILITY AND BULK STORAGE OF TREATED AND PRESERVED WOOD PRODUCTS
  - (A) SPILLS
  - (B) MISCELLANEOUS MANUFACTURING
  - (C) COAL STORAGE
  - (D) RAIL TIE PILE
  - (E) PCB STORAGE
  - (F) KNOWN CONTAMINATION

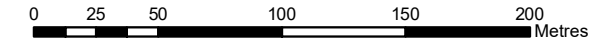
TITLE:  
**PHASE ONE CONCEPTUAL SITE MODEL**

PROJECT:  
**CONTAMINANT OVERVIEW STUDY  
FORMER ORANGEVILLE RAIL,  
MISSISSAUGA, ONTARIO**

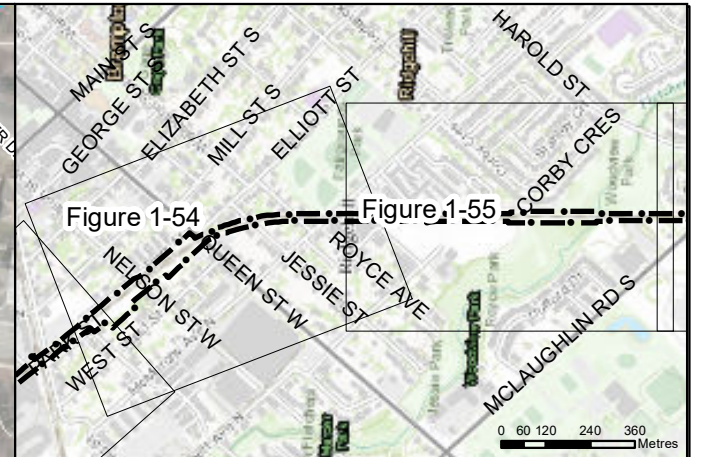
CLIENT:  
**REGION OF PEEL**

	PROJECT NO.:	REVIEWED BY:
	201-02174-00	MB
	DATE:	FIGURE:
	MAY 2020	1-54

- DATA SOURCE:**
- LEGEND:**
- 100m STUDY AREA
  - SUBJECT SITE
  - ANSI
  - INFERRED GROUNDWATER FLOW DIRECTION
  - 1m TOPOGRAPHIC CONTOUR
  - RAIL
  - Rivers
  - MECP WATER WELL
  - TANK NOT CONTRIBUTING TO APEC
  - TANK CONTRIBUTING TO APEC
  - PCA CONTRIBUTING TO APEC
  - PCA NOT CONTRIBUTING TO APEC







- POTENTIALLY CONTAMINATING ACTIVITIES (PCAS):**
- ③ AIRSTRIPS AND HANGARS OPERATION
  - ④ ASPHALT AND BITUMEN MANUFACTURING
  - ⑧ CHEMICAL MANUFACTURING, PROCESSING AND BULK STORAGE
  - ⑩ COMMERCIAL AUTOBODY SHOPS
  - ⑫ CONCRETE, CEMENT AND LIME MANUFACTURING
  - ⑭ CRUDE OIL REFINING, PROCESSING AND BULK STORAGE
  - ⑲ ELECTRONIC AND COMPUTER EQUIPMENT MANUFACTURING
  - ⑳ GASOLINE AND ASSOCIATED PRODUCTS STORAGE IN FIXED TANKS
  - ㉑ IMPORTATION OF FILL MATERIAL OF UNKNOWN QUALITY
  - ㉒ INK MANUFACTURING, PROCESSING AND BULK STORAGE
  - ㉓ IRON AND STEEL MANUFACTURING AND PROCESSING
  - ㉔ METAL TREATMENT, COATING, PLATING AND FINISHING
  - ㉕ METAL FABRICATION
  - ㉖ MINING, SMELTING AND REFINING; ORE PROCESSING; TAILINGS STORAGE
  - ㉗ OPERATION OF DRY CLEANING EQUIPMENT (WHERE CHEMICALS ARE USED)
  - ㉘ PAINTS MANUFACTURING, PROCESSING AND BULK STORAGE
  - ㉙ PESTICIDES (INCLUDING HERBICIDES, FUNGICIDES AND ANTI-FOULING AGENTS) MANUFACTURING, PROCESSING, BULK STORAGE AND LARGE-SCALE APPLICATIONS
  - ㉚ PLASTICS (INCLUDING FIBREGLASS) MANUFACTURING AND PROCESSING
  - ㉛ PULP, PAPER AND PAPERBOARD MANUFACTURING AND PROCESSING
  - ㉜ RAIL YARDS, TRACKS AND SPURS
  - ㉝ RUBBER MANUFACTURING AND PROCESSING
  - ㉞ SOAP AND DETERGENT MANUFACTURING, PROCESSING AND BULK STORAGE
  - ㉟ SOLVENT MANUFACTURING, PROCESSING AND BULK STORAGE
  - ㊱ TANNERY
  - ㊲ TEXTILE MANUFACTURING AND PROCESSING
  - ㊳ VEHICLES AND ASSOCIATED PARTS MANUFACTURING
  - ㊴ WASTE DISPOSAL AND WASTE MANAGEMENT INCLUDING THERMAL TREATMENT, LANDFILLING AND TRANSFER OF WASTE, OTHER THAN USE OF BIOSOILS AS SOIL CONDITIONERS
  - ㊵ WOOD TREATING AND PRESERVATIVE FACILITY AND BULK STORAGE OF TREATED AND PRESERVED WOOD PRODUCTS
  - Ⓐ SPILLS
  - Ⓑ MISCELLANEOUS MANUFACTURING
  - Ⓒ COAL STORAGE
  - Ⓓ RAIL TIE PILE
  - Ⓔ PCB STORAGE
  - Ⓕ KNOWN CONTAMINATION

TITLE:  
**PHASE ONE CONCEPTUAL SITE MODEL**

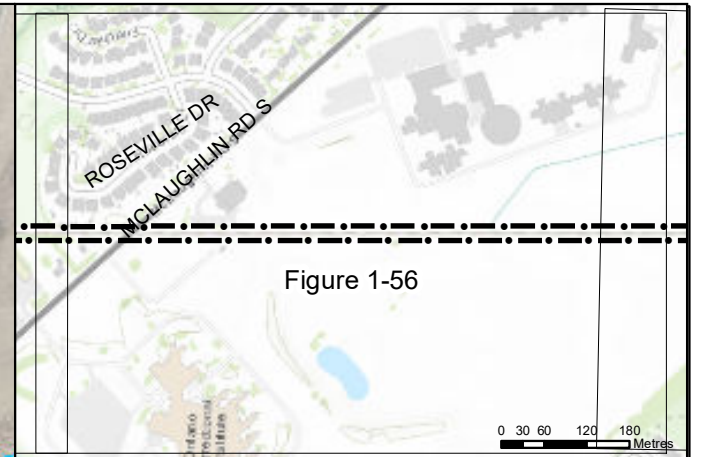
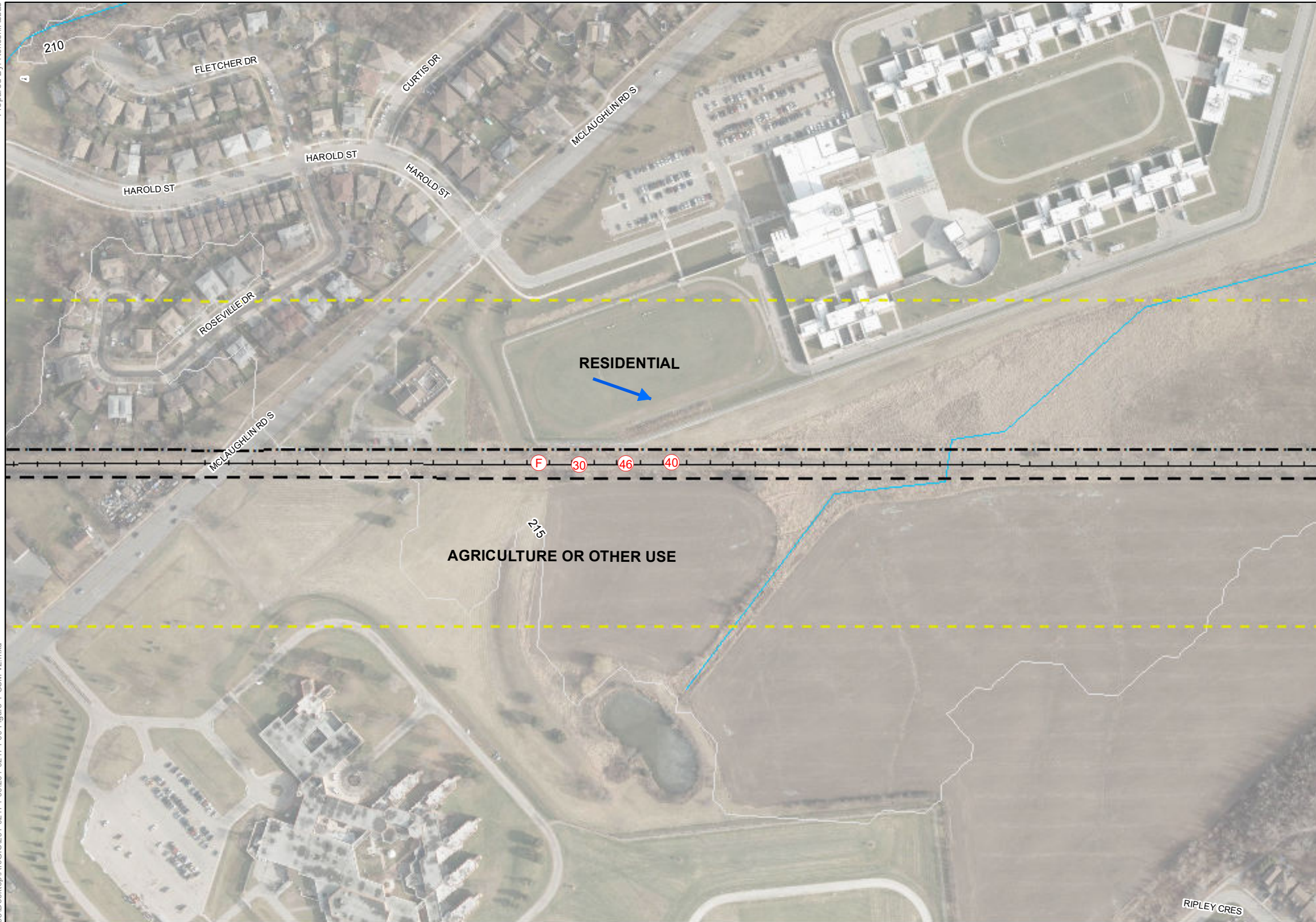
PROJECT:  
**CONTAMINANT OVERVIEW STUDY  
FORMER ORANGEVILLE RAIL,  
MISSISSAUGA, ONTARIO**

CLIENT:  
**REGION OF PEEL**

	PROJECT NO.:	REVIEWED BY:
	201-02174-00	MB
DATE:	FIGURE:	
MAY 2020	1-55	

- DATA SOURCE:**
- LEGEND:**
- 100m STUDY AREA
  - SUBJECT SITE
  - ANSI
  - INFERRED GROUNDWATER FLOW DIRECTION
  - 1m TOPOGRAPHIC CONTOUR
  - RAIL
  - Rivers
  - MECP WATER WELL
  - TANK NOT CONTRIBUTING TO APEC
  - TANK CONTRIBUTING TO APEC
  - PCA CONTRIBUTING TO APEC
  - PCA NOT CONTRIBUTING TO APEC





- POTENTIALLY CONTAMINATING ACTIVITIES (PCAS):**
- ③ AIRSTRIPS AND HANGARS OPERATION
  - ⑤ ASPHALT AND BITUMEN MANUFACTURING
  - ⑧ CHEMICAL MANUFACTURING, PROCESSING AND BULK STORAGE
  - ⑩ COMMERCIAL AUTOBODY SHOPS
  - ⑫ CONCRETE, CEMENT AND LIME MANUFACTURING
  - ⑭ CRUDE OIL REFINING, PROCESSING AND BULK STORAGE
  - ⑲ ELECTRONIC AND COMPUTER EQUIPMENT MANUFACTURING
  - ⑳ GASOLINE AND ASSOCIATED PRODUCTS STORAGE IN FIXED TANKS
  - ㉑ IMPORTATION OF FILL MATERIAL OF UNKNOWN QUALITY
  - ㉒ INK MANUFACTURING, PROCESSING AND BULK STORAGE
  - ㉓ IRON AND STEEL MANUFACTURING AND PROCESSING
  - ㉔ METAL TREATMENT, COATING, PLATING AND FINISHING
  - ㉕ METAL FABRICATION
  - ㉖ MINING, SMELTING AND REFINING; ORE PROCESSING; TAILINGS STORAGE
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  - ㉘ PAINTS MANUFACTURING, PROCESSING AND BULK STORAGE
  - ㉙ PESTICIDES (INCLUDING HERBICIDES, FUNGICIDES AND ANTI-FOULING AGENTS) MANUFACTURING, PROCESSING, BULK STORAGE AND LARGE-SCALE APPLICATIONS
  - ㉚ PLASTICS (INCLUDING FIBREGLASS) MANUFACTURING AND PROCESSING
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  - ㉜ RAIL YARDS, TRACKS AND SPURS
  - ㉝ RUBBER MANUFACTURING AND PROCESSING
  - ㉞ SOAP AND DETERGENT MANUFACTURING, PROCESSING AND BULK STORAGE
  - ㉟ SOLVENT MANUFACTURING, PROCESSING AND BULK STORAGE
  - ㊱ TANNERY
  - ㊲ TEXTILE MANUFACTURING AND PROCESSING
  - ㊳ VEHICLES AND ASSOCIATED PARTS MANUFACTURING
  - ㊴ WASTE DISPOSAL AND WASTE MANAGEMENT INCLUDING THERMAL TREATMENT, LANDFILLING AND TRANSFER OF WASTE, OTHER THAN USE OF BIOSOILS AS SOIL CONDITIONERS
  - ㊵ WOOD TREATING AND PRESERVATIVE FACILITY AND BULK STORAGE OF TREATED AND PRESERVED WOOD PRODUCTS
  - Ⓐ SPILLS
  - Ⓑ MISCELLANEOUS MANUFACTURING
  - Ⓒ COAL STORAGE
  - Ⓓ RAIL TIE PILE
  - Ⓔ PCB STORAGE
  - Ⓕ KNOWN CONTAMINATION

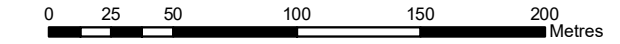
TITLE:  
**PHASE ONE CONCEPTUAL SITE MODEL**

PROJECT:  
**CONTAMINANT OVERVIEW STUDY  
FORMER ORANGEVILLE RAIL,  
MISSISSAUGA, ONTARIO**

CLIENT:  
**REGION OF PEEL**

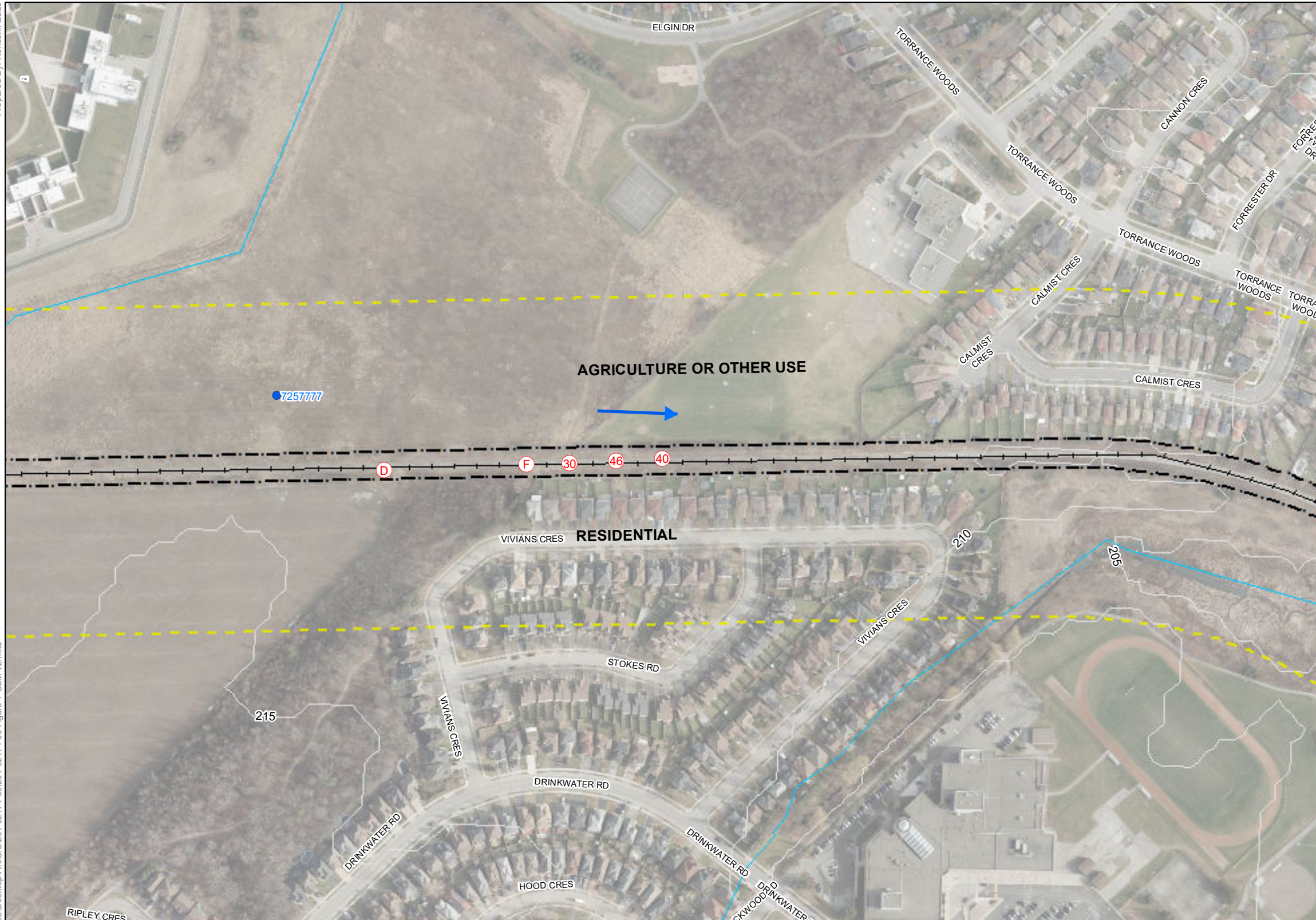
DATA SOURCE:

- LEGEND:**
- 100m STUDY AREA
  - SUBJECT SITE
  - ANSI
  - INFERRED GROUNDWATER FLOW DIRECTION
  - 1m TOPOGRAPHIC CONTOUR
  - RAIL
  - Rivers
  - MECP WATER WELL
  - TANK NOT CONTRIBUTING TO APEC
  - TANK CONTRIBUTING TO APEC
  - PCA CONTRIBUTING TO APEC
  - PCA NOT CONTRIBUTING TO APEC



	PROJECT NO.:	201-02174-00	REVIEWED BY:	MB
	DATE:	MAY 2020	FIGURE:	1-56





- POTENTIALLY CONTAMINATING ACTIVITIES (PCAS):**
- ③ AIRSTRIPS AND HANGARS OPERATION
  - ④ ASPHALT AND BITUMEN MANUFACTURING
  - ⑧ CHEMICAL MANUFACTURING, PROCESSING AND BULK STORAGE
  - ⑩ COMMERCIAL AUTOBODY SHOPS
  - ⑫ CONCRETE, CEMENT AND LIME MANUFACTURING
  - ⑭ CRUDE OIL REFINING, PROCESSING AND BULK STORAGE
  - ⑲ ELECTRONIC AND COMPUTER EQUIPMENT MANUFACTURING
  - ⑳ GASOLINE AND ASSOCIATED PRODUCTS STORAGE IN FIXED TANKS
  - ㉑ IMPORTATION OF FILL MATERIAL OF UNKNOWN QUALITY
  - ㉒ INK MANUFACTURING, PROCESSING AND BULK STORAGE
  - ㉓ IRON AND STEEL MANUFACTURING AND PROCESSING
  - ㉔ METAL TREATMENT, COATING, PLATING AND FINISHING
  - ㉕ METAL FABRICATION
  - ㉖ MINING, SMELTING AND REFINING; ORE PROCESSING; TAILINGS STORAGE
  - ㉗ OPERATION OF DRY CLEANING EQUIPMENT (WHERE CHEMICALS ARE USED)
  - ㉘ PAINTS MANUFACTURING, PROCESSING AND BULK STORAGE
  - ㉙ PESTICIDES (INCLUDING HERBICIDES, FUNGICIDES AND ANTI-FOULING AGENTS) MANUFACTURING, PROCESSING, BULK STORAGE AND LARGE-SCALE APPLICATIONS
  - ㉚ PLASTICS (INCLUDING FIBREGLASS) MANUFACTURING AND PROCESSING
  - ㉛ PULP, PAPER AND PAPERBOARD MANUFACTURING AND PROCESSING
  - ㉜ RAIL YARDS, TRACKS AND SPURS
  - ㉝ RUBBER MANUFACTURING AND PROCESSING
  - ㉞ SOAP AND DETERGENT MANUFACTURING, PROCESSING AND BULK STORAGE
  - ㉟ SOLVENT MANUFACTURING, PROCESSING AND BULK STORAGE
  - ㊱ TANNERY
  - ㊲ TEXTILE MANUFACTURING AND PROCESSING
  - ㊳ VEHICLES AND ASSOCIATED PARTS MANUFACTURING
  - ㊴ WASTE DISPOSAL AND WASTE MANAGEMENT, INCLUDING THERMAL TREATMENT, LANDFILLING AND TRANSFER OF WASTE, OTHER THAN USE OF BIOSOILS AS SOIL CONDITIONERS
  - ㊵ WOOD TREATING AND PRESERVATIVE FACILITY AND BULK STORAGE OF TREATED AND PRESERVED WOOD PRODUCTS
  - Ⓐ SPILLS
  - Ⓑ MISCELLANEOUS MANUFACTURING
  - Ⓒ COAL STORAGE
  - Ⓓ RAIL TIE PILE
  - Ⓔ PCB STORAGE
  - Ⓕ KNOWN CONTAMINATION

TITLE:  
**PHASE ONE CONCEPTUAL SITE MODEL**

PROJECT:  
**CONTAMINANT OVERVIEW STUDY  
FORMER ORANGEVILLE RAIL,  
MISSISSAUGA, ONTARIO**

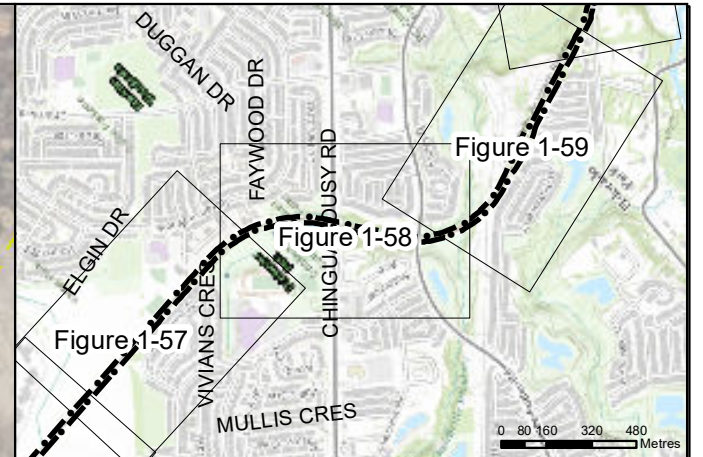
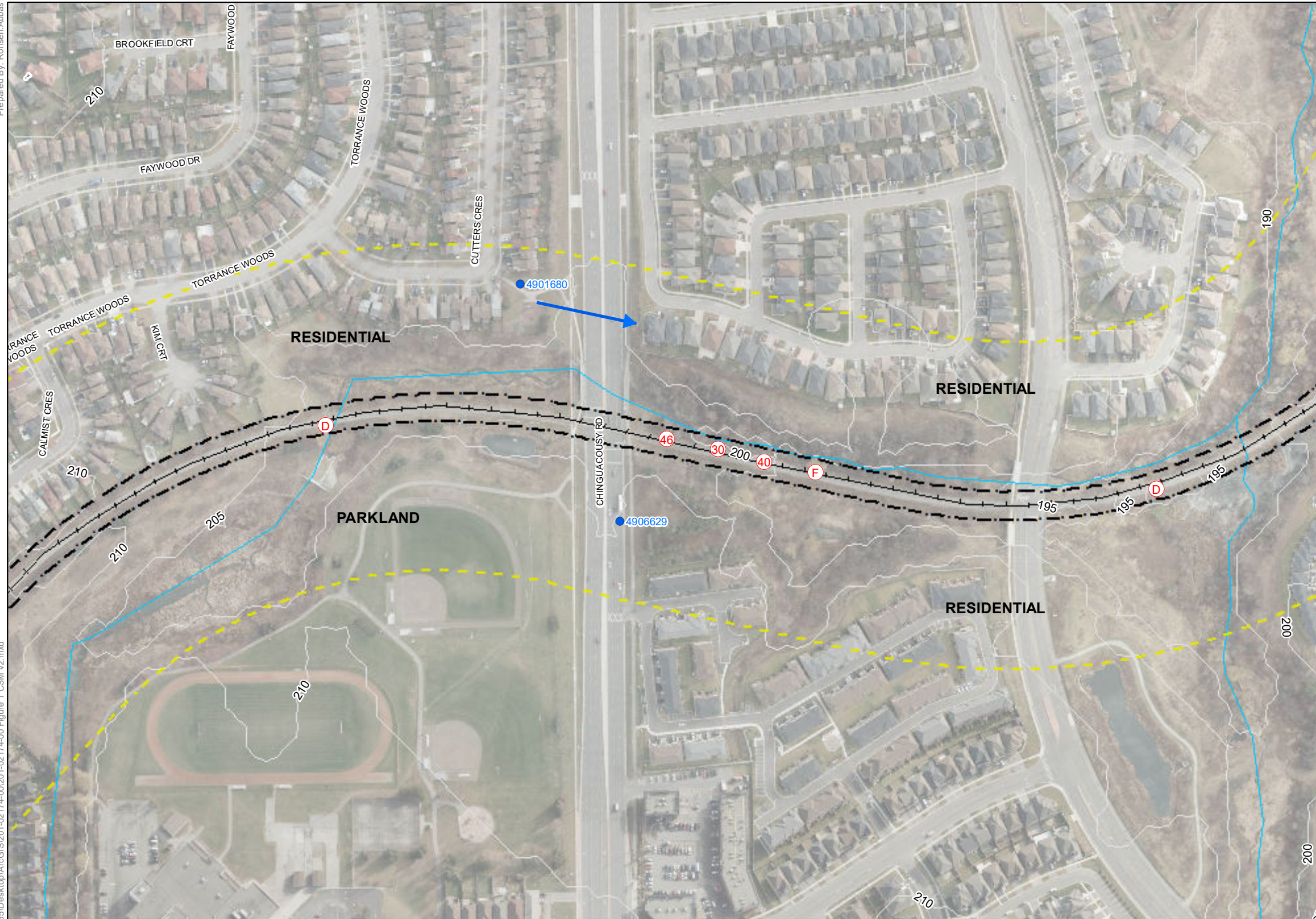
CLIENT:  
**REGION OF PEEL**

	PROJECT NO.:	201-02174-00	REVIEWED BY:	MB
	DATE:	MAY 2020	FIGURE:	1-57

DATA SOURCE:

- LEGEND:**
- 100m STUDY AREA
  - SUBJECT SITE
  - ANSI
  - INFERRED GROUNDWATER FLOW DIRECTION
  - 1m TOPOGRAPHIC CONTOUR
  - RAIL
  - Rivers
  - MECP WATER WELL
  - TANK NOT CONTRIBUTING TO APEC
  - TANK CONTRIBUTING TO APEC
  - PCA CONTRIBUTING TO APEC
  - PCA NOT CONTRIBUTING TO APEC





- POTENTIALLY CONTAMINATING ACTIVITIES (PCAS):**
- ③ AIRSTRIPS AND HANGARS OPERATION
  - ④ ASPHALT AND BITUMEN MANUFACTURING
  - ⑧ CHEMICAL MANUFACTURING, PROCESSING AND BULK STORAGE
  - ⑩ COMMERCIAL AUTOBODY SHOPS
  - ⑫ CONCRETE, CEMENT AND LIME MANUFACTURING
  - ⑭ CRUDE OIL REFINING, PROCESSING AND BULK STORAGE
  - ⑲ ELECTRONIC AND COMPUTER EQUIPMENT MANUFACTURING
  - ⑳ GASOLINE AND ASSOCIATED PRODUCTS STORAGE IN FIXED TANKS
  - ㉑ IMPORTATION OF FILL MATERIAL OF UNKNOWN QUALITY
  - ㉒ INK MANUFACTURING, PROCESSING AND BULK STORAGE
  - ㉓ IRON AND STEEL MANUFACTURING AND PROCESSING
  - ㉔ METAL TREATMENT, COATING, PLATING AND FINISHING
  - ㉕ METAL FABRICATION
  - ㉖ MINING, SMELTING AND REFINING; ORE PROCESSING; TAILINGS STORAGE
  - ㉗ OPERATION OF DRY CLEANING EQUIPMENT (WHERE CHEMICALS ARE USED)
  - ㉘ PAINTS MANUFACTURING, PROCESSING AND BULK STORAGE
  - ㉙ PESTICIDES (INCLUDING HERBICIDES, FUNGICIDES AND ANTI-FOULING AGENTS) MANUFACTURING, PROCESSING, BULK STORAGE AND LARGE-SCALE APPLICATIONS
  - ㉚ PLASTICS (INCLUDING FIBREGLASS) MANUFACTURING AND PROCESSING
  - ㉛ PULP, PAPER AND PAPERBOARD MANUFACTURING AND PROCESSING
  - ㉜ RAIL YARDS, TRACKS AND SPURS
  - ㉝ RUBBER MANUFACTURING AND PROCESSING
  - ㉞ SOAP AND DETERGENT MANUFACTURING, PROCESSING AND BULK STORAGE
  - ㉟ SOLVENT MANUFACTURING, PROCESSING AND BULK STORAGE
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  - ㊴ WASTE DISPOSAL AND WASTE MANAGEMENT, INCLUDING THERMAL TREATMENT, LANDFILLING AND TRANSFER OF WASTE, OTHER THAN USE OF BIOSOILS AS SOIL CONDITIONERS
  - ㊵ WOOD TREATING AND PRESERVATIVE FACILITY AND BULK STORAGE OF TREATED AND PRESERVED WOOD PRODUCTS
  - A SPILLS
  - B MISCELLANEOUS MANUFACTURING
  - C COAL STORAGE
  - D RAIL TIE PILE
  - E PCB STORAGE
  - F KNOWN CONTAMINATION

TITLE:  
**PHASE ONE CONCEPTUAL SITE MODEL**

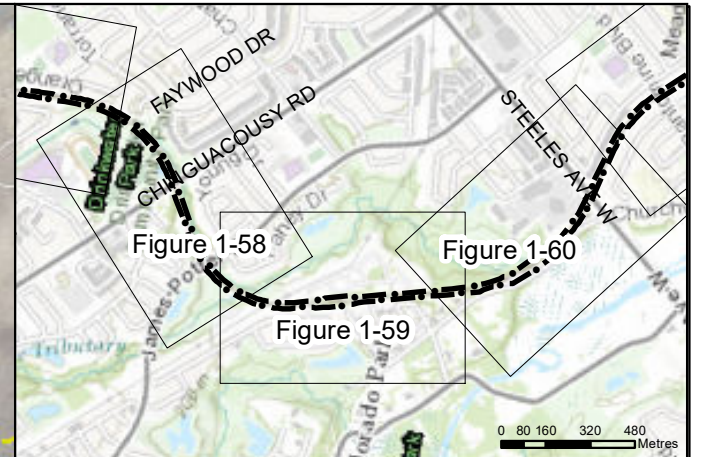
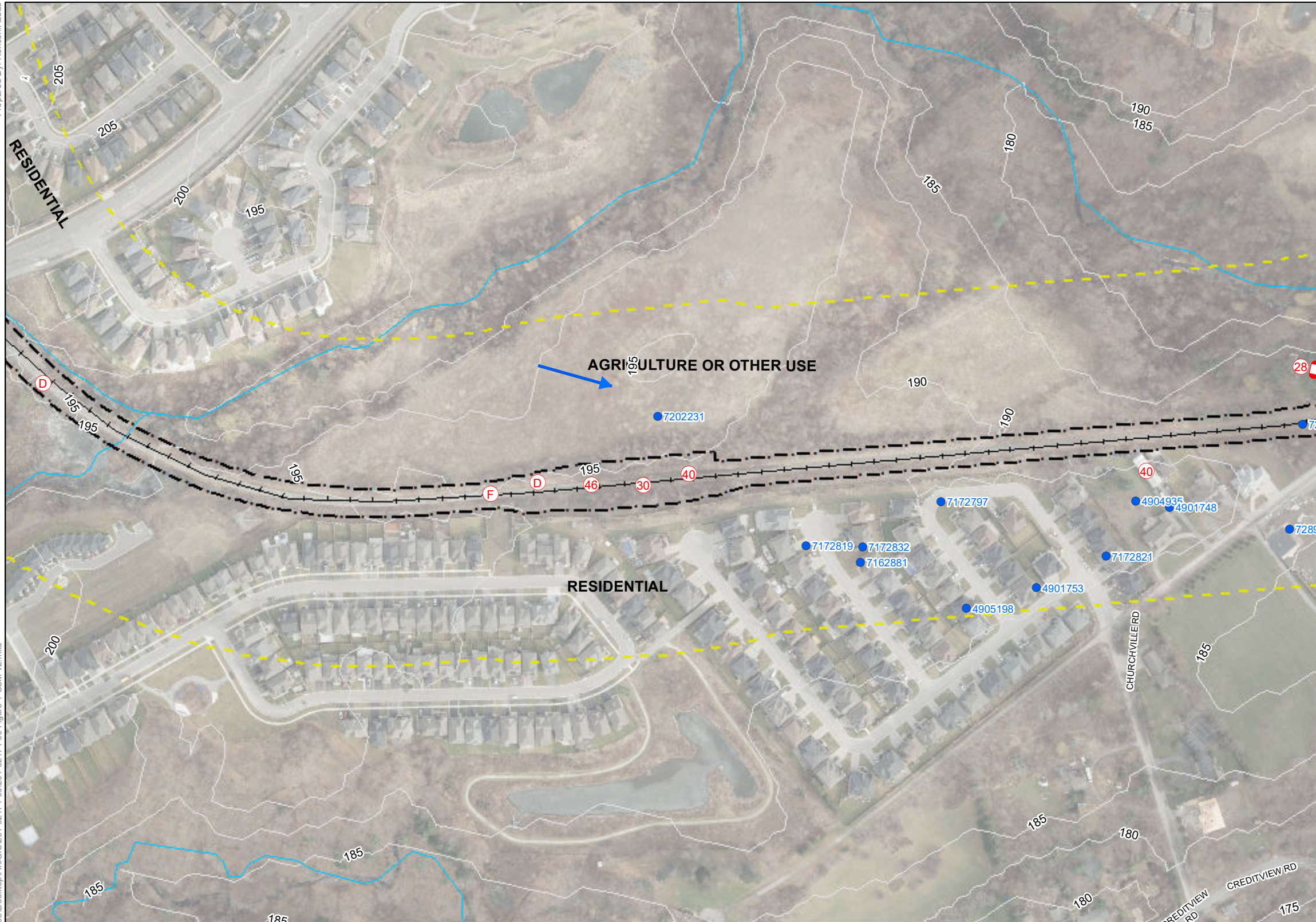
PROJECT:  
**CONTAMINANT OVERVIEW STUDY  
FORMER ORANGEVILLE RAIL,  
MISSISSAUGA, ONTARIO**

CLIENT:  
**REGION OF PEEL**

	PROJECT NO.:	REVIEWED BY:
	201-02174-00	MB
DATE:	FIGURE:	
MAY 2020	1-58	

- DATA SOURCE:**
- LEGEND:**
- 100m STUDY AREA
  - SUBJECT SITE
  - ANSI
  - INFERRED GROUNDWATER FLOW DIRECTION
  - 1m TOPOGRAPHIC CONTOUR
  - RAIL
  - Rivers
  - MECP WATER WELL
  - TANK NOT CONTRIBUTING TO APEC
  - TANK CONTRIBUTING TO APEC
  - PCA CONTRIBUTING TO APEC
  - PCA NOT CONTRIBUTING TO APEC





- POTENTIALLY CONTAMINATING ACTIVITIES (PCAS):**
- ③ AIRSTRIPS AND HANGARS OPERATION
  - ⑤ ASPHALT AND BITUMEN MANUFACTURING
  - ⑧ CHEMICAL MANUFACTURING, PROCESSING AND BULK STORAGE
  - ⑩ COMMERCIAL AUTOBODY SHOPS
  - ⑫ CONCRETE, CEMENT AND LIME MANUFACTURING
  - ⑭ CRUDE OIL REFINING, PROCESSING AND BULK STORAGE
  - ⑰ ELECTRONIC AND COMPUTER EQUIPMENT MANUFACTURING
  - ⑲ GASOLINE AND ASSOCIATED PRODUCTS STORAGE IN FIXED TANKS
  - ⑳ IMPORTATION OF FILL MATERIAL OF UNKNOWN QUALITY
  - ㉑ INK MANUFACTURING, PROCESSING AND BULK STORAGE
  - ㉒ IRON AND STEEL MANUFACTURING AND PROCESSING
  - ㉓ METAL TREATMENT, COATING, PLATING AND FINISHING
  - ㉔ METAL FABRICATION
  - ㉕ MINING, SMELTING AND REFINING; ORE PROCESSING; TAILINGS STORAGE
  - ㉖ OPERATION OF DRY CLEANING EQUIPMENT (WHERE CHEMICALS ARE USED)
  - ㉗ PAINTS MANUFACTURING, PROCESSING AND BULK STORAGE
  - ㉘ PESTICIDES (INCLUDING HERBICIDES, FUNGICIDES AND ANTI-FOULING AGENTS) MANUFACTURING, PROCESSING, BULK STORAGE AND LARGE-SCALE APPLICATIONS
  - ㉙ PLASTICS (INCLUDING FIBREGLASS) MANUFACTURING AND PROCESSING
  - ㉚ PULP, PAPER AND PAPERBOARD MANUFACTURING AND PROCESSING
  - ㉛ RAIL YARDS, TRACKS AND SPURS
  - ㉜ RUBBER MANUFACTURING AND PROCESSING
  - ㉝ SOAP AND DETERGENT MANUFACTURING, PROCESSING AND BULK STORAGE
  - ㉞ SOLVENT MANUFACTURING, PROCESSING AND BULK STORAGE
  - ㉟ TANNERY
  - ㊱ TEXTILE MANUFACTURING AND PROCESSING
  - ㊲ VEHICLES AND ASSOCIATED PARTS MANUFACTURING
  - ㊳ WASTE DISPOSAL AND WASTE MANAGEMENT INCLUDING THERMAL TREATMENT, LANDFILLING AND TRANSFER OF WASTE, OTHER THAN USE OF BIOSOILS AS SOIL CONDITIONERS
  - ㊴ WOOD TREATING AND PRESERVATIVE FACILITY AND BULK STORAGE OF TREATED AND PRESERVED WOOD PRODUCTS
  - A SPILLS
  - B MISCELLANEOUS MANUFACTURING
  - C COAL STORAGE
  - D RAIL TIE PILE
  - E PCB STORAGE
  - F KNOWN CONTAMINATION

TITLE:  
**PHASE ONE CONCEPTUAL SITE MODEL**

PROJECT:  
**CONTAMINANT OVERVIEW STUDY  
FORMER ORANGEVILLE RAIL,  
MISSISSAUGA, ONTARIO**

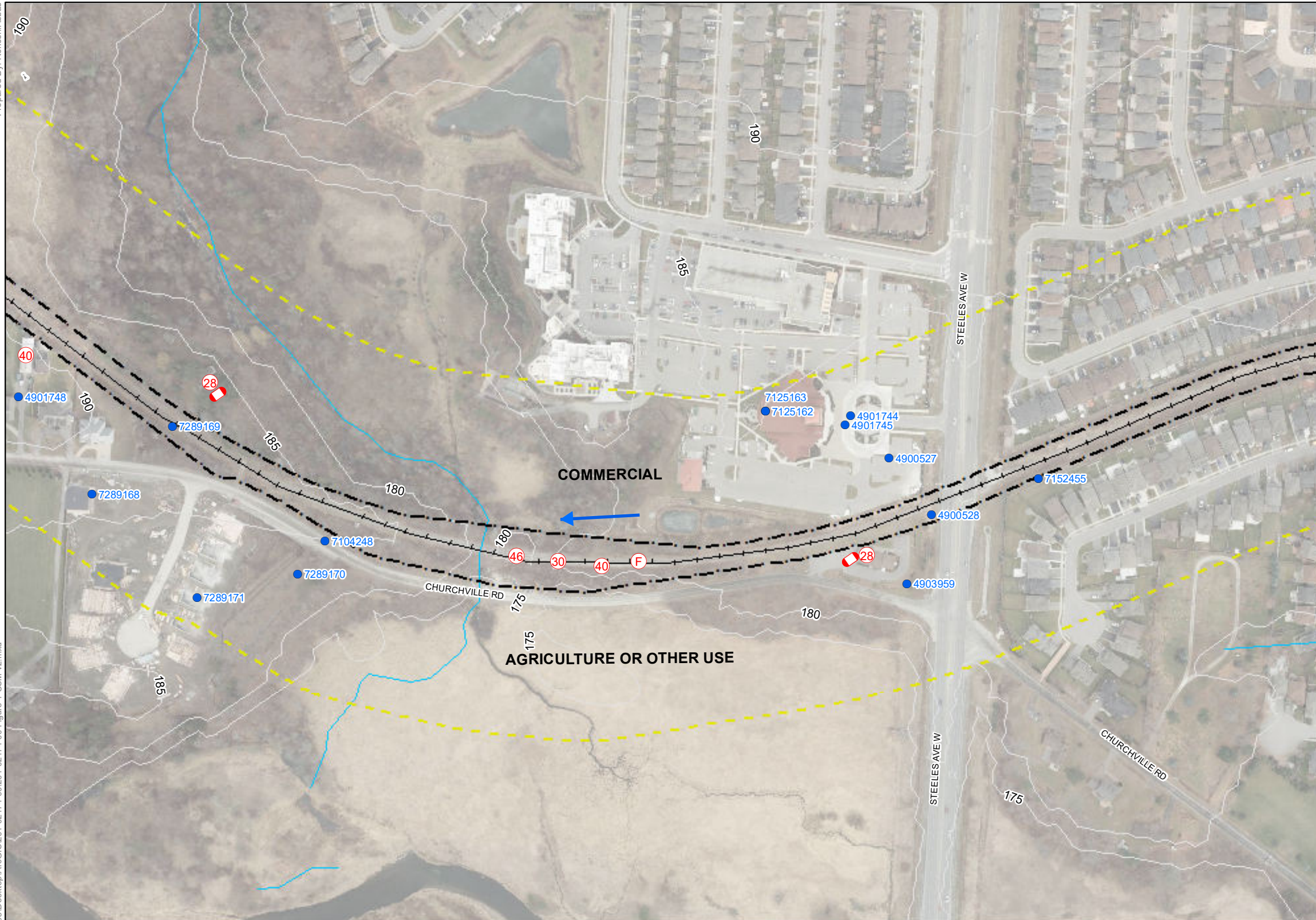
CLIENT:  
**REGION OF PEEL**

DATA SOURCE: 0 25 50 100 150 200 Metres

LEGEND:			
	100m STUDY AREA		RAIL
	SUBJECT SITE		Rivers
	ANSI		MECP WATER WELL
	INFERRED GROUNDWATER FLOW DIRECTION		TANK NOT CONTRIBUTING TO APEC
	1m TOPOGRAPHIC CONTOUR		TANK CONTRIBUTING TO APEC
			PCA CONTRIBUTING TO APEC
			PCA NOT CONTRIBUTING TO APEC

	PROJECT NO.:	201-02174-00	REVIEWED BY:	MB
	DATE:	MAY 2020	FIGURE:	1-59





- POTENTIALLY CONTAMINATING ACTIVITIES (PCAS):**
- ③ AIRSTRIPS AND HANGARS OPERATION
  - ⑤ ASPHALT AND BITUMEN MANUFACTURING
  - ⑧ CHEMICAL MANUFACTURING, PROCESSING AND BULK STORAGE
  - ⑩ COMMERCIAL AUTOBODY SHOPS
  - ⑫ CONCRETE, CEMENT AND LIME MANUFACTURING
  - ⑭ CRUDE OIL REFINING, PROCESSING AND BULK STORAGE
  - ⑰ ELECTRONIC AND COMPUTER EQUIPMENT MANUFACTURING
  - ⑲ GASOLINE AND ASSOCIATED PRODUCTS STORAGE IN FIXED TANKS
  - ⑳ IMPORTATION OF FILL MATERIAL OF UNKNOWN QUALITY
  - ㉑ INK MANUFACTURING, PROCESSING AND BULK STORAGE
  - ㉒ IRON AND STEEL MANUFACTURING AND PROCESSING
  - ㉓ METAL TREATMENT, COATING, PLATING AND FINISHING
  - ㉔ METAL FABRICATION
  - ㉕ MINING, SMELTING AND REFINING; ORE PROCESSING; TAILINGS STORAGE
  - ㉖ OPERATION OF DRY CLEANING EQUIPMENT (WHERE CHEMICALS ARE USED)
  - ㉗ PAINTS MANUFACTURING, PROCESSING AND BULK STORAGE
  - ㉘ PESTICIDES (INCLUDING HERBICIDES, FUNGICIDES AND ANTI-FOULING AGENTS) MANUFACTURING, PROCESSING, BULK STORAGE AND LARGE-SCALE APPLICATIONS
  - ㉙ PLASTICS (INCLUDING FIBREGLASS) MANUFACTURING AND PROCESSING
  - ㉚ PULP, PAPER AND PAPERBOARD MANUFACTURING AND PROCESSING
  - ㉛ RAIL YARDS, TRACKS AND SPURS
  - ㉜ RUBBER MANUFACTURING AND PROCESSING
  - ㉝ SOAP AND DETERGENT MANUFACTURING, PROCESSING AND BULK STORAGE
  - ㉞ SOLVENT MANUFACTURING, PROCESSING AND BULK STORAGE
  - ㉟ TANNERY
  - ㊱ TEXTILE MANUFACTURING AND PROCESSING
  - ㊲ VEHICLES AND ASSOCIATED PARTS MANUFACTURING
  - ㊳ WASTE DISPOSAL AND WASTE MANAGEMENT, INCLUDING THERMAL TREATMENT, LANDFILLING AND TRANSFER OF WASTE, OTHER THAN USE OF BIOSOILS AS SOIL CONDITIONERS
  - ㊴ WOOD TREATING AND PRESERVATIVE FACILITY AND BULK STORAGE OF TREATED AND PRESERVED WOOD PRODUCTS
  - Ⓐ SPILLS
  - Ⓑ MISCELLANEOUS MANUFACTURING
  - Ⓒ COAL STORAGE
  - Ⓓ RAIL TIE PILE
  - Ⓔ PCB STORAGE
  - Ⓕ KNOWN CONTAMINATION

TITLE:  
**PHASE ONE CONCEPTUAL SITE MODEL**

PROJECT:  
**CONTAMINANT OVERVIEW STUDY  
FORMER ORANGEVILLE RAIL,  
MISSISSAUGA, ONTARIO**

CLIENT:  
**REGION OF PEEL**

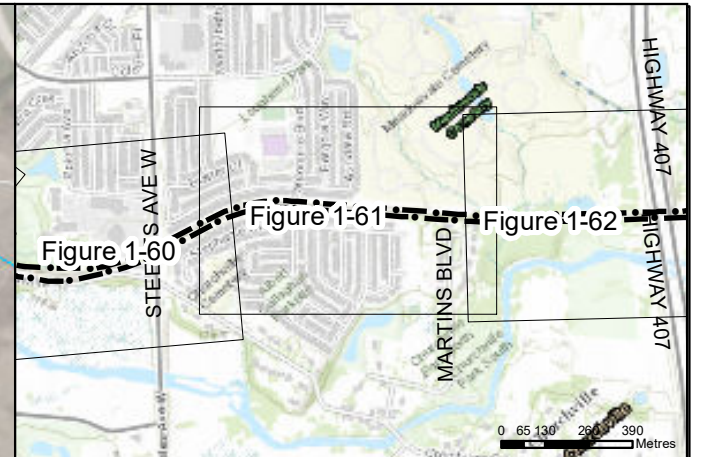
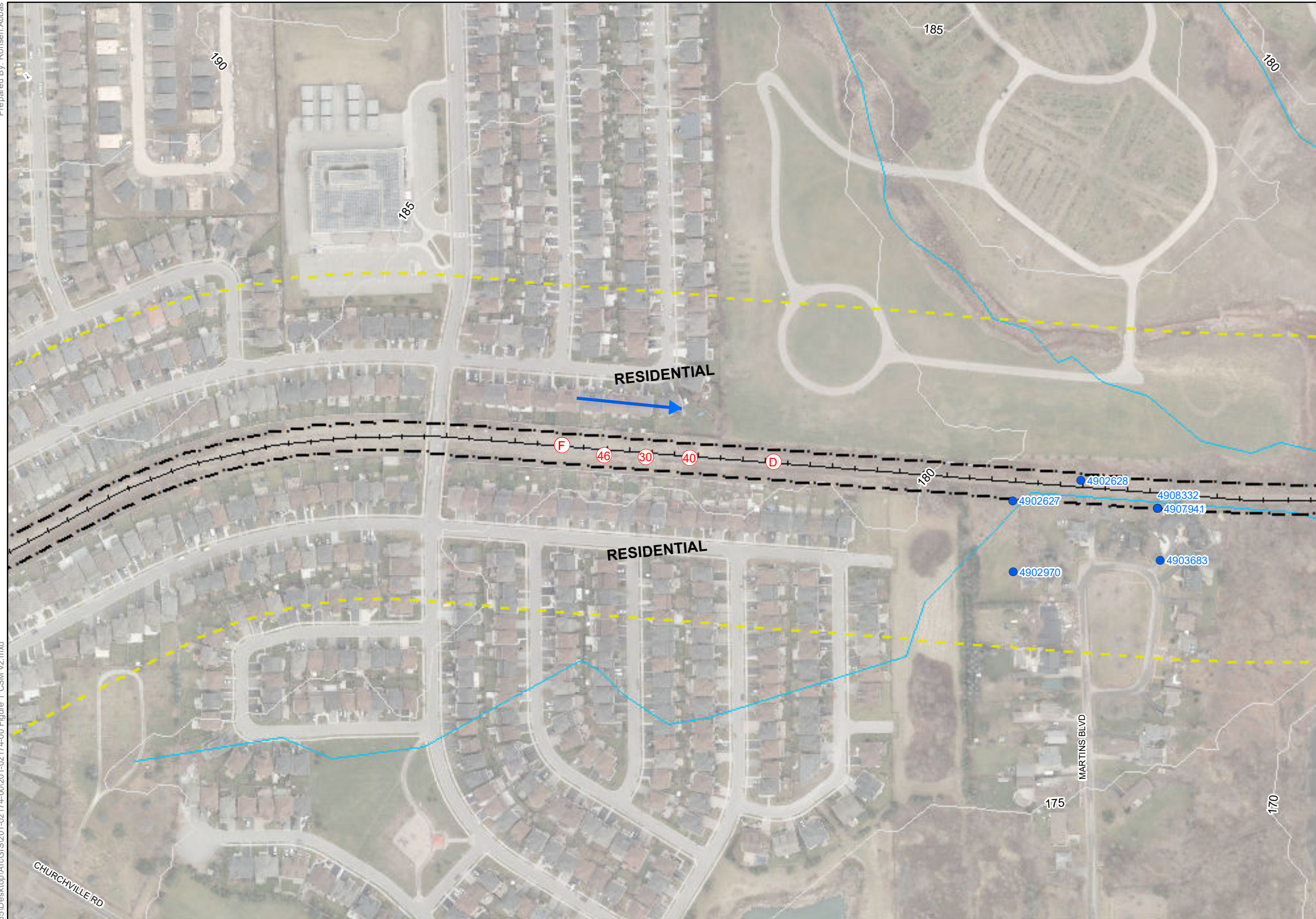
	PROJECT NO.:	201-02174-00	REVIEWED BY:	MB
	DATE:	MAY 2020	FIGURE:	1-60

DATA SOURCE:

**LEGEND:**

100m STUDY AREA	RAIL	PCA CONTRIBUTING TO APEC
SUBJECT SITE	Rivers	PCA NOT CONTRIBUTING TO APEC
ANSI	MECP WATER WELL	PCA NOT CONTRIBUTING TO APEC
INFERRED GROUNDWATER FLOW DIRECTION	TANK NOT CONTRIBUTING TO APEC	
1m TOPOGRAPHIC CONTOUR	TANK CONTRIBUTING TO APEC	





POTENTIALLY CONTAMINATING ACTIVITIES (PCAS):

- ③ AIRSTRIPS AND HANGARS OPERATION
- ⑤ ASPHALT AND BITUMEN MANUFACTURING
- ⑧ CHEMICAL MANUFACTURING, PROCESSING AND BULK STORAGE
- ⑩ COMMERCIAL AUTOBODY SHOPS
- ⑫ CONCRETE, CEMENT AND LIME MANUFACTURING
- ⑭ CRUDE OIL REFINING, PROCESSING AND BULK STORAGE
- ⑲ ELECTRONIC AND COMPUTER EQUIPMENT MANUFACTURING
- ⑳ GASOLINE AND ASSOCIATED PRODUCTS STORAGE IN FIXED TANKS
- ㉑ IMPORTATION OF FILL MATERIAL OF UNKNOWN QUALITY
- ㉒ INK MANUFACTURING, PROCESSING AND BULK STORAGE
- ㉓ IRON AND STEEL MANUFACTURING AND PROCESSING
- ㉔ METAL TREATMENT, COATING, PLATING AND FINISHING
- ㉕ METAL FABRICATION
- ㉖ MINING, SMELTING AND REFINING; ORE PROCESSING; TAILINGS STORAGE
- ㉗ OPERATION OF DRY CLEANING EQUIPMENT (WHERE CHEMICALS ARE USED)
- ㉘ PAINTS MANUFACTURING, PROCESSING AND BULK STORAGE
- ㉙ PESTICIDES (INCLUDING HERBICIDES, FUNGICIDES AND ANTI-FOULING AGENTS) MANUFACTURING, PROCESSING, BULK STORAGE AND LARGE-SCALE APPLICATIONS
- ㉚ PLASTICS (INCLUDING FIBREGLASS) MANUFACTURING AND PROCESSING
- ㉛ PULP, PAPER AND PAPERBOARD MANUFACTURING AND PROCESSING
- ㉜ RAIL YARDS, TRACKS AND SPURS
- ㉝ RUBBER MANUFACTURING AND PROCESSING
- ㉞ SOAP AND DETERGENT MANUFACTURING, PROCESSING AND BULK STORAGE
- ㉟ SOLVENT MANUFACTURING, PROCESSING AND BULK STORAGE
- ㊱ TANNERY
- ㊲ TEXTILE MANUFACTURING AND PROCESSING
- ㊳ VEHICLES AND ASSOCIATED PARTS MANUFACTURING
- ㊴ WASTE DISPOSAL AND WASTE MANAGEMENT, INCLUDING THERMAL TREATMENT, LANDFILLING AND TRANSFER OF WASTE, OTHER THAN USE OF BIOSOILS AS SOIL CONDITIONERS
- ㊵ WOOD TREATING AND PRESERVATIVE FACILITY AND BULK STORAGE OF TREATED AND PRESERVED WOOD PRODUCTS
- Ⓐ SPILLS
- Ⓑ MISCELLANEOUS MANUFACTURING
- Ⓒ COAL STORAGE
- Ⓓ RAIL TIE PILE
- Ⓔ PCB STORAGE
- Ⓕ KNOWN CONTAMINATION

TITLE:  
**PHASE ONE CONCEPTUAL SITE MODEL**

PROJECT:  
**CONTAMINANT OVERVIEW STUDY  
FORMER ORANGEVILLE RAIL,  
MISSISSAUGA, ONTARIO**

CLIENT:  
**REGION OF PEEL**

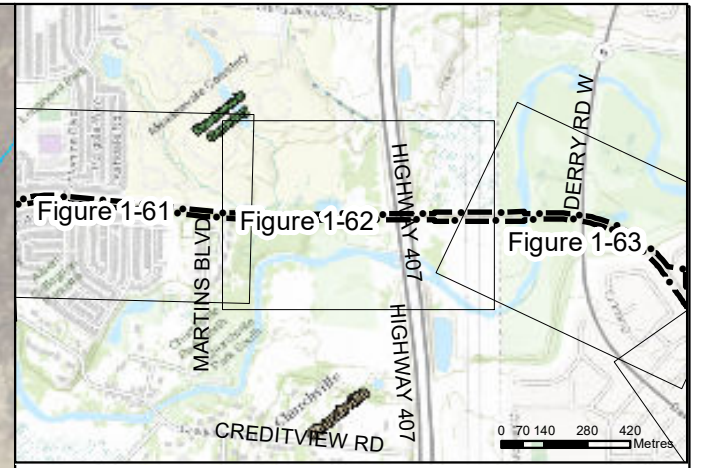
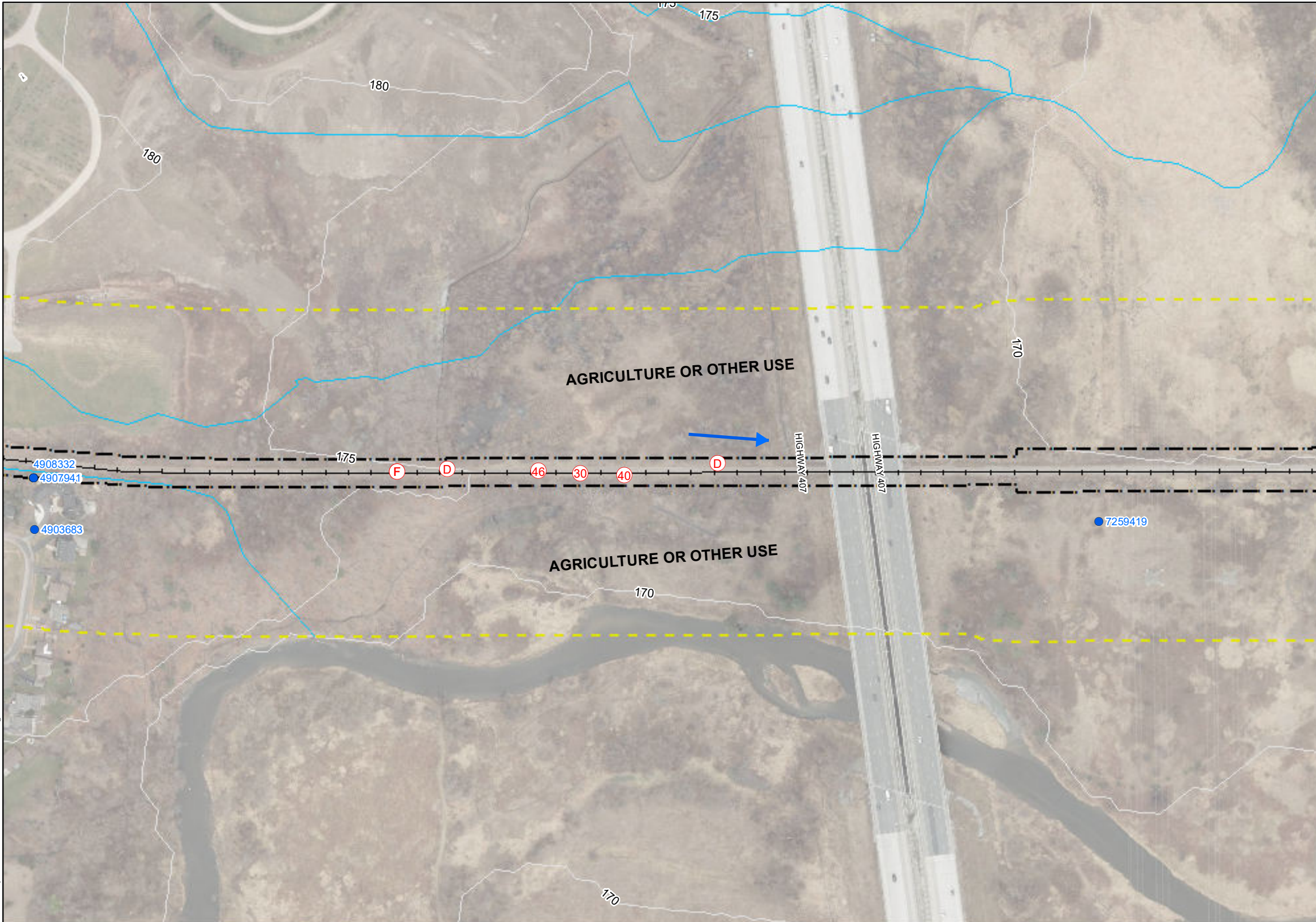
	PROJECT NO.:	201-02174-00	REVIEWED BY:	MB
	DATE:	MAY 2020	FIGURE:	1-61

DATA SOURCE:

<p><b>LEGEND:</b></p> <ul style="list-style-type: none"> <li> 100m STUDY AREA</li> <li> SUBJECT SITE</li> <li> ANSI</li> <li> INFERRED GROUNDWATER FLOW DIRECTION</li> <li> 1m TOPOGRAPHIC CONTOUR</li> </ul>	<ul style="list-style-type: none"> <li> RAIL</li> <li> Rivers</li> <li> MECP WATER WELL</li> <li> TANK NOT CONTRIBUTING TO APEC</li> <li> TANK CONTRIBUTING TO APEC</li> </ul>	<ul style="list-style-type: none"> <li> PCA CONTRIBUTING TO APEC</li> <li> PCA NOT CONTRIBUTING TO APEC</li> </ul>
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0 25 50 100 150 200 Metres





- POTENTIALLY CONTAMINATING ACTIVITIES (PCAS):**
- ③ AIRSTRIPS AND HANGARS OPERATION
  - ④ ASPHALT AND BITUMEN MANUFACTURING
  - ⑧ CHEMICAL MANUFACTURING, PROCESSING AND BULK STORAGE
  - ⑩ COMMERCIAL AUTOBODY SHOPS
  - ⑫ CONCRETE, CEMENT AND LIME MANUFACTURING
  - ⑭ CRUDE OIL REFINING, PROCESSING AND BULK STORAGE
  - ⑰ ELECTRONIC AND COMPUTER EQUIPMENT MANUFACTURING
  - ⑲ GASOLINE AND ASSOCIATED PRODUCTS STORAGE IN FIXED TANKS
  - ⑳ IMPORTATION OF FILL MATERIAL OF UNKNOWN QUALITY
  - ㉑ INK MANUFACTURING, PROCESSING AND BULK STORAGE
  - ㉒ IRON AND STEEL MANUFACTURING AND PROCESSING
  - ㉓ METAL TREATMENT, COATING, PLATING AND FINISHING
  - ㉔ METAL FABRICATION
  - ㉕ MINING, SMELTING AND REFINING; ORE PROCESSING; TAILINGS STORAGE
  - ㉖ OPERATION OF DRY CLEANING EQUIPMENT (WHERE CHEMICALS ARE USED)
  - ㉗ PAINTS MANUFACTURING, PROCESSING AND BULK STORAGE
  - ㉘ PESTICIDES (INCLUDING HERBICIDES, FUNGICIDES AND ANTI-FOULING AGENTS) MANUFACTURING, PROCESSING, BULK STORAGE AND LARGE-SCALE APPLICATIONS
  - ㉙ PLASTICS (INCLUDING FIBREGLASS) MANUFACTURING AND PROCESSING
  - ㉚ PULP, PAPER AND PAPERBOARD MANUFACTURING AND PROCESSING
  - ㉛ RAIL YARDS, TRACKS AND SPURS
  - ㉜ RUBBER MANUFACTURING AND PROCESSING
  - ㉝ SOAP AND DETERGENT MANUFACTURING, PROCESSING AND BULK STORAGE
  - ㉞ SOLVENT MANUFACTURING, PROCESSING AND BULK STORAGE
  - ㉟ TANNERY
  - ㊱ TEXTILE MANUFACTURING AND PROCESSING
  - ㊲ VEHICLES AND ASSOCIATED PARTS MANUFACTURING
  - ㊳ WASTE DISPOSAL AND WASTE MANAGEMENT, INCLUDING THERMAL TREATMENT, LANDFILLING AND TRANSFER OF WASTE, OTHER THAN USE OF BIOSOILS AS SOIL CONDITIONERS
  - ㊴ WOOD TREATING AND PRESERVATIVE FACILITY AND BULK STORAGE OF TREATED AND PRESERVED WOOD PRODUCTS
  - Ⓐ SPILLS
  - Ⓑ MISCELLANEOUS MANUFACTURING
  - Ⓒ COAL STORAGE
  - Ⓓ RAIL TIE PILE
  - Ⓔ PCB STORAGE
  - Ⓕ KNOWN CONTAMINATION

TITLE:  
**PHASE ONE CONCEPTUAL SITE MODEL**

PROJECT:  
**CONTAMINANT OVERVIEW STUDY  
FORMER ORANGEVILLE RAIL,  
MISSISSAUGA, ONTARIO**

CLIENT:  
**REGION OF PEEL**

	PROJECT NO.:	201-02174-00	REVIEWED BY:	MB
	DATE:	MAY 2020	FIGURE:	1-62

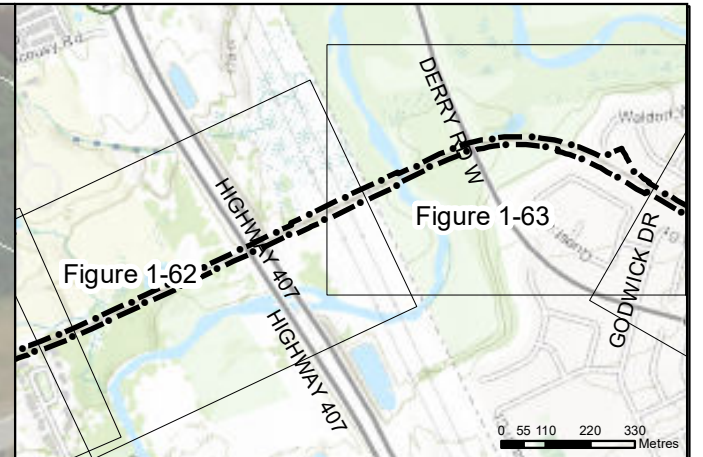
DATA SOURCE:

0 25 50 100 150 200 Metres

**LEGEND:**

100m STUDY AREA	RAIL	PCA CONTRIBUTING TO APEC
SUBJECT SITE	Rivers	PCA NOT CONTRIBUTING TO APEC
ANSI	MECP WATER WELL	TANK NOT CONTRIBUTING TO APEC
INFERRED GROUNDWATER FLOW DIRECTION	TANK CONTRIBUTING TO APEC	
1m TOPOGRAPHIC CONTOUR		





- POTENTIALLY CONTAMINATING ACTIVITIES (PCAS):**
- ③ AIRSTRIPS AND HANGARS OPERATION
  - ④ ASPHALT AND BITUMEN MANUFACTURING
  - ⑧ CHEMICAL MANUFACTURING, PROCESSING AND BULK STORAGE
  - ⑩ COMMERCIAL AUTOBODY SHOPS
  - ⑫ CONCRETE, CEMENT AND LIME MANUFACTURING
  - ⑭ CRUDE OIL REFINING, PROCESSING AND BULK STORAGE
  - ⑲ ELECTRONIC AND COMPUTER EQUIPMENT MANUFACTURING
  - ⑳ GASOLINE AND ASSOCIATED PRODUCTS STORAGE IN FIXED TANKS
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  - ㉒ INK MANUFACTURING, PROCESSING AND BULK STORAGE
  - ㉓ IRON AND STEEL MANUFACTURING AND PROCESSING
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  - ㉕ METAL FABRICATION
  - ㉖ MINING, SMELTING AND REFINING; ORE PROCESSING; TAILINGS STORAGE
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  - ㉘ PAINTS MANUFACTURING, PROCESSING AND BULK STORAGE
  - ㉙ PESTICIDES (INCLUDING HERBICIDES, FUNGICIDES AND ANTI-FOULING AGENTS) MANUFACTURING, PROCESSING, BULK STORAGE AND LARGE-SCALE APPLICATIONS
  - ㉚ PLASTICS (INCLUDING FIBREGLASS) MANUFACTURING AND PROCESSING
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  - ㉜ RAIL YARDS, TRACKS AND SPURS
  - ㉝ RUBBER MANUFACTURING AND PROCESSING
  - ㉞ SOAP AND DETERGENT MANUFACTURING, PROCESSING AND BULK STORAGE
  - ㉟ SOLVENT MANUFACTURING, PROCESSING AND BULK STORAGE
  - ㊱ TANNERY
  - ㊲ TEXTILE MANUFACTURING AND PROCESSING
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  - ㊴ WASTE DISPOSAL AND WASTE MANAGEMENT, INCLUDING THERMAL TREATMENT, LANDFILLING AND TRANSFER OF WASTE, OTHER THAN USE OF BIOSOILS AS SOIL CONDITIONERS
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  - Ⓐ SPILLS
  - Ⓑ MISCELLANEOUS MANUFACTURING
  - Ⓒ COAL STORAGE
  - Ⓓ RAIL TIE PILE
  - Ⓔ PCB STORAGE
  - Ⓕ KNOWN CONTAMINATION

TITLE:  
**PHASE ONE CONCEPTUAL SITE MODEL**

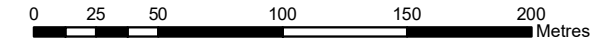
PROJECT:  
**CONTAMINANT OVERVIEW STUDY  
FORMER ORANGEVILLE RAIL,  
MISSISSAUGA, ONTARIO**

CLIENT:  
**REGION OF PEEL**

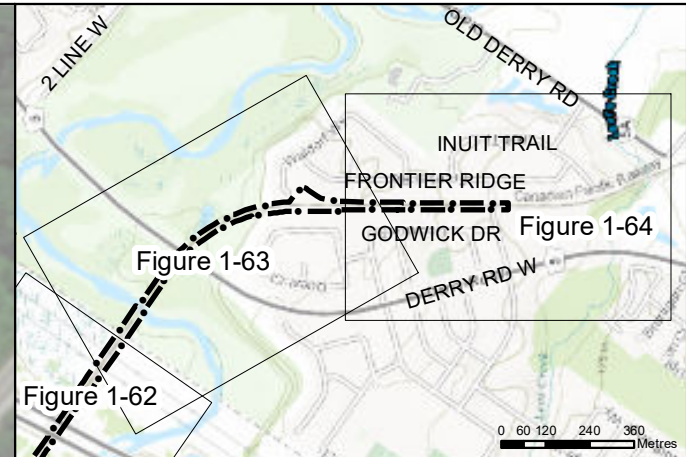
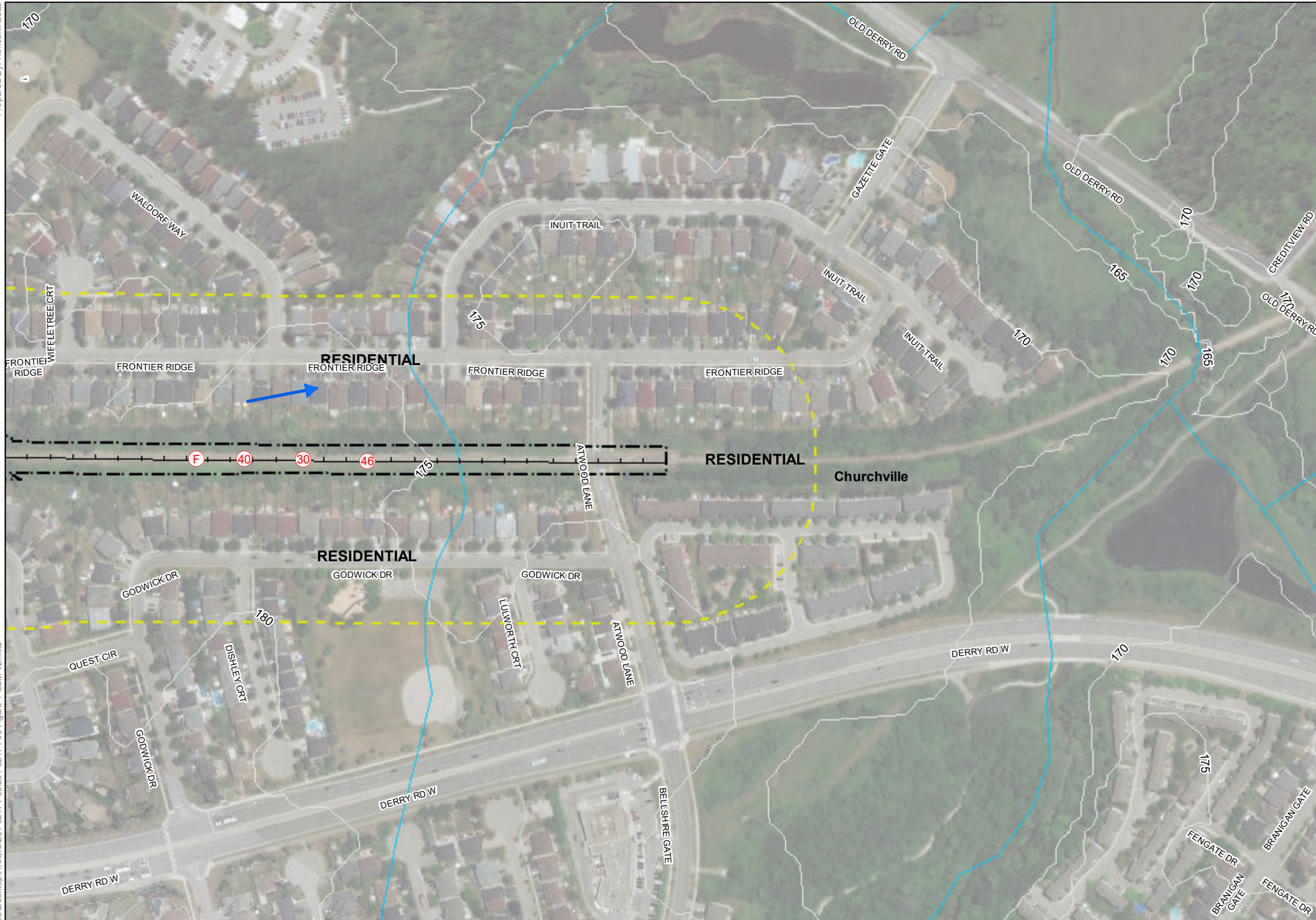
	PROJECT NO.:	201-02174-00	REVIEWED BY:	MB
	DATE:	MAY 2020	FIGURE:	1-63

DATA SOURCE:

- LEGEND:**
- 100m STUDY AREA
    - SUBJECT SITE
    - ANSI
    - INFERRED GROUNDWATER FLOW DIRECTION
    - 1m TOPOGRAPHIC CONTOUR
  - RAIL
    - Rivers
    - MECP WATER WELL
    - TANK NOT CONTRIBUTING TO APEC
    - TANK CONTRIBUTING TO APEC
  - PCA CONTRIBUTING TO APEC
    - PCA NOT CONTRIBUTING TO APEC







- POTENTIALLY CONTAMINATING ACTIVITIES (PCAS):**
- ③ AIRSTRIPS AND HANGARS OPERATION
  - ④ ASPHALT AND BITUMEN MANUFACTURING
  - ⑧ CHEMICAL MANUFACTURING, PROCESSING AND BULK STORAGE
  - ⑩ COMMERCIAL AUTOBODY SHOPS
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  - ⑭ CRUDE OIL REFINING, PROCESSING AND BULK STORAGE
  - ⑲ ELECTRONIC AND COMPUTER EQUIPMENT MANUFACTURING
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  - ㉔ METAL FABRICATION
  - ㉕ MINING, SMELTING AND REFINING; ORE PROCESSING; TAILINGS STORAGE
  - ㉖ OPERATION OF DRY CLEANING EQUIPMENT (WHERE CHEMICALS ARE USED)
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  - ㉘ PESTICIDES (INCLUDING HERBICIDES, FUNGICIDES AND ANTI-FOULING AGENTS) MANUFACTURING, PROCESSING, BULK STORAGE AND LARGE-SCALE APPLICATIONS
  - ㉙ PLASTICS (INCLUDING FIBREGLASS) MANUFACTURING AND PROCESSING
  - ㉚ PULP, PAPER AND PAPERBOARD MANUFACTURING AND PROCESSING
  - ㉛ RAIL YARDS, TRACKS AND SPURS
  - ㉜ RUBBER MANUFACTURING AND PROCESSING
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  - ㉞ SOLVENT MANUFACTURING, PROCESSING AND BULK STORAGE
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  - Ⓐ SPILLS
  - Ⓑ MISCELLANEOUS MANUFACTURING
  - Ⓒ COAL STORAGE
  - Ⓓ RAIL TIE PILE
  - Ⓔ PCB STORAGE
  - Ⓕ KNOWN CONTAMINATION

TITLE:  
**PHASE ONE CONCEPTUAL SITE MODEL**

PROJECT:  
**CONTAMINANT OVERVIEW STUDY  
FORMER ORANGEVILLE RAIL,  
MISSISSAUGA, ONTARIO**

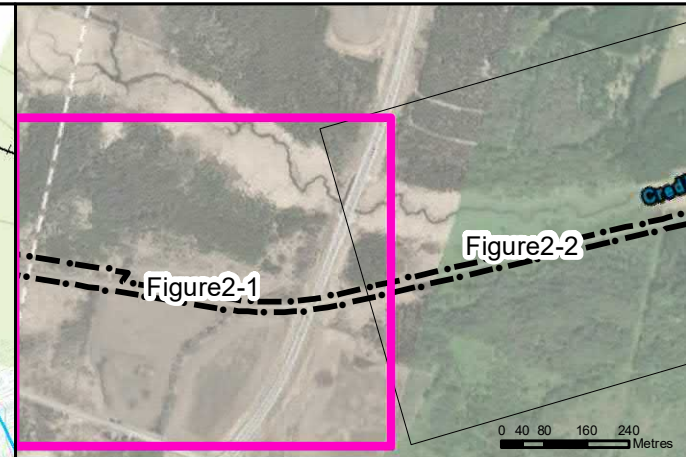
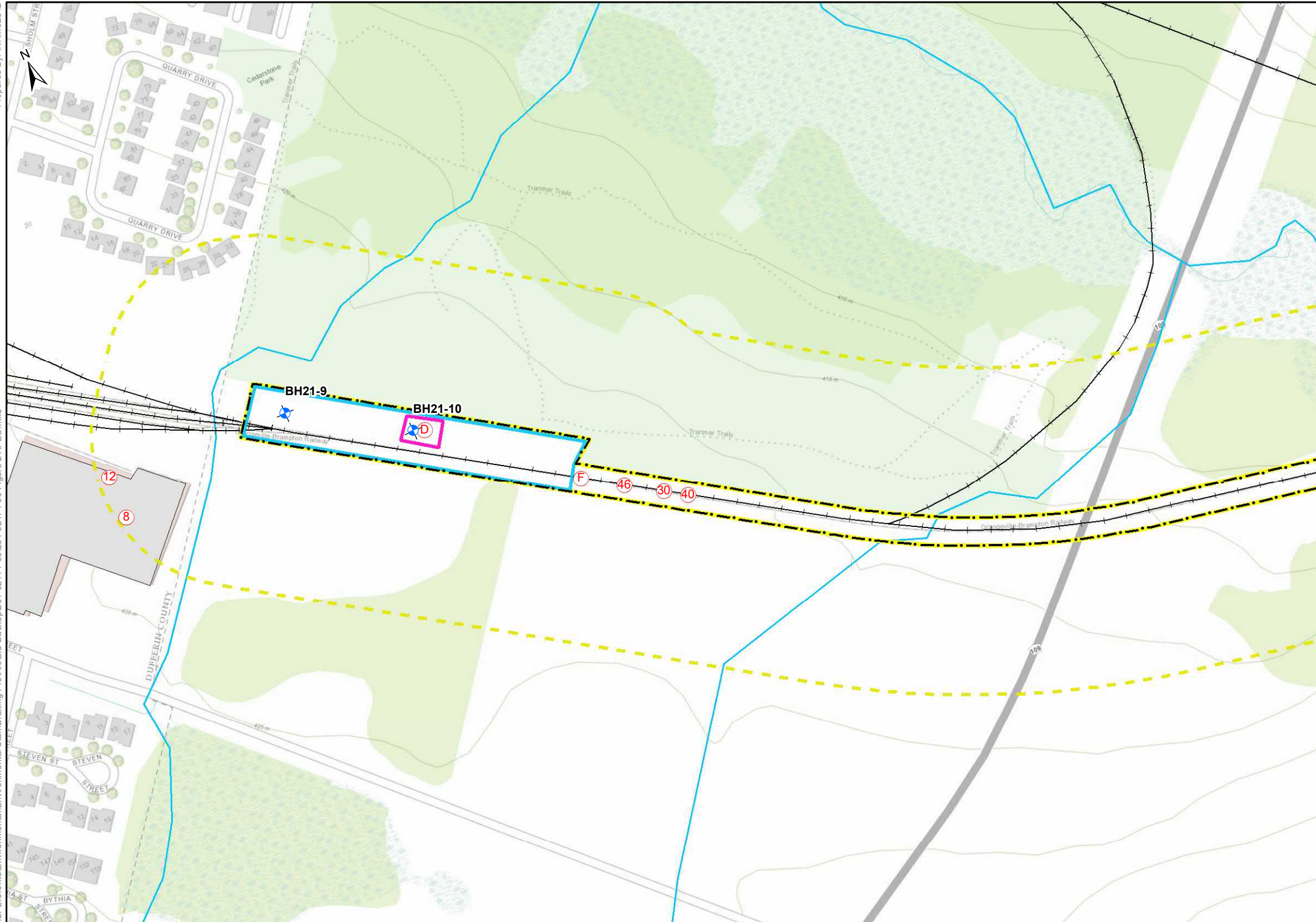
CLIENT:  
**REGION OF PEEL**

	PROJECT NO.:	REVIEWED BY:
	201-02174-00	MB
DATE:	FIGURE:	
MAY 2020	1-64	

DATA SOURCE:

- LEGEND:**
- 100m STUDY AREA
  - SUBJECT SITE
  - ANSI
  - INFERRED GROUNDWATER FLOW DIRECTION
  - 1m TOPOGRAPHIC CONTOUR
  - RAIL
  - Rivers
  - MECP WATER WELL
  - TANK NOT CONTRIBUTING TO APEC
  - TANK CONTRIBUTING TO APEC
  - PCA CONTRIBUTING TO APEC
  - PCA NOT CONTRIBUTING TO APEC





AREAS OF POTENTIAL ENVIORNMENTAL CONCERN (APEC):

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<span style="border: 1px solid blue; display: inline-block; width: 15px; height: 10px;"></span>	APEC 3
<span style="border: 1px solid magenta; display: inline-block; width: 15px; height: 10px;"></span>	APEC 105

Note:  
Please refer to Table 3 appended to the report for APECs

TITLE:  
AREAS OF POTENTIAL ENVIRONMENTAL CONCERN

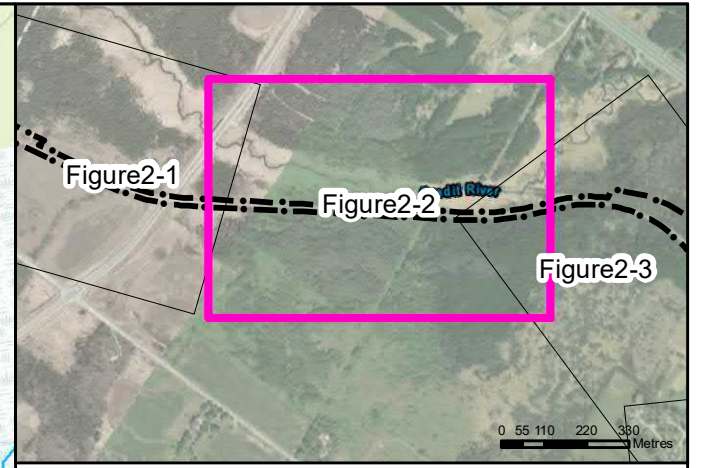
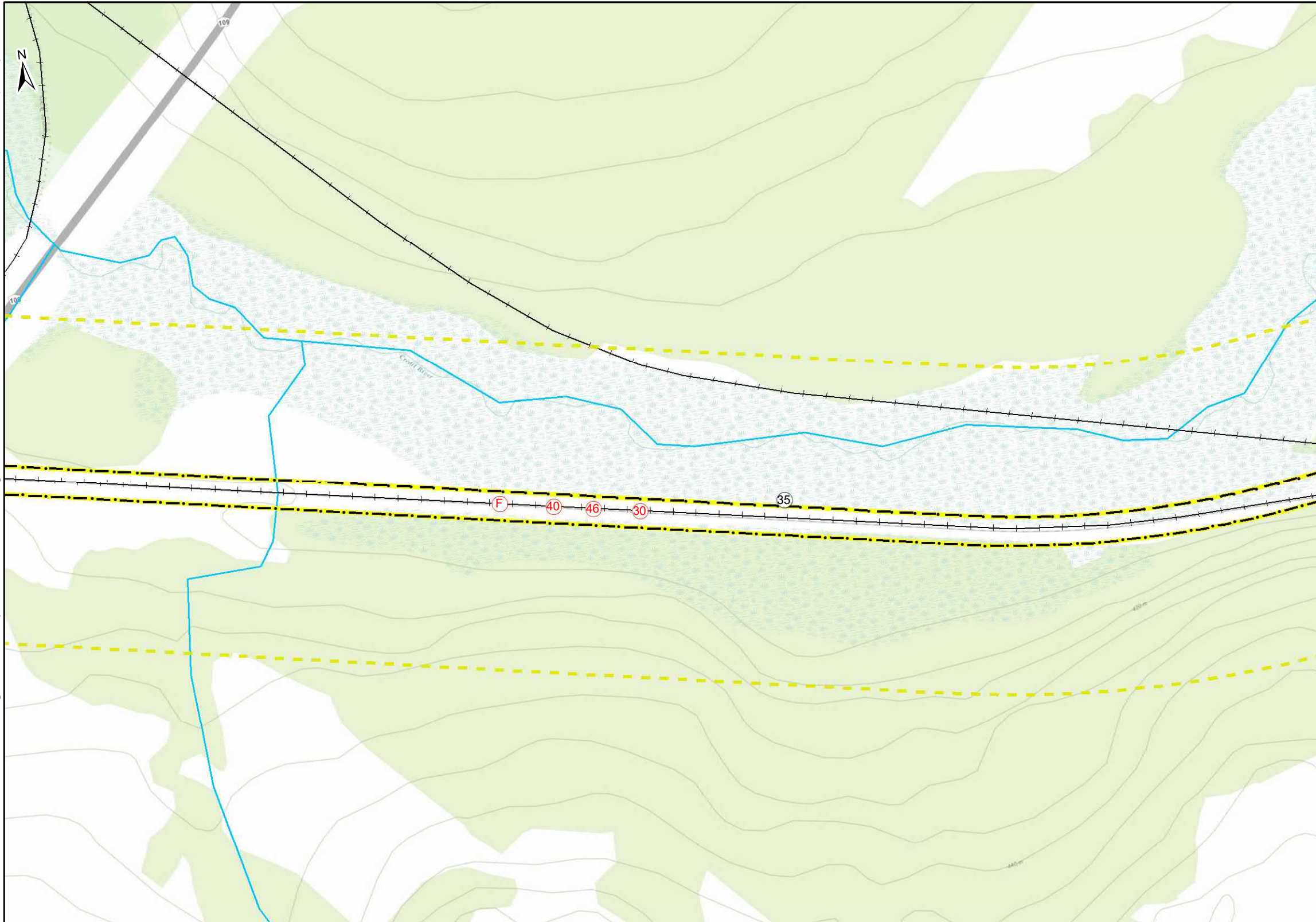
PROJECT:  
CONTAMINANT OVERVIEW STUDY  
FORMER ORANGEVILLE RAIL,  
CALEDON, ONTARIO

CLIENT:  
REGION OF PEEL

DATA SOURCE:		0 25 50 100 150 200 Metres	
<b>LEGEND:</b>			
<span style="border: 1px dashed yellow; display: inline-block; width: 15px; height: 10px;"></span>	100m STUDY AREA	<span style="display: inline-block; width: 10px; height: 10px; background-color: black; border-radius: 50%;"></span>	BOREHOLE
<span style="border: 1px solid black; display: inline-block; width: 15px; height: 10px;"></span>	SUBJECT SITE	<span style="display: inline-block; width: 10px; height: 10px; background-color: lightblue; border-radius: 50%;"></span>	MONITORING WELL
<span style="display: inline-block; width: 15px; height: 10px; background-color: grey;"></span>	BUILDINGS	<span style="border: 1px solid red; border-radius: 50%; display: inline-block; width: 10px; height: 10px;"></span>	PCA CONTRIBUTING TO APEC
<span style="display: inline-block; width: 15px; border-bottom: 1px solid black;"></span>	RAIL	<span style="border: 1px solid black; border-radius: 50%; display: inline-block; width: 10px; height: 10px;"></span>	PCA NOT CONTRIBUTING TO APEC
<span style="display: inline-block; width: 15px; border-bottom: 1px solid blue;"></span>	RIVERS		

	PROJECT NO.:	REVIEWED BY:
	211-10139-00	CJ
	DATE:	FIGURE:
	APRIL 2022	2-1





AREAS OF POTENTIAL ENVIORNMENTAL CONCERN (APEC):  
 APEC 13,14,38,114

Note:  
 Please refer to Table 3 appended to the report for APECs

TITLE:  
 AREAS OF POTENTIAL ENVIRONMENTAL CONCERN

PROJECT:  
 CONTAMINANT OVERVIEW STUDY  
 FORMER ORANGEVILLE RAIL,  
 CALEDON, ONTARIO

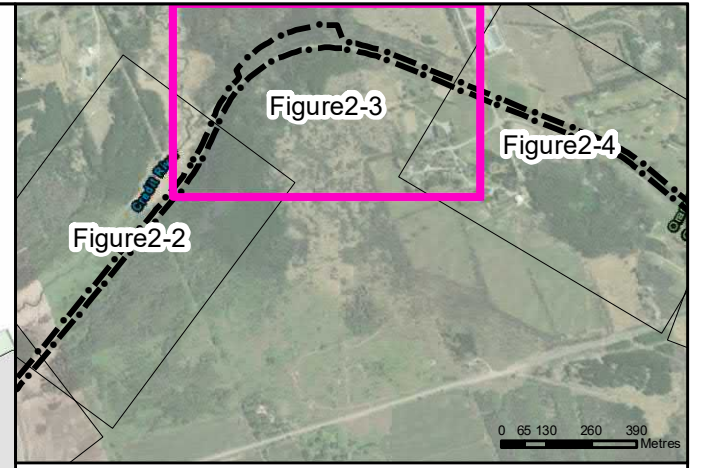
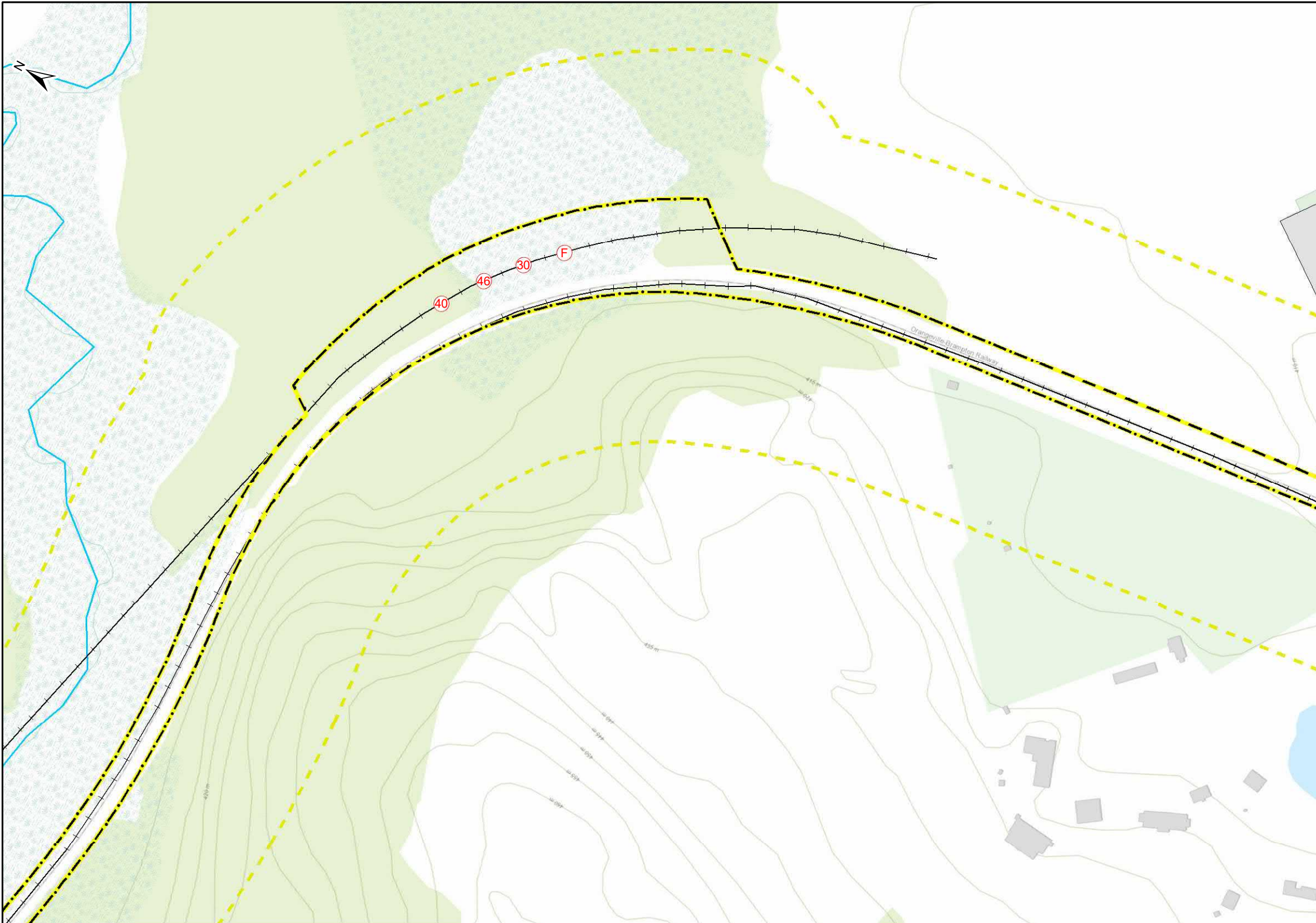
CLIENT:  
 REGION OF PEEL

	PROJECT NO.:	211-10139-00	REVIEWED BY:	CJ
	DATE:	APRIL 2022	FIGURE:	2-2



DATA SOURCE:	
LEGEND:	
100m STUDY AREA	BOREHOLE
SUBJECT SITE	MONITORING WELL
BUILDINGS	PCA CONTRIBUTING TO APEC
RAIL	PCA NOT CONTRIBUTING TO APEC
RIVERS	





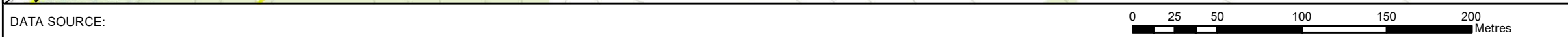
AREAS OF POTENTIAL ENVIRONMENTAL CONCERN (APEC):  
 APEC 13,14,38,114

Note:  
 Please refer to Table 3 appended to the report for APECs

TITLE:  
 AREAS OF POTENTIAL ENVIRONMENTAL CONCERN

PROJECT:  
 CONTAMINANT OVERVIEW STUDY  
 FORMER ORANGEVILLE RAIL,  
 CALEDON, ONTARIO

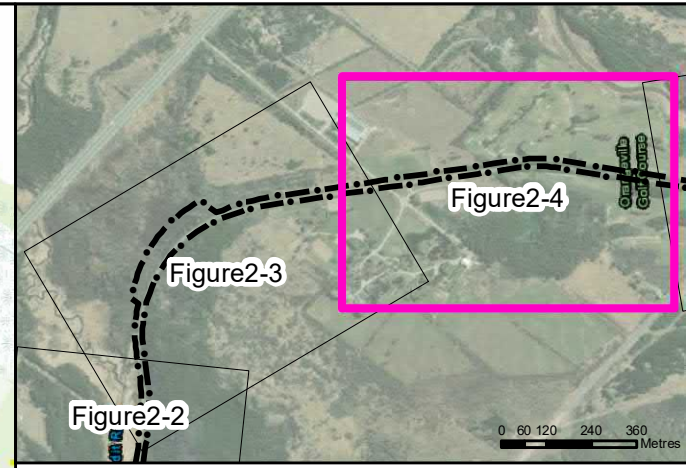
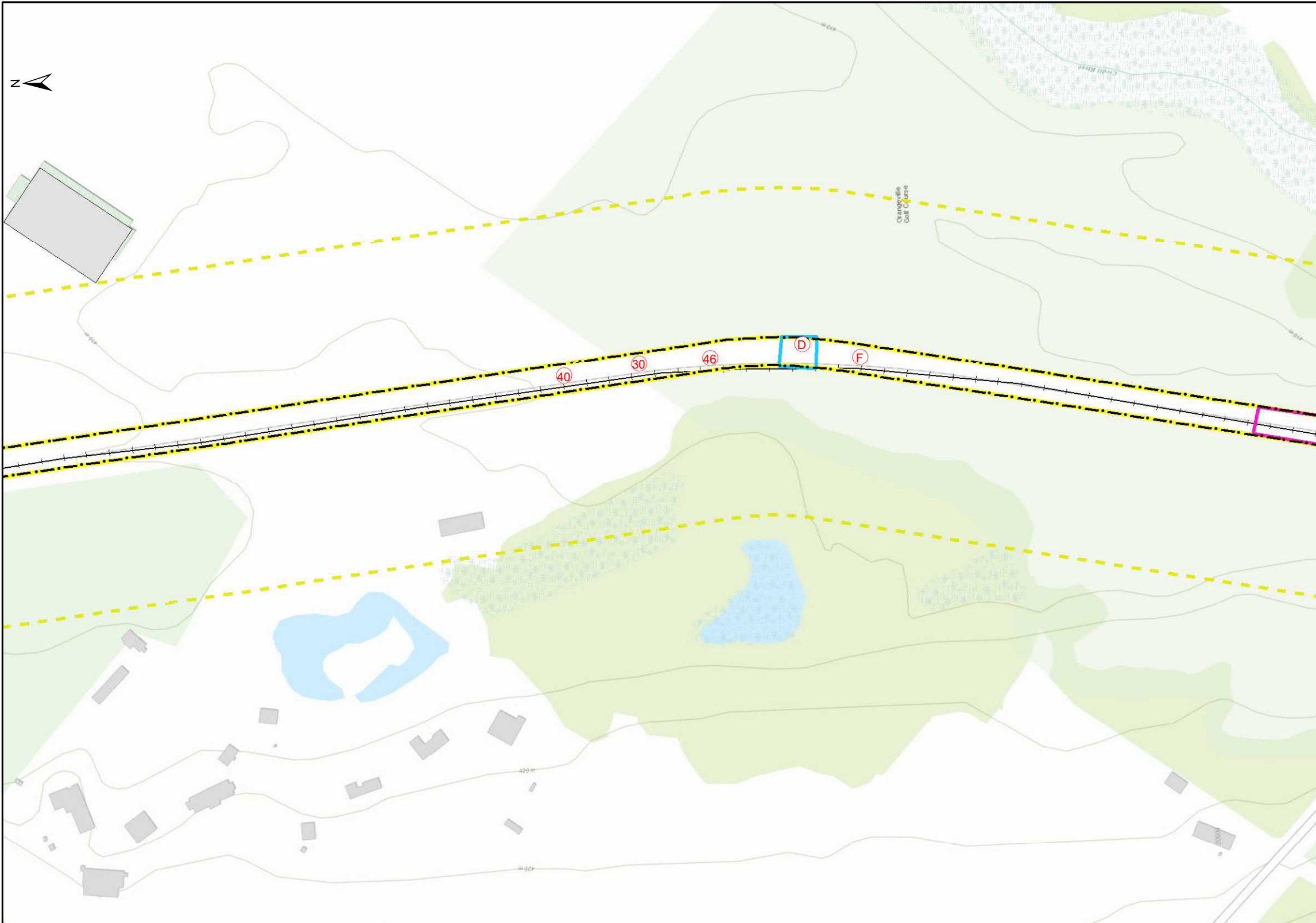
CLIENT:  
 REGION OF PEEL



LEGEND:	
<span style="border: 1px dashed yellow; display: inline-block; width: 15px; height: 10px;"></span> 100m STUDY AREA	BOREHOLE
<span style="border: 1px dashed black; display: inline-block; width: 15px; height: 10px;"></span> SUBJECT SITE	MONITORING WELL
BUILDINGS	PCA CONTRIBUTING TO APEC
RAIL	PCA NOT CONTRIBUTING TO APEC
RIVERS	

	PROJECT NO.: 211-10139-00	REVIEWED BY: CJ
	DATE: APRIL 2022	FIGURE: 2-3





AREAS OF POTENTIAL ENVIORNMENTAL CONCERN (APEC):

<span style="border: 1px dashed yellow; display: inline-block; width: 15px; height: 10px;"></span>	APEC 13,14,38,114
<span style="border: 1px solid pink; display: inline-block; width: 15px; height: 10px;"></span>	APEC 23
<span style="border: 1px solid blue; display: inline-block; width: 15px; height: 10px;"></span>	APEC 97

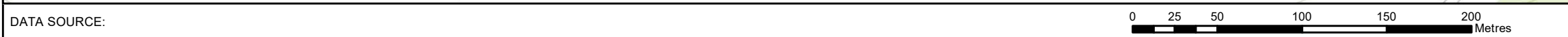
Note:  
Please refer to Table 3 appended to the report for APECs

TITLE:  
AREAS OF POTENTIAL ENVIRONMENTAL CONCERN

PROJECT:  
CONTAMINANT OVERVIEW STUDY  
FORMER ORANGEVILLE RAIL,  
CALEDON, ONTARIO

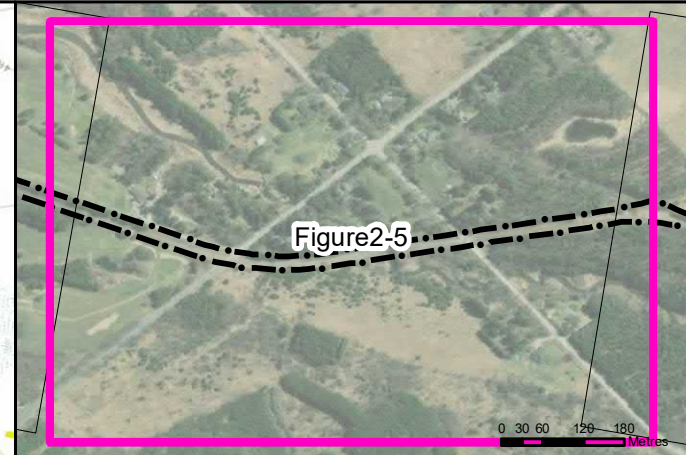
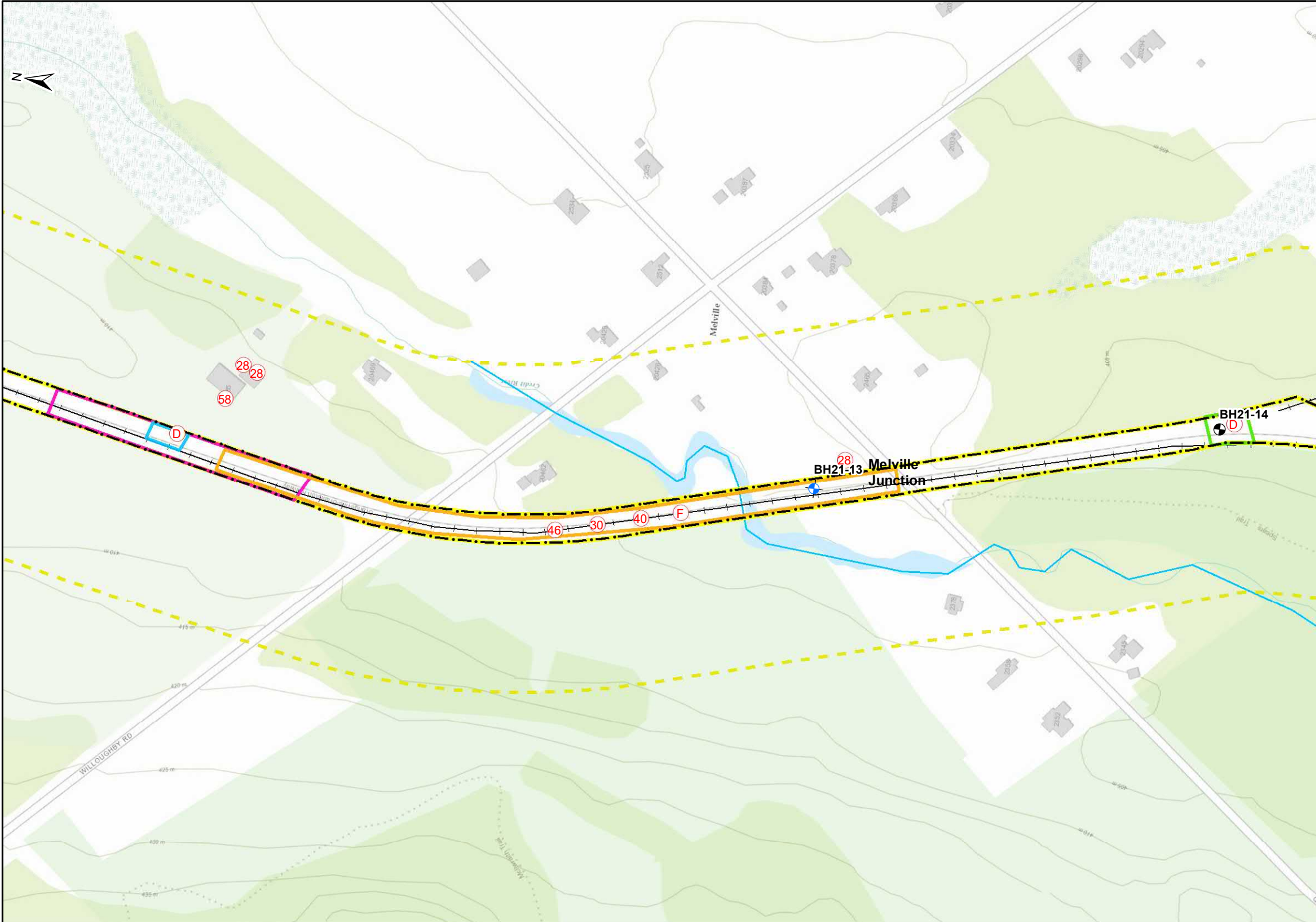
CLIENT:  
REGION OF PEEL

	PROJECT NO.:	211-10139-00	REVIEWED BY:	CJ
	DATE:	APRIL 2022	FIGURE:	2-4



DATA SOURCE:

LEGEND:	
<span style="border: 1px dashed yellow; display: inline-block; width: 15px; height: 10px;"></span> 100m STUDY AREA	BOREHOLE
<span style="border: 1px dashed black; display: inline-block; width: 15px; height: 10px;"></span> SUBJECT SITE	MONITORING WELL
BUILDINGS	PCA CONTRIBUTING TO APEC
RAIL	PCA NOT CONTRIBUTING TO APEC
RIVERS	



- AREAS OF POTENTIAL ENVIORNMENTAL CONCERN (APEC):
- APEC 13,14,38,114
  - APEC 23
  - APEC 96
  - APEC 104
  - APEC 112

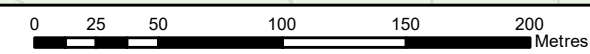
Note:  
Please refer to Table 3 appended to the report for APECs

TITLE:  
AREAS OF POTENTIAL ENVIRONMENTAL CONCERN

PROJECT:  
CONTAMINANT OVERVIEW STUDY  
FORMER ORANGEVILLE RAIL,  
CALEDON, ONTARIO

CLIENT:  
REGION OF PEEL

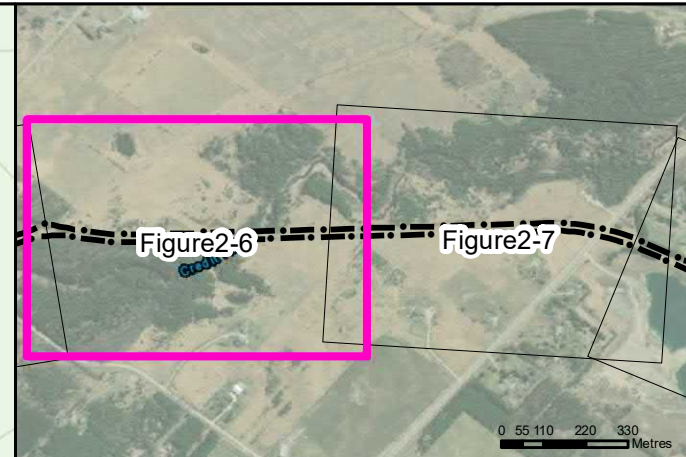
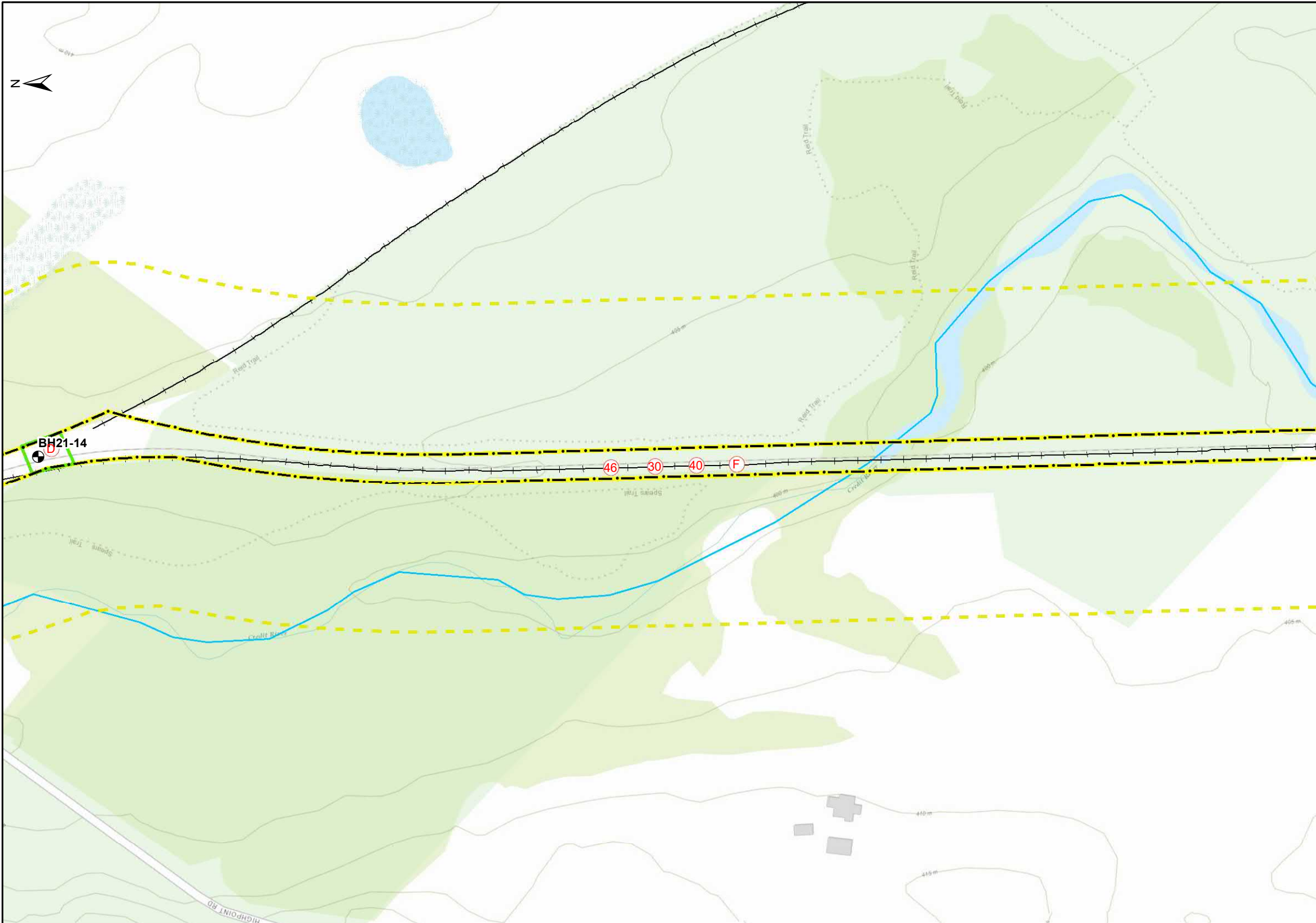
DATA SOURCE:



- LEGEND:
- 100m STUDY AREA
  - SUBJECT SITE
  - BUILDINGS
  - RAIL
  - RIVERS
  - + BOREHOLE
  - + MONITORING WELL
  - # PCA CONTRIBUTING TO APEC
  - # PCA NOT CONTRIBUTING TO APEC

	PROJECT NO.:	211-10139-00	REVIEWED BY:	CJ
	DATE:	APRIL 2022	FIGURE:	2-5





AREAS OF POTENTIAL ENVIORNMENTAL CONCERN (APEC):

- APEC 13,14,38,114
- APEC 96

Note:  
Please refer to Table 3 appended to the report for APECs

TITLE:  
AREAS OF POTENTIAL ENVIRONMENTAL CONCERN

PROJECT:  
CONTAMINANT OVERVIEW STUDY  
FORMER ORANGEVILLE RAIL,  
CALEDON, ONTARIO

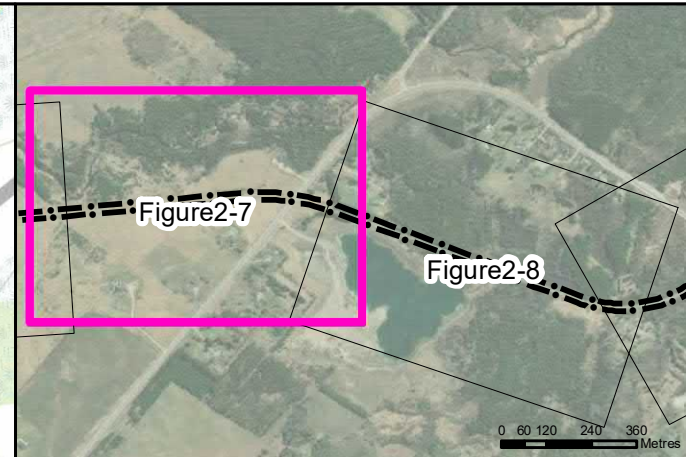
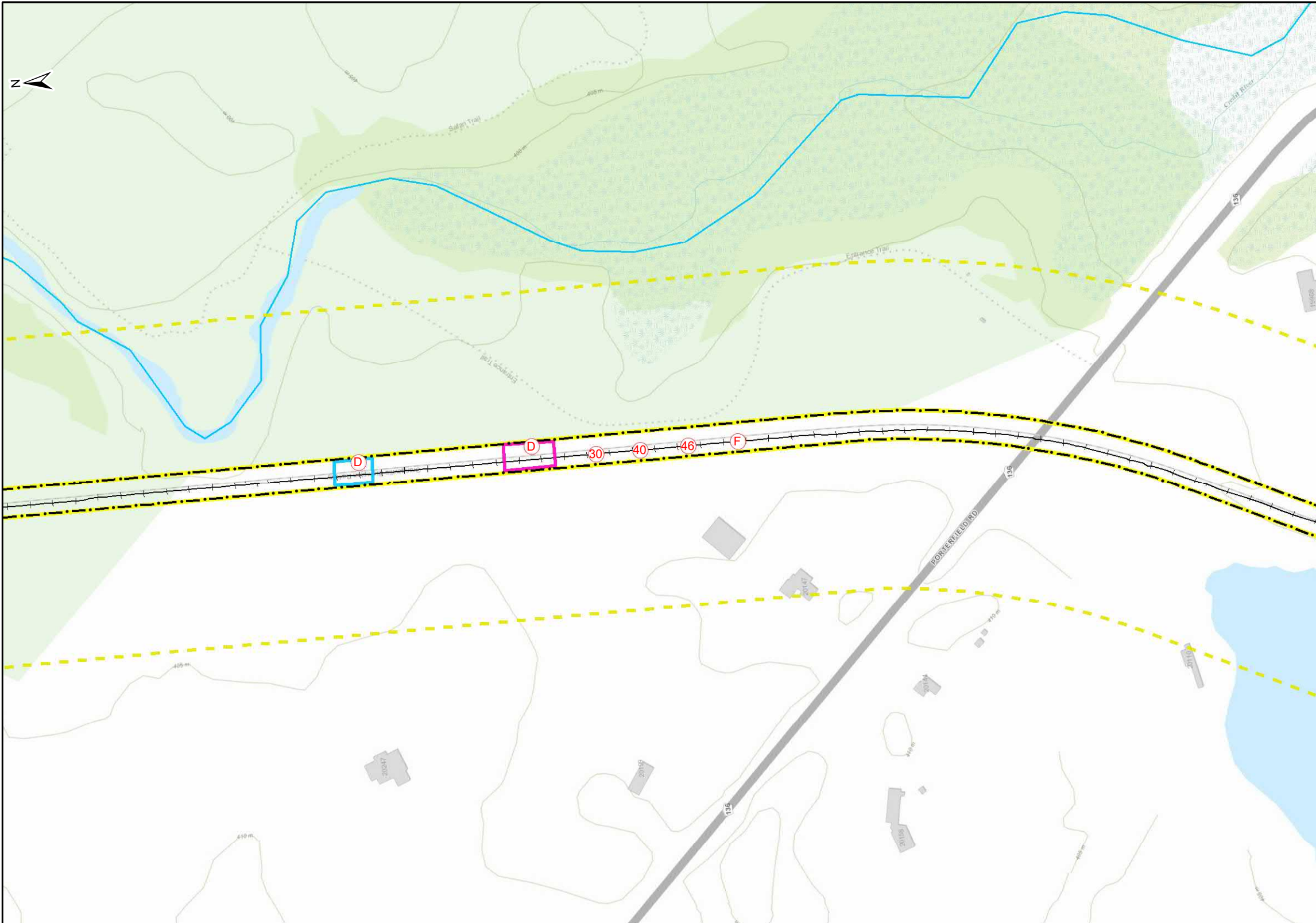
CLIENT:  
REGION OF PEEL

DATA SOURCE:

- LEGEND:
- 100m STUDY AREA
  - SUBJECT SITE
  - BUILDINGS
  - RAIL
  - RIVERS
  - + BOREHOLE
  - + MONITORING WELL
  - # PCA CONTRIBUTING TO APEC
  - # PCA NOT CONTRIBUTING TO APEC

	PROJECT NO.: 211-10139-00	REVIEWED BY: CJ
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AREAS OF POTENTIAL ENVIORNMENTAL CONCERN (APEC):

	APEC 13,14,38,114
	APEC 94
	APEC 95

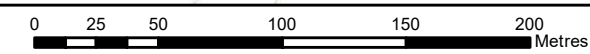
Note:  
Please refer to Table 3 appended to the report for APECs

TITLE:  
AREAS OF POTENTIAL ENVIRONMENTAL CONCERN

PROJECT:  
CONTAMINANT OVERVIEW STUDY  
FORMER ORANGEVILLE RAIL,  
CALEDON, ONTARIO

CLIENT:  
REGION OF PEEL

DATA SOURCE:

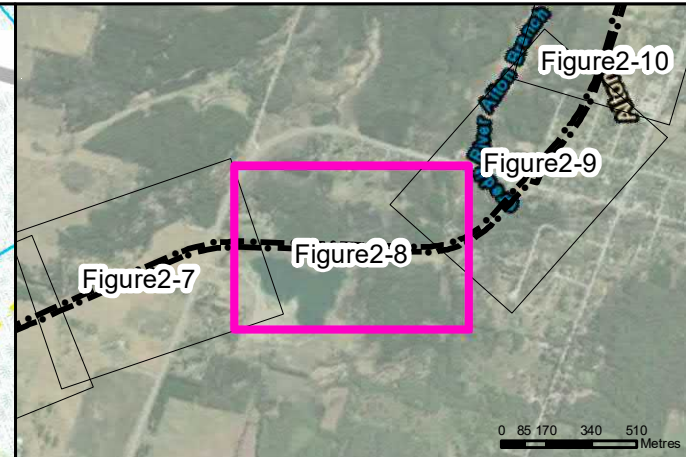


LEGEND:

	100m STUDY AREA		BOREHOLE
	SUBJECT SITE		MONITORING WELL
	BUILDINGS		PCA CONTRIBUTING TO APEC
	RAIL		PCA NOT CONTRIBUTING TO APEC
	RIVERS		

	PROJECT NO.:	211-10139-00	REVIEWED BY:	CJ
	DATE:	APRIL 2022	FIGURE:	2-7





AREAS OF POTENTIAL ENVIRONMENTAL CONCERN (APEC):

	APEC 13,14,38,114
	APEC 93

Note:  
Please refer to Table 3 appended to the report for APECs

TITLE:  
AREAS OF POTENTIAL ENVIRONMENTAL CONCERN

PROJECT:  
CONTAMINANT OVERVIEW STUDY  
FORMER ORANGEVILLE RAIL,  
CALEDON, ONTARIO

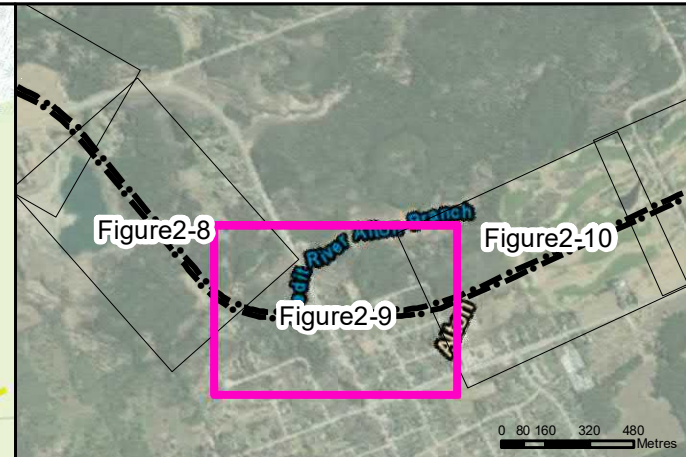
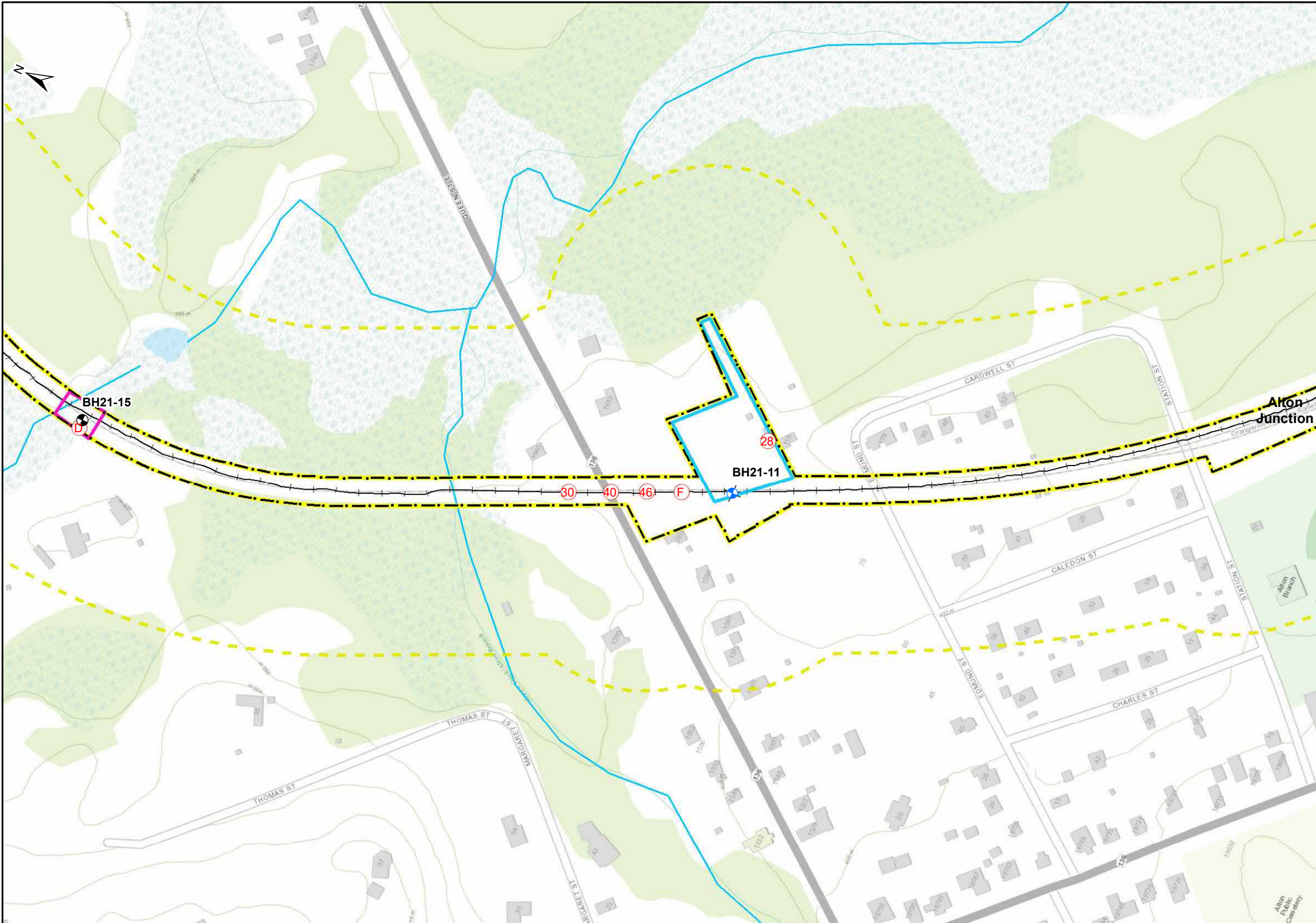
CLIENT:  
REGION OF PEEL

DATA SOURCE:

	100m STUDY AREA		BOREHOLE
	SUBJECT SITE		MONITORING WELL
	BUILDINGS		PCA CONTRIBUTING TO APEC
	RAIL		PCA NOT CONTRIBUTING TO APEC
	RIVERS		

	PROJECT NO.:	211-10139-00	REVIEWED BY:	CJ
	DATE:	APRIL 2022	FIGURE:	2-8





- AREAS OF POTENTIAL ENVIRONMENTAL CONCERN (APEC):
- APEC 13,14,38,114
  - APEC 37
  - APEC 93

Note:  
Please refer to Table 3 appended to the report for APECs

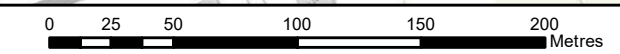
TITLE:  
AREAS OF POTENTIAL ENVIRONMENTAL CONCERN

PROJECT:  
CONTAMINANT OVERVIEW STUDY  
FORMER ORANGEVILLE RAIL,  
CALEDON, ONTARIO

CLIENT:  
REGION OF PEEL

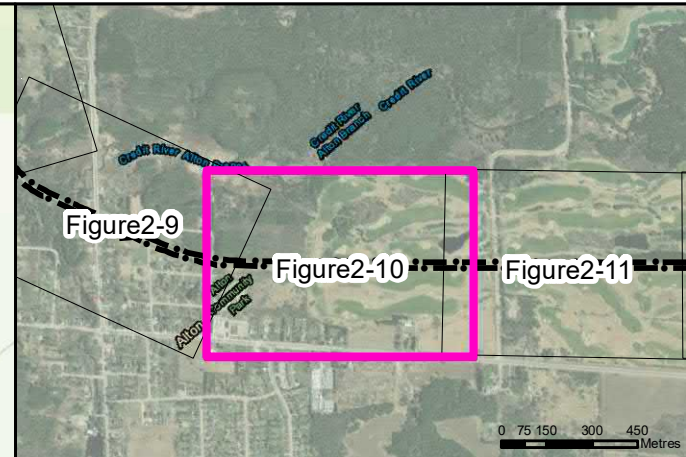
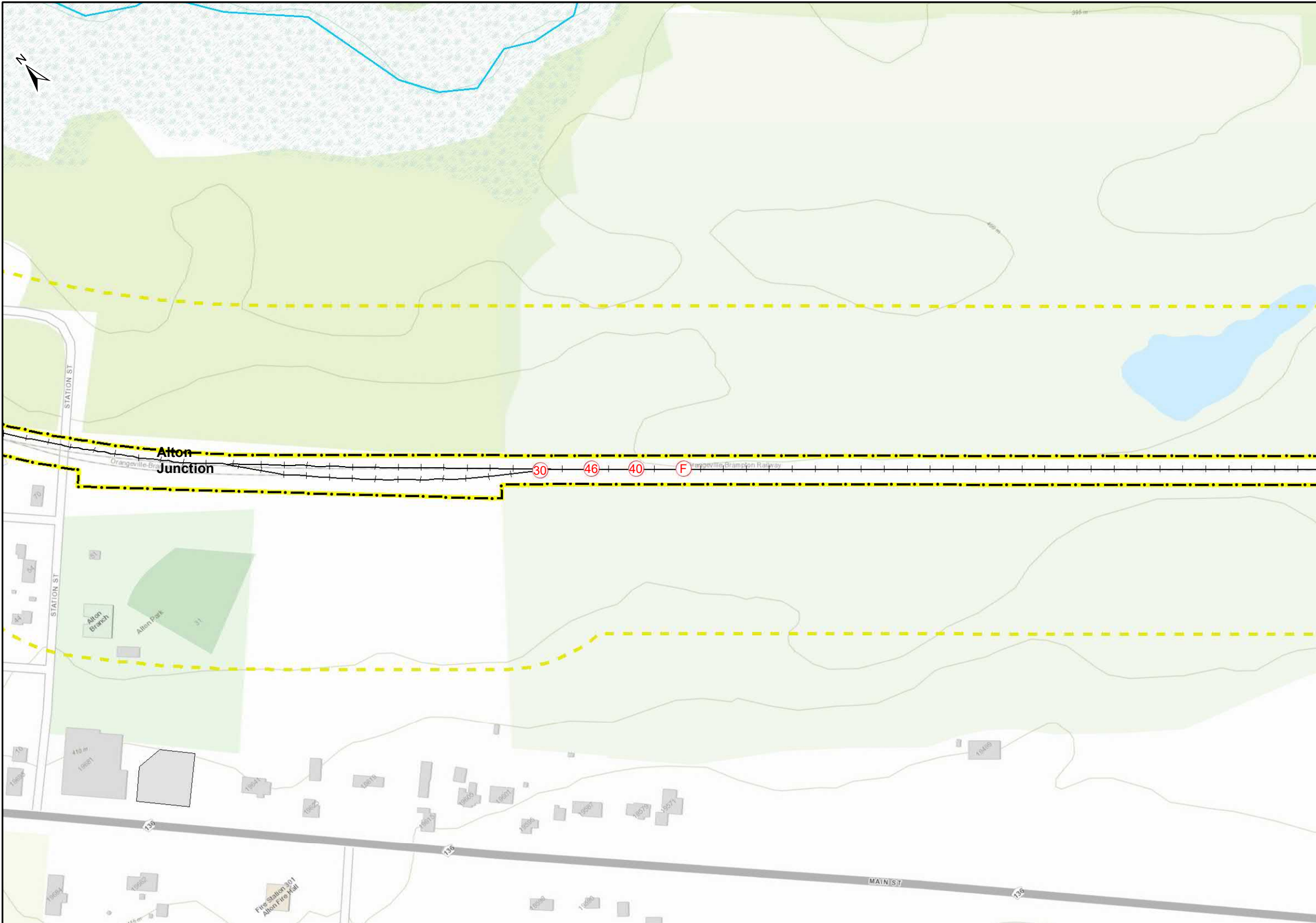
DATA SOURCE:

- LEGEND:
- 100m STUDY AREA
  - SUBJECT SITE
  - BUILDINGS
  - RAIL
  - RIVERS
  - + BOREHOLE
  - + MONITORING WELL
  - # PCA CONTRIBUTING TO APEC
  - # PCA NOT CONTRIBUTING TO APEC



	PROJECT NO.:	211-10139-00	REVIEWED BY:	CJ
	DATE:	APRIL 2022	FIGURE:	2-9





AREAS OF POTENTIAL ENVIRONMENTAL CONCERN (APEC):  
 APEC 13,14,38,114

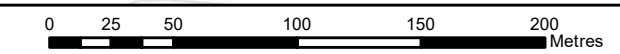
Note:  
 Please refer to Table 3 appended to the report for APECs

TITLE:  
 AREAS OF POTENTIAL ENVIRONMENTAL CONCERN

PROJECT:  
 CONTAMINANT OVERVIEW STUDY  
 FORMER ORANGEVILLE RAIL,  
 CALEDON, ONTARIO

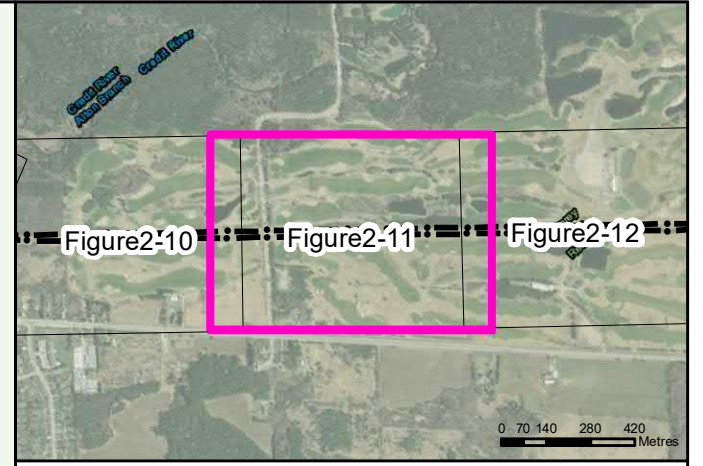
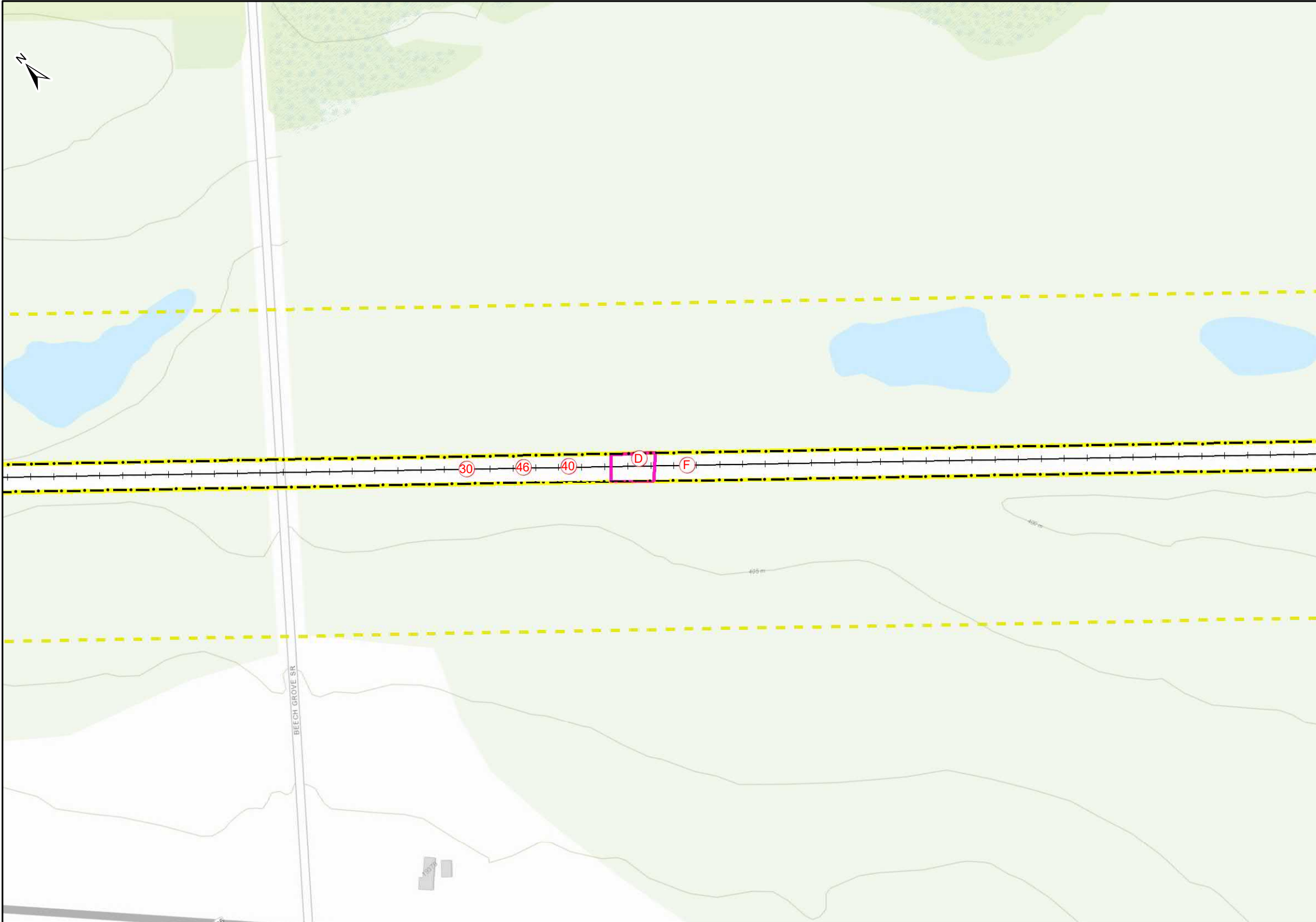
CLIENT:  
 REGION OF PEEL

DATA SOURCE:



- LEGEND:
- 100m STUDY AREA
  - SUBJECT SITE
  - BUILDINGS
  - RAIL
  - RIVERS
  - + BOREHOLE
  - + MONITORING WELL
  - # PCA CONTRIBUTING TO APEC
  - # PCA NOT CONTRIBUTING TO APEC

	PROJECT NO.:	REVIEWED BY:
	211-10139-00	CJ
	DATE:	FIGURE:
	APRIL 2022	2-10



AREAS OF POTENTIAL ENVIRONMENTAL CONCERN (APEC):

- APEC 13,14,38,114
- APEC 92

Note:  
Please refer to Table 3 appended to the report for APECs

TITLE:  
AREAS OF POTENTIAL ENVIRONMENTAL CONCERN

PROJECT:  
CONTAMINANT OVERVIEW STUDY  
FORMER ORANGEVILLE RAIL,  
CALEDON, ONTARIO

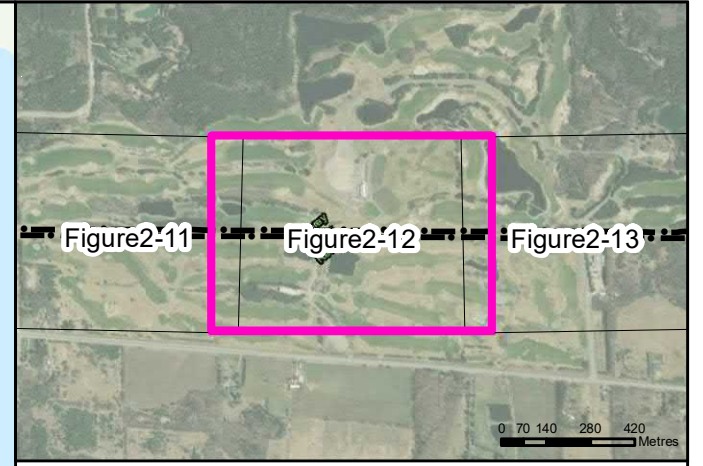
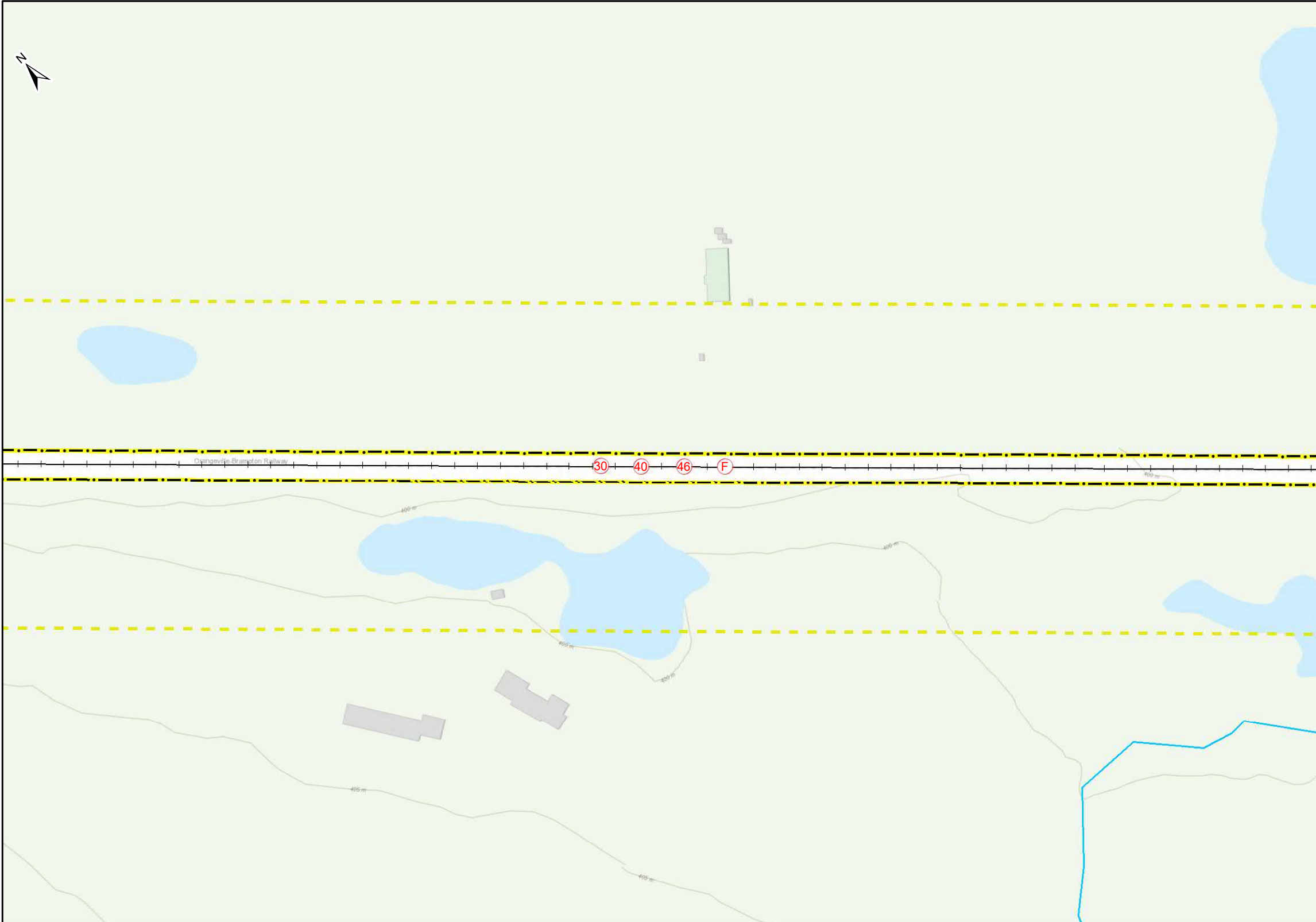
CLIENT:  
REGION OF PEEL

	PROJECT NO.:	211-10139-00	REVIEWED BY:	CJ
	DATE:	APRIL 2022	FIGURE:	2-11

DATA SOURCE: 0 25 50 100 150 200 Metres

- LEGEND:
- 100m STUDY AREA
  - SUBJECT SITE
  - BUILDINGS
  - RAIL
  - RIVERS
  - + BOREHOLE
  - + MONITORING WELL
  - # PCA CONTRIBUTING TO APEC
  - # PCA NOT CONTRIBUTING TO APEC





AREAS OF POTENTIAL ENVIRONMENTAL CONCERN (APEC):  
 APEC 13,14,38,114

Note:  
 Please refer to Table 3 appended to the report for APECs

TITLE:  
 AREAS OF POTENTIAL ENVIRONMENTAL CONCERN

PROJECT:  
 CONTAMINANT OVERVIEW STUDY  
 FORMER ORANGEVILLE RAIL,  
 CALEDON, ONTARIO

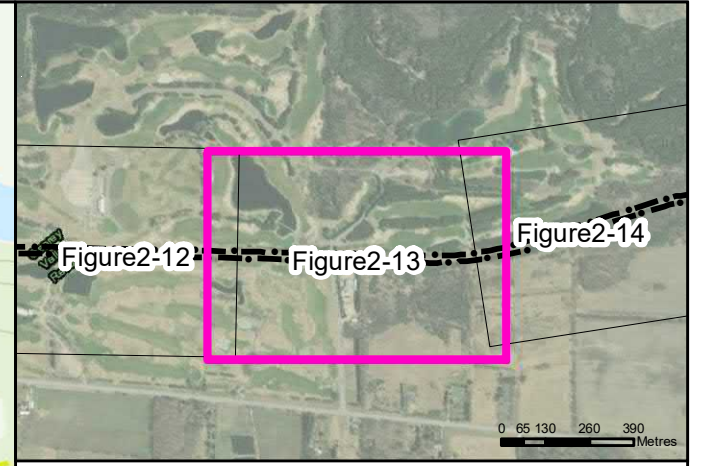
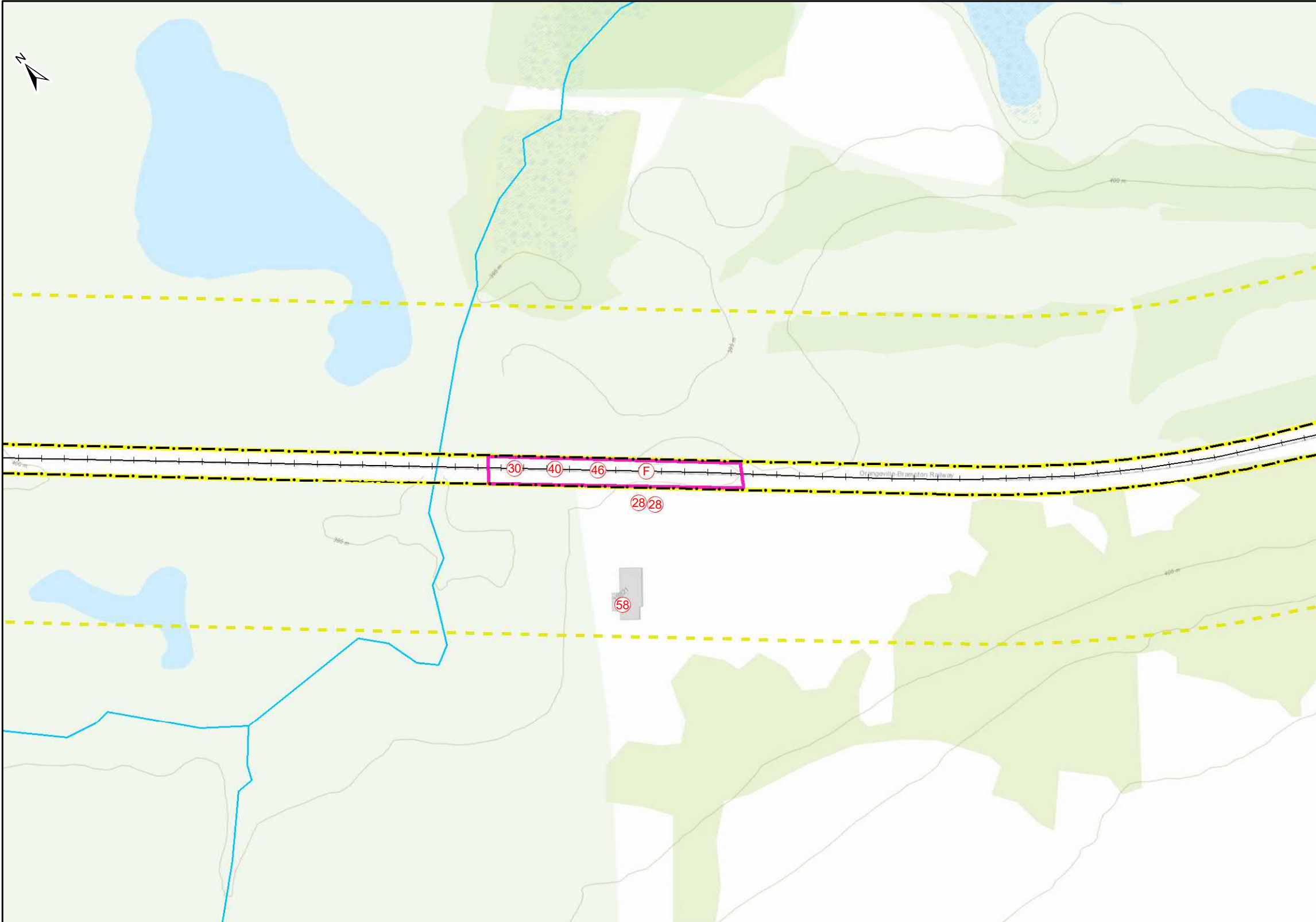
CLIENT:  
 REGION OF PEEL

DATA SOURCE: 0 25 50 100 150 200 Metres

<b>LEGEND:</b>	
100m STUDY AREA	BOREHOLE
SUBJECT SITE	MONITORING WELL
BUILDINGS	PCA CONTRIBUTING TO APEC
RAIL	PCA NOT CONTRIBUTING TO APEC
RIVERS	

	PROJECT NO.: 211-10139-00	REVIEWED BY: CJ
	DATE: APRIL 2022	FIGURE: 2-12





AREAS OF POTENTIAL ENVIORNMENTAL CONCERN (APEC):

- APEC 13,14,38,114
- APEC 22

Note:  
Please refer to Table 3 appended to the report for APECs

TITLE:  
AREAS OF POTENTIAL ENVIRONMENTAL CONCERN

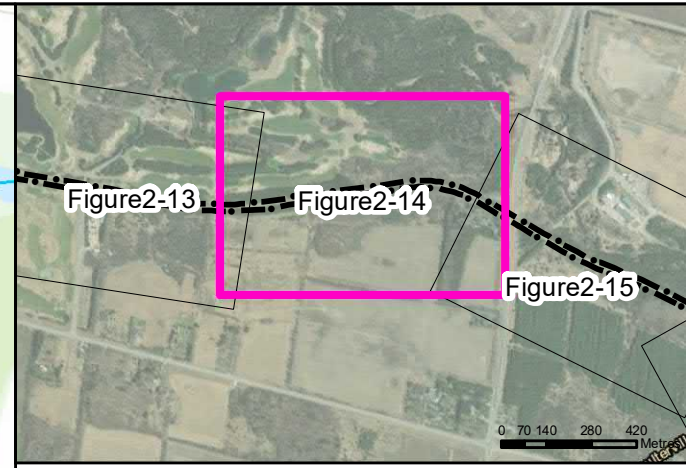
PROJECT:  
CONTAMINANT OVERVIEW STUDY  
FORMER ORANGEVILLE RAIL,  
CALEDON, ONTARIO

CLIENT:  
REGION OF PEEL

	PROJECT NO.:	211-10139-00	REVIEWED BY:	CJ
	DATE:	APRIL 2022	FIGURE:	2-13

DATA SOURCE: 0 25 50 100 150 200 Metres

LEGEND:	
<span style="border: 1px dashed yellow; display: inline-block; width: 15px; height: 10px; margin-right: 5px;"></span> 100m STUDY AREA	<span style="border: 1px solid black; display: inline-block; width: 15px; height: 10px; margin-right: 5px;"></span> BOREHOLE
<span style="border: 1px dashed black; display: inline-block; width: 15px; height: 10px; margin-right: 5px;"></span> SUBJECT SITE	<span style="border: 1px solid blue; display: inline-block; width: 15px; height: 10px; margin-right: 5px;"></span> MONITORING WELL
<span style="background-color: gray; display: inline-block; width: 15px; height: 10px; margin-right: 5px;"></span> BUILDINGS	<span style="border: 1px solid red; border-radius: 50%; padding: 2px; display: inline-block; width: 15px; height: 10px; margin-right: 5px;"></span> PCA CONTRIBUTING TO APEC
<span style="border-bottom: 1px solid black; width: 15px; display: inline-block; margin-right: 5px;"></span> RAIL	<span style="border: 1px solid black; border-radius: 50%; padding: 2px; display: inline-block; width: 15px; height: 10px; margin-right: 5px;"></span> PCA NOT CONTRIBUTING TO APEC
<span style="border-bottom: 1px solid blue; width: 15px; display: inline-block; margin-right: 5px;"></span> RIVERS	



AREAS OF POTENTIAL ENVIORNMENTAL CONCERN (APEC):

<span style="border: 1px dashed yellow; display: inline-block; width: 15px; height: 10px;"></span>	APEC 13,14,38,114
<span style="border: 1px solid pink; display: inline-block; width: 15px; height: 10px;"></span>	APEC 90
<span style="border: 1px solid blue; display: inline-block; width: 15px; height: 10px;"></span>	APEC 91

Note:  
Please refer to Table 3 appended to the report for APECs

TITLE:  
AREAS OF POTENTIAL ENVIRONMENTAL CONCERN

PROJECT:  
CONTAMINANT OVERVIEW STUDY  
FORMER ORANGEVILLE RAIL,  
CALEDON, ONTARIO

CLIENT:  
REGION OF PEEL

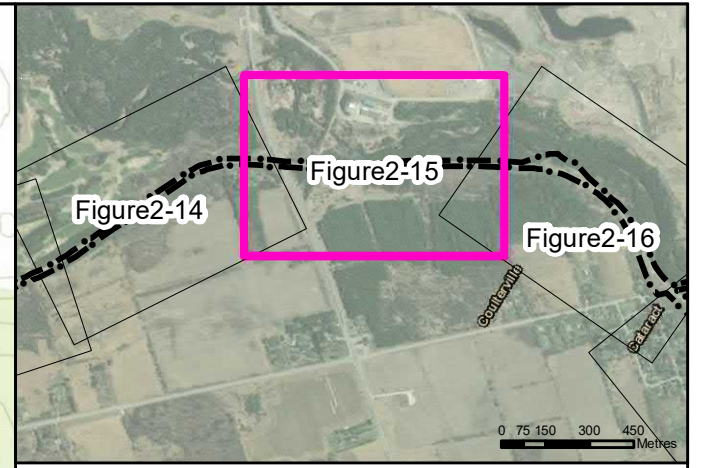
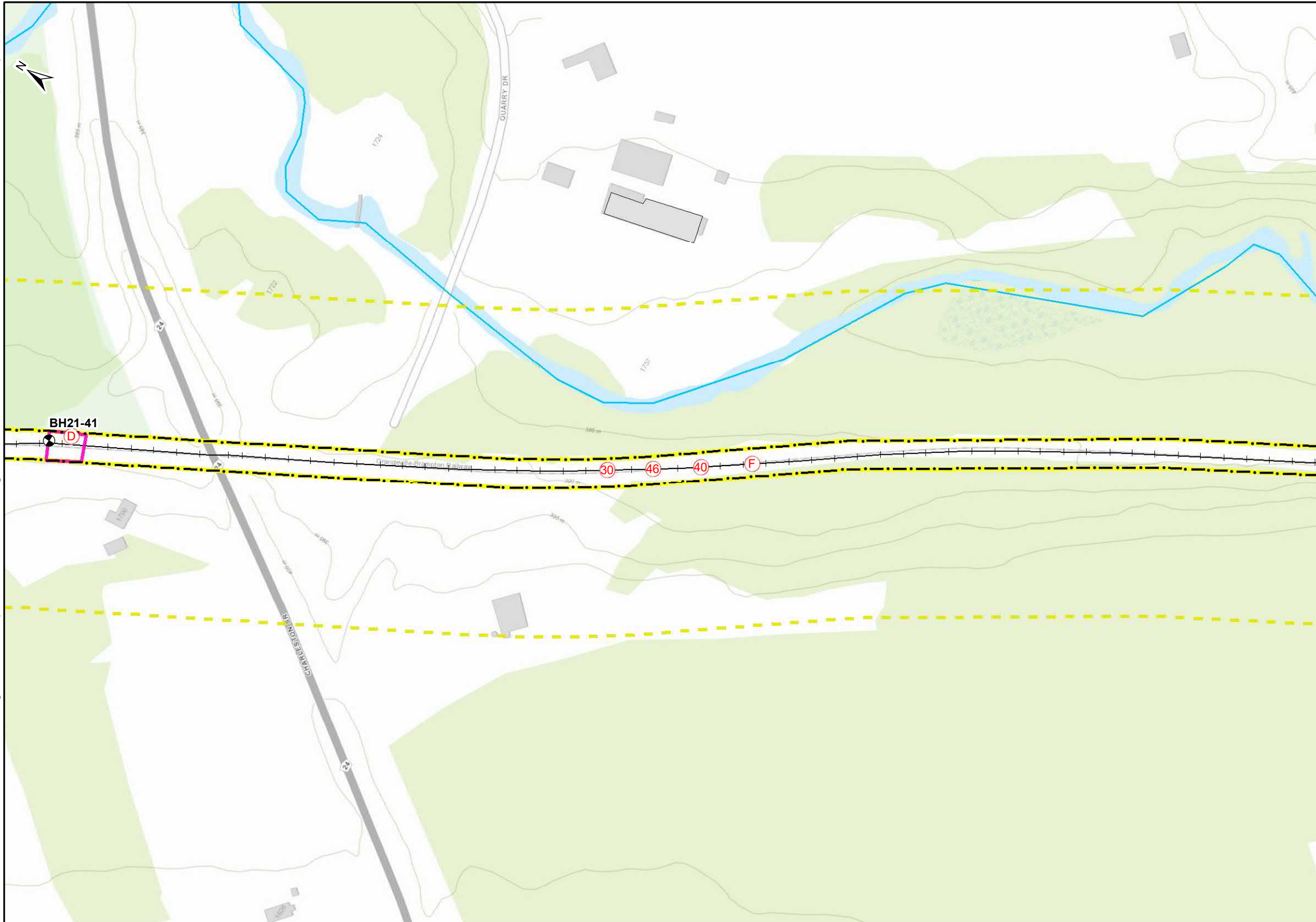
	PROJECT NO.:	211-10139-00	REVIEWED BY:	CJ
	DATE:	APRIL 2022	FIGURE:	2-14

DATA SOURCE: 0 25 50 100 150 200 Metres

LEGEND:

<span style="border: 1px dashed yellow; display: inline-block; width: 15px; height: 10px;"></span> 100m STUDY AREA	<span style="border: 1px solid black; border-radius: 50%; padding: 2px;">+</span> BOREHOLE
<span style="border: 1px dashed black; display: inline-block; width: 15px; height: 10px;"></span> SUBJECT SITE	<span style="border: 1px solid blue; border-radius: 50%; padding: 2px;">+</span> MONITORING WELL
<span style="display: inline-block; width: 15px; height: 10px; background-color: gray;"></span> BUILDINGS	<span style="border: 1px solid red; border-radius: 50%; padding: 2px;">#</span> PCA CONTRIBUTING TO APEC
<span style="border-bottom: 1px solid black; width: 15px; display: inline-block;"></span> RAIL	<span style="border: 1px solid black; border-radius: 50%; padding: 2px;">#</span> PCA NOT CONTRIBUTING TO APEC
<span style="border-bottom: 1px solid blue; width: 15px; display: inline-block;"></span> RIVERS	





AREAS OF POTENTIAL ENVIORNMENTAL CONCERN (APEC):

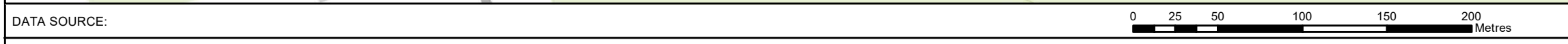
- APEC 13,14,38,114
- APEC 90

Note:  
Please refer to Table 3 appended to the report for APECs

TITLE:  
AREAS OF POTENTIAL ENVIRONMENTAL CONCERN

PROJECT:  
CONTAMINANT OVERVIEW STUDY  
FORMER ORANGEVILLE RAIL,  
CALEDON, ONTARIO

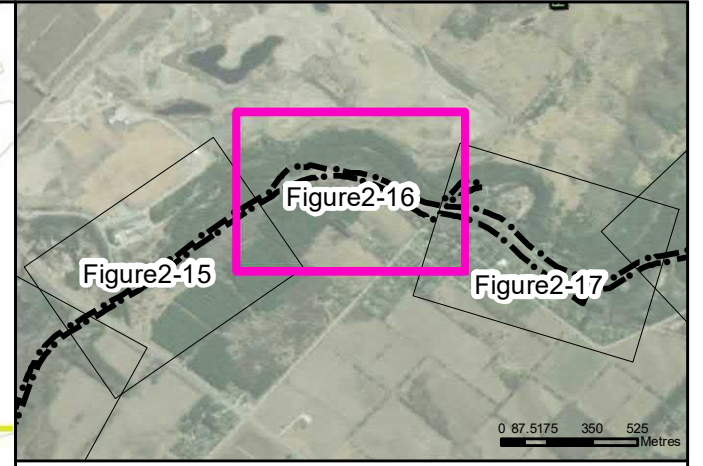
CLIENT:  
REGION OF PEEL



LEGEND:	
<span style="border: 1px dashed yellow; display: inline-block; width: 15px; height: 10px; margin-right: 5px;"></span> 100m STUDY AREA	<span style="border: 1px solid black; border-radius: 50%; padding: 2px;">+</span> BOREHOLE
<span style="border: 1px dashed black; display: inline-block; width: 15px; height: 10px; margin-right: 5px;"></span> SUBJECT SITE	<span style="border: 1px solid blue; border-radius: 50%; padding: 2px;">+</span> MONITORING WELL
<span style="display: inline-block; width: 15px; height: 10px; background-color: gray; margin-right: 5px;"></span> BUILDINGS	<span style="border: 1px solid red; border-radius: 50%; padding: 2px;">#</span> PCA CONTRIBUTING TO APEC
<span style="border-bottom: 1px solid black; width: 15px; margin-right: 5px;"></span> RAIL	<span style="border: 1px solid black; border-radius: 50%; padding: 2px;">#</span> PCA NOT CONTRIBUTING TO APEC
<span style="border-bottom: 1px solid blue; width: 15px; margin-right: 5px;"></span> RIVERS	

	PROJECT NO.: 211-10139-00	REVIEWED BY: CJ
	DATE: APRIL 2022	FIGURE: 2-15





**AREAS OF POTENTIAL ENVIRONMENTAL CONCERN (APEC):**

<span style="border: 1px dashed yellow; display: inline-block; width: 15px; height: 10px;"></span>	APEC 13,14,38,114
<span style="border: 1px dashed magenta; display: inline-block; width: 15px; height: 10px;"></span>	APEC 85
<span style="border: 1px dashed cyan; display: inline-block; width: 15px; height: 10px;"></span>	APEC 86
<span style="border: 1px dashed green; display: inline-block; width: 15px; height: 10px;"></span>	APEC 87
<span style="border: 1px dashed purple; display: inline-block; width: 15px; height: 10px;"></span>	APEC 88
<span style="border: 1px dashed orange; display: inline-block; width: 15px; height: 10px;"></span>	APEC 89
<span style="border: 1px dashed blue; display: inline-block; width: 15px; height: 10px;"></span>	APEC 111

Note:  
Please refer to Table 3 appended to the report for APECs

TITLE:  
AREAS OF POTENTIAL ENVIRONMENTAL CONCERN

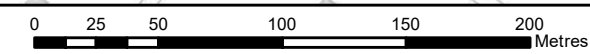
PROJECT:  
CONTAMINANT OVERVIEW STUDY  
FORMER ORANGEVILLE RAIL,  
CALEDON, ONTARIO

CLIENT:  
REGION OF PEEL

DATA SOURCE:

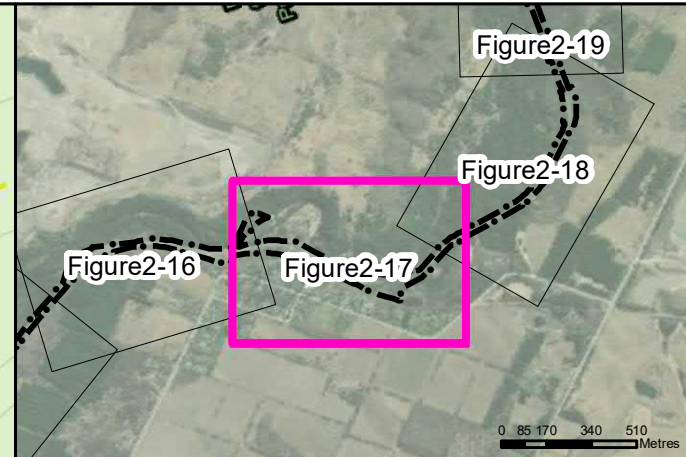
**LEGEND:**

<span style="border: 1px dashed yellow; display: inline-block; width: 20px; height: 10px;"></span> 100m STUDY AREA	BOREHOLE
<span style="border: 1px dashed black; display: inline-block; width: 20px; height: 10px;"></span> SUBJECT SITE	MONITORING WELL
BUILDINGS	PCA CONTRIBUTING TO APEC
RAIL	PCA NOT CONTRIBUTING TO APEC
RIVERS	



	PROJECT NO.: 211-10139-00	REVIEWED BY: CJ
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AREAS OF POTENTIAL ENVIRONMENTAL CONCERN (APEC):

<span style="border: 2px dashed yellow; display: inline-block; width: 15px; height: 10px;"></span>	APEC 13,14,38,114
<span style="border: 2px solid pink; display: inline-block; width: 15px; height: 10px;"></span>	APEC 84
<span style="border: 2px solid blue; display: inline-block; width: 15px; height: 10px;"></span>	APEC 111

Note:  
Please refer to Table 3 appended to the report for APECs

TITLE:  
AREAS OF POTENTIAL ENVIRONMENTAL CONCERN

PROJECT:  
CONTAMINANT OVERVIEW STUDY  
FORMER ORANGEVILLE RAIL,  
CALEDON, ONTARIO

CLIENT:  
REGION OF PEEL

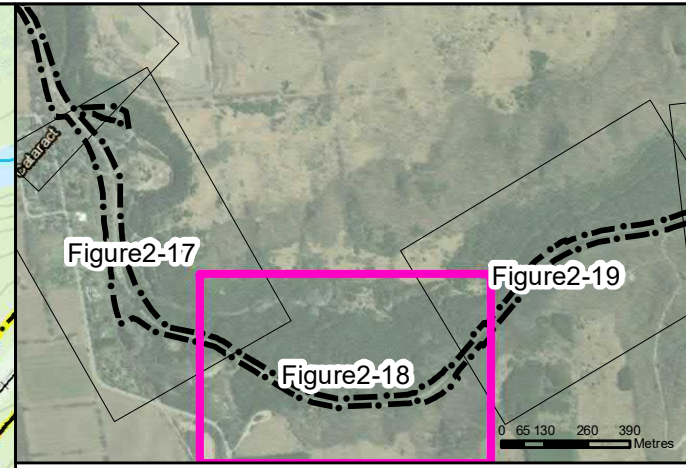


LEGEND:

<span style="border: 2px dashed yellow; display: inline-block; width: 15px; height: 10px;"></span>	100m STUDY AREA	<span style="border: 1px solid black; border-radius: 50%; padding: 2px;">+</span>	BOREHOLE
<span style="border: 2px solid black; display: inline-block; width: 15px; height: 10px;"></span>	SUBJECT SITE	<span style="border: 1px solid blue; border-radius: 50%; padding: 2px;">+</span>	MONITORING WELL
<span style="background-color: grey; display: inline-block; width: 15px; height: 10px;"></span>	BUILDINGS	<span style="border: 1px solid red; border-radius: 50%; padding: 2px;">#</span>	PCA CONTRIBUTING TO APEC
<span style="border-bottom: 1px solid black; width: 15px; display: inline-block;"></span>	RAIL	<span style="border: 1px solid black; border-radius: 50%; padding: 2px;">#</span>	PCA NOT CONTRIBUTING TO APEC
<span style="border-bottom: 2px solid blue; width: 15px; display: inline-block;"></span>	RIVERS		

	PROJECT NO.:	211-10139-00	REVIEWED BY:	CJ
	DATE:	APRIL 2022	FIGURE:	2-17





**AREAS OF POTENTIAL ENVIORNMENTAL CONCERN (APEC):**

<span style="border: 2px solid yellow; display: inline-block; width: 15px; height: 10px;"></span>	APEC 13,14,38,114
<span style="border: 2px solid blue; display: inline-block; width: 15px; height: 10px;"></span>	APEC 83
<span style="border: 2px solid magenta; display: inline-block; width: 15px; height: 10px;"></span>	APEC 84

Note:  
Please refer to Table 3 appended to the report for APECs

TITLE:  
AREAS OF POTENTIAL ENVIRONMENTAL CONCERN

PROJECT:  
CONTAMINANT OVERVIEW STUDY  
FORMER ORANGEVILLE RAIL,  
CALEDON, ONTARIO

CLIENT:  
REGION OF PEEL

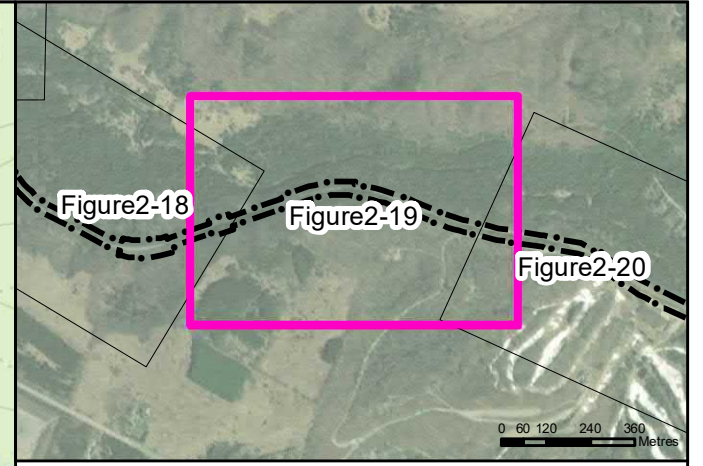
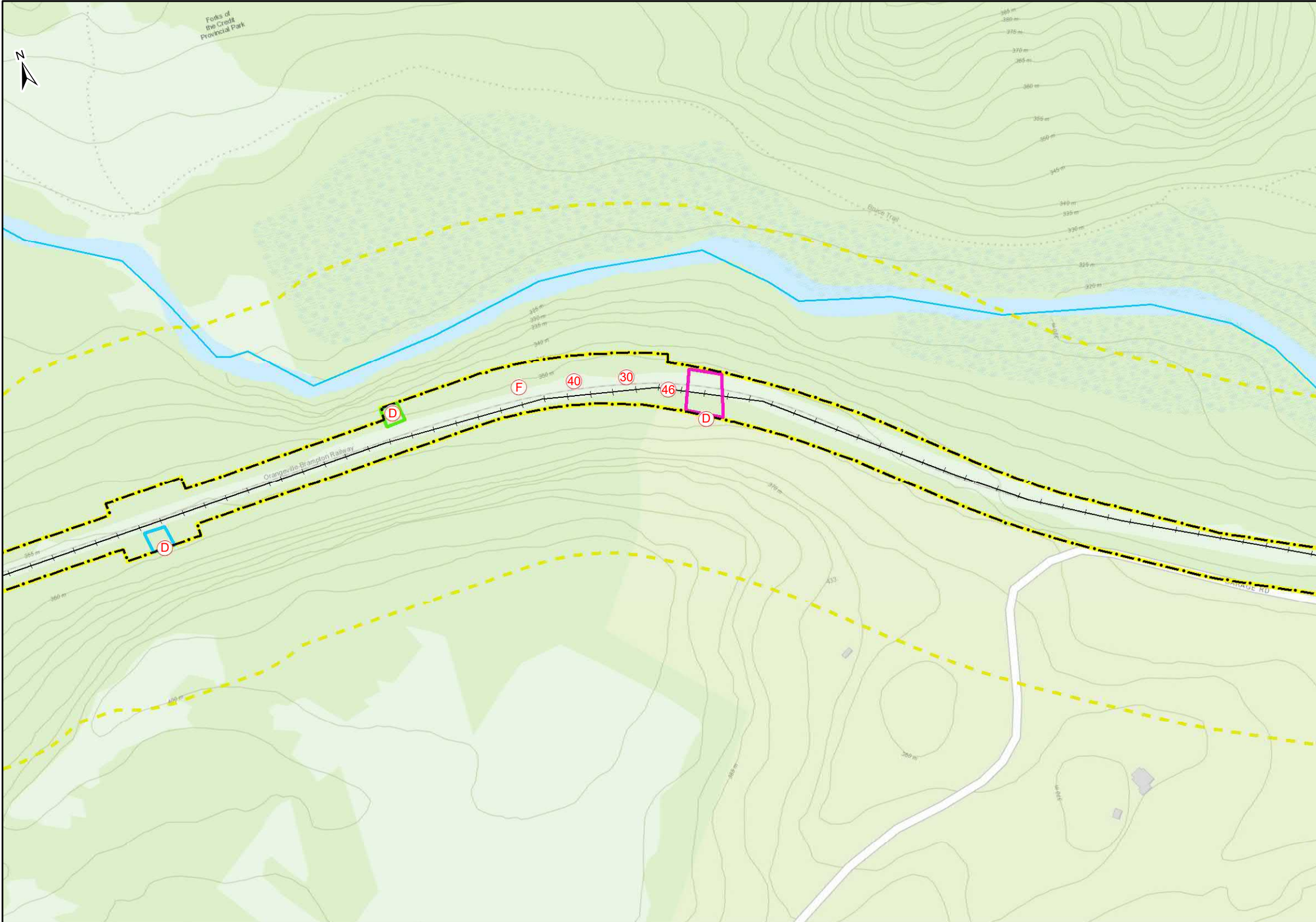
	PROJECT NO.:	211-10139-00	REVIEWED BY:	CJ
	DATE:	APRIL 2022	FIGURE:	2-18



DATA SOURCE:

<span style="border: 2px dashed yellow; display: inline-block; width: 15px; height: 10px;"></span>	100m STUDY AREA		BOREHOLE
<span style="border: 2px dashed black; display: inline-block; width: 15px; height: 10px;"></span>	SUBJECT SITE		MONITORING WELL
	BUILDINGS	<span style="border: 1px solid red; border-radius: 50%; padding: 2px;">#</span>	PCA CONTRIBUTING TO APEC
	RAIL	<span style="border: 1px solid black; border-radius: 50%; padding: 2px;">#</span>	PCA NOT CONTRIBUTING TO APEC
	RIVERS		





- AREAS OF POTENTIAL ENVIORNMENTAL CONCERN (APEC):
- APEC 13,14,38,114
  - APEC 81
  - APEC 82
  - APEC 83

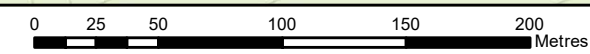
Note:  
Please refer to Table 3 appended to the report for APECs

TITLE:  
AREAS OF POTENTIAL ENVIRONMENTAL CONCERN

PROJECT:  
CONTAMINANT OVERVIEW STUDY  
FORMER ORANGEVILLE RAIL,  
CALEDON, ONTARIO

CLIENT:  
REGION OF PEEL

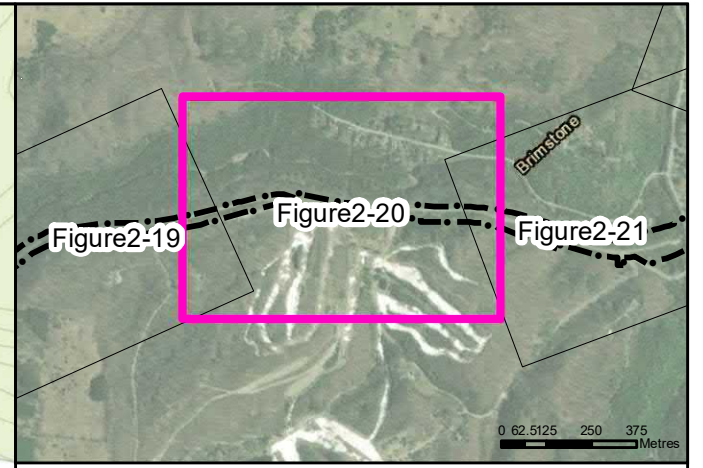
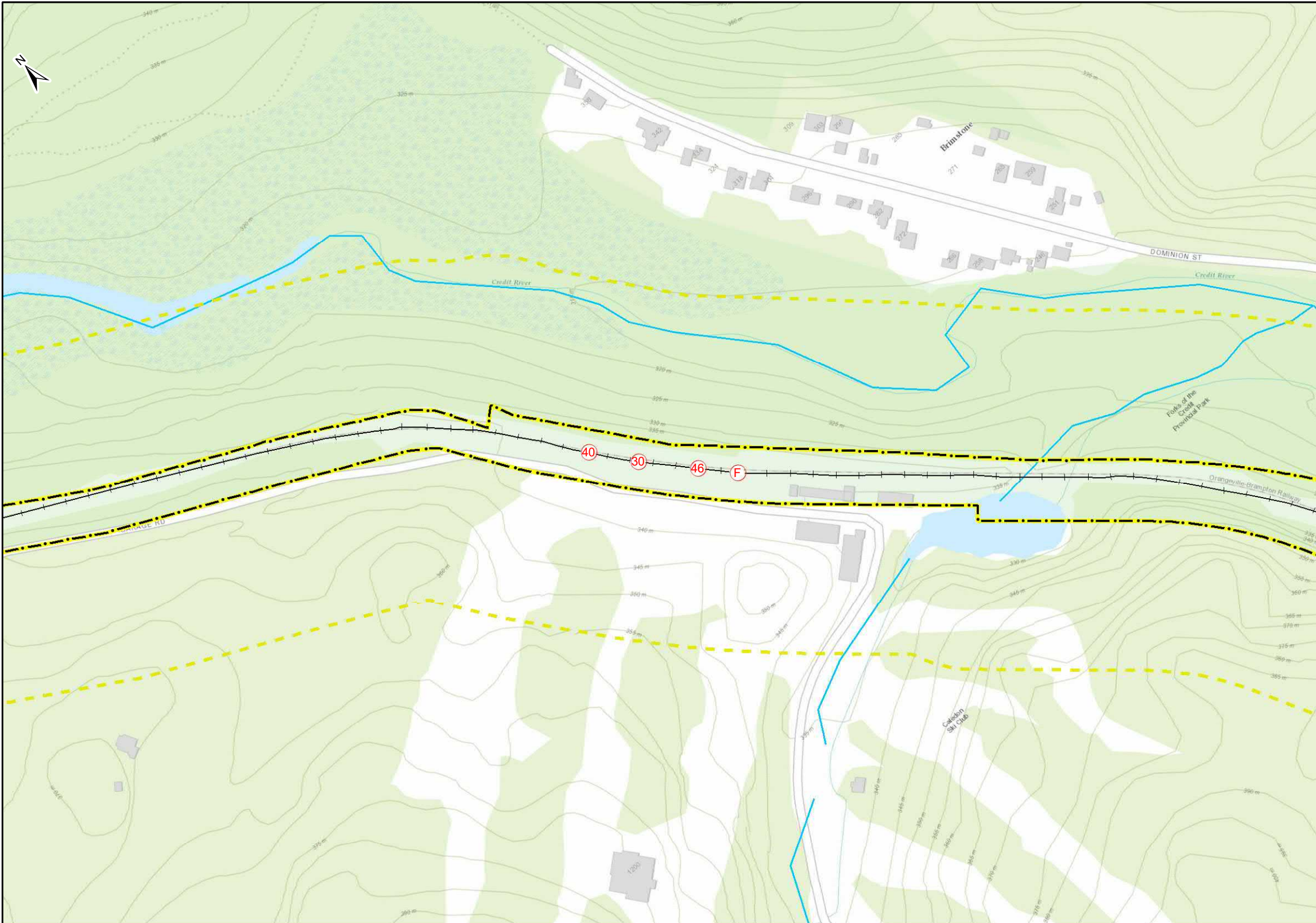
DATA SOURCE:



- LEGEND:
- 100m STUDY AREA
  - SUBJECT SITE
  - BUILDINGS
  - RAIL
  - RIVERS
  - + BOREHOLE
  - + MONITORING WELL
  - # PCA CONTRIBUTING TO APEC
  - # PCA NOT CONTRIBUTING TO APEC

	PROJECT NO.:	211-10139-00	REVIEWED BY:	CJ
	DATE:	APRIL 2022	FIGURE:	2-19





AREAS OF POTENTIAL ENVIORNMENTAL CONCERN (APEC):

APEC 13,14,38,114

Note:  
Please refer to Table 3 appended to the report for APECs

TITLE:  
AREAS OF POTENTIAL ENVIRONMENTAL CONCERN

PROJECT:  
CONTAMINANT OVERVIEW STUDY  
FORMER ORANGEVILLE RAIL,  
CALEDON, ONTARIO

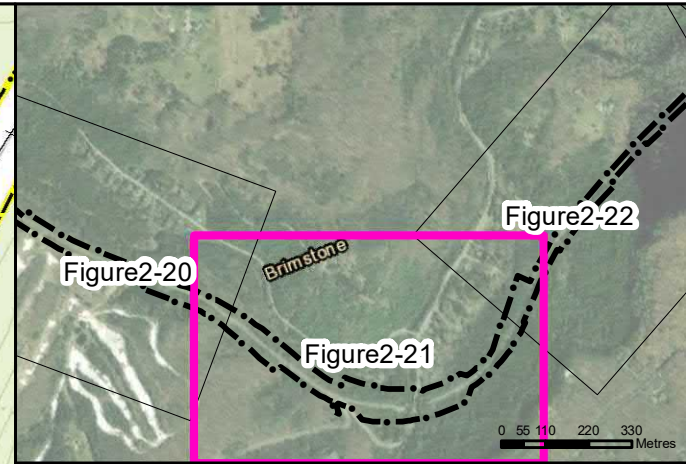
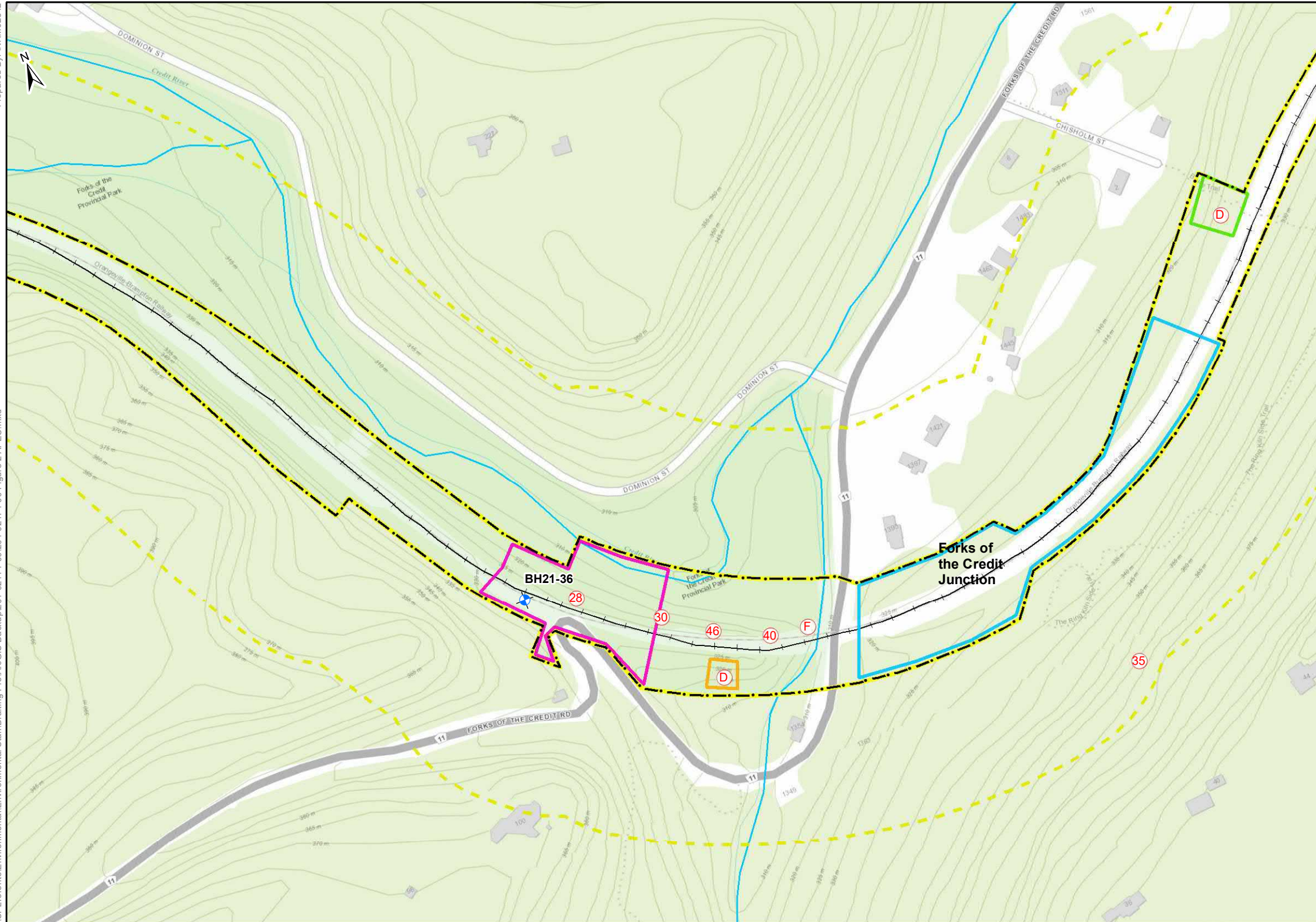
CLIENT:  
REGION OF PEEL

	PROJECT NO.:	211-10139-00	REVIEWED BY:	CJ
	DATE:	APRIL 2022	FIGURE:	2-20

DATA SOURCE:

LEGEND:	
<span style="border: 1px dashed yellow; display: inline-block; width: 15px; height: 10px;"></span> 100m STUDY AREA	BOREHOLE
<span style="border: 1px dashed black; display: inline-block; width: 15px; height: 10px;"></span> SUBJECT SITE	MONITORING WELL
BUILDINGS	PCA CONTRIBUTING TO APEC
RAIL	PCA NOT CONTRIBUTING TO APEC
RIVERS	





AREAS OF POTENTIAL ENVIORNMENTAL CONCERN (APEC):

- APEC 13,14,38,114
- APEC 11
- APEC 79
- APEC 80
- APEC 110

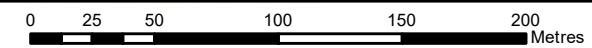
Note:  
Please refer to Table 3 appended to the report for APECs

TITLE:  
AREAS OF POTENTIAL ENVIRONMENTAL CONCERN

PROJECT:  
CONTAMINANT OVERVIEW STUDY  
FORMER ORANGEVILLE RAIL,  
CALEDON, ONTARIO

CLIENT:  
REGION OF PEEL

DATA SOURCE:



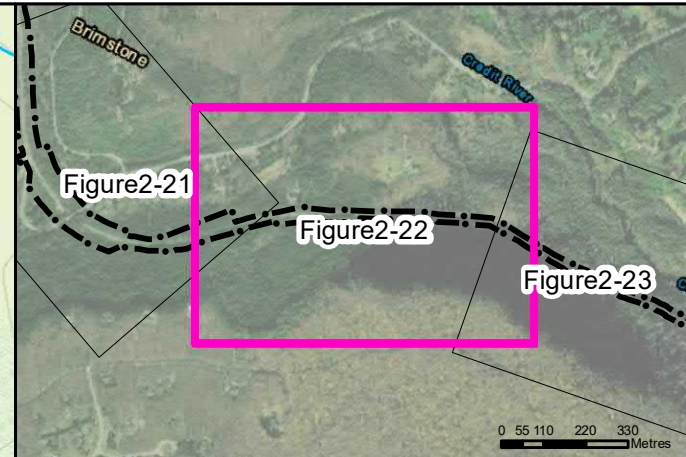
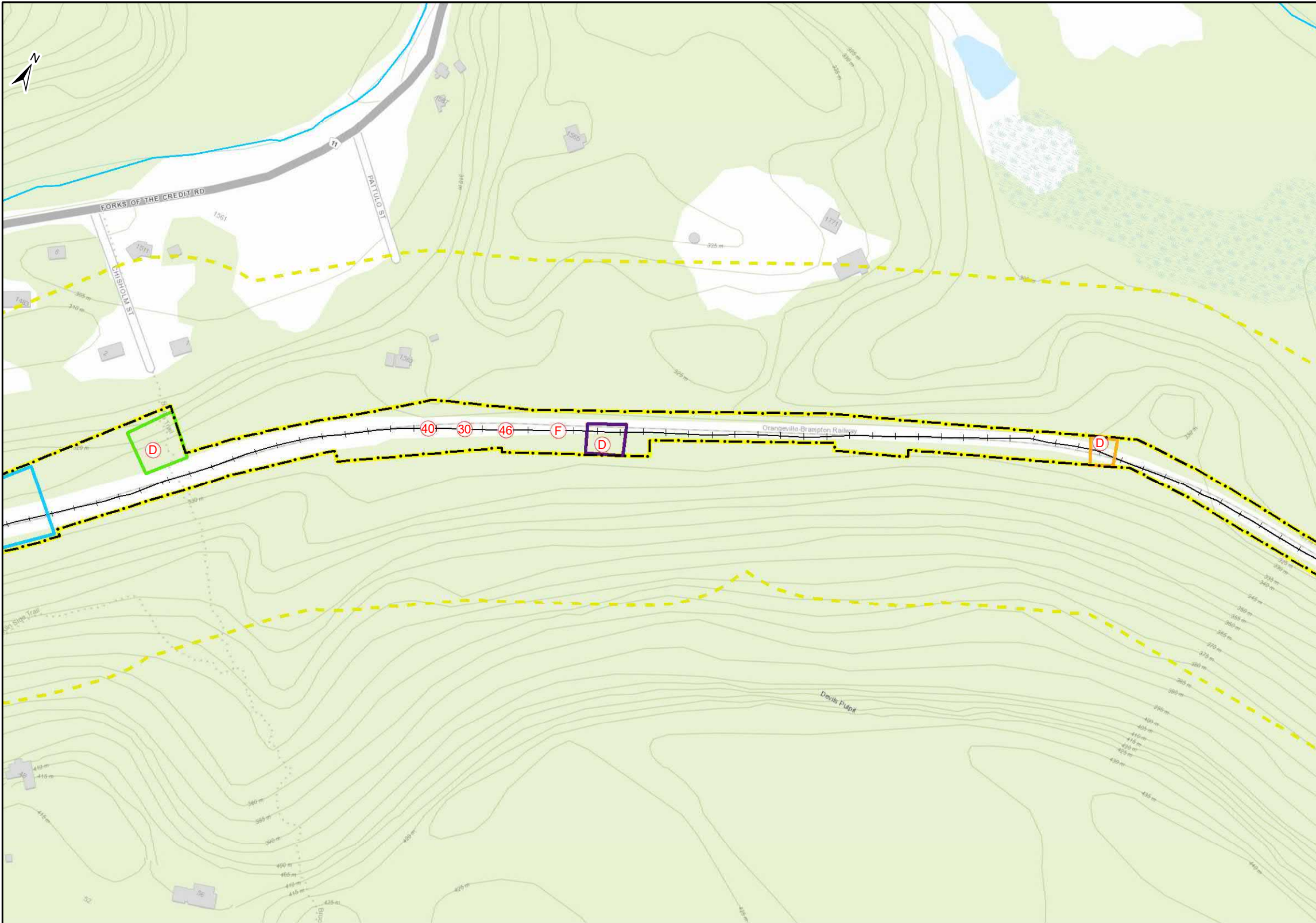
LEGEND:

- 100m STUDY AREA
- SUBJECT SITE
- BUILDINGS
- RAIL
- RIVERS
- + BOREHOLE
- + MONITORING WELL
- # PCA CONTRIBUTING TO APEC
- # PCA NOT CONTRIBUTING TO APEC



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- AREAS OF POTENTIAL ENVIORNMENTAL CONCERN (APEC):
- APEC 13,14,38,114
  - APEC 11
  - APEC 77
  - APEC 78
  - APEC 79

Note:  
Please refer to Table 3 appended to the report for APECs

TITLE:  
AREAS OF POTENTIAL ENVIRONMENTAL CONCERN

PROJECT:  
CONTAMINANT OVERVIEW STUDY  
FORMER ORANGEVILLE RAIL,  
CALEDON, ONTARIO

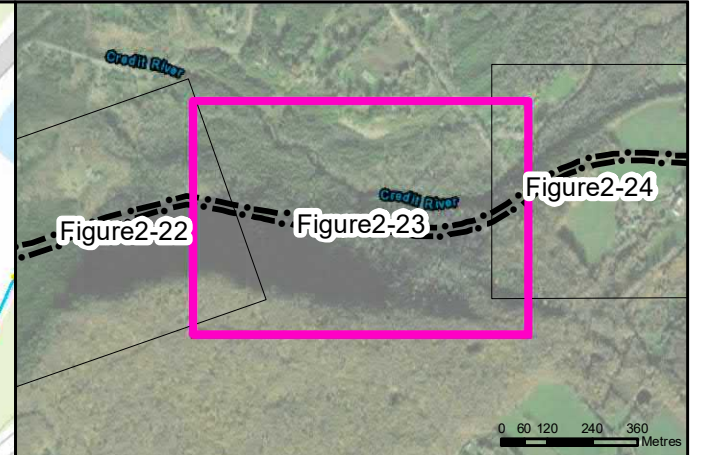
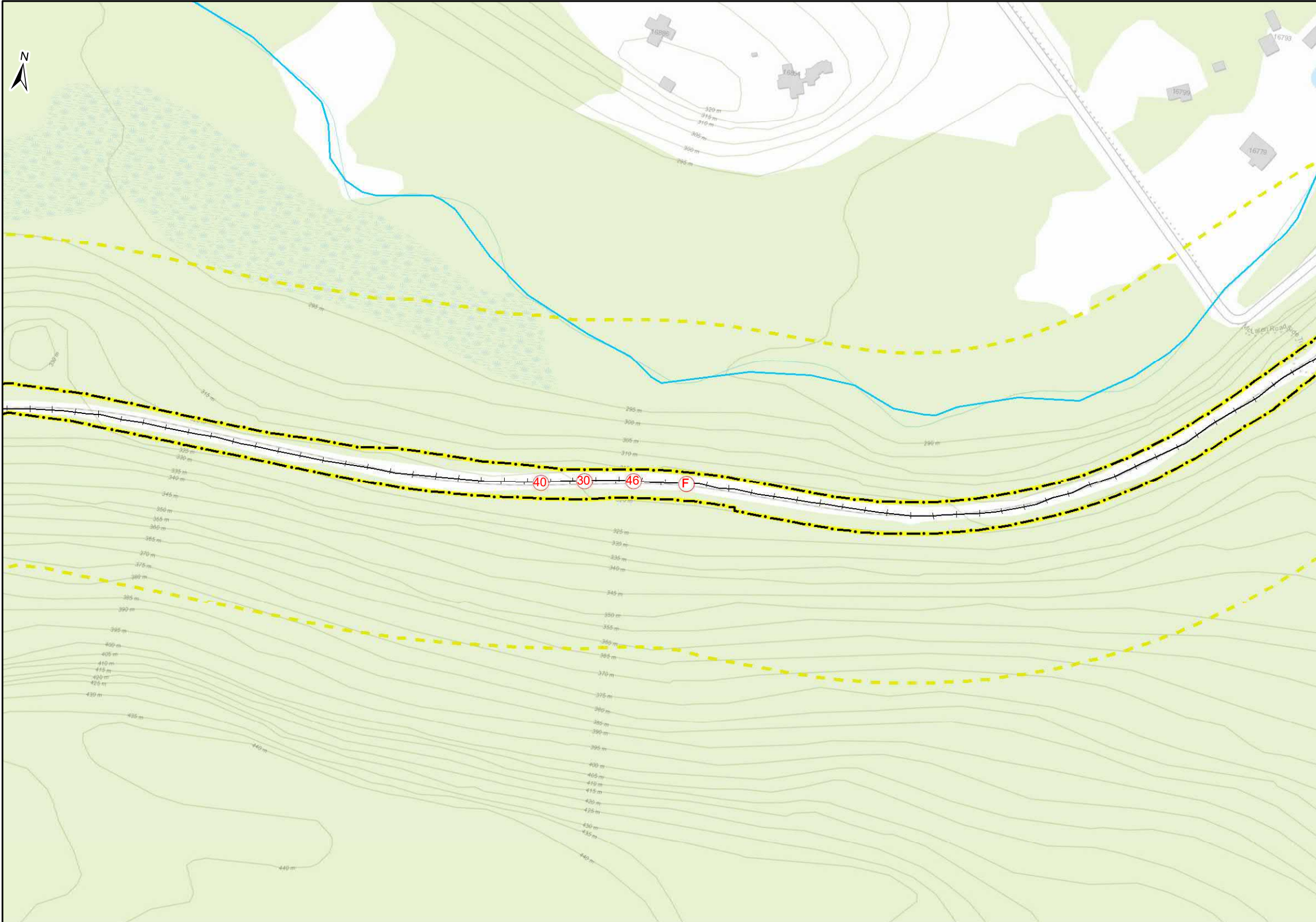
CLIENT:  
REGION OF PEEL

	PROJECT NO.:	211-10139-00	REVIEWED BY:	CJ
	DATE:	APRIL 2022	FIGURE:	2-22

DATA SOURCE: 0 25 50 100 150 200 Metres

- LEGEND:
- 100m STUDY AREA
  - SUBJECT SITE
  - BUILDINGS
  - RAIL
  - RIVERS
  - BOREHOLE
  - MONITORING WELL
  - # PCA CONTRIBUTING TO APEC
  - # PCA NOT CONTRIBUTING TO APEC





AREAS OF POTENTIAL ENVIORNMENTAL CONCERN (APEC):

APEC 13,14,38,114

Note:  
Please refer to Table 3 appended to the report for APECs

TITLE:  
AREAS OF POTENTIAL ENVIRONMENTAL CONCERN

PROJECT:  
CONTAMINANT OVERVIEW STUDY  
FORMER ORANGEVILLE RAIL,  
CALEDON, ONTARIO

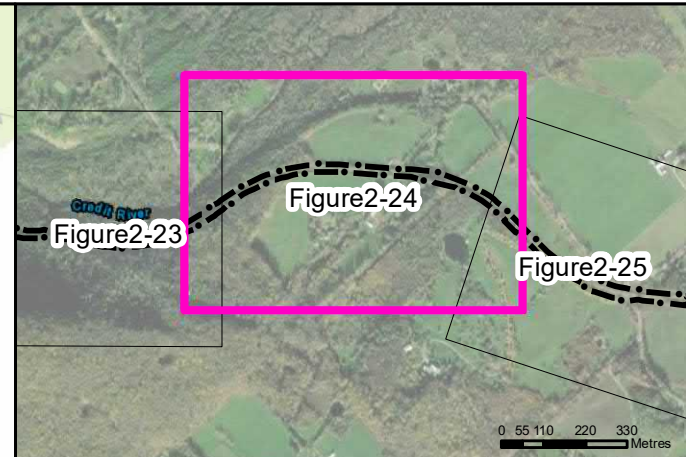
CLIENT:  
REGION OF PEEL



LEGEND:	
<span style="border: 1px dashed yellow; display: inline-block; width: 15px; height: 10px; vertical-align: middle;"></span> 100m STUDY AREA	BOREHOLE
<span style="border: 1px dashed black; display: inline-block; width: 15px; height: 10px; vertical-align: middle;"></span> SUBJECT SITE	MONITORING WELL
BUILDINGS	PCA CONTRIBUTING TO APEC
RAIL	PCA NOT CONTRIBUTING TO APEC
RIVERS	

	PROJECT NO.: 211-10139-00	REVIEWED BY: CJ
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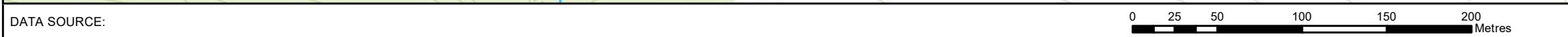
- AREAS OF POTENTIAL ENVIORNMENTAL CONCERN (APEC):
- APEC 13,14,38,114
  - APEC 75
  - APEC 76

Note:  
Please refer to Table 3 appended to the report for APECs

TITLE:  
AREAS OF POTENTIAL ENVIRONMENTAL CONCERN

PROJECT:  
CONTAMINANT OVERVIEW STUDY  
FORMER ORANGEVILLE RAIL,  
CALEDON, ONTARIO

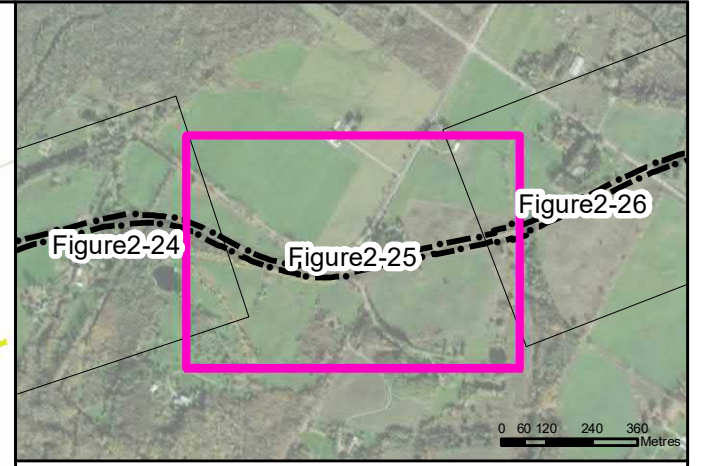
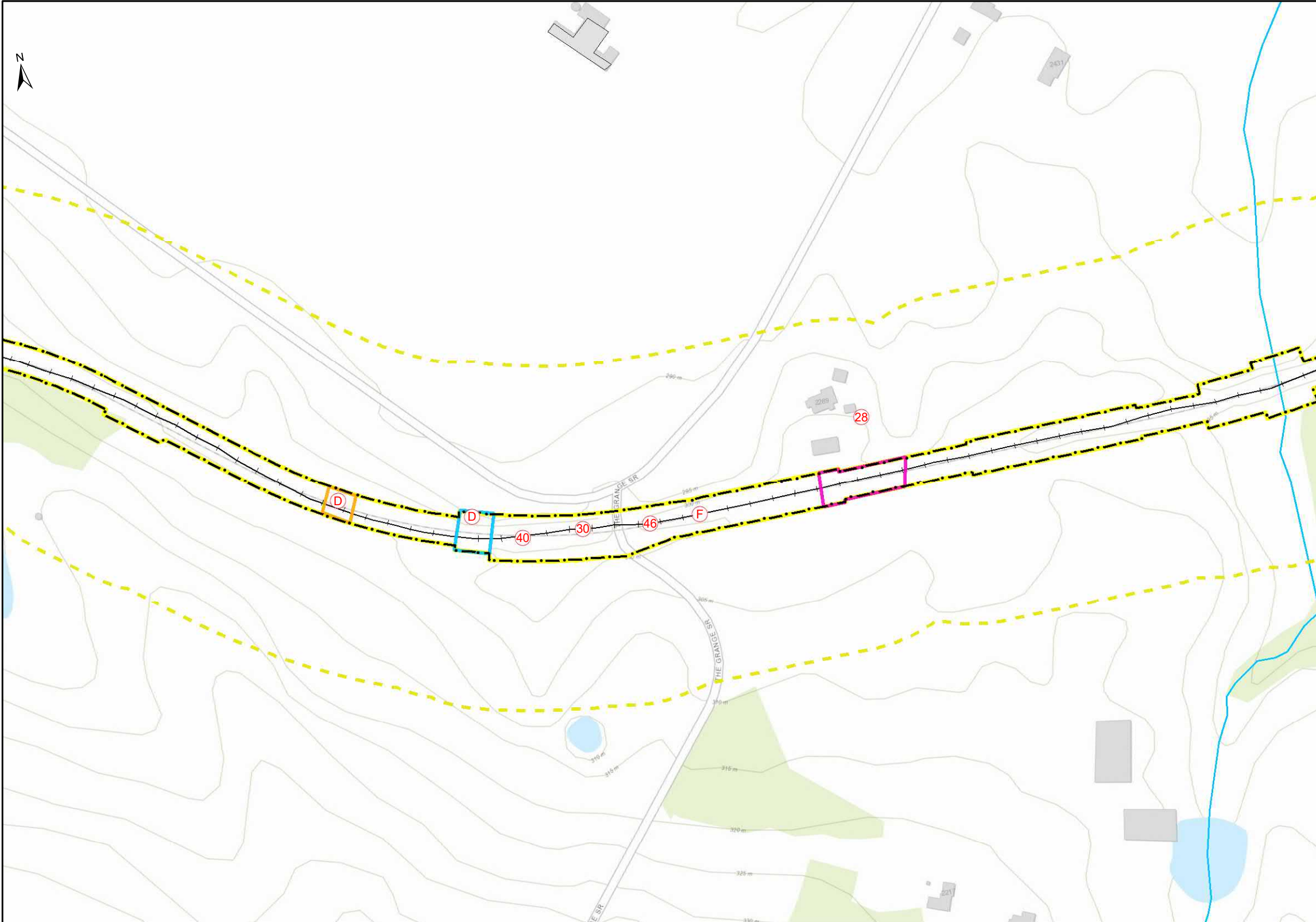
CLIENT:  
REGION OF PEEL



- LEGEND:
- 100m STUDY AREA
  - SUBJECT SITE
  - BUILDINGS
  - RAIL
  - RIVERS
  - + BOREHOLE
  - + MONITORING WELL
  - # PCA CONTRIBUTING TO APEC
  - # PCA NOT CONTRIBUTING TO APEC

	PROJECT NO.: 211-10139-00	REVIEWED BY: CJ
	DATE: APRIL 2022	FIGURE: 2-24





- AREAS OF POTENTIAL ENVIORNMENTAL CONCERN (APEC):
- APEC 13,14,38,114
  - APEC 36
  - APEC 73
  - APEC 74

Note:  
Please refer to Table 3 appended to the report for APECs

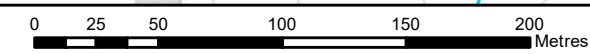
TITLE:  
AREAS OF POTENTIAL ENVIRONMENTAL CONCERN

PROJECT:  
CONTAMINANT OVERVIEW STUDY  
FORMER ORANGEVILLE RAIL,  
CALEDON, ONTARIO

CLIENT:  
REGION OF PEEL

DATA SOURCE:

- LEGEND:
- 100m STUDY AREA
  - SUBJECT SITE
  - BUILDINGS
  - RAIL
  - RIVERS
  - + BOREHOLE
  - + MONITORING WELL
  - # PCA CONTRIBUTING TO APEC
  - # PCA NOT CONTRIBUTING TO APEC

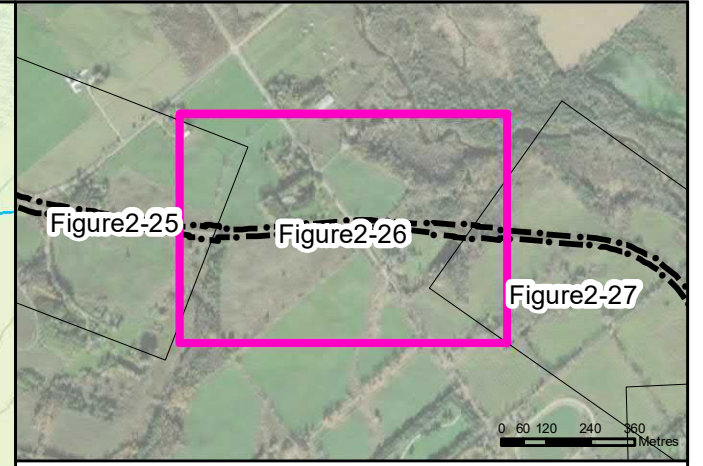
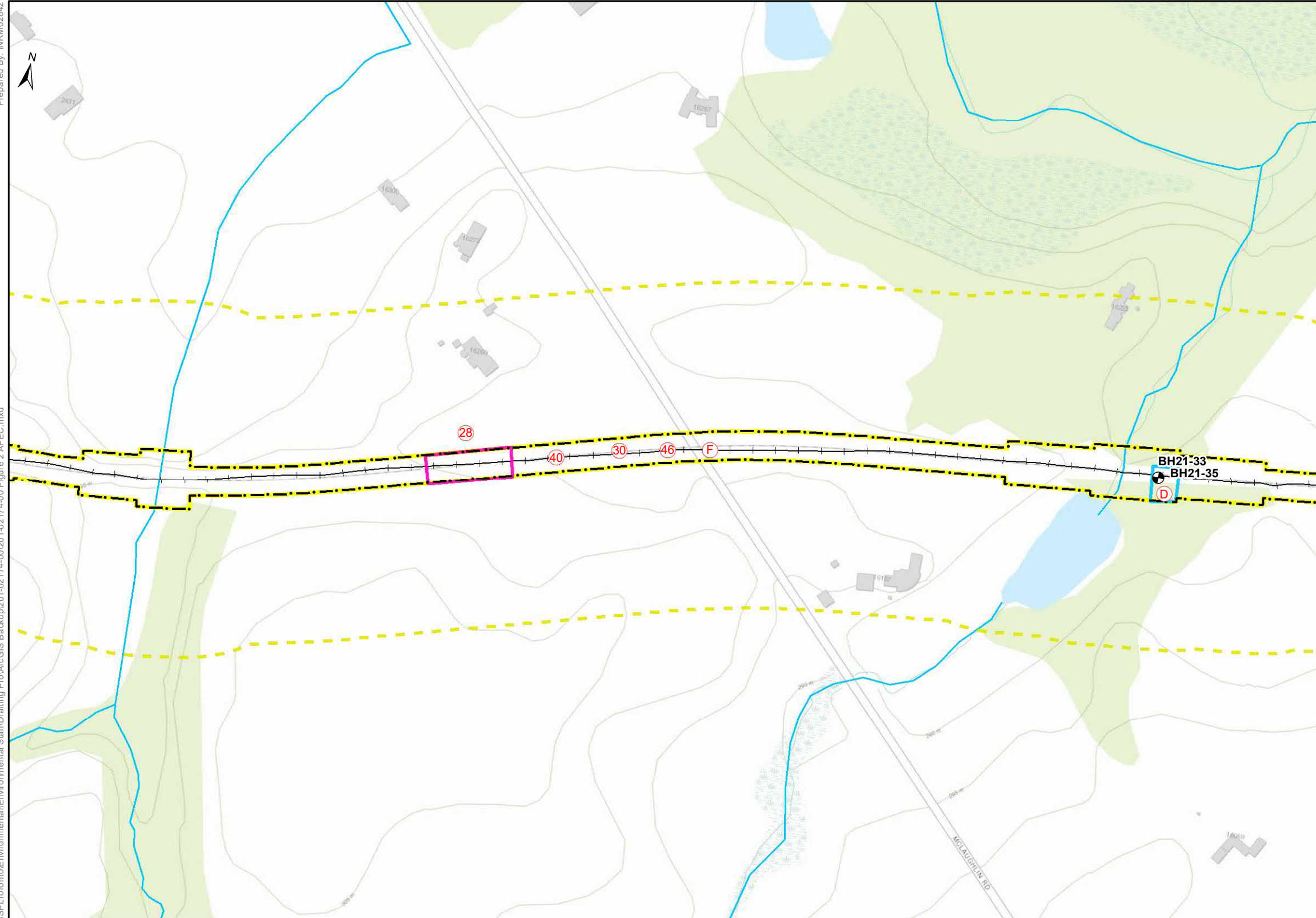


PROJECT NO.:  
211-10139-00

REVIEWED BY:  
CJ

DATE:  
APRIL 2022

FIGURE:  
2-25



- AREAS OF POTENTIAL ENVIORNMENTAL CONCERN (APEC):
- APEC 13,14,38,114
  - APEC 35
  - APEC 72

Note:  
Please refer to Table 3 appended to the report for APECs

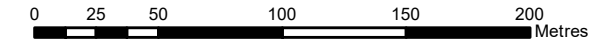
TITLE:  
AREAS OF POTENTIAL ENVIRONMENTAL CONCERN

PROJECT:  
CONTAMINANT OVERVIEW STUDY  
FORMER ORANGEVILLE RAIL,  
CALEDON, ONTARIO

CLIENT:  
REGION OF PEEL

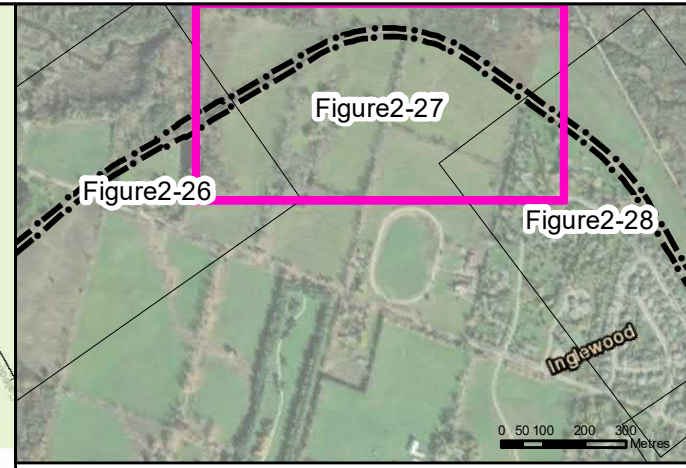
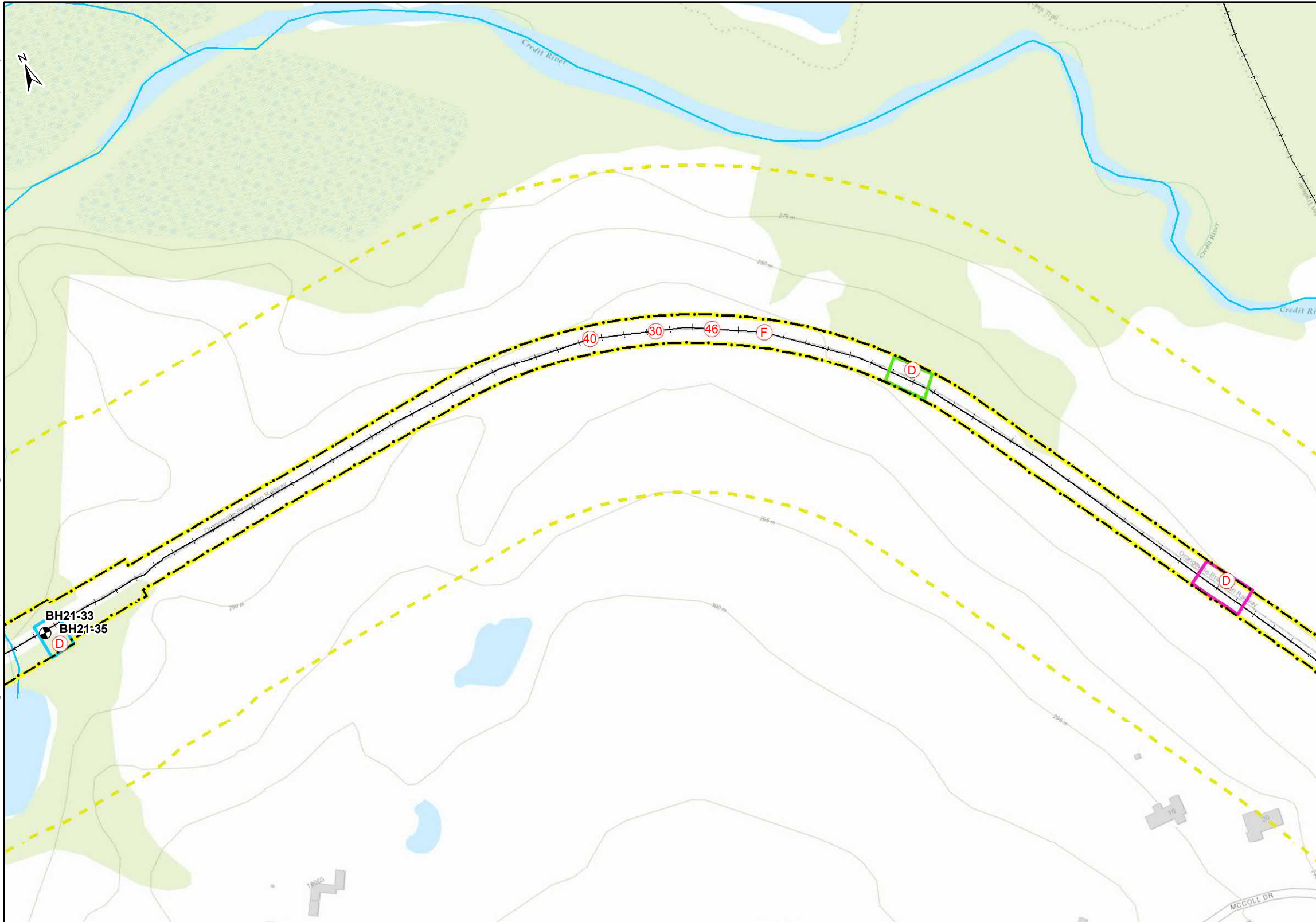
DATA SOURCE:

- LEGEND:
- 100m STUDY AREA
  - SUBJECT SITE
  - BUILDINGS
  - RAIL
  - RIVERS
  - + BOREHOLE
  - + MONITORING WELL
  - # PCA CONTRIBUTING TO APEC
  - # PCA NOT CONTRIBUTING TO APEC



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	DATE:	APRIL 2022	FIGURE:	2-26





AREAS OF POTENTIAL ENVIORNMENTAL CONCERN (APEC):

<span style="border: 2px dashed yellow; display: inline-block; width: 15px; height: 10px;"></span>	APEC 13,14,38,114
<span style="border: 2px dashed magenta; display: inline-block; width: 15px; height: 10px;"></span>	APEC 70
<span style="border: 2px dashed green; display: inline-block; width: 15px; height: 10px;"></span>	APEC 71
<span style="border: 2px dashed blue; display: inline-block; width: 15px; height: 10px;"></span>	APEC 72

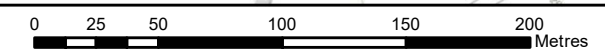
Note:  
Please refer to Table 3 appended to the report for APECs

TITLE:  
AREAS OF POTENTIAL ENVIRONMENTAL CONCERN

PROJECT:  
CONTAMINANT OVERVIEW STUDY  
FORMER ORANGEVILLE RAIL,  
CALEDON, ONTARIO

CLIENT:  
REGION OF PEEL

DATA SOURCE:

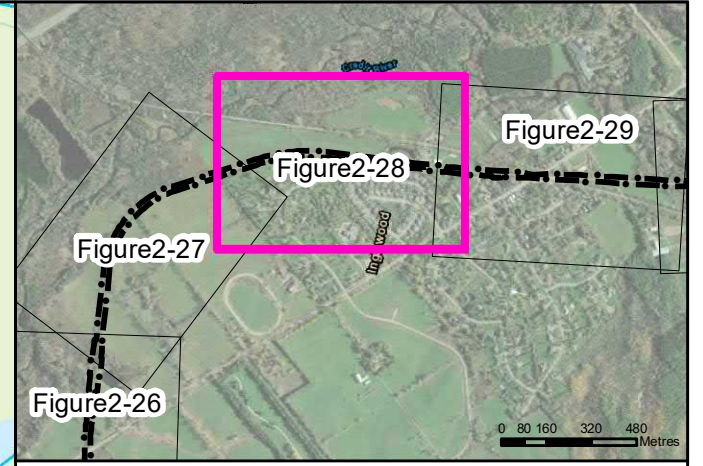
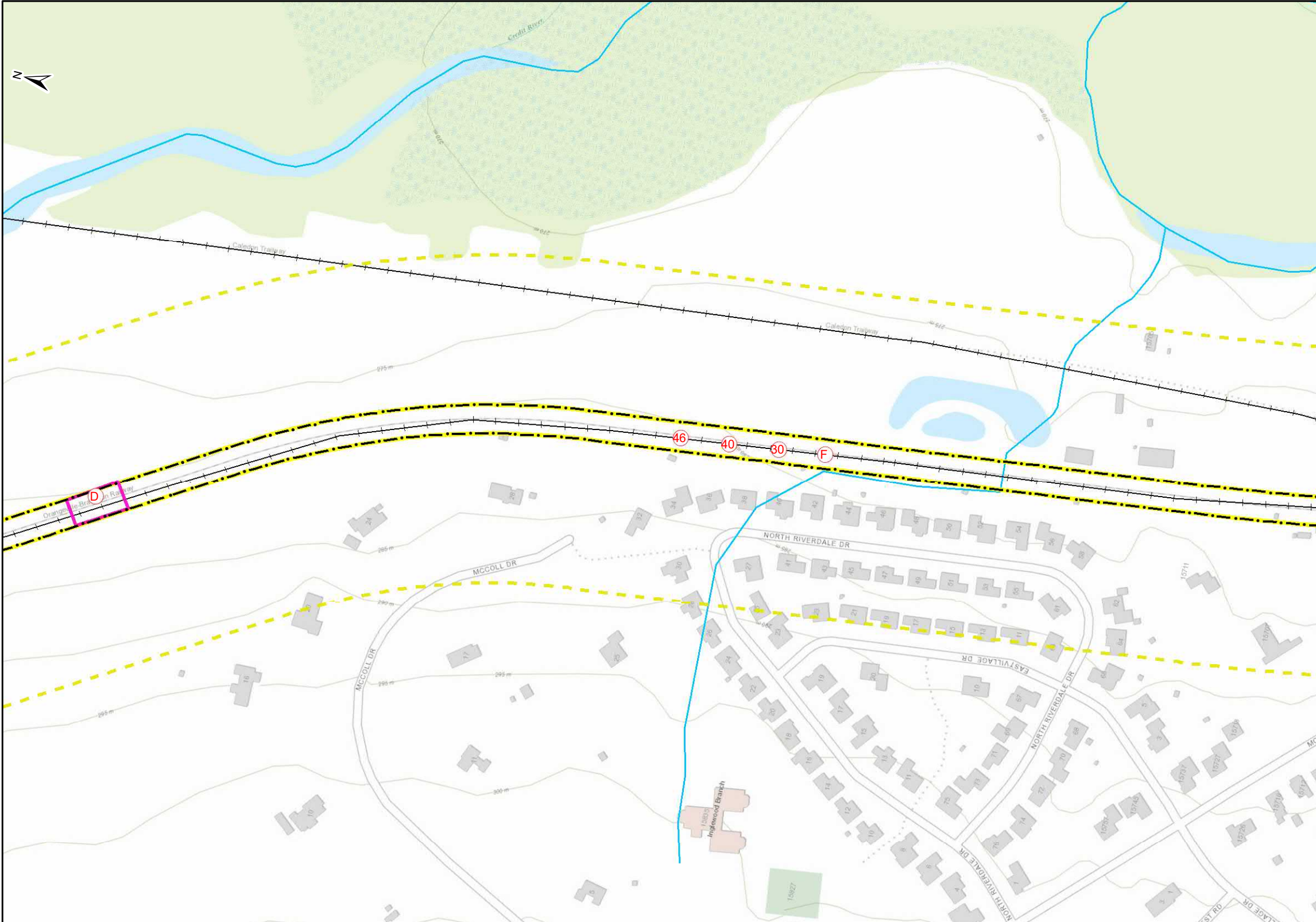


LEGEND:

<span style="border: 2px dashed yellow; display: inline-block; width: 15px; height: 10px;"></span>	100m STUDY AREA		BOREHOLE
<span style="border: 2px dashed black; display: inline-block; width: 15px; height: 10px;"></span>	SUBJECT SITE		MONITORING WELL
	BUILDINGS		PCA CONTRIBUTING TO APEC
	RAIL		PCA NOT CONTRIBUTING TO APEC
	RIVERS		

	PROJECT NO.:	211-10139-00	REVIEWED BY:	CJ
	DATE:	APRIL 2022	FIGURE:	2-27





AREAS OF POTENTIAL ENVIORNMENTAL CONCERN (APEC):

- APEC 13,14,38,114
- APEC 70

Note:  
Please refer to Table 3 appended to the report for APECs

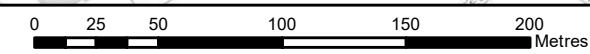
TITLE:  
AREAS OF POTENTIAL ENVIRONMENTAL CONCERN

PROJECT:  
CONTAMINANT OVERVIEW STUDY  
FORMER ORANGEVILLE RAIL,  
CALEDON, ONTARIO

CLIENT:  
REGION OF PEEL

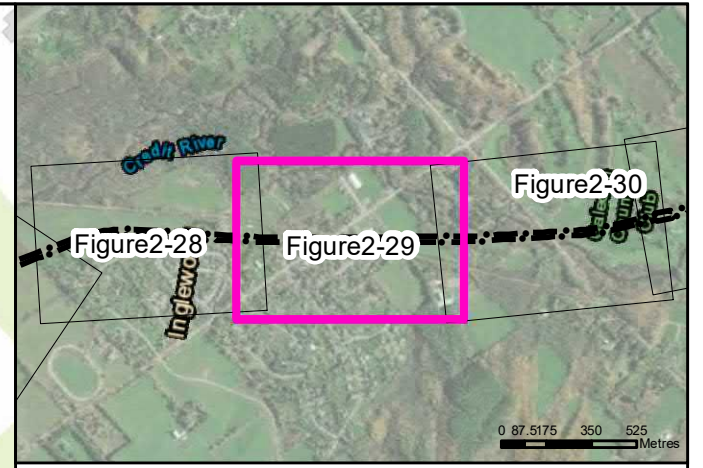
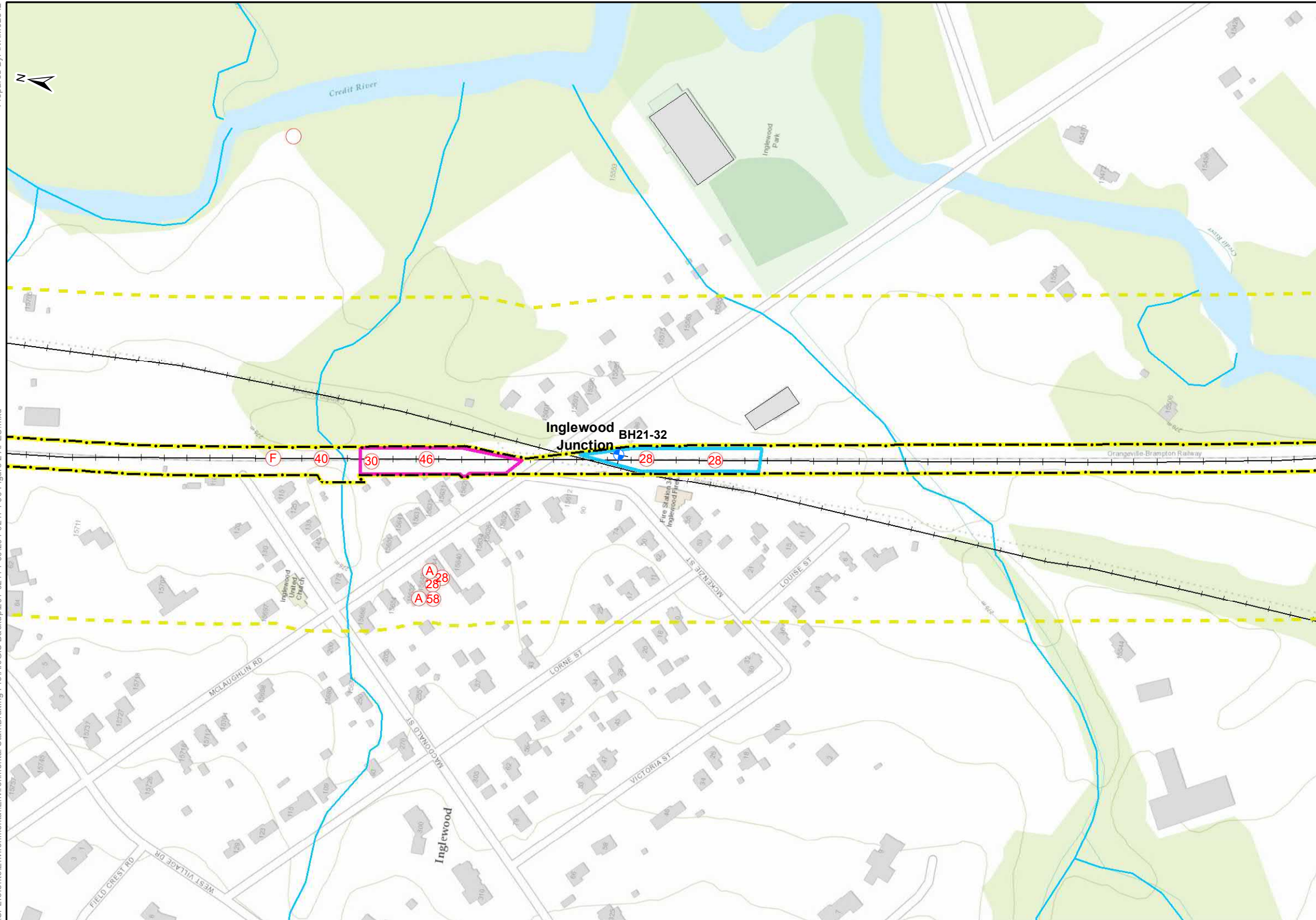
DATA SOURCE:

- LEGEND:
- 100m STUDY AREA
  - SUBJECT SITE
  - BUILDINGS
  - RAIL
  - RIVERS
  - + BOREHOLE
  - + MONITORING WELL
  - # PCA CONTRIBUTING TO APEC
  - # PCA NOT CONTRIBUTING TO APEC



	PROJECT NO.:	211-10139-00	REVIEWED BY:	CJ
	DATE:	APRIL 2022	FIGURE:	2-28





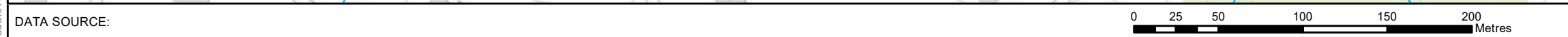
- AREAS OF POTENTIAL ENVIRONMENTAL CONCERN (APEC):
- APEC 13,14,38,114
  - APEC 21
  - APEC 109

Note:  
Please refer to Table 3 appended to the report for APECs

TITLE:  
AREAS OF POTENTIAL ENVIRONMENTAL CONCERN

PROJECT:  
CONTAMINANT OVERVIEW STUDY  
FORMER ORANGEVILLE RAIL,  
CALEDON, ONTARIO

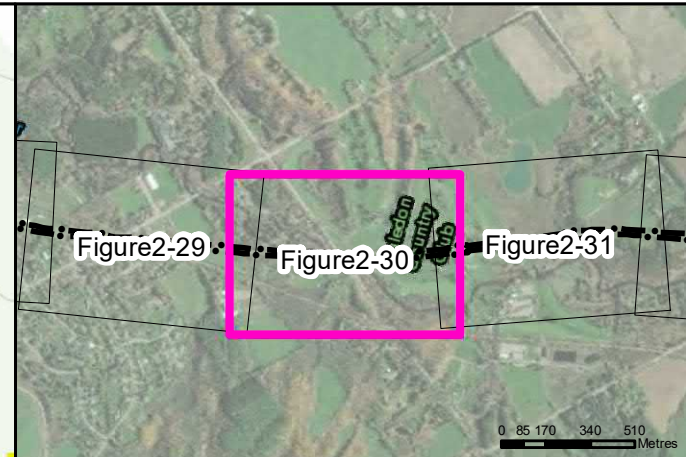
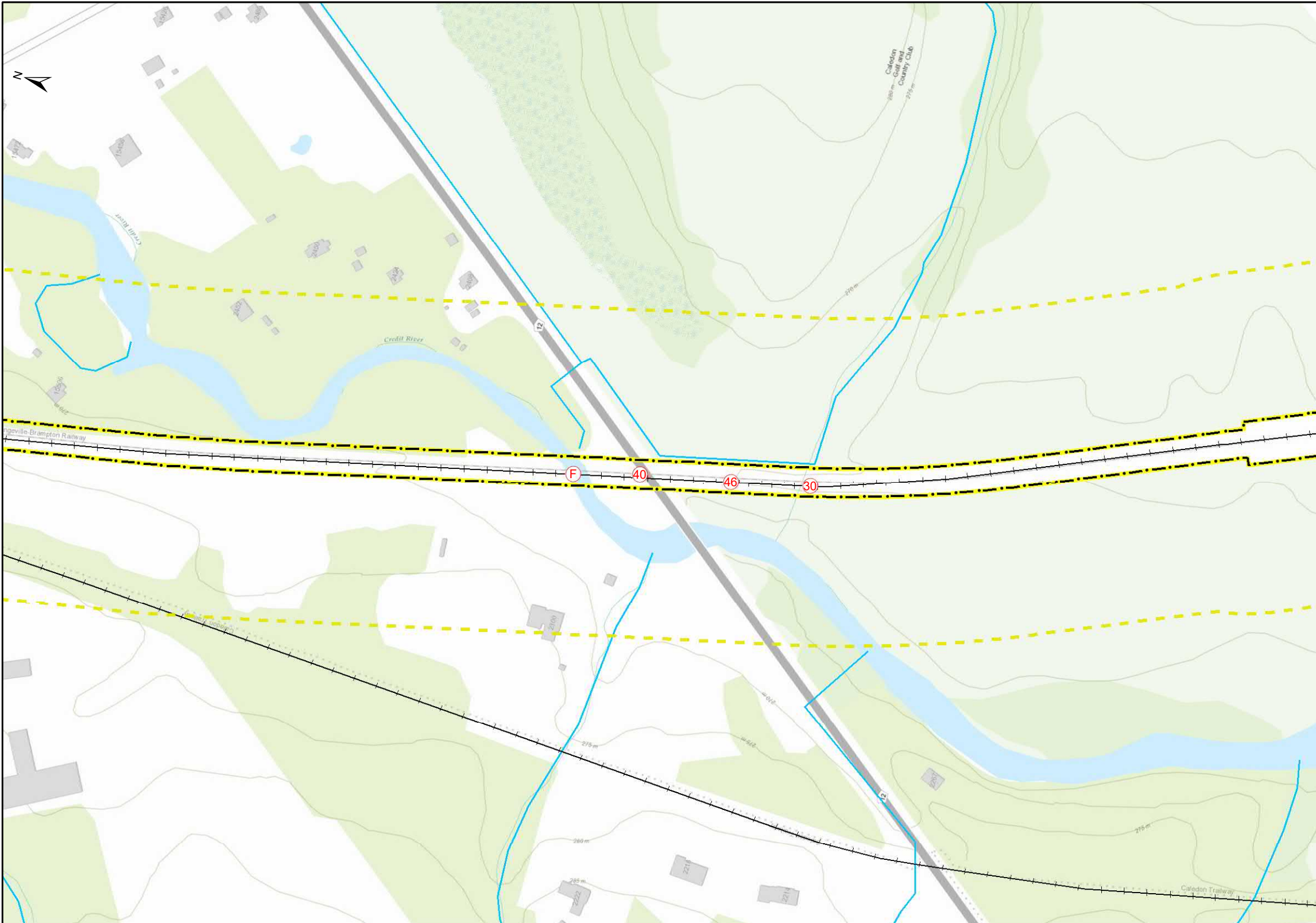
CLIENT:  
REGION OF PEEL



LEGEND:	
<span style="border: 1px dashed yellow; display: inline-block; width: 15px; height: 10px; margin-right: 5px;"></span> 100m STUDY AREA	<span style="border: 1px solid black; border-radius: 50%; width: 10px; height: 10px; display: inline-block; margin-right: 5px;"></span> BOREHOLE
<span style="border: 1px solid black; display: inline-block; width: 15px; height: 10px; margin-right: 5px;"></span> SUBJECT SITE	<span style="border: 1px solid black; border-radius: 50%; width: 10px; height: 10px; display: inline-block; margin-right: 5px;"></span> MONITORING WELL
<span style="background-color: gray; display: inline-block; width: 15px; height: 10px; margin-right: 5px;"></span> BUILDINGS	<span style="border: 1px solid red; border-radius: 50%; width: 10px; height: 10px; display: inline-block; margin-right: 5px;"></span> PCA CONTRIBUTING TO APEC
<span style="border-bottom: 1px solid black; width: 15px; display: inline-block; margin-right: 5px;"></span> RAIL	<span style="border: 1px solid black; border-radius: 50%; width: 10px; height: 10px; display: inline-block; margin-right: 5px;"></span> PCA NOT CONTRIBUTING TO APEC
<span style="border-bottom: 1px solid blue; width: 15px; display: inline-block; margin-right: 5px;"></span> RIVERS	

	PROJECT NO.: 211-10139-00	REVIEWED BY: CJ
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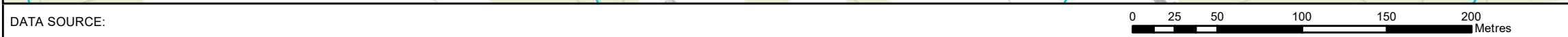
AREAS OF POTENTIAL ENVIRONMENTAL CONCERN (APEC):  
 APEC 13,14,38,114

Note:  
 Please refer to Table 3 appended to the report for APECs

TITLE:  
 AREAS OF POTENTIAL ENVIRONMENTAL CONCERN

PROJECT:  
 CONTAMINANT OVERVIEW STUDY  
 FORMER ORANGEVILLE RAIL,  
 CALEDON, ONTARIO

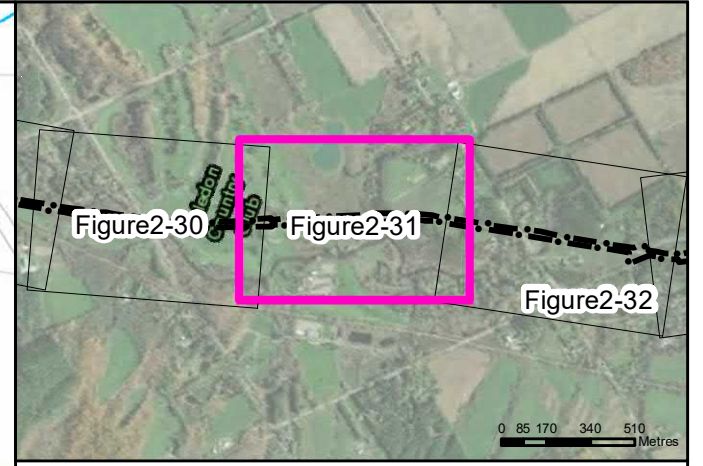
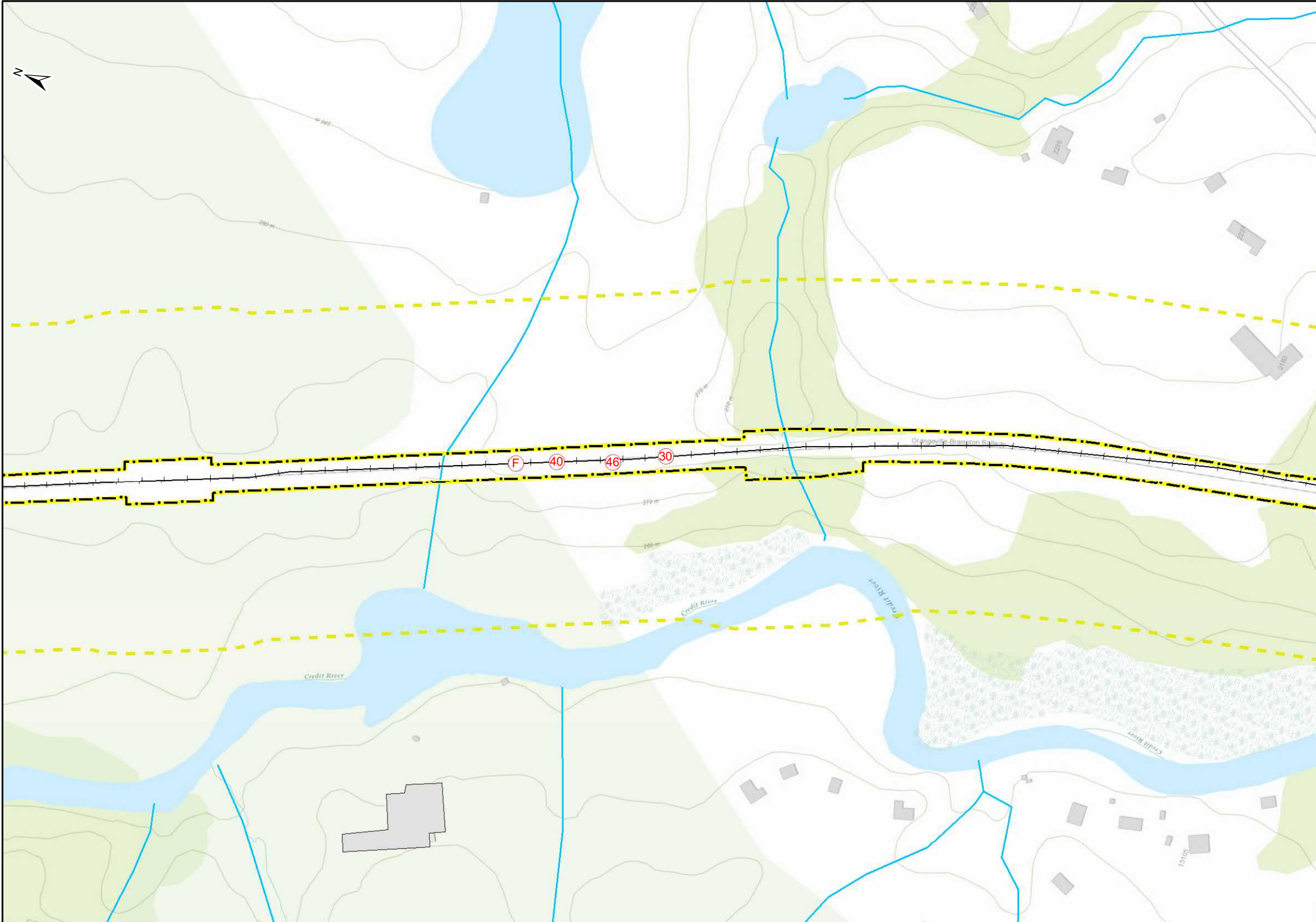
CLIENT:  
 REGION OF PEEL



LEGEND:	
<span style="border: 1px dashed yellow; display: inline-block; width: 15px; height: 10px;"></span> 100m STUDY AREA	<span style="border: 1px solid black; border-radius: 50%; padding: 2px;">+</span> BOREHOLE
<span style="border: 2px dashed black; display: inline-block; width: 15px; height: 10px;"></span> SUBJECT SITE	<span style="border: 1px solid blue; border-radius: 50%; padding: 2px;">+</span> MONITORING WELL
<span style="background-color: lightgrey; display: inline-block; width: 15px; height: 10px;"></span> BUILDINGS	<span style="border: 1px solid red; border-radius: 50%; padding: 2px;">#</span> PCA CONTRIBUTING TO APEC
<span style="border-bottom: 1px solid black; width: 15px; display: inline-block;"></span> RAIL	<span style="border: 1px solid black; border-radius: 50%; padding: 2px;">#</span> PCA NOT CONTRIBUTING TO APEC
<span style="border-bottom: 1px solid blue; width: 15px; display: inline-block;"></span> RIVERS	

	PROJECT NO.: 211-10139-00	REVIEWED BY: CJ
	DATE: APRIL 2022	FIGURE: 2-30





AREAS OF POTENTIAL ENVIORNMENTAL CONCERN (APEC):

APEC 13,14,38,114

Note:  
Please refer to Table 3 appended to the report for APECs

TITLE:  
AREAS OF POTENTIAL ENVIRONMENTAL CONCERN

PROJECT:  
CONTAMINANT OVERVIEW STUDY  
FORMER ORANGEVILLE RAIL,  
CALEDON, ONTARIO

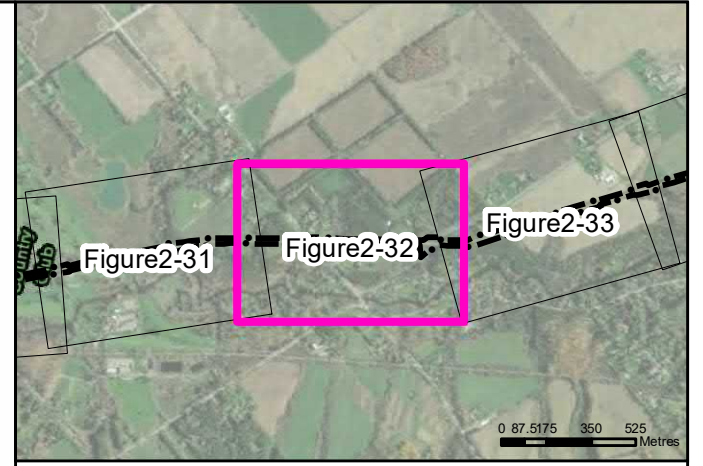
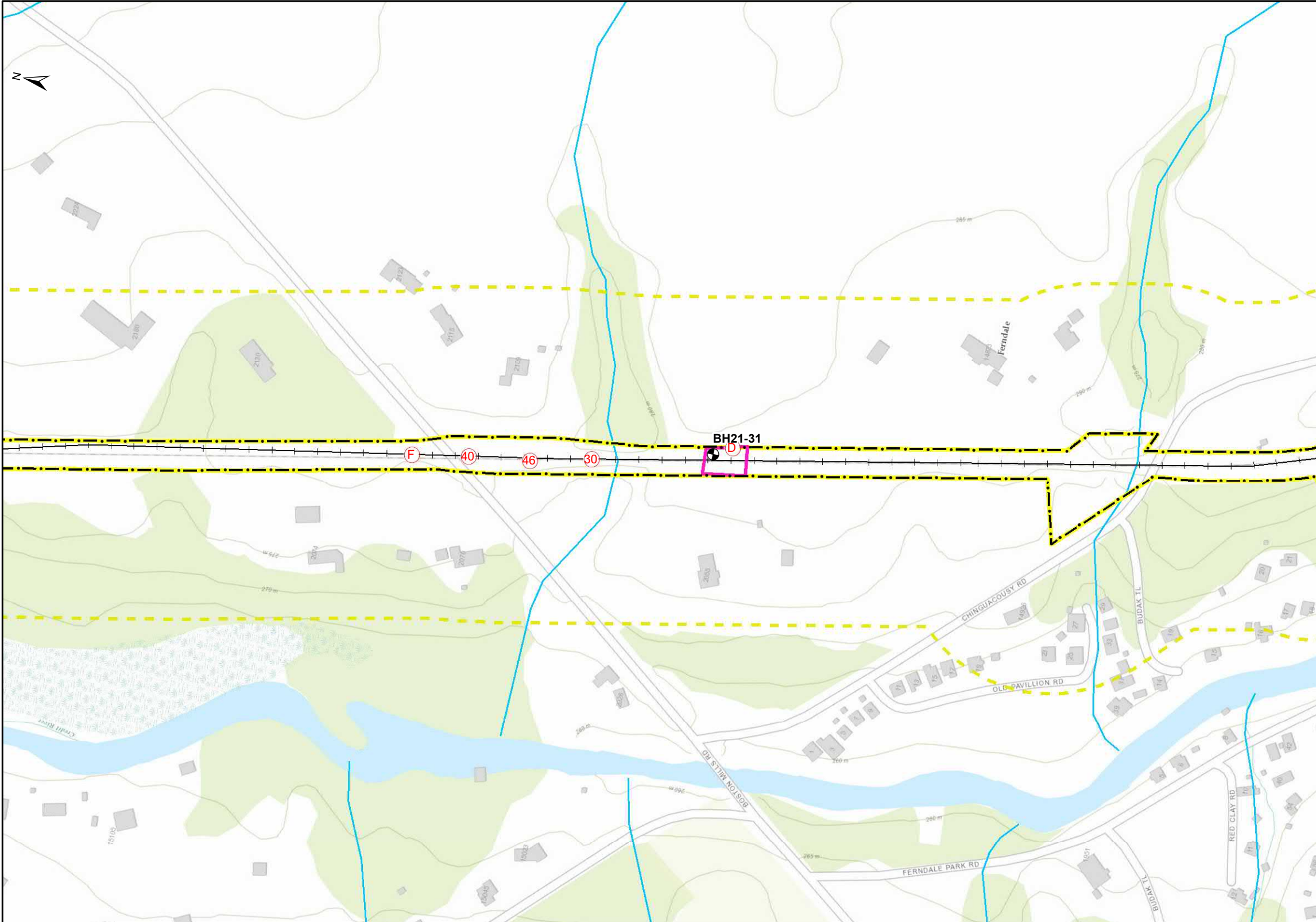
CLIENT:  
REGION OF PEEL

DATA SOURCE:

LEGEND:	
<span style="border: 1px dashed yellow; display: inline-block; width: 15px; height: 10px;"></span> 100m STUDY AREA	BOREHOLE
<span style="border: 1px dashed black; display: inline-block; width: 15px; height: 10px;"></span> SUBJECT SITE	MONITORING WELL
BUILDINGS	PCA CONTRIBUTING TO APEC
RAIL	PCA NOT CONTRIBUTING TO APEC
RIVERS	

	PROJECT NO.: 211-10139-00	REVIEWED BY: CJ
	DATE: APRIL 2022	FIGURE: 2-31





AREAS OF POTENTIAL ENVIORNMENTAL CONCERN (APEC):

- APEC 13,14,38,114
- APEC 69

Note:  
Please refer to Table 3 appended to the report for APECs

TITLE:  
AREAS OF POTENTIAL ENVIRONMENTAL CONCERN

PROJECT:  
CONTAMINANT OVERVIEW STUDY  
FORMER ORANGEVILLE RAIL,  
CALEDON, ONTARIO

CLIENT:  
REGION OF PEEL



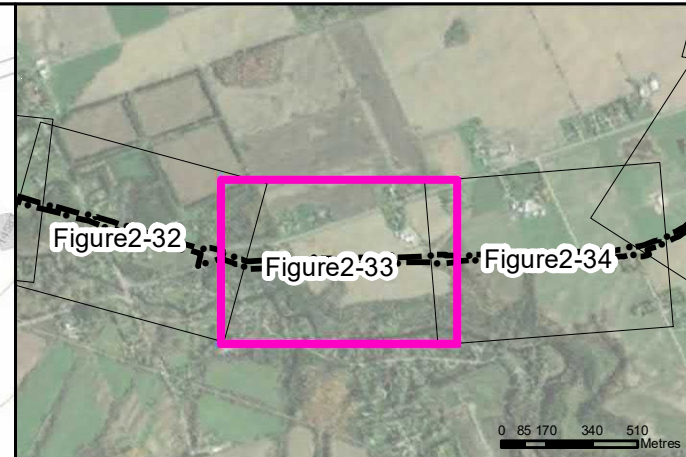
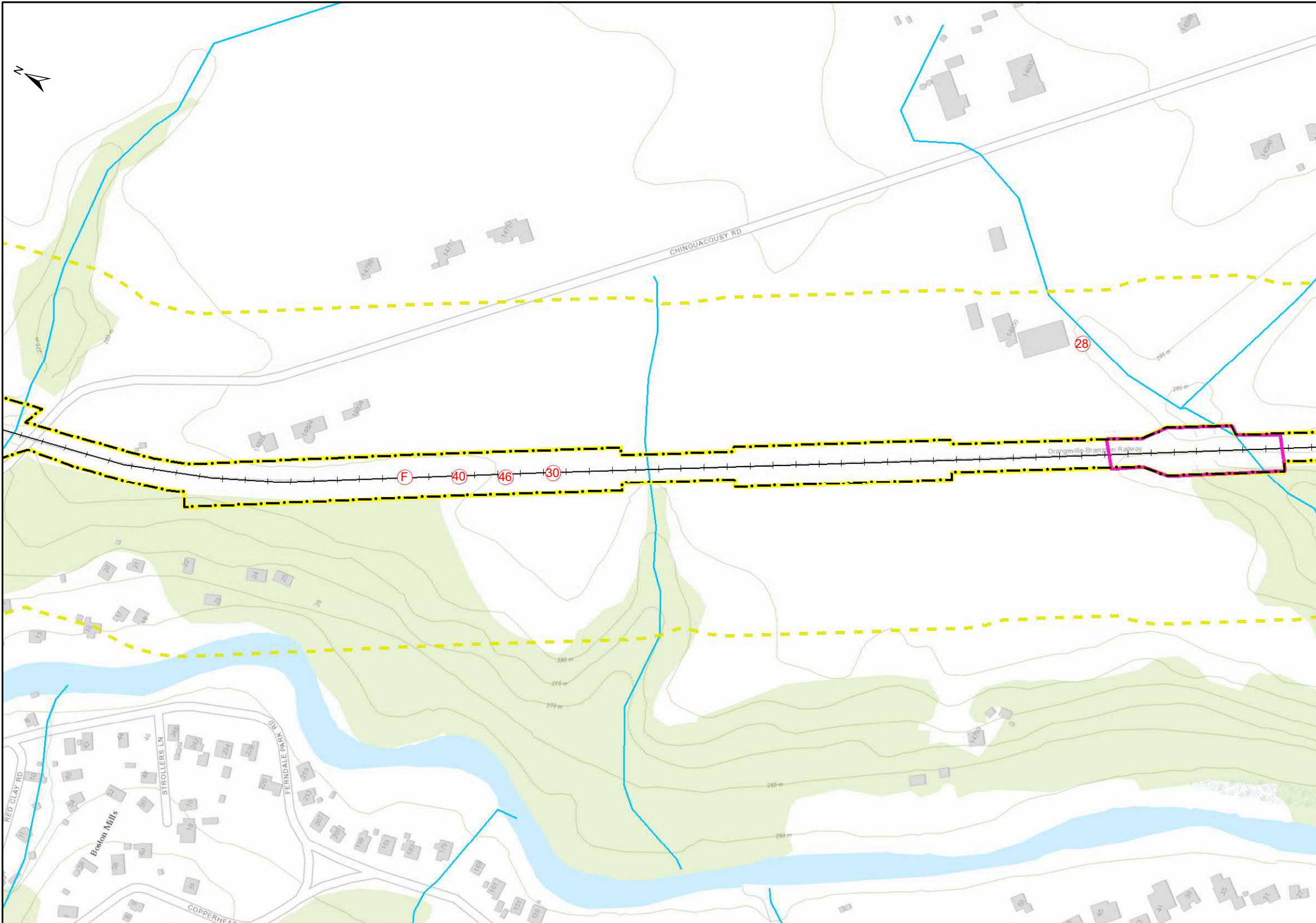
DATA SOURCE:

LEGEND:

<span style="border: 1px dashed yellow; display: inline-block; width: 15px; height: 10px; margin-right: 5px;"></span> 100m STUDY AREA	BOREHOLE
<span style="border: 1px dashed black; display: inline-block; width: 15px; height: 10px; margin-right: 5px;"></span> SUBJECT SITE	MONITORING WELL
BUILDINGS	PCA CONTRIBUTING TO APEC
RAIL	PCA NOT CONTRIBUTING TO APEC
RIVERS	

	PROJECT NO.: 211-10139-00	REVIEWED BY: CJ
	DATE: APRIL 2022	FIGURE: 2-32





AREAS OF POTENTIAL ENVIRONMENTAL CONCERN (APEC):

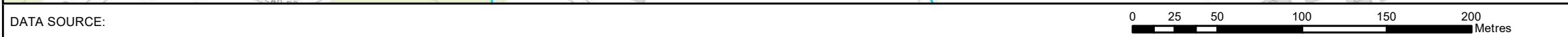
- APEC 13,14,38,114
- APEC 34

Note:  
Please refer to Table 3 appended to the report for APECs

TITLE:  
AREAS OF POTENTIAL ENVIRONMENTAL CONCERN

PROJECT:  
CONTAMINANT OVERVIEW STUDY  
FORMER ORANGEVILLE RAIL,  
CALEDON, ONTARIO

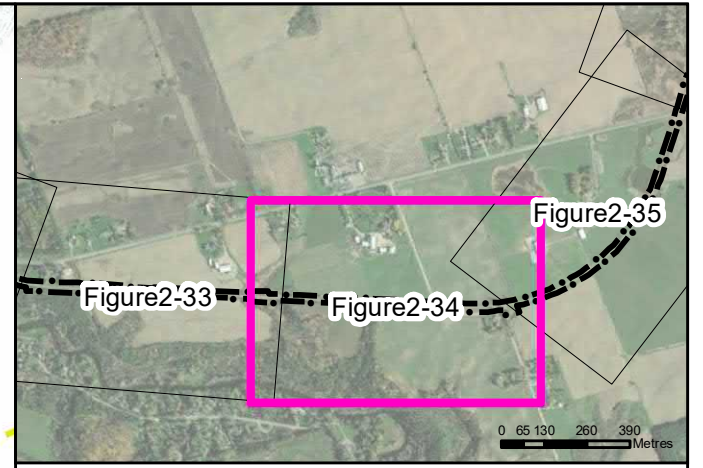
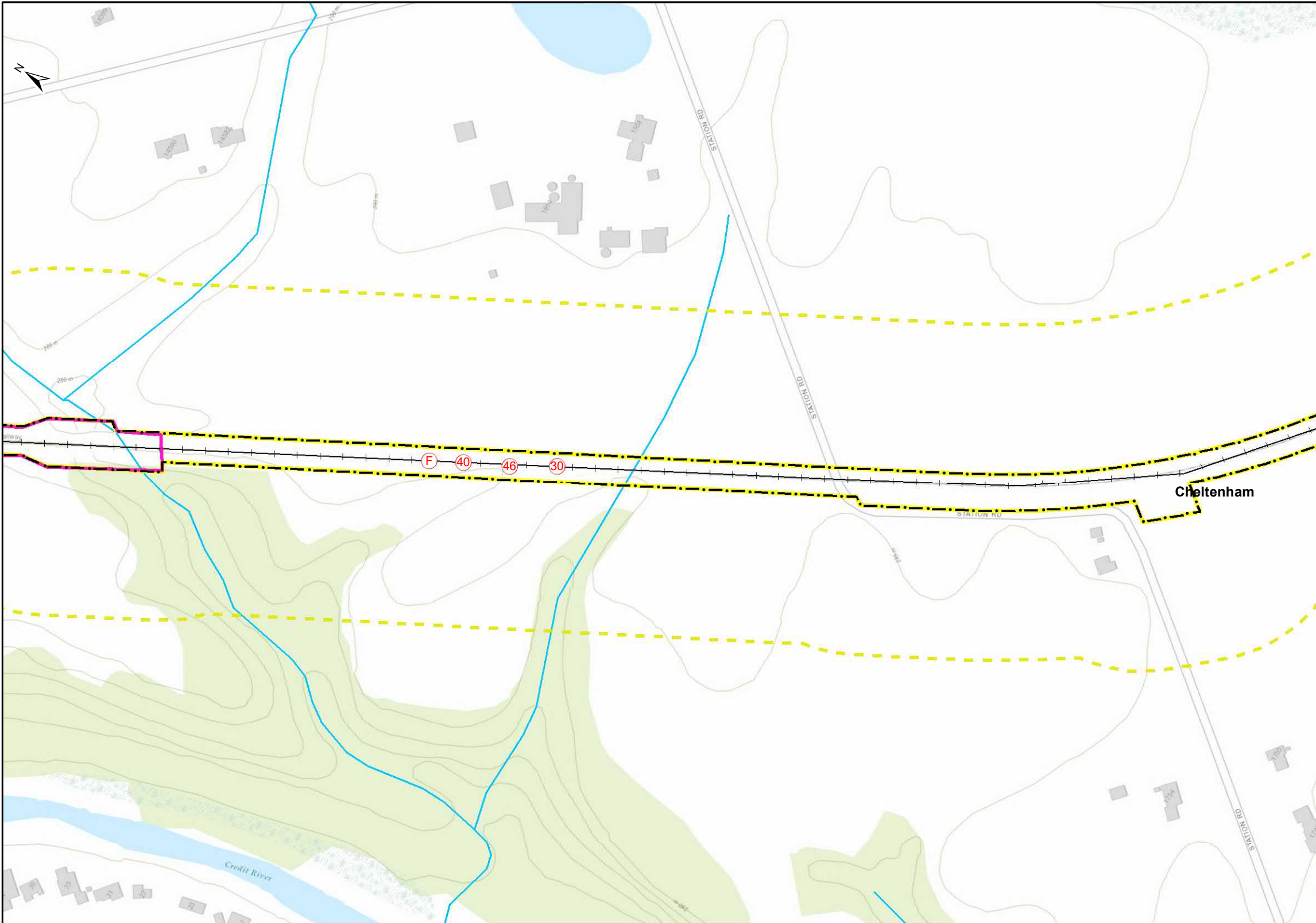
CLIENT:  
REGION OF PEEL



LEGEND:	
<span style="border: 1px dashed yellow; display: inline-block; width: 15px; height: 10px; margin-right: 5px;"></span> 100m STUDY AREA	<span style="border: 1px solid black; border-radius: 50%; padding: 2px;">+</span> BOREHOLE
<span style="border: 1px dashed black; display: inline-block; width: 15px; height: 10px; margin-right: 5px;"></span> SUBJECT SITE	<span style="border: 1px solid blue; border-radius: 50%; padding: 2px;">+</span> MONITORING WELL
<span style="display: inline-block; width: 15px; height: 10px; background-color: gray; margin-right: 5px;"></span> BUILDINGS	<span style="border: 1px solid red; border-radius: 50%; padding: 2px;">#</span> PCA CONTRIBUTING TO APEC
<span style="border-bottom: 1px solid black; width: 15px; display: inline-block; margin-right: 5px;"></span> RAIL	<span style="border: 1px solid black; border-radius: 50%; padding: 2px;">#</span> PCA NOT CONTRIBUTING TO APEC
<span style="border-bottom: 1px solid blue; width: 15px; display: inline-block; margin-right: 5px;"></span> RIVERS	

	PROJECT NO.: 211-10139-00	REVIEWED BY: CJ
	DATE: APRIL 2022	FIGURE: 2-33





AREAS OF POTENTIAL ENVIORNMENTAL CONCERN (APEC):

- APEC 13,14,38,114
- APEC 34

Note:  
Please refer to Table 3 appended to the report for APECs

TITLE:  
AREAS OF POTENTIAL ENVIRONMENTAL CONCERN

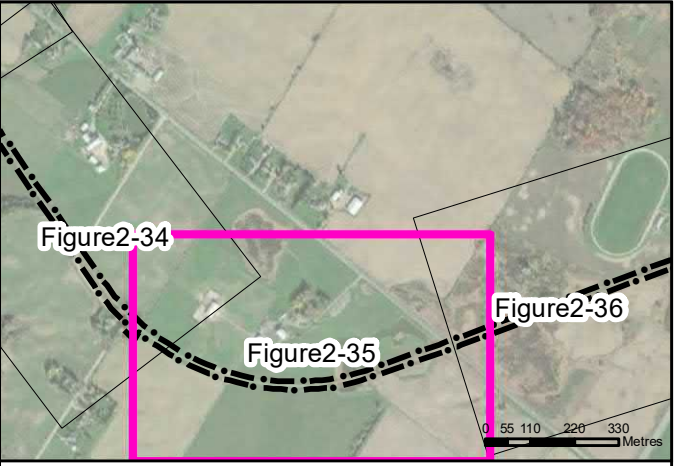
PROJECT:  
CONTAMINANT OVERVIEW STUDY  
FORMER ORANGEVILLE RAIL,  
CALEDON, ONTARIO

CLIENT:  
REGION OF PEEL

	PROJECT NO.:	211-10139-00	REVIEWED BY:	CJ
	DATE:	APRIL 2022	FIGURE:	2-34

DATA SOURCE: 0 25 50 100 150 200 Metres

LEGEND:	
<span style="border: 1px dashed yellow; display: inline-block; width: 15px; height: 10px; margin-right: 5px;"></span> 100m STUDY AREA	<span style="border: 1px solid black; border-radius: 50%; padding: 2px;">+</span> BOREHOLE
<span style="border: 1px dashed black; display: inline-block; width: 15px; height: 10px; margin-right: 5px;"></span> SUBJECT SITE	<span style="border: 1px solid blue; border-radius: 50%; padding: 2px;">+</span> MONITORING WELL
<span style="display: inline-block; width: 15px; height: 10px; background-color: gray; margin-right: 5px;"></span> BUILDINGS	<span style="border: 1px solid red; border-radius: 50%; padding: 2px;">#</span> PCA CONTRIBUTING TO APEC
<span style="border-bottom: 1px solid black; width: 15px; display: inline-block; margin-right: 5px;"></span> RAIL	<span style="border: 1px solid black; border-radius: 50%; padding: 2px;">#</span> PCA NOT CONTRIBUTING TO APEC
<span style="border-bottom: 1px solid blue; width: 15px; display: inline-block; margin-right: 5px;"></span> RIVERS	



AREAS OF POTENTIAL ENVIORNMENTAL CONCERN (APEC):


- APEC 13,14,38,114
- APEC 68

Note:  
Please refer to Table 3 appended to the report for APECs

TITLE:  
AREAS OF POTENTIAL ENVIRONMENTAL CONCERN

PROJECT:  
CONTAMINANT OVERVIEW STUDY  
FORMER ORANGEVILLE RAIL,  
CALEDON, ONTARIO

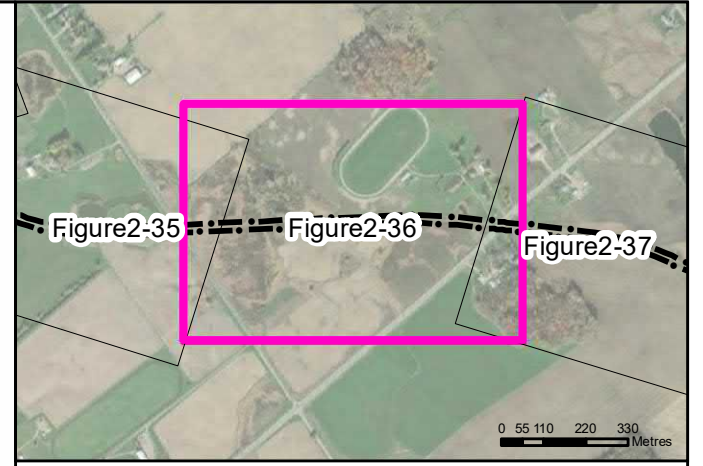
CLIENT:  
REGION OF PEEL

	PROJECT NO.:	REVIEWED BY:
	211-10139-00	CJ
DATE:	FIGURE:	
APRIL 2022	2-35	

DATA SOURCE: 0 25 50 100 150 200 Metres

LEGEND:	
<span style="border: 1px dashed yellow; display: inline-block; width: 15px; height: 10px; margin-right: 5px;"></span> 100m STUDY AREA	<span style="border: 1px solid black; border-radius: 50%; width: 10px; height: 10px; display: inline-block; margin-right: 5px;"></span> BOREHOLE
<span style="border: 1px solid black; border-style: dashed; display: inline-block; width: 15px; height: 10px; margin-right: 5px;"></span> SUBJECT SITE	<span style="border: 1px solid blue; border-radius: 50%; width: 10px; height: 10px; display: inline-block; margin-right: 5px;"></span> MONITORING WELL
<span style="background-color: gray; display: inline-block; width: 15px; height: 10px; margin-right: 5px;"></span> BUILDINGS	<span style="border: 1px solid red; border-radius: 50%; width: 10px; height: 10px; display: inline-block; margin-right: 5px;"></span> # PCA CONTRIBUTING TO APEC
<span style="border-bottom: 1px solid black; border-style: dashed; width: 15px; display: inline-block; margin-right: 5px;"></span> RAIL	<span style="border: 1px solid red; border-radius: 50%; width: 10px; height: 10px; display: inline-block; margin-right: 5px;"></span> # PCA NOT CONTRIBUTING TO APEC
<span style="color: blue; font-weight: bold; font-size: 1.2em;">—</span> RIVERS	





- AREAS OF POTENTIAL ENVIORNMENTAL CONCERN (APEC):
- APEC 13,14,38,114
  - APEC 33
  - APEC 67

Note:  
Please refer to Table 3 appended to the report for APECs

TITLE:  
AREAS OF POTENTIAL ENVIRONMENTAL CONCERN

PROJECT:  
CONTAMINANT OVERVIEW STUDY  
FORMER ORANGEVILLE RAIL,  
CALEDON, ONTARIO

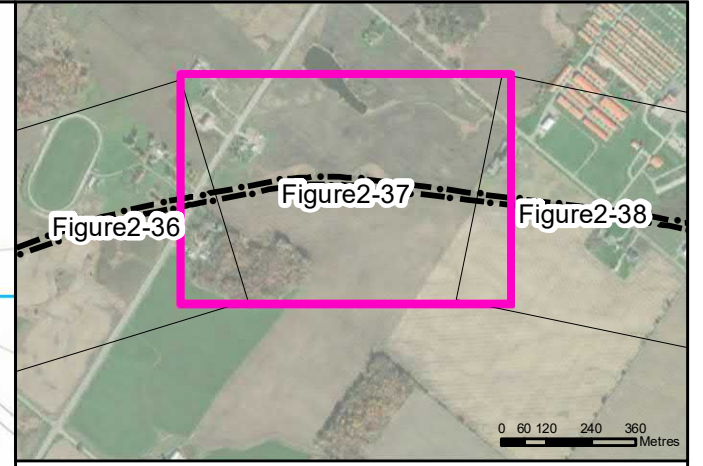
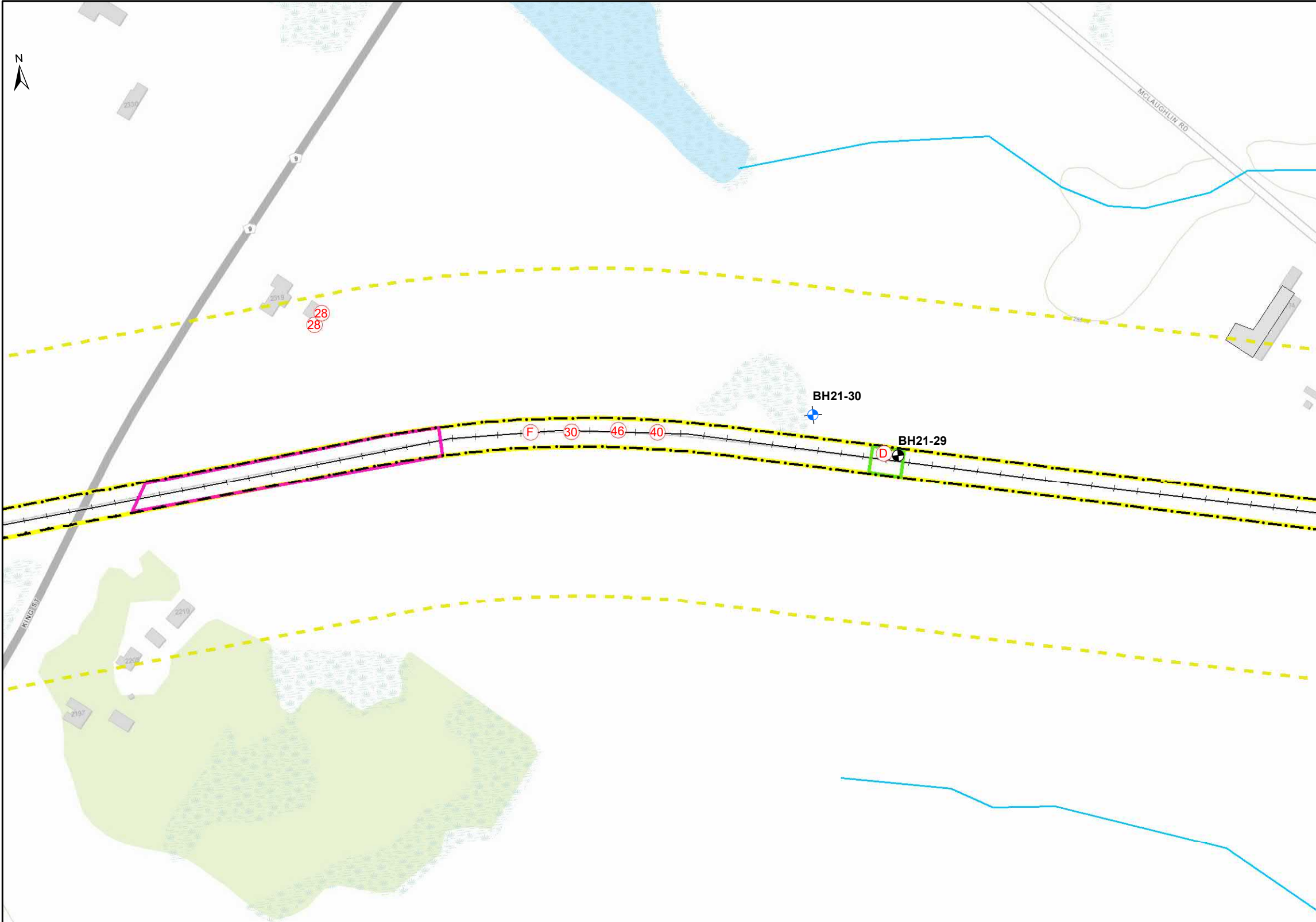
CLIENT:  
REGION OF PEEL

	PROJECT NO.:	211-10139-00	REVIEWED BY:	CJ
	DATE:	APRIL 2022	FIGURE:	2-36

DATA SOURCE: 0 25 50 100 150 200 Metres

LEGEND:	
<span style="border: 1px dashed yellow; display: inline-block; width: 15px; height: 10px; margin-right: 5px;"></span> 100m STUDY AREA	<span style="border: 1px solid black; border-radius: 50%; width: 10px; height: 10px; display: inline-block; margin-right: 5px;"></span> BOREHOLE
<span style="border: 1px dashed black; display: inline-block; width: 15px; height: 10px; margin-right: 5px;"></span> SUBJECT SITE	<span style="border: 1px solid black; width: 10px; height: 10px; display: inline-block; margin-right: 5px;"></span> MONITORING WELL
<span style="background-color: lightgrey; display: inline-block; width: 15px; height: 10px; margin-right: 5px;"></span> BUILDINGS	<span style="border: 1px solid red; border-radius: 50%; width: 10px; height: 10px; display: inline-block; margin-right: 5px;"></span> # PCA CONTRIBUTING TO APEC
<span style="border-bottom: 1px solid black; width: 15px; display: inline-block; margin-right: 5px;"></span> RAIL	<span style="border: 1px solid black; border-radius: 50%; width: 10px; height: 10px; display: inline-block; margin-right: 5px;"></span> # PCA NOT CONTRIBUTING TO APEC
<span style="border-bottom: 1px solid cyan; width: 15px; display: inline-block; margin-right: 5px;"></span> RIVERS	





AREAS OF POTENTIAL ENVIRONMENTAL CONCERN (APEC):

<span style="border: 1px dashed yellow; display: inline-block; width: 15px; height: 10px;"></span>	APEC 13,14,38,114
<span style="border: 1px solid pink; display: inline-block; width: 15px; height: 10px;"></span>	APEC 33
<span style="border: 1px solid green; display: inline-block; width: 15px; height: 10px;"></span>	APEC 66

Note:  
Please refer to Table 3 appended to the report for APECs

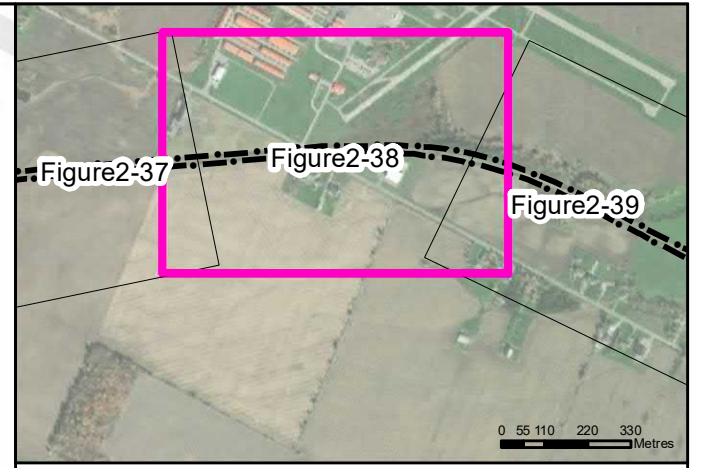
TITLE:  
AREAS OF POTENTIAL ENVIRONMENTAL CONCERN

PROJECT:  
CONTAMINANT OVERVIEW STUDY  
FORMER ORANGEVILLE RAIL,  
CALEDON, ONTARIO

CLIENT:  
REGION OF PEEL

	PROJECT NO.:	211-10139-00	REVIEWED BY:	CJ
	DATE:	APRIL 2022	FIGURE:	2-37

DATA SOURCE:		0 25 50 100 150 200 Metres	
<b>LEGEND:</b>			
<span style="border: 1px dashed yellow; display: inline-block; width: 15px; height: 10px;"></span>	100m STUDY AREA		BOREHOLE
<span style="border: 1px dashed black; display: inline-block; width: 15px; height: 10px;"></span>	SUBJECT SITE		MONITORING WELL
	BUILDINGS	<span style="border: 1px solid red; border-radius: 50%; padding: 2px;">#</span>	PCA CONTRIBUTING TO APEC
	RAIL	<span style="border: 1px solid black; border-radius: 50%; padding: 2px;">#</span>	PCA NOT CONTRIBUTING TO APEC
	RIVERS		



AREAS OF POTENTIAL ENVIORNMENTAL CONCERN (APEC):

- APEC 13,14,38,114
- APEC 1

Note:  
Please refer to Table 3 appended to the report for APECs


TITLE:  
AREAS OF POTENTIAL ENVIRONMENTAL CONCERN

PROJECT:  
CONTAMINANT OVERVIEW STUDY  
FORMER ORANGEVILLE RAIL,  
CALEDON, ONTARIO

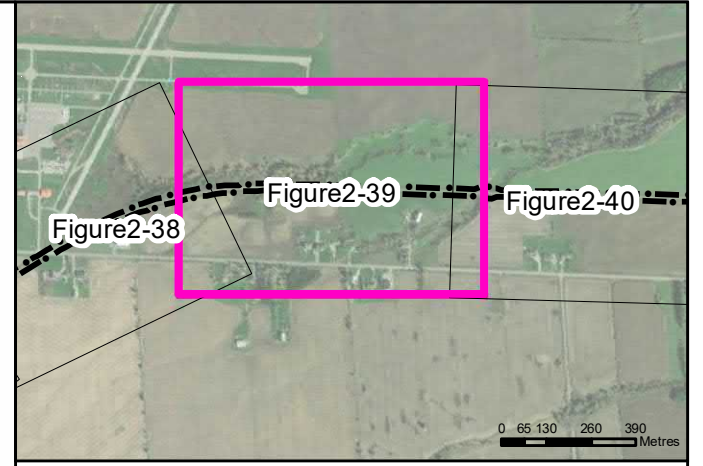
CLIENT:  
REGION OF PEEL

DATA SOURCE:

LEGEND:	
<span style="border: 1px dashed yellow; display: inline-block; width: 20px; height: 10px; margin-right: 5px;"></span> 100m STUDY AREA	<span style="border: 1px solid black; border-radius: 50%; padding: 2px; margin-right: 5px;"></span> BOREHOLE
<span style="border: 1px solid black; display: inline-block; width: 20px; height: 10px; margin-right: 5px;"></span> SUBJECT SITE	<span style="color: blue; font-size: 1.2em;">+</span> MONITORING WELL
<span style="background-color: gray; display: inline-block; width: 20px; height: 10px; margin-right: 5px;"></span> BUILDINGS	<span style="color: red; font-size: 1.2em;">#</span> PCA CONTRIBUTING TO APEC
<span style="border-bottom: 1px solid black; width: 20px; margin-right: 5px;"></span> RAIL	<span style="color: red; font-size: 1.2em;">#</span> PCA NOT CONTRIBUTING TO APEC
<span style="color: blue; font-size: 1.2em;">—</span> RIVERS	

	PROJECT NO.: 211-10139-00	REVIEWED BY: CJ
	DATE: APRIL 2022	FIGURE: 2-38





AREAS OF POTENTIAL ENVIORNMENTAL CONCERN (APEC):

<span style="border: 1px dashed yellow; display: inline-block; width: 15px; height: 10px;"></span>	APEC 13,14,38,114
<span style="border: 1px solid magenta; display: inline-block; width: 15px; height: 10px;"></span>	APEC 64
<span style="border: 1px solid cyan; display: inline-block; width: 15px; height: 10px;"></span>	APEC 65

Note:  
Please refer to Table 3 appended to the report for APECs

TITLE:  
AREAS OF POTENTIAL ENVIRONMENTAL CONCERN

PROJECT:  
CONTAMINANT OVERVIEW STUDY  
FORMER ORANGEVILLE RAIL,  
CALEDON, ONTARIO

CLIENT:  
REGION OF PEEL

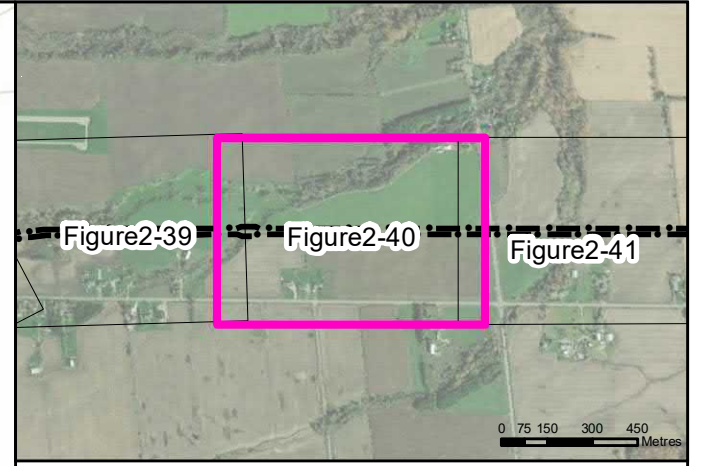
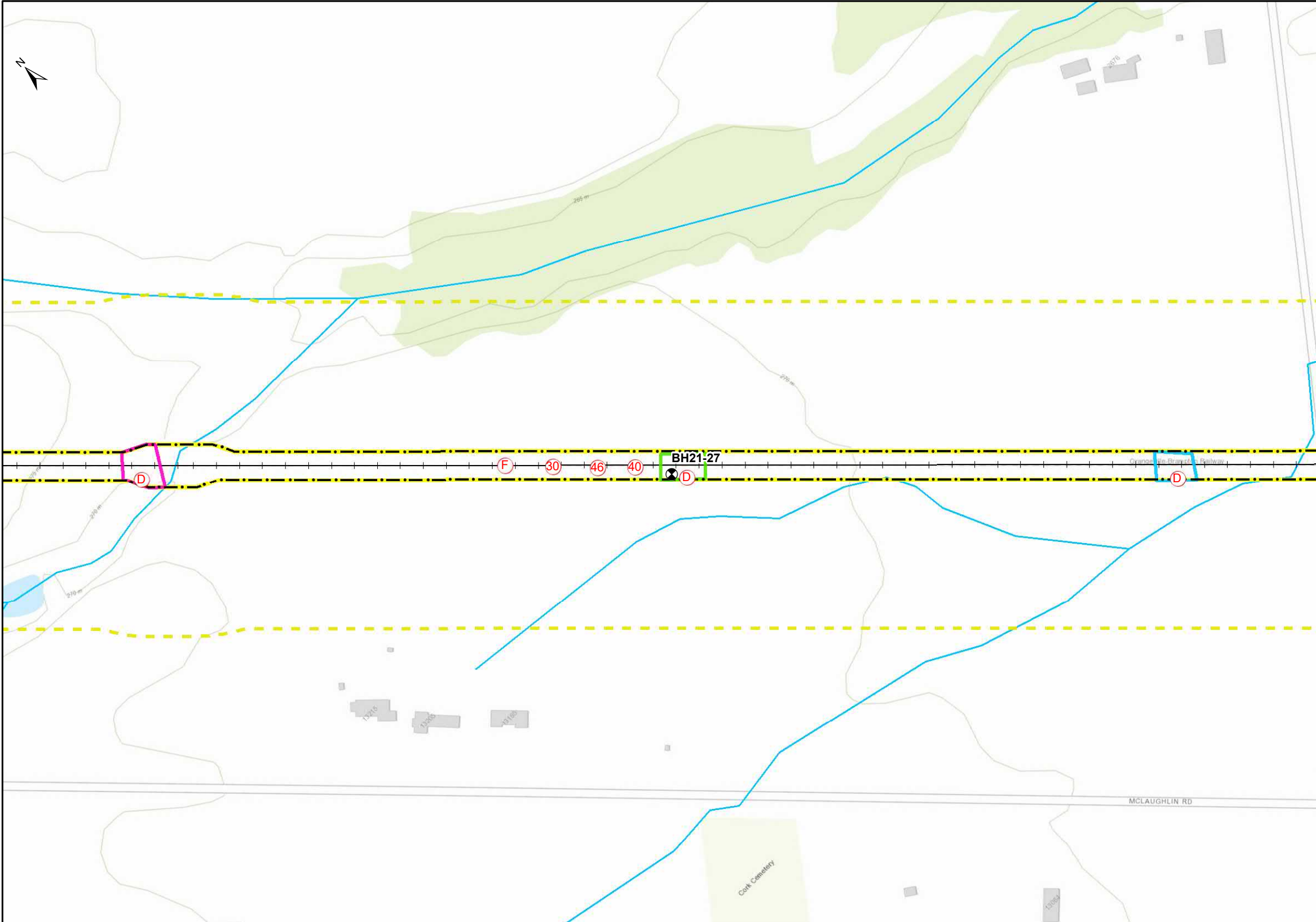
DATA SOURCE: 0 25 50 100 150 200 Metres

LEGEND:

<span style="border: 1px dashed yellow; display: inline-block; width: 15px; height: 10px;"></span> 100m STUDY AREA	<span style="border: 1px solid black; border-radius: 50%; padding: 2px;">+</span> BOREHOLE
<span style="border: 1px dashed black; display: inline-block; width: 15px; height: 10px;"></span> SUBJECT SITE	<span style="border: 1px solid blue; border-radius: 50%; padding: 2px;">+</span> MONITORING WELL
<span style="background-color: gray; display: inline-block; width: 15px; height: 10px;"></span> BUILDINGS	<span style="border: 1px solid red; border-radius: 50%; padding: 2px;">#</span> PCA CONTRIBUTING TO APEC
<span style="border-bottom: 1px solid black; width: 15px; display: inline-block;"></span> RAIL	<span style="border: 1px solid black; border-radius: 50%; padding: 2px;">#</span> PCA NOT CONTRIBUTING TO APEC
<span style="border-bottom: 1px solid cyan; width: 15px; display: inline-block;"></span> RIVERS	

	PROJECT NO.: 211-10139-00	REVIEWED BY: CJ
	DATE: APRIL 2022	FIGURE: 2-39





AREAS OF POTENTIAL ENVIORNMENTAL CONCERN (APEC):

<span style="border: 1px solid yellow; display: inline-block; width: 15px; height: 10px;"></span>	APEC 13,14,38,114
<span style="border: 1px solid blue; display: inline-block; width: 15px; height: 10px;"></span>	APEC 62
<span style="border: 1px solid green; display: inline-block; width: 15px; height: 10px;"></span>	APEC 63
<span style="border: 1px solid magenta; display: inline-block; width: 15px; height: 10px;"></span>	APEC 64

Note:  
Please refer to Table 3 appended to the report for APECs

TITLE:  
AREAS OF POTENTIAL ENVIRONMENTAL CONCERN

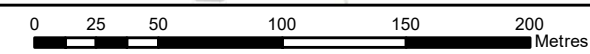
PROJECT:  
CONTAMINANT OVERVIEW STUDY  
FORMER ORANGEVILLE RAIL,  
CALEDON, ONTARIO

CLIENT:  
REGION OF PEEL

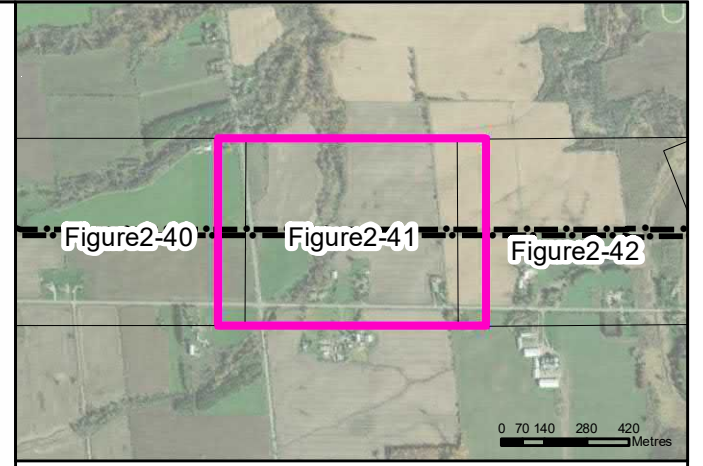
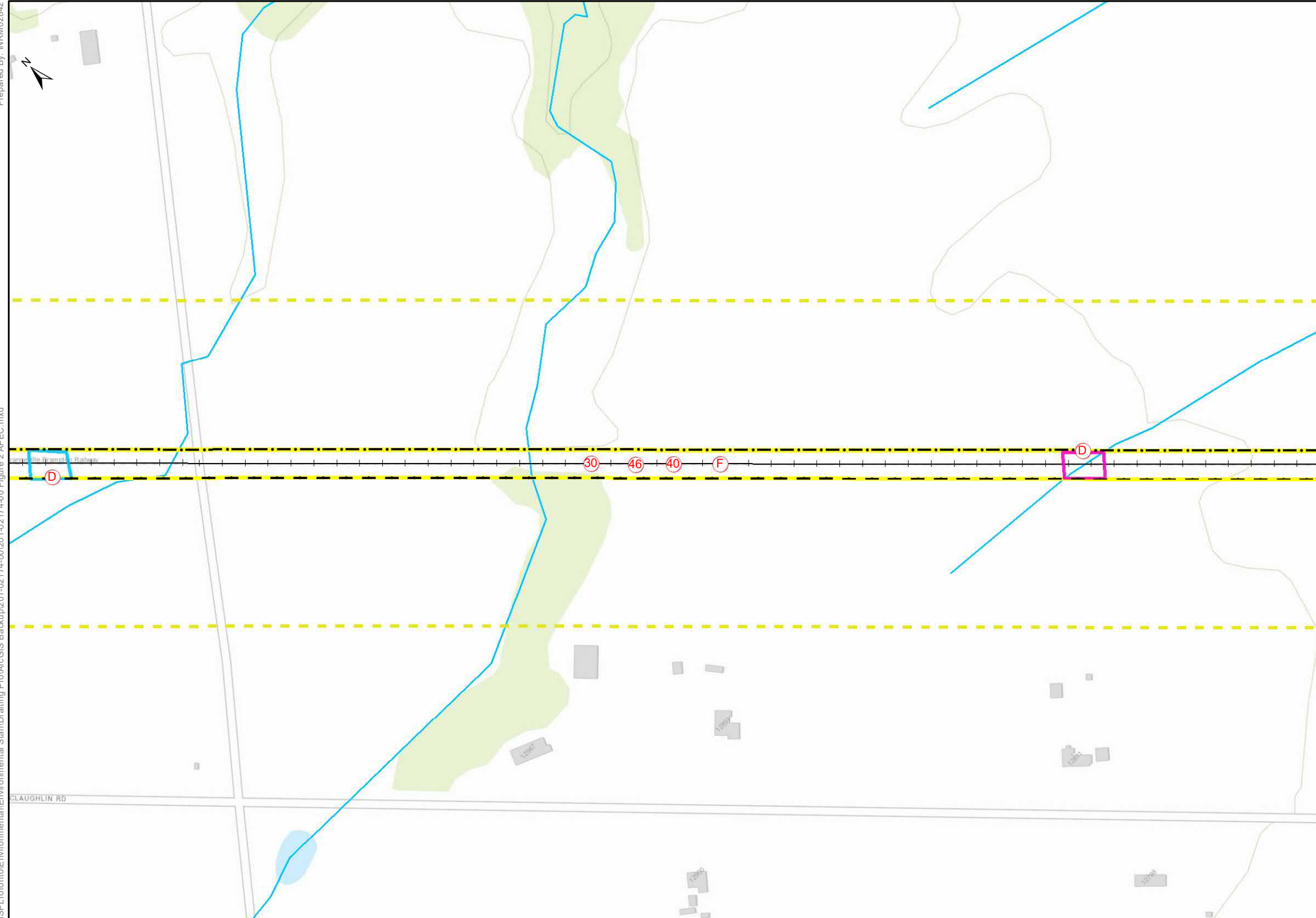
DATA SOURCE:

LEGEND:

<span style="border: 1px dashed yellow; display: inline-block; width: 15px; height: 10px;"></span>	100m STUDY AREA	<span style="display: inline-block; width: 10px; height: 10px; background-color: black; border-radius: 50%;"></span>	BOREHOLE
<span style="border: 1px dashed black; display: inline-block; width: 15px; height: 10px;"></span>	SUBJECT SITE	<span style="display: inline-block; width: 10px; height: 10px; background-color: lightblue; border-radius: 50%;"></span>	MONITORING WELL
<span style="display: inline-block; width: 15px; height: 10px; background-color: gray;"></span>	BUILDINGS	<span style="display: inline-block; width: 10px; height: 10px; border: 1px solid red; border-radius: 50%;"></span>	PCA CONTRIBUTING TO APEC
<span style="display: inline-block; width: 15px; height: 10px; border-bottom: 1px solid black;"></span>	RAIL	<span style="display: inline-block; width: 10px; height: 10px; border: 1px solid black; border-radius: 50%;"></span>	PCA NOT CONTRIBUTING TO APEC
<span style="display: inline-block; width: 15px; height: 10px; border-bottom: 1px solid blue;"></span>	RIVERS		



	PROJECT NO.:	211-10139-00	REVIEWED BY:	CJ
	DATE:	APRIL 2022	FIGURE:	2-40



- AREAS OF POTENTIAL ENVIORNMENTAL CONCERN (APEC):
- APEC 13,14,38,114
  - APEC 61
  - APEC 62

Note:  
Please refer to Table 3 appended to the report for APECs

TITLE:  
AREAS OF POTENTIAL ENVIRONMENTAL CONCERN

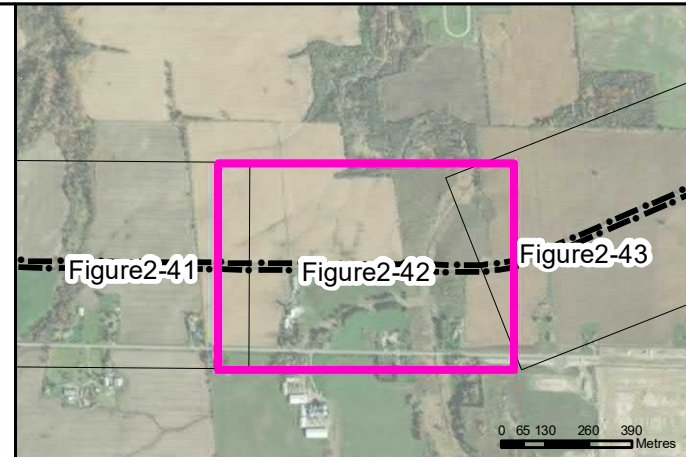
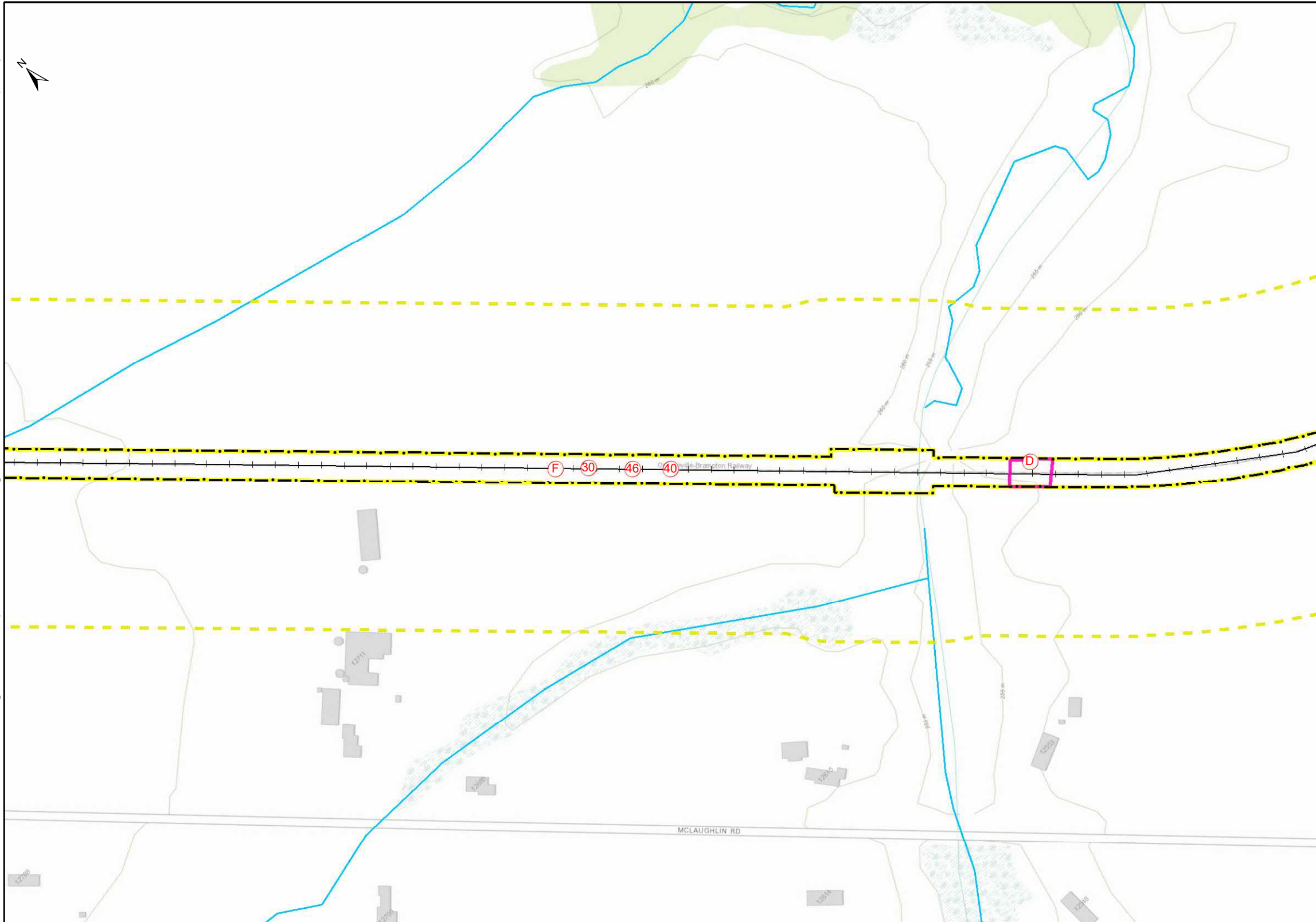
PROJECT:  
CONTAMINANT OVERVIEW STUDY  
FORMER ORANGEVILLE RAIL,  
CALEDON, ONTARIO

CLIENT:  
REGION OF PEEL

DATA SOURCE: 0 25 50 100 150 200 Metres

- LEGEND:
- 100m STUDY AREA
  - SUBJECT SITE
  - BUILDINGS
  - RAIL
  - RIVERS
  - + BOREHOLE
  - + MONITORING WELL
  - # PCA CONTRIBUTING TO APEC
  - # PCA NOT CONTRIBUTING TO APEC

	PROJECT NO.: 211-10139-00	REVIEWED BY: CJ
	DATE: APRIL 2022	FIGURE: 2-41



AREAS OF POTENTIAL ENVIORNMENTAL CONCERN (APEC):

- APEC 13,14,38,114
- APEC 60

Note:  
Please refer to Table 3 appended to the report for APECs

TITLE:  
AREAS OF POTENTIAL ENVIRONMENTAL CONCERN

PROJECT:  
CONTAMINANT OVERVIEW STUDY  
FORMER ORANGEVILLE RAIL,  
CALEDON, ONTARIO

CLIENT:  
REGION OF PEEL

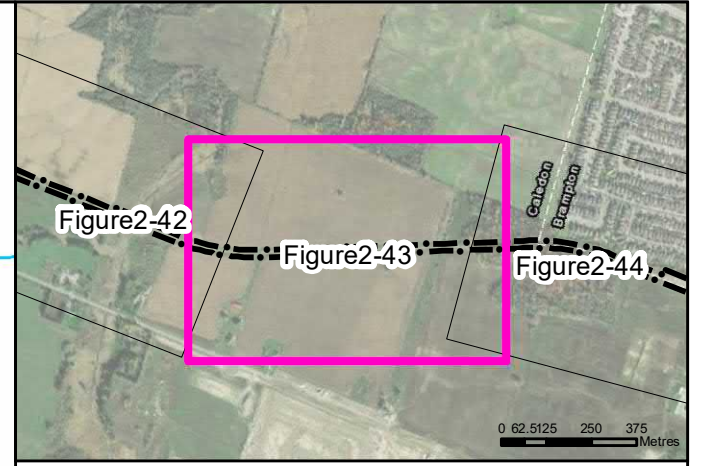
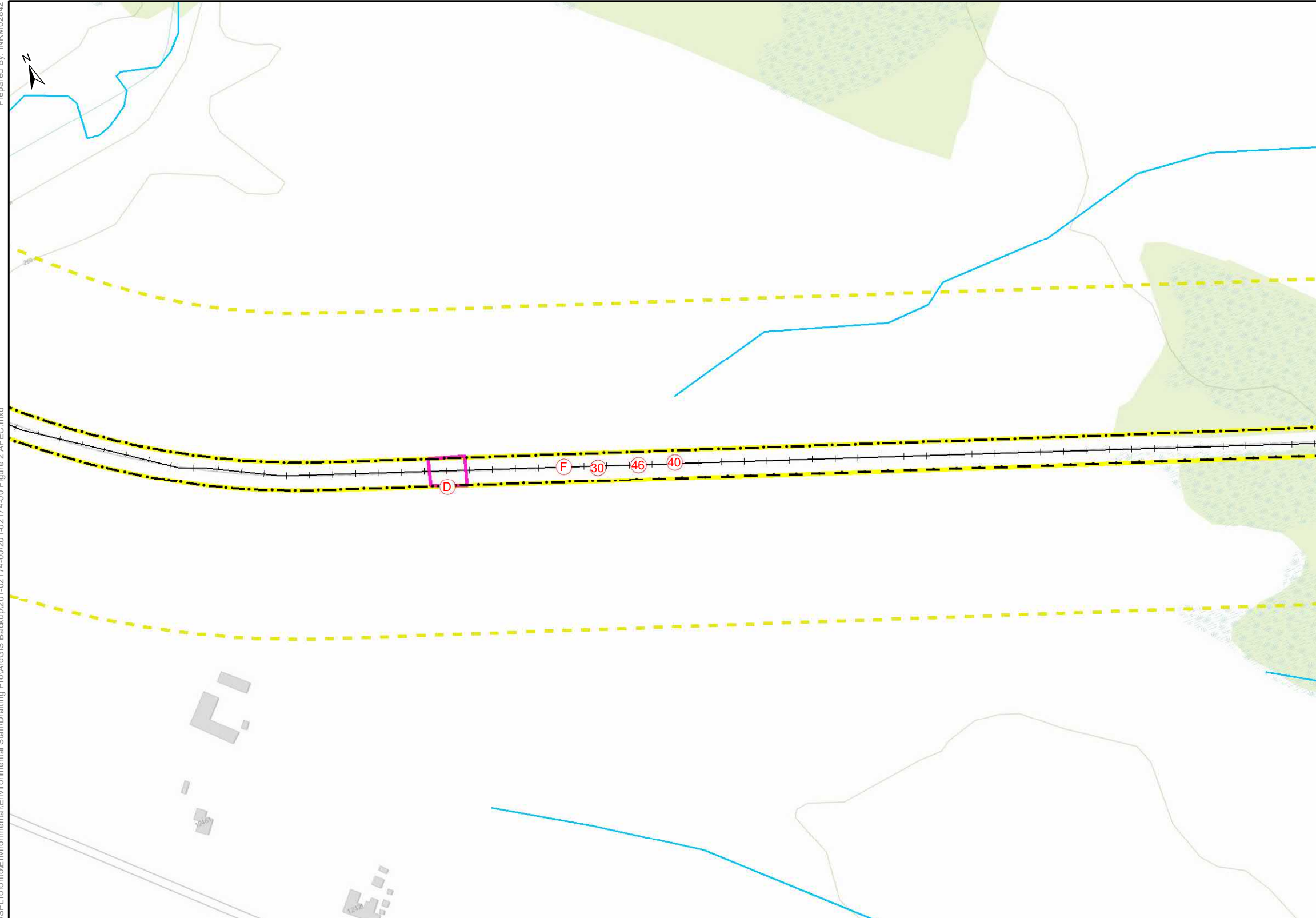
DATA SOURCE:

- LEGEND:
- 100m STUDY AREA
  - SUBJECT SITE
  - BUILDINGS
  - RAIL
  - RIVERS
  - + BOREHOLE
  - + MONITORING WELL
  - # PCA CONTRIBUTING TO APEC
  - # PCA NOT CONTRIBUTING TO APEC

0 25 50 100 150 200 Metres

	PROJECT NO.:	211-10139-00	REVIEWED BY:	CJ
	DATE:	APRIL 2022	FIGURE:	2-42





AREAS OF POTENTIAL ENVIRONMENTAL CONCERN (APEC):


- APEC 13,14,38,114
- APEC 58

Note:  
Please refer to Table 3 appended to the report for APECs

TITLE:  
AREAS OF POTENTIAL ENVIRONMENTAL CONCERN

PROJECT:  
CONTAMINANT OVERVIEW STUDY  
FORMER ORANGEVILLE RAIL,  
CALEDON, ONTARIO

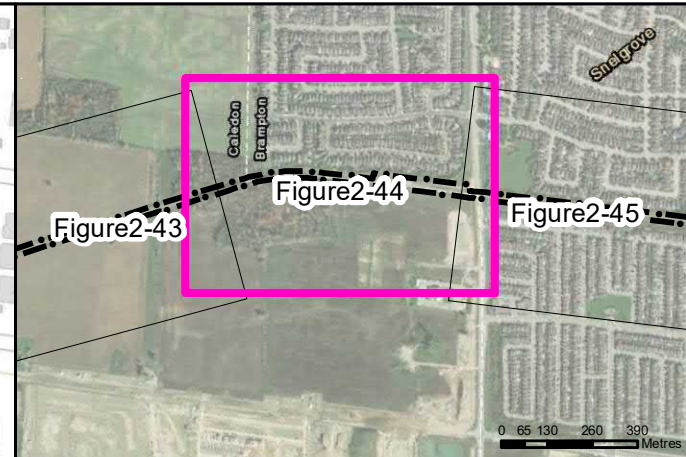
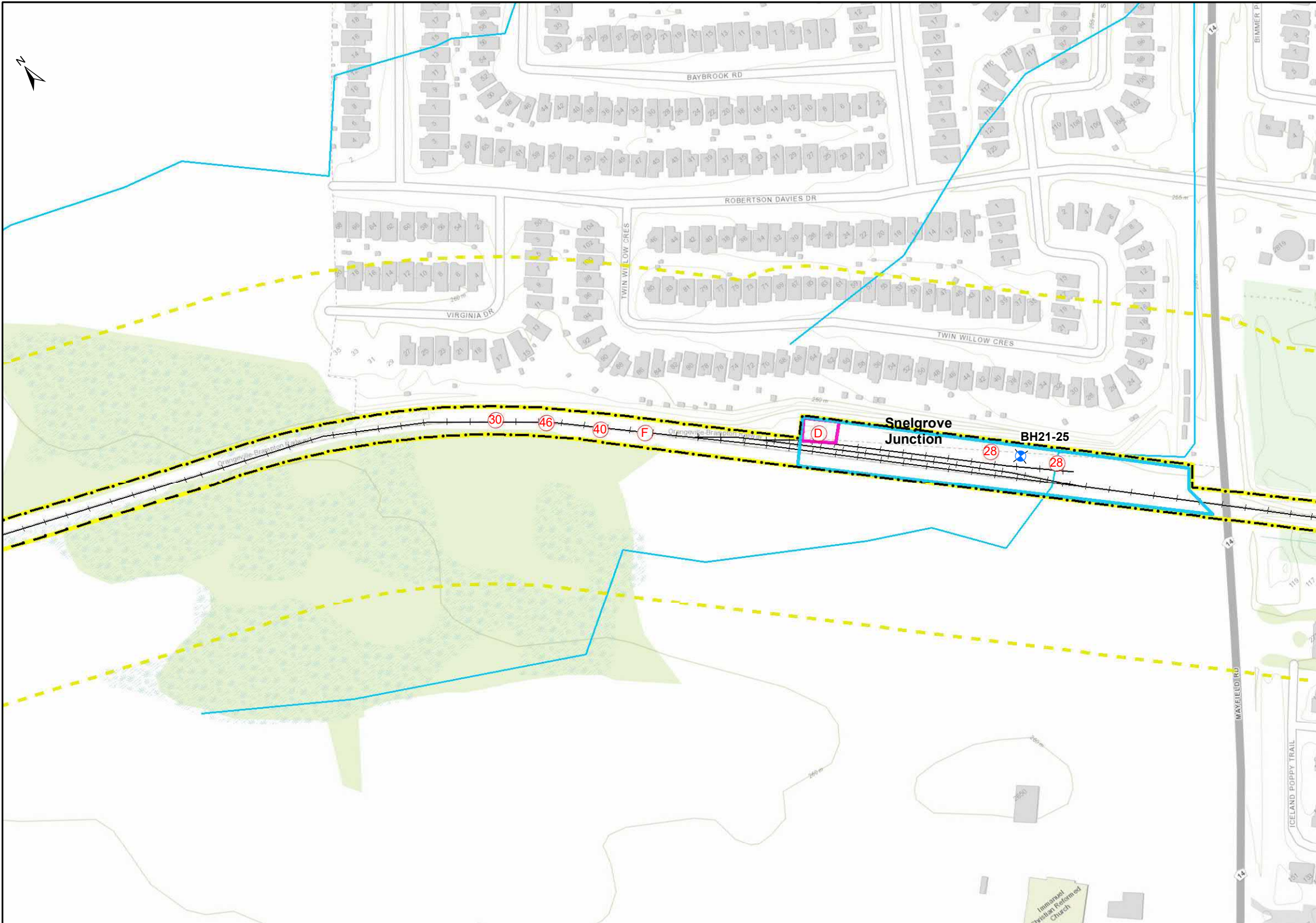
CLIENT:  
REGION OF PEEL

	PROJECT NO.:	REVIEWED BY:
	211-10139-00	CJ
DATE:	FIGURE:	
APRIL 2022	2-43	

DATA SOURCE: 0 25 50 100 150 200 Metres

LEGEND:

<span style="border: 1px dashed yellow; display: inline-block; width: 20px; height: 10px; margin-right: 5px;"></span> 100m STUDY AREA	<span style="border: 1px solid black; border-radius: 50%; width: 10px; height: 10px; display: inline-block; margin-right: 5px;"></span> BOREHOLE
<span style="border: 2px dashed black; display: inline-block; width: 20px; height: 10px; margin-right: 5px;"></span> SUBJECT SITE	<span style="border: 1px solid blue; border-radius: 50%; width: 10px; height: 10px; display: inline-block; margin-right: 5px;"></span> MONITORING WELL
<span style="background-color: grey; display: inline-block; width: 20px; height: 10px; margin-right: 5px;"></span> BUILDINGS	<span style="border: 1px solid red; border-radius: 50%; width: 10px; height: 10px; display: inline-block; margin-right: 5px;"></span> # PCA CONTRIBUTING TO APEC
<span style="border-bottom: 1px solid black; width: 20px; display: inline-block; margin-right: 5px;"></span> RAIL	<span style="border: 1px solid black; border-radius: 50%; width: 10px; height: 10px; display: inline-block; margin-right: 5px;"></span> # PCA NOT CONTRIBUTING TO APEC
<span style="border-bottom: 1px solid blue; width: 20px; display: inline-block; margin-right: 5px;"></span> RIVERS	



- AREAS OF POTENTIAL ENVIRONMENTAL CONCERN (APEC):
- APEC 13,14,38,114
  - APEC 57
  - APEC 108

Note:  
Please refer to Table 3 appended to the report for APECs

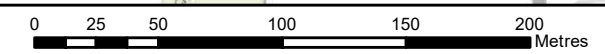
TITLE:  
AREAS OF POTENTIAL ENVIRONMENTAL CONCERN

PROJECT:  
CONTAMINANT OVERVIEW STUDY  
FORMER ORANGEVILLE RAIL,  
CALEDON, ONTARIO

CLIENT:  
REGION OF PEEL

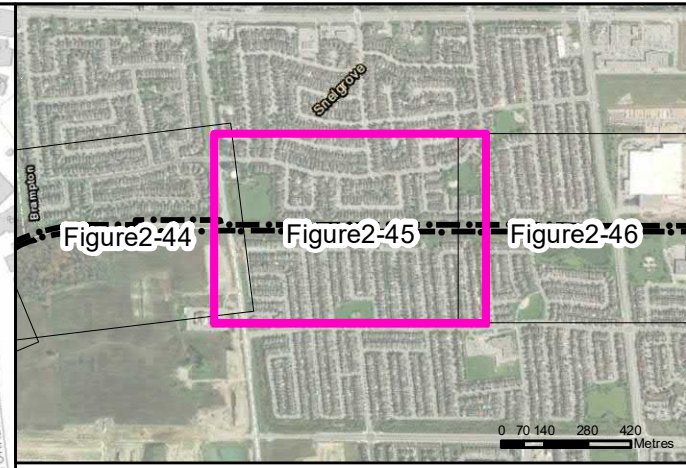
DATA SOURCE:

- LEGEND:
- 100m STUDY AREA
  - SUBJECT SITE
  - BUILDINGS
  - RAIL
  - RIVERS
  - + BOREHOLE
  - + MONITORING WELL
  - # PCA CONTRIBUTING TO APEC
  - # PCA NOT CONTRIBUTING TO APEC



	PROJECT NO.:	211-10139-00	REVIEWED BY:	CJ
	DATE:	APRIL 2022	FIGURE:	2-44





- AREAS OF POTENTIAL ENVIORNMENTAL CONCERN (APEC):
- APEC 13,14,38,114
  - APEC 54
  - APEC 55
  - APEC 56
  - APEC 108

Note:  
Please refer to Table 3 appended to the report for APECs

TITLE:  
AREAS OF POTENTIAL ENVIRONMENTAL CONCERN

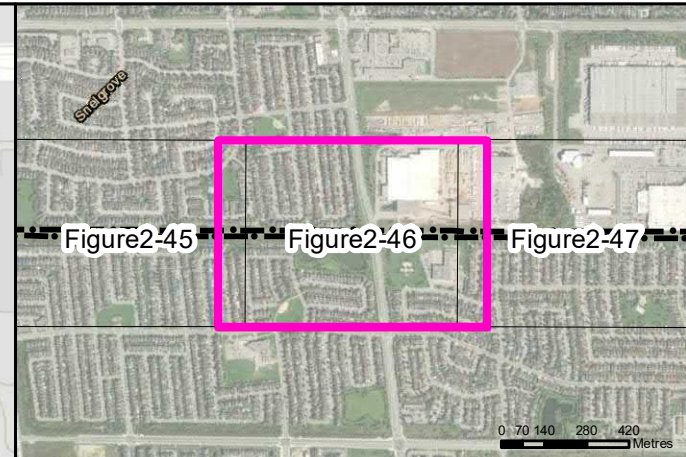
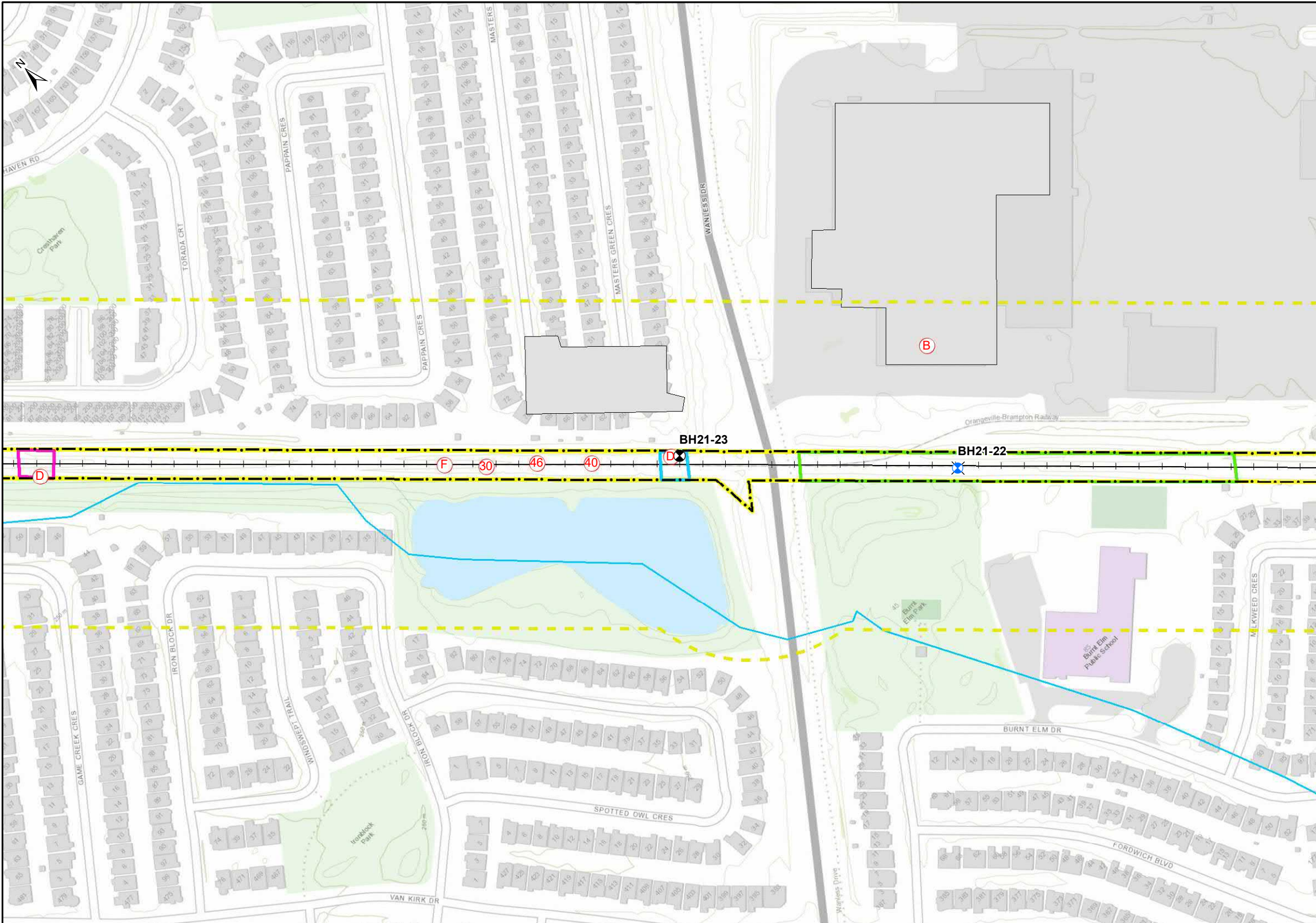
PROJECT:  
CONTAMINANT OVERVIEW STUDY  
FORMER ORANGEVILLE RAIL,  
BRAMPTON, ONTARIO

CLIENT:  
REGION OF PEEL

- DATA SOURCE:
- LEGEND:
- 100m STUDY AREA
  - SUBJECT SITE
  - BUILDINGS
  - RAIL
  - RIVERS
  - + BOREHOLE
  - + MONITORING WELL
  - # PCA CONTRIBUTING TO APEC
  - # PCA NOT CONTRIBUTING TO APEC

	PROJECT NO.:	211-10139-00	REVIEWED BY:	CJ
	DATE:	APRIL 2022	FIGURE:	2-45





- AREAS OF POTENTIAL ENVIORNMENTAL CONCERN (APEC):
- APEC 13,14,38,114
  - APEC 27
  - APEC 53
  - APEC 54

Note:  
Please refer to Table 3 appended to the report for APECs

TITLE:	AREAS OF POTENTIAL ENVIRONMENTAL CONCERN
PROJECT:	CONTAMINANT OVERVIEW STUDY FORMER ORANGEVILLE RAIL, BRAMPTON, ONTARIO
CLIENT:	REGION OF PEEL



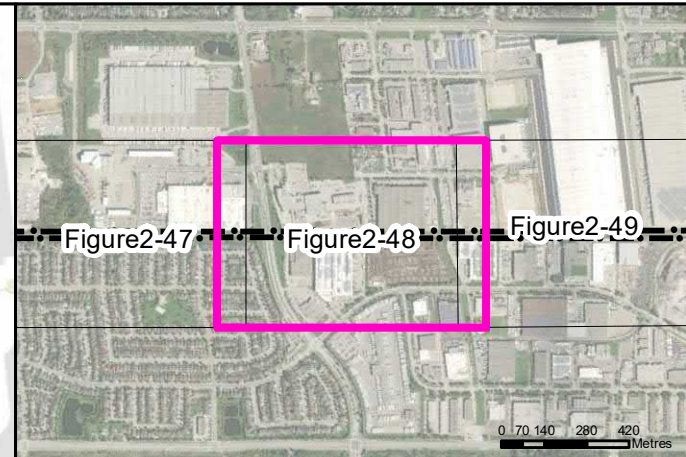
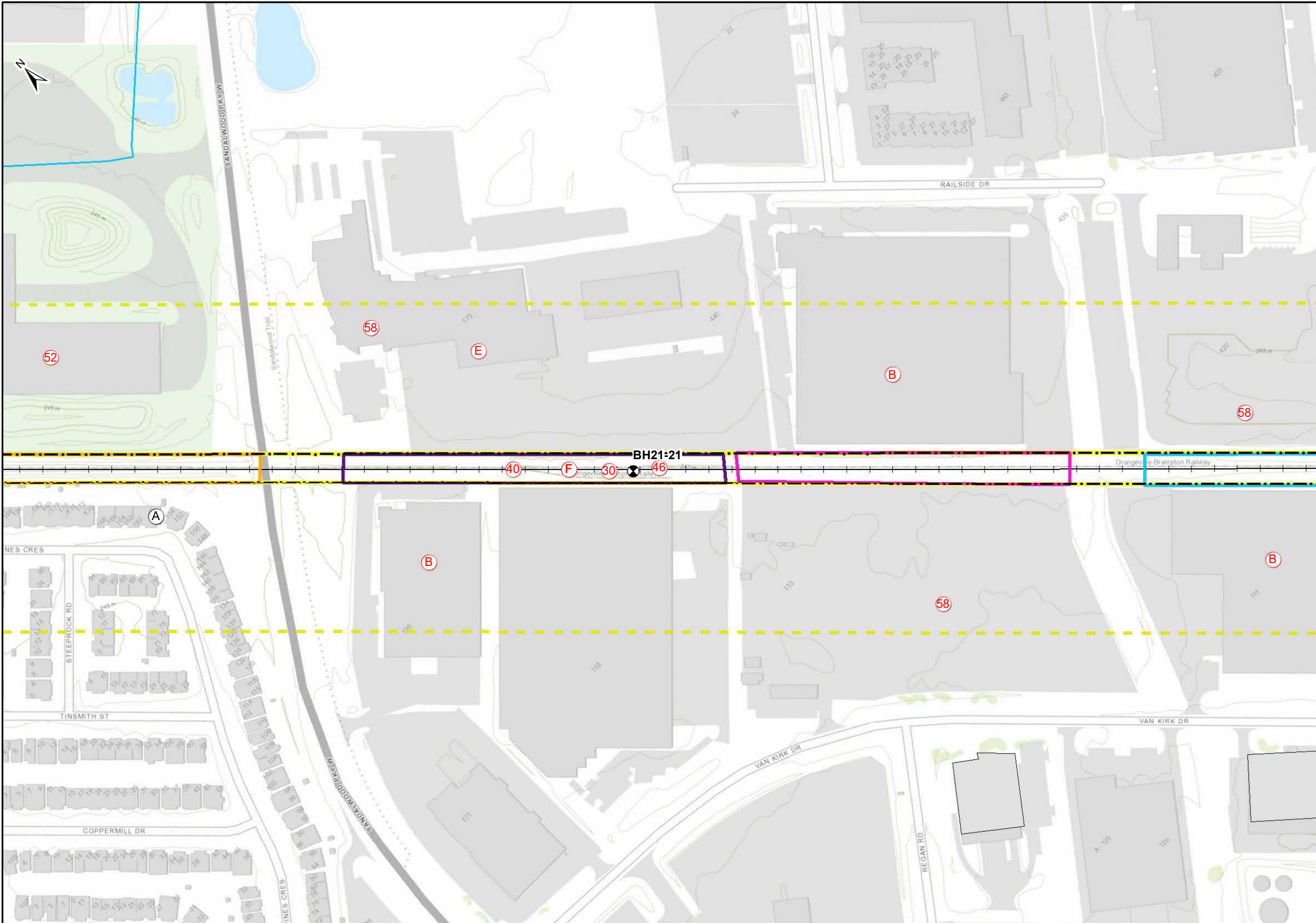
DATA SOURCE:	
LEGEND:	
<span style="border: 1px dashed yellow; display: inline-block; width: 15px; height: 10px; margin-right: 5px;"></span> 100m STUDY AREA	<span style="border: 1px solid black; border-radius: 50%; width: 10px; height: 10px; display: inline-block; margin-right: 5px;"></span> BOREHOLE
<span style="border: 1px dashed black; display: inline-block; width: 15px; height: 10px; margin-right: 5px;"></span> SUBJECT SITE	<span style="border: 1px solid blue; border-radius: 50%; width: 10px; height: 10px; display: inline-block; margin-right: 5px;"></span> MONITORING WELL
<span style="background-color: gray; display: inline-block; width: 15px; height: 10px; margin-right: 5px;"></span> BUILDINGS	<span style="border: 1px solid red; border-radius: 50%; width: 10px; height: 10px; display: inline-block; margin-right: 5px;"></span> PCA CONTRIBUTING TO APEC
<span style="border-bottom: 1px solid black; width: 15px; display: inline-block; margin-right: 5px;"></span> RAIL	<span style="border: 1px solid black; border-radius: 50%; width: 10px; height: 10px; display: inline-block; margin-right: 5px;"></span> PCA NOT CONTRIBUTING TO APEC
<span style="border-bottom: 1px solid blue; width: 15px; display: inline-block; margin-right: 5px;"></span> RIVERS	

	PROJECT NO.:	REVIEWED BY:
	211-10139-00	CJ
DATE:	APRIL 2022	FIGURE:
		2-46









AREAS OF POTENTIAL ENVIORNMENTAL CONCERN (APEC):

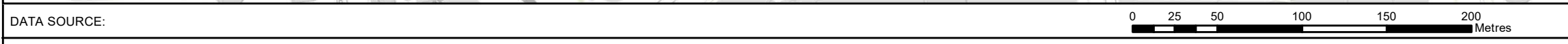
<span style="border: 1px solid yellow; display: inline-block; width: 15px; height: 10px;"></span>	APEC 13,14,38,114
<span style="border: 1px solid blue; display: inline-block; width: 15px; height: 10px;"></span>	APEC 18
<span style="border: 1px solid pink; display: inline-block; width: 15px; height: 10px;"></span>	APEC 19
<span style="border: 1px solid purple; display: inline-block; width: 15px; height: 10px;"></span>	APEC 20
<span style="border: 1px solid orange; display: inline-block; width: 15px; height: 10px;"></span>	APEC 107

Note:  
Please refer to Table 3 appended to the report for APECs

TITLE:  
AREAS OF POTENTIAL ENVIRONMENTAL CONCERN

PROJECT:  
CONTAMINANT OVERVIEW STUDY  
FORMER ORANGEVILLE RAIL,  
BRAMPTON, ONTARIO

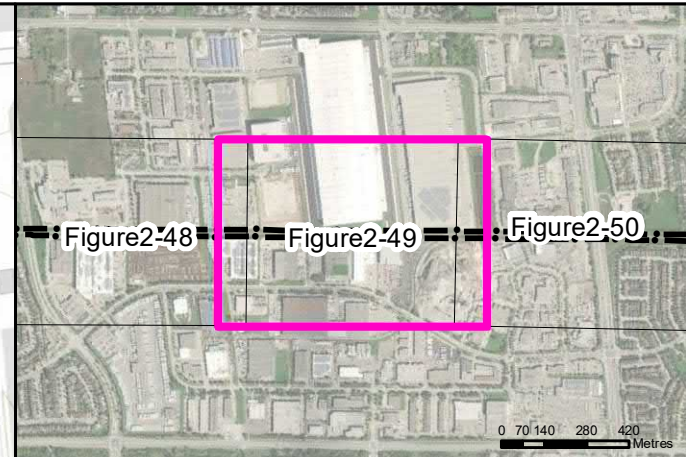
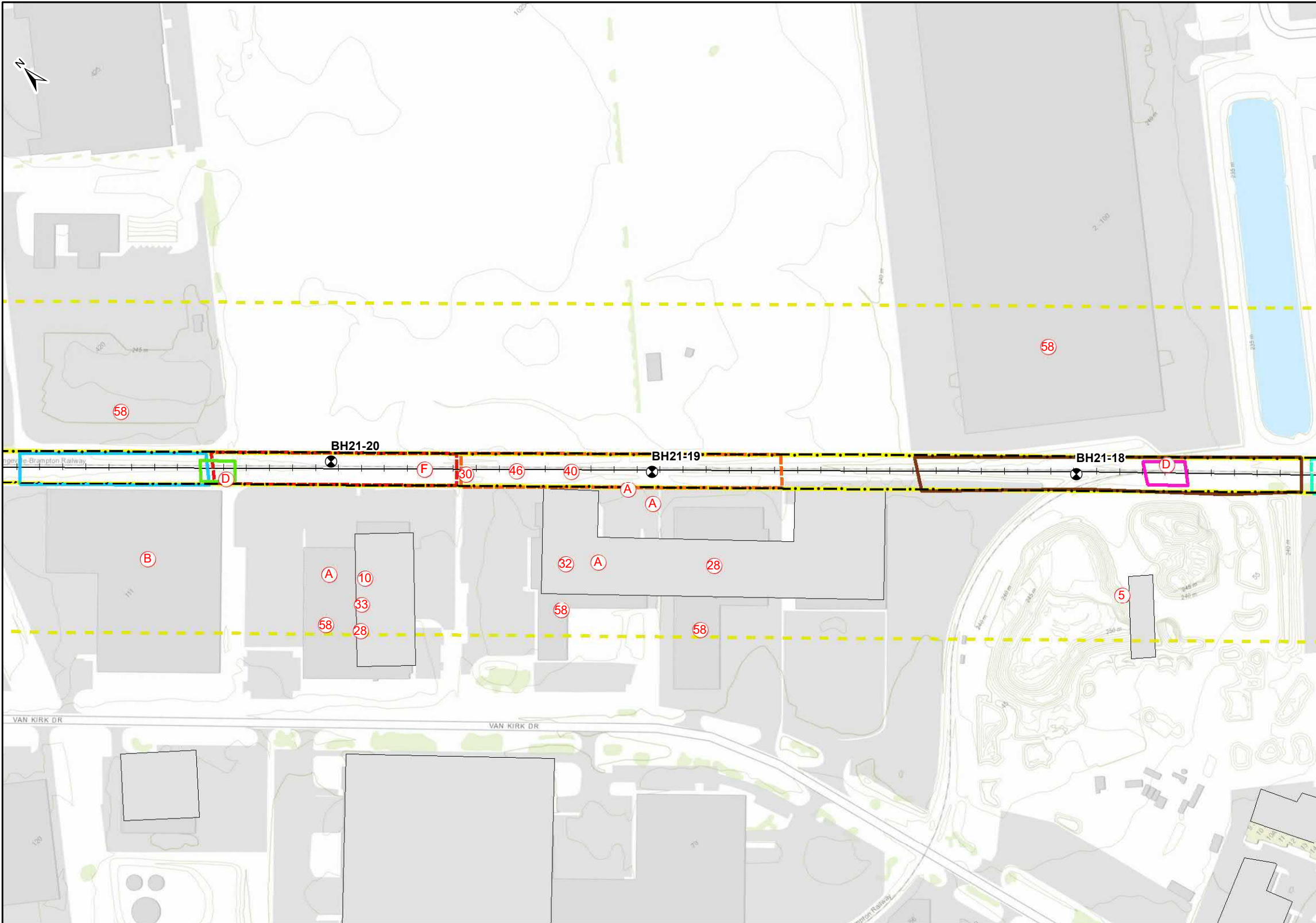
CLIENT:  
REGION OF PEEL



DATA SOURCE:	
LEGEND:	
<span style="border: 1px dashed yellow; display: inline-block; width: 20px; height: 10px;"></span> 100m STUDY AREA	BOREHOLE
<span style="border: 1px dashed black; display: inline-block; width: 20px; height: 10px;"></span> SUBJECT SITE	MONITORING WELL
BUILDINGS	PCA CONTRIBUTING TO APEC
RAIL	PCA NOT CONTRIBUTING TO APEC
RIVERS	

	PROJECT NO.:	REVIEWED BY:
	211-10139-00	CJ
	DATE:	FIGURE:
	APRIL 2022	2-48



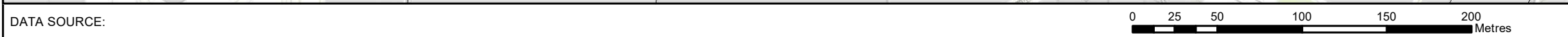


**AREAS OF POTENTIAL ENVIORNMENTAL CONCERN (APEC):**

	APEC 13,14,38,114
	APEC 2
	APEC 5
	APEC 8
	APEC 18
	APEC 102
	APEC 103

Note:  
Please refer to Table 3 appended to the report for APECs

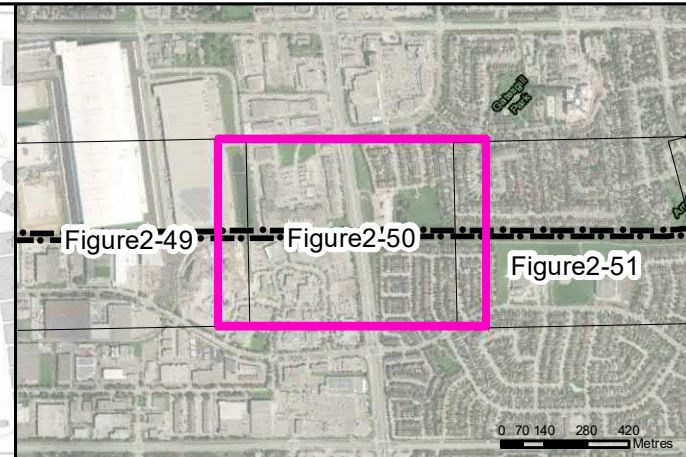
TITLE:	AREAS OF POTENTIAL ENVIRONMENTAL CONCERN	
PROJECT:	CONTAMINANT OVERVIEW STUDY FORMER ORANGEVILLE RAIL, BRAMPTON, ONTARIO	
CLIENT:	REGION OF PEEL	



DATA SOURCE:	
LEGEND:	
	100m STUDY AREA
	SUBJECT SITE
	BUILDINGS
	RAIL
	RIVERS
	BOREHOLE
	MONITORING WELL
	PCA CONTRIBUTING TO APEC
	PCA NOT CONTRIBUTING TO APEC

	PROJECT NO.:	211-10139-00	REVIEWED BY:	CJ
	DATE:	APRIL 2022	FIGURE:	2-49





AREAS OF POTENTIAL ENVIRONMENTAL CONCERN (APEC):

	APEC 13,14,38,114
	APEC 2
	APEC 9
	APEC 102

Note:  
Please refer to Table 3 appended to the report for APECs

TITLE:  
AREAS OF POTENTIAL ENVIRONMENTAL CONCERN

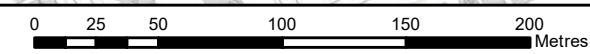
PROJECT:  
CONTAMINANT OVERVIEW STUDY  
FORMER ORANGEVILLE RAIL,  
BRAMPTON, ONTARIO

CLIENT:  
REGION OF PEEL

DATA SOURCE:

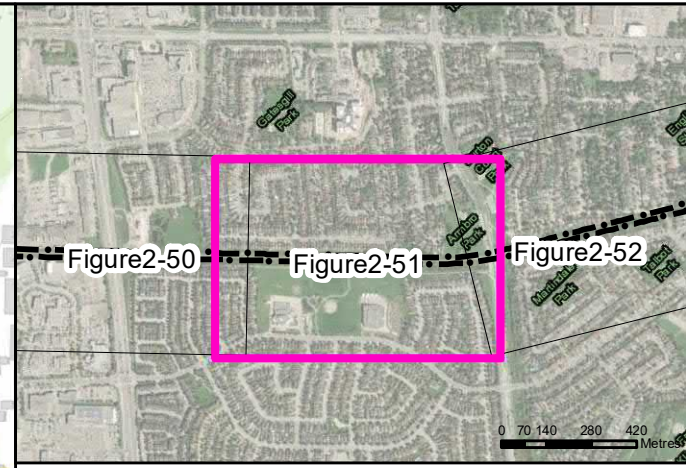
LEGEND:

	100m STUDY AREA		BOREHOLE
	SUBJECT SITE		MONITORING WELL
	BUILDINGS		PCA CONTRIBUTING TO APEC
	RAIL		PCA NOT CONTRIBUTING TO APEC
	RIVERS		



	PROJECT NO.:	211-10139-00	REVIEWED BY:	CJ
	DATE:	APRIL 2022	FIGURE:	2-50





AREAS OF POTENTIAL ENVIORNMENTAL CONCERN (APEC):

<span style="border: 2px solid yellow; display: inline-block; width: 15px; height: 10px;"></span>	APEC 13,14,38,114
<span style="border: 2px solid pink; display: inline-block; width: 15px; height: 10px;"></span>	APEC 49
<span style="border: 2px solid blue; display: inline-block; width: 15px; height: 10px;"></span>	APEC 50
<span style="border: 2px solid green; display: inline-block; width: 15px; height: 10px;"></span>	APEC 51

Note:  
Please refer to Table 3 appended to the report for APECs

TITLE:  
AREAS OF POTENTIAL ENVIRONMENTAL CONCERN

PROJECT:  
CONTAMINANT OVERVIEW STUDY  
FORMER ORANGEVILLE RAIL,  
BRAMPTON, ONTARIO

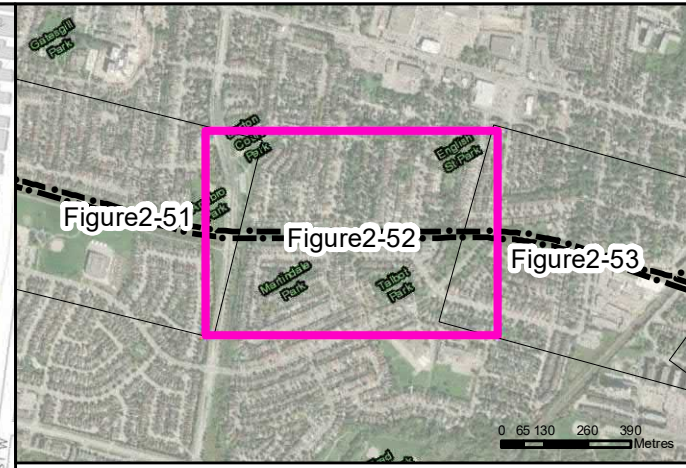
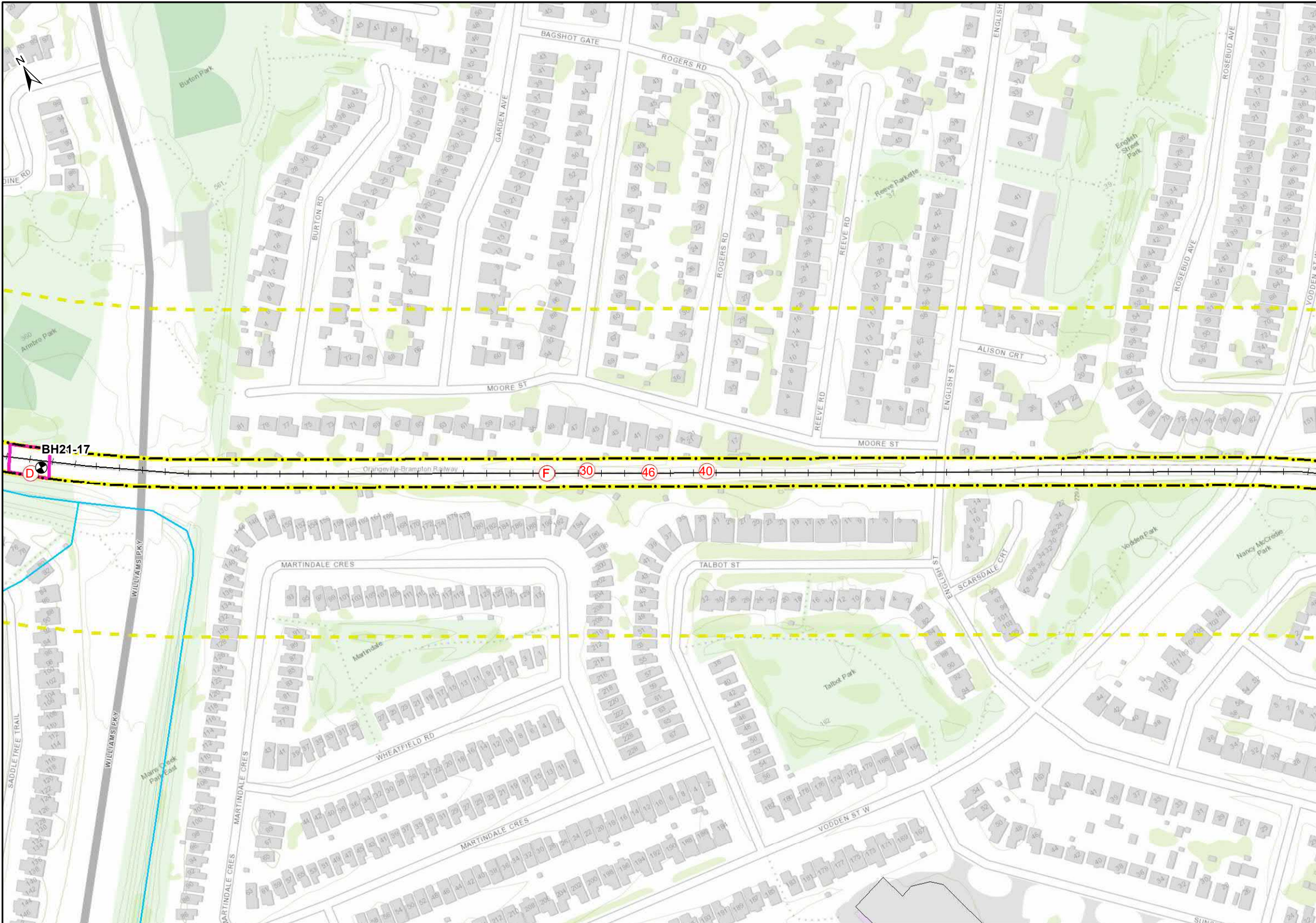
CLIENT:  
REGION OF PEEL

DATA SOURCE:

<span style="border: 2px dashed yellow; display: inline-block; width: 15px; height: 10px;"></span>	100m STUDY AREA	<span style="border: 1px solid black; border-radius: 50%; padding: 2px;">+</span>	BOREHOLE
<span style="border: 2px dashed black; display: inline-block; width: 15px; height: 10px;"></span>	SUBJECT SITE	<span style="border: 1px solid black; border-radius: 50%; padding: 2px;">+</span>	MONITORING WELL
<span style="background-color: grey; display: inline-block; width: 15px; height: 10px;"></span>	BUILDINGS	<span style="border: 1px solid red; border-radius: 50%; padding: 2px;">#</span>	PCA CONTRIBUTING TO APEC
<span style="border-bottom: 1px solid black; width: 15px; display: inline-block;"></span>	RAIL	<span style="border: 1px solid black; border-radius: 50%; padding: 2px;">#</span>	PCA NOT CONTRIBUTING TO APEC
<span style="border-bottom: 2px solid blue; width: 15px; display: inline-block;"></span>	RIVERS		

	PROJECT NO.:	211-10139-00	REVIEWED BY:	CJ
	DATE:	APRIL 2022	FIGURE:	2-51





AREAS OF POTENTIAL ENVIRONMENTAL CONCERN (APEC):

- APEC 13,14,38,114
- APEC 49

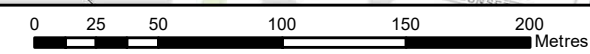
Note:  
Please refer to Table 3 appended to the report for APECs

TITLE:  
AREAS OF POTENTIAL ENVIRONMENTAL CONCERN

PROJECT:  
CONTAMINANT OVERVIEW STUDY  
FORMER ORANGEVILLE RAIL,  
MISSISSAUGA, ONTARIO

CLIENT:  
REGION OF PEEL

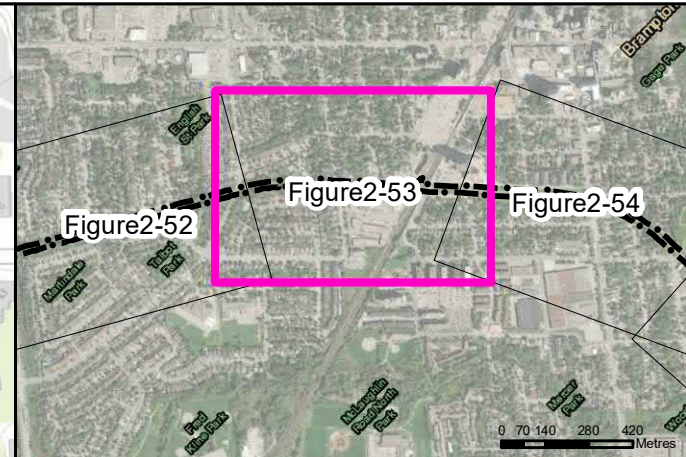
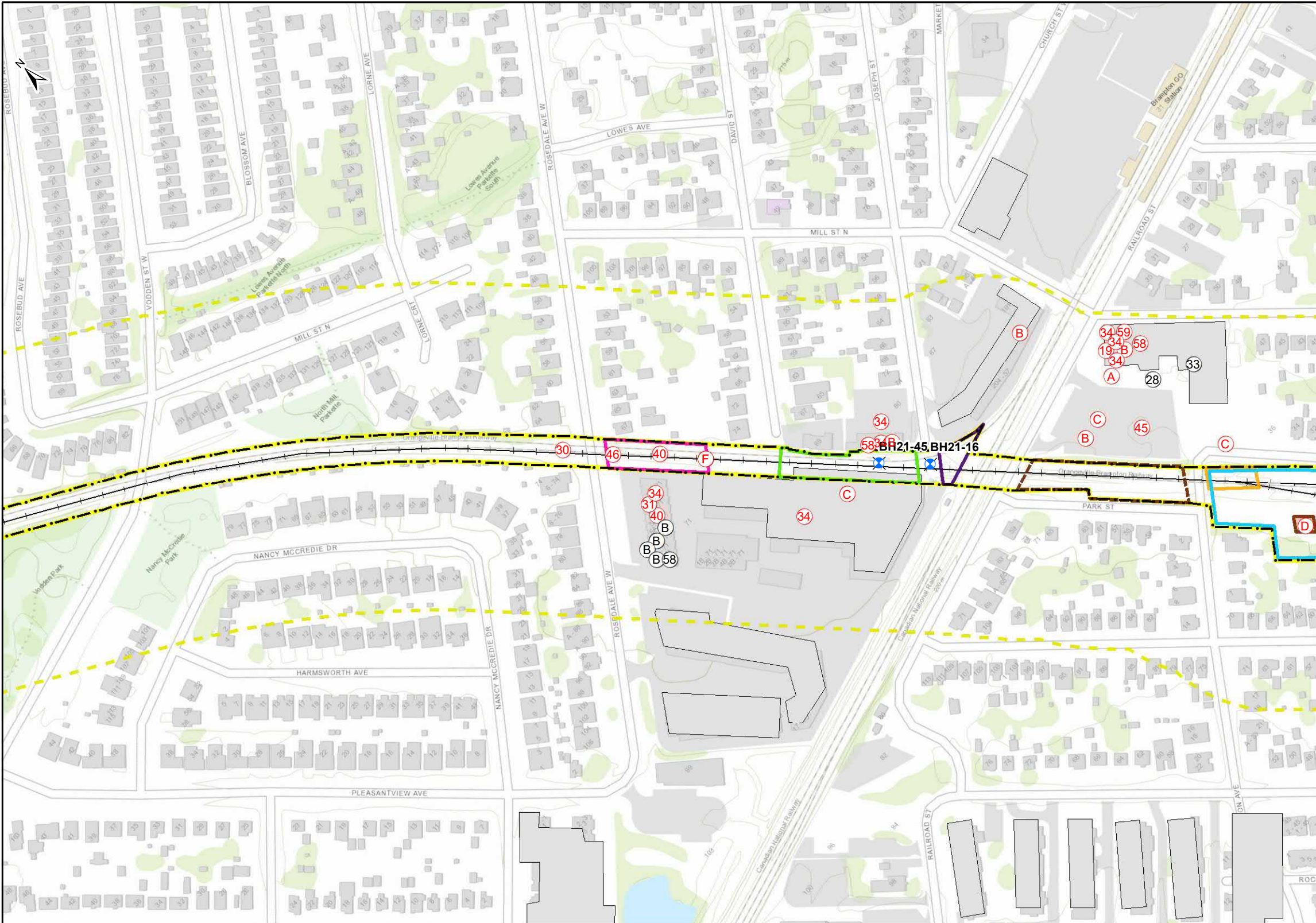
DATA SOURCE:



- LEGEND:
- 100m STUDY AREA
  - SUBJECT SITE
  - BUILDINGS
  - RAIL
  - RIVERS
  - + BOREHOLE
  - + MONITORING WELL
  - # PCA CONTRIBUTING TO APEC
  - # PCA NOT CONTRIBUTING TO APEC

	PROJECT NO.:	211-10139-00	REVIEWED BY:	CJ
	DATE:	APRIL 2022	FIGURE:	2-52





- AREAS OF POTENTIAL ENVIRONMENTAL CONCERN (APEC):**
- APEC 13,14,38,114
  - APEC 6
  - APEC 16
  - APEC 17
  - APEC 26
  - APEC 29
  - APEC 113

Note:  
Please refer to Table 3 appended to the report for APECs

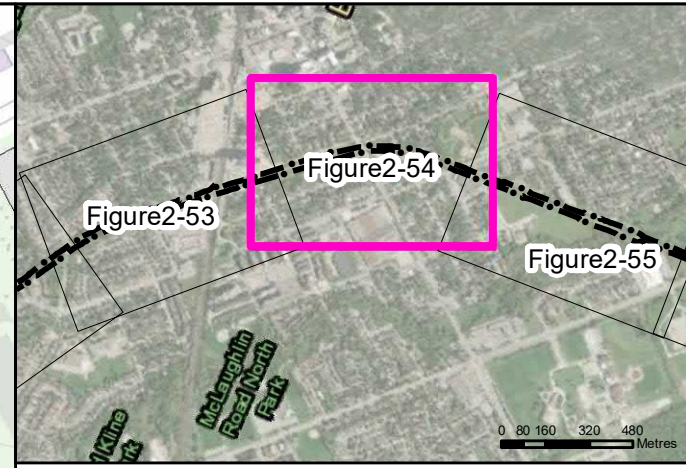
TITLE:	AREAS OF POTENTIAL ENVIRONMENTAL CONCERN	
PROJECT:	CONTAMINANT OVERVIEW STUDY FORMER ORANGEVILLE RAIL, MISSISSAUGA, ONTARIO	
CLIENT:	REGION OF PEEL	



DATA SOURCE:		LEGEND:	
<span style="border: 1px dashed yellow; display: inline-block; width: 15px; height: 10px; margin-right: 5px;"></span>	100m STUDY AREA	<span style="display: inline-block; width: 15px; height: 10px; background-color: grey; margin-right: 5px;"></span>	BUILDINGS
<span style="border: 1px solid black; display: inline-block; width: 15px; height: 10px; margin-right: 5px;"></span>	SUBJECT SITE	<span style="display: inline-block; width: 15px; height: 10px; border-bottom: 1px solid black; margin-right: 5px;"></span>	RAIL
<span style="display: inline-block; width: 15px; height: 10px; border-bottom: 1px solid blue; margin-right: 5px;"></span>	RIVERS	<span style="display: inline-block; width: 15px; height: 10px; border: 1px solid black; border-radius: 50%; margin-right: 5px;"></span>	BOREHOLE
<span style="display: inline-block; width: 15px; height: 10px; border: 1px solid black; border-radius: 50%; margin-right: 5px;"></span>	MONITORING WELL	<span style="display: inline-block; width: 15px; height: 10px; border: 1px solid black; border-radius: 50%; text-align: center; line-height: 10px; margin-right: 5px;">#</span>	PCA CONTRIBUTING TO APEC
<span style="display: inline-block; width: 15px; height: 10px; border: 1px solid black; border-radius: 50%; text-align: center; line-height: 10px; margin-right: 5px;">#</span>	PCA NOT CONTRIBUTING TO APEC		

	PROJECT NO.:	REVIEWED BY:
	211-10139-00	CJ
	DATE:	FIGURE:
	APRIL 2022	2-53





**AREAS OF POTENTIAL ENVIRONMENTAL CONCERN (APEC):**

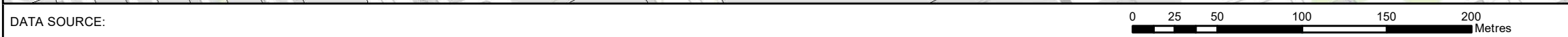
[Yellow outline]	APEC 13,14,38,114
[Pink hatched]	APEC 4
[Brown hatched]	APEC 6
[Red hatched]	APEC 7
[Green hatched]	APEC 10
[Purple hatched]	APEC 12
[Blue dashed]	APEC 24
[Cyan hatched]	APEC 25
[Red dashed]	APEC 28
[Orange outline]	APEC 29
[Black dashed]	APEC 31
[Yellow solid]	APEC 32
[Red solid]	APEC 39
[Orange hatched]	APEC 40
[Green hatched]	APEC 41
[Black solid]	APEC 42
[Red solid]	APEC 48
[Blue outline]	APEC 113

Note:  
Please refer to Table 3 appended to the report for APECs

TITLE:  
AREAS OF POTENTIAL ENVIRONMENTAL CONCERN

PROJECT:  
CONTAMINANT OVERVIEW STUDY  
FORMER ORANGEVILLE RAIL,  
MISSISSAUGA, ONTARIO

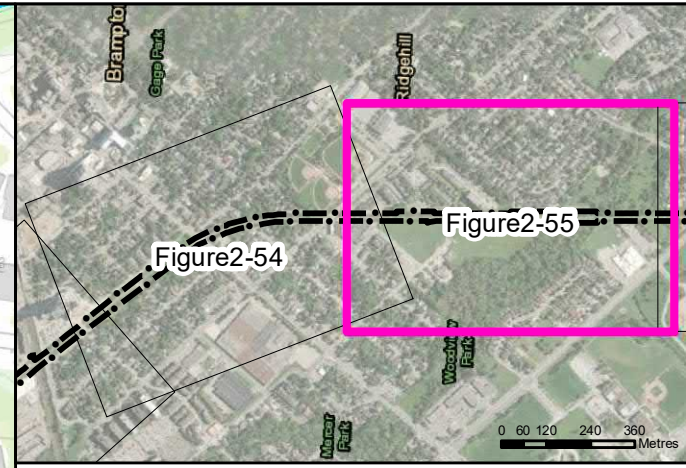
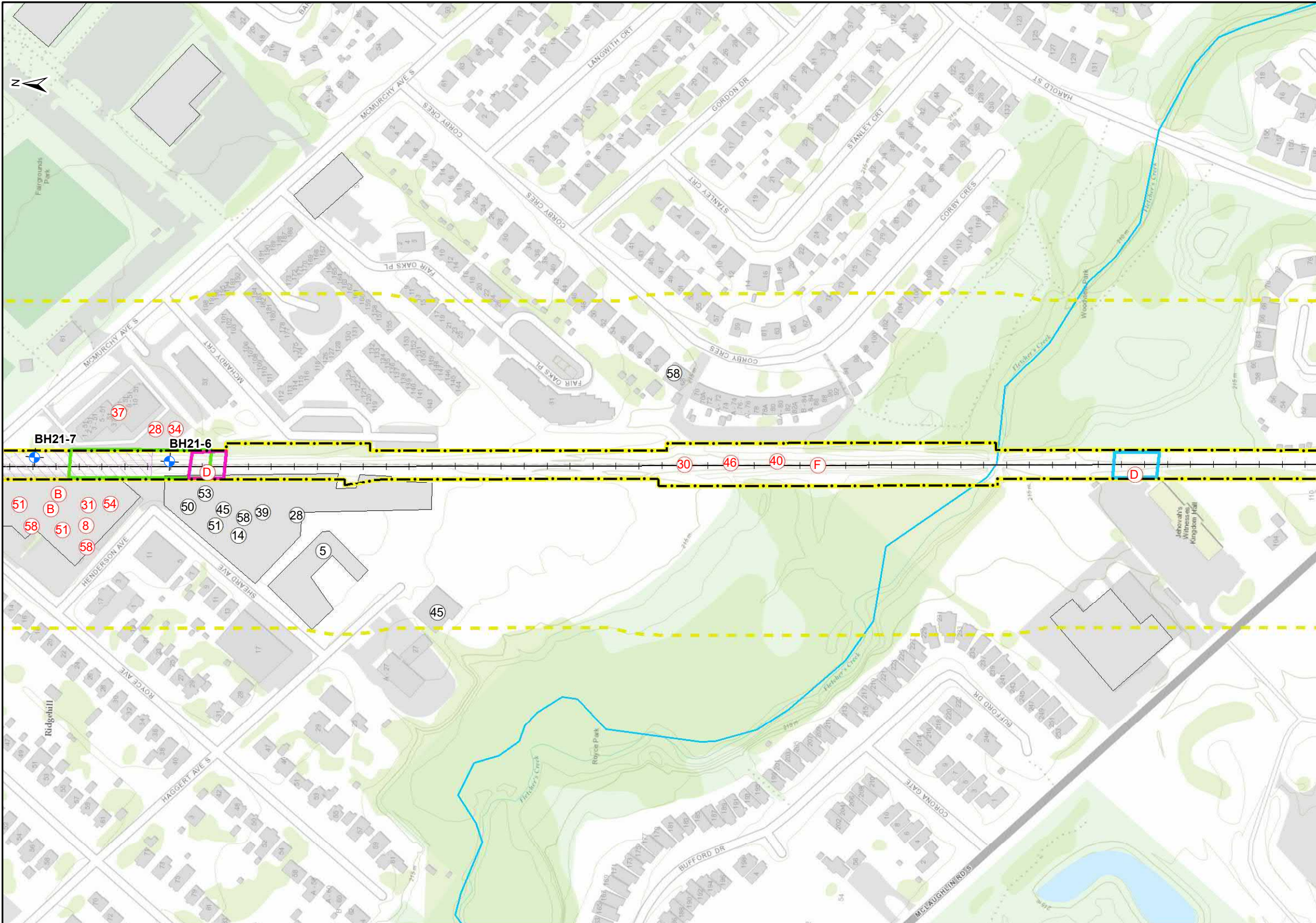
CLIENT:  
REGION OF PEEL



DATA SOURCE:	
[Yellow dashed line]	100m STUDY AREA
[Black dashed line]	SUBJECT SITE
[Grey rectangle]	BUILDINGS
[Black line]	RAIL
[Blue line]	RIVERS
[Blue circle with cross]	BOREHOLE
[Blue circle with dot]	MONITORING WELL
[Red circle with #]	PCA CONTRIBUTING TO APEC
[Black circle with #]	PCA NOT CONTRIBUTING TO APEC

	PROJECT NO.:	211-10139-00	REVIEWED BY:	CJ
	DATE:	APRIL 2022	FIGURE:	2-54





**AREAS OF POTENTIAL ENVIRONMENTAL CONCERN (APEC):**

	APEC 13,14,38,114
	APEC 4
	APEC 10
	APEC 47
	APEC 101

Note:  
Please refer to Table 3 appended to the report for APECs

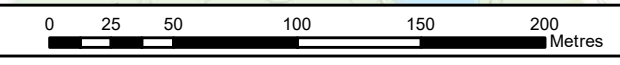
TITLE:  
AREAS OF POTENTIAL ENVIRONMENTAL CONCERN

PROJECT:  
CONTAMINANT OVERVIEW STUDY  
FORMER ORANGEVILLE RAIL,  
MISSISSAUGA, ONTARIO

CLIENT:  
REGION OF PEEL

**DATA SOURCE:**

	100m STUDY AREA		BOREHOLE
	SUBJECT SITE		MONITORING WELL
	BUILDINGS		PCA CONTRIBUTING TO APEC
	RAIL		PCA NOT CONTRIBUTING TO APEC
	RIVERS		



	PROJECT NO.:	211-10139-00	REVIEWED BY:	CJ
	DATE:	APRIL 2022	FIGURE:	2-55



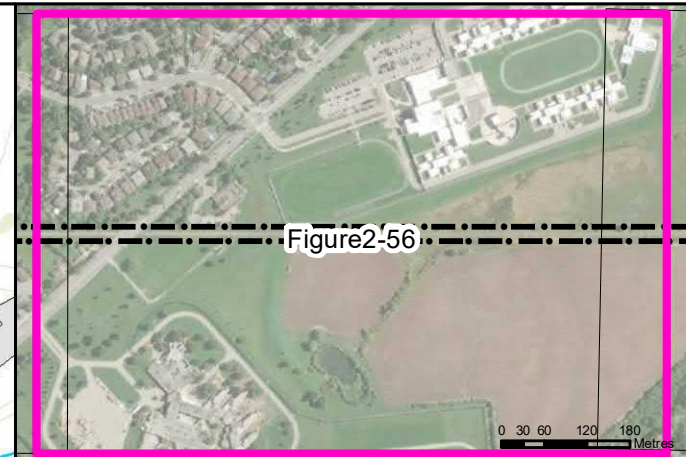
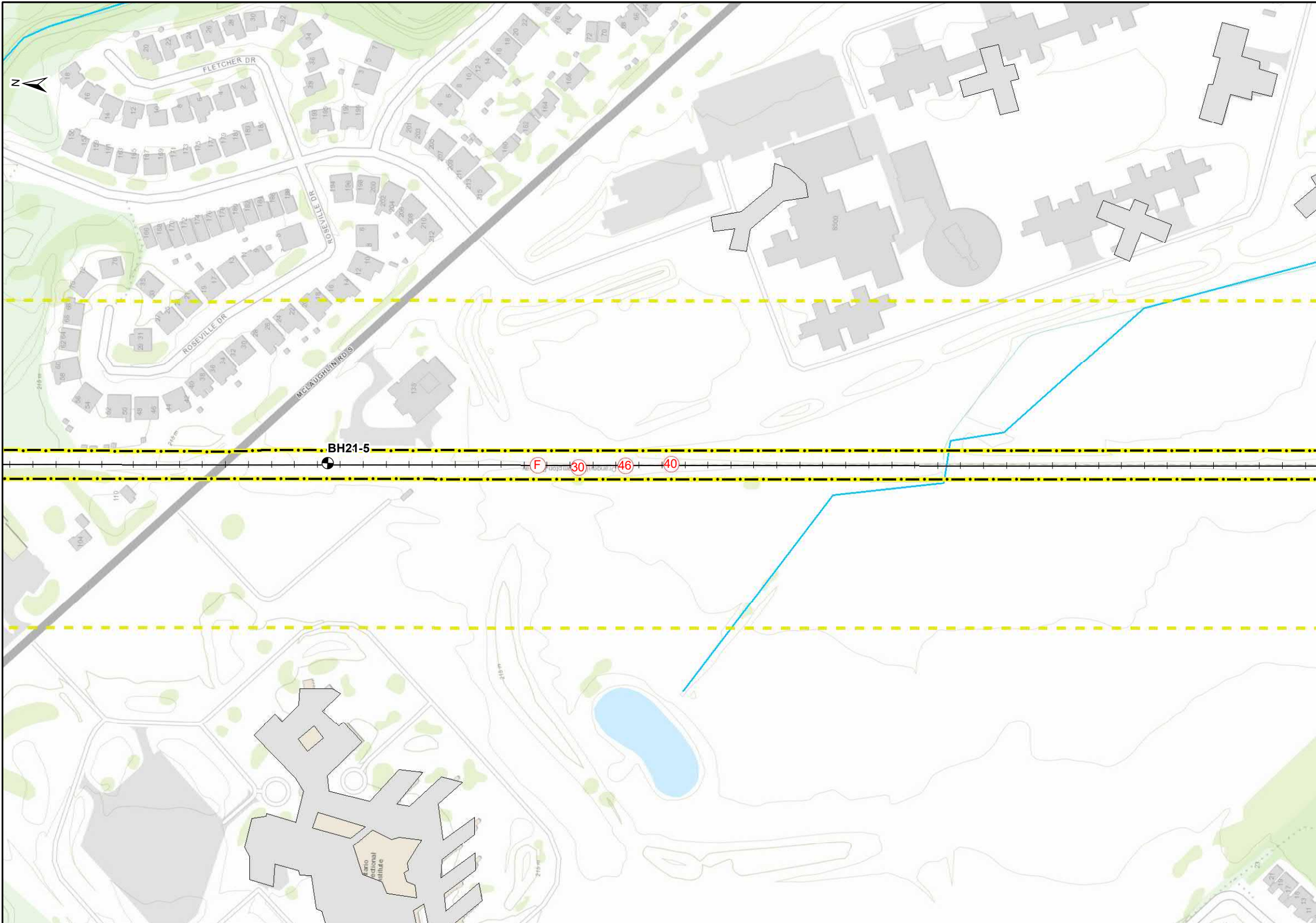


Figure 2-56

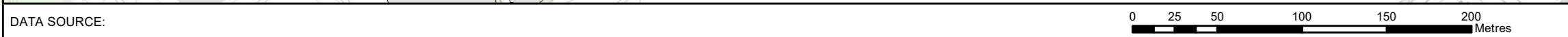
AREAS OF POTENTIAL ENVIRONMENTAL CONCERN (APEC):  
 APEC 13,14,38,114

Note:  
 Please refer to Table 3 appended to the report for APECs

TITLE:  
 AREAS OF POTENTIAL ENVIRONMENTAL CONCERN

PROJECT:  
 CONTAMINANT OVERVIEW STUDY  
 FORMER ORANGEVILLE RAIL,  
 MISSISSAUGA, ONTARIO

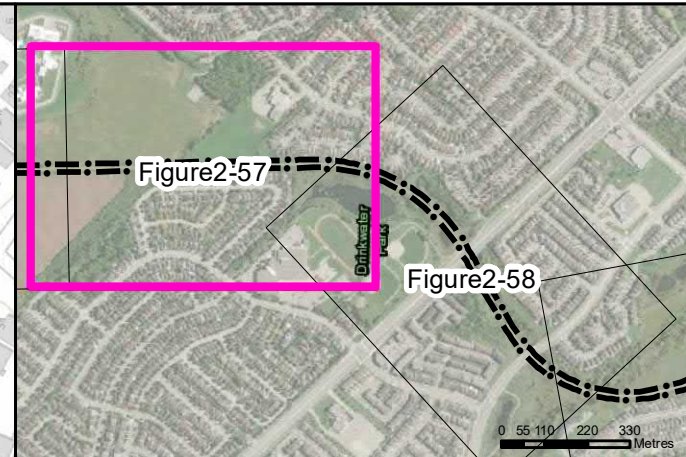
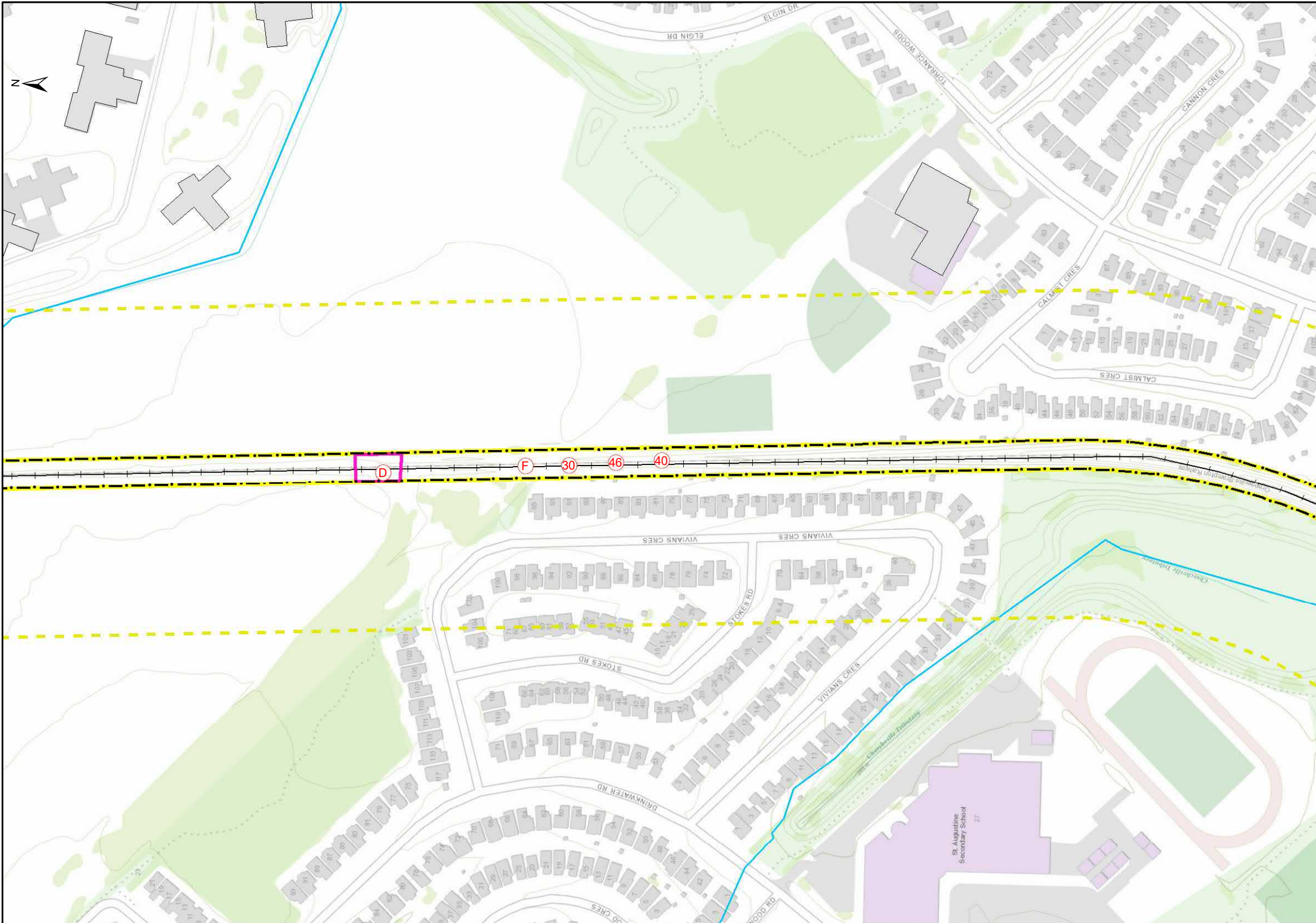
CLIENT:  
 REGION OF PEEL



DATA SOURCE:	
LEGEND:	
100m STUDY AREA	BOREHOLE
SUBJECT SITE	MONITORING WELL
BUILDINGS	PCA CONTRIBUTING TO APEC
RAIL	PCA NOT CONTRIBUTING TO APEC
RIVERS	

	PROJECT NO.:	REVIEWED BY:
	211-10139-00	CJ
	DATE:	FIGURE:
	APRIL 2022	2-56





AREAS OF POTENTIAL ENVIRONMENTAL CONCERN (APEC):

- APEC 13,14,38,114
- APEC 46

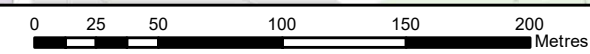
Note:  
Please refer to Table 3 appended to the report for APECs

TITLE:  
AREAS OF POTENTIAL ENVIRONMENTAL CONCERN

PROJECT:  
CONTAMINANT OVERVIEW STUDY  
FORMER ORANGEVILLE RAIL,  
MISSISSAUGA, ONTARIO

CLIENT:  
REGION OF PEEL

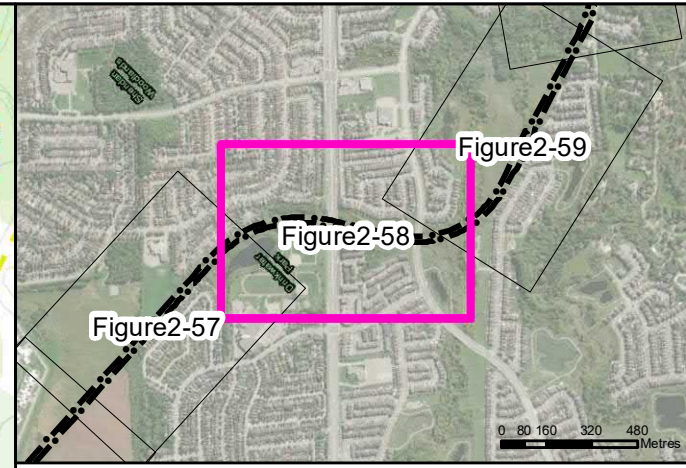
DATA SOURCE:



- LEGEND:
- 100m STUDY AREA
  - SUBJECT SITE
  - BUILDINGS
  - RAIL
  - RIVERS
  - + BOREHOLE
  - + MONITORING WELL
  - # PCA CONTRIBUTING TO APEC
  - # PCA NOT CONTRIBUTING TO APEC

	PROJECT NO.:	211-10139-00	REVIEWED BY:	CJ
	DATE:	APRIL 2022	FIGURE:	2-57





- AREAS OF POTENTIAL ENVIORNMENTAL CONCERN (APEC):
- APEC 13,14,38,114
  - APEC 44
  - APEC 45

Note:  
Please refer to Table 3 appended to the report for APECs

TITLE:  
AREAS OF POTENTIAL ENVIRONMENTAL CONCERN

PROJECT:  
CONTAMINANT OVERVIEW STUDY  
FORMER ORANGEVILLE RAIL,  
MISSISSAUGA, ONTARIO

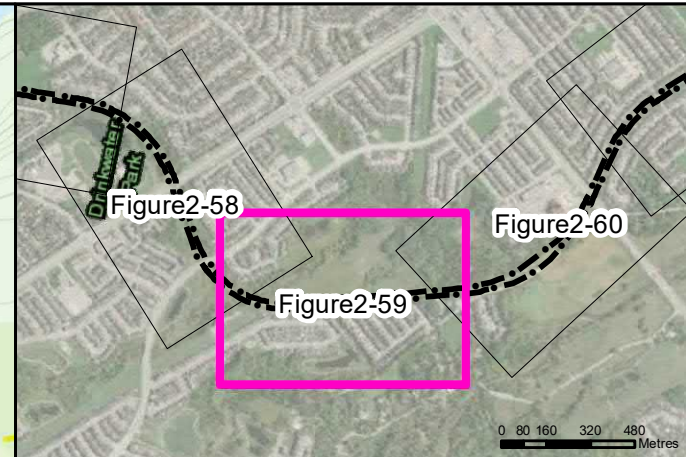
CLIENT:  
REGION OF PEEL

DATA SOURCE:

- LEGEND:
- 100m STUDY AREA
  - SUBJECT SITE
  - BUILDINGS
  - RAIL
  - RIVERS
  - + BOREHOLE
  - + MONITORING WELL
  - # PCA CONTRIBUTING TO APEC
  - # PCA NOT CONTRIBUTING TO APEC

	PROJECT NO.:	211-10139-00	REVIEWED BY:	CJ
	DATE:	APRIL 2022	FIGURE:	2-58





AREAS OF POTENTIAL ENVIRONMENTAL CONCERN (APEC):

	APEC 13,14,38,114
	APEC 15
	APEC 43
	APEC 44

Note:  
Please refer to Table 3 appended to the report for APECs

TITLE:  
AREAS OF POTENTIAL ENVIRONMENTAL CONCERN

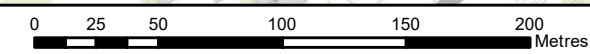
PROJECT:  
CONTAMINANT OVERVIEW STUDY  
FORMER ORANGEVILLE RAIL,  
MISSISSAUGA, ONTARIO

CLIENT:  
REGION OF PEEL

DATA SOURCE:

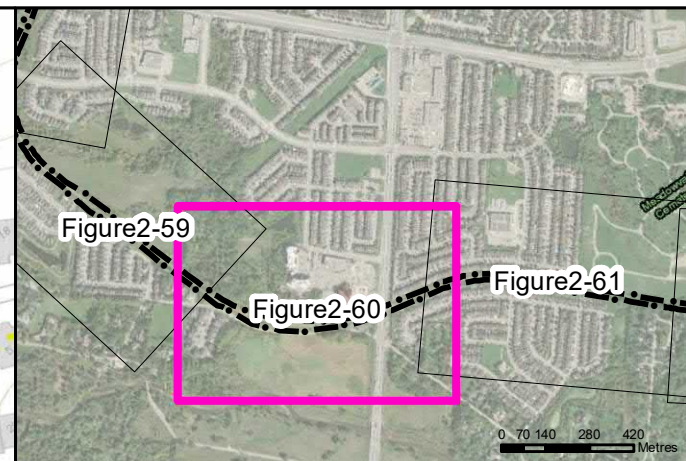
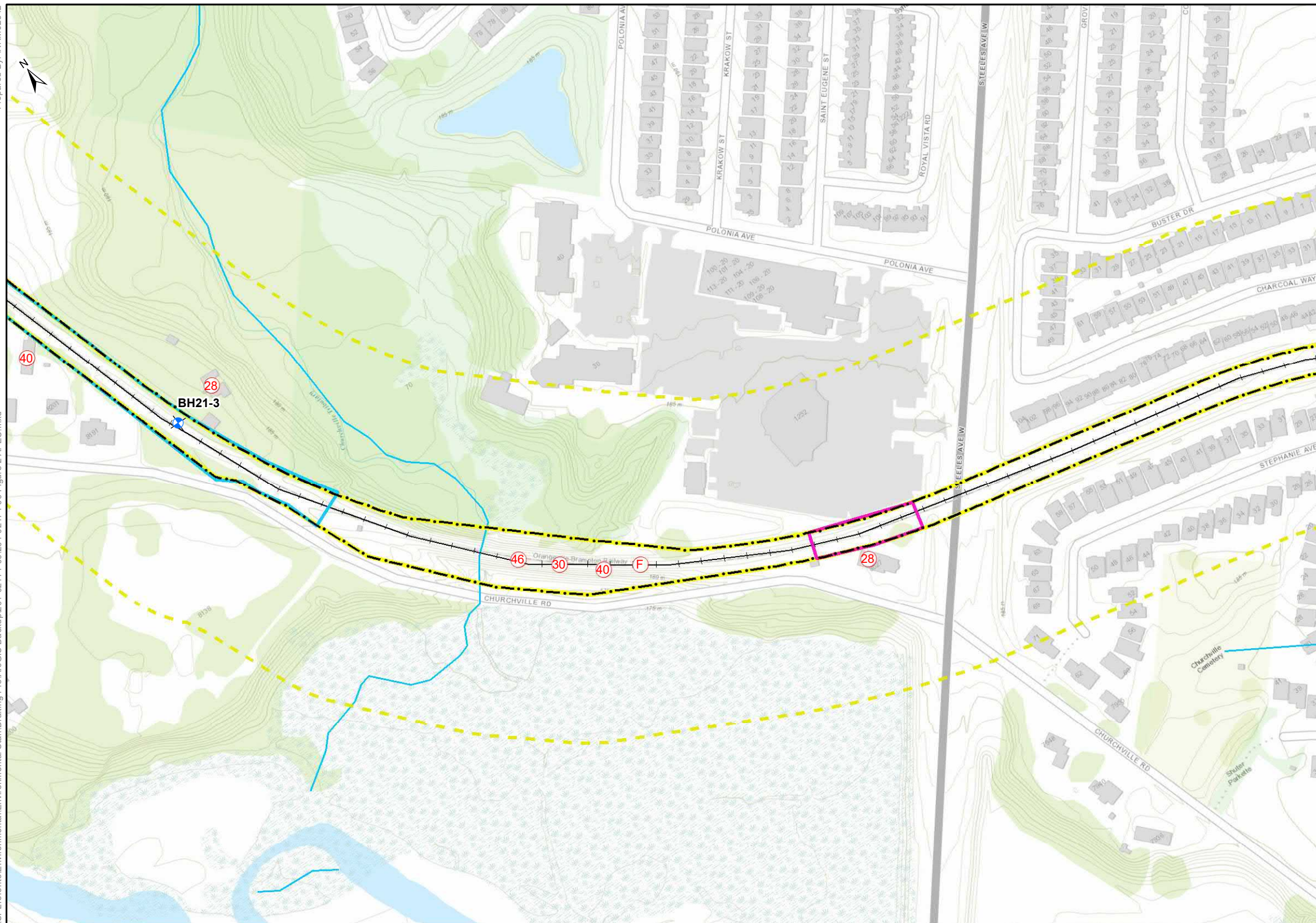
LEGEND:

	100m STUDY AREA		BOREHOLE
	SUBJECT SITE		MONITORING WELL
	BUILDINGS		PCA CONTRIBUTING TO APEC
	RAIL		PCA NOT CONTRIBUTING TO APEC
	RIVERS		



	PROJECT NO.:	211-10139-00	REVIEWED BY:	CJ
	DATE:	APRIL 2022	FIGURE:	2-59





- AREAS OF POTENTIAL ENVIRONMENTAL CONCERN (APEC):
- APEC 13,14,38,114
  - APEC 15
  - APEC 30

Note:  
Please refer to Table 3 appended to the report for APECs

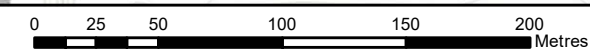
TITLE:  
AREAS OF POTENTIAL ENVIRONMENTAL CONCERN

PROJECT:  
CONTAMINANT OVERVIEW STUDY  
FORMER ORANGEVILLE RAIL,  
MISSISSAUGA, ONTARIO

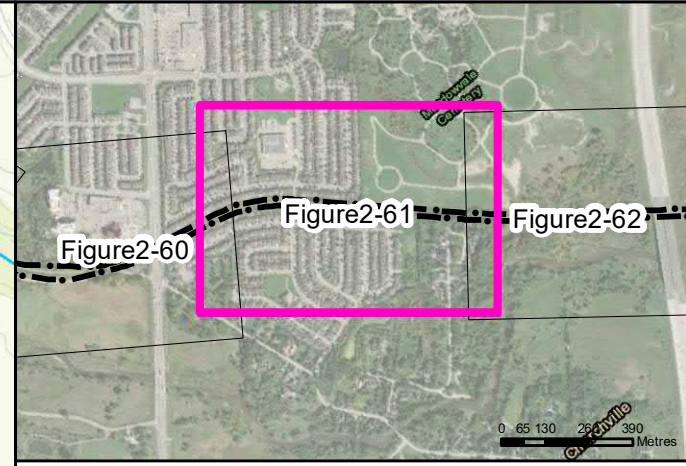
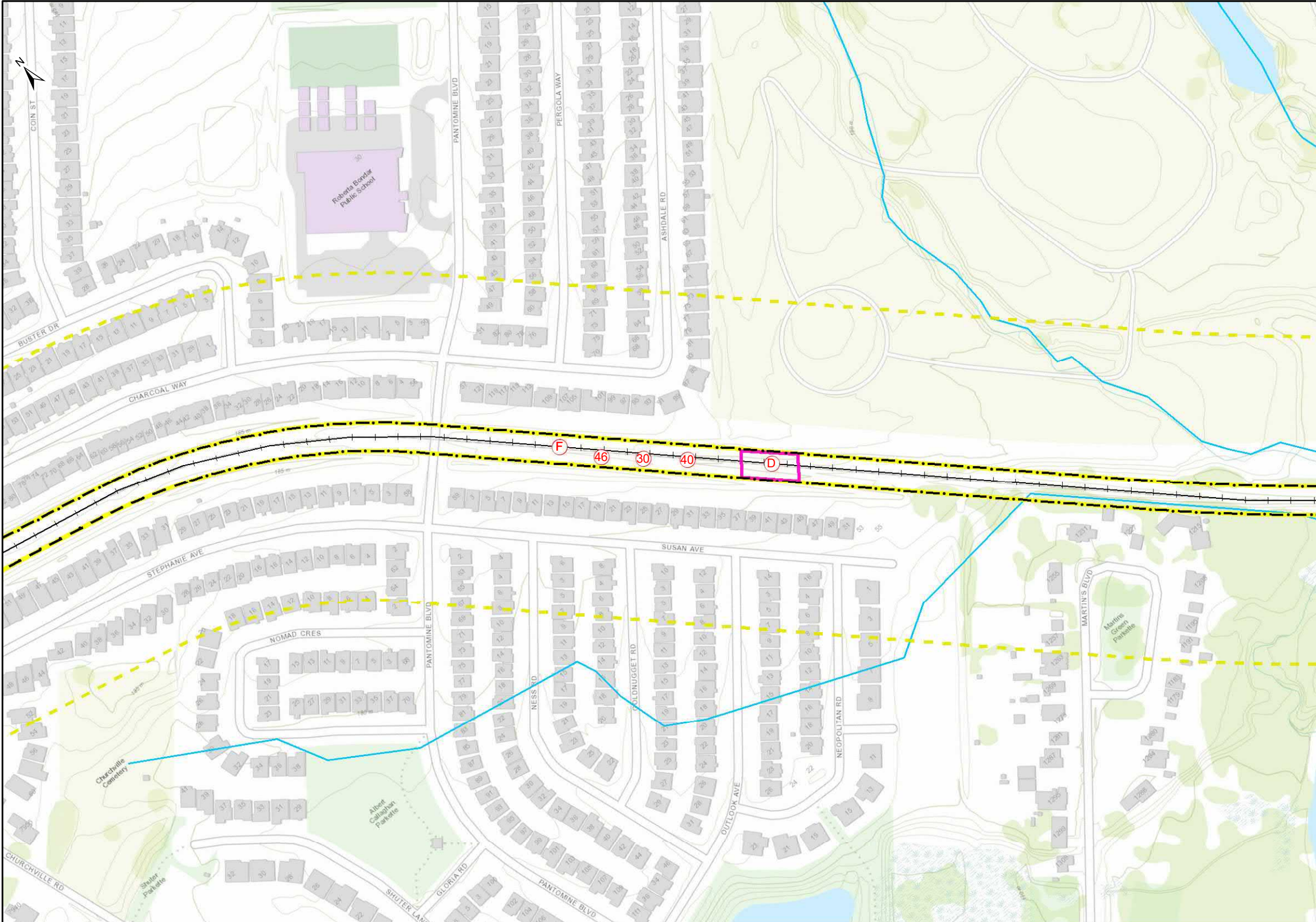
CLIENT:  
REGION OF PEEL

	PROJECT NO.:	211-10139-00	REVIEWED BY:	CJ
	DATE:	APRIL 2022	FIGURE:	2-60

- DATA SOURCE:
- LEGEND:
- 100m STUDY AREA
  - SUBJECT SITE
  - BUILDINGS
  - RAIL
  - RIVERS
  - + BOREHOLE
  - + MONITORING WELL
  - # PCA CONTRIBUTING TO APEC
  - # PCA NOT CONTRIBUTING TO APEC







AREAS OF POTENTIAL ENVIORNMENTAL CONCERN (APEC):

- APEC 13,14,38,114
- APEC 106

Note:  
Please refer to Table 3 appended to the report for APECs

TITLE:  
AREAS OF POTENTIAL ENVIRONMENTAL CONCERN

PROJECT:  
CONTAMINANT OVERVIEW STUDY  
FORMER ORANGEVILLE RAIL,  
MISSISSAUGA, ONTARIO

CLIENT:  
REGION OF PEEL

DATA SOURCE:

- LEGEND:
- 100m STUDY AREA
  - SUBJECT SITE
  - BUILDINGS
  - RAIL
  - RIVERS
  - + BOREHOLE
  - + MONITORING WELL
  - # PCA CONTRIBUTING TO APEC
  - # PCA NOT CONTRIBUTING TO APEC



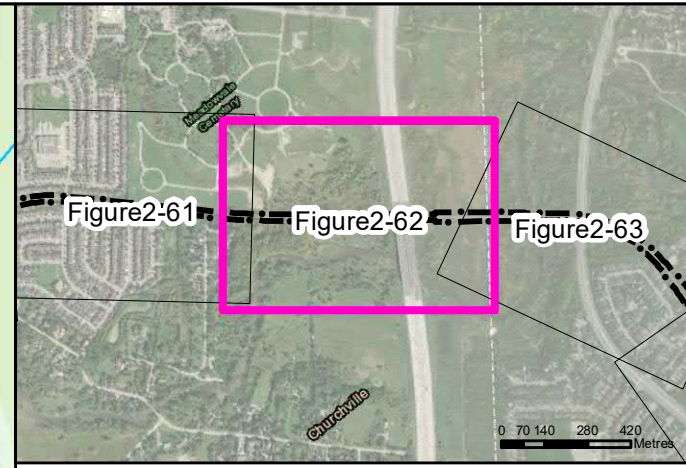
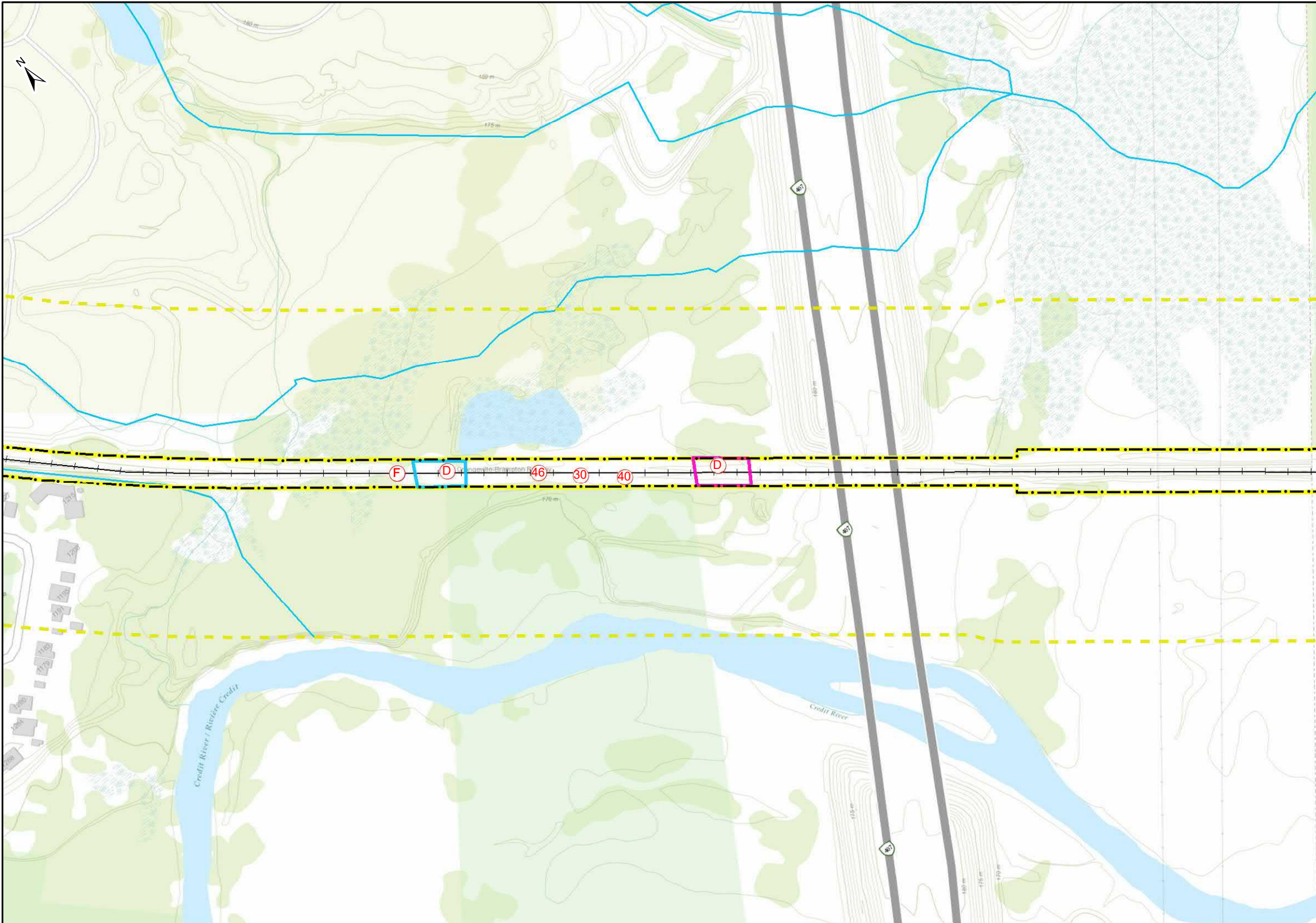
PROJECT NO.:  
211-10139-00

REVIEWED BY:  
CJ

DATE:  
APRIL 2022

FIGURE:  
2-61





AREAS OF POTENTIAL ENVIRONMENTAL CONCERN (APEC):

<span style="border: 1px dashed yellow; display: inline-block; width: 15px; height: 10px;"></span>	APEC 13,14,38,114
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<span style="border: 1px solid pink; display: inline-block; width: 15px; height: 10px;"></span>	APEC 100

Note:  
Please refer to Table 3 appended to the report for APECs

TITLE:  
AREAS OF POTENTIAL ENVIRONMENTAL CONCERN

PROJECT:  
CONTAMINANT OVERVIEW STUDY  
FORMER ORANGEVILLE RAIL,  
MISSISSAUGA, ONTARIO

CLIENT:  
REGION OF PEEL

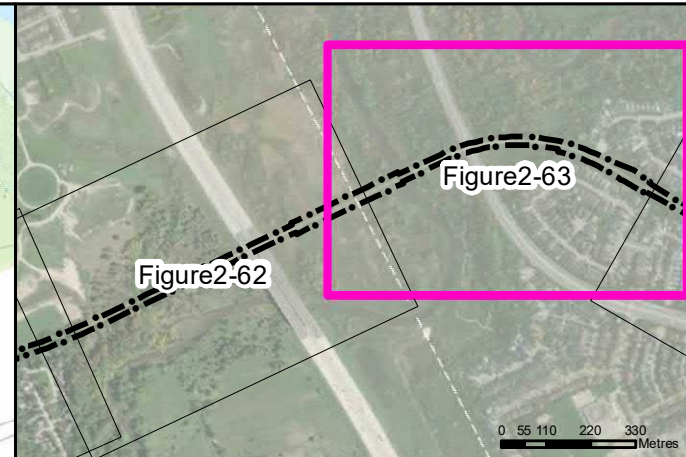
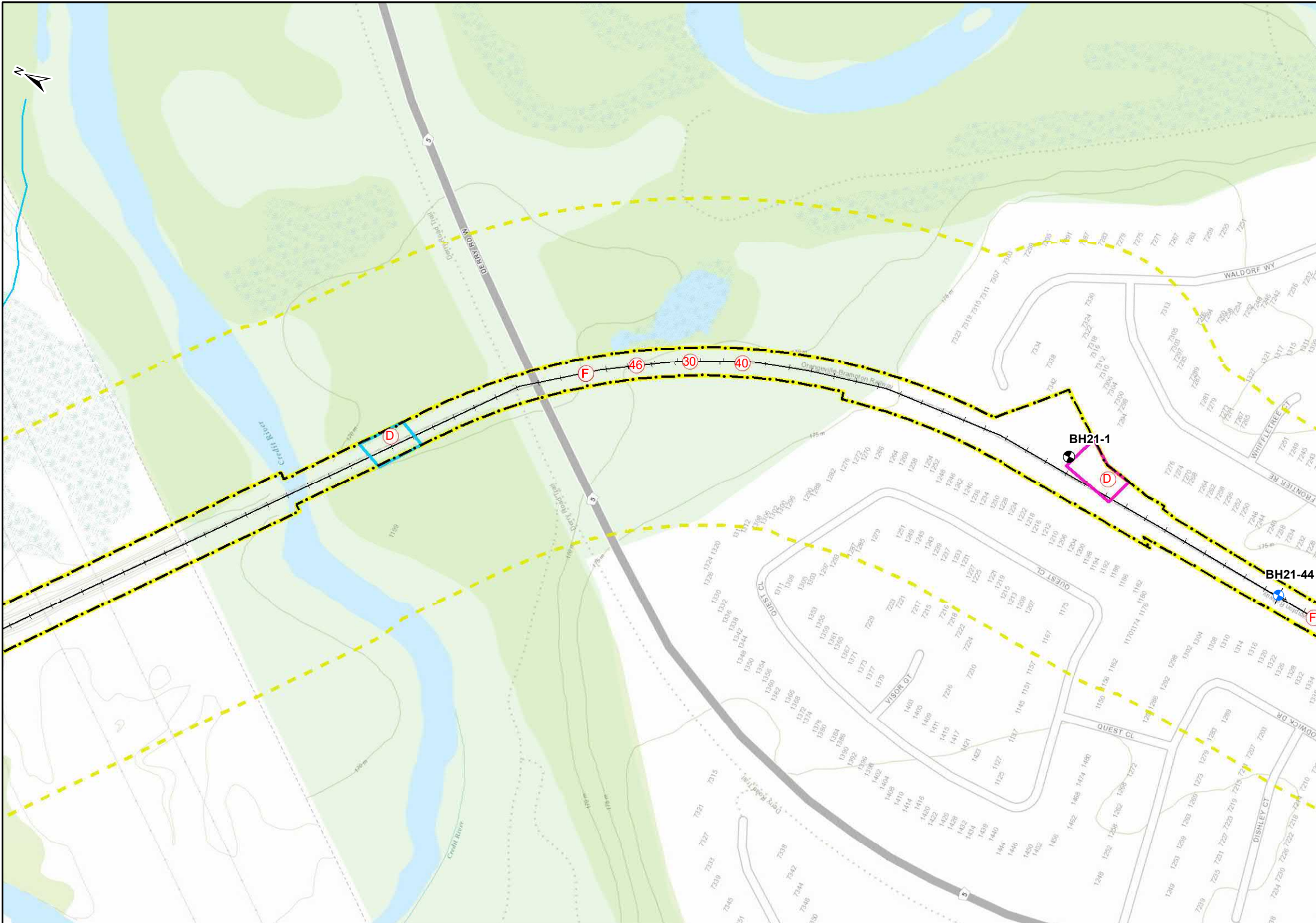


LEGEND:

<span style="border: 1px dashed yellow; display: inline-block; width: 15px; height: 10px;"></span>	100m STUDY AREA	<span style="border: 1px solid black; border-radius: 50%; padding: 2px;">+</span>	BOREHOLE
<span style="border: 1px dashed black; display: inline-block; width: 15px; height: 10px;"></span>	SUBJECT SITE	<span style="border: 1px solid blue; border-radius: 50%; padding: 2px;">+</span>	MONITORING WELL
<span style="display: inline-block; width: 15px; height: 10px; background-color: gray;"></span>	BUILDINGS	<span style="border: 1px solid red; border-radius: 50%; padding: 2px;">#</span>	PCA CONTRIBUTING TO APEC
<span style="border-bottom: 1px solid black; width: 15px; display: inline-block;"></span>	RAIL	<span style="border: 1px solid black; border-radius: 50%; padding: 2px;">#</span>	PCA NOT CONTRIBUTING TO APEC
<span style="border-bottom: 1px solid blue; width: 15px; display: inline-block;"></span>	RIVERS		

	PROJECT NO.: 211-10139-00	REVIEWED BY: CJ
	DATE: APRIL 2022	FIGURE: 2-62





- AREAS OF POTENTIAL ENVIRONMENTAL CONCERN (APEC):
- APEC 13,14,38,114
  - APEC 98
  - APEC 99

Note:  
Please refer to Table 3 appended to the report for APECs

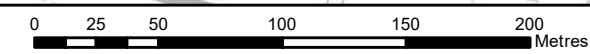
TITLE:  
AREAS OF POTENTIAL ENVIRONMENTAL CONCERN


PROJECT:  
CONTAMINANT OVERVIEW STUDY  
FORMER ORANGEVILLE RAIL,  
MISSISSAUGA, ONTARIO

CLIENT:  
REGION OF PEEL

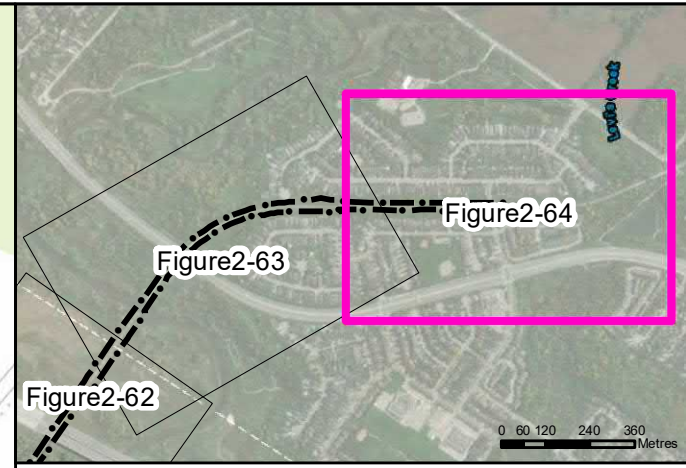
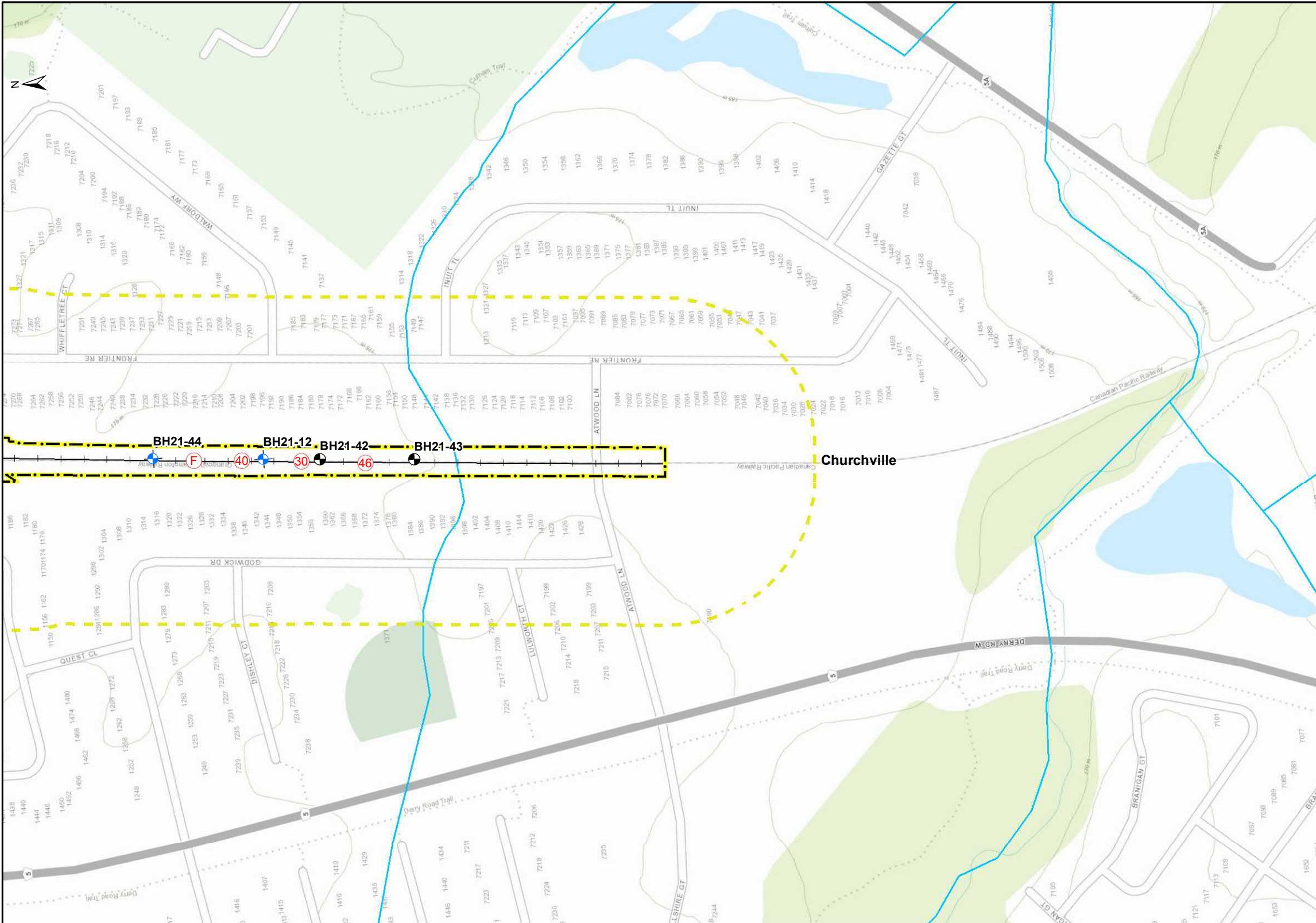
DATA SOURCE:

- LEGEND:
- 100m STUDY AREA
  - SUBJECT SITE
  - BUILDINGS
  - RAIL
  - RIVERS
  - + BOREHOLE
  - + MONITORING WELL
  - # PCA CONTRIBUTING TO APEC
  - # PCA NOT CONTRIBUTING TO APEC



	PROJECT NO.:	211-10139-00	REVIEWED BY:	CJ
	DATE:	APRIL 2022	FIGURE:	2-63





AREAS OF POTENTIAL ENVIORNMENTAL CONCERN (APEC):  
 APEC 13,14,38,114

Note:  
 Please refer to Table 3 appended to the report for APECs

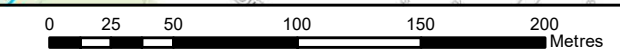
TITLE:  
 AREAS OF POTENTIAL ENVIRONMENTAL CONCERN

PROJECT:  
 CONTAMINANT OVERVIEW STUDY  
 FORMER ORANGEVILLE RAIL,  
 MISSISSAUGA, ONTARIO

CLIENT:  
 REGION OF PEEL

DATA SOURCE:

- LEGEND:
- 100m STUDY AREA
  - SUBJECT SITE
  - BUILDINGS
  - RAIL
  - RIVERS
  - + BOREHOLE
  - + MONITORING WELL
  - # PCA CONTRIBUTING TO APEC
  - # PCA NOT CONTRIBUTING TO APEC



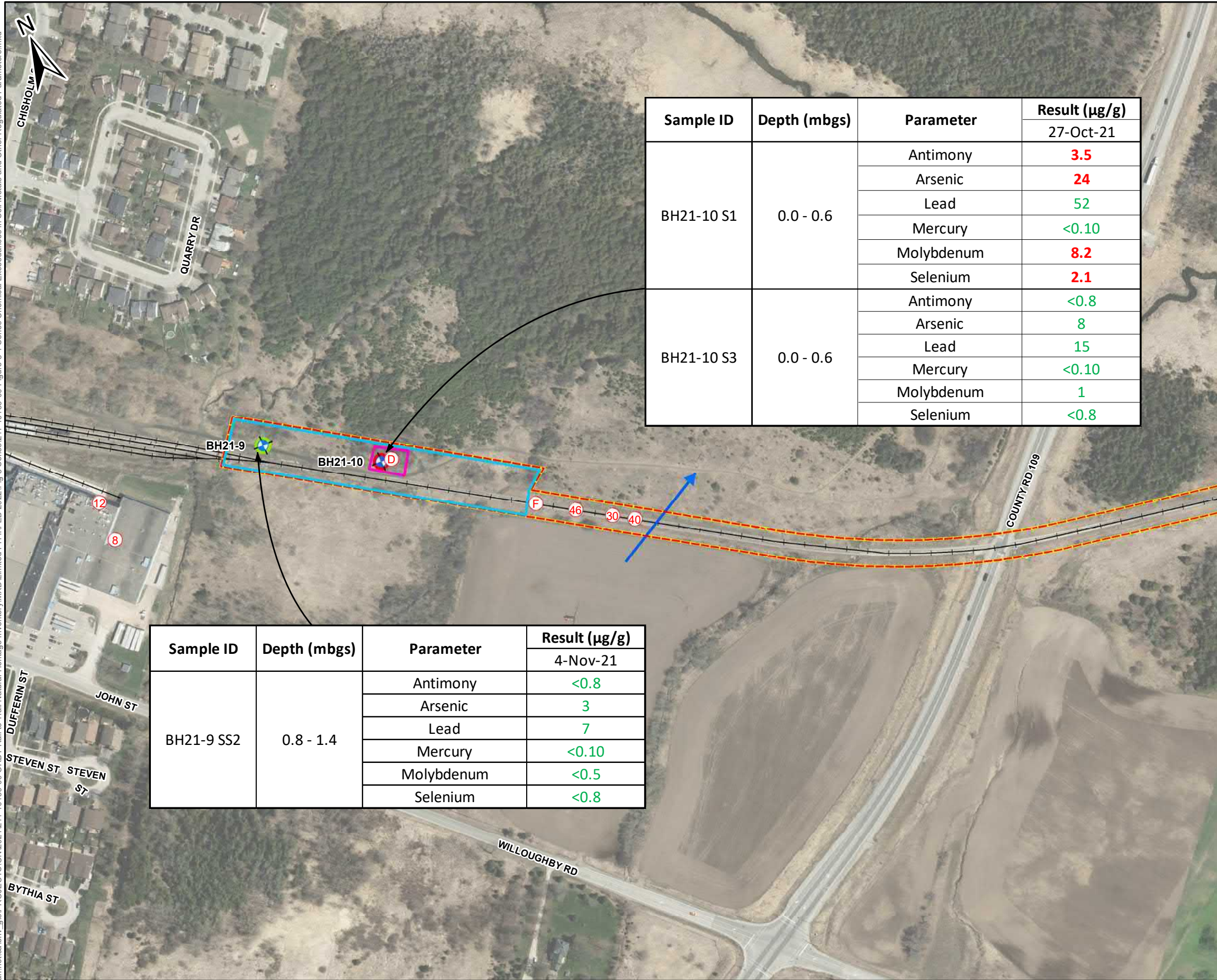
	PROJECT NO.:	211-10139-00	REVIEWED BY:	CJ
	DATE:	APRIL 2022	FIGURE:	2-64



## Figure 3 – Chemical Exceedances in Soil – Metals and ORPs

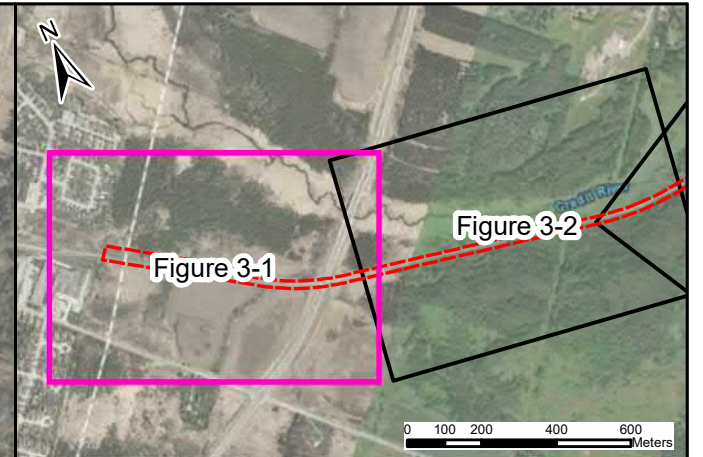
Figures 3-1 through 3-4: Caledon Study Area





Sample ID	Depth (mbgs)	Parameter	Result (µg/g)
			27-Oct-21
BH21-10 S1	0.0 - 0.6	Antimony	3.5
		Arsenic	24
		Lead	52
		Mercury	<0.10
		Molybdenum	8.2
		Selenium	2.1
BH21-10 S3	0.0 - 0.6	Antimony	<0.8
		Arsenic	8
		Lead	15
		Mercury	<0.10
		Molybdenum	1
		Selenium	<0.8

Sample ID	Depth (mbgs)	Parameter	Result (µg/g)
			4-Nov-21
BH21-9 SS2	0.8 - 1.4	Antimony	<0.8
		Arsenic	3
		Lead	7
		Mercury	<0.10
		Molybdenum	<0.5
		Selenium	<0.8



**LEGEND:**

- SITE BOUNDARY
- RAILWAY LINE
- BOREHOLE
- MONITORING WELL
- MEETS SCS
- EXCEEDS SCS
- # PCA CONTRIBUTING TO APEC
- # PCA NOT CONTRIBUTING TO APEC
- INFERRED GROUNDWATER FLOW DIRECTION
- APEC 13,14,38,114
- APEC 3
- APEC 105

Parameter	MECP Table 1 RPICC SCS (µg/g)
Antimony	1.3
Arsenic	18
Lead	120
Mercury	0.27
Molybdenum	2
Selenium	1.5

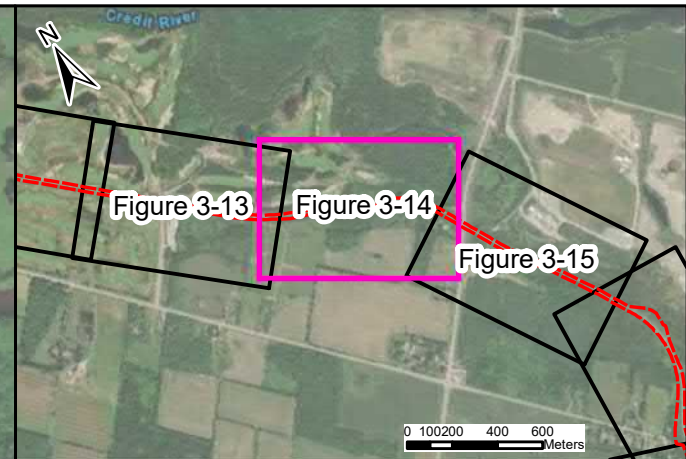
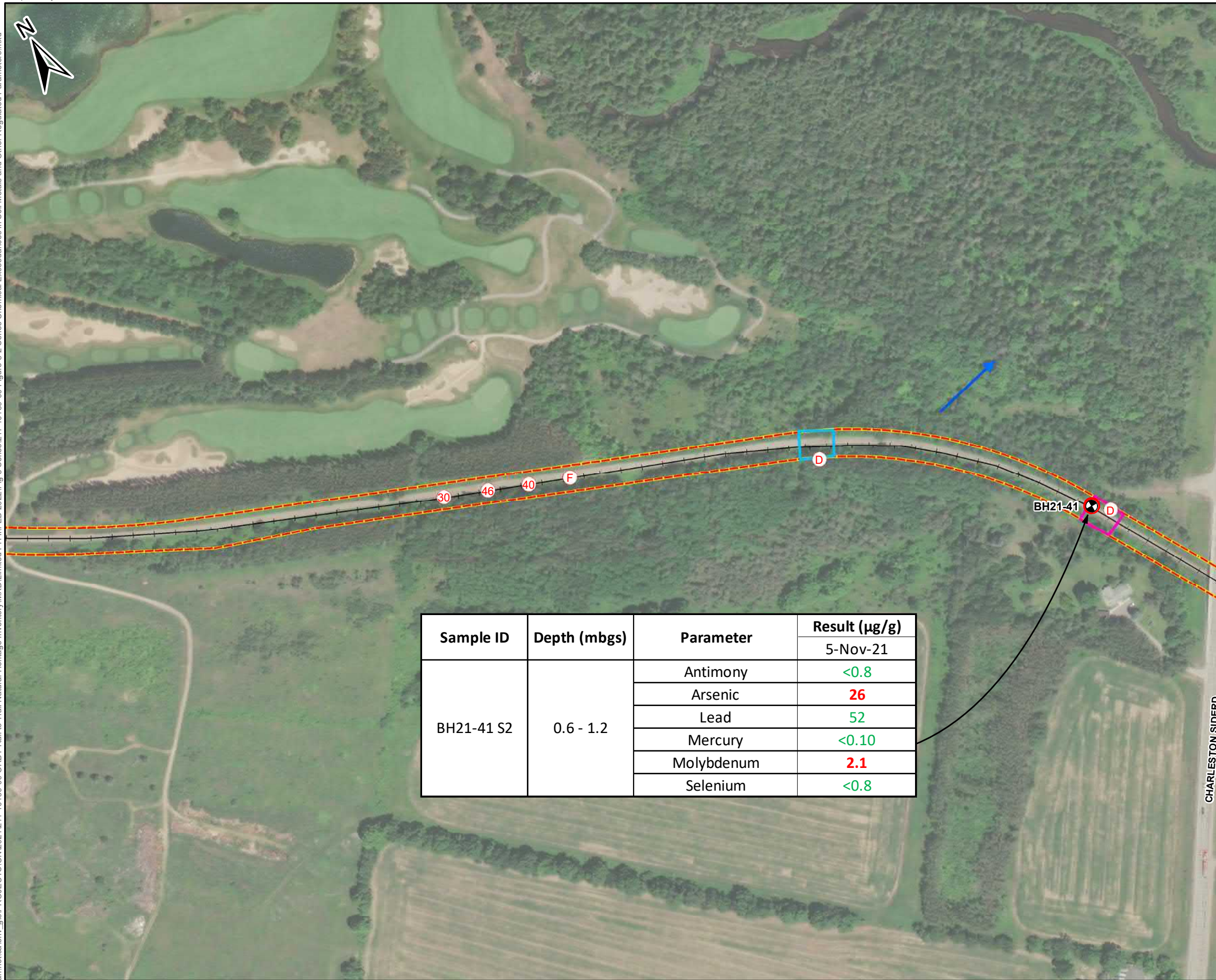
TITLE:  
**FIGURE SERIES 3: CHEMICAL EXCEEDANCES IN SOIL-METALS AND OTHER REGULATED PARAMETERS**

PROJECT:  
LIMITED PHASE II ENVIRONMENTAL ASSESSMENT  
FORMER ORANGEVILLE RAIL, CALEDON, ONTARIO

CLIENT:  
**REGION OF PEEL**

	PROJECT NO.:	REVIEWED BY:
	211-10139-00	CJ
	DATE:	FIGURE:
	FEBRUARY 2022	<b>3-1</b>





**LEGEND:**

- SITE BOUNDARY
- RAILWAY LINE
- BOREHOLE
- MONITORING WELL
- MEETS SCS
- EXCEEDS SCS
- # PCA CONTRIBUTING TO APEC
- # PCA NOT CONTRIBUTING TO APEC
- ➔ INFERRED GROUNDWATER FLOW DIRECTION
- APEC 13,14,38,114
- APEC 90
- APEC 91

Sample ID	Depth (mbgs)	Parameter	Result (µg/g)
			5-Nov-21
BH21-41 S2	0.6 - 1.2	Antimony	<0.8
		Arsenic	26
		Lead	52
		Mercury	<0.10
		Molybdenum	2.1
		Selenium	<0.8

Parameter	MECP Table 1 RPICC SCS (µg/g)
Antimony	1.3
Arsenic	18
Lead	120
Mercury	0.27
Molybdenum	2
Selenium	1.5

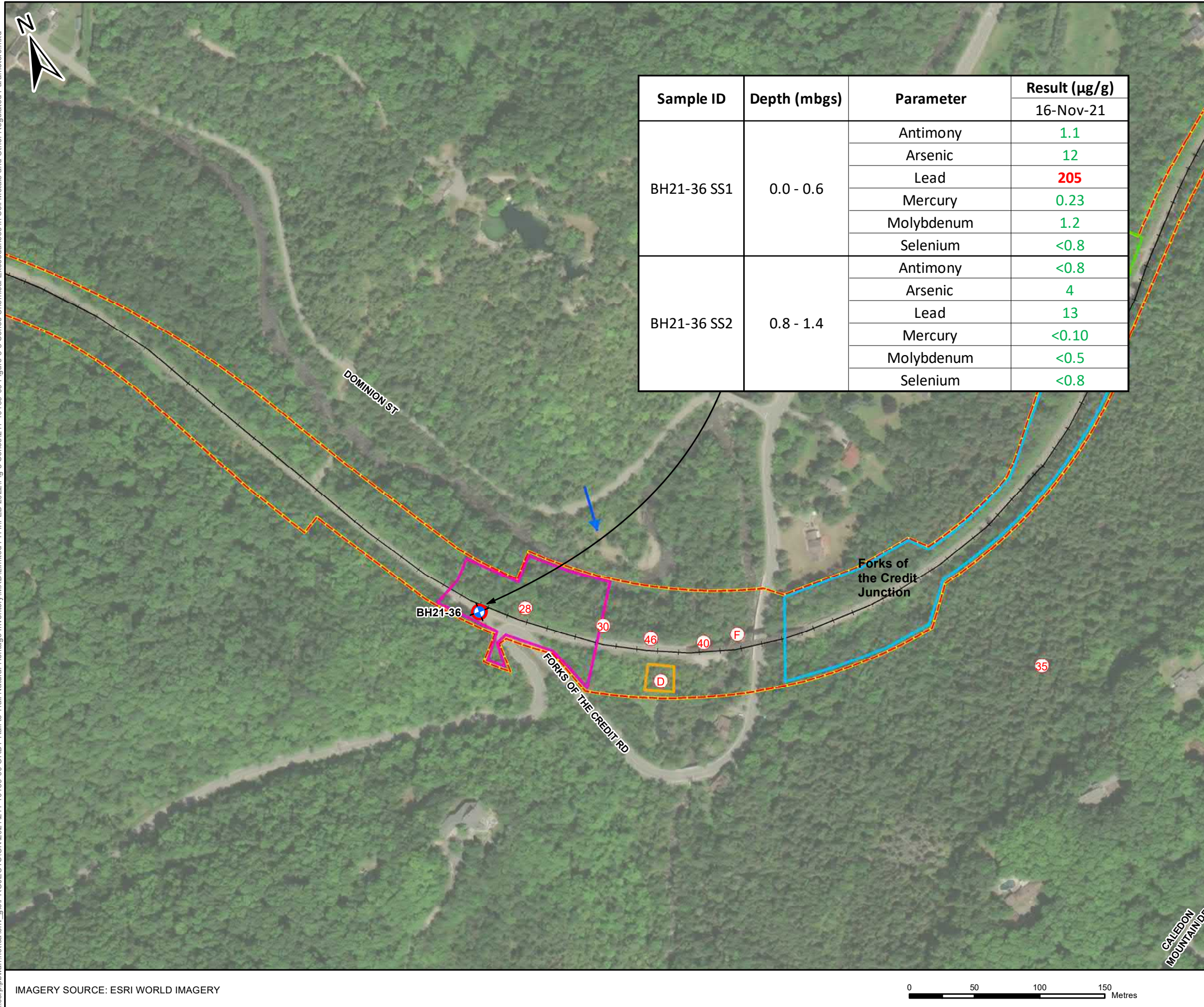
TITLE:  
**FIGURE SERIES 3: CHEMICAL EXCEEDANCES IN SOIL-METALS AND OTHER REGULATED PARAMETERS**

PROJECT:  
LIMITED PHASE II ENVIRONMENTAL ASSESSMENT  
FORMER ORANGEVILLE RAIL, CALEDON, ONTARIO

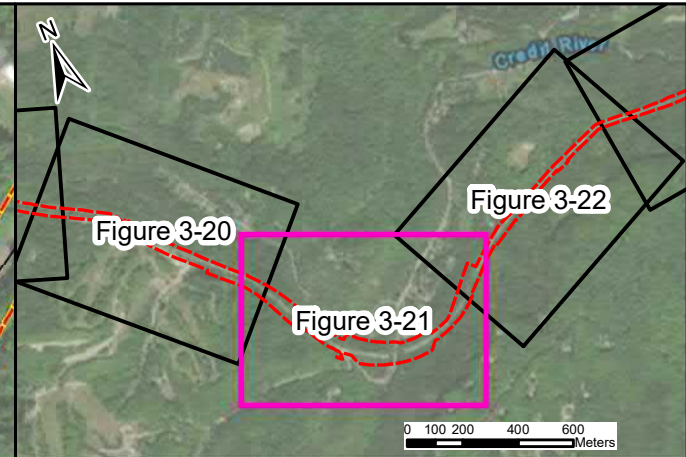
CLIENT:  
**REGION OF PEEL**

	PROJECT NO.:	REVIEWED BY:
	211-10139-00	CJ
	DATE:	FIGURE:
	FEBRUARY 2022	<b>3-2</b>





Sample ID	Depth (mbgs)	Parameter	Result (µg/g)
			16-Nov-21
BH21-36 SS1	0.0 - 0.6	Antimony	1.1
		Arsenic	12
		Lead	205
		Mercury	0.23
		Molybdenum	1.2
		Selenium	<0.8
BH21-36 SS2	0.8 - 1.4	Antimony	<0.8
		Arsenic	4
		Lead	13
		Mercury	<0.10
		Molybdenum	<0.5
		Selenium	<0.8



**LEGEND:**

- SITE BOUNDARY
- RAILWAY LINE
- BOREHOLE
- MONITORING WELL
- MEETS SCS
- EXCEEDS SCS
- # PCA CONTRIBUTING TO APEC
- # PCA NOT CONTRIBUTING TO APEC
- ➔ INFERRED GROUNDWATER FLOW DIRECTION

- APEC 13,14,38,114
- APEC 11
- APEC 79
- APEC 80
- APEC 110

Parameter	MECP Table 1 RPICC SCS (µg/g)
Antimony	1.3
Arsenic	18
Lead	120
Mercury	0.27
Molybdenum	2
Selenium	1.5

TITLE:  
**FIGURE SERIES 3: CHEMICAL EXCEEDANCES IN SOIL-METALS AND OTHER REGULATED PARAMETERS**

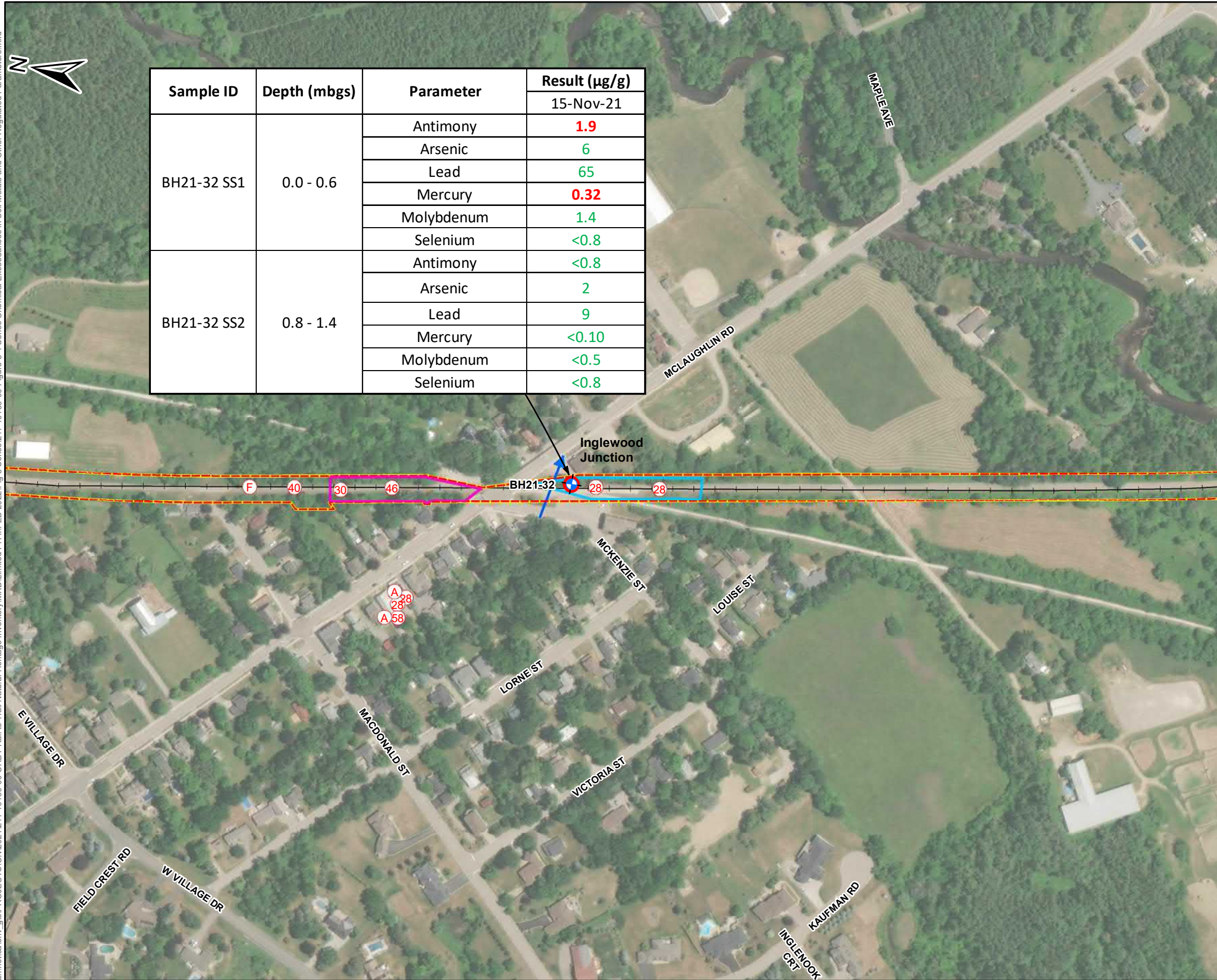
PROJECT:  
LIMITED PHASE II ENVIRONMENTAL ASSESSMENT  
FORMER ORANGEVILLE RAIL, CALEDON, ONTARIO

CLIENT:  
REGION OF PEEL

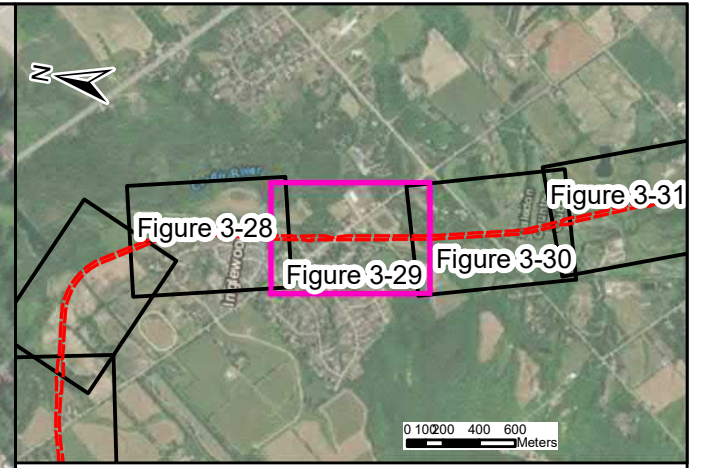
	PROJECT NO.:	REVIEWED BY:
	211-10139-00	CJ
	DATE:	FIGURE:
	FEBRUARY 2022	3-3



\\corp.pbwan.net\ca\env\_gis\PROJECTS\ON\2021\211-10139-00 ORBY Rail to Trail Natural Heritage Inventory\MXD\Limited PH II\FEB 2022\Fig 3 Series\211-10139-00 Figure 3-4 Series Chemical Exceedances in Soil Metals and Other Regulated Parameters.mxd



Sample ID	Depth (mbgs)	Parameter	Result (µg/g)
			15-Nov-21
BH21-32 SS1	0.0 - 0.6	Antimony	1.9
		Arsenic	6
		Lead	65
		Mercury	0.32
		Molybdenum	1.4
		Selenium	<0.8
BH21-32 SS2	0.8 - 1.4	Antimony	<0.8
		Arsenic	2
		Lead	9
		Mercury	<0.10
		Molybdenum	<0.5
		Selenium	<0.8



**LEGEND:**

- SITE BOUNDARY
- RAILWAY LINE
- BOREHOLE
- MONITORING WELL
- MEETS SCS
- EXCEEDS SCS
- # PCA CONTRIBUTING TO APEC
- # PCA NOT CONTRIBUTING TO APEC
- ➔ INFERRED GROUNDWATER FLOW DIRECTION
- APEC 13,14,38,114
- APEC 21
- APEC 109

Parameter	MECP Table 1 RPICC SCS (µg/g)
Antimony	1.3
Arsenic	18
Lead	120
Mercury	0.27
Molybdenum	2
Selenium	1.5

TITLE:  
**FIGURE SERIES 3: CHEMICAL EXCEEDANCES IN SOIL-METALS AND OTHER REGULATED PARAMETERS**

PROJECT:  
LIMITED PHASE II ENVIRONMENTAL ASSESSMENT FORMER ORANGEVILLE RAIL, CALEDON, ONTARIO

CLIENT:  
REGION OF PEEL

	PROJECT NO.:	REVIEWED BY:
	211-10139-00	CJ
DATE:	FIGURE:	
FEBRUARY 2022	<b>3-4</b>	

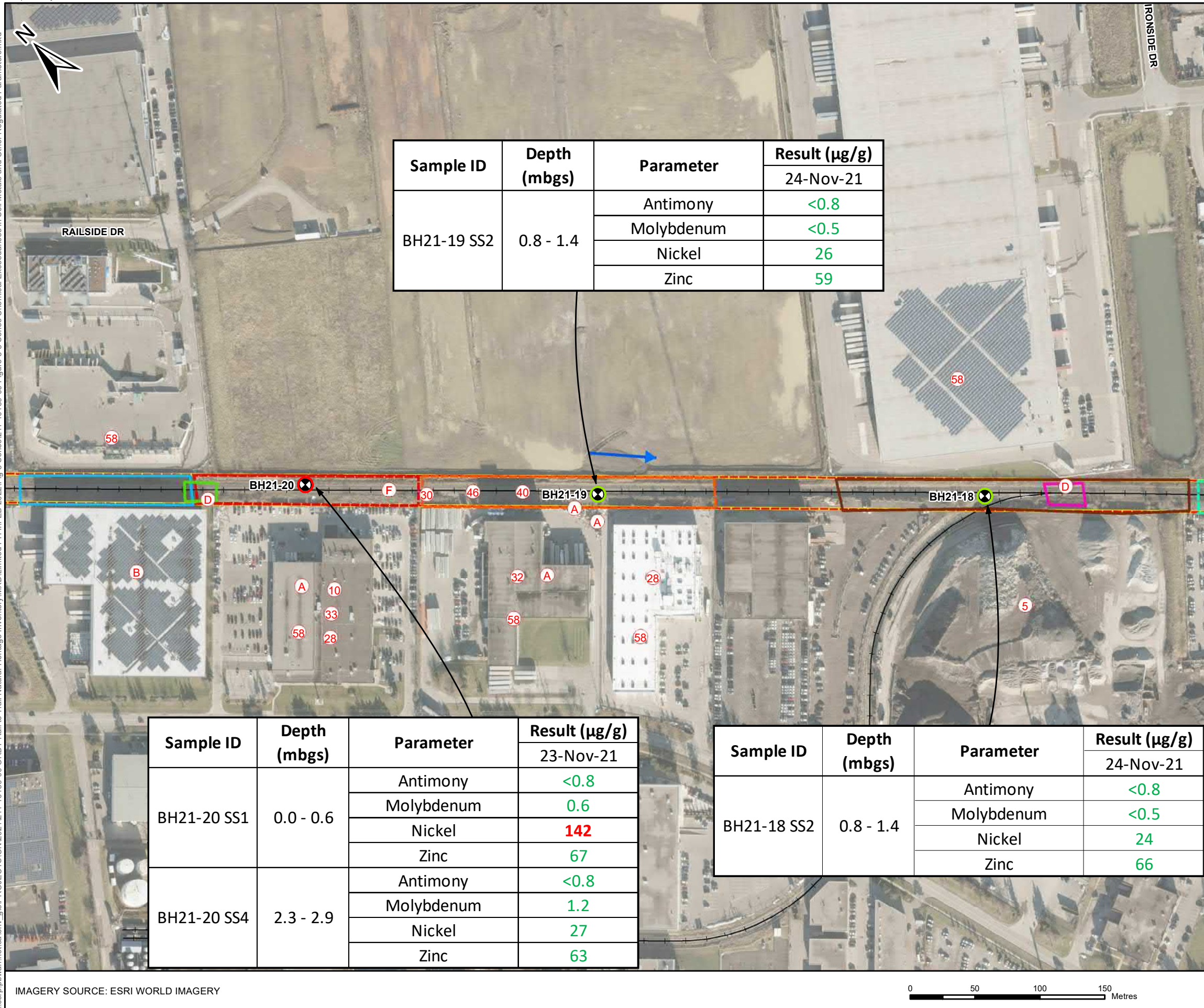


Figure 3 – Chemical Exceedances in Soil – Metals and ORPs

Figures 3-5 and 3-6: Brampton Study Area



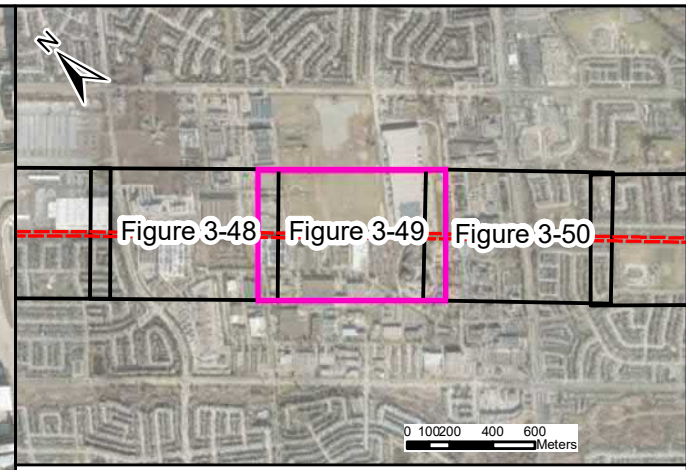
\\corp\_pbowan.net\ca\env\_gis\PROJECTS\ON2021\211-10139-00 ORBY Rail to Trail Natural Heritage Inventory\MXD\Limited PH II\FEB 2022\Fig 3 Series\211-10139-00 Figure 3-5 Series Chemical Exceedances in Soil Metals and Other Regulated Parameters.mxd



Sample ID	Depth (mbgs)	Parameter	Result (µg/g)
			24-Nov-21
BH21-19 SS2	0.8 - 1.4	Antimony	<0.8
		Molybdenum	<0.5
		Nickel	26
		Zinc	59

Sample ID	Depth (mbgs)	Parameter	Result (µg/g)
			23-Nov-21
BH21-20 SS1	0.0 - 0.6	Antimony	<0.8
		Molybdenum	0.6
		Nickel	142
		Zinc	67
BH21-20 SS4	2.3 - 2.9	Antimony	<0.8
		Molybdenum	1.2
		Nickel	27
		Zinc	63

Sample ID	Depth (mbgs)	Parameter	Result (µg/g)
			24-Nov-21
BH21-18 SS2	0.8 - 1.4	Antimony	<0.8
		Molybdenum	<0.5
		Nickel	24
		Zinc	66



**LEGEND:**

- SITE BOUNDARY
- RAILWAY LINE
- BOREHOLE
- MONITORING WELL
- MEETS SCS
- EXCEEDS SCS
- # PCA CONTRIBUTING TO APEC
- # PCA NOT CONTRIBUTING TO APEC
- ➔ INFERRED GROUNDWATER FLOW DIRECTION
- APEC 13,14,38,114
- APEC 2
- APEC 5
- APEC 8
- APEC 9
- APEC 18
- APEC 102
- APEC 103

Parameter	MECP Table 1 RPICC SCS (µg/g)
Antimony	1.3
Molybdenum	2
Nickel	82
Zinc	290

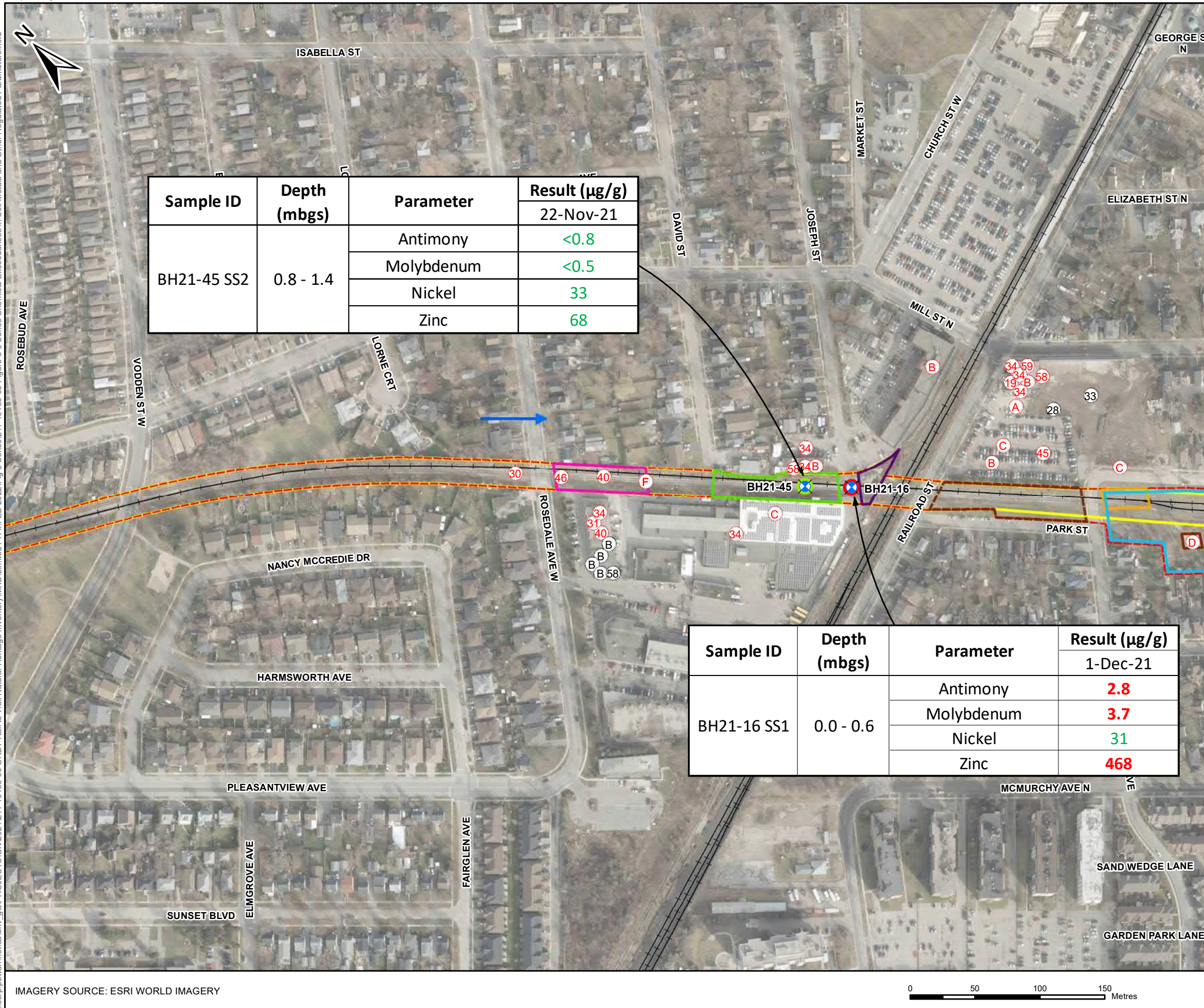
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**FIGURE SERIES 3: CHEMICAL EXCEEDANCES IN SOIL-METALS AND OTHER REGULATED PARAMETERS**

PROJECT:  
LIMITED PHASE II ENVIRONMENTAL ASSESSMENT  
FORMER ORANGEVILLE RAIL, BRAMPTON, ONTARIO

CLIENT:  
REGION OF PEEL

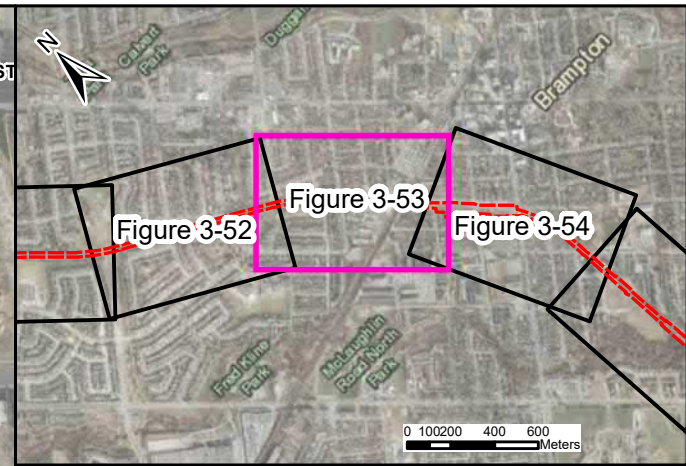
	PROJECT NO.:	REVIEWED BY:
	211-10139-00	CJ
	DATE:	FIGURE:
	FEBRUARY 2022	<b>3-5</b>





Sample ID	Depth (mbgs)	Parameter	Result (µg/g)
			22-Nov-21
BH21-45 SS2	0.8 - 1.4	Antimony	<0.8
		Molybdenum	<0.5
		Nickel	33
		Zinc	68

Sample ID	Depth (mbgs)	Parameter	Result (µg/g)
			1-Dec-21
BH21-16 SS1	0.0 - 0.6	Antimony	2.8
		Molybdenum	3.7
		Nickel	31
		Zinc	468



**LEGEND:**

- SITE BOUNDARY
- RAILWAY LINE
- BOREHOLE
- MONITORING WELL
- MEETS SCS
- EXCEEDS SCS
- # PCA CONTRIBUTING TO APEC
- # PCA NOT CONTRIBUTING TO APEC
- ➔ INFERRED GROUNDWATER FLOW DIRECTION

- APEC 13,14,38,114
- APEC 6
- APEC 16
- APEC 17
- APEC 26
- APEC 29
- APEC 48
- APEC 113

Parameter	MECP Table 1 RPIICC SCS (µg/g)
Antimony	1.3
Molybdenum	2
Nickel	82
Zinc	290

TITLE:  
**FIGURE SERIES 3: CHEMICAL EXCEEDANCES IN SOIL-METALS AND OTHER REGULATED PARAMETERS**

PROJECT:  
LIMITED PHASE II ENVIRONMENTAL ASSESSMENT  
FORMER ORANGEVILLE RAIL, BRAMPTON, ONTARIO

CLIENT:  
**REGION OF PEEL**

	PROJECT NO.:	REVIEWED BY:
	211-10139-00	CJ
DATE:	FIGURE:	
FEBRUARY 2022	<b>3-6</b>	

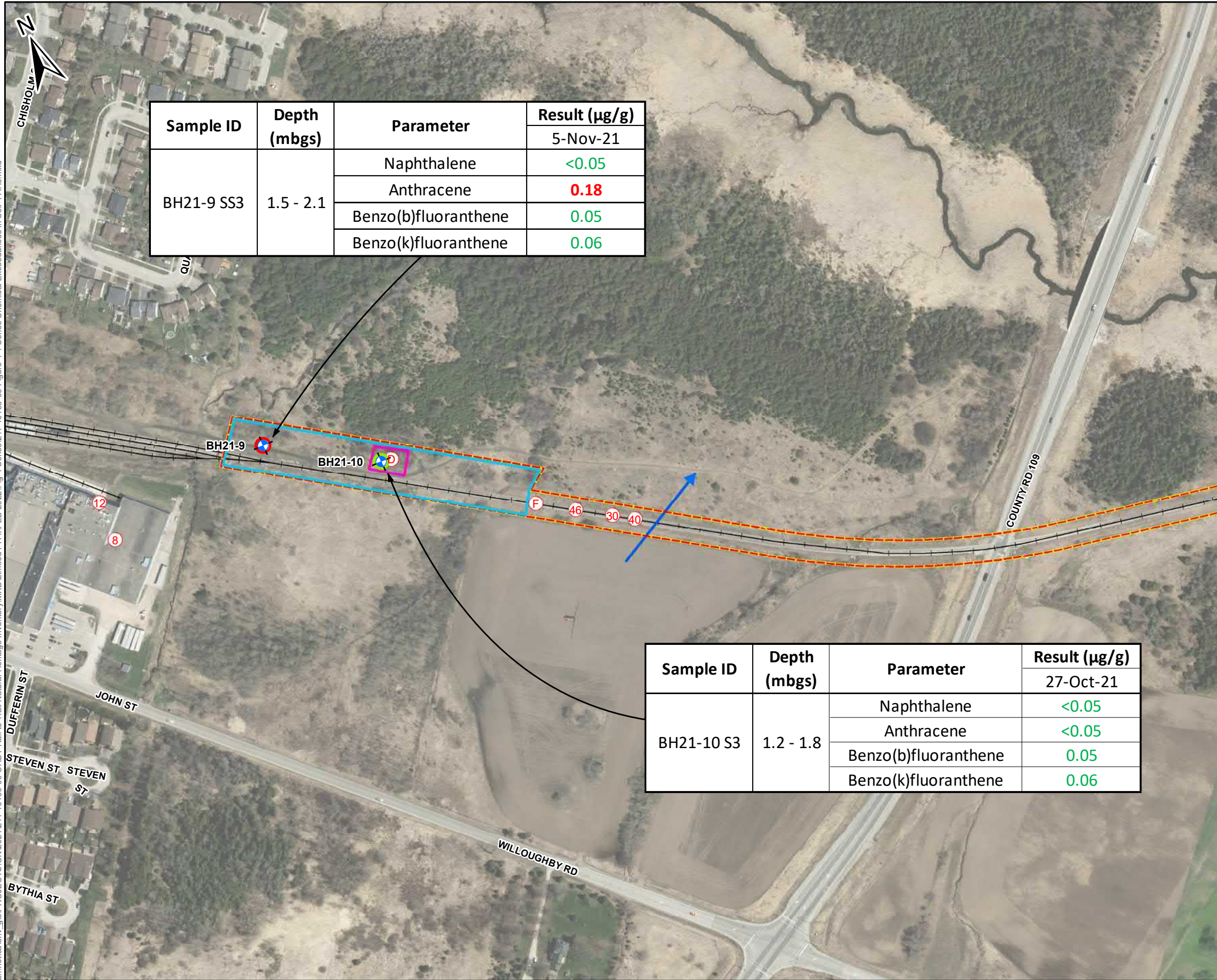




## Figure 4 – Chemical Exceedances in Soil – PAHs

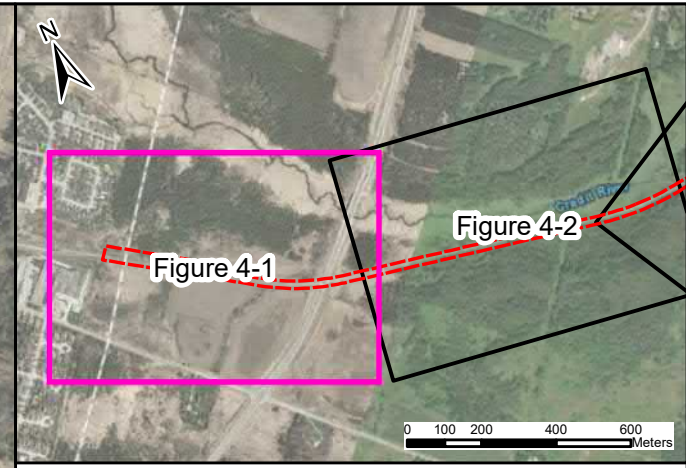
Figures 4-1 through 4-3: Caledon Study Area





Sample ID	Depth (mbgs)	Parameter	Result (µg/g)
			5-Nov-21
BH21-9 SS3	1.5 - 2.1	Naphthalene	<0.05
		Anthracene	0.18
		Benzo(b)fluoranthene	0.05
		Benzo(k)fluoranthene	0.06

Sample ID	Depth (mbgs)	Parameter	Result (µg/g)
			27-Oct-21
BH21-10 S3	1.2 - 1.8	Naphthalene	<0.05
		Anthracene	<0.05
		Benzo(b)fluoranthene	0.05
		Benzo(k)fluoranthene	0.06



**LEGEND:**

- SITE BOUNDARY
- RAILWAY LINE
- BOREHOLE
- MONITORING WELL
- MEETS SCS
- EXCEEDS SCS
- # PCA CONTRIBUTING TO APEC
- # PCA NOT CONTRIBUTING TO APEC
- INFERRED GROUNDWATER FLOW DIRECTION
- APEC 13,14,38,114
- APEC 3
- APEC 105

Parameter	MECP Table 1 RPIICC SCS (µg/g)
Naphthalene	0.09
Anthracene	0.16
Benzo(b)fluoranthene	0.47
Benzo(k)fluoranthene	0.48

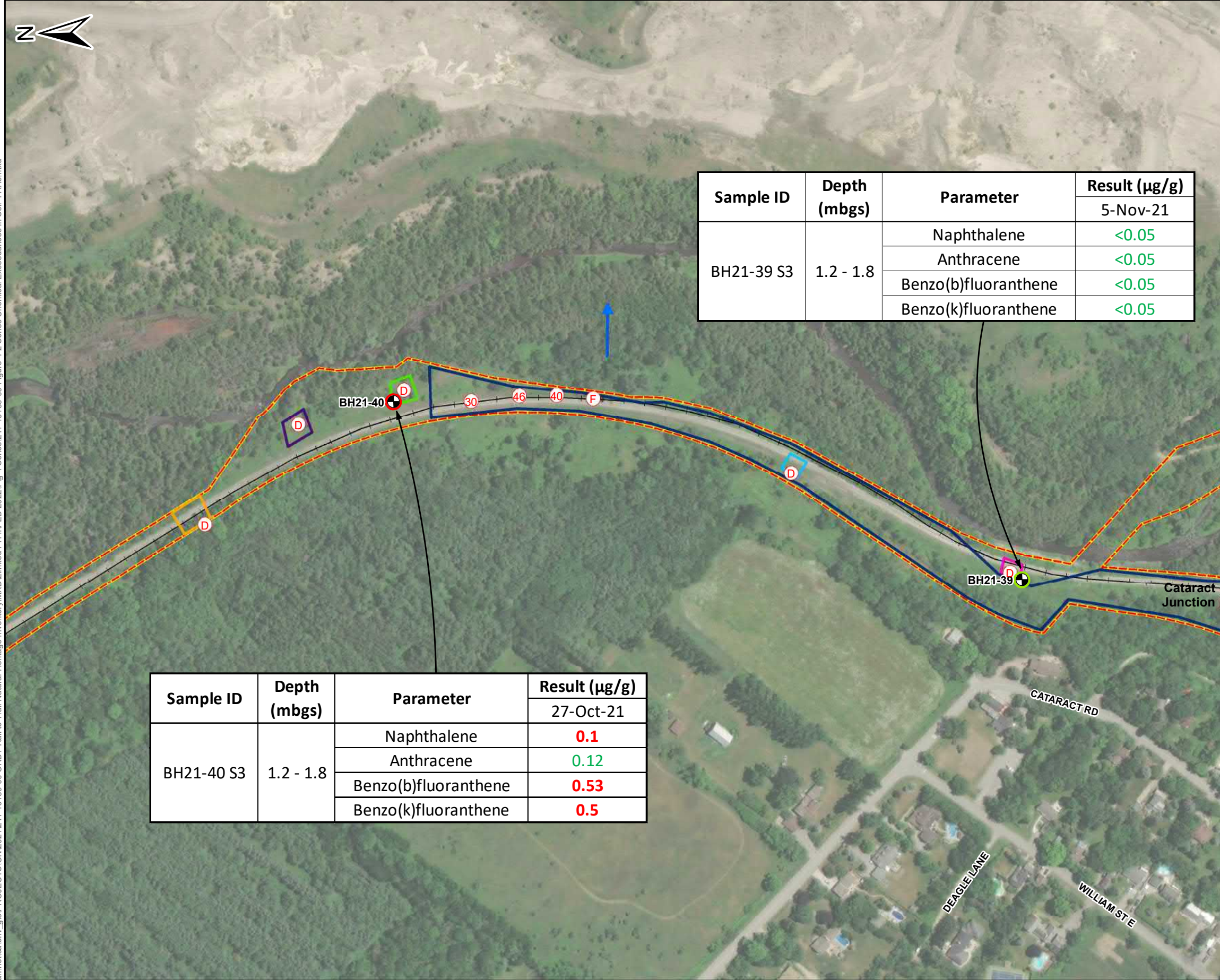
TITLE:  
**FIGURE SERIES 4: CHEMICAL EXCEEDANCES IN SOIL-PAHS**

PROJECT:  
LIMITED PHASE II ENVIRONMENTAL ASSESSMENT FORMER ORANGEVILLE RAIL, CALEDON, ONTARIO

CLIENT:  
REGION OF PEEL

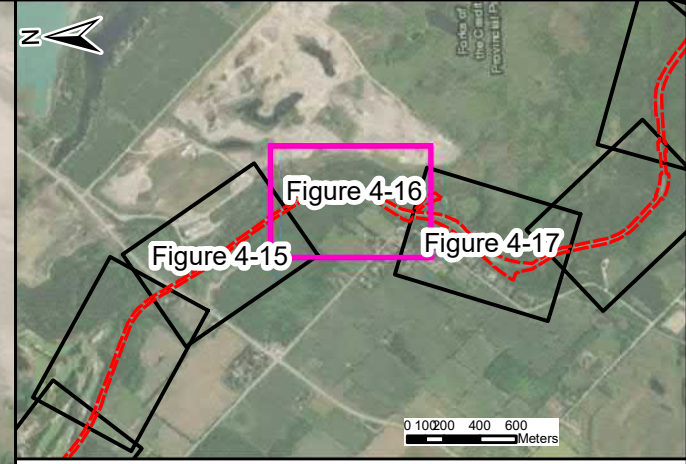
	PROJECT NO.:	REVIEWED BY:
	211-10139-00	CJ
	DATE:	FIGURE:
	FEBRUARY 2022	4-1





Sample ID	Depth (mbgs)	Parameter	Result (µg/g)
			5-Nov-21
BH21-39 S3	1.2 - 1.8	Naphthalene	<0.05
		Anthracene	<0.05
		Benzo(b)fluoranthene	<0.05
		Benzo(k)fluoranthene	<0.05

Sample ID	Depth (mbgs)	Parameter	Result (µg/g)
			27-Oct-21
BH21-40 S3	1.2 - 1.8	Naphthalene	0.1
		Anthracene	0.12
		Benzo(b)fluoranthene	0.53
		Benzo(k)fluoranthene	0.5



**LEGEND:**

- SITE BOUNDARY
- RAILWAY LINE
- BOREHOLE
- MONITORING WELL
- MEETS SCS
- EXCEEDS SCS
- # PCA CONTRIBUTING TO APEC
- # PCA NOT CONTRIBUTING TO APEC
- INFERRED GROUNDWATER FLOW DIRECTION

- APEC 13,14,38,114
- APEC 85
- APEC 86
- APEC 87
- APEC 88
- APEC 89
- APEC 111

Parameter	MECP Table 1 RPIICC SCS (µg/g)
Naphthalene	0.09
Anthracene	0.16
Benzo(b)fluoranthene	0.47
Benzo(k)fluoranthene	0.48

TITLE:  
**FIGURE SERIES 4: CHEMICAL EXCEEDANCES IN SOIL-PAHs**

PROJECT:  
LIMITED PHASE II ENVIRONMENTAL ASSESSMENT FORMER ORANGEVILLE RAIL, CALEDON, ONTARIO

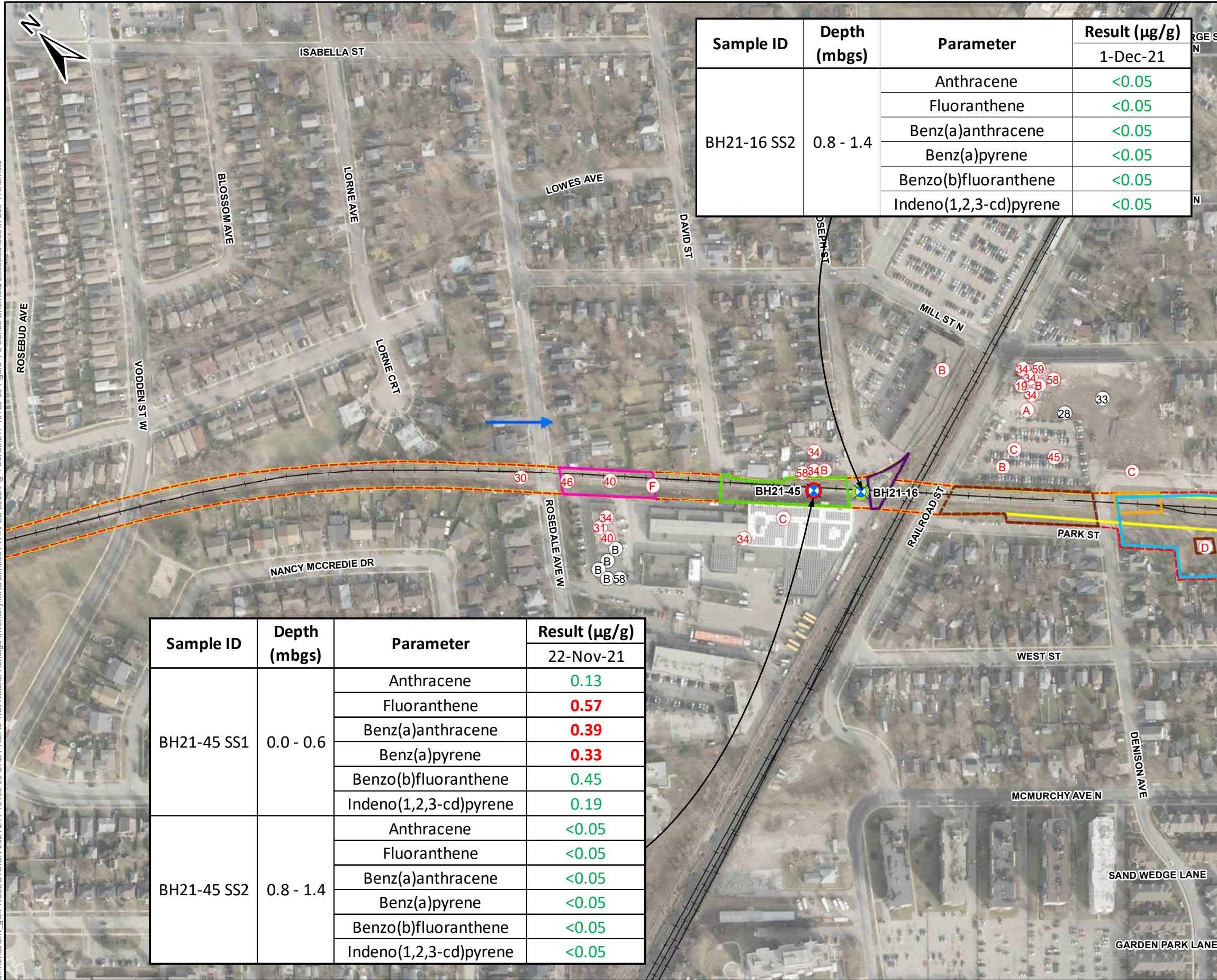
CLIENT:  
REGION OF PEEL

	PROJECT NO.: 211-10139-00	REVIEWED BY: CJ
	DATE: FEBRUARY 2022	FIGURE: <b>4-2</b>



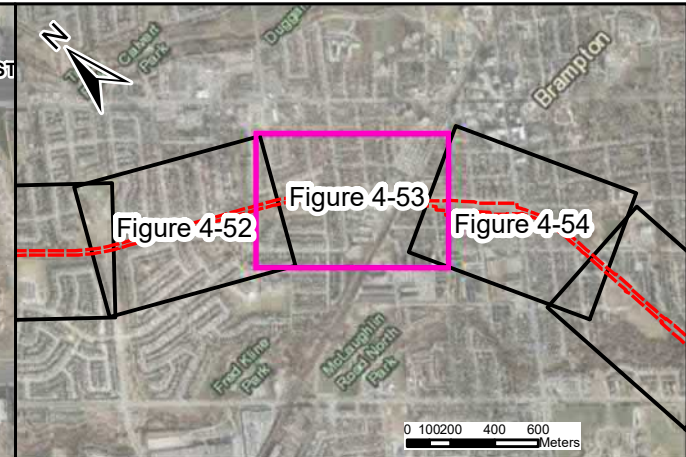
\\corp.pbwan.net\ca\env\_gis\PROJECTS\ON2021\211-10139-00 ORBY Rail to Trail Natural Heritage Inventory\MXD\Limited PH II\FEB 2022\Fig 4 Series\211-10139-00 Figure 4-2 Series Chemical Exceedances in Soil-PAHs.mxd





Sample ID	Depth (mbgs)	Parameter	Result (µg/g)
			1-Dec-21
BH21-16 SS2	0.8 - 1.4	Anthracene	<0.05
		Fluoranthene	<0.05
		Benz(a)anthracene	<0.05
		Benz(a)pyrene	<0.05
		Benzo(b)fluoranthene	<0.05
		Indeno(1,2,3-cd)pyrene	<0.05

Sample ID	Depth (mbgs)	Parameter	Result (µg/g)
			22-Nov-21
BH21-45 SS1	0.0 - 0.6	Anthracene	0.13
		Fluoranthene	0.57
		Benz(a)anthracene	0.39
		Benz(a)pyrene	0.33
		Benzo(b)fluoranthene	0.45
		Indeno(1,2,3-cd)pyrene	0.19
BH21-45 SS2	0.8 - 1.4	Anthracene	<0.05
		Fluoranthene	<0.05
		Benz(a)anthracene	<0.05
		Benz(a)pyrene	<0.05
		Benzo(b)fluoranthene	<0.05
		Indeno(1,2,3-cd)pyrene	<0.05



**LEGEND:**

- SITE BOUNDARY
- RAILWAY LINE
- BOREHOLE
- MONITORING WELL
- MEETS SCS
- EXCEEDS SCS
- # PCA CONTRIBUTING TO APEC
- # PCA NOT CONTRIBUTING TO APEC
- ➔ INFERRED GROUNDWATER FLOW DIRECTION

- APEC 13,14,38,114
- APEC 6
- APEC 16
- APEC 17
- APEC 26
- APEC 29
- APEC 48
- APEC 113

Parameter	MECP Table 1 RPIICC SCS (µg/g)
Anthracene	0.16
Fluoranthene	0.56
Benz(a)anthracene	0.36
Benz(a)pyrene	0.3
Benzo(b)fluoranthene	0.47
Indeno(1,2,3-cd)pyrene	0.23

TITLE:  
**FIGURE SERIES 4: CHEMICAL EXCEEDANCES IN SOIL-PAHS**

PROJECT:  
LIMITED PHASE II ENVIRONMENTAL ASSESSMENT FORMER ORANGEVILLE RAIL, CALEDON, ONTARIO

CLIENT:  
REGION OF PEEL

	PROJECT NO.: 211-10139-00	REVIEWED BY: CJ
	DATE: FEBRUARY 2022	FIGURE: <b>4-3</b>

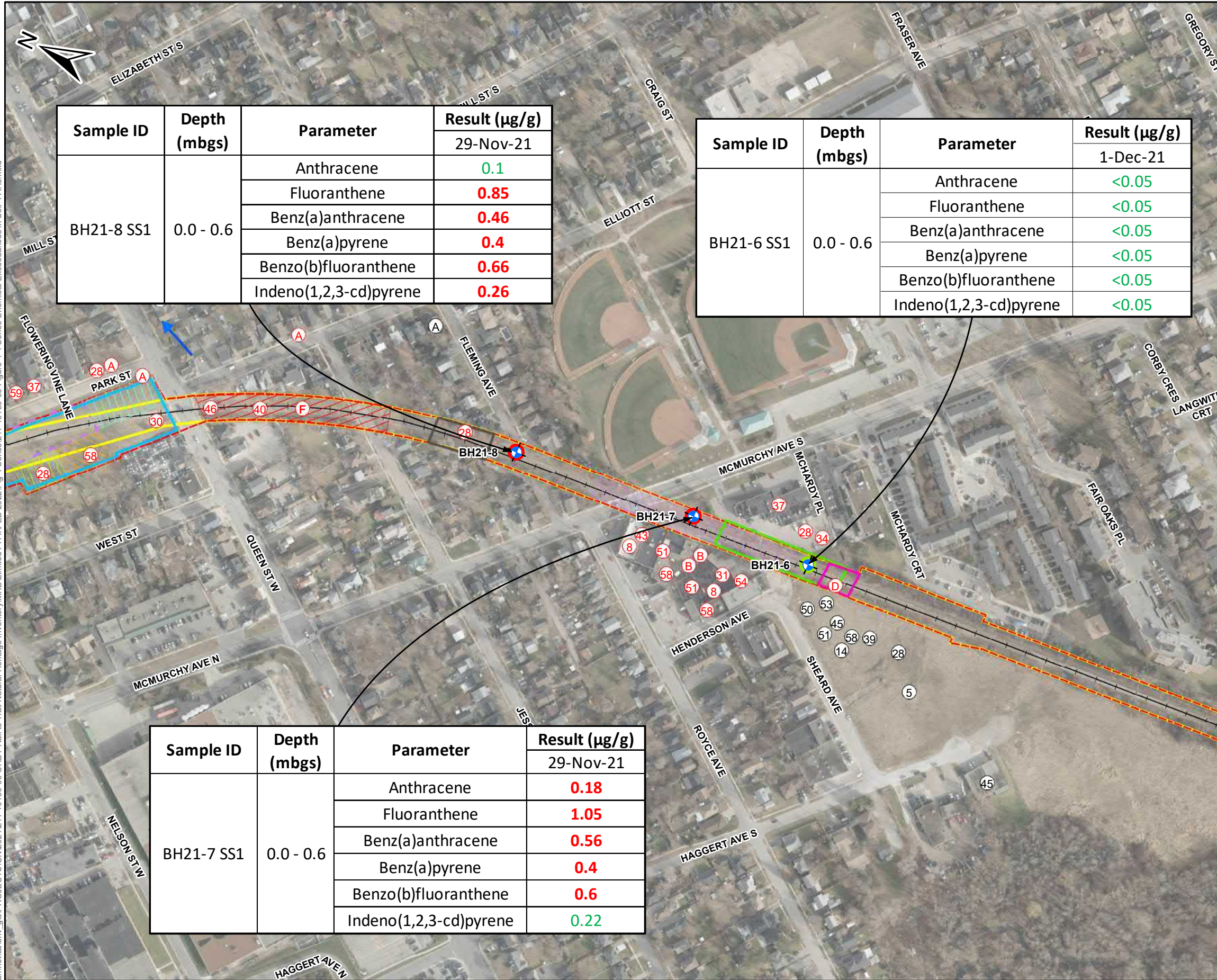


Figure 4 – Chemical Exceedances in Soil – PAHs

Figure 4-4: Brampton Study Area



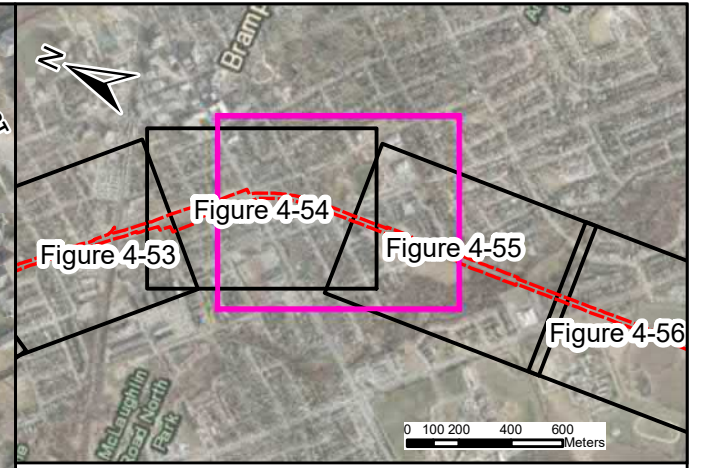
\\corp\_pbowan.net\ca\env\_gis\PROJECTS\2021\211-10139-00 ORBY Rail to Trail Natural Heritage Inventory\MXD\Limited PH II\FEB 2022\Fig 4 Series\211-10139-00 Figure 4-4 Series Chemical Exceedances in Soil-PAHs.mxd



Sample ID	Depth (mbgs)	Parameter	Result (µg/g)
			29-Nov-21
BH21-8 SS1	0.0 - 0.6	Anthracene	0.1
		Fluoranthene	0.85
		Benz(a)anthracene	0.46
		Benz(a)pyrene	0.4
		Benzo(b)fluoranthene	0.66
		Indeno(1,2,3-cd)pyrene	0.26

Sample ID	Depth (mbgs)	Parameter	Result (µg/g)
			1-Dec-21
BH21-6 SS1	0.0 - 0.6	Anthracene	<0.05
		Fluoranthene	<0.05
		Benz(a)anthracene	<0.05
		Benz(a)pyrene	<0.05
		Benzo(b)fluoranthene	<0.05
		Indeno(1,2,3-cd)pyrene	<0.05

Sample ID	Depth (mbgs)	Parameter	Result (µg/g)
			29-Nov-21
BH21-7 SS1	0.0 - 0.6	Anthracene	0.18
		Fluoranthene	1.05
		Benz(a)anthracene	0.56
		Benz(a)pyrene	0.4
		Benzo(b)fluoranthene	0.6
		Indeno(1,2,3-cd)pyrene	0.22



**LEGEND:**

- SITE BOUNDARY
- RAILWAY LINE
- BOREHOLE
- MONITORING WELL
- MEETS SCS
- EXCEEDS SCS
- # PCA CONTRIBUTING TO APEC
- # PCA NOT CONTRIBUTING TO APEC
- INFERRED GROUNDWATER FLOW DIRECTION
- APEC 13,14,38,114
- APEC 4
- APEC 7
- APEC 10
- APEC 12
- APEC 25
- APEC 40
- APEC 41
- APEC 42
- APEC 101
- APEC 113

Parameter	MECP Table 1 RPICC SCS (µg/g)
Anthracene	0.16
Fluoranthene	0.56
Benz(a)anthracene	0.36
Benz(a)pyrene	0.3
Benzo(b)fluoranthene	0.47
Indeno(1,2,3-cd)pyrene	0.23

TITLE:  
**FIGURE SERIES 4: CHEMICAL EXCEEDANCES IN SOIL-PAHS**

PROJECT:  
LIMITED PHASE II ENVIRONMENTAL ASSESSMENT FORMER ORANGEVILLE RAIL, BRAMPTON, ONTARIO

CLIENT:  
REGION OF PEEL

	PROJECT NO.:	REVIEWED BY:
	211-10139-00	CJ
	DATE:	FIGURE:
	FEBRUARY 2022	4-4



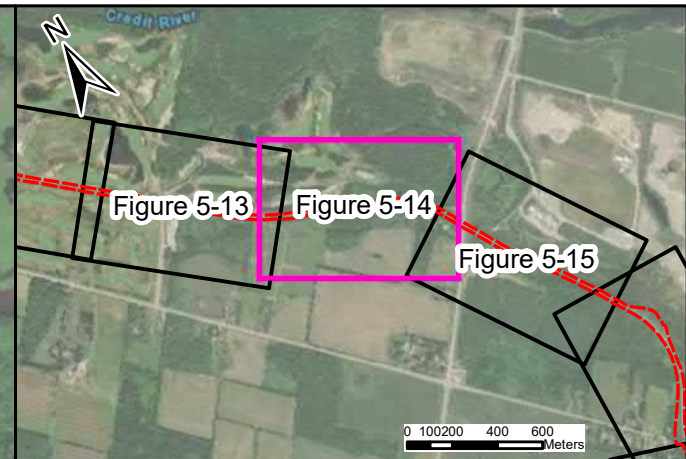
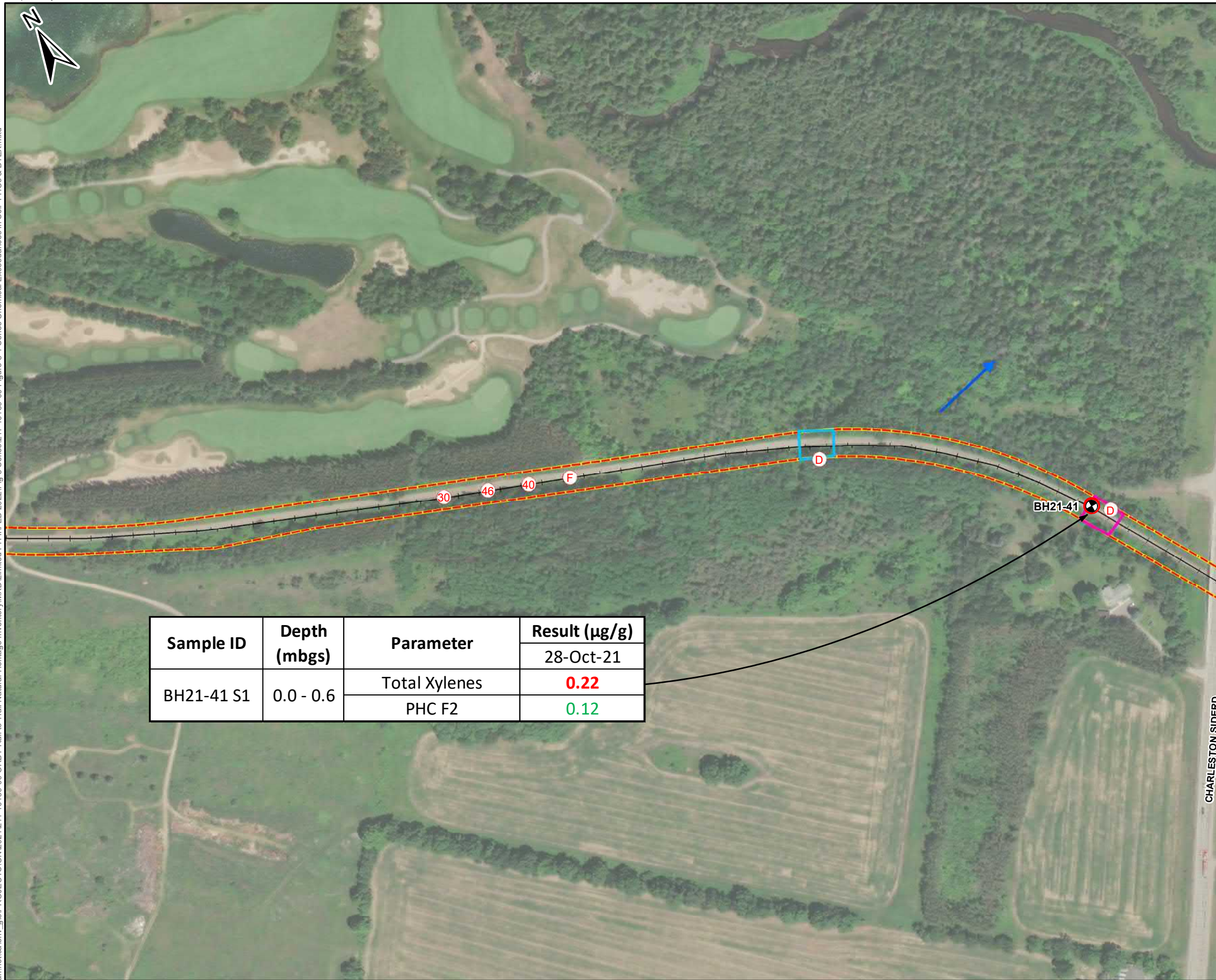


Figure 5 – Chemical Exceedances in Soil – PHCs and BTEX

Figure 5-1 and 5-2: Caledon Study Area



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**LEGEND:**

SITE BOUNDARY	APEC 13,14,38,114
RAILWAY LINE	APEC 90
BOREHOLE	APEC 91
MONITORING WELL	
MEETS SCS	
EXCEEDS SCS	
PCA CONTRIBUTING TO APEC	
PCA NOT CONTRIBUTING TO APEC	
INFERRED GROUNDWATER FLOW DIRECTION	

Sample ID	Depth (mbgs)	Parameter	Result (µg/g)
			28-Oct-21
BH21-41 S1	0.0 - 0.6	Total Xylenes	0.22
		PHC F2	0.12

Parameter	MECP Table 1 RPIICC SCS (µg/g)
Total Xylenes	0.05
PHC F2	10

TITLE:  
**FIGURE SERIES 5: CHEMICAL EXCEEDANCES IN SOIL- PHCS & BTEX**

PROJECT:  
LIMITED PHASE II ENVIRONMENTAL ASSESSMENT FORMER ORANGEVILLE RAIL, CALEDON, ONTARIO

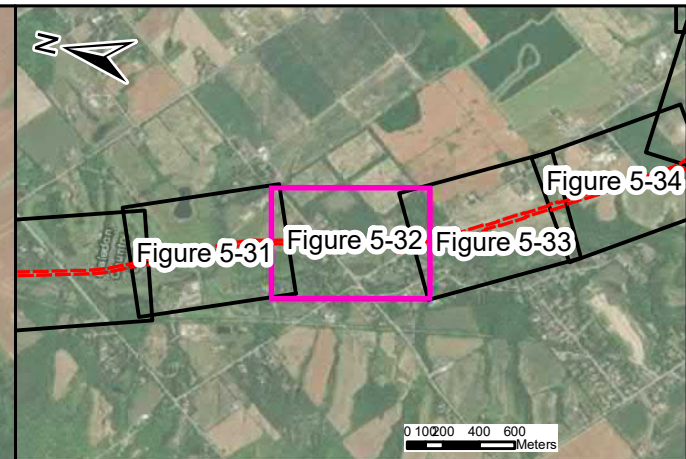
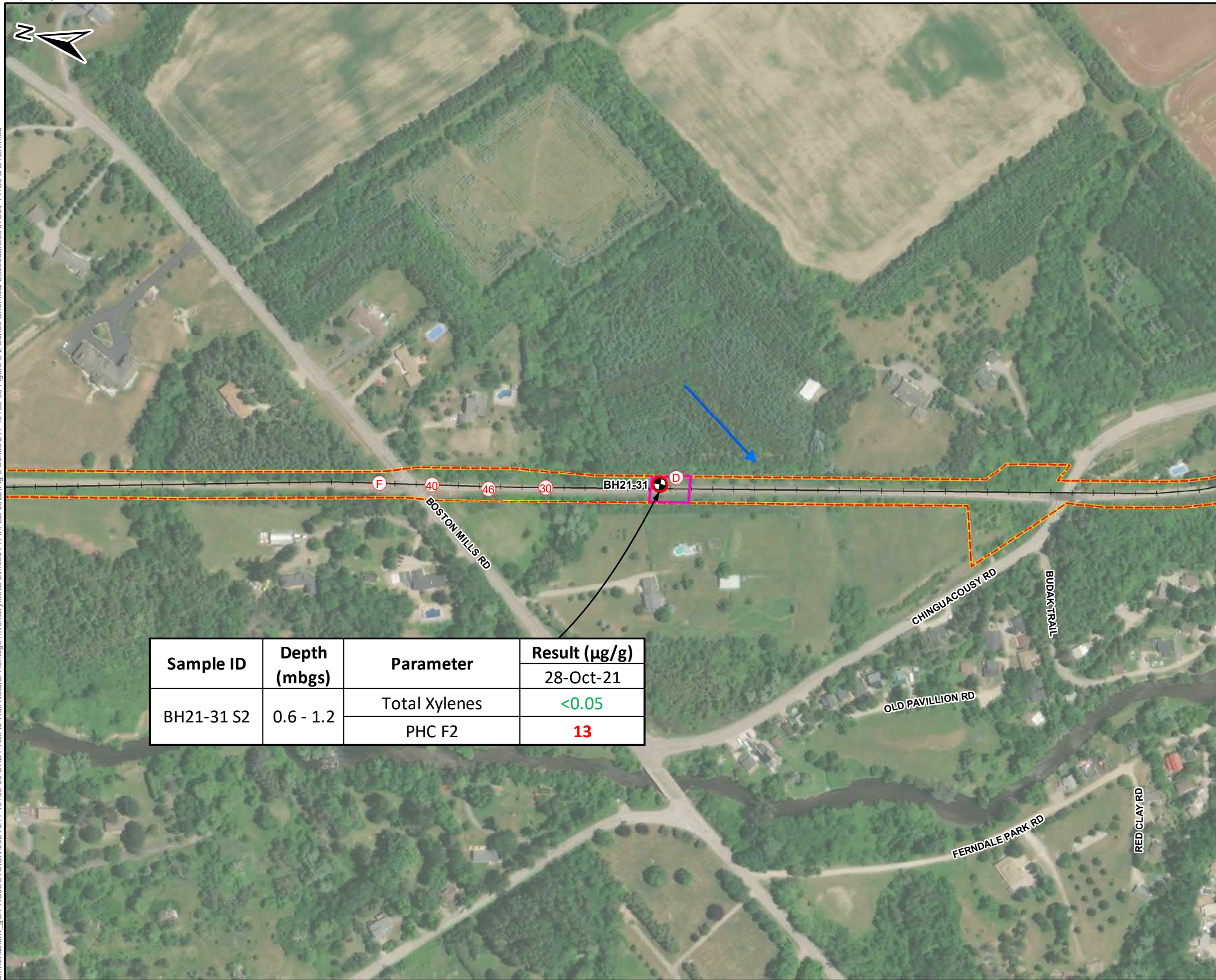
CLIENT:  
REGION OF PEEL

	PROJECT NO.:	REVIEWED BY:
	211-10139-00	CJ
	DATE:	FIGURE:
	FEBRUARY 2022	5-1





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**LEGEND:**

- SITE BOUNDARY
- RAILWAY LINE
- BOREHOLE
- MONITORING WELL
- MEETS SCS
- EXCEEDS SCS
- # PCA CONTRIBUTING TO APEC
- # PCA NOT CONTRIBUTING TO APEC
- INFERRED GROUNDWATER FLOW DIRECTION
- APEC 13,14,38,114
- APEC 69

Sample ID	Depth (mbgs)	Parameter	Result (µg/g)
			28-Oct-21
BH21-31 S2	0.6 - 1.2	Total Xylenes	<0.05
		PHC F2	13

Parameter	MECP Table 1 RPIICC SCS (µg/g)
Total Xylenes	0.05
PHC F2	10

TITLE:  
**FIGURE SERIES 5: CHEMICAL EXCEEDANCES IN SOIL- PHCS & BTEX**

PROJECT:  
LIMITED PHASE II ENVIRONMENTAL ASSESSMENT FORMER ORANGEVILLE RAIL, CALEDON, ONTARIO

CLIENT:  
REGION OF PEEL

	PROJECT NO.:	REVIEWED BY:
	211-10139-00	CJ
DATE:	FIGURE:	
FEBRUARY 2022	<b>5-2</b>	

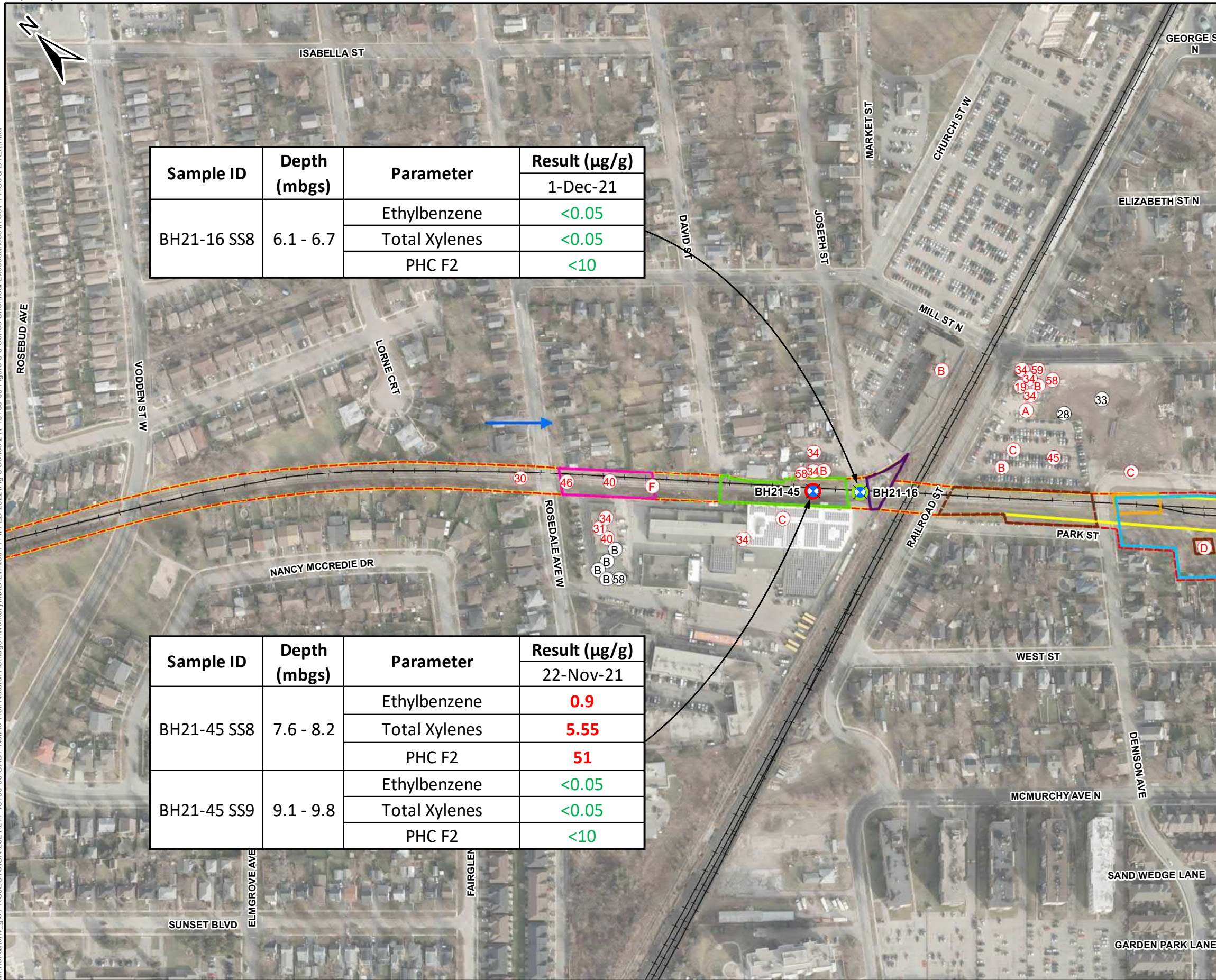


Figure 5 – Chemical Exceedances in Soil – PHCs and BTEX

Figure 5-3: Brampton Study Area

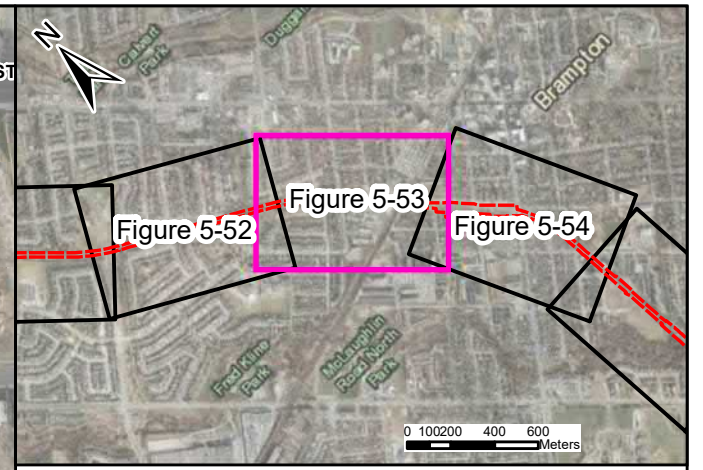


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Sample ID	Depth (mbgs)	Parameter	Result (µg/g)
			1-Dec-21
BH21-16 SS8	6.1 - 6.7	Ethylbenzene	<0.05
		Total Xylenes	<0.05
		PHC F2	<10

Sample ID	Depth (mbgs)	Parameter	Result (µg/g)
			22-Nov-21
BH21-45 SS8	7.6 - 8.2	Ethylbenzene	0.9
		Total Xylenes	5.55
		PHC F2	51
BH21-45 SS9	9.1 - 9.8	Ethylbenzene	<0.05
		Total Xylenes	<0.05
		PHC F2	<10



**LEGEND:**

- SITE BOUNDARY
- RAILWAY LINE
- BOREHOLE
- MONITORING WELL
- MEETS SCS
- EXCEEDS SCS
- # PCA CONTRIBUTING TO APEC
- # PCA NOT CONTRIBUTING TO APEC
- ➔ INFERRED GROUNDWATER FLOW DIRECTION

- APEC 13,14,38,114
- APEC 6
- APEC 16
- APEC 17
- APEC 26
- APEC 29
- APEC 48
- APEC 113

Parameter	MECP Table 1 RPICC SCS (µg/g)
Ethylbenzene	0.05
Total Xylenes	0.05
PHC F2	10

TITLE:  
**FIGURE SERIES 5: CHEMICAL EXCEEDANCES IN SOIL-PHCS & BTEX**

PROJECT:  
LIMITED PHASE II ENVIRONMENTAL ASSESSMENT FORMER ORANGEVILLE RAIL, BRAMPTON, ONTARIO

CLIENT:  
REGION OF PEEL

	PROJECT NO.:	REVIEWED BY:
	211-10139-00	CJ
	DATE:	FIGURE:
	FEBRUARY 2022	<b>5-3</b>



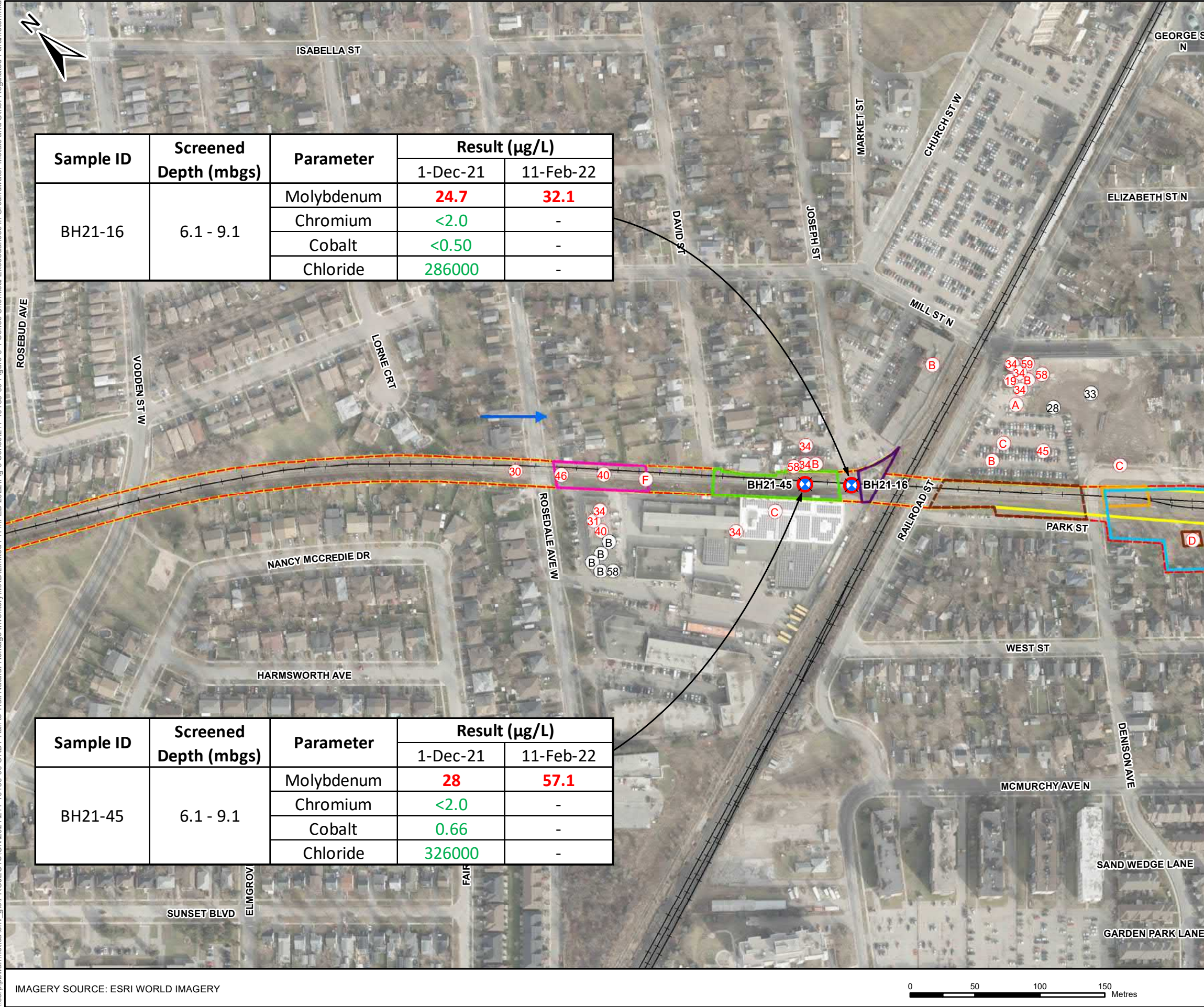


## Figure 6 – Chemical Exceedances in Groundwater – Metals and ORPs

Figures 6-1 and 6-2: Brampton Study Area

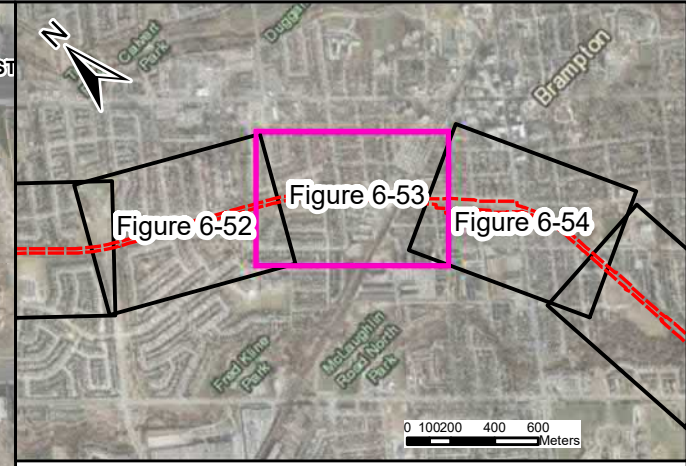


\\corp.pbwan.net\ca\env\_gis\PROJECTS\2021\211-10139-00 ORBY Rail to Trail Natural Heritage Inventory\MXD\Limited PH II\FEB 2022\Fig 6 Series\211-10139-00 Figure 6-1 Series Chemical Exceedances in Groundwater-Metals and Other Regulated Parameters.mxd



Sample ID	Screened Depth (mbgs)	Parameter	Result (µg/L)	
			1-Dec-21	11-Feb-22
BH21-16	6.1 - 9.1	Molybdenum	24.7	32.1
		Chromium	<2.0	-
		Cobalt	<0.50	-
		Chloride	286000	-

Sample ID	Screened Depth (mbgs)	Parameter	Result (µg/L)	
			1-Dec-21	11-Feb-22
BH21-45	6.1 - 9.1	Molybdenum	28	57.1
		Chromium	<2.0	-
		Cobalt	0.66	-
		Chloride	326000	-



**LEGEND:**

- SITE BOUNDARY
- RAILWAY LINE
- BOREHOLE
- MONITORING WELL
- MEETS SCS
- EXCEEDS SCS
- # PCA CONTRIBUTING TO APEC
- # PCA NOT CONTRIBUTING TO APEC
- INFERRED GROUNDWATER FLOW DIRECTION
- APEC 13,14,38,114
- APEC 6
- APEC 16
- APEC 17
- APEC 26
- APEC 29
- APEC 48
- APEC 113

Parameter	MECP Table 1 SCS (µg/L)
Molybdenum	23
Chromium	11
Cobalt	3.8
Chloride	790000

**TITLE:** **FIGURE SERIES 6: CHEMICAL EXCEEDANCES IN GROUNDWATER-METALS AND OTHER REGULATED PARAMETERS**

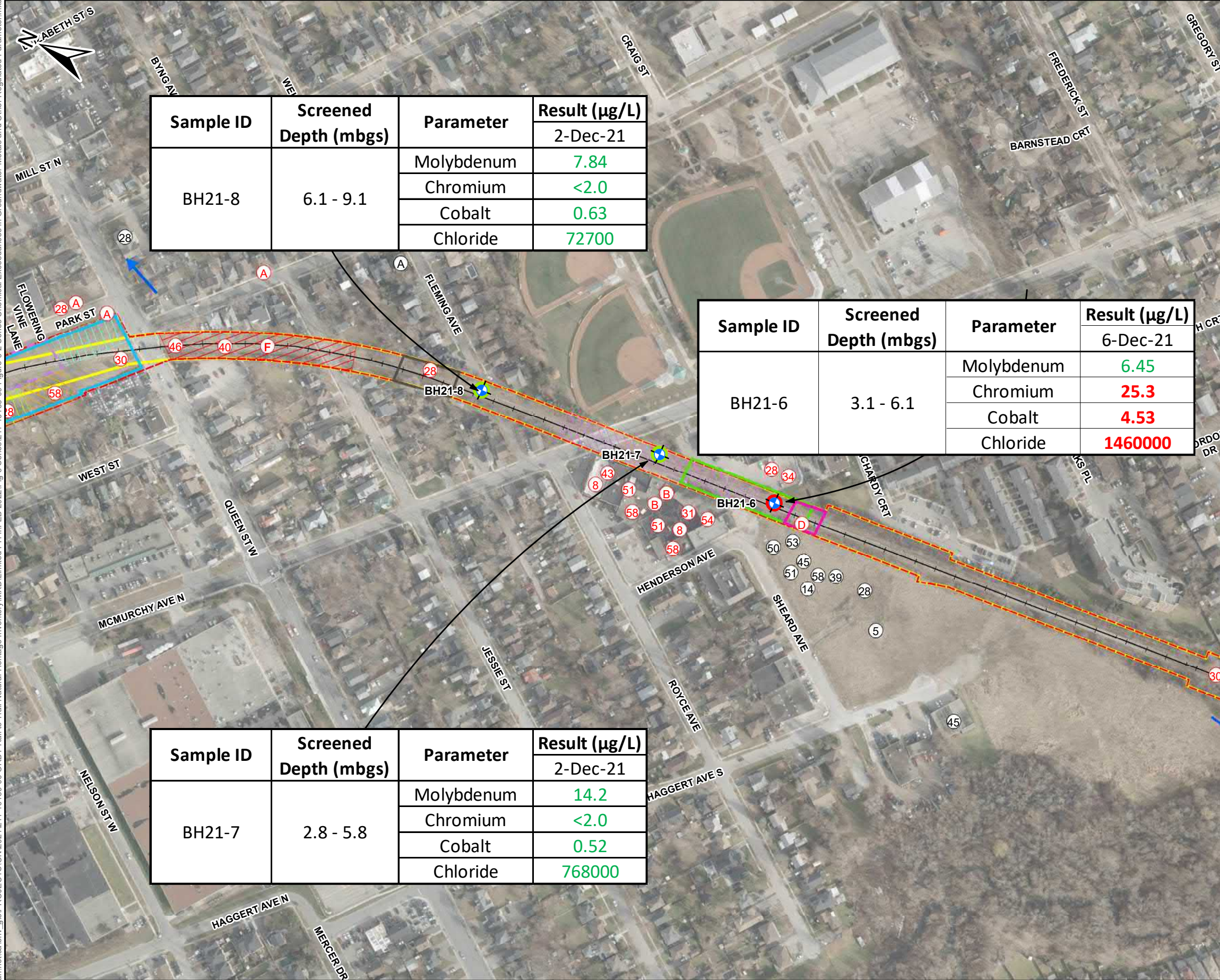
**PROJECT:** LIMITED PHASE II ENVIRONMENTAL ASSESSMENT FORMER ORANGEVILLE RAIL, BRAMPTON, ONTARIO

**CLIENT:** REGION OF PEEL

	PROJECT NO.: 211-10139-00	REVIEWED BY: CJ
	DATE: FEBRUARY 2022	FIGURE: <b>6-1</b>



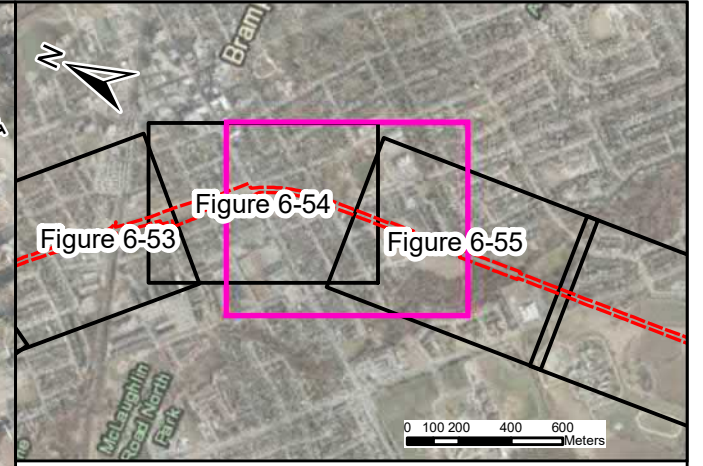




Sample ID	Screened Depth (mbgs)	Parameter	Result (µg/L)
			2-Dec-21
BH21-8	6.1 - 9.1	Molybdenum	7.84
		Chromium	<2.0
		Cobalt	0.63
		Chloride	72700

Sample ID	Screened Depth (mbgs)	Parameter	Result (µg/L)
			6-Dec-21
BH21-6	3.1 - 6.1	Molybdenum	6.45
		Chromium	25.3
		Cobalt	4.53
		Chloride	146000

Sample ID	Screened Depth (mbgs)	Parameter	Result (µg/L)
			2-Dec-21
BH21-7	2.8 - 5.8	Molybdenum	14.2
		Chromium	<2.0
		Cobalt	0.52
		Chloride	768000



**LEGEND:**

- SITE BOUNDARY
- RAILWAY LINE
- BOREHOLE
- MONITORING WELL
- MEETS SCS
- EXCEEDS SCS
- # PCA CONTRIBUTING TO APEC
- # PCA NOT CONTRIBUTING TO APEC
- ➔ INFERRED GROUNDWATER FLOW DIRECTION
- APEC 13,14,38,114
- APEC 4
- APEC 7
- APEC 10
- APEC 12
- APEC 25
- APEC 40
- APEC 41
- APEC 42
- APEC 101
- APEC 113

Parameter	MECP Table 1 SCS (µg/L)
Molybdenum	23
Chromium	11
Cobalt	3.8
Chloride	790000

**TITLE:** **FIGURE SERIES 6: CHEMICAL EXCEEDANCES IN GROUNDWATER-METALS AND OTHER REGULATED PARAMETERS**

**PROJECT:** LIMITED PHASE II ENVIRONMENTAL ASSESSMENT FORMER ORANGEVILLE RAIL, BRAMPTON, ONTARIO

**CLIENT:** REGION OF PEEL

	PROJECT NO.:	REVIEWED BY:
	211-10139-00	CJ
DATE:	FIGURE:	
FEBRUARY 2022	6-2	



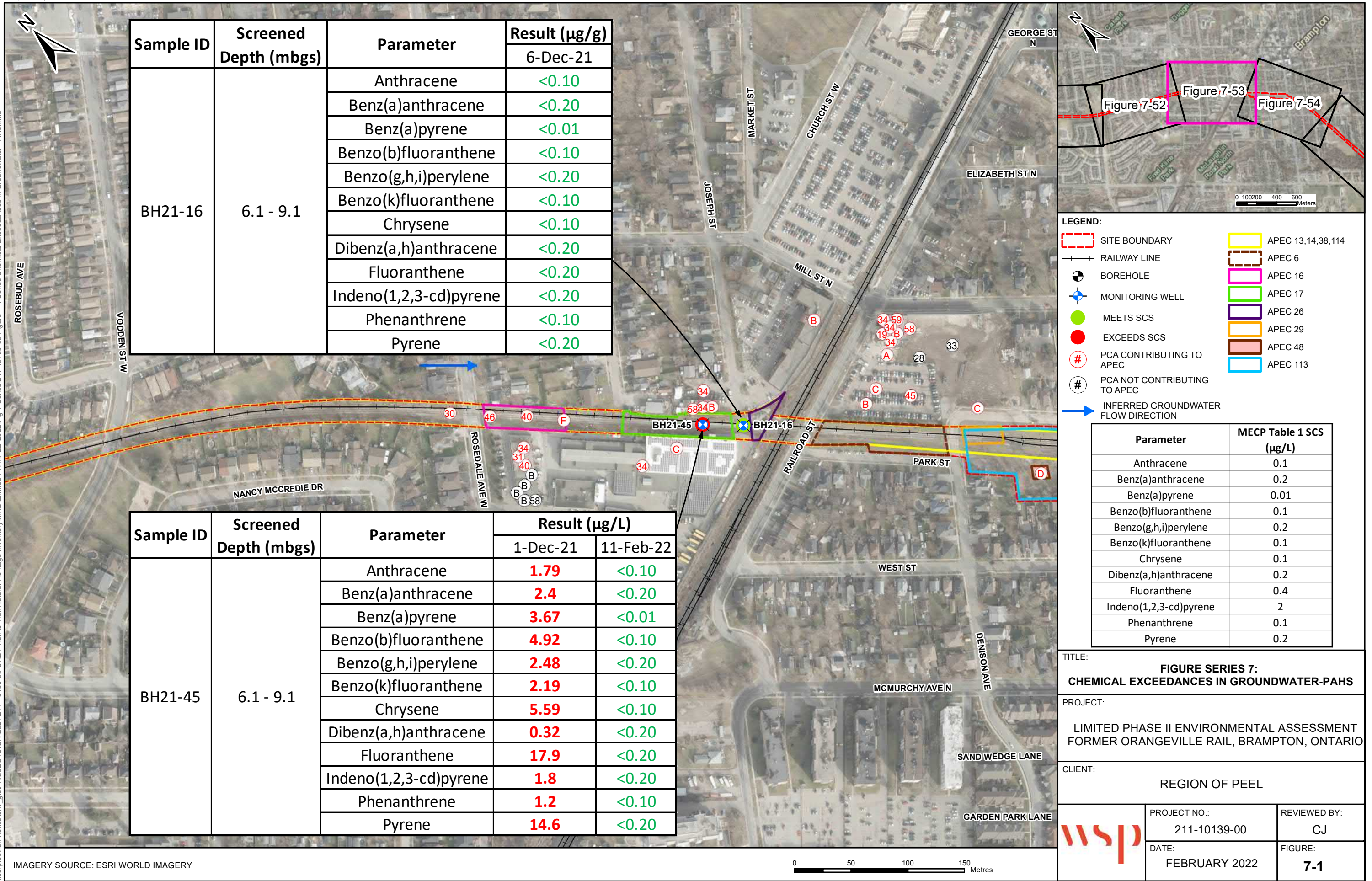


## Figure 7 – Chemical Exceedances in Groundwater – PAHs

Figure 7-1: Brampton Study Area



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Sample ID	Screened Depth (mbgs)	Parameter	Result (µg/g)
			6-Dec-21
BH21-16	6.1 - 9.1	Anthracene	<0.10
		Benz(a)anthracene	<0.20
		Benz(a)pyrene	<0.01
		Benzo(b)fluoranthene	<0.10
		Benzo(g,h,i)perylene	<0.20
		Benzo(k)fluoranthene	<0.10
		Chrysene	<0.10
		Dibenz(a,h)anthracene	<0.20
		Fluoranthene	<0.20
		Indeno(1,2,3-cd)pyrene	<0.20
		Phenanthrene	<0.10
		Pyrene	<0.20

Sample ID	Screened Depth (mbgs)	Parameter	Result (µg/L)	
			1-Dec-21	11-Feb-22
BH21-45	6.1 - 9.1	Anthracene	1.79	<0.10
		Benz(a)anthracene	2.4	<0.20
		Benz(a)pyrene	3.67	<0.01
		Benzo(b)fluoranthene	4.92	<0.10
		Benzo(g,h,i)perylene	2.48	<0.20
		Benzo(k)fluoranthene	2.19	<0.10
		Chrysene	5.59	<0.10
		Dibenz(a,h)anthracene	0.32	<0.20
		Fluoranthene	17.9	<0.20
		Indeno(1,2,3-cd)pyrene	1.8	<0.20
		Phenanthrene	1.2	<0.10
		Pyrene	14.6	<0.20

**LEGEND:**

- SITE BOUNDARY
- RAILWAY LINE
- BOREHOLE
- MONITORING WELL
- MEETS SCS
- EXCEEDS SCS
- # PCA CONTRIBUTING TO APEC
- # PCA NOT CONTRIBUTING TO APEC
- ➔ INFERRED GROUNDWATER FLOW DIRECTION

APEC	Color
APEC 13, 14, 38, 114	Yellow
APEC 6	Brown
APEC 16	Pink
APEC 17	Light Green
APEC 26	Purple
APEC 29	Orange
APEC 48	Red
APEC 113	Blue

Parameter	MECP Table 1 SCS (µg/L)
Anthracene	0.1
Benz(a)anthracene	0.2
Benz(a)pyrene	0.01
Benzo(b)fluoranthene	0.1
Benzo(g,h,i)perylene	0.2
Benzo(k)fluoranthene	0.1
Chrysene	0.1
Dibenz(a,h)anthracene	0.2
Fluoranthene	0.4
Indeno(1,2,3-cd)pyrene	2
Phenanthrene	0.1
Pyrene	0.2

**TITLE:** **FIGURE SERIES 7: CHEMICAL EXCEEDANCES IN GROUNDWATER-PAHS**

**PROJECT:** LIMITED PHASE II ENVIRONMENTAL ASSESSMENT FORMER ORANGEVILLE RAIL, BRAMPTON, ONTARIO

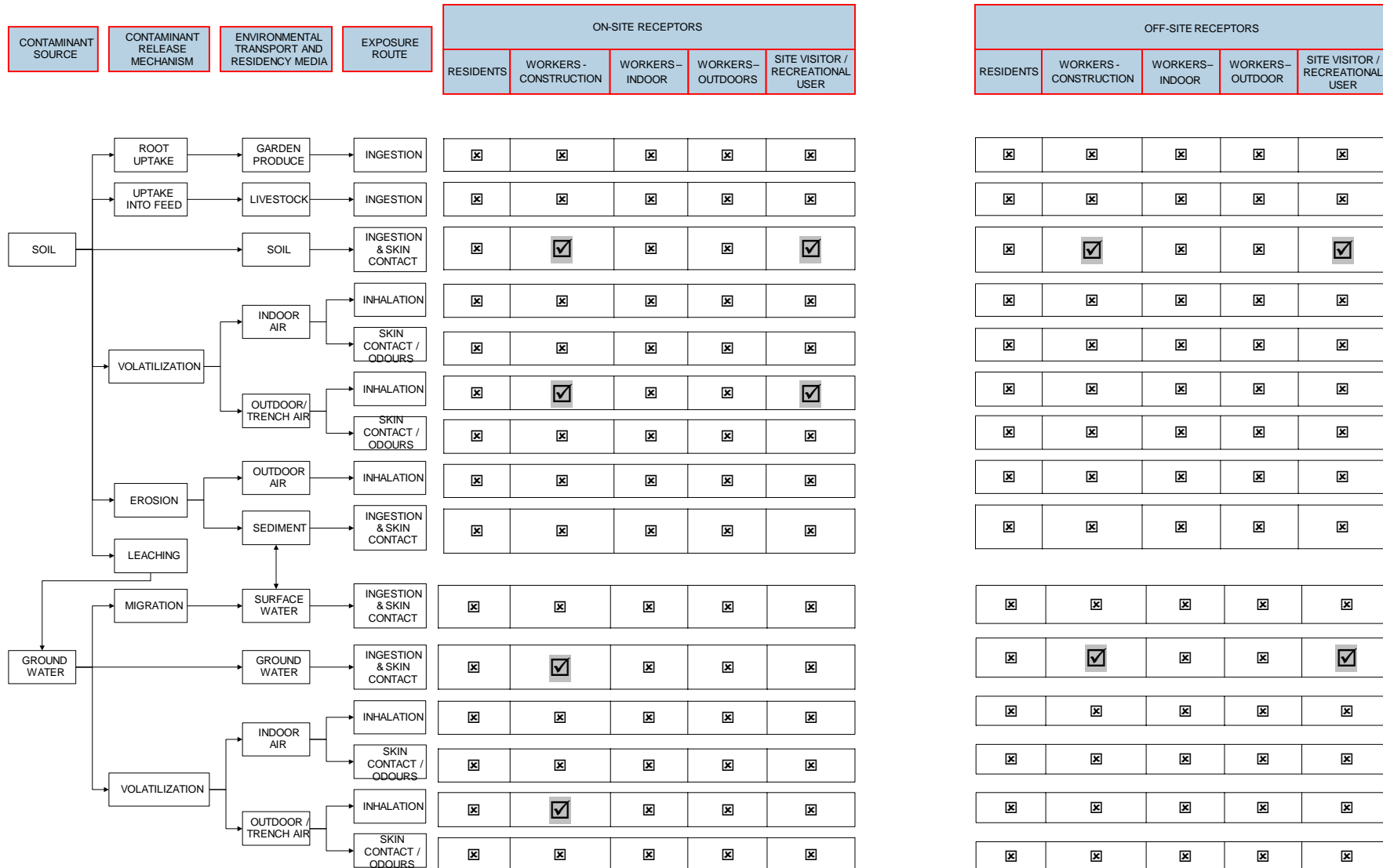
**CLIENT:** REGION OF PEEL

	PROJECT NO.: 211-10139-00	REVIEWED BY: CJ
	DATE: FEBRUARY 2022	FIGURE: 7-1



# Contaminant Transport Diagram – Human Health

## FIGURE 8



Exposure pathway not evaluated in the DDRA  
 Exposure pathway evaluated in the DDRA

Date: January 2022

Project Number: 211-10139-00



Reviewed By: CJ

Designed By: MP

# APPENDIX

## **A** BOREHOLE LOGS







# BOREHOLE DRILLING RECORD : BH21-1

Project Number: 211-10139-00

Former Orangeville Rail  
Limited Phase II Environmental Assessment  
Region of Peel

<b>DRILLING DETAILS</b> Date (Start): 2021-11-17 Date (End): 2021-11-17 Drilling Company: Davis Drilling Drilling Equipment: CME 55 Drilling Method: Diesel Hammer Borehole Diameter: 203 mm Drilling Fluid: None	<b>SURVEY DETAILS</b> Easting: 601719.802 m Northing: 4831105.845 m Surface Elevation: 173.727 masl Top of Well Elevation: masl	<b>ODOUR</b> L - Light M - Medium S - Strong  <b>VISUAL</b> D - Dispersed with Product S - Saturated with Product	<b>SAMPLE TYPE</b> DC - Diamond Corer SS - Split Spoon MA - Manual Auger TR - Trowel ST - Shelby Tube DT - Dual Tube MC - Macro Core NR - No Recovery	<b>CHEMICAL ANALYSIS</b> Metals: Sb As Ba Be B Cd Cr Co Cu Pb Mo Ni Se Ag TI U V Zn Inorg: Inorganic Compounds PHC: Petroleum Hydrocarbons (F1-F4) BTEX: Benzene, Toluene, Ethylbenzene, Xylene VOC: Volatile Organic Compounds PAH: Polycyclic Aromatic Hydrocarbons PCB: Polychlorinated Biphenyl D/F: Dioxins & Furans Phenol: Phenolic Compounds GSA: Grain-size Analysis
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(m) DEPTH ELEVATION (masl)	STRATIGRAPHY	LITHOLOGY / GEOLOGY DESCRIPTION	OBSERVATIONS					SAMPLES				MONITORING WELL		REMARKS	
			PID CGD (ppm)	ODOUR			VISUAL	SAMPLE TYPE & No.	% RECOVERY	N (Blow/15cm)	CHEMICAL ANALYSIS	DUPLICATE	DIAGRAM		DESCRIPTION
				L	M	S									
103.83 173.57		<b>TOPSOIL</b> : Some sandy silt and organics, dark brown, moist	5												0.5
0.5		<b>SILT</b> : Sand, trace gravel, brown, moist													1.0
1.0 1.22 172.51		<b>SILT</b> : Clay, trace sand, brown/grey, saturated	0												1.5
1.5 1.83 171.90			0												2.0
2.0															2.5
2.5															3.0
3.0															3.5
3.5															4.0
4.0															4.5
4.5															5.0
5.0															5.5
5.5															6.0
6.0															6.5
6.5															7.0
7.0															7.5
7.5															8.0
8.0															8.5
8.5															9.0
9.0															9.5

Project : GINT LOGS ORBY.GPJ Report : WSP\_EN\_WELL-ENVIRONMENTAL 2022-1-5



# AUGER MANUAL DRILLING RECORD : BH21-10

Project Number: **211-10139-00**

Former Orangeville Rail  
Limited Phase II Environmental Assessment  
Region of Peel

<b>DRILLING DETAILS</b> Date (Start): 2021-10-27 Date (End): 2021-10-27 Drilling Company: Drilling Equipment: Hand Auger Drilling Method: Auger Borehole Diameter: 82.5 mm Drilling Fluid: None	<b>SURVEY DETAILS</b> Easting: 573449.668 m Northing: 4862380.629 m Surface Elevation: 422.508 masl Top of Well Elevation: masl	<b>ODOUR</b> L - Light M - Medium S - Strong  <b>VISUAL</b> D - Dispersed with Product S - Saturated with Product	<b>SAMPLE TYPE</b> DC - Diamond Corer SS - Split Spoon MA - Manual Auger TR - Trowel ST - Shelby Tube DT - Dual Tube MC - Macro Core NR - No Recovery	<b>CHEMICAL ANALYSIS</b> Metals: Sb As Ba Be B Cd Cr Co Cu Pb Mo Ni Se Ag TI U V Zn Inorg: Inorganic Compounds PHC: Petroleum Hydrocarbons (F1-F4) BTEX: Benzene, Toluene, Ethylbenzene, Xylene VOC: Volatile Organic Compounds PAH: Polycyclic Aromatic Hydrocarbons PCB: Polychlorinated Biphenyl D/F: Dioxins & Furans Phenol: Phenolic Compounds GSA: Grain-size Analysis
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(m) DEPTH ELEVATION (masl)	STRATIGRAPHY	LITHOLOGY / GEOLOGY		OBSERVATIONS					SAMPLES				MONITORING WELL		REMARKS
		DESCRIPTION	PID CGD (ppm)	ODOUR	VISUAL	SAMPLE TYPE & No.	% RECOVERY	N (Blow/15cm)	CHEMICAL ANALYSIS	DUPLICATE	DIAGRAM	DESCRIPTION			
													L	M	
422.51	[Diagonal lines pattern]	<b>SILT</b> : Sand, some gravel, rocks, organics, black/brown, moist	0			MA1	33%		Metals & Inorg.					0.5	
0.70															
421.81	[Dotted pattern]	<b>SAND</b> : some gravel, stones, pulverized rock, white/light brown <i>brown, trace silt, moist</i>	0			MA2	38%		PCB OC Pest					1.0	
1.83						MA3	33%		PAH					1.5	
420.68														2.0	
2.0														2.5	
2.5														3.0	
3.0														3.5	
3.5														4.0	
4.0														4.5	
4.5														5.0	
5.0														5.5	
5.5														6.0	
6.0														6.5	
6.5														7.0	
7.0														7.5	
7.5														8.0	
8.0														8.5	
8.5														9.0	
9.0														9.5	

Project: GINT LOGS ORBY.GPJ Report: WSP\_EN\_WELL-ENVIRONMENTAL 2022-1-5





# OBSERVATION WELL DRILLING RECORD : BH21-11

Project Number: **211-10139-00**

Former Orangeville Rail  
Limited Phase II Environmental Assessment  
Region of Peel

<b>DRILLING DETAILS</b> Date (Start): 2021-11-04 Date (End): 2021-11-04 Drilling Company: Davis Drilling Drilling Equipment: CME 55 Drilling Method: Hollow Stem Auger Borehole Diameter: 203 mm Drilling Fluid: None	<b>SURVEY DETAILS</b> Easting: 575101.549 m Northing: 4856998.492 m Surface Elevation: 396.937 masl Top of Well Elevation: masl	<b>ODOUR</b> L - Light M - Medium S - Strong  <b>VISUAL</b> D - Dispersed with Product S - Saturated with Product	<b>SAMPLE TYPE</b> DC - Diamond Corer SS - Split Spoon MA - Manual Auger TR - Trowel ST - Shelby Tube DT - Dual Tube MC - Macro Core NR - No Recovery	<b>CHEMICAL ANALYSIS</b> Metals Inorg. PHC BTEX VOC PAH PCB D/F Phenol GSA  Sb As Ba Be B Cd Cr Co Cu Pb Mo Ni Se Ag Ti U V Zn Inorganic Compounds Petroleum Hydrocarbons (F1-F4) Benzene, Toluene, Ethylbenzene, Xylene Volatile Organic Compounds Polycyclic Aromatic Hydrocarbons Polychlorinated Biphenyl Dioxins & Furans Phenolic Compounds Grain-size Analysis
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(m) DEPTH ELEVATION (masl)	STRATIGRAPHY	LITHOLOGY / GEOLOGY		OBSERVATIONS			SAMPLES				MONITORING WELL		REMARKS
		DESCRIPTION	PID CGD (ppm)	ODOUR	VISUAL	SAMPLE TYPE & No.	% RECOVERY	N (Blow/15cm)	CHEMICAL ANALYSIS	DUPLICATE	DIAGRAM	DESCRIPTION	
396.94 396.78	[Cross-hatched]	<b>SILT</b> : Sand, some gravel and organics. Black, moist	0			SS1	71%	7	Metals & Inorg.		[Concrete]	CONCRETE	0.5
0.5		<b>SAND</b> : Coarse sand with some gravel and rocks. Brown moist <i>Fine-medium sand, light brown</i>	0			SS2	79%	15	OC Pest PAH				1.0
1.0			0			SS3	67%	20					1.5
1.5			0			SS4	75%	32				[Bentonite]	2.5
2.0			0			SS5	88%	24					3.0
2.5			0			SS6	29%	13					4.5
3.0		← Saturated	0			SS7	83%	10	PHC BTEX				6.5
3.5			0			SS8	100%	14				[Screen]	7.5
4.0			0			SS9	88%	17				[Bentonite]	9.0
4.5		← Coarse sand, trace gravel	0										9.5
5.0			0										9.5
5.5			0										9.5
6.0			0										9.5
6.5			0										9.5
7.0			0										9.5
7.5			0										9.5
8.0			0										9.5
8.5			0										9.5
9.0			0										9.5
9.14 387.79	[Dotted]	<b>GRAVEL</b> : Some coarse sand and pebbles. Saturated	0										9.5
9.75 387.18	[Dotted]		0										9.5

Project : GINT LOGS ORBY.GPJ Report : WSP\_EN\_WELL-ENVIRONMENTAL\_2022-1-5







# OBSERVATION WELL DRILLING RECORD : BH21-13

Project Number: **211-10139-00**

Former Orangeville Rail  
Limited Phase II Environmental Assessment  
Region of Peel

<b>DRILLING DETAILS</b> Date (Start): 2021-11-15 Date (End): 2021-11-15 Drilling Company: Davis Drilling Drilling Equipment: CME 55 Drilling Method: Hollow Stem Auger Borehole Diameter: 203 mm Drilling Fluid: None	<b>SURVEY DETAILS</b> Easting: 575272.383 m Northing: 4860032.288 m Surface Elevation: 403.897 masl Top of Well Elevation: masl	<b>ODOUR</b> L - Light M - Medium S - Strong  <b>VISUAL</b> D - Dispersed with Product S - Saturated with Product	<b>SAMPLE TYPE</b> DC - Diamond Corer SS - Split Spoon MA - Manual Auger TR - Trowel ST - Shelby Tube DT - Dual Tube MC - Macro Core NR - No Recovery	<b>CHEMICAL ANALYSIS</b> Metals Inorg. PHC BTEX VOC PAH PCB D/F Phenol GSA  Sb As Ba Be B Cd Cr Co Cu Pb Mo Ni Se Ag TI U V Zn Inorganic Compounds Petroleum Hydrocarbons (F1-F4) Benzene, Toluene, Ethylbenzene, Xylene Volatile Organic Compounds Polycyclic Aromatic Hydrocarbons Polychlorinated Biphenyl Dioxins & Furans Phenolic Compounds Grain-size Analysis
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(m) DEPTH ELEVATION (masl)	STRATIGRAPHY	LITHOLOGY / GEOLOGY  DESCRIPTION	OBSERVATIONS					SAMPLES				MONITORING WELL		REMARKS	
			PID CGD (ppm)	ODOUR			VISUAL	SAMPLE TYPE & No.	% RECOVERY	N (Blow/15cm)	CHEMICAL ANALYSIS	DUPLICATE	DIAGRAM		DESCRIPTION
				L	M	S									
403.90	[Pattern]	<b>SILT</b> : Sand, trace gravel and organics. Brown, moist	0					SS1	54%	5	OC Pest PAH		[Diagram]	CONCRETE	0.5
0.84 403.06	[Pattern]	<b>SAND</b> : Light brown, moist	0					SS2	83%	3	Metals & Inorg.		[Diagram]		1.0
1.52 402.37	[Pattern]	<b>SAND</b> : Silt, brown, moist to wet	0					SS3	79%	4			[Diagram]	BENTONITE	1.5
2.0			0					SS4	100%	9			[Diagram]		2.5
3.05 400.85	[Pattern]	<b>SILT</b> : sand, brown, moist to wet	0					SS5	100%	8	PHC BTEX		[Diagram]		3.0
4.57 399.33	[Pattern]	<b>GRAVEL</b> : Some pebbles, wet	0					SS6	50%	51			[Diagram]	SAND	4.5
6.10 397.80	[Pattern]	<b>SAND</b> : Brown, saturated	0					SS7	54%	9			[Diagram]	SCREEN Length: 3.05 m Diam.: 51 mm Slot: #10	5.5
7.62 396.28	[Pattern]	<b>ROCK FRAGMENTS</b> : Sand, crushed rock. Brown, wet	0					SS8	54%	38			[Diagram]	BENTONITE	7.5
9.60 394.30	[Pattern]	← saturated	0					SS9	71%	N/A			[Diagram]		9.5

Project: GINT LOGS ORBY.GPJ Report: WSP\_EN\_WELL-ENVIRONMENTAL 2022-1-5









# OBSERVATION WELL DRILLING RECORD : BH21-16

Project Number: **211-10139-00**

Former Orangeville Rail  
Limited Phase II Environmental Assessment  
Region of Peel

<b>DRILLING DETAILS</b> Date (Start): 2021-12-01 Date (End): 2021-12-01 Drilling Company: Davis Drilling Drilling Equipment: CME 55 Drilling Method: Hollow Stem Auger Borehole Diameter: 203 mm Drilling Fluid: None	<b>SURVEY DETAILS</b> Easting: 599255.635 m Northing: 4837772.699 m Surface Elevation: 218.114 masl Top of Well Elevation: masl	<b>ODOUR</b> L - Light M - Medium S - Strong  <b>VISUAL</b> D - Dispersed with Product S - Saturated with Product	<b>SAMPLE TYPE</b> DC - Diamond Corer SS - Split Spoon MA - Manual Auger TR - Trowel ST - Shelby Tube DT - Dual Tube MC - Macro Core NR - No Recovery	<b>CHEMICAL ANALYSIS</b> Metals Inorg. PHC BTEX VOC PAH PCB D/F Phenol GSA  Sb As Ba Be B Cd Cr Co Cu Pb Mo Ni Se Ag Ti U V Zn Inorganic Compounds Petroleum Hydrocarbons (F1-F4) Benzene, Toluene, Ethylbenzene, Xylene Volatile Organic Compounds Polycyclic Aromatic Hydrocarbons Polychlorinated Biphenyl Dioxins & Furans Phenolic Compounds Grain-size Analysis
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(m) DEPTH ELEVATION (masl)	STRATIGRAPHY	LITHOLOGY / GEOLOGY  DESCRIPTION	OBSERVATIONS					SAMPLES				MONITORING WELL		REMARKS		
			PID CGD (ppm)	ODOUR			SAMPLE TYPE & No.	% RECOVERY	N (Blow/15cm)	CHEMICAL ANALYSIS	DUPLICATE	DIAGRAM	DESCRIPTION			
				L	M	S									D	S
218.11	[Cross-hatched]	Dark brown/black, loose <b>SILT</b> : Sand, some gravel. Light brown/grey, moist	0					SS1	58%	24	Metals & Inorg.		[Diagram: Concrete cap]	CONCRETE	0.5	
0.81 217.30	[Dotted]	<b>SILT</b> : Sand, trace gravel. Grey, moist, soft Trace clay, brown dry	10					SS2	79%	6	PAH	QAQC-10			1.0	
1.0			0					SS3	100%	27					1.5	
2.0			0					SS4	92%	56					2.5	
3.0			0					SS5	100%	53					3.0	
4.5		very brittle/cracked, some gravel	0					SS6	100%	31					4.5	
6.10 212.02	[Diagonal lines]	<b>CLAY</b> : Grey, moist, soft	0					SS7	75%	14					6.0	
7.72 210.39	[Dotted]	<b>SAND</b> : Silt, some gravel. Grey/brown, saturated	0					SS8	88%	52	PHC VOC	QAQC-9		[Diagram: Sand, Screen]	SAND SCREEN Length: 3.05 m Diam.: 51 mm Slot: #10	7.5
9.14 208.97 9.45 208.67	[Horizontal lines]	<b>RED SHALE</b> : Red shale chips, some gravel, wet	0					SS9	42%	N/A					9.0	
															9.5	

Project: GINT LOGS ORBY.GPJ Report: WSP\_EN\_WELL-ENVIRONMENTAL\_2022-1-5





# AUGER MANUAL DRILLING RECORD : BH21-17

Project Number: **211-10139-00**

Former Orangeville Rail  
Limited Phase II Environmental Assessment  
Region of Peel

<b>DRILLING DETAILS</b> Date (Start): 2021-11-05 Date (End): 2021-11-05 Drilling Company: Drilling Equipment: Hand Auger Drilling Method: Auger Borehole Diameter: 82.5 mm Drilling Fluid: None	<b>SURVEY DETAILS</b> Easting: 598117.46 m Northing: 4838582.606 m Surface Elevation: 224.204 masl Top of Well Elevation: masl	<b>ODOUR</b> L - Light M - Medium S - Strong  <b>VISUAL</b> D - Dispersed with Product S - Saturated with Product	<b>SAMPLE TYPE</b> DC - Diamond Corer SS - Split Spoon MA - Manual Auger TR - Trowel ST - Shelby Tube DT - Dual Tube MC - Macro Core NR - No Recovery	<b>CHEMICAL ANALYSIS</b> Metals: Sb As Ba Be B Cd Cr Co Cu Pb Mo Ni Se Ag TI U V Zn Inorg: Inorganic Compounds PHC: Petroleum Hydrocarbons (F1-F4) BTEX: Benzene, Toluene, Ethylbenzene, Xylene VOC: Volatile Organic Compounds PAH: Polycyclic Aromatic Hydrocarbons PCB: Polychlorinated Biphenyl D/F: Dioxins & Furans Phenol: Phenolic Compounds GSA: Grain-size Analysis
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(m) DEPTH ELEVATION (masl)	LITHOLOGY / GEOLOGY		OBSERVATIONS					SAMPLES				MONITORING WELL		REMARKS		
	STRATIGRAPHY	DESCRIPTION	PID CGD (ppm)	ODOUR					SAMPLE TYPE & No.	% RECOVERY	N (Blow/15cm)	CHEMICAL ANALYSIS	DUPLICATE		DIAGRAM	DESCRIPTION
				L	M	S	D	S								
224.20  0.5  1.0 1.22 222.98 1.5 1.83 222.38  2.0  2.5  3.0  3.5  4.0  4.5  5.0  5.5  6.0  6.5  7.0  7.5  8.0  8.5  9.0  9.5		<b>SILT</b> : Sand, organics. Dark brown, moist  ← Trace clay, trace gravel. Dry  <b>SILT</b> : Clay, Trace gravel. Brown/grey, dry	0  0  0	L M S D S	L M S D S	L M S D S	MA1  MA2  MA3	29%  33%  79%	Metals & Inorg.  PCB OC Pest  PAH	   	   	   	0.5  1.0  1.5  2.0  2.5  3.0  3.5  4.0  4.5  5.0  5.5  6.0  6.5  7.0  7.5  8.0  8.5  9.0  9.5			

Project: GINT LOGS ORBY.GPJ Report: WSP\_EN\_WELL-ENVIRONMENTAL 2022-1-5



# BOREHOLE DRILLING RECORD : BH21-18

Project Number: 211-10139-00

Former Orangeville Rail  
Limited Phase II Environmental Assessment  
Region of Peel

<b>DRILLING DETAILS</b> Date (Start): 2021-11-24 Date (End): 2021-11-24 Drilling Company: Davis Drilling Drilling Equipment: CME 55 Drilling Method: Hollow Stem Auger Borehole Diameter: 203 mm Drilling Fluid: None	<b>SURVEY DETAILS</b> Easting: 59664.585 m Northing: 4839724.521 m Surface Elevation: 238.096 masl Top of Well Elevation: masl	<b>ODOUR</b> L - Light M - Medium S - Strong  <b>VISUAL</b> D - Dispersed with Product S - Saturated with Product	<b>SAMPLE TYPE</b> DC - Diamond Corer SS - Split Spoon MA - Manual Auger TR - Trowel ST - Shelby Tube DT - Dual Tube MC - Macro Core NR - No Recovery	<b>CHEMICAL ANALYSIS</b> Metals: Sb As Ba Be B Cd Cr Co Cu Pb Mo Ni Se Ag TI U V Zn Inorg: Inorganic Compounds PHC: Petroleum Hydrocarbons (F1-F4) BTEX: Benzene, Toluene, Ethylbenzene, Xylene VOC: Volatile Organic Compounds PAH: Polycyclic Aromatic Hydrocarbons PCB: Polychlorinated Biphenyl D/F: Dioxins & Furans Phenol: Phenolic Compounds GSA: Grain-size Analysis
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(m) DEPTH ELEVATION (masl)	LITHOLOGY / GEOLOGY		OBSERVATIONS					SAMPLES				MONITORING WELL		REMARKS						
	STRATIGRAPHY	DESCRIPTION	PID CGD (ppm)	ODOUR					SAMPLE TYPE & No.	% RECOVERY	N (Blow/15cm)	CHEMICAL ANALYSIS	DUPLICATE		DIAGRAM	DESCRIPTION				
				L	M	S	D	S												
238.10	[Stratigraphic Column]	<b>SILT</b> : Sand, trace gravel and organics. Dark brown, moist																		
0.5																	0.5			
1.0																		1.0		
1.22		<b>RED SHALE</b> : Red shale chips, weathered, dry																		
236.88																				
1.5																		1.5		
236.27																				
1.82																				
2.0																				2.0
2.5																				2.5
3.0																				3.0
3.5																				3.5
4.0																				4.0
4.5																				4.5
5.0																				5.0
5.5																				5.5
6.0																				6.0
6.5																				6.5
7.0																				7.0
7.5																				7.5
8.0																				8.0
8.5																				8.5
9.0																				9.0
9.5																				9.5

Project : GINT LOGS ORBY.GPJ Report : WSP\_EN\_WELL-ENVIRONMENTAL 2022-1-5





# BOREHOLE DRILLING RECORD : BH21-19

Project Number: 211-10139-00

Former Orangeville Rail  
Limited Phase II Environmental Assessment  
Region of Peel

<b>DRILLING DETAILS</b> Date (Start): 2021-11-24 Date (End): 2021-11-24 Drilling Company: Davis Drilling Drilling Equipment: CME 55 Drilling Method: Hollow Stem Auger Borehole Diameter: 203 mm Drilling Fluid: None	<b>SURVEY DETAILS</b> Easting: 596751.123 m Northing: 4839932.696 m Surface Elevation: 241.304 masl Top of Well Elevation: masl	<b>ODOUR</b> L - Light M - Medium S - Strong  <b>VISUAL</b> D - Dispersed with Product S - Saturated with Product	<b>SAMPLE TYPE</b> DC - Diamond Corer SS - Split Spoon MA - Manual Auger TR - Trowel ST - Shelby Tube DT - Dual Tube MC - Macro Core NR - No Recovery	<b>CHEMICAL ANALYSIS</b> Metals: Sb As Ba Be B Cd Cr Co Cu Pb Mo Ni Se Ag TI U V Zn Inorg. Inorganic Compounds PHC Petroleum Hydrocarbons (F1-F4) BTEX Benzene, Toluene, Ethylbenzene, Xylene VOC Volatile Organic Compounds PAH Polycyclic Aromatic Hydrocarbons PCB Polychlorinated Biphenyl D/F Dioxins & Furans Phenol Phenolic Compounds GSA Grain-size Analysis
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(m) DEPTH ELEVATION (masl)	LITHOLOGY / GEOLOGY		OBSERVATIONS					SAMPLES				MONITORING WELL		REMARKS			
	STRATIGRAPHY	DESCRIPTION	PID CGD (ppm)	ODOUR			SAMPLE TYPE & No.	% RECOVERY	N (Blow/15cm)	CHEMICAL ANALYSIS	DUPLICATE	DIAGRAM	DESCRIPTION				
				L	M	S									D	S	
241.96 241.23		<b>SILT</b> : Sand, some gravel and organics. Dark brown, moist															
0.5		<b>SILT</b> : Sand, trace gravel. Brown, moist															
1.0																	
1.52 239.78		<b>Red/brown</b> <b>Trace gravel, pulverized rock and white dust, brittle red shale chips, dry</b>															
1.5																	
2.0		<b>RED SHALE</b> : Red shale fragments, some gravel, dry															
2.5																	
3.0																	
3.35 237.95																	
3.5																	
4.0																	
4.5																	
5.0																	
5.5																	
6.0																	
6.5																	
7.0																	
7.5																	
8.0																	
8.5																	
9.0																	
9.5																	

Project: GINT LOGS ORBY.GPJ Report: WSP\_EN\_WELL-ENVIRONMENTAL 2022-1-5



# OBSERVATION WELL DRILLING RECORD : BH21-2

Project Number: 211-10139-00

Former Orangeville Rail  
Limited Phase II Environmental Assessment  
Region of Peel

<b>DRILLING DETAILS</b> Date (Start): 2021-12-02 Date (End): 2021-12-02 Drilling Company: Davis Drilling Drilling Equipment: CME 55 Drilling Method: Hollow Stem Auger Borehole Diameter: 203 mm Drilling Fluid: None	<b>SURVEY DETAILS</b> Easting: 599850.293 m Northing: 483272.348 m Surface Elevation: 183.942 masl Top of Well Elevation: masl	<b>ODOUR</b> L - Light M - Medium S - Strong  <b>VISUAL</b> D - Dispersed with Product S - Saturated with Product	<b>SAMPLE TYPE</b> DC - Diamond Corer SS - Split Spoon MA - Manual Auger TR - Trowel ST - Shelby Tube DT - Dual Tube MC - Macro Core NR - No Recovery	<b>CHEMICAL ANALYSIS</b> Metals: Sb As Ba Be B Cd Cr Co Cu Pb Mo Ni Se Ag Tl U V Zn Inorg. Inorganic Compounds PHC Petroleum Hydrocarbons (F1-F4) BTEX Benzene, Toluene, Ethylbenzene, Xylene VOC Volatile Organic Compounds PAH Polycyclic Aromatic Hydrocarbons PCB Polychlorinated Biphenyl D/F Dioxins & Furans Phenol Phenolic Compounds GSA Grain-size Analysis
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(m) DEPTH ELEVATION (masl)	LITHOLOGY / GEOLOGY		OBSERVATIONS			SAMPLES				MONITORING WELL		REMARKS					
	STRATIGRAPHY	DESCRIPTION	PID CGD (ppm)	ODOUR			SAMPLE TYPE & No.	% RECOVERY	N (Blow/15cm)	CHEMICAL ANALYSIS	DUPLICATE		DIAGRAM	DESCRIPTION			
				L	M	S									D	S	
183.94		<b>SILT</b> : Sand, organics, trace gravel. Brown, moist <i>Light brown, moist to dry</i>  <i>Gravel pocket, some sand, loose, dry</i>															
0.5																	
1.0																	
1.5																	
2.0																	
2.56		<b>CLAY</b> : Sand, grey/brown, moist, soft <i>saturated</i>															
181.38																	
2.5																	
3.0																	
3.5																	
4.75		<b>CLAY</b> : Grey, wet  <i>2" sand seam, wet</i>  <i>trace gravel</i>  <i>saturated, soft</i>															
179.19																	
4.0																	
4.5																	
5.0																	
9.75																	
174.19																	

Project : GINT LOGS ORBY.GPJ Report : WSP\_EN\_WELL-ENVIRONMENTAL\_2022-1-5





# BOREHOLE DRILLING RECORD : BH21-20

Project Number: 211-10139-00

Former Orangeville Rail  
Limited Phase II Environmental Assessment  
Region of Peel

<b>DRILLING DETAILS</b> Date (Start): 2021-11-23 Date (End): 2021-11-23 Drilling Company: Davis Drilling Drilling Equipment: CME 55 Drilling Method: Hollow Stem Auger Borehole Diameter: 203 mm Drilling Fluid: None	<b>SURVEY DETAILS</b> Easting: 596594.066 m Northing: 4840094.602 m Surface Elevation: 243.416 masl Top of Well Elevation: masl	<b>ODOUR</b> L - Light M - Medium S - Strong  <b>VISUAL</b> D - Dispersed with Product S - Saturated with Product	<b>SAMPLE TYPE</b> DC - Diamond Corer SS - Split Spoon MA - Manual Auger TR - Trowel ST - Shelby Tube DT - Dual Tube MC - Macro Core NR - No Recovery	<b>CHEMICAL ANALYSIS</b> Metals: Sb As Ba Be B Cd Cr Co Cu Pb Mo Ni Se Ag TI U V Zn Inorg: Inorganic Compounds PHC: Petroleum Hydrocarbons (F1-F4) BTEX: Benzene, Toluene, Ethylbenzene, Xylene VOC: Volatile Organic Compounds PAH: Polycyclic Aromatic Hydrocarbons PCB: Polychlorinated Biphenyl D/F: Dioxins & Furans Phenol: Phenolic Compounds GSA: Grain-size Analysis
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(m) DEPTH ELEVATION (masl)	LITHOLOGY / GEOLOGY		OBSERVATIONS					SAMPLES				MONITORING WELL		REMARKS	
	STRATIGRAPHY	DESCRIPTION	PID CGD (ppm)	ODOUR			SAMPLE TYPE & No.	% RECOVERY	N (Blow/15cm)	CHEMICAL ANALYSIS	DUPLICATE	DIAGRAM	DESCRIPTION		
				L	M	S									D
243.82 243.24		<b>SAND</b> : Silt, some gravel and organics. Dark brown, moist	5												0.5
0.5		<b>SILT</b> : Sand, trace gravel. Brown, moist, soft													1.0
1.0			0												1.5
1.5		← Trace clay, some oxidation													2.0
2.0		← Pulverized rock	0												2.5
2.29 241.13		<b>RED SHALE</b> : Brittle shale chips, dry	0												3.0
2.5															3.5
3.0		← Some white rocks/dust, dry													4.0
3.20 240.22			0												4.5
3.5															5.0
4.0															5.5
4.5															6.0
5.0															6.5
5.5															7.0
6.0															7.5
6.5															8.0
7.0															8.5
7.5															9.0
8.0															9.5
8.5															
9.0															
9.5															

Project : GINT LOGS ORBY.GPJ Report : WSP\_EN\_WELL-ENVIRONMENTAL 2022-1-5



# BOREHOLE DRILLING RECORD : BH21-21

Project Number: 211-10139-00

Former Orangeville Rail  
Limited Phase II Environmental Assessment  
Region of Peel

<b>DRILLING DETAILS</b> Date (Start): 2021-11-23 Date (End): 2021-11-23 Drilling Company: Davis Drilling Drilling Equipment: CME 55 Drilling Method: Hollow Stem Auger Borehole Diameter: 203 mm Drilling Fluid: None	<b>SURVEY DETAILS</b> Easting: 596176.169 m Northing: 4840493.732 m Surface Elevation: 244.742 masl Top of Well Elevation: masl	<b>ODOUR</b> L - Light M - Medium S - Strong  <b>VISUAL</b> D - Dispersed with Product S - Saturated with Product	<b>SAMPLE TYPE</b> DC - Diamond Corer SS - Split Spoon MA - Manual Auger TR - Trowel ST - Shelby Tube DT - Dual Tube MC - Macro Core NR - No Recovery	<b>CHEMICAL ANALYSIS</b> Metals: Sb As Ba Be B Cd Cr Co Cu Pb Mo Ni Se Ag TI U V Zn Inorg: Inorganic Compounds PHC: Petroleum Hydrocarbons (F1-F4) BTEX: Benzene, Toluene, Ethylbenzene, Xylene VOC: Volatile Organic Compounds PAH: Polycyclic Aromatic Hydrocarbons PCB: Polychlorinated Biphenyl D/F: Dioxins & Furans Phenol: Phenolic Compounds GSA: Grain-size Analysis
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(m) DEPTH ELEVATION (masl)	LITHOLOGY / GEOLOGY		OBSERVATIONS			SAMPLES				MONITORING WELL		REMARKS			
	STRATIGRAPHY	DESCRIPTION	PID CGD (ppm)	ODOUR			SAMPLE TYPE & No.	% RECOVERY	N (Blow/15cm)	CHEMICAL ANALYSIS	DUPLICATE		DIAGRAM	DESCRIPTION	
				L	M	S									D
0.06 244.69		GRAVEL : Rocks, some organics, trace silt, moist	0					SS1	75%	4	PCB PAH OC Pest			0.5	
0.5		SILT : Sand, trace gravel. Brown, moist/dry, soft	0											1.0	
1.0		Some gravel, refusal on rocks	0					SS2	42%	>59				1.5	
1.5				0					SS3	88%	12	Metals & Inorg. PHC VOC			2.0
2.0				0										2.5	
2.56 242.18		RED SHALE : Red shale chips, dry	0					SS4	67%	>80				3.0	
3.0			0										3.5		
3.20 241.54			0					SS5	100%	N/A				4.0	
3.5			0										4.5		
4.0													5.0		
4.5													5.5		
5.0													6.0		
5.5													6.5		
6.0													7.0		
6.5													7.5		
7.0													8.0		
7.5													8.5		
8.0													9.0		
8.5													9.5		

Project : GINT LOGS ORBY.GPJ Report : WSP\_EN\_WELL-ENVIRONMENTAL 2022-1-5







# AUGER MANUAL DRILLING RECORD : BH21-23

Project Number: **211-10139-00**

Former Orangeville Rail  
Limited Phase II Environmental Assessment  
Region of Peel

<b>DRILLING DETAILS</b> Date (Start): 2021-11-05 Date (End): 2021-11-05 Drilling Company: Drilling Equipment: Hand Auger Drilling Method: Auger Borehole Diameter: 82.5 mm Drilling Fluid: None	<b>SURVEY DETAILS</b> Easting: 595076.42 m Northing: 4841580.422 m Surface Elevation: 246.511 masl Top of Well Elevation: masl	<b>ODOUR</b> L - Light M - Medium S - Strong  <b>VISUAL</b> D - Dispersed with Product S - Saturated with Product	<b>SAMPLE TYPE</b> DC - Diamond Corer SS - Split Spoon MA - Manual Auger TR - Trowel ST - Shelby Tube DT - Dual Tube MC - Macro Core NR - No Recovery	<b>CHEMICAL ANALYSIS</b> Metals Inorg. PHC BTEX VOC PAH PCB D/F Phenol GSA  Sb As Ba Be B Cd Cr Co Cu Pb Mo Ni Se Ag TI U V Zn Inorganic Compounds Petroleum Hydrocarbons (F1-F4) Benzene, Toluene, Ethylbenzene, Xylene Volatile Organic Compounds Polycyclic Aromatic Hydrocarbons Polychlorinated Biphenyl Dioxins & Furans Phenolic Compounds Grain-size Analysis
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(m) DEPTH ELEVATION (masl)	LITHOLOGY / GEOLOGY		OBSERVATIONS					SAMPLES				MONITORING WELL		REMARKS	
	STRATIGRAPHY	DESCRIPTION	PID CGD (ppm)	ODOUR			VISUAL	SAMPLE TYPE & No.	% RECOVERY	N (Blow/15cm)	CHEMICAL ANALYSIS	DUPLICATE	DIAGRAM		DESCRIPTION
				L	M	S									
246.51	0.5	0.61	0											0.5	
245.90	1.0	1.83	0											1.0	
244.68	1.5		0											1.5	
2.0														2.0	
2.5														2.5	
3.0														3.0	
3.5														3.5	
4.0														4.0	
4.5														4.5	
5.0														5.0	
5.5														5.5	
6.0														6.0	
6.5														6.5	
7.0														7.0	
7.5														7.5	
8.0														8.0	
8.5														8.5	
9.0														9.0	
9.5														9.5	

Project: GINT LOGS ORBY.GPJ Report: WSP\_EN\_WELL-ENVIRONMENTAL 2022-1-5





# AUGER MANUAL DRILLING RECORD : BH21-24

Project Number: **211-10139-00**

Former Orangeville Rail  
Limited Phase II Environmental Assessment  
Region of Peel

<b>DRILLING DETAILS</b> Date (Start): 2021-11-05 Date (End): 2021-11-05 Drilling Company: Drilling Equipment: Hand Auger Drilling Method: Auger Borehole Diameter: 82.5 mm Drilling Fluid: None	<b>SURVEY DETAILS</b> Easting: 594404.585 m Northing: 4842223.603 m Surface Elevation: 252.4 masl Top of Well Elevation: masl	<b>ODOUR</b> L - Light M - Medium S - Strong  <b>VISUAL</b> D - Dispersed with Product S - Saturated with Product	<b>SAMPLE TYPE</b> DC - Diamond Corer SS - Split Spoon MA - Manual Auger TR - Trowel ST - Shelby Tube DT - Dual Tube MC - Macro Core NR - No Recovery	<b>CHEMICAL ANALYSIS</b> Metals: Sb As Ba Be B Cd Cr Co Cu Pb Mo Ni Se Ag Ti U V Zn Inorg: Inorganic Compounds PHC: Petroleum Hydrocarbons (F1-F4) BTEX: Benzene, Toluene, Ethylbenzene, Xylene VOC: Volatile Organic Compounds PAH: Polycyclic Aromatic Hydrocarbons PCB: Polychlorinated Biphenyl D/F: Dioxins & Furans Phenol: Phenolic Compounds GSA: Grain-size Analysis
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(m) DEPTH ELEVATION (masl)	STRATIGRAPHY	LITHOLOGY / GEOLOGY  DESCRIPTION	OBSERVATIONS					SAMPLES				MONITORING WELL		REMARKS	
			PID CGD (ppm)	ODOUR			VISUAL	SAMPLE TYPE & No.	% RECOVERY	N (Blow/15cm)	CHEMICAL ANALYSIS	DUPLICATE	DIAGRAM		DESCRIPTION
				L	M	S									
252.40	[Diagonal Hatching]	<b>SILT</b> : Sand, trace gravel and organics. Brown, moist	0					MA1	42%		PCB OC Pest			0.5	
0.70 251.70	[X]	: No recovery	0					MA2	17%		PAH			1.0	
1.22 251.18	[Diagonal Hatching]	<b>SILT</b> : Trace sand, trace gravel. Brown/grey, moist	0					MA3	71%		Metals & Inorg.			1.5	
1.83 250.57														2.0	
2.0														2.0	
2.5														2.5	
3.0														3.0	
3.5														3.5	
4.0														4.0	
4.5														4.5	
5.0														5.0	
5.5														5.5	
6.0														6.0	
6.5														6.5	
7.0														7.0	
7.5														7.5	
8.0														8.0	
8.5														8.5	
9.0														9.0	
9.5														9.5	

Project: GINT LOGS ORBY.GPJ Report: WSP\_EN\_WELL-ENVIRONMENTAL 2022-1-5







# AUGER MANUAL DRILLING RECORD : BH21-26

Project Number: **211-10139-00**

Former Orangeville Rail  
Limited Phase II Environmental Assessment  
Region of Peel

<b>DRILLING DETAILS</b> Date (Start): 2021-10-28 Date (End): 2021-10-28 Drilling Company: Drilling Equipment: Hand Auger Drilling Method: Auger Borehole Diameter: 82.5 mm Drilling Fluid: None	<b>SURVEY DETAILS</b> Easting: 592761.742 m Northing: 4842374.548 m Surface Elevation: 260.076 masl Top of Well Elevation: masl	<b>ODOUR</b> L - Light M - Medium S - Strong  <b>VISUAL</b> D - Dispersed with Product S - Saturated with Product	<b>SAMPLE TYPE</b> DC - Diamond Corer SS - Split Spoon MA - Manual Auger TR - Trowel ST - Shelby Tube DT - Dual Tube MC - Macro Core NR - No Recovery	<b>CHEMICAL ANALYSIS</b> Metals: Sb As Ba Be B Cd Cr Co Cu Pb Mo Ni Se Ag TI U V Zn Inorg: Inorganic Compounds PHC: Petroleum Hydrocarbons (F1-F4) BTEX: Benzene, Toluene, Ethylbenzene, Xylene VOC: Volatile Organic Compounds PAH: Polycyclic Aromatic Hydrocarbons PCB: Polychlorinated Biphenyl D/F: Dioxins & Furans Phenol: Phenolic Compounds GSA: Grain-size Analysis
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(m) DEPTH ELEVATION (masl)	STRATIGRAPHY	LITHOLOGY / GEOLOGY		OBSERVATIONS					SAMPLES				MONITORING WELL		REMARKS
		DESCRIPTION	PID CGD (ppm)	ODOUR	VISUAL	SAMPLE TYPE & No.	% RECOVERY	N (Blow/15cm)	CHEMICAL ANALYSIS	DUPLICATE	DIAGRAM	DESCRIPTION			
													L	M	
260.08		<p><b>SILT</b> : Trace sand, gravel, organics. Dark brown, moist</p> <p>No organics</p> <p>wet</p>	0			MA1	46%		PCB OC Pest				0.5		
0.5			0			MA2	58%		PAH				1.0		
1.0			0			MA3	92%		Metals & Inorg.				1.5		
1.83			0										2.0		
258.25													2.0		
2.0													2.5		
2.5													3.0		
3.0													3.5		
3.5													4.0		
4.0													4.5		
4.5													5.0		
5.0													5.5		
5.5													6.0		
6.0													6.5		
6.5													7.0		
7.0													7.5		
7.5													8.0		
8.0													8.5		
8.5													9.0		
9.0													9.5		
9.5													9.5		

Project: GINT LOGS ORBY.GPJ Report: WSP\_EN\_WELL-ENVIRONMENTAL 2022-1-5



# AUGER MANUAL DRILLING RECORD : BH21-27

Project Number: **211-10139-00**

Former Orangeville Rail  
Limited Phase II Environmental Assessment  
Region of Peel

<b>DRILLING DETAILS</b> Date (Start): 2021-10-28 Date (End): 2021-10-28 Drilling Company: Drilling Equipment: Hand Auger Drilling Method: Auger Borehole Diameter: 82.5 mm Drilling Fluid: None	<b>SURVEY DETAILS</b> Easting: 591431.505 m Northing: 4844553.405 m Surface Elevation: 269.879 masl Top of Well Elevation: masl	<b>ODOUR</b> L - Light M - Medium S - Strong  <b>VISUAL</b> D - Dispersed with Product S - Saturated with Product	<b>SAMPLE TYPE</b> DC - Diamond Corer SS - Split Spoon MA - Manual Auger TR - Trowel ST - Shelby Tube DT - Dual Tube MC - Macro Core NR - No Recovery	<b>CHEMICAL ANALYSIS</b> Metals: Sb As Ba Be B Cd Cr Co Cu Pb Mo Ni Se Ag TI U V Zn Inorg: Inorganic Compounds PHC: Petroleum Hydrocarbons (F1-F4) BTEX: Benzene, Toluene, Ethylbenzene, Xylene VOC: Volatile Organic Compounds PAH: Polycyclic Aromatic Hydrocarbons PCB: Polychlorinated Biphenyl D/F: Dioxins & Furans Phenol: Phenolic Compounds GSA: Grain-size Analysis
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(m) DEPTH ELEVATION (masl)	STRATIGRAPHY	LITHOLOGY / GEOLOGY		OBSERVATIONS					SAMPLES				MONITORING WELL		REMARKS
		DESCRIPTION	PID CGD (ppm)	ODOUR	VISUAL	SAMPLE TYPE & No.	% RECOVERY	N (Blow/15cm)	CHEMICAL ANALYSIS	DUPLICATE	DIAGRAM	DESCRIPTION			
													L	M	
269.88		<b>SILT</b> : Sand, some gravel, organics. Dark brown, moist  ← Trace gravel, no organics, brown  ← Dry	0												0.5
0.5			0												1.0
1.0			0												1.5
1.5			0												2.0
1.83															2.5
268.05															3.0
2.0															3.5
2.5															4.0
3.0															4.5
3.5															5.0
4.0															5.5
4.5															6.0
5.0															6.5
5.5															7.0
6.0															7.5
6.5															8.0
7.0															8.5
7.5															9.0
8.0															9.5
8.5															9.5

Project: GINT LOGS ORBY.GPJ Report: WSP\_EN\_WELL-ENVIRONMENTAL 2022-1-5











# OBSERVATION WELL DRILLING RECORD : BH21-3

Project Number: 211-10139-00

Former Orangeville Rail  
Limited Phase II Environmental Assessment  
Region of Peel

<b>DRILLING DETAILS</b> Date (Start): 2021-12-02 Date (End): 2021-12-02 Drilling Company: Davis Drilling Drilling Equipment: CME 55 Drilling Method: Hollow Stem Auger Borehole Diameter: 203 mm Drilling Fluid: None	<b>SURVEY DETAILS</b> Easting: 599498.283 m Northing: 4833071.687 m Surface Elevation: 186.453 masl Top of Well Elevation: masl	<b>ODOUR</b> L - Light M - Medium S - Strong  <b>VISUAL</b> D - Dispersed with Product S - Saturated with Product	<b>SAMPLE TYPE</b> DC - Diamond Corer SS - Split Spoon MA - Manual Auger TR - Trowel ST - Shelby Tube DT - Dual Tube MC - Macro Core NR - No Recovery	<b>CHEMICAL ANALYSIS</b> Metals Inorg. PHC BTEX VOC PAH PCB D/F Phenol GSA  Sb As Ba Be B Cd Cr Co Cu Pb Mo Ni Se Ag Ti U V Zn Inorganic Compounds Petroleum Hydrocarbons (F1-F4) Benzene, Toluene, Ethylbenzene, Xylene Volatile Organic Compounds Polycyclic Aromatic Hydrocarbons Polychlorinated Biphenyl Dioxins & Furans Phenolic Compounds Grain-size Analysis
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(m) DEPTH ELEVATION (masl)	STRATIGRAPHY	LITHOLOGY / GEOLOGY DESCRIPTION	OBSERVATIONS					SAMPLES				MONITORING WELL		REMARKS	
			PID CGD (ppm)	ODOUR			SAMPLE TYPE & No.	% RECOVERY	N (Blow/15cm)	CHEMICAL ANALYSIS	DUPLICATE	DIAGRAM	DESCRIPTION		
				L	M	S									D
0.06 186.40		SILT : 2" Fill, sand and gravel, dark brown, organics, wet						SS1	75%	3	Metals & Inorg.	QAQC-12		CONCRETE	
0.76 185.69		SILT : Sand, trace gravel and organics. Brown, wet													
1.52 184.93		SILT : Clay, grey/brown, wet						SS2	67%	9					
1.52 184.93		CLAY : Silt, brown/grey, moist, soft						SS3	88%	5				BENTONITE	
2.59 183.86		Rock/gravel						SS4	96%	13					
3.15 183.30		CLAY : Sand, trace gravel. Grey, dry, brittle													
3.15 183.30		CLAY : Grey, moist, soft						SS5	100%	7					
4.5		saturated													
5.0								SS6	100%	5	PHC BTEX				
5.5														SAND	
6.0		moist												SCREEN Length: 3.05 m Diam.: 51 mm Slot: #10	
6.5								SS7	100%	6					
7.0															
7.5		wet, soft													
8.0															
8.5														BENTONITE	
9.0															
9.5								SS9	100%	2					
9.75 176.70															WATER MARKER Depth : 8.32 m Elev. : 178.133 m Date : 2021-12-06

Project : GINT LOGS ORBY.GPJ Report : WSP\_EN\_WELL-ENVIRONMENTAL\_2022-1-5



# OBSERVATION WELL DRILLING RECORD : BH21-30

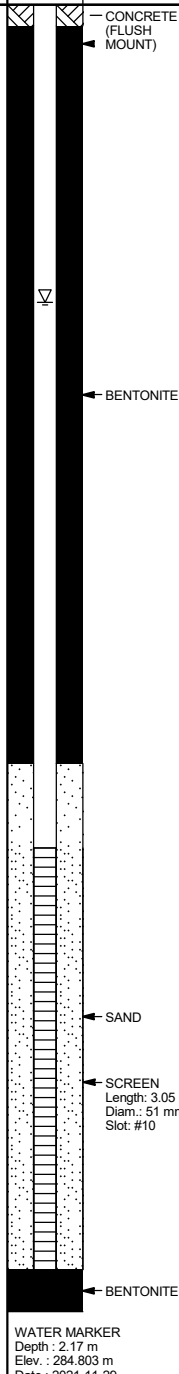
Project Number: 211-10139-00

Former Orangeville Rail  
Limited Phase II Environmental Assessment  
Region of Peel

<b>DRILLING DETAILS</b> Date (Start): 2021-11-08 Date (End): 2021-11-08 Drilling Company: Davis Drilling Drilling Equipment: CME 55 Drilling Method: Hollow Stem Auger Borehole Diameter: 203 mm Drilling Fluid: None	<b>SURVEY DETAILS</b> Easting: 589518.806 m Northing: 4845691.371 m Surface Elevation: 286.973 masl Top of Well Elevation: masl	<b>ODOUR</b> L - Light M - Medium S - Strong  <b>VISUAL</b> D - Dispersed with Product S - Saturated with Product	<b>SAMPLE TYPE</b> DC - Diamond Corer SS - Split Spoon MA - Manual Auger TR - Trowel ST - Shelby Tube DT - Dual Tube MC - Macro Core NR - No Recovery	<b>CHEMICAL ANALYSIS</b> Metals Inorg. PHC BTEX VOC PAH PCB D/F Phenol GSA Sb As Ba Be B Cd Cr Co Cu Pb Mo Ni Se Ag Ti U V Zn Inorganic Compounds Petroleum Hydrocarbons (F1-F4) Benzene, Toluene, Ethylbenzene, Xylene Volatile Organic Compounds Polycyclic Aromatic Hydrocarbons Polychlorinated Biphenyl Dioxins & Furans Phenolic Compounds Grain-size Analysis
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(m) DEPTH ELEVATION (masl)	STRATIGRAPHY	LITHOLOGY / GEOLOGY DESCRIPTION	OBSERVATIONS			SAMPLES				MONITORING WELL		REMARKS			
			PID CGD (ppm)	ODOUR			SAMPLE TYPE & No.	% RECOVERY	N (Blow/15cm)	CHEMICAL ANALYSIS	DUPLICATE		DIAGRAM	DESCRIPTION	
				L	M	S									D
286.97 286.87		<b>SAND</b> : Trace organics, gravel. Light brown, dry	0					SS1	79%	5	PCB OC Pest PAH				0.5
		<b>SILT</b> : Sand, trace gravel. Brown, dry	0					SS2	79%	6	Metals & Inorg.				1.0
1.52 285.45		<b>SILT</b> : Clay, trace gravel and sand. Brown/grey, moist	5					SS3	75%	11	PHC BTEX				1.5
			0					SS4	92%	22					2.5
3.05 283.93		<b>SILT</b> : Sand, some gravel. Brown, moist	0					SS5	92%	25					3.0
			0					SS6	67%	80					4.5
6.10 280.88		<b>CLAY</b> : Trace gravel. Grey, dry, brittle	0					SS7	96%	47					6.0
			0					SS8	100%	43					7.5
9.17 277.80 9.45 277.52		<b>ROCK</b> : Pulverized rock, limestone pieces. Some brown sandy silt, dry.	0					SS9	100%	N/A					9.5

Project : GINT LOGS ORBY.GPJ Report : WSP\_EN\_WELL-ENVIRONMENTAL 2022-1-5













# AUGER MANUAL DRILLING RECORD : BH21-33

Project Number: 211-10139-00

Former Orangeville Rail  
Limited Phase II Environmental Assessment  
Region of Peel

<b>DRILLING DETAILS</b> Date (Start): 2021-10-28 Date (End): 2021-10-28 Drilling Company: Drilling Equipment: Hand Auger Drilling Method: Auger Borehole Diameter: 82.5 mm Drilling Fluid: None	<b>SURVEY DETAILS</b> Easting: 584917.474 m Northing: 4851058.052 m Surface Elevation: 289.94 masl Top of Well Elevation: masl	<b>ODOUR</b> L - Light M - Medium S - Strong  <b>VISUAL</b> D - Dispersed with Product S - Saturated with Product	<b>SAMPLE TYPE</b> DC - Diamond Corer SS - Split Spoon MA - Manual Auger TR - Trowel ST - Shelby Tube DT - Dual Tube MC - Macro Core NR - No Recovery	<b>CHEMICAL ANALYSIS</b> Metals Inorg. PHC BTEX VOC PAH PCB D/F Phenol GSA  Sb As Ba Be B Cd Cr Co Cu Pb Mo Ni Se Ag TI U V Zn Inorganic Compounds Petroleum Hydrocarbons (F1-F4) Benzene, Toluene, Ethylbenzene, Xylene Volatile Organic Compounds Polycyclic Aromatic Hydrocarbons Polychlorinated Biphenyl Dioxins & Furans Phenolic Compounds Grain-size Analysis
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(m) DEPTH ELEVATION (masl)	LITHOLOGY / GEOLOGY		OBSERVATIONS			SAMPLES				MONITORING WELL		REMARKS		
	STRATIGRAPHY	DESCRIPTION	PID CGD (ppm)	ODOUR			SAMPLE TYPE & No.	% RECOVERY	N (Blow/15cm)	CHEMICAL ANALYSIS	DUPLICATE		DIAGRAM	DESCRIPTION
				L	M	S								
289.94 289.81 0.5 1.0 1.5 1.83 288.11 2.0 2.5 3.0 3.5 4.0 4.5 5.0 5.5 6.0 6.5 7.0 7.5 8.0 8.5 9.0 9.5	TOPSOIL	<p><b>TOPSOIL</b> : Some sandy silt, gravel, organics. Dark brown, moist</p> <p><b>SAND</b> : Silt, trace gravel. Brown, moist</p>	0					MA1	21%		PAH			0.5
			0					MA2	42%		PCB OC Pest			1.0
			0					MA3	33%		Metals & Inorg.			1.5

Project : GINT LOGS ORBY.GPJ Report : WSP\_EN\_WELL-ENVIRONMENTAL 2022-1-5



# AUGER MANUAL DRILLING RECORD : BH21-34

Project Number: **211-10139-00**

Former Orangeville Rail  
Limited Phase II Environmental Assessment  
Region of Peel

<b>DRILLING DETAILS</b> Date (Start): 2021-10-28 Date (End): 2021-10-28 Drilling Company: Drilling Equipment: Hand Auger Drilling Method: Auger Borehole Diameter: 82.5 mm Drilling Fluid: None	<b>SURVEY DETAILS</b> Easting: 583329.038 m Northing: 4851090.509 m Surface Elevation: 306.709 masl Top of Well Elevation: masl	<b>ODOUR</b> L - Light M - Medium S - Strong  <b>VISUAL</b> D - Dispersed with Product S - Saturated with Product	<b>SAMPLE TYPE</b> DC - Diamond Corer SS - Split Spoon MA - Manual Auger TR - Trowel ST - Shelby Tube DT - Dual Tube MC - Macro Core NR - No Recovery	<b>CHEMICAL ANALYSIS</b> Metals: Sb As Ba Be B Cd Cr Co Cu Pb Mo Ni Se Ag TI U V Zn Inorg: Inorganic Compounds PHC: Petroleum Hydrocarbons (F1-F4) BTEX: Benzene, Toluene, Ethylbenzene, Xylene VOC: Volatile Organic Compounds PAH: Polycyclic Aromatic Hydrocarbons PCB: Polychlorinated Biphenyl D/F: Dioxins & Furans Phenol: Phenolic Compounds GSA: Grain-size Analysis
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(m) DEPTH ELEVATION (masl)	STRATIGRAPHY	LITHOLOGY / GEOLOGY  DESCRIPTION	OBSERVATIONS					SAMPLES				MONITORING WELL		REMARKS	
			PID CGD (ppm)	ODOUR			VISUAL	SAMPLE TYPE & No.	% RECOVERY	N (Blow/15cm)	CHEMICAL ANALYSIS	DUPLICATE	DIAGRAM		DESCRIPTION
				L	M	S									
0.5	0.5	GRAVEL : Some rocks and silt. Dark brown, wet  SILT : Sand, some gravel. Brown, wet  ← Moist	0	L	M	S	D	S	MA1	71%	PCB OC Pest	QAQC-1	0.5		
1.0	1.0		0	L	M	S	D	S	MA2	100%	Metals & Inorg.	QAQC-2	1.0		
1.5	1.5		0	L	M	S	D	S	MA3	100%	PAH	QAQC-3	1.5		
2.0	2.0		0	L	M	S	D	S					2.0		
2.5	2.5		0	L	M	S	D	S					2.5		
3.0	3.0		0	L	M	S	D	S					3.0		
3.5	3.5		0	L	M	S	D	S					3.5		
4.0	4.0		0	L	M	S	D	S					4.0		
4.5	4.5		0	L	M	S	D	S					4.5		
5.0	5.0		0	L	M	S	D	S					5.0		
5.5	5.5		0	L	M	S	D	S					5.5		
6.0	6.0		0	L	M	S	D	S					6.0		
6.5	6.5		0	L	M	S	D	S					6.5		
7.0	7.0		0	L	M	S	D	S					7.0		
7.5	7.5		0	L	M	S	D	S					7.5		
8.0	8.0		0	L	M	S	D	S					8.0		
8.5	8.5		0	L	M	S	D	S					8.5		
9.0	9.0		0	L	M	S	D	S					9.0		
9.5	9.5		0	L	M	S	D	S					9.5		

Project : GINT LOGS ORBY.GPJ Report : WSP\_EN\_WELL-ENVIRONMENTAL 2022-1-5





# AUGER MANUAL DRILLING RECORD : BH21-35

Project Number: **211-10139-00**

Former Orangeville Rail  
Limited Phase II Environmental Assessment  
Region of Peel

<b>DRILLING DETAILS</b> Date (Start): 2021-10-27 Date (End): 2021-10-27 Drilling Company: Drilling Equipment: Hand Auger Drilling Method: Auger Borehole Diameter: 82.5 mm Drilling Fluid: None	<b>SURVEY DETAILS</b> Easting: 584917.477 m Northing: 4851058.087 m Surface Elevation: 289.961 masl Top of Well Elevation: masl	<b>ODOUR</b> L - Light M - Medium S - Strong  <b>VISUAL</b> D - Dispersed with Product S - Saturated with Product	<b>SAMPLE TYPE</b> DC - Diamond Corer SS - Split Spoon MA - Manual Auger TR - Trowel ST - Shelby Tube DT - Dual Tube MC - Macro Core NR - No Recovery	<b>CHEMICAL ANALYSIS</b> Metals: Sb As Ba Be B Cd Cr Co Cu Pb Mo Ni Se Ag TI U V Zn Inorg: Inorganic Compounds PHC: Petroleum Hydrocarbons (F1-F4) BTEX: Benzene, Toluene, Ethylbenzene, Xylene VOC: Volatile Organic Compounds PAH: Polycyclic Aromatic Hydrocarbons PCB: Polychlorinated Biphenyl D/F: Dioxins & Furans Phenol: Phenolic Compounds GSA: Grain-size Analysis
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(m) DEPTH ELEVATION (masl)	STRATIGRAPHY	LITHOLOGY / GEOLOGY		OBSERVATIONS					SAMPLES				MONITORING WELL		REMARKS
		DESCRIPTION	PID CGD (ppm)	ODOUR	VISUAL	SAMPLE TYPE & No.	% RECOVERY	N (Blow/15cm)	CHEMICAL ANALYSIS	DUPLICATE	DIAGRAM	DESCRIPTION			
													L	M	
289.96		SILT : Sand, some gravel, rocks, organics, dark brown, moist Light brown, dry	0			MA1	58%		Metals & Inorg.					0.5	
0.5 289.35		SILT : Some gravel, trace sand, brown, moist rocks	0			MA2	54%		PCB OC Pest					1.0	
1.0 288.13			0			MA3	42%		PAH					1.5	
1.5														2.0	
2.0														2.5	
2.5														3.0	
3.0														3.5	
3.5														4.0	
4.0														4.5	
4.5														5.0	
5.0														5.5	
5.5														6.0	
6.0														6.5	
6.5														7.0	
7.0														7.5	
7.5														8.0	
8.0														8.5	
8.5														9.0	
9.0														9.5	

Project: GINT LOGS ORBY.GPJ Report: WSP\_EN\_WELL-ENVIRONMENTAL 2022-1-5







# AUGER MANUAL DRILLING RECORD : BH21-37

Project Number: **211-10139-00**

Former Orangeville Rail  
Limited Phase II Environmental Assessment  
Region of Peel

<b>DRILLING DETAILS</b> Date (Start): 2021-10-27 Date (End): 2021-10-27 Drilling Company: Drilling Equipment: Hand Auger Drilling Method: Auger Borehole Diameter: 82.5 mm Drilling Fluid: None	<b>SURVEY DETAILS</b> Easting: m Northing: m Surface Elevation: masl Top of Well Elevation: masl	<b>ODOUR</b> L - Light M - Medium S - Strong  <b>VISUAL</b> D - Dispersed with Product S - Saturated with Product	<b>SAMPLE TYPE</b> DC - Diamond Corer SS - Split Spoon MA - Manual Auger TR - Trowel ST - Shelby Tube DT - Dual Tube MC - Macro Core NR - No Recovery	<b>CHEMICAL ANALYSIS</b> Metals: Sb As Ba Be B Cd Cr Co Cu Pb Mo Ni Se Ag TI U V Zn Inorg. Inorganic Compounds PHC Petroleum Hydrocarbons (F1-F4) BTEX Benzene, Toluene, Ethylbenzene, Xylene VOC Volatile Organic Compounds PAH Polycyclic Aromatic Hydrocarbons PCB Polychlorinated Biphenyl D/F Dioxins & Furans Phenol Phenolic Compounds GSA Grain-size Analysis
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(m) DEPTH ELEVATION (masl)	LITHOLOGY / GEOLOGY		OBSERVATIONS			SAMPLES				MONITORING WELL		REMARKS		
	STRATIGRAPHY	DESCRIPTION	PID CGD (ppm)	ODOUR			SAMPLE TYPE & No.	% RECOVERY	N (Blow/15cm)	CHEMICAL ANALYSIS	DUPLICATE		DIAGRAM	DESCRIPTION
				L	M	S								
0.5		<b>SILT</b> : Sand, trace gravel, organics, dark brown, moist	0				MA1	42%		PCB OC Pest			0.5	
1.0		← brown, no organics	0				MA2	33%		Metals & Inorg.			1.0	
1.5			0				MA3	42%		PAH			1.5	
1.83			0										1.83	
2.0													2.0	
2.5													2.5	
3.0													3.0	
3.5													3.5	
4.0													4.0	
4.5													4.5	
5.0													5.0	
5.5													5.5	
6.0													6.0	
6.5													6.5	
7.0													7.0	
7.5													7.5	
8.0													8.0	
8.5													8.5	
9.0													9.0	
9.5													9.5	

Project: GINT LOGS ORBY.GPJ Report: WSP\_EN\_WELL-ENVIRONMENTAL 2022-1-5



# AUGER MANUAL DRILLING RECORD : BH21-38

Project Number: **211-10139-00**

Former Orangeville Rail  
Limited Phase II Environmental Assessment  
Region of Peel

<b>DRILLING DETAILS</b> Date (Start): 2021-10-27 Date (End): 2021-10-27 Drilling Company: Drilling Equipment: Hand Auger Drilling Method: Auger Borehole Diameter: 82.5 mm Drilling Fluid: None	<b>SURVEY DETAILS</b> Easting: 578555.328 m Northing: 4852070.44 m Surface Elevation: 365.999 masl Top of Well Elevation: masl	<b>ODOUR</b> L - Light M - Medium S - Strong  <b>VISUAL</b> D - Dispersed with Product S - Saturated with Product	<b>SAMPLE TYPE</b> DC - Diamond Corer SS - Split Spoon MA - Manual Auger TR - Trowel ST - Shelby Tube DT - Dual Tube MC - Macro Core NR - No Recovery	<b>CHEMICAL ANALYSIS</b> Metals: Sb As Ba Be B Cd Cr Co Cu Pb Mo Ni Se Ag TI U V Zn Inorg: Inorganic Compounds PHC: Petroleum Hydrocarbons (F1-F4) BTEX: Benzene, Toluene, Ethylbenzene, Xylene VOC: Volatile Organic Compounds PAH: Polycyclic Aromatic Hydrocarbons PCB: Polychlorinated Biphenyl D/F: Dioxins & Furans Phenol: Phenolic Compounds GSA: Grain-size Analysis
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(m) DEPTH ELEVATION (masl)	LITHOLOGY / GEOLOGY		OBSERVATIONS					SAMPLES				MONITORING WELL		REMARKS	
	STRATIGRAPHY	DESCRIPTION	PID CGD (ppm)	ODOUR			SAMPLE TYPE & No.	% RECOVERY	N (Blow/15cm)	CHEMICAL ANALYSIS	DUPLICATE	DIAGRAM	DESCRIPTION		
				L	M	S									D
366.00		<b>SAND</b> : Silt, trace gravel, organics/roots, dark brown, moist	0						MA1	33%		PAH			0.5
0.5			0						MA2	25%		PCB OC Pest			1.0
1.27		<b>SAND</b> : brown, moist to wet	0						MA3	58%		Metals & Inorg.			1.5
1.5			0												2.0
1.83															2.5
364.73															3.0
364.17															3.5
2.0															4.0
2.5															4.5
3.0															5.0
3.5															5.5
4.0															6.0
4.5															6.5
5.0															7.0
5.5															7.5
6.0															8.0
6.5															8.5
7.0															9.0
7.5															9.5
8.0															9.5

Project : GINT LOGS ORBY.GPJ Report : WSP\_EN\_WELL-ENVIRONMENTAL 2022-1-5





# AUGER MANUAL DRILLING RECORD : BH21-39

Project Number: **211-10139-00**

Former Orangeville Rail  
Limited Phase II Environmental Assessment  
Region of Peel

<b>DRILLING DETAILS</b> Date (Start): 2021-11-05 Date (End): 2021-11-05 Drilling Company: Drilling Equipment: Hand Auger Drilling Method: Auger Borehole Diameter: 82.5 mm Drilling Fluid: None	<b>SURVEY DETAILS</b> Easting: 578788.309 m Northing: 4852893.463 m Surface Elevation: 379.769 masl Top of Well Elevation: masl	<b>ODOUR</b> L - Light M - Medium S - Strong  <b>VISUAL</b> D - Dispersed with Product S - Saturated with Product	<b>SAMPLE TYPE</b> DC - Diamond Corer SS - Split Spoon MA - Manual Auger TR - Trowel ST - Shelby Tube DT - Dual Tube MC - Macro Core NR - No Recovery	<b>CHEMICAL ANALYSIS</b> Metals Inorg. PHC BTEX VOC PAH PCB D/F Phenol GSA Sb As Ba Be B Cd Cr Co Cu Pb Mo Ni Se Ag TI U V Zn Inorganic Compounds Petroleum Hydrocarbons (F1-F4) Benzene, Toluene, Ethylbenzene, Xylene Volatile Organic Compounds Polycyclic Aromatic Hydrocarbons Polychlorinated Biphenyl Dioxins & Furans Phenolic Compounds Grain-size Analysis
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(m) DEPTH ELEVATION (masl)	STRATIGRAPHY	LITHOLOGY / GEOLOGY		OBSERVATIONS					SAMPLES				MONITORING WELL		REMARKS	
		DESCRIPTION	PID CGD (ppm)	ODOUR					SAMPLE TYPE & No.	% RECOVERY	N (Blow/15cm)	CHEMICAL ANALYSIS	DUPLICATE	DIAGRAM		DESCRIPTION
				L	M	S	D	S								
379.87 379.59 0.5	X	<b>SILT</b> : Sand, some gravel and organics. Dark brown, moist  : No recovery	0						MA1	29%		Metals & Inorg.				0.5
1.0 1.22 378.55	X	<b>SILT</b> : Clay, trace gravel. Brown, wet to moist	0						MA2	0%						1.0
1.5 1.83 377.94	X	<b>SILT</b> : Clay, trace gravel. Brown, wet to moist	0						MA3	100%		PAH OC PCB OC Pest				1.5
2.0 2.5 3.0 3.5 4.0 4.5 5.0 5.5 6.0 6.5 7.0 7.5 8.0 8.5 9.0 9.5																2.0 2.5 3.0 3.5 4.0 4.5 5.0 5.5 6.0 6.5 7.0 7.5 8.0 8.5 9.0 9.5

Project : GINT LOGS ORBY.GPJ Report : WSP\_EN\_WELL-ENVIRONMENTAL 2022-1-5



# AUGER MANUAL DRILLING RECORD : BH21-4

Project Number: **211-10139-00**

Former Orangeville Rail  
Limited Phase II Environmental Assessment  
Region of Peel

<b>DRILLING DETAILS</b> Date (Start): 2021-12-06 Date (End): 2021-12-06 Drilling Company: Geotech Support Services Drilling Equipment: Hand Auger Drilling Method: Auger Borehole Diameter: 203 mm Drilling Fluid: None	<b>SURVEY DETAILS</b> Easting: 599341.718 m Northing: 4833956.053 m Surface Elevation: 196.991 masl Top of Well Elevation: masl	<b>ODOUR</b> L - Light M - Medium S - Strong  <b>VISUAL</b> D - Dispersed with Product S - Saturated with Product	<b>SAMPLE TYPE</b> DC - Diamond Corer SS - Split Spoon MA - Manual Auger TR - Trowel ST - Shelby Tube DT - Dual Tube MC - Macro Core NR - No Recovery	<b>CHEMICAL ANALYSIS</b> Metals: Sb As Ba Be B Cd Cr Co Cu Pb Mo Ni Se Ag TI U V Zn Inorg: Inorganic Compounds PHC: Petroleum Hydrocarbons (F1-F4) BTEX: Benzene, Toluene, Ethylbenzene, Xylene VOC: Volatile Organic Compounds PAH: Polycyclic Aromatic Hydrocarbons PCB: Polychlorinated Biphenyl D/F: Dioxins & Furans Phenol: Phenolic Compounds GSA: Grain-size Analysis
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(m) DEPTH ELEVATION (masl)	LITHOLOGY / GEOLOGY		OBSERVATIONS					SAMPLES				MONITORING WELL		REMARKS																							
	STRATIGRAPHY	DESCRIPTION	PID CGD (ppm)	ODOUR					SAMPLE TYPE & No.	% RECOVERY	N (Blow/15cm)	CHEMICAL ANALYSIS	DUPLICATE		DIAGRAM	DESCRIPTION																					
				L	M	S	D	S																													
196.99	0.5	1.0	1.5	1.83	195.16											0.5	1.0	1.5	2.0	2.5	3.0	3.5	4.0	4.5	5.0	5.5	6.0	6.5	7.0	7.5	8.0	8.5	9.0	9.5			
		<b>SILT</b> : Sand, organics, some gravel. Dark brown, moist, soft ← Trace gravel, brown ← moist to dry	0									MA1 29% Metals & Inorg. PAH MA2 25% OC Pest PCB MA3 58% PHC BTEX																									

Project: GINT LOGS ORBY.GPJ Report: WSP\_EN\_WELL-ENVIRONMENTAL 2022-1-5





# AUGER MANUAL DRILLING RECORD : BH21-40

Project Number: **211-10139-00**

Former Orangeville Rail  
Limited Phase II Environmental Assessment  
Region of Peel

<b>DRILLING DETAILS</b> Date (Start): 2021-10-27 Date (End): 2021-10-27 Drilling Company: Drilling Equipment: Hand Auger Drilling Method: Auger Borehole Diameter: 82.5 mm Drilling Fluid: None	<b>SURVEY DETAILS</b> Easting: 578937.278 m Northing: 4853367.264 m Surface Elevation: 382.315 masl Top of Well Elevation: masl	<b>ODOUR</b> L - Light M - Medium S - Strong  <b>VISUAL</b> D - Dispersed with Product S - Saturated with Product	<b>SAMPLE TYPE</b> DC - Diamond Corer SS - Split Spoon MA - Manual Auger TR - Trowel ST - Shelby Tube DT - Dual Tube MC - Macro Core NR - No Recovery	<b>CHEMICAL ANALYSIS</b> Metals Inorg. PHC BTEX VOC PAH PCB D/F Phenol GSA  Sb As Ba Be B Cd Cr Co Cu Pb Mo Ni Se Ag TI U V Zn Inorganic Compounds Petroleum Hydrocarbons (F1-F4) Benzene, Toluene, Ethylbenzene, Xylene Volatile Organic Compounds Polycyclic Aromatic Hydrocarbons Polychlorinated Biphenyl Dioxins & Furans Phenolic Compounds Grain-size Analysis
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(m) DEPTH ELEVATION (masl)	STRATIGRAPHY	LITHOLOGY / GEOLOGY		OBSERVATIONS					SAMPLES				MONITORING WELL		REMARKS	
		DESCRIPTION	PID CGD (ppm)	ODOUR					SAMPLE TYPE & No.	% RECOVERY	N (Blow/15cm)	CHEMICAL ANALYSIS	DUPLICATE	DIAGRAM		DESCRIPTION
				L	M	S	D	S								
382.32 0.20 382.11 0.5	[Pattern]	<b>SAND</b> : Silt, trace gravel, organics/roots, dark brown, moist  : No recovery - Assumed Silty Sand	0						MA1	33%		PCB OC Pest PAH				0.5
1.22 381.10 1.5	[Pattern]	<b>SAND</b> : silt, trace gravel, light to dark brown, moist to wet	0						MA2	0%						1.0
1.83 380.49 2.0	[Pattern]								MA3	42%		Metals & Inorg. PAH				1.5
2.5																2.0
3.0																2.5
3.5																3.0
4.0																3.5
4.5																4.0
5.0																4.5
5.5																5.0
6.0																5.5
6.5																6.0
7.0																6.5
7.5																7.0
8.0																7.5
8.5																8.0
9.0																8.5
9.5																9.0

Project : GINT LOGS ORBY.GPJ Report : WSP\_EN\_WELL-ENVIRONMENTAL 2022-1-5



# AUGER MANUAL DRILLING RECORD : BH21-41

Project Number: **211-10139-00**

Former Orangeville Rail  
Limited Phase II Environmental Assessment  
Region of Peel

<b>DRILLING DETAILS</b> Date (Start): 2021-11-05 Date (End): 2021-11-05 Drilling Company: Drilling Equipment: Hand Auger Drilling Method: Auger Borehole Diameter: 82.5 mm Drilling Fluid: None	<b>SURVEY DETAILS</b> Easting: 578368.166 m Northing: 4854298.288 m Surface Elevation: 392.706 masl Top of Well Elevation: masl	<b>ODOUR</b> L - Light M - Medium S - Strong  <b>VISUAL</b> D - Dispersed with Product S - Saturated with Product	<b>SAMPLE TYPE</b> DC - Diamond Corer SS - Split Spoon MA - Manual Auger TR - Trowel ST - Shelby Tube DT - Dual Tube MC - Macro Core NR - No Recovery	<b>CHEMICAL ANALYSIS</b> Metals: Sb As Ba Be B Cd Cr Co Cu Pb Mo Ni Se Ag Ti U V Zn Inorg: Inorganic Compounds PHC: Petroleum Hydrocarbons (F1-F4) BTEX: Benzene, Toluene, Ethylbenzene, Xylene VOC: Volatile Organic Compounds PAH: Polycyclic Aromatic Hydrocarbons PCB: Polychlorinated Biphenyl D/F: Dioxins & Furans Phenol: Phenolic Compounds GSA: Grain-size Analysis
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(m) DEPTH ELEVATION (masl)	STRATIGRAPHY	LITHOLOGY / GEOLOGY		OBSERVATIONS					SAMPLES				MONITORING WELL		REMARKS	
		DESCRIPTION	PID CGD (ppm)	ODOUR	VISUAL	SAMPLE TYPE & No.	% RECOVERY	N (Blow/15cm)	CHEMICAL ANALYSIS	DUPLICATE	DIAGRAM	DESCRIPTION				
													L	M		S
392.71	[Pattern]	<b>SILT</b> : Sand, trace gravel and organics. Dark brown, moist	0						MA1	38%		PAH				0.5
0.61 392.10	[Pattern]	<b>SAND</b> : Silt, some gravel. Light brown, moist	5						MA2	42%		Metals & Inorg. OC Pest PCB				1.0
1.22 391.49	[X]	: No recovery							MA3	0%						1.5
1.83 390.88																2.0
2.0																2.5
2.5																3.0
3.0																3.5
3.5																4.0
4.0																4.5
4.5																5.0
5.0																5.5
5.5																6.0
6.0																6.5
6.5																7.0
7.0																7.5
7.5																8.0
8.0																8.5
8.5																9.0
9.0																9.5

Project: GINT LOGS ORBY.GPJ Report: WSP\_EN\_WELL-ENVIRONMENTAL 2022-1-5





# BOREHOLE DRILLING RECORD : BH21-42

Project Number: 211-10139-00

Former Orangeville Rail  
Limited Phase II Environmental Assessment  
Region of Peel

<b>DRILLING DETAILS</b> Date (Start): 2021-11-18 Date (End): 2021-11-18 Drilling Company: Davis Drilling Drilling Equipment: CME 55 Drilling Method: Hollow Stem Auger Borehole Diameter: 203 mm Drilling Fluid: None	<b>SURVEY DETAILS</b> Easting: 601689.807 m Northing: 4830813.835 m Surface Elevation: 174.252 masl Top of Well Elevation: masl	<b>ODOUR</b> L - Light M - Medium S - Strong  <b>VISUAL</b> D - Dispersed with Product S - Saturated with Product	<b>SAMPLE TYPE</b> DC - Diamond Corer SS - Split Spoon MA - Manual Auger TR - Trowel ST - Shelby Tube DT - Dual Tube MC - Macro Core NR - No Recovery	<b>CHEMICAL ANALYSIS</b> Metals Inorg. PHC BTEX VOC PAH PCB D/F Phenol GSA  Sb As Ba Be B Cd Cr Co Cu Pb Mo Ni Se Ag TI U V Zn Inorganic Compounds Petroleum Hydrocarbons (F1-F4) Benzene, Toluene, Ethylbenzene, Xylene Volatile Organic Compounds Polycyclic Aromatic Hydrocarbons Polychlorinated Biphenyl Dioxins & Furans Phenolic Compounds Grain-size Analysis
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(m) DEPTH ELEVATION (masl)	STRATIGRAPHY	LITHOLOGY / GEOLOGY DESCRIPTION	OBSERVATIONS					SAMPLES				MONITORING WELL		REMARKS		
			PID CGD (ppm)	ODOUR			VISUAL	SAMPLE TYPE & No.	% RECOVERY	N (Blow/15cm)	CHEMICAL ANALYSIS	DUPLICATE	DIAGRAM		DESCRIPTION	
				L	M	S										D
174.25 0.23 174.02		<b>SILT</b> : Sand, organics, some gravel and rock fragments. Dark brown/black	0							SS1	67%	5	Metals & Inorg.			0.5
0.5		<b>SILT</b> : Clay, trace sand. Brown/grey, moist														1.0
1.0		grey, saturated	0							SS2	75%	5	PCB PAH			1.5
1.5																2.0
2.0			0							SS3	88%	6	PHC BTEX			2.5
2.5																3.0
3.0		← gravel														3.5
3.5			0							SS4	100%	3				4.0
4.0																4.5
4.5			0													5.0
4.57 169.68		<b>CLAY</b> : Grey, saturated	0							SS5	100%	54				5.5
5.0																6.0
5.5																6.5
6.0																7.0
6.10 168.16		<b>CLAY</b> : Sand, trace gravel. Grey, dry, brittle	5							SS6	100%	7				7.5
6.5																8.0
7.0																8.5
7.5		← moist to wet														9.0
8.0			0							SS7	83%	16				9.5
8.5																9.9
9.0		← lightly moist														9.9
9.5			0							SS8	100%	12				9.9
9.75 164.50																9.9
										SS9	88%	19				9.9

Project : GINT LOGS ORBY.GPJ Report : WSP\_EN\_WELL-ENVIRONMENTAL 2022-1-5



# BOREHOLE DRILLING RECORD : BH21-43

Project Number: 211-10139-00

Former Orangeville Rail  
Limited Phase II Environmental Assessment  
Region of Peel

<b>DRILLING DETAILS</b> Date (Start): 2021-11-17 Date (End): 2021-11-17 Drilling Company: Davis Drilling Drilling Equipment: CME 55 Drilling Method: Hollow Stem Auger Borehole Diameter: 203 mm Drilling Fluid: None	<b>SURVEY DETAILS</b> Easting: 601685.523 m Northing: 4830747.576 m Surface Elevation: 172.817 masl Top of Well Elevation: masl	<b>ODOUR</b> L - Light M - Medium S - Strong  <b>VISUAL</b> D - Dispersed with Product S - Saturated with Product	<b>SAMPLE TYPE</b> DC - Diamond Corer SS - Split Spoon MA - Manual Auger TR - Trowel ST - Shelby Tube DT - Dual Tube MC - Macro Core NR - No Recovery	<b>CHEMICAL ANALYSIS</b> Metals: Sb As Ba Be B Cd Cr Co Cu Pb Mo Ni Se Ag TI U V Zn Inorg: Inorganic Compounds PHC: Petroleum Hydrocarbons (F1-F4) BTEX: Benzene, Toluene, Ethylbenzene, Xylene VOC: Volatile Organic Compounds PAH: Polycyclic Aromatic Hydrocarbons PCB: Polychlorinated Biphenyl D/F: Dioxins & Furans Phenol: Phenolic Compounds GSA: Grain-size Analysis
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(m) DEPTH ELEVATION (masl)	STRATIGRAPHY	LITHOLOGY / GEOLOGY DESCRIPTION	OBSERVATIONS					SAMPLES				MONITORING WELL		REMARKS					
			PID CGD (ppm)	ODOUR			VISUAL	SAMPLE TYPE & No.	% RECOVERY	N (Blow/15cm)	CHEMICAL ANALYSIS	DUPLICATE	DIAGRAM		DESCRIPTION				
				L	M	S										D	S		
0.06 172.77		SILT : Sand, rocks, gravel, organics, dark brown, dry	0																
0.5		SAND : Trace gravel, brown, dry moist																	0.5
1.14 171.67		SAND : Silt, trace gravel, black staining, moist	0																1.0
1.55 171.27		SILT : Sand, trace gravel, brown, moist to wet trace clay	0																1.5
2.0			0																2.0
2.5			5																2.5
3.0			0																3.0
3.5			0																3.5
4.0																			4.0
4.5																			4.5
4.60 168.22		CLAY : Trace gravel, grey, moist	0																4.5
5.0																			5.0
5.5																			5.5
6.0		some gravel, dry																	6.0
6.5			0																6.5
7.0																			7.0
7.5																			7.5
8.0			0																8.0
8.5																			8.5
9.0		trace gravel, brittle																	9.0
9.5			0																9.5
9.75 163.06																			9.5

Project : GINT LOGS ORBY.GPJ Report : WSP\_EN\_WELL-ENVIRONMENTAL 2022-1-5











# AUGER MANUAL DRILLING RECORD : BH21-5

Project Number: **211-10139-00**

Former Orangeville Rail  
Limited Phase II Environmental Assessment  
Region of Peel

<b>DRILLING DETAILS</b> Date (Start): 2021-12-06 Date (End): 2021-12-06 Drilling Company: Geotech Support Services Drilling Equipment: Hand Auger Drilling Method: Auger Borehole Diameter: 203 mm Drilling Fluid: None	<b>SURVEY DETAILS</b> Easting: 599776.087 m Northing: 4835898.209 m Surface Elevation: 213.824 masl Top of Well Elevation: masl	<b>ODOUR</b> L - Light M - Medium S - Strong  <b>VISUAL</b> D - Dispersed with Product S - Saturated with Product	<b>SAMPLE TYPE</b> DC - Diamond Corer SS - Split Spoon MA - Manual Auger TR - Trowel ST - Shelby Tube DT - Dual Tube MC - Macro Core NR - No Recovery	<b>CHEMICAL ANALYSIS</b> Metals: Sb As Ba Be B Cd Cr Co Cu Pb Mo Ni Se Ag TI U V Zn Inorg: Inorganic Compounds PHC: Petroleum Hydrocarbons (F1-F4) BTEX: Benzene, Toluene, Ethylbenzene, Xylene VOC: Volatile Organic Compounds PAH: Polycyclic Aromatic Hydrocarbons PCB: Polychlorinated Biphenyl D/F: Dioxins & Furans Phenol: Phenolic Compounds GSA: Grain-size Analysis
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(m) DEPTH ELEVATION (masl)	LITHOLOGY / GEOLOGY		OBSERVATIONS					SAMPLES				MONITORING WELL		REMARKS		
	STRATIGRAPHY	DESCRIPTION	PID CGD (ppm)	ODOUR					SAMPLE TYPE & No.	% RECOVERY	N (Blow/15cm)	CHEMICAL ANALYSIS	DUPLICATE		DIAGRAM	DESCRIPTION
				L	M	S	D	S								
213.82	0.5		0						MA1	33%		Metals & Inorg. PAH				0.5
1.0	1.0		0						MA2	58%		PHC BTEX				1.0
1.5	1.5		0						MA3	33%		OC Pest PCB				1.5
1.83 212.00	2.0															2.0
2.5	2.5															2.5
3.0	3.0															3.0
3.5	3.5															3.5
4.0	4.0															4.0
4.5	4.5															4.5
5.0	5.0															5.0
5.5	5.5															5.5
6.0	6.0															6.0
6.5	6.5															6.5
7.0	7.0															7.0
7.5	7.5															7.5
8.0	8.0															8.0
8.5	8.5															8.5
9.0	9.0															9.0
9.5	9.5															9.5

Project: GINT LOGS ORBY.GPJ Report: WSP\_EN\_WELL-ENVIRONMENTAL 2022-1-5



# OBSERVATION WELL DRILLING RECORD : BH21-6

Project Number: **211-10139-00**

Former Orangeville Rail  
Limited Phase II Environmental Assessment  
Region of Peel

<b>DRILLING DETAILS</b> Date (Start): 2021-12-01 Date (End): 2021-12-01 Drilling Company: Davis Drilling Drilling Equipment: CME 55 Drilling Method: Hollow Stem Auger Borehole Diameter: 203 mm Drilling Fluid: None	<b>SURVEY DETAILS</b> Easting: 599720.793 m Northing: 4836847.647 m Surface Elevation: 216.805 masl Top of Well Elevation: masl	<b>ODOUR</b> L - Light M - Medium S - Strong  <b>VISUAL</b> D - Dispersed with Product S - Saturated with Product	<b>SAMPLE TYPE</b> DC - Diamond Corer SS - Split Spoon MA - Manual Auger TR - Trowel ST - Shelby Tube DT - Dual Tube MC - Macro Core NR - No Recovery	<b>CHEMICAL ANALYSIS</b> Metals: Sb As Ba Be B Cd Cr Co Cu Pb Mo Ni Se Ag TI U V Zn Inorg: Inorganic Compounds PHC: Petroleum Hydrocarbons (F1-F4) BTEX: Benzene, Toluene, Ethylbenzene, Xylene VOC: Volatile Organic Compounds PAH: Polycyclic Aromatic Hydrocarbons PCB: Polychlorinated Biphenyl D/F: Dioxins & Furans Phenol: Phenolic Compounds GSA: Grain-size Analysis
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(m) DEPTH ELEVATION (masl)	STRATIGRAPHY	LITHOLOGY / GEOLOGY  DESCRIPTION	OBSERVATIONS					SAMPLES				MONITORING WELL		REMARKS	
			PID CGD (ppm)	ODOUR			VISUAL	SAMPLE TYPE & No.	% RECOVERY	N (Blow/15cm)	CHEMICAL ANALYSIS	DUPLICATE	DIAGRAM		DESCRIPTION
				L	M	S									
246.91 216.70	XXXX	<b>SILT</b> : Sand, rocks, gravel (ballast). Dark brown/black, moist	0						SS1	58%	6	PAH		CONCRETE	
0.5		<b>SILT</b> : Sand, trace gravel, trace clay. Brown, moist dry, brittle	0						SS2	96%	37	Metals & Inorg.		BENTONITE	
1.0			0						SS3	71%	>82				
1.5			0						SS4	88%	80				
2.0			0						SS5	38%	>92				
2.5		<b>ROCK</b> : Pulverized rock and dust, dry. Refusal	0						SS6	67%	>82	PHC BTEX		SAND	
3.0			0						SS7	83%	N/A				
3.15 213.66	△△△	<b>SAND</b> : Silt, trace gravel. Brown, saturated	0											SCREEN Length: 3.05 m Diam.: 51 mm Slot: #10	
3.5			0												
3.66 213.15	△△△	<b>ROCK</b> : Pulverized rock and gravel, dry	0												
4.0			0												
4.5			0												
5.0			0												
5.03 211.78	△△△	<b>RED SHALE</b> : Red shale chips and intact shale, layered, weathered, dry.	0											BENTONITE	
5.5			0												
6.0			0												
6.20 210.40	△△△		0												
6.5			0												
7.0			0												
7.5			0												
8.0			0												
8.5			0												
9.0			0												
9.5			0												

WATER MARKER  
Depth : 0.23 m  
Elev. : 216.575 m  
Date : 2021-12-06  
WATER MARKER  
Depth : 0.27 m  
Elev. : 216.535 m  
Date : 2021-12-02

Project : GINT LOGS ORBY.GPJ Report : WSP\_EN\_WELL-ENVIRONMENTAL 2022-1-5





# OBSERVATION WELL DRILLING RECORD : BH21-7

Project Number: **211-10139-00**

Former Orangeville Rail  
Limited Phase II Environmental Assessment  
Region of Peel

<b>DRILLING DETAILS</b> Date (Start): 2021-11-29 Date (End): 2021-11-29 Drilling Company: Davis Drilling Drilling Equipment: CME 55 Drilling Method: Hollow Stem Auger Borehole Diameter: 203 mm Drilling Fluid: None	<b>SURVEY DETAILS</b> Easting: 599718.378 m Northing: 4836942.437 m Surface Elevation: 217.859 masl Top of Well Elevation: masl	<b>ODOUR</b> L - Light M - Medium S - Strong  <b>VISUAL</b> D - Dispersed with Product S - Saturated with Product	<b>SAMPLE TYPE</b> DC - Diamond Corer SS - Split Spoon MA - Manual Auger TR - Trowel ST - Shelby Tube DT - Dual Tube MC - Macro Core NR - No Recovery	<b>CHEMICAL ANALYSIS</b> Metals Inorg. PHC BTEX VOC PAH PCB D/F Phenol GSA  Sb As Ba Be B Cd Cr Co Cu Pb Mo Ni Se Ag TI U V Zn Inorganic Compounds Petroleum Hydrocarbons (F1-F4) Benzene, Toluene, Ethylbenzene, Xylene Volatile Organic Compounds Polycyclic Aromatic Hydrocarbons Polychlorinated Biphenyl Dioxins & Furans Phenolic Compounds Grain-size Analysis
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(m) DEPTH ELEVATION (masl)	STRATIGRAPHY	LITHOLOGY / GEOLOGY DESCRIPTION	OBSERVATIONS					SAMPLES				MONITORING WELL		REMARKS	
			PID CGD (ppm)	ODOUR			VISUAL	SAMPLE TYPE & No.	% RECOVERY	N (Blow/15cm)	CHEMICAL ANALYSIS	DUPLICATE	DIAGRAM		DESCRIPTION
				L	M	S									
217.86	[Silt pattern]	<b>SILT</b> : Sand, trace gravel and organics. Dark brown, moist  <i>← trace clay. brown/grey, moist to dry, soft to brittle</i>  <i>← more gravel, less clay content. dry, brittle</i>	0												0.5
1.0			0												1.0
1.5			5												1.5
2.0			0												2.0
3.0	[Sand pattern]	<b>SAND</b> : Silt, some rocks and gravel. Moist/wet	0											3.0	
3.5			0											3.5	
4.5	[Clay pattern]	<b>CLAY</b> : Sand, trace gravel. Grey, moist to dry	0											4.5	
5.0			0											5.0	
6.0	[Sand pattern]	<b>SAND</b> : Trace clay and gravel, rocks. Grey/brown, wet	0											6.0	
6.5			0											6.5	
7.0	[Red shale pattern]	<b>RED SHALE</b> : Rel shale chips, dry, some gravel	0											7.0	
7.5			0											7.5	
8.0			0											8.0	
8.5														8.5	
9.0														9.0	
9.5														9.5	

Project : GINT LOGS ORBY.GPJ Report : WSP\_EN\_WELL-ENVIRONMENTAL 2022-1-5







# OBSERVATION WELL DRILLING RECORD : BH21-9

Project Number: 211-10139-00

Former Orangeville Rail  
Limited Phase II Environmental Assessment  
Region of Peel

<b>DRILLING DETAILS</b> Date (Start): 2021-11-04 Date (End): 2021-11-04 Drilling Company: Davis Drilling Drilling Equipment: CME 55 Drilling Method: Hollow Stem Auger Borehole Diameter: 203 mm Drilling Fluid: None	<b>SURVEY DETAILS</b> Easting: 573372.335 m Northing: 4862428.345 m Surface Elevation: 422.953 masl Top of Well Elevation: masl	<b>ODOUR</b> L - Light M - Medium S - Strong  <b>VISUAL</b> D - Dispersed with Product S - Saturated with Product	<b>SAMPLE TYPE</b> DC - Diamond Corer SS - Split Spoon MA - Manual Auger TR - Trowel ST - Shelby Tube DT - Dual Tube MC - Macro Core NR - No Recovery	<b>CHEMICAL ANALYSIS</b> Metals: Sb As Ba Be B Cd Cr Co Cu Pb Mo Ni Se Ag Ti U V Zn Inorg: Inorganic Compounds PHC: Petroleum Hydrocarbons (F1-F4) BTEX: Benzene, Toluene, Ethylbenzene, Xylene VOC: Volatile Organic Compounds PAH: Polycyclic Aromatic Hydrocarbons PCB: Polychlorinated Biphenyl D/F: Dioxins & Furans Phenol: Phenolic Compounds GSA: Grain-size Analysis
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(m) DEPTH ELEVATION (masl)	STRATIGRAPHY	LITHOLOGY / GEOLOGY DESCRIPTION	OBSERVATIONS					SAMPLES				MONITORING WELL		REMARKS					
			PID CGD (ppm)	ODOUR			VISUAL	SAMPLE TYPE & No.	% RECOVERY	N (Blow/15cm)	CHEMICAL ANALYSIS	DUPLICATE	DIAGRAM		DESCRIPTION				
				L	M	S										D	S		
0.06 422.90		<b>TOPSOIL</b> : Rootlets, organics, some gravel.	0																
0.5		<b>GRAVEL</b> : Sandy silt, rock fragments. Dark brown, dry																	0.5
0.84 422.11		<b>SILT</b> : Sand. Brown, moist	5																1.0
1.5		<b>SAND</b> : Silt, some gravel, rock fragments. Brown, moist																	1.5
1.58 421.38		<b>SAND</b> : Silt, some gravel, rock fragments. Brown, moist	0																2.0
2.0		<b>SILT</b> : Trace gravel, brown, wet																	2.5
2.39 420.57		<b>SILT</b> : Trace gravel, brown, wet	0																3.0
2.5		<b>SILT</b> : Trace gravel, brown, wet																	3.5
3.0		<b>SILT</b> : Trace gravel, brown, wet																	4.0
3.5		<b>SILT</b> : Trace gravel, brown, wet																	4.5
4.0		<b>SILT</b> : Trace gravel, brown, wet																	5.0
4.5		<b>SILT</b> : Trace gravel, brown, wet																	5.5
4.57 418.38		<b>ROCK FRAGMENTS</b> : Gravel, pulverized rock (shale and limestone). Brown, wet	0																6.0
5.0		<b>ROCK FRAGMENTS</b> : Gravel, pulverized rock (shale and limestone). Brown, wet																	6.5
5.5		<b>ROCK FRAGMENTS</b> : Gravel, pulverized rock (shale and limestone). Brown, wet																	7.0
6.0		<b>ROCK FRAGMENTS</b> : Gravel, pulverized rock (shale and limestone). Brown, wet																	7.5
6.16 416.80		<b>Auger refusal</b>	0																8.0
6.5		<b>Auger refusal</b>																	8.5
7.0		<b>Auger refusal</b>																	9.0
7.5		<b>Auger refusal</b>																	9.5
8.0		<b>Auger refusal</b>																	9.5

Project : GINT LOGS ORBY.GPJ Report : WSP\_EN\_WELL-ENVIRONMENTAL 2022-1-5

# APPENDIX

## **B** CERTIFICATES OF ANALYSIS





**CLIENT NAME: WSP CANADA INC.  
2 INTERNATIONAL BLVD SUITE 201  
ETOBICOKE, ON M9W1A2  
(416) 798-0065**

**ATTENTION TO: Marsad Jafar  
PROJECT: 211-10139-00 Phase 200 02**

**AGAT WORK ORDER: 21T843989**

**TRACE ORGANICS REVIEWED BY: Inga Kuzmina, Trace Organics Lab Manager**

**DATE REPORTED: Dec 15, 2021**

**PAGES (INCLUDING COVER): 5**

**VERSION\*: 1**

Should you require any information regarding this analysis please contact your client services representative at (905) 712-5100

\*Notes

**Disclaimer:**

- All work conducted herein has been done using accepted standard protocols, and generally accepted practices and methods. AGAT test methods may incorporate modifications from the specified reference methods to improve performance.
- All samples will be disposed of within 30 days after receipt unless a Long Term Storage Agreement is signed and returned. Some specialty analysis may be exempt, please contact your Client Project Manager for details.
- AGAT's liability in connection with any delay, performance or non-performance of these services is only to the Client and does not extend to any other third party. Unless expressly agreed otherwise in writing, AGAT's liability is limited to the actual cost of the specific analysis or analyses included in the services.
- This Certificate shall not be reproduced except in full, without the written approval of the laboratory.
- The test results reported herewith relate only to the samples as received by the laboratory.
- Application of guidelines is provided "as is" without warranty of any kind, either expressed or implied, including, but not limited to, warranties of merchantability, fitness for a particular purpose, or non-infringement. AGAT assumes no responsibility for any errors or omissions in the guidelines contained in this document.
- All reportable information as specified by ISO/IEC 17025:2017 is available from AGAT Laboratories upon request.



## Certificate of Analysis

AGAT WORK ORDER: 21T843989  
PROJECT: 211-10139-00 Phase 200 02

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

CLIENT NAME: WSP CANADA INC.

ATTENTION TO: Marsad Jafar

SAMPLING SITE:

SAMPLED BY:

### O. Reg. 153(511) - PHCs F2 - F4 (Water)

DATE RECEIVED: 2021-12-13

DATE REPORTED: 2021-12-15

SAMPLE DESCRIPTION: BH21-30				
SAMPLE TYPE: Water				
DATE SAMPLED: 2021-12-13				
Parameter	Unit	G / S	RDL	3337872
F2 (C10 to C16)	µg/L	150	100	<100
F3 (C16 to C34)	µg/L	500	100	<100
F4 (C34 to C50)	µg/L	500	100	<100
Gravimetric Heavy Hydrocarbons	µg/L		500	NA
Sediment				No
Surrogate	Unit	Acceptable Limits		
Terphenyl	%	60-140		111

**Comments:** RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 1: Full Depth Background Site Condition Standards - Ground Water - All Types of Property Uses  
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

**3337872** The C10 - C16, C16 - C34, and C34 - C50 fractions are calculated using the average response factor for n-C10, n-C16, and n-C34.  
Gravimetric Heavy Hydrocarbons are not included in the Total C16 - C50 and are only determined if the chromatogram of the C34 - C50 Hydrocarbons indicated that hydrocarbons >C50 are present.  
The chromatogram has returned to baseline by the retention time of nC50.  
This method complies with the Reference Method for the CWS PHC and is validated for use in the laboratory.  
nC10, nC16 and nC34 response factors are within 10% of their average.  
C50 response factor is within 70% of nC10 + nC16 nC34 average.  
Linearity is within 15%.  
Extraction and holding times were met for this sample.  
Fractions 2-4 are quantified with the contribution of PAHs. Under Ontario Regulation 153, results are considered valid without determining the PAH contribution if not requested by the client.

Sediment parameter is comment only based on visual inspection of the sample prior to extraction and is not an accredited test.

Analysis performed at AGAT Toronto (unless marked by \*)

Certified By:



## Quality Assurance

**CLIENT NAME:** WSP CANADA INC.  
**PROJECT:** 211-10139-00 Phase 200 02  
**SAMPLING SITE:**

**AGAT WORK ORDER:** 21T843989  
**ATTENTION TO:** Marsad Jafar  
**SAMPLED BY:**

### Trace Organics Analysis

RPT Date: Dec 15, 2021			DUPLICATE				Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Measured Value		Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits		
								Lower	Upper		Lower	Upper		Lower	Upper	

**O. Reg. 153(511) - PHCs F2 - F4 (Water)**

F2 (C10 to C16)	3285019	< 100	< 100	NA	< 100	102%	60%	140%	85%	60%	140%	95%	60%	140%
F3 (C16 to C34)	3285019	< 100	< 100	NA	< 100	106%	60%	140%	76%	60%	140%	86%	60%	140%
F4 (C34 to C50)	3285019	< 100	< 100	NA	< 100	85%	60%	140%	74%	60%	140%	87%	60%	140%

Comments: When the average of the sample and duplicate results is less than 5x the RDL, the Relative Percent Difference (RPD) will be indicated as Not Applicable (NA).

Certified By: \_\_\_\_\_





## Method Summary

CLIENT NAME: WSP CANADA INC.

AGAT WORK ORDER: 21T843989

PROJECT: 211-10139-00 Phase 200 02

ATTENTION TO: Marsad Jafar

SAMPLING SITE:

SAMPLED BY:

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
<b>Trace Organics Analysis</b>			
F2 (C10 to C16)	VOL-91-5010	modified from MOE PHC E3421	GC/FID
F3 (C16 to C34)	VOL-91-5010	modified from MOE PHC E3421	GC/FID
F4 (C34 to C50)	VOL-91-5010	modified from MOE PHC E3421	GC/FID
Gravimetric Heavy Hydrocarbons	VOL-91-5010	modified from MOE PHC E3421	BALANCE
Terphenyl	VOL-91-5010	modified from MOE PHC E3421	GC/FID
Sediment			







CLIENT NAME: WSP CANADA INC.  
2 INTERNATIONAL BLVD SUITE 201  
ETOBICOKE, ON M9W1A2  
(416) 798-0065

ATTENTION TO: Vanessa Oetinger

PROJECT: 211-10139-00

AGAT WORK ORDER: 21T822752

SOIL ANALYSIS REVIEWED BY: Jacky Zhu, Spectroscopy Technician

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

DATE REPORTED: Nov 08, 2021

PAGES (INCLUDING COVER): 21

VERSION\*: 1

Should you require any information regarding this analysis please contact your client services representative at (905) 712-5100

\*Notes

**Disclaimer:**

- All work conducted herein has been done using accepted standard protocols, and generally accepted practices and methods. AGAT test methods may incorporate modifications from the specified reference methods to improve performance.
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- All reportable information as specified by ISO/IEC 17025:2017 is available from AGAT Laboratories upon request.



## Certificate of Analysis

AGAT WORK ORDER: 21T822752

PROJECT: 211-10139-00

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

CLIENT NAME: WSP CANADA INC.

SAMPLING SITE: ORBY Rail

ATTENTION TO: Vanessa Oetinger

SAMPLED BY: Matthew Roy

### O. Reg. 153(511) - Metals & Inorganics (Soil)

DATE RECEIVED: 2021-10-28

DATE REPORTED: 2021-11-08

Parameter	Unit	SAMPLE DESCRIPTION:		BH21-10 S1	BH21-14 S2	BH21-15 S3	BH21-26 S3	BH21-27 S1	BH21-29 S2	BH21-33 S3	BH21-34 S2
		SAMPLE TYPE:		Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
		DATE SAMPLED:		2021-10-27	2021-10-27	2021-10-27	2021-10-28	2021-10-28	2021-10-28	2021-10-28	2021-10-28
		G / S	RDL	3146311	3146324	3146340	3146354	3146364	3146370	3146415	3146420
Antimony	µg/g	40	0.8	3.5	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8
Arsenic	µg/g	18	1	24	3	4	4	12	5	5	4
Barium	µg/g	670	2.0	44.5	49.6	26.5	47.6	54.2	99.0	99.2	58.5
Beryllium	µg/g	8	0.4	1.4	<0.4	<0.4	<0.4	0.5	0.7	0.6	0.4
Boron	µg/g	120	5	12	<5	<5	5	6	9	9	10
Boron (Hot Water Soluble)	µg/g	2	0.10	0.37	0.13	<0.10	<0.10	0.26	0.13	<0.10	<0.10
Cadmium	µg/g	1.9	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Chromium	µg/g	160	5	15	14	7	16	19	26	23	17
Cobalt	µg/g	80	0.5	9.3	4.6	3.3	9.4	6.8	11.1	11.9	7.4
Copper	µg/g	230	1.0	64.7	8.6	17.0	37.1	24.7	26.1	25.3	17.4
Lead	µg/g	120	1	52	8	5	7	15	9	9	5
Molybdenum	µg/g	40	0.5	8.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Nickel	µg/g	270	1	29	9	5	18	15	24	24	14
Selenium	µg/g	5.5	0.8	2.1	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8
Silver	µg/g	40	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Thallium	µg/g	3.3	0.5	0.6	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Uranium	µg/g	33	0.50	0.73	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Vanadium	µg/g	86	0.4	26.7	26.6	14.4	23.0	28.1	36.5	33.6	26.5
Zinc	µg/g	340	5	70	46	22	47	58	57	52	38
Chromium, Hexavalent	µg/g	8	0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Cyanide, Free	µg/g	0.051	0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040
Mercury	µg/g	3.9	0.10	<0.10	0.11	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Electrical Conductivity (2:1)	mS/cm	1.4	0.005	0.255	0.103	0.073	0.106	0.192	0.129	0.115	0.108
Sodium Adsorption Ratio (2:1) (Calc.)	N/A	12	N/A	0.061	0.043	0.061	0.084	0.103	0.105	0.155	0.072
pH, 2:1 CaCl2 Extraction	pH Units	5.0-9.0	NA	7.24	7.27	7.80	7.79	7.70	7.71	7.80	7.87

Certified By:







## Certificate of Analysis

AGAT WORK ORDER: 21T822752

PROJECT: 211-10139-00

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MISSISSAUGA, ONTARIO  
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CLIENT NAME: WSP CANADA INC.

SAMPLING SITE: ORBY Rail

ATTENTION TO: Vanessa Oetinger

SAMPLED BY: Matthew Roy

### O. Reg. 153(511) - Metals & Inorganics (Soil)

DATE RECEIVED: 2021-10-28

DATE REPORTED: 2021-11-08

Parameter	Unit	SAMPLE DESCRIPTION:		QAQC-2	BH21-35 S1	BH21-37 S2	BH21-38 S3	BH21-40 S3
		SAMPLE TYPE:		Soil	Soil	Soil	Soil	Soil
		DATE SAMPLED:		2021-10-28	2021-10-27	2021-10-27	2021-10-27	2021-10-27
		G / S	RDL	3146421	3146433	3146450	3146454	3146457
Antimony	µg/g	40	0.8	<0.8	<0.8	1.0	<0.8	<0.8
Arsenic	µg/g	18	1	3	13	12	3	6
Barium	µg/g	670	2.0	57.0	53.8	41.3	16.9	29.6
Beryllium	µg/g	8	0.4	0.4	0.5	<0.4	<0.4	<0.4
Boron	µg/g	120	5	11	21	7	<5	7
Boron (Hot Water Soluble)	µg/g	2	0.10	<0.10	0.35	0.18	<0.10	0.20
Cadmium	µg/g	1.9	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Chromium	µg/g	160	5	16	12	11	6	11
Cobalt	µg/g	80	0.5	7.4	10.2	5.4	2.5	4.5
Copper	µg/g	230	1.0	17.0	44.3	25.1	9.0	27.2
Lead	µg/g	120	1	5	13	18	4	20
Molybdenum	µg/g	40	0.5	<0.5	1.1	0.9	<0.5	0.9
Nickel	µg/g	270	1	13	19	11	4	10
Selenium	µg/g	5.5	0.8	<0.8	<0.8	<0.8	<0.8	<0.8
Silver	µg/g	40	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Thallium	µg/g	3.3	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Uranium	µg/g	33	0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Vanadium	µg/g	86	0.4	25.2	15.4	19.1	9.4	19.3
Zinc	µg/g	340	5	36	63	33	14	33
Chromium, Hexavalent	µg/g	8	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Cyanide, Free	µg/g	0.051	0.040	<0.040	<0.040	<0.040	<0.040	<0.040
Mercury	µg/g	3.9	0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Electrical Conductivity (2:1)	mS/cm	1.4	0.005	0.101	0.217	0.136	0.082	0.328
Sodium Adsorption Ratio (2:1) (Calc.)	N/A	12	N/A	0.070	0.095	0.036	0.051	0.025
pH, 2:1 CaCl <sub>2</sub> Extraction	pH Units	5.0-9.0	NA	7.91	7.87	7.46	7.66	7.62

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**AGAT** Laboratories

# Certificate of Analysis

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CLIENT NAME: WSP CANADA INC.

SAMPLING SITE: ORBY Rail

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SAMPLED BY: Matthew Roy

## O. Reg. 153(511) - Metals & Inorganics (Soil)

DATE RECEIVED: 2021-10-28

DATE REPORTED: 2021-11-08

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 3: Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition - Soil - Industrial/Commercial/Community Property Use - Coarse Textured Soils

Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

3146311-3146457 EC was determined on the DI water extract obtained from the 2:1 leaching procedure (2 parts DI water:1 part soil). pH was determined on the 0.01M CaCl<sub>2</sub> extract prepared at 2:1 ratio. SAR is a calculated parameter.

Analysis performed at AGAT Toronto (unless marked by \*)

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SAMPLED BY: Matthew Roy

### O. Reg. 153(511) - OC Pesticides + PCBs (Soil)

DATE RECEIVED: 2021-10-28

DATE REPORTED: 2021-11-08

Parameter	Unit	SAMPLE DESCRIPTION:		BH21-10 S2	BH21-14 S1	BH21-15 S2	BH21-26 S1	BH21-27 S2	BH21-29 S1	BH21-33 S2	BH21-34 S1
		SAMPLE TYPE:		Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
		DATE SAMPLED:		2021-10-27	2021-10-27	2021-10-27	2021-10-28	2021-10-28	2021-10-28	2021-10-28	2021-10-28
		G / S	RDL	3146319	3146323	3146330	3146342	3146367	3146369	3146399	3146416
Gamma-Hexachlorocyclohexane	µg/g	0.056	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Heptachlor	µg/g	0.19	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Aldrin	µg/g	0.088	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Heptachlor Epoxide	µg/g	0.05	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Endosulfan I	µg/g		0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Endosulfan II	µg/g		0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Endosulfan	µg/g	0.3	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Alpha-Chlordane	µg/g		0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
gamma-Chlordane	µg/g		0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Chlordane	µg/g	0.05	0.007	<0.007	<0.007	<0.007	<0.007	<0.007	<0.007	<0.007	<0.007
op'-DDD	µg/g		0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
pp'-DDD	µg/g		0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
DDD	µg/g	4.6	0.007	<0.007	<0.007	<0.007	<0.007	<0.007	<0.007	<0.007	<0.007
op'-DDE	µg/g		0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
pp'-DDE	µg/g		0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
DDE	µg/g	0.52	0.007	<0.007	<0.007	<0.007	<0.007	<0.007	<0.007	<0.007	<0.007
op'-DDT	µg/g		0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
pp'-DDT	µg/g		0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
DDT	µg/g	1.4	0.007	<0.007	<0.007	<0.007	<0.007	<0.007	<0.007	<0.007	<0.007
Dieldrin	µg/g	0.088	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Endrin	µg/g	0.04	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Methoxychlor	µg/g	1.6	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Hexachlorobenzene	µg/g	0.66	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Hexachlorobutadiene	µg/g	0.031	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Hexachloroethane	µg/g	0.21	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Aroclor 1242	µg/g		0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Aroclor 1248	µg/g		0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Aroclor 1254	µg/g		0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Aroclor 1260	µg/g		0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Polychlorinated Biphenyls	µg/g	1.1	0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10

Certified By:





## Certificate of Analysis

AGAT WORK ORDER: 21T822752

PROJECT: 211-10139-00

5835 COOPERS AVENUE  
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CLIENT NAME: WSP CANADA INC.

SAMPLING SITE: ORBY Rail

ATTENTION TO: Vanessa Oetinger

SAMPLED BY: Matthew Roy

### O. Reg. 153(511) - OC Pesticides + PCBs (Soil)

DATE RECEIVED: 2021-10-28

DATE REPORTED: 2021-11-08

Parameter	Unit	SAMPLE DESCRIPTION:									
		G / S		BH21-10 S2	BH21-14 S1	BH21-15 S2	BH21-26 S1	BH21-27 S2	BH21-29 S1	BH21-33 S2	BH21-34 S1
		RDL	3146319	3146323	3146330	3146342	3146367	3146369	3146399	3146416	
Moisture Content	%	0.1	4.5	28.0	5.1	19.2	13.4	22.5	12.1	15.2	
wet weight OC/PCB	g	NA	10.58	10.26	10.72	10.49	10.61	10.43	10.23	10.39	
Surrogate	Unit	Acceptable Limits									
TCMX	%	50-140	71	78	90	83	74	79	80	80	
Decachlorobiphenyl	%	50-140	81	80	97	87	98	83	89	101	

Certified By:



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### O. Reg. 153(511) - OC Pesticides + PCBs (Soil)

DATE RECEIVED: 2021-10-28

DATE REPORTED: 2021-11-08

Parameter	Unit	SAMPLE DESCRIPTION:		QAQC-1	BH21-35 S2	BH21-37 S1	BH21-38 S2	BH21-40 S1
		SAMPLE TYPE:		Soil	Soil	Soil	Soil	Soil
		DATE SAMPLED:		2021-10-28	2021-10-27	2021-10-27	2021-10-27	2021-10-27
	G / S	RDL	3146417	3146434	3146439	3146453	3146456	
Gamma-Hexachlorocyclohexane	µg/g	0.056	0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Heptachlor	µg/g	0.19	0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Aldrin	µg/g	0.088	0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Heptachlor Epoxide	µg/g	0.05	0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Endosulfan I	µg/g		0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Endosulfan II	µg/g		0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Endosulfan	µg/g	0.3	0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Alpha-Chlordane	µg/g		0.005	<0.005	<0.005	<0.005	<0.005	<0.005
gamma-Chlordane	µg/g		0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Chlordane	µg/g	0.05	0.007	<0.007	<0.007	<0.007	<0.007	<0.007
op'-DDD	µg/g		0.005	<0.005	<0.005	<0.005	<0.005	<0.005
pp'-DDD	µg/g		0.005	<0.005	<0.005	<0.005	<0.005	<0.005
DDD	µg/g	4.6	0.007	<0.007	<0.007	<0.007	<0.007	<0.007
op'-DDE	ug/g		0.005	<0.005	<0.005	<0.005	<0.005	<0.005
pp'-DDE	µg/g		0.005	<0.005	<0.005	<0.005	<0.005	<0.005
DDE	µg/g	0.52	0.007	<0.007	<0.007	<0.007	<0.007	<0.007
op'-DDT	µg/g		0.005	<0.005	<0.005	<0.005	<0.005	<0.005
pp'-DDT	µg/g		0.005	<0.005	<0.005	<0.005	<0.005	<0.005
DDT	µg/g	1.4	0.007	<0.007	<0.007	<0.007	<0.007	<0.007
Dieldrin	µg/g	0.088	0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Endrin	µg/g	0.04	0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Methoxychlor	µg/g	1.6	0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Hexachlorobenzene	µg/g	0.66	0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Hexachlorobutadiene	µg/g	0.031	0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Hexachloroethane	µg/g	0.21	0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Aroclor 1242	µg/g		0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Aroclor 1248	µg/g		0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Aroclor 1254	µg/g		0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Aroclor 1260	µg/g		0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Polychlorinated Biphenyls	µg/g	1.1	0.10	<0.10	<0.10	<0.10	<0.10	<0.10

Certified By:



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DATE RECEIVED: 2021-10-28

DATE REPORTED: 2021-11-08

		SAMPLE DESCRIPTION:		QAQC-1	BH21-35 S2	BH21-37 S1	BH21-38 S2	BH21-40 S1
		SAMPLE TYPE:		Soil	Soil	Soil	Soil	Soil
		DATE SAMPLED:		2021-10-28	2021-10-27	2021-10-27	2021-10-27	2021-10-27
Parameter	Unit	G / S	RDL	3146417	3146434	3146439	3146453	3146456
Moisture Content	%		0.1	15.4	16.6	14.1	13.1	26.4
wet weight OC/PCB	g		NA	10.01	10.67	10.87	10.69	10.62
Surrogate	Unit	Acceptable Limits						
TCMX	%	50-140		66	76	77	86	80
Decachlorobiphenyl	%	50-140		95	87	82	106	92

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 3: Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition - Soil - Industrial/Commercial/Community Property Use - Coarse Textured Soils

Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

3146319-3146456 Results are based on the dry weight of the soil.

DDT total is a calculated parameter. The calculated value is the sum of op'DDT and pp'DDT.

DDD total is a calculated parameter. The calculated value is the sum of op'DDD and pp'DDD.

DDE total is a calculated parameter. The calculated value is the sum of op'DDE and pp'DDE.

Endosulfan total is a calculated parameter. The calculated value is the sum of Endosulfan I and Endosulfan II.

Chlordane total is a calculated parameter. The calculated value is the sum of Alpha-Chlordane and Gamma-Chlordane.

PCB total is a calculated parameter. The calculated value is the sum of Aroclor 1242, Aroclor 1248, Aroclor 1254 and Aroclor 1260.

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

Analysis performed at AGAT Toronto (unless marked by \*)

Certified By:





## Certificate of Analysis

AGAT WORK ORDER: 21T822752

PROJECT: 211-10139-00

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

CLIENT NAME: WSP CANADA INC.

SAMPLING SITE: ORBY Rail

ATTENTION TO: Vanessa Oetinger

SAMPLED BY: Matthew Roy

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

DATE RECEIVED: 2021-10-28

DATE REPORTED: 2021-11-08

Parameter	Unit	SAMPLE DESCRIPTION:		BH21-10 S3	BH21-14 S3	BH21-15 S2	BH21-26 S2	BH21-27 S3	BH21-29 S3	BH21-33 S1	BH21-34 S3
		SAMPLE TYPE:		Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
		DATE SAMPLED:		2021-10-27	2021-10-27	2021-10-27	2021-10-28	2021-10-28	2021-10-28	2021-10-28	2021-10-28
		G / S	RDL	3146321	3146326	3146330	3146344	3146368	3146397	3146398	3146426
Naphthalene	µg/g	9.6	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Acenaphthylene	µg/g	0.15	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Acenaphthene	µg/g	96	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Fluorene	µg/g	62	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Phenanthrene	µg/g	12	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Anthracene	µg/g	0.67	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Fluoranthene	µg/g	9.6	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Pyrene	µg/g	96	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Benz(a)anthracene	µg/g	0.96	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Chrysene	µg/g	9.6	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Benzo(b)fluoranthene	µg/g	0.96	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Benzo(k)fluoranthene	µg/g	0.96	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Benzo(a)pyrene	µg/g	0.3	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Indeno(1,2,3-cd)pyrene	µg/g	0.76	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Dibenz(a,h)anthracene	µg/g	0.1	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Benzo(g,h,i)perylene	µg/g	9.6	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
1 and 2 Methylnaphthalene	µg/g	76	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Moisture Content	%		0.1	8.8	7.6	5.1	13.7	10.0	13.8	23.6	15.0
Surrogate	Unit	Acceptable Limits									
Naphthalene-d8	%	50-140		105	89	114	93	98	98	98	85
Acridine-d9	%	50-140		98	81	78	92	86	85	88	96
Terphenyl-d14	%	50-140		77	105	86	105	95	105	86	105

Certified By:



## Certificate of Analysis

AGAT WORK ORDER: 21T822752

PROJECT: 211-10139-00

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<http://www.agatlabs.com>

CLIENT NAME: WSP CANADA INC.

SAMPLING SITE: ORBY Rail

ATTENTION TO: Vanessa Oetinger

SAMPLED BY: Matthew Roy

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

DATE RECEIVED: 2021-10-28

DATE REPORTED: 2021-11-08

Parameter	Unit	SAMPLE DESCRIPTION:		QAQC-3	BH21-35 S3	BH21-37 S3	BH21-38 S1	BH21-40 S3
		G / S	RDL	3146427	3146436	3146451	3146452	3146457
Naphthalene	µg/g	9.6	0.05	<0.05	<0.05	<0.05	0.07	0.10
Acenaphthylene	µg/g	0.15	0.05	<0.05	<0.05	<0.05	<0.05	0.06
Acenaphthene	µg/g	96	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Fluorene	µg/g	62	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Phenanthrene	µg/g	12	0.05	<0.05	<0.05	<0.05	0.07	0.19
Anthracene	µg/g	0.67	0.05	<0.05	<0.05	<0.05	0.05	0.12
Fluoranthene	µg/g	9.6	0.05	<0.05	0.25	<0.05	0.14	0.47
Pyrene	µg/g	96	0.05	<0.05	0.18	<0.05	0.12	0.37
Benz(a)anthracene	µg/g	0.96	0.05	<0.05	0.08	<0.05	0.07	0.19
Chrysene	µg/g	9.6	0.05	<0.05	0.14	<0.05	0.11	0.16
Benzo(b)fluoranthene	µg/g	0.96	0.05	<0.05	0.19	<0.05	0.21	0.53
Benzo(k)fluoranthene	µg/g	0.96	0.05	<0.05	0.17	<0.05	0.23	0.50
Benzo(a)pyrene	µg/g	0.3	0.05	<0.05	0.06	<0.05	<0.05	0.09
Indeno(1,2,3-cd)pyrene	µg/g	0.76	0.05	<0.05	0.06	<0.05	0.09	0.20
Dibenz(a,h)anthracene	µg/g	0.1	0.05	<0.05	<0.05	<0.05	<0.05	0.05
Benzo(g,h,i)perylene	µg/g	9.6	0.05	<0.05	0.06	<0.05	0.13	0.20
1 and 2 Methyl naphthalene	µg/g	76	0.05	<0.05	<0.05	<0.05	<0.05	0.32
Moisture Content	%		0.1	17.8	13.9	16.0	23.6	17.7
Surrogate	Unit	Acceptable Limits						
Naphthalene-d8	%	50-140		98	127	85	63	99
Acridine-d9	%	50-140		78	101	96	64	85
Terphenyl-d14	%	50-140		88	67	92	83	96

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 3: Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition - Soil - Industrial/Commercial/Community Property Use - Coarse Textured Soils

Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

3146321-3146457 Results are based on the dry weight of the soil.

Note: The result for Benzo(b)Fluoranthene is the total of the Benzo(b)&j)Fluoranthene isomers because the isomers co-elute on the GC column. 2- and 1-Methyl Naphthalene is a calculated parameter. The calculated value is the sum of 2-Methyl Naphthalene and 1-Methyl Naphthalene.

Analysis performed at AGAT Toronto (unless marked by \*)

Certified By:



**Exceedance Summary**

AGAT WORK ORDER: 21T822752

PROJECT: 211-10139-00

5835 COOPERS AVENUE  
MISSISSAUGA, ONTARIO  
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CLIENT NAME: WSP CANADA INC.

ATTENTION TO: Vanessa Oetinger

SAMPLEID	SAMPLE TITLE	GUIDELINE	ANALYSIS PACKAGE	PARAMETER	UNIT	GUIDEVALUE	RESULT
3146311	BH21-10 S1	ON T3 S ICC CT	O. Reg. 153(511) - Metals & Inorganics (Soil)	Arsenic	µg/g	18	24



## Quality Assurance

CLIENT NAME: WSP CANADA INC.  
 PROJECT: 211-10139-00  
 SAMPLING SITE: ORBY Rail

AGAT WORK ORDER: 21T822752  
 ATTENTION TO: Vanessa Oetinger  
 SAMPLED BY: Matthew Roy

Soil Analysis															
RPT Date: Nov 08, 2021			DUPLICATE				Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE		MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Measured Value		Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper

**O. Reg. 153(511) - Metals & Inorganics (Soil)**

Antimony	3146311	3146311	3.5	3.0	NA	< 0.8	98%	70%	130%	109%	80%	120%	83%	70%	130%
Arsenic	3146311	3146311	24	24	0.0%	< 1	99%	70%	130%	106%	80%	120%	101%	70%	130%
Barium	3146311	3146311	44.5	46.4	4.2%	< 2.0	118%	70%	130%	105%	80%	120%	98%	70%	130%
Beryllium	3146311	3146311	1.4	1.4	NA	< 0.4	97%	70%	130%	93%	80%	120%	89%	70%	130%
Boron	3146311	3146311	12	12	NA	< 5	100%	70%	130%	103%	80%	120%	86%	70%	130%
Boron (Hot Water Soluble)	3146311	3146311	0.37	0.35	NA	< 0.10	93%	60%	140%	103%	70%	130%	91%	60%	140%
Cadmium	3146311	3146311	<0.5	<0.5	NA	< 0.5	116%	70%	130%	108%	80%	120%	93%	70%	130%
Chromium	3146311	3146311	15	15	NA	< 5	101%	70%	130%	102%	80%	120%	97%	70%	130%
Cobalt	3146311	3146311	9.3	9.1	2.2%	< 0.5	97%	70%	130%	103%	80%	120%	94%	70%	130%
Copper	3146311	3146311	64.7	67.8	4.7%	< 1.0	98%	70%	130%	105%	80%	120%	100%	70%	130%
Lead	3146311	3146311	52	54	3.8%	< 1	88%	70%	130%	89%	80%	120%	87%	70%	130%
Molybdenum	3146311	3146311	8.2	8.7	5.9%	< 0.5	100%	70%	130%	117%	80%	120%	109%	70%	130%
Nickel	3146311	3146311	29	28	3.5%	< 1	101%	70%	130%	101%	80%	120%	91%	70%	130%
Selenium	3146311	3146311	2.1	2.0	NA	< 0.8	105%	70%	130%	109%	80%	120%	97%	70%	130%
Silver	3146311	3146311	<0.5	<0.5	NA	< 0.5	98%	70%	130%	115%	80%	120%	96%	70%	130%
Thallium	3146311	3146311	0.6	0.6	NA	< 0.5	100%	70%	130%	107%	80%	120%	103%	70%	130%
Uranium	3146311	3146311	0.73	0.72	NA	< 0.50	95%	70%	130%	110%	80%	120%	104%	70%	130%
Vanadium	3146311	3146311	26.7	27.5	3.0%	< 0.4	94%	70%	130%	101%	80%	120%	99%	70%	130%
Zinc	3146311	3146311	70	67	4.4%	< 5	107%	70%	130%	113%	80%	120%	113%	70%	130%
Chromium, Hexavalent	3146311	3146311	<0.2	<0.2	NA	< 0.2	95%	70%	130%	101%	80%	120%	72%	70%	130%
Cyanide, Free	3145525		<0.040	<0.040	NA	< 0.040	109%	70%	130%	109%	80%	120%	94%	70%	130%
Mercury	3146311	3146311	<0.10	<0.10	NA	< 0.10	118%	70%	130%	107%	80%	120%	103%	70%	130%
Electrical Conductivity (2:1)	3146311	3146311	0.255	0.266	4.2%	< 0.005	99%	80%	120%						
Sodium Adsorption Ratio (2:1) (Calc.)	3146311	3146311	0.061	0.058	5.0%	NA									
pH, 2:1 CaCl2 Extraction	3151125		8.17	8.20	0.4%	NA	98%	80%	120%						

Comments: NA signifies Not Applicable.

pH duplicates QA acceptance criteria was met relative as stated in Table 5-15 of Analytical Protocol document.

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

Certified By:



## Quality Assurance

CLIENT NAME: WSP CANADA INC.

AGAT WORK ORDER: 21T822752

PROJECT: 211-10139-00

ATTENTION TO: Vanessa Oetinger

SAMPLING SITE: ORBY Rail

SAMPLED BY: Matthew Roy

### Trace Organics Analysis

RPT Date: Nov 08, 2021			DUPLICATE			Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD		Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper

<b>O. Reg. 153(511) - OC Pesticides + PCBs (Soil)</b>															
Gamma-Hexachlorocyclohexane	3146456	3146456	< 0.005	< 0.005	NA	< 0.005	87%	50%	140%	89%	50%	140%	102%	50%	140%
Heptachlor	3146456	3146456	< 0.005	< 0.005	NA	< 0.005	97%	50%	140%	98%	50%	140%	101%	50%	140%
Aldrin	3146456	3146456	< 0.005	< 0.005	NA	< 0.005	98%	50%	140%	107%	50%	140%	95%	50%	140%
Heptachlor Epoxide	3146456	3146456	< 0.005	< 0.005	NA	< 0.005	97%	50%	140%	103%	50%	140%	102%	50%	140%
Endosulfan I	3146456	3146456	< 0.005	< 0.005	NA	< 0.005	91%	50%	140%	97%	50%	140%	106%	50%	140%
Endosulfan II	3146456	3146456	< 0.005	< 0.005	NA	< 0.005	89%	50%	140%	99%	50%	140%	85%	50%	140%
Alpha-Chlordane	3146456	3146456	< 0.005	< 0.005	NA	< 0.005	97%	50%	140%	104%	50%	140%	82%	50%	140%
gamma-Chlordane	3146456	3146456	< 0.005	< 0.005	NA	< 0.005	90%	50%	140%	105%	50%	140%	85%	50%	140%
op'-DDD	3146456	3146456	< 0.005	< 0.005	NA	< 0.005	78%	50%	140%	109%	50%	140%	92%	50%	140%
pp'-DDD	3146456	3146456	< 0.005	< 0.005	NA	< 0.005	86%	50%	140%	92%	50%	140%	102%	50%	140%
op'-DDE	3146456	3146456	< 0.005	< 0.005	NA	< 0.005	86%	50%	140%	108%	50%	140%	95%	50%	140%
pp'-DDE	3146456	3146456	< 0.005	< 0.005	NA	< 0.005	87%	50%	140%	107%	50%	140%	105%	50%	140%
op'-DDT	3146456	3146456	< 0.005	< 0.005	NA	< 0.005	96%	50%	140%	106%	50%	140%	105%	50%	140%
pp'-DDT	3146456	3146456	< 0.005	< 0.005	NA	< 0.005	87%	50%	140%	94%	50%	140%	106%	50%	140%
Dieldrin	3146456	3146456	< 0.005	< 0.005	NA	< 0.005	109%	50%	140%	104%	50%	140%	99%	50%	140%
Endrin	3146456	3146456	< 0.005	< 0.005	NA	< 0.005	84%	50%	140%	101%	50%	140%	106%	50%	140%
Methoxychlor	3146456	3146456	< 0.005	< 0.005	NA	< 0.005	88%	50%	140%	106%	50%	140%	104%	50%	140%
Hexachlorobenzene	3146456	3146456	< 0.005	< 0.005	NA	< 0.005	102%	50%	140%	103%	50%	140%	95%	50%	140%
Hexachlorobutadiene	3146456	3146456	< 0.01	< 0.01	NA	< 0.01	106%	50%	140%	93%	50%	140%	89%	50%	140%
Hexachloroethane	3146456	3146456	< 0.01	< 0.01	NA	< 0.01	86%	50%	140%	83%	50%	140%	86%	50%	140%
Aroclor 1242	3146456	3146456	< 0.10	< 0.10	NA	< 0.10	102%	50%	140%	NA	50%	140%	NA	50%	140%
Aroclor 1248	3146456	3146456	< 0.10	< 0.10	NA	< 0.10	98%	50%	140%	NA	50%	140%	NA	50%	140%
Aroclor 1254	3146456	3146456	< 0.10	< 0.10	NA	< 0.10	97%	50%	140%	NA	50%	140%	NA	50%	140%
Aroclor 1260	3146456	3146456	< 0.10	< 0.10	NA	< 0.10	103%	50%	140%	NA	50%	140%	NA	50%	140%
Polychlorinated Biphenyls	3146456	3146456	< 0.10	< 0.10	NA	< 0.10	104%	50%	140%	102%	50%	140%	89%	50%	140%
<b>O. Reg. 153(511) - PAHs (Soil)</b>															
Naphthalene	3138150		< 0.05	< 0.05	NA	< 0.05	74%	50%	140%	89%	50%	140%	105%	50%	140%
Acenaphthylene	3138150		< 0.05	< 0.05	NA	< 0.05	82%	50%	140%	93%	50%	140%	98%	50%	140%
Acenaphthene	3138150		< 0.05	< 0.05	NA	< 0.05	93%	50%	140%	92%	50%	140%	86%	50%	140%
Fluorene	3138150		< 0.05	< 0.05	NA	< 0.05	91%	50%	140%	98%	50%	140%	93%	50%	140%
Phenanthrene	3138150		< 0.05	< 0.05	NA	< 0.05	98%	50%	140%	98%	50%	140%	92%	50%	140%
Anthracene	3138150		< 0.05	< 0.05	NA	< 0.05	86%	50%	140%	105%	50%	140%	105%	50%	140%
Fluoranthene	3138150		< 0.05	< 0.05	NA	< 0.05	95%	50%	140%	98%	50%	140%	98%	50%	140%
Pyrene	3138150		< 0.05	< 0.05	NA	< 0.05	91%	50%	140%	86%	50%	140%	86%	50%	140%
Benz(a)anthracene	3138150		< 0.05	< 0.05	NA	< 0.05	86%	50%	140%	95%	50%	140%	93%	50%	140%
Chrysene	3138150		< 0.05	< 0.05	NA	< 0.05	96%	50%	140%	98%	50%	140%	92%	50%	140%
Benzo(b)fluoranthene	3138150		< 0.05	< 0.05	NA	< 0.05	93%	50%	140%	88%	50%	140%	105%	50%	140%
Benzo(k)fluoranthene	3138150		< 0.05	< 0.05	NA	< 0.05	92%	50%	140%	85%	50%	140%	78%	50%	140%
Benzo(a)pyrene	3138150		< 0.05	< 0.05	NA	< 0.05	105%	50%	140%	99%	50%	140%	88%	50%	140%



## Quality Assurance

CLIENT NAME: WSP CANADA INC.  
 PROJECT: 211-10139-00  
 SAMPLING SITE: ORBY Rail

AGAT WORK ORDER: 21T822752  
 ATTENTION TO: Vanessa Oetinger  
 SAMPLED BY: Matthew Roy

### Trace Organics Analysis (Continued)

RPT Date: Nov 08, 2021			DUPLICATE			Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD		Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
Indeno(1,2,3-cd)pyrene	3138150		< 0.05	< 0.05	NA	< 0.05	78%	50%	140%	96%	50%	140%	85%	50%	140%
Dibenz(a,h)anthracene	3138150		< 0.05	< 0.05	NA	< 0.05	85%	50%	140%	94%	50%	140%	96%	50%	140%
Benzo(g,h,i)perylene	3138150		< 0.05	< 0.05	NA	< 0.05	96%	50%	140%	98%	50%	140%	93%	50%	140%

Comments: When the average of the sample and duplicate results is less than 5x the RDL, the Relative Percent Difference (RPD) will be indicated as Not Applicable (NA).

Certified By: \_\_\_\_\_



## Method Summary

CLIENT NAME: WSP CANADA INC.

AGAT WORK ORDER: 21T822752

PROJECT: 211-10139-00

ATTENTION TO: Vanessa Oetinger

SAMPLING SITE: ORBY Rail

SAMPLED BY: Matthew Roy

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Soil Analysis			
Antimony	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Arsenic	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Barium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Beryllium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Boron	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Boron (Hot Water Soluble)	MET-93-6104	modified from EPA 6010D and MSA PART 3, CH 21	ICP/OES
Cadmium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Chromium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Cobalt	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Copper	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Lead	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Molybdenum	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Nickel	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Selenium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Silver	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Thallium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Uranium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Vanadium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Zinc	MET 93 -6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Chromium, Hexavalent	INOR-93-6068	modified from EPA 3060 and EPA 7196	SPECTROPHOTOMETER
Cyanide, Free	INOR-93-6052	modified from ON MOECC E3015, SM 4500-CN- I, G-387	TECHNICON AUTO ANALYZER
Mercury	MET-93-6103	modified from EPA 7471B and SM 3112 B	ICP-MS
Electrical Conductivity (2:1)	INOR-93-6036	modified from MSA PART 3, CH 14 and SM 2510 B	EC METER
Sodium Adsorption Ratio (2:1) (Calc.)	INOR-93-6007	modified from EPA 6010D & Analytical Protocol	ICP/OES
pH, 2:1 CaCl <sub>2</sub> Extraction	INOR-93-6031	modified from EPA 9045D and MCKEAGUE 3.11	PH METER



## Method Summary

CLIENT NAME: WSP CANADA INC.  
 PROJECT: 211-10139-00  
 SAMPLING SITE: ORBY Rail

AGAT WORK ORDER: 21T822752  
 ATTENTION TO: Vanessa Oetinger  
 SAMPLED BY: Matthew Roy

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Trace Organics Analysis			
Gamma-Hexachlorocyclohexane	ORG-91-5113	modified from EPA SW-846 3570, 3620C & 8081B	GC/ECD
Heptachlor	ORG-91-5113	modified from EPA SW-846 3570, 3620C & 8081B	GC/ECD
Aldrin	ORG-91-5113	modified from EPA SW-846 3570, 3620C & 8081B	GC/ECD
Heptachlor Epoxide	ORG-91-5113	modified from EPA SW-846 3570, 3620C & 8081B	GC/ECD
Endosulfan I	ORG-91-5113	modified from EPA SW-846 3570, 3620C & 8081B	GC/ECD
Endosulfan II	ORG-91-5113	modified from EPA SW-846 3570, 3620C & 8081B	GC/ECD
Endosulfan	ORG-91-5113	modified from EPA SW-846 3570, 3620C & 8081B	GC/ECD
Alpha-Chlordane	ORG-91-5113	modified from EPA SW-846 3570, 3620C & 8081B	GC/ECD
gamma-Chlordane	ORG-91-5113	modified from EPA SW-846 3570, 3620C & 8081B	GC/ECD
Chlordane	ORG-91-5113	modified from EPA SW-846 3570, 3620C & 8081B	CALCULATION
op'-DDD	ORG-91-5113	modified from EPA SW-846 3570, 3620C & 8081B	GC/ECD
pp'-DDD	ORG-91-5113	modified from EPA SW-846 3570, 3620C & 8081B	GC/ECD
DDD	ORG-91-5113	modified from EPA SW-846 3570, 3620C & 8081B	CALCULATION
op'-DDE	ORG-91-5113	modified from EPA SW-846 3570, 3620C & 8081B	GC/ECD
pp'-DDE	ORG-91-5113	modified from EPA SW-846 3570, 3620C & 8081B	GC/ECD
DDE	ORG-91-5113	modified from EPA SW-846 3570, 3620C & 8081B	GC/ECD
op'-DDT	ORG-91-5113	modified from EPA SW-846 3570, 3620C & 8081B	GC/ECD
pp'-DDT	ORG-91-5113	modified from EPA SW-846 3570, 3620C & 8081B	GC/ECD
DDT	ORG-91-5113	modified from EPA SW-846 3570, 3620C & 8081B	CALCULATION
Dieldrin	ORG-91-5113	modified from EPA SW-846 3570, 3620C & 8081B	GC/ECD
Endrin	ORG-91-5113	modified from EPA SW-846 3570, 3620C & 8081B	GC/ECD
Methoxychlor	ORG-91-5113	modified from EPA SW-846 3570, 3620C & 8081B	GC/ECD
Hexachlorobenzene	ORG-91-5113	modified from EPA SW-846 3570, 3620C & 8081B	GC/ECD
Hexachlorobutadiene	ORG-91-5113	modified from EPA SW-846 3570, 3620C & 8081B	GC/ECD
Hexachloroethane	ORG-91-5113	modified from EPA SW-846 3570, 3620C & 8081B	GC/ECD
Aroclor 1242	ORG-91-5113	modified from EPA SW-846 3570, 3620C & 8082A	GC/ECD
Aroclor 1248	ORG-91-5113	modified from EPA SW-846 3570, 3620C & 8082A	GC/ECD

## Method Summary

CLIENT NAME: WSP CANADA INC.

AGAT WORK ORDER: 21T822752

PROJECT: 211-10139-00

ATTENTION TO: Vanessa Oetinger

SAMPLING SITE: ORBY Rail

SAMPLED BY: Matthew Roy

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Aroclor 1254	ORG-91-5113	modified from EPA SW-846 3570, 3620C & 8082A	GC/ECD
Aroclor 1260	ORG-91-5113	modified from EPA SW-846 3570, 3620C & 8082A	GC/ECD
Polychlorinated Biphenyls	ORG-91-5113	modified from EPA SW-846 3570, 3620C & 8082A	GC/ECD
TCMX	ORG-91-5113	modified from EPA SW-846 3541, 3620,8081	GC/ECD
Decachlorobiphenyl	ORG-91-5113	modified from EPA SW-846 3541, 3620,8081	GC/ECD
Moisture Content	VOL-91-5009	CCME Tier 1 Method	BALANCE
wet weight OC/PCB	ORG-91-5113		BALANCE
Naphthalene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Acenaphthylene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Acenaphthene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Fluorene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Phenanthrene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Anthracene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Fluoranthene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Pyrene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Benz(a)anthracene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Chrysene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Benzo(b)fluoranthene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Benzo(k)fluoranthene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Benzo(a)pyrene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Indeno(1,2,3-cd)pyrene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Dibenz(a,h)anthracene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Benzo(g,h,i)perylene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
1 and 2 Methylnaphthalene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Naphthalene-d8	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Acridine-d9	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Terphenyl-d14	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS







# AGAT Laboratories

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

## Laboratory Use Only

Work Order #: \_\_\_\_\_  
Cooler Quantity: \_\_\_\_\_  
Arrival Temperatures: see pg 1  
Custody Seal Intact:  Yes  No  N/A  
Notes: \_\_\_\_\_

## Chain of Custody Record If this is a Drinking Water sample, please use Drinking Water Chain of Custody Form (potable water consumed by humans)

### Report Information:

Company: \_\_\_\_\_  
Contact: See Page 1  
Address: \_\_\_\_\_  
Phone: \_\_\_\_\_ Fax: \_\_\_\_\_  
Reports to be sent to:  
1. Email: \_\_\_\_\_  
2. Email: \_\_\_\_\_

### Regulatory Requirements:

(Please check all applicable boxes)

Regulation 153/04  Excess Soils R406  Sewer Use  
 Ind/Com  Sanitary  Storm  
 Res/Park  Agriculture  Region  
 Agriculture  Regulation 558  Prov. Water Quality Objectives (PWQO)  
 CCME  Other  
 Coarse  Fine  Indicate One

### Is this submission for a Record of Site Condition?

Yes  No

### Report Guideline on Certificate of Analysis

Yes  No

### Project Information:

Project: \_\_\_\_\_  
Site Location: \_\_\_\_\_  
Sampled By: \_\_\_\_\_  
AGAT Quote #: \_\_\_\_\_ PO: \_\_\_\_\_  
Please note: If quotation number is not provided, client will be billed full price for analysis.

### Invoice Information:

Bill To Same: Yes  No

Company: \_\_\_\_\_  
Contact: \_\_\_\_\_  
Address: \_\_\_\_\_  
Email: \_\_\_\_\_

### Sample Matrix Legend

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

### Turnaround Time (TAT) Required:

**Regular TAT**  5 to 7 Business Days

### Rush TAT (Rush Surcharges Apply)

3 Business Days  2 Business Days  Next Business Day

**OR** Date Required (Rush Surcharges May Apply): \_\_\_\_\_

Please provide prior notification for rush TAT  
\*TAT is exclusive of weekends and statutory holidays

For 'Same Day' analysis, please contact your AGAT CPM

Sample Identification	Date Sampled	Time Sampled	# of Containers	Sample Matrix	Comments/ Special Instructions	Y / N	Field Filtered - Metals, Hg, CrVI, DOC	0. Reg 153	0. Reg 558	0. Reg 406	Potentially Hazardous or High Concentration (Y/N)		
								Metals & Inorganics Metals - <input type="checkbox"/> CrVI, <input type="checkbox"/> Hg, <input type="checkbox"/> HWSB BTEX, F1-F4 PHCs Analyze F4G if required <input type="checkbox"/> Yes <input type="checkbox"/> No	Landfill Disposal Characterization TCLP: TCLP: <input type="checkbox"/> MB1 <input type="checkbox"/> VOCs <input type="checkbox"/> ABNS <input type="checkbox"/> B1e1P <input type="checkbox"/> PCBs	Excess Soils SPLP Rainwater Leach SPLP: <input type="checkbox"/> Metals <input type="checkbox"/> VOCs <input type="checkbox"/> SVOCs	Excess Soils Characterization Package pH, IC/PMS Metals, BTEX, F1-F4	Salt - EC/SAR	OC Pesticides
BH21-27 S1	10/28/21	PM	1	S				X					
BH21-27 S2		PM	1	S									
BH21-27 S3		PM	1	S									
BH21-29 S1		AM	1	S									
BH21-29 S2		AM	1	S				X					
BH21-29 S3		AM	1	S				X					
BH21-33 S1		AM	1	S									
BH21-33 S2		AM	1	S									
BH21-33 S3		AM	1	S				X					
BH21-34 S1		AM	1	S									
<del>BH21-34 S2</del> QARC-1		AM	1	S									

Samples Relinquished By (Print Name and Sign): <u>Matthew Ray</u>	Date: 10/28/21 Time: (700)	Samples Received By (Print Name and Sign): <u>ABellana</u>	Date: _____ Time: _____
Samples Relinquished By (Print Name and Sign):	Date: _____ Time: _____	Samples Received By (Print Name and Sign):	Date: _____ Time: _____
Samples Relinquished By (Print Name and Sign):	Date: _____ Time: _____	Samples Received By (Print Name and Sign):	Date: _____ Time: _____

Page 2 of 4

No: **T 126077**



### Laboratory Use Only

Work Order #: \_\_\_\_\_

Cooler Quantity: \_\_\_\_\_

Arrival Temperatures: see pg 1

Custody Seal Intact:  Yes  No  N/A

Notes: \_\_\_\_\_

## Chain of Custody Record

If this is a Drinking Water sample, please use Drinking Water Chain of Custody Form (potable water consumed by humans)

### Report Information:

Company: \_\_\_\_\_

Contact: See Page 1

Address: \_\_\_\_\_

Phone: \_\_\_\_\_ Fax: \_\_\_\_\_

Reports to be sent to:

1. Email: \_\_\_\_\_

2. Email: \_\_\_\_\_

### Regulatory Requirements:

(Please check all applicable boxes)

Regulation 153/04  Excess Soils R406  Sewer Use

Table 3 Indicate One  Sanitary  Storm

Wind/Corn  Res/Park  Agriculture  Regulation 558  Prov. Water Quality Objectives (PWQO)

Soil Texture (Check One)  CCME  Other

Coarse  Fine  Indicate One

### Turnaround Time (TAT) Required:

**Regular TAT**  5 to 7 Business Days

**Rush TAT (Rush Surcharges Apply)**

3 Business Days  2 Business Days  Next Business Day

**OR** Date Required (Rush Surcharges May Apply): \_\_\_\_\_

### Project Information:

Project: \_\_\_\_\_

Site Location: \_\_\_\_\_

Sampled By: \_\_\_\_\_

AGAT Quote #: \_\_\_\_\_ PO: \_\_\_\_\_

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

### Is this submission for a Record of Site Condition?

Yes  No

### Report Guideline on Certificate of Analysis

Yes  No

Please provide prior notification for rush TAT  
\*TAT is exclusive of weekends and statutory holidays

For 'Same Day' analysis, please contact your AGAT CPM

### Invoice Information:

Bill To Same: Yes  No

Company: \_\_\_\_\_

Contact: \_\_\_\_\_

Address: \_\_\_\_\_

Email: \_\_\_\_\_

### Sample Matrix Legend

- B** Biota
- GW** Ground Water
- O** Oil
- P** Paint
- S** Soil
- SD** Sediment
- SW** Surface Water

Sample Identification	Date Sampled	Time Sampled	# of Containers	Sample Matrix	Comments/ Special Instructions	Y / N	Field Filtered - Metals, Hg, CrVI, DOC	0. Reg 153	0. Reg 406	Potentially Hazardous or High Concentration (Y/N)
BH21-34 S2	10/24/21	AM	1	S						
QAQC-2		AM	1	S						
BH21-34 S3		AM	1	S						
QAQC-3		AM	1	S						
BH21-35 S1	10/27/21	PM	1	S						
BH21-35 S2		PM	1	S						
BH21-35 S3		PM	1	S						
BH21-37 S1		PM	1	S						
BH21-37 S2		PM	1	S						
BH21-37 S3		PM	1	S						

Samples Relinquished By (Print Name and Sign): <u>Matthew Roy</u>	Date: <u>10/28/21</u>	Time: <u>1700</u>	Samples Received By (Print Name and Sign): <u>Abellano</u>	Date: <u>21 OCT 28</u>	Time: <u>5:09 PM</u>
Samples Relinquished By (Print Name and Sign): _____	Date: _____	Time: _____	Samples Received By (Print Name and Sign): _____	Date: _____	Time: _____
Samples Relinquished By (Print Name and Sign): _____	Date: _____	Time: _____	Samples Received By (Print Name and Sign): _____	Date: _____	Time: _____

No: **T 126078**



**Laboratory Use Only**

Work Order #: \_\_\_\_\_

Cooler Quantity: \_\_\_\_\_

Arrival Temperatures: see pg 1

Custody Seal Intact:  Yes  No  N/A

Notes: \_\_\_\_\_

**Chain of Custody Record** If this is a Drinking Water sample, please use Drinking Water Chain of Custody Form (potable water consumed by humans)

**Report Information:**

Company: \_\_\_\_\_

Contact: See Page 1

Address: \_\_\_\_\_

Phone: \_\_\_\_\_ Fax: \_\_\_\_\_

Reports to be sent to:

1. Email: \_\_\_\_\_

2. Email: \_\_\_\_\_

**Regulatory Requirements:**  
*(Please check all applicable boxes)*

Regulation 153/04  Excess Soils R406  Sewer Use  
 Sanitary  Storm

Table 3  Indicate One  
 Land/Com  Indicate One

Res/Park  Agriculture  Region

Regulation 558  Prov. Water Quality Objectives (PWQO)

CCME  Other

Soil Texture (Check One)  
 Coarse  Fine  Indicate One

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

Report Guideline on Certificate of Analysis  
 Yes  No

**Turnaround Time (TAT) Required:**

**Regular TAT**  5 to 7 Business Days

**Rush TAT** (Rush Surcharges Apply)

3 Business Days  2 Business Days  Next Business Day

OR Date Required (Rush Surcharges May Apply): \_\_\_\_\_

Please provide prior notification for rush TAT  
 \*TAT is exclusive of weekends and statutory holidays

For 'Same Day' analysis, please contact your AGAT CPM

**Project Information:**

Project: \_\_\_\_\_

Site Location: \_\_\_\_\_

Sampled By: \_\_\_\_\_

AGAT Quote #: \_\_\_\_\_ PO: \_\_\_\_\_

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

**Invoice Information:** Bill To Same: Yes  No

Company: \_\_\_\_\_

Contact: \_\_\_\_\_

Address: \_\_\_\_\_

Email: \_\_\_\_\_

- Sample Matrix Legend**
- B** Biota
  - GW** Ground Water
  - O** Oil
  - P** Paint
  - S** Soil
  - SD** Sediment
  - SW** Surface Water

Sample Matrix	Y / N	0. Reg 153				0. Reg 558				0. Reg 406				Potentially Hazardous or High Concentration (Y/N)	
		Metals & Inorganics	Metals - Cr-VI, Hg, HWSB	BTEX, F1-F4 PHCs	Analyze F4G if required	PAHs	PCBs	VOC	Landfill Disposal Characterization TOLP: M&I, VOCs, ABNs, Bi&P, PCBs	Excess Soils SPLP Rainwater Leach	SPLP: Metals, VOCs, SWOCs	Excess Soils Characterization Package pH, IC/PMS Metals, BTEX, F1-F4	Salt - EC/SAR		
BH21-38 S1															
BH21-38 S2															
BH21-38 S3		X													
BH21-40 S1															
BH21-40 S3		X				X									

Sample Identification	Date Sampled	Time Sampled	# of Containers	Sample Matrix	Comments/ Special Instructions
BH21-38 S1	10/27/21	AM	1	S	
BH21-38 S2		AM	1	S	
BH21-38 S3		AM	1	S	
BH21-40 S1		AM	1	S	
BH21-40 S3		AM	2	S	

Samples Relinquished By (Print Name and Sign): <u>Matthew Roy</u>	Date: <u>10/28/21</u> Time: <u>1700</u>	Samples Received By (Print Name and Sign): <u>ABellanna</u>	Date: _____ Time: _____
Samples Relinquished By (Print Name and Sign): _____	Date: _____ Time: _____	Samples Received By (Print Name and Sign): _____	Date: _____ Time: _____
Samples Relinquished By (Print Name and Sign): _____	Date: _____ Time: _____	Samples Received By (Print Name and Sign): _____	Date: _____ Time: _____

21 OCT 28 5:10 PM  
Page 4 of 4  
No: T **126079**



CLIENT NAME: WSP CANADA INC.  
2 INTERNATIONAL BLVD SUITE 201  
ETOBICOKE, ON M9W1A2  
(416) 798-0065

ATTENTION TO: Vanessa Oetinger

PROJECT: 211-10139-00

AGAT WORK ORDER: 21T826519

SOIL ANALYSIS REVIEWED BY: Jacky Zhu, Spectroscopy Technician

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

DATE REPORTED: Nov 16, 2021

PAGES (INCLUDING COVER): 23

VERSION\*: 1

Should you require any information regarding this analysis please contact your client services representative at (905) 712-5100

\*Notes

**Disclaimer:**

- All work conducted herein has been done using accepted standard protocols, and generally accepted practices and methods. AGAT test methods may incorporate modifications from the specified reference methods to improve performance.
- All samples will be disposed of within 30 days after receipt unless a Long Term Storage Agreement is signed and returned. Some specialty analysis may be exempt, please contact your Client Project Manager for details.
- AGAT's liability in connection with any delay, performance or non-performance of these services is only to the Client and does not extend to any other third party. Unless expressly agreed otherwise in writing, AGAT's liability is limited to the actual cost of the specific analysis or analyses included in the services.
- This Certificate shall not be reproduced except in full, without the written approval of the laboratory.
- The test results reported herewith relate only to the samples as received by the laboratory.
- Application of guidelines is provided "as is" without warranty of any kind, either expressed or implied, including, but not limited to, warranties of merchantability, fitness for a particular purpose, or non-infringement. AGAT assumes no responsibility for any errors or omissions in the guidelines contained in this document.
- All reportable information as specified by ISO/IEC 17025:2017 is available from AGAT Laboratories upon request.



## Certificate of Analysis

AGAT WORK ORDER: 21T826519

PROJECT: 211-10139-00

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

CLIENT NAME: WSP CANADA INC.

ATTENTION TO: Vanessa Oetinger

SAMPLING SITE:

SAMPLED BY:

### O. Reg. 153(511) - Metals & Inorganics (Soil)

DATE RECEIVED: 2021-11-05

DATE REPORTED: 2021-11-16

Parameter	Unit	SAMPLE DESCRIPTION:									
		SAMPLE TYPE:		BH21-41 SS2	BH21-39 S1	BH21-31 S1	BH21-24 S3	BH21-23 S2	BH21-17 S1	BH21-9 SS2	BH21-11 SS1
		G / S	RDL	2021-11-05	2021-11-05	2021-11-05	2021-11-05	2021-11-05	2021-11-05	2021-11-04	2021-11-04
Antimony	µg/g	40	0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8
Arsenic	µg/g	18	1	26	6	8	6	7	7	3	2
Barium	µg/g	670	2.0	18.3	40.7	58.8	41.5	54.8	62.8	25.4	10.1
Beryllium	µg/g	8	0.4	<0.4	0.4	0.5	0.4	0.6	0.6	<0.4	<0.4
Boron	µg/g	120	5	10	15	7	7	10	9	<5	<5
Boron (Hot Water Soluble)	µg/g	2	0.10	0.13	0.36	0.12	<0.10	0.26	0.66	0.18	<0.10
Cadmium	µg/g	1.9	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Chromium	µg/g	160	5	23	14	17	16	22	20	12	<5
Cobalt	µg/g	80	0.5	8.3	6.3	10.0	9.8	11.2	7.9	4.6	1.9
Copper	µg/g	230	1.0	24.0	12.3	28.5	34.8	36.6	28.8	8.0	9.0
Lead	µg/g	120	1	52	7	9	7	9	22	7	2
Molybdenum	µg/g	40	0.5	2.1	<0.5	<0.5	<0.5	0.7	0.7	<0.5	<0.5
Nickel	µg/g	270	1	8	13	21	20	25	19	9	2
Selenium	µg/g	5.5	0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8
Silver	µg/g	40	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Thallium	µg/g	3.3	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Uranium	µg/g	33	0.50	<0.50	<0.50	<0.50	<0.50	0.52	<0.50	<0.50	<0.50
Vanadium	µg/g	86	0.4	25.2	21.3	24.8	23.4	29.5	29.0	24.7	10.4
Zinc	µg/g	340	5	121	48	51	53	63	77	28	18
Chromium, Hexavalent	µg/g	8	0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Cyanide, Free	µg/g	0.051	0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040
Mercury	µg/g	3.9	0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Electrical Conductivity (2:1)	mS/cm	1.4	0.005	0.152	0.210	0.107	0.103	0.157	0.186	0.096	0.061
Sodium Adsorption Ratio (2:1) (Calc.)	N/A	12	N/A	0.121	0.758	0.060	0.095	0.370	0.055	0.070	0.055
pH, 2:1 CaCl2 Extraction	pH Units	5.0-9.0	NA	7.69	7.49	7.60	7.66	7.59	7.16	7.29	7.82

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**AGAT** Laboratories

# Certificate of Analysis

AGAT WORK ORDER: 21T826519

PROJECT: 211-10139-00

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

CLIENT NAME: WSP CANADA INC.

ATTENTION TO: Vanessa Oetinger

SAMPLING SITE:

SAMPLED BY:

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

DATE RECEIVED: 2021-11-05

DATE REPORTED: 2021-11-16

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 3: Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition - Soil - Industrial/Commercial/Community Property Use - Coarse Textured Soils

Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

3176795-3176901 EC was determined on the DI water extract obtained from the 2:1 leaching procedure (2 parts DI water:1 part soil). pH was determined on the 0.01M CaCl2 extract prepared at 2:1 ratio. SAR is a calculated parameter.

Analysis performed at AGAT Toronto (unless marked by \*)

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CLIENT NAME: WSP CANADA INC.

ATTENTION TO: Vanessa Oetinger

SAMPLING SITE:

SAMPLED BY:

### O. Reg. 153(511) - OC Pesticides (Soil)

DATE RECEIVED: 2021-11-05

DATE REPORTED: 2021-11-16

SAMPLE DESCRIPTION: BH21-11 SS2

SAMPLE TYPE: Soil

DATE SAMPLED: 2021-11-04

3176902

Parameter	Unit	G / S	RDL	3176902
Hexachloroethane	µg/g	0.21	0.01	<0.01
Gamma-Hexachlorocyclohexane	µg/g	0.056	0.005	<0.005
Heptachlor	µg/g	0.19	0.005	<0.005
Aldrin	µg/g	0.088	0.005	<0.005
Heptachlor Epoxide	µg/g	0.05	0.005	<0.005
Endosulfan I	µg/g		0.005	<0.005
Endosulfan II	µg/g		0.005	<0.005
Endosulfan	µg/g	0.3	0.005	<0.005
Alpha-Chlordane	µg/g		0.005	<0.005
gamma-Chlordane	µg/g		0.005	<0.005
Chlordane	µg/g	0.05	0.007	<0.007
op'-DDE	ug/g		0.005	<0.005
pp'-DDE	µg/g		0.005	<0.005
DDE	µg/g	0.52	0.007	<0.007
op'-DDD	µg/g		0.005	<0.005
pp'-DDD	µg/g		0.005	<0.005
DDD	µg/g	4.6	0.007	<0.007
op'-DDT	µg/g		0.005	<0.005
pp'-DDT	µg/g		0.005	<0.005
DDT (Total)	µg/g	1.4	0.007	<0.007
Dieldrin	µg/g	0.088	0.005	<0.005
Endrin	µg/g	0.04	0.005	<0.005
Methoxychlor	µg/g	1.6	0.005	<0.005
Hexachlorobenzene	µg/g	0.66	0.005	<0.005
Hexachlorobutadiene	µg/g	0.031	0.01	<0.01
Moisture Content	%		0.1	5.2
wet weight OC	g		0.01	10.58
Surrogate	Unit	Acceptable Limits		
TCMX	%	50-140		105
Decachlorobiphenyl	%	50-140		112

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ATTENTION TO: Vanessa Oetinger

SAMPLING SITE:

SAMPLED BY:

O. Reg. 153(511) - OC Pesticides (Soil)

DATE RECEIVED: 2021-11-05

DATE REPORTED: 2021-11-16

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 3: Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition - Soil - Industrial/Commercial/Community Property Use - Coarse Textured Soils  
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

3176902 Results are based on the dry weight of the soil.  
DDT total is a calculated parameter. The calculated value is the sum of op'DDT and pp'DDT.  
DDD total is a calculated parameter. The calculated value is the sum of op'DDD and pp'DDD.  
DDE total is a calculated parameter. The calculated value is the sum of op'DDE and pp'DDE.  
Endosulfan total is a calculated parameter. The calculated value is the sum of Endosulfan I and Endosulfan II.  
Chlordane total is a calculated parameter. The calculated value is the sum of Alpha-Chlordane and Gamma-Chlordane.  
The calculated parameters are non-accredited. The parameters that are components of the calculation are accredited.

Analysis performed at AGAT Toronto (unless marked by \*)

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PROJECT: 211-10139-00

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CLIENT NAME: WSP CANADA INC.

ATTENTION TO: Vanessa Oetinger

SAMPLING SITE:

SAMPLED BY:

### O. Reg. 153(511) - OC Pesticides + PCBs (Soil)

DATE RECEIVED: 2021-11-05

DATE REPORTED: 2021-11-16

Parameter	Unit	SAMPLE DESCRIPTION:								
		SAMPLE TYPE:		BH21-41 SS2	BH21-39 S3	BH21-31 S2	BH21-24 S1	BH21-23 S3	BH21-17 S2	BH21-9 SS1
		G / S	RDL	Soil	Soil	Soil	Soil	Soil	Soil	Soil
		DATE SAMPLED:								
		2021-11-05	2021-11-05	2021-11-05	2021-11-05	2021-11-05	2021-11-05	2021-11-05	2021-11-05	2021-11-04
		3176795	3176804	3176878	3176880	3176885	3176887	3176889		
Gamma-Hexachlorocyclohexane	µg/g	0.056	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Heptachlor	µg/g	0.19	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Aldrin	µg/g	0.088	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Heptachlor Epoxide	µg/g	0.05	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Endosulfan I	µg/g		0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Endosulfan II	µg/g		0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Endosulfan	µg/g	0.3	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Alpha-Chlordane	µg/g		0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
gamma-Chlordane	µg/g		0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Chlordane	µg/g	0.05	0.007	<0.007	<0.007	<0.007	<0.007	<0.007	<0.007	<0.007
op'-DDD	µg/g		0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
pp'-DDD	µg/g		0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
DDD	µg/g	4.6	0.007	<0.007	<0.007	<0.007	<0.007	<0.007	<0.007	<0.007
op'-DDE	ug/g		0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
pp'-DDE	µg/g		0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
DDE	µg/g	0.52	0.007	<0.007	<0.007	<0.007	<0.007	<0.007	<0.007	<0.007
op'-DDT	µg/g		0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
pp'-DDT	µg/g		0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
DDT	µg/g	1.4	0.007	<0.007	<0.007	<0.007	<0.007	<0.007	<0.007	<0.007
Dieldrin	µg/g	0.088	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Endrin	µg/g	0.04	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Methoxychlor	µg/g	1.6	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Hexachlorobenzene	µg/g	0.66	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Hexachlorobutadiene	µg/g	0.031	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Hexachloroethane	µg/g	0.21	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Aroclor 1242	µg/g		0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Aroclor 1248	µg/g		0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Aroclor 1254	µg/g		0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Aroclor 1260	µg/g		0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Polychlorinated Biphenyls	µg/g	1.1	0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10

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AGAT WORK ORDER: 21T826519

PROJECT: 211-10139-00

5835 COOPERS AVENUE  
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CLIENT NAME: WSP CANADA INC.

ATTENTION TO: Vanessa Oetinger

SAMPLING SITE:

SAMPLED BY:

### O. Reg. 153(511) - OC Pesticides + PCBs (Soil)

DATE RECEIVED: 2021-11-05

DATE REPORTED: 2021-11-16

		SAMPLE DESCRIPTION:		BH21-41 SS2	BH21-39 S3	BH21-31 S2	BH21-24 S1	BH21-23 S3	BH21-17 S2	BH21-9 SS1
		SAMPLE TYPE:		Soil	Soil	Soil	Soil	Soil	Soil	Soil
		DATE SAMPLED:		2021-11-05	2021-11-05	2021-11-05	2021-11-05	2021-11-05	2021-11-05	2021-11-04
Parameter	Unit	G / S	RDL	3176795	3176804	3176878	3176880	3176885	3176887	3176889
Moisture Content	%		0.1	18.9	22.8	14.4	20.0	12.8	14.6	17.6
wet weight OC/PCB	g		NA	10.86	10.69	10.36	10.52	10.66	10.22	10.23
Surrogate	Unit	Acceptable Limits								
TCMX	%	50-140		79	87	97	83	76	82	93
Decachlorobiphenyl	%	50-140		84	91	99	87	82	87	112

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 3: Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition - Soil - Industrial/Commercial/Community Property Use - Coarse Textured Soils

Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

3176795-3176889 Results are based on the dry weight of the soil.

DDT total is a calculated parameter. The calculated value is the sum of op'DDT and pp'DDT.

DDD total is a calculated parameter. The calculated value is the sum of op'DDD and pp'DDD.

DDE total is a calculated parameter. The calculated value is the sum of op'DDE and pp'DDE.

Endosulfan total is a calculated parameter. The calculated value is the sum of Endosulfan I and Endosulfan II.

Chlordane total is a calculated parameter. The calculated value is the sum of Alpha-Chlordane and Gamma-Chlordane.

PCB total is a calculated parameter. The calculated value is the sum of Aroclor 1242, Aroclor 1248, Aroclor 1254 and Aroclor 1260.

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

Analysis performed at AGAT Toronto (unless marked by \*)

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PROJECT: 211-10139-00

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CLIENT NAME: WSP CANADA INC.

ATTENTION TO: Vanessa Oetinger

SAMPLING SITE:

SAMPLED BY:

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

DATE RECEIVED: 2021-11-05

DATE REPORTED: 2021-11-16

Parameter	Unit	SAMPLE DESCRIPTION:		BH21-41 SS1	BH21-39 S3	BH21-31 S3	BH21-24 S2	BH21-23 S1	BH21-17 S3	BH21-9 SS3	BH21-11 SS2	
		SAMPLE TYPE:		Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
		DATE SAMPLED:		2021-11-05	2021-11-05	2021-11-05	2021-11-05	2021-11-05	2021-11-05	2021-11-05	2021-11-04	2021-11-04
		G / S	RDL	3176793	3176804	3176879	3176881	3176883	3176888	3176892	3176902	
Naphthalene	µg/g	9.6	0.05	0.08	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	
Acenaphthylene	µg/g	0.15	0.05	0.08	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	
Acenaphthene	µg/g	96	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	
Fluorene	µg/g	62	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	
Phenanthrene	µg/g	12	0.05	0.08	<0.05	<0.05	<0.05	<0.05	<0.05	0.10	<0.05	
Anthracene	µg/g	0.67	0.05	0.06	<0.05	<0.05	<0.05	<0.05	<0.05	0.18	<0.05	
Fluoranthene	µg/g	9.6	0.05	0.38	<0.05	<0.05	<0.05	<0.05	<0.05	0.19	<0.05	
Pyrene	µg/g	96	0.05	0.36	<0.05	<0.05	<0.05	<0.05	<0.05	0.18	<0.05	
Benz(a)anthracene	µg/g	0.96	0.05	0.18	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	
Chrysene	µg/g	9.6	0.05	0.14	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	
Benzo(b)fluoranthene	µg/g	0.96	0.05	0.25	<0.05	<0.05	<0.05	0.09	<0.05	0.05	<0.05	
Benzo(k)fluoranthene	µg/g	0.96	0.05	0.24	<0.05	<0.05	<0.05	0.09	<0.05	0.06	<0.05	
Benzo(a)pyrene	µg/g	0.3	0.05	<0.05	<0.05	<0.05	<0.05	0.05	<0.05	<0.05	<0.05	
Indeno(1,2,3-cd)pyrene	µg/g	0.76	0.05	0.08	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	
Dibenz(a,h)anthracene	µg/g	0.1	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	
Benzo(g,h,i)perylene	µg/g	9.6	0.05	0.08	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	
1 and 2 Methylnaphthalene	µg/g	76	0.05	0.18	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	
Moisture Content	%		0.1	22.5	22.8	12.2	19.8	16.8	13.3	9.9	5.2	
Surrogate	Unit	Acceptable Limits										
Naphthalene-d8	%	50-140		81	<1	<1	<1	65	<1	102	78	
Acridine-d9	%	50-140		62	<1	<1	<1	62	<1	61	88	
Terphenyl-d14	%	50-140		110	<1	<1	<1	74	<1	73	74	

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 3: Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition - Soil -

Industrial/Commercial/Community Property Use - Coarse Textured Soils

Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

3176793-3176902 Results are based on the dry weight of the soil.

Note: The result for Benzo(b)Fluoranthene is the total of the Benzo(b)&j)Fluoranthene isomers because the isomers co-elute on the GC column.

2- and 1-Methyl Naphthalene is a calculated parameter. The calculated value is the sum of 2-Methyl Naphthalene and 1-Methyl Naphthalene.

Analysis performed at AGAT Toronto (unless marked by \*)

Certified By:





## Certificate of Analysis

AGAT WORK ORDER: 21T826519

PROJECT: 211-10139-00

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CLIENT NAME: WSP CANADA INC.

ATTENTION TO: Vanessa Oetinger

SAMPLING SITE:

SAMPLED BY:

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

DATE RECEIVED: 2021-11-05

DATE REPORTED: 2021-11-16

Parameter	Unit	SAMPLE DESCRIPTION:		BH21-9 SS5	BH21-11
		G / S	RDL	3176893	3176906
Benzene	µg/g	0.32	0.02	<0.02	<0.02
Toluene	µg/g	68	0.05	<0.05	<0.05
Ethylbenzene	µg/g	9.5	0.05	<0.05	<0.05
m & p-Xylene	µg/g		0.05	<0.05	<0.05
o-Xylene	µg/g		0.05	<0.05	<0.05
Xylenes (Total)	µg/g	26	0.05	<0.05	<0.05
F1 (C6 - C10)	µg/g	55	5	<5	<5
F1 (C6 to C10) minus BTEX	µg/g	55	5	<5	<5
F2 (C10 to C16)	µg/g	230	10	<10	<10
F3 (C16 to C34)	µg/g	1700	50	<50	<50
F4 (C34 to C50)	µg/g	3300	50	<50	<50
Gravimetric Heavy Hydrocarbons	µg/g	3300	50	NA	NA
Moisture Content	%		0.1	14.7	17.7
Surrogate	Unit	Acceptable Limits			
Toluene-d8	% Recovery	60-140	91	93	
Terphenyl	%	60-140	108	95	

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CLIENT NAME: WSP CANADA INC.

ATTENTION TO: Vanessa Oetinger

SAMPLING SITE:

SAMPLED BY:

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

DATE RECEIVED: 2021-11-05

DATE REPORTED: 2021-11-16

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 3: Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition - Soil - Industrial/Commercial/Community Property Use - Coarse Textured Soils  
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

3176893-3176906 Results are based on sample dry weight.  
The C6-C10 fraction is calculated using Toluene response factor.  
Xylenes is a calculated parameter. The calculated value is the sum of m&p-Xylene and o-Xylene.  
C6-C10 (F1 minus BTEX) is a calculated parameter. The calculated value is F1 minus BTEX.  
The calculated parameters are non-accredited. The parameters that are components of the calculation are accredited.  
The C10 - C16, C16 - C34, and C34 - C50 fractions are calculated using the average response factor for n-C10, n-C16, and n-C34.  
Gravimetric Heavy Hydrocarbons are not included in the Total C16-C50 and are only determined if the chromatogram of the C34 - C50 hydrocarbons indicates that hydrocarbons >C50 are present.  
The chromatogram has returned to baseline by the retention time of nC50.  
Total C6 - C50 results are corrected for BTEX contribution.  
This method complies with the Reference Method for the CWS PHC and is validated for use in the laboratory.  
nC6 and nC10 response factors are within 30% of Toluene response factor.  
nC10, nC16 and nC34 response factors are within 10% of their average.  
C50 response factor is within 70% of nC10 + nC16 + nC34 average.  
Linearity is within 15%.  
Extraction and holding times were met for this sample.  
Fractions 1-4 are quantified with the contribution of PAHs. Under Ontario Regulation 153, results are considered valid without determining the PAH contribution if not requested by the client.  
Quality Control Data is available upon request.

Analysis performed at AGAT Toronto (unless marked by \*)

Certified By:



**Exceedance Summary**

AGAT WORK ORDER: 21T826519

PROJECT: 211-10139-00

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

CLIENT NAME: WSP CANADA INC.

ATTENTION TO: Vanessa Oetinger

SAMPLEID	SAMPLE TITLE	GUIDELINE	ANALYSIS PACKAGE	PARAMETER	UNIT	GUIDEVALUE	RESULT
3176795	BH21-41 SS2	ON T3 S ICC CT	O. Reg. 153(511) - Metals & Inorganics (Soil)	Arsenic	µg/g	18	26



## Quality Assurance

CLIENT NAME: WSP CANADA INC.  
 PROJECT: 211-10139-00  
 SAMPLING SITE:

AGAT WORK ORDER: 21T826519  
 ATTENTION TO: Vanessa Oetinger  
 SAMPLED BY:

Soil Analysis															
RPT Date: Nov 16, 2021			DUPLICATE				Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE		MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Measured Value		Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper

O. Reg. 153(511) - Metals & Inorganics (Soil)															
Antimony	3170083		<0.8	<0.8	NA	< 0.8	134%	70%	130%	107%	80%	120%	106%	70%	130%
Arsenic	3170083		3	3	NA	< 1	116%	70%	130%	109%	80%	120%	116%	70%	130%
Barium	3170083		14.6	14.6	0.0%	< 2.0	110%	70%	130%	101%	80%	120%	106%	70%	130%
Beryllium	3170083		<0.4	<0.4	NA	< 0.4	107%	70%	130%	104%	80%	120%	89%	70%	130%
Boron	3170083		6	7	NA	< 5	101%	70%	130%	106%	80%	120%	97%	70%	130%
Boron (Hot Water Soluble)	3176795	3176795	0.13	0.12	NA	< 0.10	97%	60%	140%	103%	70%	130%	100%	60%	140%
Cadmium	3170083		<0.5	<0.5	NA	< 0.5	116%	70%	130%	105%	80%	120%	109%	70%	130%
Chromium	3170083		8	8	NA	< 5	91%	70%	130%	96%	80%	120%	97%	70%	130%
Cobalt	3170083		3.4	3.3	3.0%	< 0.5	94%	70%	130%	102%	80%	120%	101%	70%	130%
Copper	3170083		7.6	7.5	1.3%	< 1.0	106%	70%	130%	101%	80%	120%	98%	70%	130%
Lead	3170083		3	4	NA	< 1	112%	70%	130%	93%	80%	120%	84%	70%	130%
Molybdenum	3170083		<0.5	<0.5	NA	< 0.5	104%	70%	130%	108%	80%	120%	120%	70%	130%
Nickel	3170083		5	5	0.0%	< 1	98%	70%	130%	106%	80%	120%	101%	70%	130%
Selenium	3170083		<0.8	<0.8	NA	< 0.8	100%	70%	130%	112%	80%	120%	118%	70%	130%
Silver	3170083		<0.5	<0.5	NA	< 0.5	102%	70%	130%	107%	80%	120%	97%	70%	130%
Thallium	3170083		<0.5	<0.5	NA	< 0.5	88%	70%	130%	111%	80%	120%	102%	70%	130%
Uranium	3170083		0.56	0.53	NA	< 0.50	95%	70%	130%	103%	80%	120%	88%	70%	130%
Vanadium	3170083		17.7	15.6	12.6%	< 0.4	106%	70%	130%	105%	80%	120%	111%	70%	130%
Zinc	3170083		24	24	NA	< 5	110%	70%	130%	114%	80%	120%	113%	70%	130%
Chromium, Hexavalent	3190716		<0.2	<0.2	NA	< 0.2	102%	70%	130%	93%	80%	120%	88%	70%	130%
Cyanide, Free	3188795		<0.040	<0.040	NA	< 0.040	98%	70%	130%	109%	80%	120%	92%	70%	130%
Mercury	3170083		<0.10	<0.10	NA	< 0.10	114%	70%	130%	102%	80%	120%	101%	70%	130%
Electrical Conductivity (2:1)	3176795	3176795	0.152	0.155	2.0%	< 0.005	108%	80%	120%						
Sodium Adsorption Ratio (2:1) (Calc.)	3187468		4.92	4.95	0.6%	NA									
pH, 2:1 CaCl2 Extraction	3176891	3176891	7.29	7.29	0.0%	NA	101%	80%	120%						

Comments: NA signifies Not Applicable.

pH duplicates QA acceptance criteria was met relative as stated in Table 5-15 of Analytical Protocol document.

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

For a multi-element scan for lab control standards and matrix spikes, up to 10% of analytes may exceed the quoted limits by up to 10% absolute and it is considered acceptable.

Certified By: \_\_\_\_\_



## Quality Assurance

CLIENT NAME: WSP CANADA INC.

AGAT WORK ORDER: 21T826519

PROJECT: 211-10139-00

ATTENTION TO: Vanessa Oetinger

SAMPLING SITE:

SAMPLED BY:

Trace Organics Analysis															
RPT Date: Nov 16, 2021			DUPLICATE				Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE		MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Measured Value		Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper

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

Naphthalene	3176902	3176902	< 0.05	< 0.05	NA	< 0.05	74%	50%	140%	89%	50%	140%	105%	50%	140%
Acenaphthylene	3176902	3176902	< 0.05	< 0.05	NA	< 0.05	82%	50%	140%	93%	50%	140%	98%	50%	140%
Acenaphthene	3176902	3176902	< 0.05	< 0.05	NA	< 0.05	93%	50%	140%	92%	50%	140%	86%	50%	140%
Fluorene	3176902	3176902	< 0.05	< 0.05	NA	< 0.05	91%	50%	140%	98%	50%	140%	93%	50%	140%
Phenanthrene	3176902	3176902	< 0.05	< 0.05	NA	< 0.05	98%	50%	140%	98%	50%	140%	92%	50%	140%
Anthracene	3176902	3176902	< 0.05	< 0.05	NA	< 0.05	86%	50%	140%	105%	50%	140%	105%	50%	140%
Fluoranthene	3176902	3176902	< 0.05	< 0.05	NA	< 0.05	95%	50%	140%	98%	50%	140%	98%	50%	140%
Pyrene	3176902	3176902	< 0.05	< 0.05	NA	< 0.05	91%	50%	140%	86%	50%	140%	86%	50%	140%
Benz(a)anthracene	3176902	3176902	< 0.05	< 0.05	NA	< 0.05	86%	50%	140%	95%	50%	140%	93%	50%	140%
Chrysene	3176902	3176902	< 0.05	< 0.05	NA	< 0.05	96%	50%	140%	98%	50%	140%	92%	50%	140%
Benzo(b)fluoranthene	3176902	3176902	< 0.05	< 0.05	NA	< 0.05	93%	50%	140%	88%	50%	140%	105%	50%	140%
Benzo(k)fluoranthene	3176902	3176902	< 0.05	< 0.05	NA	< 0.05	92%	50%	140%	85%	50%	140%	78%	50%	140%
Benzo(a)pyrene	3176902	3176902	< 0.05	< 0.05	NA	< 0.05	105%	50%	140%	99%	50%	140%	88%	50%	140%
Indeno(1,2,3-cd)pyrene	3176902	3176902	< 0.05	< 0.05	NA	< 0.05	78%	50%	140%	96%	50%	140%	85%	50%	140%
Dibenz(a,h)anthracene	3176902	3176902	< 0.05	< 0.05	NA	< 0.05	85%	50%	140%	94%	50%	140%	96%	50%	140%
Benzo(g,h,i)perylene	3176902	3176902	< 0.05	< 0.05	NA	< 0.05	96%	50%	140%	98%	50%	140%	93%	50%	140%

**O. Reg. 153(511) - OC Pesticides + PCBs (Soil)**

Gamma-Hexachlorocyclohexane	3176902	3176902	< 0.005	< 0.005	NA	< 0.005	102%	50%	140%	104%	50%	140%	82%	50%	140%
Heptachlor	3176902	3176902	< 0.005	< 0.005	NA	< 0.005	109%	50%	140%	108%	50%	140%	104%	50%	140%
Aldrin	3176902	3176902	< 0.005	< 0.005	NA	< 0.005	98%	50%	140%	108%	50%	140%	102%	50%	140%
Heptachlor Epoxide	3176902	3176902	< 0.005	< 0.005	NA	< 0.005	105%	50%	140%	107%	50%	140%	102%	50%	140%
Endosulfan I	3176902	3176902	< 0.005	< 0.005	NA	< 0.005	102%	50%	140%	100%	50%	140%	102%	50%	140%
Endosulfan II	3176902	3176902	< 0.005	< 0.005	NA	< 0.005	109%	50%	140%	114%	50%	140%	104%	50%	140%
Alpha-Chlordane	3176902	3176902	< 0.005	< 0.005	NA	< 0.005	99%	50%	140%	112%	50%	140%	107%	50%	140%
gamma-Chlordane	3176902	3176902	< 0.005	< 0.005	NA	< 0.005	101%	50%	140%	110%	50%	140%	105%	50%	140%
op'-DDD	3176902	3176902	< 0.005	< 0.005	NA	< 0.005	115%	50%	140%	105%	50%	140%	118%	50%	140%
pp'-DDD	3176902	3176902	< 0.005	< 0.005	NA	< 0.005	103%	50%	140%	108%	50%	140%	109%	50%	140%
op'-DDE	3176902	3176902	< 0.005	< 0.005	NA	< 0.005	97%	50%	140%	107%	50%	140%	112%	50%	140%
pp'-DDE	3176902	3176902	< 0.005	< 0.005	NA	< 0.005	104%	50%	140%	103%	50%	140%	104%	50%	140%
op'-DDT	3176902	3176902	< 0.005	< 0.005	NA	< 0.005	100%	50%	140%	105%	50%	140%	114%	50%	140%
pp'-DDT	3176902	3176902	< 0.005	< 0.005	NA	< 0.005	106%	50%	140%	104%	50%	140%	115%	50%	140%
Dieldrin	3176902	3176902	< 0.005	< 0.005	NA	< 0.005	104%	50%	140%	101%	50%	140%	107%	50%	140%
Endrin	3176902	3176902	< 0.005	< 0.005	NA	< 0.005	106%	50%	140%	105%	50%	140%	109%	50%	140%
Methoxychlor	3176902	3176902	< 0.005	< 0.005	NA	< 0.005	95%	50%	140%	109%	50%	140%	107%	50%	140%
Hexachlorobenzene	3176902	3176902	< 0.005	< 0.005	NA	< 0.005	104%	50%	140%	93%	50%	140%	87%	50%	140%
Hexachlorobutadiene	3176902	3176902	< 0.01	< 0.01	NA	< 0.01	89%	50%	140%	92%	50%	140%	86%	50%	140%
Hexachloroethane	3176902	3176902	< 0.01	< 0.01	NA	< 0.01	87%	50%	140%	93%	50%	140%	106%	50%	140%
Aroclor 1242	3176902	3176902	< 0.10	< 0.10	NA	< 0.10	104%	50%	140%	NA	50%	140%	NA	50%	140%

## Quality Assurance

CLIENT NAME: WSP CANADA INC.  
 PROJECT: 211-10139-00  
 SAMPLING SITE:


AGAT WORK ORDER: 21T826519  
 ATTENTION TO: Vanessa Oetinger  
 SAMPLED BY:

### Trace Organics Analysis (Continued)

RPT Date: Nov 16, 2021			DUPLICATE				Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Measured Value		Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits		
								Lower	Upper		Lower	Upper		Lower	Upper	
Aroclor 1248	3176902	3176902	< 0.10	< 0.10	NA	< 0.10	106%	50%	140%	NA	50%	140%	NA	50%	140%	
Aroclor 1254	3176902	3176902	< 0.10	< 0.10	NA	< 0.10	102%	50%	140%	NA	50%	140%	NA	50%	140%	
Aroclor 1260	3176902	3176902	< 0.10	< 0.10	NA	< 0.10	98%	50%	140%	NA	50%	140%	NA	50%	140%	
Polychlorinated Biphenyls	3176902	3176902	< 0.10	< 0.10	NA	< 0.10	96%	50%	140%	92%	50%	140%	102%	50%	140%	
O. Reg. 153(511) - PHCs F1 - F4 (Soil)																
F2 (C10 to C16)	3176906	3176906	< 10	< 10	NA	< 10	100%	60%	140%	109%	60%	140%	70%	60%	140%	
F3 (C16 to C34)	3176906	3176906	< 50	< 50	NA	< 50	96%	60%	140%	106%	60%	140%	73%	60%	140%	
F4 (C34 to C50)	3176906	3176906	< 50	< 50	NA	< 50	90%	60%	140%	119%	60%	140%	89%	60%	140%	
O. Reg. 153(511) - PHCs F1 - F4 (Soil)																
Benzene	3176906		< 0.02	< 0.02	NA	< 0.02	96%	60%	140%	83%	60%	140%	83%	60%	140%	
Toluene	3176906		< 0.05	< 0.05	NA	< 0.05	83%	60%	140%	87%	60%	140%	78%	60%	140%	
Ethylbenzene	3176906		< 0.05	< 0.05	NA	< 0.05	80%	60%	140%	79%	60%	140%	100%	60%	140%	
m & p-Xylene	3176906		< 0.05	< 0.05	NA	< 0.05	98%	60%	140%	94%	60%	140%	93%	60%	140%	
o-Xylene	3176906		< 0.05	< 0.05	NA	< 0.05	82%	60%	140%	80%	60%	140%	88%	60%	140%	
F1 (C6 - C10)	3176906		< 5	< 5	NA	< 5	119%	60%	140%	104%	60%	140%	88%	60%	140%	

Comments: When the average of the sample and duplicate results is less than 5x the RDL, the Relative Percent Difference (RPD) will be indicated as Not Applicable (NA).

Certified By: \_\_\_\_\_





## QC Exceedance

CLIENT NAME: WSP CANADA INC.

AGAT WORK ORDER: 21T826519

PROJECT: 211-10139-00

ATTENTION TO: Vanessa Oetinger

RPT Date: Nov 16, 2021		REFERENCE MATERIAL		METHOD BLANK SPIKE			MATRIX SPIKE			
PARAMETER	Sample Id	Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
			Lower	Upper		Lower	Upper		Lower	Upper

O. Reg. 153(511) - Metals &amp; Inorganics (Soil)

Antimony

134%   70%   130%   107%   80%   120%   106%   70%   130%

Comments: NA signifies Not Applicable.

pH duplicates QA acceptance criteria was met relative as stated in Table 5-15 of Analytical Protocol document.

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

For a multi-element scan for lab control standards and matrix spikes, up to 10% of analytes may exceed the quoted limits by up to 10% absolute and it is considered acceptable.



## Method Summary

CLIENT NAME: WSP CANADA INC.

AGAT WORK ORDER: 21T826519

PROJECT: 211-10139-00

ATTENTION TO: Vanessa Oetinger

SAMPLING SITE:

SAMPLED BY:

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Soil Analysis			
Antimony	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Arsenic	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Barium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Beryllium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Boron	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Boron (Hot Water Soluble)	MET-93-6104	modified from EPA 6010D and MSA PART 3, CH 21	ICP/OES
Cadmium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Chromium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Cobalt	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Copper	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Lead	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Molybdenum	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Nickel	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Selenium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Silver	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Thallium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Uranium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Vanadium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Zinc	MET 93 -6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Chromium, Hexavalent	INOR-93-6068	modified from EPA 3060 and EPA 7196	SPECTROPHOTOMETER
Cyanide, Free	INOR-93-6052	modified from ON MOECC E3015, SM 4500-CN- I, G-387	TECHNICON AUTO ANALYZER
Mercury	MET-93-6103	modified from EPA 7471B and SM 3112 B	ICP-MS
Electrical Conductivity (2:1)	INOR-93-6036	modified from MSA PART 3, CH 14 and SM 2510 B	EC METER
Sodium Adsorption Ratio (2:1) (Calc.)	INOR-93-6007	modified from EPA 6010D & Analytical Protocol	ICP/OES
pH, 2:1 CaCl <sub>2</sub> Extraction	INOR-93-6031	modified from EPA 9045D and MCKEAGUE 3.11	PH METER

## Method Summary

CLIENT NAME: WSP CANADA INC.

AGAT WORK ORDER: 21T826519

PROJECT: 211-10139-00

ATTENTION TO: Vanessa Oetinger

SAMPLING SITE:

SAMPLED BY:

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Trace Organics Analysis			
Hexachloroethane	ORG-91-5113	modified from EPA 3570 & 3620C & 8081B	GC/ECD
Gamma-Hexachlorocyclohexane	ORG-91-5113	modified from EPA 3570 & 3620C & 8081B	GC/ECD
Heptachlor	ORG-91-5113	modified from EPA 3570 & 3620C & 8081B	GC/ECD
Aldrin	ORG-91-5113	modified from EPA 3570 & 3620C & 8081B	GC/ECD
Heptachlor Epoxide	ORG-91-5113	modified from EPA 3570 & 3620C & 8081B	GC/ECD
Endosulfan I	ORG-91-5113	modified from EPA 3570 & 3620C & 8081B	GC/ECD
Endosulfan II	ORG-91-5113	modified from EPA 3570 & 3620C & 8081B	GC/ECD
Endosulfan	ORG-91-5113	modified from EPA 3570 & 3620C & 8081B	CALCULATION
Alpha-Chlordane	ORG-91-5113	modified from EPA 3570 & 3620C & 8081B	GC/ECD
gamma-Chlordane	ORG-91-5113	modified from EPA 3570 & 3620C & 8081B	GC/ECD
Chlordane	ORG-91-5113	modified from EPA 3570 & 3620C & 8081B	CALCULATION
op'-DDE	ORG-91-5113	modified from EPA 3570 & 3620C & 8081B	GC/ECD
pp'-DDE	ORG-91-5113	modified from EPA 3570 & 3620C & 8081B	GC/ECD
DDE	ORG-91-5113	modified from EPA 3570 & 3620C & 8081B	GC/ECD
op'-DDD	ORG-91-5113	modified from EPA 3570 & 3620C & 8081B	GC/ECD
pp'-DDD	ORG-91-5113	modified from EPA 3570 & 3620C & 8081B	GC/ECD
DDD	ORG-91-5113	modified from EPA 3570 & 3620C & 8081B	CALCULATION
op'-DDT	ORG-91-5113	modified from EPA 3570 & 3620C & 8081B	GC/ECD
pp'-DDT	ORG-91-5113	modified from EPA 3570 & 3620C & 8081B	GC/ECD
DDT (Total)	ORG-91-5113	modified from EPA 3570, 3620C & 8081B	CALCULATION
Dieldrin	ORG-91-5113	modified from EPA 3570 & 3620C & 8081B	GC/ECD
Endrin	ORG-91-5113	modified from EPA 3570 & 3620C & 8081B	GC/ECD
Methoxychlor	ORG-91-5113	modified from EPA 3570 & 3620C & 8081B	GC/ECD
Hexachlorobenzene	ORG-91-5113	modified from EPA 3570 & 3620C & 8081B	GC/ECD
Hexachlorobutadiene	ORG-91-5113	modified from EPA 3570 & 3620C & 8081B	GC/ECD
TCMX	ORG-91-5112	modified from EPA 3570 & 3620C & 8081B	GC/ECD
Decachlorobiphenyl	ORG-91-5113	modified from EPA 3570 & 3620C & 8081B	GC/ECD
Moisture Content	VOL-91-5009	CCME Tier 1 Method	BALANCE



## Method Summary

CLIENT NAME: WSP CANADA INC.

AGAT WORK ORDER: 21T826519

PROJECT: 211-10139-00

ATTENTION TO: Vanessa Oetinger

SAMPLING SITE:

SAMPLED BY:

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
wet weight OC	ORG-91-5113		BALANCE
Gamma-Hexachlorocyclohexane	ORG-91-5113	modified from EPA SW-846 3570, 3620C & 8081B	GC/ECD
Heptachlor	ORG-91-5113	modified from EPA SW-846 3570, 3620C & 8081B	GC/ECD
Aldrin	ORG-91-5113	modified from EPA SW-846 3570, 3620C & 8081B	GC/ECD
Heptachlor Epoxide	ORG-91-5113	modified from EPA SW-846 3570, 3620C & 8081B	GC/ECD
Endosulfan I	ORG-91-5113	modified from EPA SW-846 3570, 3620C & 8081B	GC/ECD
Endosulfan II	ORG-91-5113	modified from EPA SW-846 3570, 3620C & 8081B	GC/ECD
Endosulfan	ORG-91-5113	modified from EPA SW-846 3570, 3620C & 8081B	GC/ECD
Alpha-Chlordane	ORG-91-5113	modified from EPA SW-846 3570, 3620C & 8081B	GC/ECD
gamma-Chlordane	ORG-91-5113	modified from EPA SW-846 3570, 3620C & 8081B	GC/ECD
Chlordane	ORG-91-5113	modified from EPA SW-846 3570, 3620C & 8081B	CALCULATION
op'-DDD	ORG-91-5113	modified from EPA SW-846 3570, 3620C & 8081B	GC/ECD
pp'-DDD	ORG-91-5113	modified from EPA SW-846 3570, 3620C & 8081B	GC/ECD
DDD	ORG-91-5113	modified from EPA SW-846 3570, 3620C & 8081B	CALCULATION
op'-DDE	ORG-91-5113	modified from EPA SW-846 3570, 3620C & 8081B	GC/ECD
pp'-DDE	ORG-91-5113	modified from EPA SW-846 3570, 3620C & 8081B	GC/ECD
DDE	ORG-91-5113	modified from EPA SW-846 3570, 3620C & 8081B	GC/ECD
op'-DDT	ORG-91-5113	modified from EPA SW-846 3570, 3620C & 8081B	GC/ECD
pp'-DDT	ORG-91-5113	modified from EPA SW-846 3570, 3620C & 8081B	GC/ECD
DDT	ORG-91-5113	modified from EPA SW-846 3570, 3620C & 8081B	CALCULATION
Dieldrin	ORG-91-5113	modified from EPA SW-846 3570, 3620C & 8081B	GC/ECD
Endrin	ORG-91-5113	modified from EPA SW-846 3570, 3620C & 8081B	GC/ECD
Methoxychlor	ORG-91-5113	modified from EPA SW-846 3570, 3620C & 8081B	GC/ECD
Hexachlorobenzene	ORG-91-5113	modified from EPA SW-846 3570, 3620C & 8081B	GC/ECD
Hexachlorobutadiene	ORG-91-5113	modified from EPA SW-846 3570, 3620C & 8081B	GC/ECD
Hexachloroethane	ORG-91-5113	modified from EPA SW-846 3570, 3620C & 8081B	GC/ECD
Aroclor 1242	ORG-91-5113	modified from EPA SW-846 3570, 3620C & 8082A	GC/ECD
Aroclor 1248	ORG-91-5113	modified from EPA SW-846 3570, 3620C & 8082A	GC/ECD

## Method Summary

CLIENT NAME: WSP CANADA INC.

AGAT WORK ORDER: 21T826519

PROJECT: 211-10139-00

ATTENTION TO: Vanessa Oetinger

SAMPLING SITE:

SAMPLED BY:

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Aroclor 1254	ORG-91-5113	modified from EPA SW-846 3570, 3620C & 8082A	GC/ECD
Aroclor 1260	ORG-91-5113	modified from EPA SW-846 3570, 3620C & 8082A	GC/ECD
Polychlorinated Biphenyls	ORG-91-5113	modified from EPA SW-846 3570, 3620C & 8082A	GC/ECD
TCMX	ORG-91-5113	modified from EPA SW-846 3541, 3620,8081	GC/ECD
Decachlorobiphenyl	ORG-91-5113	modified from EPA SW-846 3541, 3620,8081	GC/ECD
wet weight OC/PCB	ORG-91-5113		BALANCE
Naphthalene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Acenaphthylene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Acenaphthene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Fluorene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Phenanthrene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Anthracene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Fluoranthene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Pyrene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Benz(a)anthracene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Chrysene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Benzo(b)fluoranthene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Benzo(k)fluoranthene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Benzo(a)pyrene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Indeno(1,2,3-cd)pyrene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Dibenz(a,h)anthracene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Benzo(g,h,i)perylene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
1 and 2 Methylnaphthalene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Naphthalene-d8	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Acridine-d9	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Terphenyl-d14	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Benzene	VOL-91-5009	modified from CCME Tier 1 Method	(P&T)GC/MS
Toluene	VOL-91-5009	modified from CCME Tier 1 Method	(P&T)GC/MS
Ethylbenzene	VOL-91-5009	modified from CCME Tier 1 Method	(P&T)GC/MS
m & p-Xylene	VOL-91-5009	modified from CCME Tier 1 Method	(P&T)GC/MS
o-Xylene	VOL-91-5009	modified from CCME Tier 1 Method	(P&T)GC/MS

## Method Summary

CLIENT NAME: WSP CANADA INC.

AGAT WORK ORDER: 21T826519

PROJECT: 211-10139-00

ATTENTION TO: Vanessa Oetinger

SAMPLING SITE:

SAMPLED BY:

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Xylenes (Total)	VOL-91-5009	modified from CCME Tier 1 Method	(P&T)GC/MS
F1 (C6 - C10)	VOL-91-5009	modified from CCME Tier 1 Method	(P&T)GC/FID
F1 (C6 to C10) minus BTEX	VOL-91-5009	modified from CCME Tier 1 Method	P&T GC/FID
Toluene-d8	VOL-91-5009	modified from EPA SW-846 5030C & 8260D	(P&T)GC/MS
F2 (C10 to C16)	VOL-91-5009	modified from CCME Tier 1 Method	GC/FID
F3 (C16 to C34)	VOL-91-5009	modified from CCME Tier 1 Method	GC/FID
F4 (C34 to C50)	VOL-91-5009	modified from CCME Tier 1 Method	GC/FID
Gravimetric Heavy Hydrocarbons	VOL-91-5009	modified from CCME Tier 1 Method	BALANCE
Terphenyl	VOL-91-5009	modified from CCME Tier 1 Method	GC/FID



**Laboratory Use Only**

Work Order #: 21T826519

Cooler Quantity: 1 large

Arrival Temperatures: 6.4 | 6.2 | 8.1

Custody Seal Intact:  Yes  No  N/A

Notes: Free Ice

## Chain of Custody Record

If this is a Drinking Water sample, please use Drinking Water Chain of Custody Form (potable water consumed by humans)

**Report Information:**

Company: WSP

Contact: Vanessa Oetinger

Address: 2 International Blvd, Etobicoke

Phone: \_\_\_\_\_ Fax: \_\_\_\_\_

Reports to be sent to:

1. Email: Vanessa.oetinger@wsp.com

2. Email: matt.roy@wsp.com

**Regulatory Requirements:**  
*(Please check all applicable boxes)*

Regulation 153/04  Excess Soils R406  Sewer Use  
 Sanitary  Storm

Table 3 *Indicate One*

Ind./Com  Res/Park  Agriculture

Table \_\_\_\_\_ *Indicate One*

Region \_\_\_\_\_

Soil Texture (Check One)

Coarse  CCME  Other

Fine  \_\_\_\_\_ *Indicate One*

**Turnaround Time (TAT) Required:**

**Regular TAT**  5 to 7 Business Days

**Rush TAT (Rush Surcharges Apply)**

3 Business Days  2 Business Days  Next Business Day

**OR Date Required (Rush Surcharges May Apply):**

\_\_\_\_\_

Please provide prior notification for rush TAT  
\*TAT is exclusive of weekends and statutory holidays

**For 'Same Day' analysis, please contact your AGAT CPM**

**Project Information:**

Project: 211-10139-00

Site Location: ORBY Rail

Sampled By: Matt Roy

AGAT Quote #: \_\_\_\_\_ PO: \_\_\_\_\_

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

**Is this submission for a Record of Site Condition?**

Yes  No

**Report Guideline on Certificate of Analysis**

Yes  No

**Invoice Information:**

Bill To Same: Yes  No

Company: \_\_\_\_\_

Contact: \_\_\_\_\_

Address: \_\_\_\_\_

Email: payables.ontario@wsp.com

**Sample Matrix Legend**

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

Sample Identification	Date Sampled	Time Sampled	# of Containers	Sample Matrix	Comments/ Special Instructions	Y / N	0. Reg 153				0. Reg 552				0. Reg 406				Potentially Hazardous or High Concentration (Y/N)
							Metals & Inorganics	Metals - CrVI, Hg, HWSB	BTEX, F1-F4 PHCs	Analyze F4G if required	PAHs	PCBs	VOC	Landfill Disposal Characterization TOLP: M&I, VOCs, ABNs, Biop	Excess Soils SPLP Rainwater Leach	SPLP: Metals, VOCs, SVOCs	Excess Soils Characterization Package pH, ICPMS Metals, BTEX, F1-F4	Salt - EC/SAR	
BH21-41 S1	11/5/21	AM PM	1	S			X												
BH21-41 S2		AM PM	2	S		X				X								X	
BH21-39 S1		AM PM	1	S		X													X
BH21-39 S3		AM PM	2	S					X	X									X
BH21-31 S1		AM PM	1	S		X													X
BH21-31 S2		AM PM	1	S							X								X
BH21-31 S3		AM PM	1	S					X										X
BH21-24 S1		AM PM	1	S							X								X
BH21-24 S2		AM PM	1	S						X									
BH21-24 S3		AM PM	1	S			X												

Samples Relinquished By (Print Name and Sign): <u>Matthew Roy</u>	Date: <u>11/5/21</u>	Time: <u>1600</u>	Samples Received By (Print Name and Sign): <u>NEAC</u>	Date: _____	Time: _____
Samples Relinquished By (Print Name and Sign): _____	Date: _____	Time: _____	Samples Received By (Print Name and Sign): _____	Date: _____	Time: _____
Samples Relinquished By (Print Name and Sign): _____	Date: _____	Time: _____	Samples Received By (Print Name and Sign): _____	Date: _____	Time: _____

Page 1 of 3  
No: **T 126066**

**Laboratory Use Only**

Work Order #: 21T826519

Cooler Quantity: \_\_\_\_\_

Arrival Temperatures: See pg 1

Custody Seal Intact:  Yes  No  N/A

Notes: \_\_\_\_\_

**Chain of Custody Record** If this is a Drinking Water sample, please use Drinking Water Chain of Custody Form (potable water consumed by humans)

**Report Information:**

Company: \_\_\_\_\_

Contact: See Page 1

Address: \_\_\_\_\_

Phone: \_\_\_\_\_ Fax: \_\_\_\_\_

Reports to be sent to:

1. Email: \_\_\_\_\_

2. Email: \_\_\_\_\_

**Regulatory Requirements:**  
*(Please check all applicable boxes)*

Regulation 153/04  Excess Soils R406  Sewer Use  
 Sanitary  Storm

Table 3 Indicate One  Inid/Com  Res/Park  Agriculture

Table \_\_\_\_\_ Indicate One \_\_\_\_\_ Region \_\_\_\_\_

Soil Texture (Check One)  Coarse  Fine  CCME  Other

Indicate One \_\_\_\_\_

**Turnaround Time (TAT) Required:**

**Regular TAT**  5 to 7 Business Days

**Rush TAT (Rush Surcharges Apply)**

3 Business Days  2 Business Days  Next Business Day

OR Date Required (Rush Surcharges May Apply): \_\_\_\_\_

**Project Information:**

Project: 211-10139-00

Site Location: ORBY Rail

Sampled By: Matt Roy

AGAT Quote #: \_\_\_\_\_ PO: \_\_\_\_\_

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

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

**Report Guideline on Certificate of Analysis**  Yes  No

Please provide prior notification for rush TAT  
\*TAT is exclusive of weekends and statutory holidays

**For 'Same Day' analysis, please contact your AGAT CPM**

**Invoice Information:** Bill To Same: Yes  No

Company: \_\_\_\_\_

Contact: \_\_\_\_\_

Address: \_\_\_\_\_

Email: payables.ontario@wsp.com

**Sample Matrix Legend**

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

Field Filtered - Metals, Hg, CrVI, DOC	O. Reg 153				PAHs	PCBs	VOC	O. Reg 406				Salt - EC/SAR	OC Pesticides	Potentially Hazardous or High Concentration (Y/N)
	Metals & Inorganics	Metals - <input type="checkbox"/> CrVI, <input type="checkbox"/> Hg, <input type="checkbox"/> HWSB	BTEX, F1-F4 PHCs	Analyze F4G if required <input type="checkbox"/> Yes <input type="checkbox"/> No				Landfill Disposal Characterization TOLP: <input type="checkbox"/> TOLP, <input type="checkbox"/> M&I, <input type="checkbox"/> VOCs, <input type="checkbox"/> ABNs, <input type="checkbox"/> Bt/p, <input type="checkbox"/> PCBs	Excess Soils SPLP Rainwater Leach SPLP: <input type="checkbox"/> Metals, <input type="checkbox"/> VOCs, <input type="checkbox"/> SVOCs	Excess Soils Characterization Package pH, ICPMS Metals, BTEX, F1-F4				
					X									
	X													
	X												X	
						X							X	
							X						X	
	X													
						X								

Sample Identification	Date Sampled	Time Sampled	# of Containers	Sample Matrix	Comments/ Special Instructions	Y / N
BH21-23 S1	11/5/21	AM	1	S		
BH21-23 S2		AM	1	S		
BH21-23 S3		AM	1	S		
BH21-17 S1		AM	1	S		
BH21-17 S2		AM	1	S		
BH21-17 S3		AM	1	S		
BH21-9 S51	11/4/21	PM	1	S		
BH21-9 S52		PM	1	S		
BH21-9 S53		PM	1	S		
BH21-9 S55		PM	3	S		

Samples Relinquished By (Print Name and Sign): <u>Matt Roy</u>	Date: <u>11/5/21</u>	Time: <u>1600</u>	Samples Received By (Print Name and Sign): <u>[Signature]</u>	Date: _____	Time: _____	21NOV 5 5:00PM
Samples Relinquished By (Print Name and Sign): _____	Date: _____	Time: _____	Samples Received By (Print Name and Sign): _____	Date: _____	Time: _____	Page <u>2</u> of <u>3</u>
Samples Relinquished By (Print Name and Sign): _____	Date: _____	Time: _____	Samples Received By (Print Name and Sign): _____	Date: _____	Time: _____	Nº: <b>T 126067</b>





# AGAT Laboratories

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

### Laboratory Use Only

Work Order #: 21T826519

Cooler Quantity: \_\_\_\_\_  
Arrival Temperatures: See Pg 1  
Custody Seal Intact:  Yes  No  N/A  
Notes: \_\_\_\_\_

## Chain of Custody Record If this is a Drinking Water sample, please use Drinking Water Chain of Custody Form (potable water consumed by humans)

### Report Information:

Company: \_\_\_\_\_  
Contact: See Page 1  
Address: \_\_\_\_\_  
Phone: \_\_\_\_\_ Fax: \_\_\_\_\_  
Reports to be sent to:  
1. Email: \_\_\_\_\_  
2. Email: \_\_\_\_\_

### Regulatory Requirements:

(Please check all applicable boxes)

Regulation 153/04  Excess Soils R406  Sewer Use  
 Wind/Corn  Agriculture  Sanitary  Storm  
Soil Texture (Check One)  Coarse  Fine  CCME  Other  
 Res/Park  Regulation 558  Prov. Water Quality Objectives (PWQO)

### Project Information:

Project: 211-10139-00  
Site Location: ORBY RAIL  
Sampled By: Matthew Roy  
AGAT Quote #: \_\_\_\_\_ PO: \_\_\_\_\_  
Please note: If quotation number is not provided, client will be billed full price for analysis.

### Is this submission for a Record of Site Condition?

Yes  No

### Report Guideline on Certificate of Analysis

Yes  No

### Turnaround Time (TAT) Required:

Regular TAT  5 to 7 Business Days

### Rush TAT (Rush Surcharges Apply)

3 Business Days  2 Business Days  Next Business Day

OR Date Required (Rush Surcharges May Apply): \_\_\_\_\_

Please provide prior notification for rush TAT  
\*TAT is exclusive of weekends and statutory holidays

For 'Same Day' analysis, please contact your AGAT CPM

### Invoice Information:

Bill To Same: Yes  No

Company: \_\_\_\_\_  
Contact: \_\_\_\_\_  
Address: \_\_\_\_\_  
Email: payables.ontario@wsp.com

### Sample Matrix Legend

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

Sample Identification	Date Sampled	Time Sampled	# of Containers	Sample Matrix	Comments/ Special Instructions	Y / N	Field Filtered - Metals, Hg, CrVI, DOC										Potentially Hazardous or High Concentration (Y/N)	
							Metals & Inorganics	Metals - <input type="checkbox"/> CrVI, <input type="checkbox"/> Hg, <input type="checkbox"/> HWSB	BTEX, F1-F4, PHCs	Analyze F4G if required <input type="checkbox"/> Yes <input type="checkbox"/> No	PAHs	PCBs	VOC	O. Reg 558	O. Reg 406	OC Pesticides		HOLD
BH21-11 S51	11/4/21	PM	1	S			X											
BH21-11 S52		PM	1	S														
BH21-11 S53		PM	1	S			X											
BH21-11		PM	3	S				X										
		AM																
		PM																
		AM																
		PM																
		AM																
		PM																
		AM																
		PM																

Samples Relinquished By (Print Name and Sign): <u>Matthew Roy</u>	Date: <u>11/5/21</u>	Time: <u>1600</u>	Samples Received By (Print Name and Sign): <u>[Signature]</u>	Date: _____	Time: _____
Samples Relinquished By (Print Name and Sign): _____	Date: _____	Time: _____	Samples Received By (Print Name and Sign): _____	Date: _____	Time: _____
Samples Relinquished By (Print Name and Sign): _____	Date: _____	Time: _____	Samples Received By (Print Name and Sign): _____	Date: _____	Time: _____





CLIENT NAME: WSP CANADA INC.  
2 INTERNATIONAL BLVD SUITE 201  
ETOBICOKE, ON M9W1A2  
(416) 798-0065

ATTENTION TO: Vanessa Oetinger

PROJECT: 211-10139-00

AGAT WORK ORDER: 21T827359

SOIL ANALYSIS REVIEWED BY: Jacky Zhu, Spectroscopy Technician

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

DATE REPORTED: Nov 20, 2021

PAGES (INCLUDING COVER): 18

VERSION\*: 1

Should you require any information regarding this analysis please contact your client services representative at (905) 712-5100

\*Notes

Disclaimer:

- All work conducted herein has been done using accepted standard protocols, and generally accepted practices and methods. AGAT test methods may incorporate modifications from the specified reference methods to improve performance.
- All samples will be disposed of within 30 days after receipt unless a Long Term Storage Agreement is signed and returned. Some specialty analysis may be exempt, please contact your Client Project Manager for details.
- AGAT's liability in connection with any delay, performance or non-performance of these services is only to the Client and does not extend to any other third party. Unless expressly agreed otherwise in writing, AGAT's liability is limited to the actual cost of the specific analysis or analyses included in the services.
- This Certificate shall not be reproduced except in full, without the written approval of the laboratory.
- The test results reported herewith relate only to the samples as received by the laboratory.
- Application of guidelines is provided "as is" without warranty of any kind, either expressed or implied, including, but not limited to, warranties of merchantability, fitness for a particular purpose, or non-infringement. AGAT assumes no responsibility for any errors or omissions in the guidelines contained in this document.
- All reportable information as specified by ISO/IEC 17025:2017 is available from AGAT Laboratories upon request.



## Certificate of Analysis

AGAT WORK ORDER: 21T827359

PROJECT: 211-10139-00

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

CLIENT NAME: WSP CANADA INC.

ATTENTION TO: Vanessa Oetinger

SAMPLING SITE:

SAMPLED BY: Matt Roy

### O. Reg. 153(511) - Metals & Inorganics (Soil)

DATE RECEIVED: 2021-11-08

DATE REPORTED: 2021-11-20

Parameter	Unit	SAMPLE DESCRIPTION:				
		G / S	RDL	BH21-30 SS2	BH21-28 SS1	QAQC-3
				Soil	Soil	Soil
				2021-11-08	2021-11-08	2021-11-08
				12:00	12:00	12:00
				3185854	3185864	3185865
Antimony	µg/g	40	0.8	<0.8	<0.8	<0.8
Arsenic	µg/g	18	1	6	10	10
Barium	µg/g	670	2.0	147	73.4	65.4
Beryllium	µg/g	8	0.4	1.4	0.8	0.7
Boron	µg/g	120	5	12	12	10
Boron (Hot Water Soluble)	µg/g	2	0.10	<0.10	0.44	0.47
Cadmium	µg/g	1.9	0.5	<0.5	<0.5	<0.5
Chromium	µg/g	160	5	32	23	21
Cobalt	µg/g	80	0.5	14.1	16.3	6.8
Copper	µg/g	230	1.0	28.4	40.9	31.3
Lead	µg/g	120	1	12	29	26
Molybdenum	µg/g	40	0.5	<0.5	0.7	0.6
Nickel	µg/g	270	1	33	31	17
Selenium	µg/g	5.5	0.8	<0.8	0.9	<0.8
Silver	µg/g	40	0.5	<0.5	<0.5	<0.5
Thallium	µg/g	3.3	0.5	<0.5	<0.5	<0.5
Uranium	µg/g	33	0.50	0.62	0.58	<0.50
Vanadium	µg/g	86	0.4	42.7	30.2	27.3
Zinc	µg/g	340	5	71	92	81
Chromium, Hexavalent	µg/g	8	0.2	<0.2	<0.2	<0.2
Cyanide, Free	µg/g	0.051	0.040	<0.040	<0.040	<0.040
Mercury	µg/g	3.9	0.10	<0.10	<0.10	<0.10
Electrical Conductivity (2:1)	mS/cm	1.4	0.005	0.165	0.342	0.336
Sodium Adsorption Ratio (2:1) (Calc.)	N/A	12	N/A	0.458	0.396	0.393
pH, 2:1 CaCl2 Extraction	pH Units	5.0-9.0	NA	7.25	7.28	7.60

Certified By:





**AGAT** Laboratories

# Certificate of Analysis

AGAT WORK ORDER: 21T827359

PROJECT: 211-10139-00

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

CLIENT NAME: WSP CANADA INC.

ATTENTION TO: Vanessa Oetinger

SAMPLING SITE:

SAMPLED BY: Matt Roy

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

DATE RECEIVED: 2021-11-08

DATE REPORTED: 2021-11-20

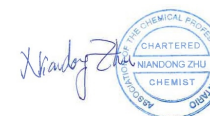
Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 3: Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition - Soil - Industrial/Commercial/Community Property Use - Coarse Textured Soils

Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

3185854-3185865 EC was determined on the DI water extract obtained from the 2:1 leaching procedure (2 parts DI water:1 part soil). pH was determined on the 0.01M CaCl2 extract prepared at 2:1 ratio. SAR is a calculated parameter.

Analysis performed at AGAT Toronto (unless marked by \*)

Certified By:







## Certificate of Analysis

AGAT WORK ORDER: 21T827359

PROJECT: 211-10139-00

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

CLIENT NAME: WSP CANADA INC.

ATTENTION TO: Vanessa Oetinger

SAMPLING SITE:

SAMPLED BY: Matt Roy

### O. Reg. 153(511) - OC Pesticides + PCBs (Soil)

DATE RECEIVED: 2021-11-08

DATE REPORTED: 2021-11-20

Parameter	Unit	SAMPLE DESCRIPTION:				
		G / S	RDL	BH21-30 SS1	BH21-28 SS3	QAQC-5
				Soil	Soil	Soil
				2021-11-08	2021-11-08	2021-11-08
					12:00	12:00
				3185851	3185868	3185869
Gamma-Hexachlorocyclohexane	µg/g	0.056	0.005	<0.005	<0.005	<0.005
Heptachlor	µg/g	0.19	0.005	<0.005	<0.005	<0.005
Aldrin	µg/g	0.088	0.005	<0.005	<0.005	<0.005
Heptachlor Epoxide	µg/g	0.05	0.005	<0.005	<0.005	<0.005
Endosulfan I	µg/g		0.005	<0.005	<0.005	<0.005
Endosulfan II	µg/g		0.005	<0.005	<0.005	<0.005
Endosulfan	µg/g	0.3	0.005	<0.005	<0.005	<0.005
Alpha-Chlordane	µg/g		0.005	<0.005	<0.005	<0.005
gamma-Chlordane	µg/g		0.005	<0.005	<0.005	<0.005
Chlordane	µg/g	0.05	0.007	<0.007	<0.007	<0.007
op'-DDD	µg/g		0.005	<0.005	<0.005	<0.005
pp'-DDD	µg/g		0.005	<0.005	<0.005	<0.005
DDD	µg/g	4.6	0.007	<0.007	<0.007	<0.007
op'-DDE	ug/g		0.005	<0.005	<0.005	<0.005
pp'-DDE	µg/g		0.005	<0.005	<0.005	<0.005
DDE	µg/g	0.52	0.007	<0.007	<0.007	<0.007
op'-DDT	µg/g		0.005	<0.005	<0.005	<0.005
pp'-DDT	µg/g		0.005	<0.005	<0.005	<0.005
DDT	µg/g	1.4	0.007	<0.007	<0.007	<0.007
Dieldrin	µg/g	0.088	0.005	<0.005	<0.005	<0.005
Endrin	µg/g	0.04	0.005	<0.005	<0.005	<0.005
Methoxychlor	µg/g	1.6	0.005	<0.005	<0.005	<0.005
Hexachlorobenzene	µg/g	0.66	0.005	<0.005	<0.005	<0.005
Hexachlorobutadiene	µg/g	0.031	0.01	<0.01	<0.01	<0.01
Hexachloroethane	µg/g	0.21	0.01	<0.01	<0.01	<0.01
Aroclor 1242	µg/g		0.10	<0.10	<0.10	<0.10
Aroclor 1248	µg/g		0.10	<0.10	<0.10	<0.10
Aroclor 1254	µg/g		0.10	<0.10	<0.10	<0.10
Aroclor 1260	µg/g		0.10	<0.10	<0.10	<0.10

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SAMPLING SITE:

SAMPLED BY: Matt Roy

### O. Reg. 153(511) - OC Pesticides + PCBs (Soil)

DATE RECEIVED: 2021-11-08

DATE REPORTED: 2021-11-20

		SAMPLE DESCRIPTION:		BH21-30 SS1	BH21-28 SS3	QAQC-5
		SAMPLE TYPE:		Soil	Soil	Soil
		DATE SAMPLED:		2021-11-08	2021-11-08	2021-11-08
				12:00	12:00	
Parameter	Unit	G / S	RDL	3185851	3185868	3185869
Polychlorinated Biphenyls	µg/g	1.1	0.10	<0.10	<0.10	<0.10
Moisture Content	%		0.1	8.9	14.2	11.3
wet weight OC/PCB	g		NA	10.74	10.11	10.54
Surrogate	Unit	Acceptable Limits				
TCMX	%	50-140		80	90	105
Decachlorobiphenyl	%	50-140		89	102	107

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 3: Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition - Soil - Industrial/Commercial/Community Property Use - Coarse Textured Soils  
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

3185851-3185869 Results are based on the dry weight of the soil.  
DDT total is a calculated parameter. The calculated value is the sum of op'DDT and pp'DDT.  
DDD total is a calculated parameter. The calculated value is the sum of op'DDD and pp'DDD.  
DDE total is a calculated parameter. The calculated value is the sum of op'DDE and pp'DDE.  
Endosulfan total is a calculated parameter. The calculated value is the sum of Endosulfan I and Endosulfan II.  
Chlordane total is a calculated parameter. The calculated value is the sum of Alpha-Chlordane and Gamma-Chlordane.  
PCB total is a calculated parameter. The calculated value is the sum of Aroclor 1242, Aroclor 1248, Aroclor 1254 and Aroclor 1260.  
The calculated parameters are non-accredited. The parameters that are components of the calculation are accredited.

Analysis performed at AGAT Toronto (unless marked by \*)

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CLIENT NAME: WSP CANADA INC.

ATTENTION TO: Vanessa Oettinger

SAMPLING SITE:

SAMPLED BY: Matt Roy

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

DATE RECEIVED: 2021-11-08

DATE REPORTED: 2021-11-20

Parameter	Unit	SAMPLE DESCRIPTION:				
		G / S	RDL	BH21-30 SS1	BH21-28 SS3	QAQC-5
				Soil	Soil	Soil
				2021-11-08	2021-11-08	2021-11-08
					12:00	12:00
				3185851	3185868	3185869
Naphthalene	µg/g	9.6	0.05	<0.05	<0.05	<0.05
Acenaphthylene	µg/g	0.15	0.05	<0.05	<0.05	<0.05
Acenaphthene	µg/g	96	0.05	<0.05	<0.05	<0.05
Fluorene	µg/g	62	0.05	<0.05	<0.05	<0.05
Phenanthrene	µg/g	12	0.05	<0.05	<0.05	<0.05
Anthracene	µg/g	0.67	0.05	<0.05	<0.05	<0.05
Fluoranthene	µg/g	9.6	0.05	<0.05	<0.05	<0.05
Pyrene	µg/g	96	0.05	0.05	<0.05	<0.05
Benz(a)anthracene	µg/g	0.96	0.05	<0.05	<0.05	<0.05
Chrysene	µg/g	9.6	0.05	<0.05	<0.05	<0.05
Benzo(b)fluoranthene	µg/g	0.96	0.05	<0.05	<0.05	<0.05
Benzo(k)fluoranthene	µg/g	0.96	0.05	<0.05	<0.05	<0.05
Benzo(a)pyrene	µg/g	0.3	0.05	<0.05	<0.05	<0.05
Indeno(1,2,3-cd)pyrene	µg/g	0.76	0.05	<0.05	<0.05	<0.05
Dibenz(a,h)anthracene	µg/g	0.1	0.05	<0.05	<0.05	<0.05
Benzo(g,h,i)perylene	µg/g	9.6	0.05	<0.05	<0.05	<0.05
1 and 2 Methyl naphthalene	µg/g	76	0.05	<0.05	<0.05	<0.05
Moisture Content	%		0.1	8.9	14.2	11.3
Surrogate	Unit	Acceptable Limits				
Naphthalene-d8	%	50-140		82	108	114
Acridine-d9	%	50-140		120	96	85
Terphenyl-d14	%	50-140		102	91	93

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 3: Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition - Soil - Industrial/Commercial/Community Property Use - Coarse Textured Soils  
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

3185851-3185869 Results are based on the dry weight of the soil.

Note: The result for Benzo(b)Fluoranthene is the total of the Benzo(b&j)Fluoranthene isomers because the isomers co-elute on the GC column.  
2- and 1-Methyl Naphthalene is a calculated parameter. The calculated value is the sum of 2-Methyl Naphthalene and 1-Methyl Naphthalene.

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ATTENTION TO: Vanessa Oettinger

SAMPLING SITE:

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

DATE RECEIVED: 2021-11-08

DATE REPORTED: 2021-11-20

Parameter	Unit	SAMPLE DESCRIPTION:				
		G / S	RDL	BH21-30 SS3	BH21-28 SS2	QAQC-4
				Soil	Soil	Soil
				2021-11-08	2021-11-08	2021-11-08
				12:00	12:00	
				3185858	3185866	3185867
Benzene	µg/g	0.32	0.02	<0.02	<0.02	<0.02
Toluene	µg/g	68	0.05	<0.05	<0.05	<0.05
Ethylbenzene	µg/g	9.5	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
Xylenes (Total)	µg/g	26	0.05	<0.05	<0.05	<0.05
F1 (C6 - C10)	µg/g	55	5	<5	<5	<5
F1 (C6 to C10) minus BTEX	µg/g	55	5	<5	<5	<5
F2 (C10 to C16)	µg/g	230	10	<10	<10	<10
F3 (C16 to C34)	µg/g	1700	50	<50	<50	<50
F4 (C34 to C50)	µg/g	3300	50	<50	<50	<50
Gravimetric Heavy Hydrocarbons	µg/g	3300	50	NA	NA	NA
Moisture Content	%		0.1	8.4	10.0	14.5
Surrogate	Unit	Acceptable Limits				
Toluene-d8	% Recovery	60-140	97	91	97	97
Terphenyl	%	60-140	74	72	97	97

Certified By:



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CLIENT NAME: WSP CANADA INC.

ATTENTION TO: Vanessa Oetinger

SAMPLING SITE:

SAMPLED BY: Matt Roy

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

DATE RECEIVED: 2021-11-08

DATE REPORTED: 2021-11-20

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 3: Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition - Soil - Industrial/Commercial/Community Property Use - Coarse Textured Soils  
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

3185858-3185867 Results are based on sample dry weight.  
The C6-C10 fraction is calculated using Toluene response factor.  
Xylenes is a calculated parameter. The calculated value is the sum of m&p-Xylene and o-Xylene.  
C6-C10 (F1 minus BTEX) is a calculated parameter. The calculated value is F1 minus BTEX.  
The calculated parameters are non-accredited. The parameters that are components of the calculation are accredited.  
The C10 - C16, C16 - C34, and C34 - C50 fractions are calculated using the average response factor for n-C10, n-C16, and n-C34.  
Gravimetric Heavy Hydrocarbons are not included in the Total C16-C50 and are only determined if the chromatogram of the C34 - C50 hydrocarbons indicates that hydrocarbons >C50 are present.  
The chromatogram has returned to baseline by the retention time of nC50.  
Total C6 - C50 results are corrected for BTEX contribution.  
This method complies with the Reference Method for the CWS PHC and is validated for use in the laboratory.  
nC6 and nC10 response factors are within 30% of Toluene response factor.  
nC10, nC16 and nC34 response factors are within 10% of their average.  
C50 response factor is within 70% of nC10 + nC16 + nC34 average.  
Linearity is within 15%.  
Extraction and holding times were met for this sample.  
Fractions 1-4 are quantified with the contribution of PAHs. Under Ontario Regulation 153, results are considered valid without determining the PAH contribution if not requested by the client.  
Quality Control Data is available upon request.

Analysis performed at AGAT Toronto (unless marked by \*)

Certified By:

## Quality Assurance

CLIENT NAME: WSP CANADA INC.  
 PROJECT: 211-10139-00  
 SAMPLING SITE:

AGAT WORK ORDER: 21T827359  
 ATTENTION TO: Vanessa Oetinger  
 SAMPLED BY: Matt Roy

Soil Analysis															
RPT Date: Nov 20, 2021			DUPLICATE				Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE		MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Measured Value		Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper

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

Antimony	3194983		<0.8	<0.8	NA	< 0.8	130%	70%	130%	100%	80%	120%	93%	70%	130%
Arsenic	3194983		1	1	NA	< 1	111%	70%	130%	102%	80%	120%	104%	70%	130%
Barium	3194983		12.4	12.4	0.0%	< 2.0	99%	70%	130%	101%	80%	120%	94%	70%	130%
Beryllium	3194983		<0.4	<0.4	NA	< 0.4	130%	70%	130%	112%	80%	120%	121%	70%	130%
Boron	3194983		<5	<5	NA	< 5	95%	70%	130%	106%	80%	120%	109%	70%	130%
Boron (Hot Water Soluble)	3188832		0.26	0.25	NA	< 0.10	91%	60%	140%	99%	70%	130%	98%	60%	140%
Cadmium	3194983		<0.5	<0.5	NA	< 0.5	104%	70%	130%	99%	80%	120%	101%	70%	130%
Chromium	3194983		8	6	NA	< 5	101%	70%	130%	112%	80%	120%	89%	70%	130%
Cobalt	3194983		2.3	2.5	NA	< 0.5	104%	70%	130%	107%	80%	120%	101%	70%	130%
Copper	3194983		4.9	5.0	NA	< 1.0	92%	70%	130%	104%	80%	120%	93%	70%	130%
Lead	3194983		2	2	NA	< 1	102%	70%	130%	103%	80%	120%	91%	70%	130%
Molybdenum	3194983		<0.5	<0.5	NA	< 0.5	103%	70%	130%	109%	80%	120%	107%	70%	130%
Nickel	3194983		4	4	NA	< 1	101%	70%	130%	109%	80%	120%	101%	70%	130%
Selenium	3194983		<0.8	<0.8	NA	< 0.8	131%	70%	130%	97%	80%	120%	100%	70%	130%
Silver	3194983		<0.5	<0.5	NA	< 0.5	126%	70%	130%	104%	80%	120%	92%	70%	130%
Thallium	3194983		<0.5	<0.5	NA	< 0.5	105%	70%	130%	101%	80%	120%	91%	70%	130%
Uranium	3194983		<0.50	<0.50	NA	< 0.50	107%	70%	130%	103%	80%	120%	98%	70%	130%
Vanadium	3194983		12.3	12.9	4.8%	< 0.4	106%	70%	130%	98%	80%	120%	99%	70%	130%
Zinc	3194983		12	12	NA	< 5	105%	70%	130%	106%	80%	120%	107%	70%	130%
Chromium, Hexavalent	3185854	3185854	<0.2	<0.2	NA	< 0.2	96%	70%	130%	97%	80%	120%	87%	70%	130%
Cyanide, Free	3185854	3185854	<0.040	<0.040	NA	< 0.040	106%	70%	130%	109%	80%	120%	91%	70%	130%
Mercury	3194983		<0.10	<0.10	NA	< 0.10	99%	70%	130%	95%	80%	120%	93%	70%	130%
Electrical Conductivity (2:1)	3194209		0.158	0.166	4.9%	< 0.005	101%	80%	120%						
Sodium Adsorption Ratio (2:1) (Calc.)	3188909		0.747	0.678	9.7%	NA									
pH, 2:1 CaCl2 Extraction	3185854	3185854	7.25	7.29	0.6%	NA	99%	80%	120%						

Comments: NA signifies Not Applicable.

pH duplicates QA acceptance criteria was met relative as stated in Table 5-15 of Analytical Protocol document.

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

For a multi-element scan for lab control standards and matrix spikes, up to 10% of analytes may exceed the quoted limits by up to 10% absolute and it is considered acceptable.

Certified By: \_\_\_\_\_





## Quality Assurance

CLIENT NAME: WSP CANADA INC.

AGAT WORK ORDER: 21T827359

PROJECT: 211-10139-00

ATTENTION TO: Vanessa Oetinger

SAMPLING SITE:

SAMPLED BY: Matt Roy

### Trace Organics Analysis

RPT Date: Nov 20, 2021			DUPLICATE			Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD		Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper

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

Benzene	3185867		< 0.02	< 0.02	NA	< 0.02	85%	60%	140%	83%	60%	140%	85%	60%	140%
Toluene	3185867		< 0.05	< 0.05	NA	< 0.05	80%	60%	140%	88%	60%	140%	92%	60%	140%
Ethylbenzene	3185867		< 0.05	< 0.05	NA	< 0.05	92%	60%	140%	80%	60%	140%	79%	60%	140%
m & p-Xylene	3185867		< 0.05	< 0.05	NA	< 0.05	85%	60%	140%	93%	60%	140%	96%	60%	140%
o-Xylene	3185867		< 0.05	< 0.05	NA	< 0.05	79%	60%	140%	86%	60%	140%	84%	60%	140%
F1 (C6 - C10)	3185867		< 5	< 5	NA	< 5	114%	60%	140%	108%	60%	140%	88%	60%	140%
F2 (C10 to C16)	3188549		< 10	< 10	NA	< 10	98%	60%	140%	90%	60%	140%	61%	60%	140%
F3 (C16 to C34)	3188549		< 50	< 50	NA	< 50	95%	60%	140%	81%	60%	140%	62%	60%	140%
F4 (C34 to C50)	3188549		< 50	< 50	NA	< 50	95%	60%	140%	119%	60%	140%	81%	60%	140%

**O. Reg. 153(511) - OC Pesticides + PCBs (Soil)**

Gamma-Hexachlorocyclohexane	3176902		< 0.005	< 0.005	NA	< 0.005	102%	50%	140%	104%	50%	140%	82%	50%	140%
Heptachlor	3176902		< 0.005	< 0.005	NA	< 0.005	109%	50%	140%	108%	50%	140%	104%	50%	140%
Aldrin	3176902		< 0.005	< 0.005	NA	< 0.005	98%	50%	140%	108%	50%	140%	102%	50%	140%
Heptachlor Epoxide	3176902		< 0.005	< 0.005	NA	< 0.005	105%	50%	140%	107%	50%	140%	102%	50%	140%
Endosulfan I	3176902		< 0.005	< 0.005	NA	< 0.005	102%	50%	140%	100%	50%	140%	102%	50%	140%
Endosulfan II	3176902		< 0.005	< 0.005	NA	< 0.005	109%	50%	140%	114%	50%	140%	104%	50%	140%
Alpha-Chlordane	3176902		< 0.005	< 0.005	NA	< 0.005	99%	50%	140%	112%	50%	140%	107%	50%	140%
gamma-Chlordane	3176902		< 0.005	< 0.005	NA	< 0.005	101%	50%	140%	110%	50%	140%	105%	50%	140%
op'-DDD	3176902		< 0.005	< 0.005	NA	< 0.005	115%	50%	140%	105%	50%	140%	118%	50%	140%
pp'-DDD	3176902		< 0.005	< 0.005	NA	< 0.005	103%	50%	140%	108%	50%	140%	109%	50%	140%
op'-DDE	3176902		< 0.005	< 0.005	NA	< 0.005	97%	50%	140%	107%	50%	140%	112%	50%	140%
pp'-DDE	3176902		< 0.005	< 0.005	NA	< 0.005	104%	50%	140%	103%	50%	140%	104%	50%	140%
op'-DDT	3176902		< 0.005	< 0.005	NA	< 0.005	100%	50%	140%	105%	50%	140%	114%	50%	140%
pp'-DDT	3176902		< 0.005	< 0.005	NA	< 0.005	106%	50%	140%	104%	50%	140%	115%	50%	140%
Dieldrin	3176902		< 0.005	< 0.005	NA	< 0.005	104%	50%	140%	101%	50%	140%	107%	50%	140%
Endrin	3176902		< 0.005	< 0.005	NA	< 0.005	106%	50%	140%	105%	50%	140%	109%	50%	140%
Methoxychlor	3176902		< 0.005	< 0.005	NA	< 0.005	95%	50%	140%	109%	50%	140%	107%	50%	140%
Hexachlorobenzene	3176902		< 0.005	< 0.005	NA	< 0.005	104%	50%	140%	93%	50%	140%	87%	50%	140%
Hexachlorobutadiene	3176902		< 0.01	< 0.01	NA	< 0.01	89%	50%	140%	92%	50%	140%	86%	50%	140%
Hexachloroethane	3176902		< 0.01	< 0.01	NA	< 0.01	87%	50%	140%	93%	50%	140%	106%	50%	140%
Aroclor 1242	3176902		< 0.10	< 0.10	NA	< 0.10	104%	50%	140%	NA	50%	140%	NA	50%	140%
Aroclor 1248	3176902		< 0.10	< 0.10	NA	< 0.10	106%	50%	140%	NA	50%	140%	NA	50%	140%
Aroclor 1254	3176902		< 0.10	< 0.10	NA	< 0.10	102%	50%	140%	NA	50%	140%	NA	50%	140%
Aroclor 1260	3176902		< 0.10	< 0.10	NA	< 0.10	98%	50%	140%	NA	50%	140%	NA	50%	140%
Polychlorinated Biphenyls	3176902		< 0.10	< 0.10	NA	< 0.10	96%	50%	140%	92%	50%	140%	102%	50%	140%

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

Naphthalene	3188273		< 0.05	< 0.05	NA	< 0.05	105%	50%	140%	70%	50%	140%	114%	50%	140%
Acenaphthylene	3188273		< 0.05	< 0.05	NA	< 0.05	78%	50%	140%	75%	50%	140%	75%	50%	140%
Acenaphthene	3188273		< 0.05	< 0.05	NA	< 0.05	85%	50%	140%	94%	50%	140%	96%	50%	140%

## Quality Assurance

 CLIENT NAME: WSP CANADA INC.  
 PROJECT: 211-10139-00  
 SAMPLING SITE:

 AGAT WORK ORDER: 21T827359  
 ATTENTION TO: Vanessa Oetinger  
 SAMPLED BY: Matt Roy

### Trace Organics Analysis (Continued)

RPT Date: Nov 20, 2021			DUPLICATE				Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Measured Value		Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits		
								Lower	Upper		Lower	Upper		Lower	Upper	
Fluorene	3188273		< 0.05	< 0.05	NA	< 0.05	78%	50%	140%	85%	50%	140%	93%	50%	140%	
Phenanthrene	3188273		< 0.05	< 0.05	NA	< 0.05	90%	50%	140%	78%	50%	140%	92%	50%	140%	
Anthracene	3188273		< 0.05	< 0.05	NA	< 0.05	85%	50%	140%	74%	50%	140%	104%	50%	140%	
Fluoranthene	3188273		< 0.05	< 0.05	NA	< 0.05	96%	50%	140%	109%	50%	140%	78%	50%	140%	
Pyrene	3188273		< 0.05	< 0.05	NA	< 0.05	105%	50%	140%	86%	50%	140%	85%	50%	140%	
Benz(a)anthracene	3188273		< 0.05	< 0.05	NA	< 0.05	78%	50%	140%	95%	50%	140%	93%	50%	140%	
Chrysene	3188273		< 0.05	< 0.05	NA	< 0.05	88%	50%	140%	77%	50%	140%	92%	50%	140%	
Benzo(b)fluoranthene	3188273		< 0.05	< 0.05	NA	< 0.05	74%	50%	140%	71%	50%	140%	91%	50%	140%	
Benzo(k)fluoranthene	3188273		< 0.05	< 0.05	NA	< 0.05	85%	50%	140%	85%	50%	140%	114%	50%	140%	
Benzo(a)pyrene	3188273		< 0.05	< 0.05	NA	< 0.05	93%	50%	140%	93%	50%	140%	78%	50%	140%	
Indeno(1,2,3-cd)pyrene	3188273		< 0.05	< 0.05	NA	< 0.05	92%	50%	140%	92%	50%	140%	95%	50%	140%	
Dibenz(a,h)anthracene	3188273		< 0.05	< 0.05	NA	< 0.05	91%	50%	140%	104%	50%	140%	93%	50%	140%	
Benzo(g,h,i)perylene	3188273		< 0.05	< 0.05	NA	< 0.05	97%	50%	140%	77%	50%	140%	92%	50%	140%	

Comments: When the average of the sample and duplicate results is less than 5x the RDL, the Relative Percent Difference (RPD) will be indicated as Not Applicable (NA).

Certified By: \_\_\_\_\_



## QC Exceedance

CLIENT NAME: WSP CANADA INC.

AGAT WORK ORDER: 21T827359

PROJECT: 211-10139-00

ATTENTION TO: Vanessa Oetinger

RPT Date: Nov 20, 2021										REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Sample Id	Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits									
			Lower	Upper		Lower	Upper		Lower	Upper								

O. Reg. 153(511) - Metals &amp; Inorganics (Soil)

Selenium

131%   70%   130%   97%   80%   120%   100%   70%   130%

Comments: NA signifies Not Applicable.

pH duplicates QA acceptance criteria was met relative as stated in Table 5-15 of Analytical Protocol document.

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

For a multi-element scan for lab control standards and matrix spikes, up to 10% of analytes may exceed the quoted limits by up to 10% absolute and it is considered acceptable.





## Method Summary

CLIENT NAME: WSP CANADA INC.  
 PROJECT: 211-10139-00  
 SAMPLING SITE:

AGAT WORK ORDER: 21T827359  
 ATTENTION TO: Vanessa Oetinger  
 SAMPLED BY: Matt Roy

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Soil Analysis			
Antimony	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Arsenic	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Barium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Beryllium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Boron	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Boron (Hot Water Soluble)	MET-93-6104	modified from EPA 6010D and MSA PART 3, CH 21	ICP/OES
Cadmium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Chromium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Cobalt	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Copper	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Lead	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Molybdenum	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Nickel	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Selenium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Silver	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Thallium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Uranium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Vanadium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Zinc	MET 93 -6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Chromium, Hexavalent	INOR-93-6068	modified from EPA 3060 and EPA 7196	SPECTROPHOTOMETER
Cyanide, Free	INOR-93-6052	modified from ON MOECC E3015, SM 4500-CN- I, G-387	TECHNICON AUTO ANALYZER
Mercury	MET-93-6103	modified from EPA 7471B and SM 3112 B	ICP-MS
Electrical Conductivity (2:1)	INOR-93-6036	modified from MSA PART 3, CH 14 and SM 2510 B	EC METER
Sodium Adsorption Ratio (2:1) (Calc.)	INOR-93-6007	modified from EPA 6010D & Analytical Protocol	ICP/OES
pH, 2:1 CaCl <sub>2</sub> Extraction	INOR-93-6031	modified from EPA 9045D and MCKEAGUE 3.11	PH METER

## Method Summary

CLIENT NAME: WSP CANADA INC.

AGAT WORK ORDER: 21T827359

PROJECT: 211-10139-00

ATTENTION TO: Vanessa Oetinger

SAMPLING SITE:

SAMPLED BY: Matt Roy

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Trace Organics Analysis			
Gamma-Hexachlorocyclohexane	ORG-91-5113	modified from EPA SW-846 3570, 3620C & 8081B	GC/ECD
Heptachlor	ORG-91-5113	modified from EPA SW-846 3570, 3620C & 8081B	GC/ECD
Aldrin	ORG-91-5113	modified from EPA SW-846 3570, 3620C & 8081B	GC/ECD
Heptachlor Epoxide	ORG-91-5113	modified from EPA SW-846 3570, 3620C & 8081B	GC/ECD
Endosulfan I	ORG-91-5113	modified from EPA SW-846 3570, 3620C & 8081B	GC/ECD
Endosulfan II	ORG-91-5113	modified from EPA SW-846 3570, 3620C & 8081B	GC/ECD
Endosulfan	ORG-91-5113	modified from EPA SW-846 3570, 3620C & 8081B	GC/ECD
Alpha-Chlordane	ORG-91-5113	modified from EPA SW-846 3570, 3620C & 8081B	GC/ECD
gamma-Chlordane	ORG-91-5113	modified from EPA SW-846 3570, 3620C & 8081B	GC/ECD
Chlordane	ORG-91-5113	modified from EPA SW-846 3570, 3620C & 8081B	CALCULATION
op'-DDD	ORG-91-5113	modified from EPA SW-846 3570, 3620C & 8081B	GC/ECD
pp'-DDD	ORG-91-5113	modified from EPA SW-846 3570, 3620C & 8081B	GC/ECD
DDD	ORG-91-5113	modified from EPA SW-846 3570, 3620C & 8081B	CALCULATION
op'-DDE	ORG-91-5113	modified from EPA SW-846 3570, 3620C & 8081B	GC/ECD
pp'-DDE	ORG-91-5113	modified from EPA SW-846 3570, 3620C & 8081B	GC/ECD
DDE	ORG-91-5113	modified from EPA SW-846 3570, 3620C & 8081B	GC/ECD
op'-DDT	ORG-91-5113	modified from EPA SW-846 3570, 3620C & 8081B	GC/ECD
pp'-DDT	ORG-91-5113	modified from EPA SW-846 3570, 3620C & 8081B	GC/ECD
DDT	ORG-91-5113	modified from EPA SW-846 3570, 3620C & 8081B	CALCULATION
Dieldrin	ORG-91-5113	modified from EPA SW-846 3570, 3620C & 8081B	GC/ECD
Endrin	ORG-91-5113	modified from EPA SW-846 3570, 3620C & 8081B	GC/ECD
Methoxychlor	ORG-91-5113	modified from EPA SW-846 3570, 3620C & 8081B	GC/ECD
Hexachlorobenzene	ORG-91-5113	modified from EPA SW-846 3570, 3620C & 8081B	GC/ECD
Hexachlorobutadiene	ORG-91-5113	modified from EPA SW-846 3570, 3620C & 8081B	GC/ECD
Hexachloroethane	ORG-91-5113	modified from EPA SW-846 3570, 3620C & 8081B	GC/ECD
Aroclor 1242	ORG-91-5113	modified from EPA SW-846 3570, 3620C & 8082A	GC/ECD
Aroclor 1248	ORG-91-5113	modified from EPA SW-846 3570, 3620C & 8082A	GC/ECD

## Method Summary

CLIENT NAME: WSP CANADA INC.

AGAT WORK ORDER: 21T827359

PROJECT: 211-10139-00

ATTENTION TO: Vanessa Oetinger

SAMPLING SITE:

SAMPLED BY: Matt Roy

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Aroclor 1254	ORG-91-5113	modified from EPA SW-846 3570, 3620C & 8082A	GC/ECD
Aroclor 1260	ORG-91-5113	modified from EPA SW-846 3570, 3620C & 8082A	GC/ECD
Polychlorinated Biphenyls	ORG-91-5113	modified from EPA SW-846 3570, 3620C & 8082A	GC/ECD
TCMX	ORG-91-5113	modified from EPA SW-846 3541, 3620,8081	GC/ECD
Decachlorobiphenyl	ORG-91-5113	modified from EPA SW-846 3541, 3620,8081	GC/ECD
Moisture Content	VOL-91-5009	CCME Tier 1 Method	BALANCE
wet weight OC/PCB	ORG-91-5113		BALANCE
Naphthalene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Acenaphthylene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Acenaphthene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Fluorene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Phenanthrene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Anthracene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Fluoranthene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Pyrene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Benz(a)anthracene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Chrysene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Benzo(b)fluoranthene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Benzo(k)fluoranthene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Benzo(a)pyrene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Indeno(1,2,3-cd)pyrene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Dibenz(a,h)anthracene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Benzo(g,h,i)perylene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
1 and 2 Methylnaphthalene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Naphthalene-d8	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Acridine-d9	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Terphenyl-d14	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Benzene	VOL-91-5009	modified from CCME Tier 1 Method	(P&T)GC/MS
Toluene	VOL-91-5009	modified from CCME Tier 1 Method	(P&T)GC/MS
Ethylbenzene	VOL-91-5009	modified from CCME Tier 1 Method	(P&T)GC/MS
m & p-Xylene	VOL-91-5009	modified from CCME Tier 1 Method	(P&T)GC/MS



## Method Summary

CLIENT NAME: WSP CANADA INC.

AGAT WORK ORDER: 21T827359

PROJECT: 211-10139-00

ATTENTION TO: Vanessa Oetinger

SAMPLING SITE:

SAMPLED BY: Matt Roy

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
o-Xylene	VOL-91-5009	modified from CCME Tier 1 Method	(P&T)GC/MS
Xylenes (Total)	VOL-91-5009	modified from CCME Tier 1 Method	(P&T)GC/MS
F1 (C6 - C10)	VOL-91-5009	modified from CCME Tier 1 Method	(P&T)GC/FID
F1 (C6 to C10) minus BTEX	VOL-91-5009	modified from CCME Tier 1 Method	P&T GC/FID
Toluene-d8	VOL-91-5009	modified from EPA SW-846 5030C & 8260D	(P&T)GC/MS
F2 (C10 to C16)	VOL-91-5009	modified from CCME Tier 1 Method	GC/FID
F3 (C16 to C34)	VOL-91-5009	modified from CCME Tier 1 Method	GC/FID
F4 (C34 to C50)	VOL-91-5009	modified from CCME Tier 1 Method	GC/FID
Gravimetric Heavy Hydrocarbons	VOL-91-5009	modified from CCME Tier 1 Method	BALANCE
Terphenyl	VOL-91-5009	modified from CCME Tier 1 Method	GC/FID

**Laboratory Use Only**

Work Order #: 21T827359

Cooler Quantity: 1 LRG BLK

Arrival Temperatures: 7.7 8.3 19.1

Custody Seal Intact:  Yes  No  N/A

Notes: FREE ICE

**Chain of Custody Record** If this is a Drinking Water sample, please use Drinking Water Chain of Custody Form (potable water consumed by humans)

**Report Information:**

Company: WSP

Contact: Vanessa Oettinger

Address: 2 International Blvd, Etobicoke

Phone: \_\_\_\_\_ Fax: \_\_\_\_\_

Reports to be sent to:

1. Email: Vanessa.oettinger@wsp.com

2. Email: matt.roy@wsp.com

**Regulatory Requirements:**  
*(Please check all applicable boxes)*

Regulation 153/04  Excess Soils R406  Sewer Use  
 Ind/Com  Sanitary  Storm

Table 3  Res/Park  Agriculture  Regulation 558  Prov. Water Quality Objectives (PWQO)

Soil Texture (Check One)  CCME  Other

Coarse  Fine

**Turnaround Time (TAT) Required:**

Regular TAT  5 to 7 Business Days

Rush TAT (Rush Surcharges Apply)

3 Business Days  2 Business Days  Next Business Day

OR Date Required (Rush Surcharges May Apply): \_\_\_\_\_

**Project Information:**

Project: 211-10139-00

Site Location: ORBY Rail

Sampled By: Matt Roy

AGAT Quote #: \_\_\_\_\_ PO: \_\_\_\_\_

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

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

Report Guideline on Certificate of Analysis  Yes  No

**Invoice Information:**

Bill To Same: Yes  No

Company: \_\_\_\_\_

Contact: \_\_\_\_\_

Address: \_\_\_\_\_

Email: payables.ontario@wsp.com

**Sample Matrix Legend**

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

Sample Identification	Date Sampled	Time Sampled	# of Containers	Sample Matrix	Comments/ Special Instructions	Y / N	0. Reg 153				0. Reg 559				0. Reg 406				Potentially Hazardous or High Concentration (Y/N)		
							Field Filtered - Metals, Hg, CrVI, DOC	Metals & Inorganics	Metals - CrVI, Hg, HWBS	BTEX, F1-F4 PHCs	Analyze F4G if required	PAHs	PCBs	VOC	Landfill Disposal Characterization TOLP: M&I, VOCs, ABNs, BAP, PCBs	Excess Soils SPLP Rainwater Leach	SPLP: Metals, VOCs, SVOCs	Excess Soils Characterization Package pH, ICPMS Metals, BTEX, F1-F4		Salt - EC/SAR	OC Pesticides
BH21-30 SS1	11/4/21	PM	2	S																	
BH21-30 SS2		PM	2	S			X														
BH21-30 SS3		PM	3	S			X		X												
BH21-30 SS4		PM	2	S			X														
BH21-30 SS8		PM	3	S			X		X												
BH21-28 SS1		AM	1	S			X														
QAQC-3		AM	1	S			X														
BH21-28 SS2		PM	3	S					X												
<del>BH21-28</del> QAQC-4		PM	3	S					X												
BH21-28 SS3		PM	2	S						X	X										
QAQC-5		PM	2	S						X	X										

Samples Relinquished By (Print Name and Sign): Matt Roy Date: 11/8/21 Time: 1630

Samples Received By (Print Name and Sign): Adriana Bellavia Date: \_\_\_\_\_ Time: \_\_\_\_\_

Samples Relinquished By (Print Name and Sign): \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_

Samples Received By (Print Name and Sign): \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_

Samples Relinquished By (Print Name and Sign): \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_

Samples Received By (Print Name and Sign): \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_

Page 1 of 2

Nº: **T 126069**







CLIENT NAME: WSP CANADA INC.  
2 INTERNATIONAL BLVD SUITE 201  
ETOBICOKE, ON M9W1A2  
(416) 798-0065

ATTENTION TO: Vanessa Oetinger

PROJECT: 211-10139-00

AGAT WORK ORDER: 21T830287

SOIL ANALYSIS REVIEWED BY: Jacky Zhu, Spectroscopy Technician

TRACE ORGANICS REVIEWED BY: Inga Kuzmina, Trace Organics Lab Manager

DATE REPORTED: Nov 27, 2021

PAGES (INCLUDING COVER): 16

VERSION\*: 1

Should you require any information regarding this analysis please contact your client services representative at (905) 712-5100

\*Notes

**Disclaimer:**

- All work conducted herein has been done using accepted standard protocols, and generally accepted practices and methods. AGAT test methods may incorporate modifications from the specified reference methods to improve performance.
- All samples will be disposed of within 30 days after receipt unless a Long Term Storage Agreement is signed and returned. Some specialty analysis may be exempt, please contact your Client Project Manager for details.
- AGAT's liability in connection with any delay, performance or non-performance of these services is only to the Client and does not extend to any other third party. Unless expressly agreed otherwise in writing, AGAT's liability is limited to the actual cost of the specific analysis or analyses included in the services.
- This Certificate shall not be reproduced except in full, without the written approval of the laboratory.
- The test results reported herewith relate only to the samples as received by the laboratory.
- Application of guidelines is provided "as is" without warranty of any kind, either expressed or implied, including, but not limited to, warranties of merchantability, fitness for a particular purpose, or non-infringement. AGAT assumes no responsibility for any errors or omissions in the guidelines contained in this document.
- All reportable information as specified by ISO/IEC 17025:2017 is available from AGAT Laboratories upon request.



## Certificate of Analysis

AGAT WORK ORDER: 21T830287

PROJECT: 211-10139-00

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

CLIENT NAME: WSP CANADA INC.

SAMPLING SITE: ORBY Rail

ATTENTION TO: Vanessa Oetinger

SAMPLED BY: Matthew Roy

### O. Reg. 153(511) - Metals & Inorganics (Soil)

DATE RECEIVED: 2021-11-15

DATE REPORTED: 2021-11-27

Parameter	Unit	SAMPLE DESCRIPTION:		BH21-13 SS2	BH21-32 SS1
		G / S	RDL	3211731	3211736
Antimony	µg/g	40	0.8	<0.8	1.9
Arsenic	µg/g	18	1	2	6
Barium	µg/g	670	2.0	10.6	43.1
Beryllium	µg/g	8	0.4	<0.4	<0.4
Boron	µg/g	120	5	<5	9
Boron (Hot Water Soluble)	µg/g	2	0.10	<0.10	0.40
Cadmium	µg/g	1.9	0.5	<0.5	<0.5
Chromium	µg/g	160	5	5	12
Cobalt	µg/g	80	0.5	1.7	5.8
Copper	µg/g	230	1.0	3.4	48.3
Lead	µg/g	120	1	3	65
Molybdenum	µg/g	40	0.5	<0.5	1.4
Nickel	µg/g	270	1	3	21
Selenium	µg/g	5.5	0.8	<0.8	<0.8
Silver	µg/g	40	0.5	<0.5	<0.5
Thallium	µg/g	3.3	0.5	<0.5	<0.5
Uranium	µg/g	33	0.50	<0.50	<0.50
Vanadium	µg/g	86	0.4	10.9	17.7
Zinc	µg/g	340	5	13	67
Chromium, Hexavalent	µg/g	8	0.2	<0.2	<0.2
Cyanide, Free	µg/g	0.051	0.040	<0.040	<0.040
Mercury	µg/g	3.9	0.10	<0.10	0.32
Electrical Conductivity (2:1)	mS/cm	1.4	0.005	0.078	0.184
Sodium Adsorption Ratio (2:1) (Calc.)	N/A	12	N/A	0.205	0.193
pH, 2:1 CaCl2 Extraction	pH Units	5.0-9.0	NA	7.77	7.60

Certified By:





**AGAT** Laboratories

# Certificate of Analysis

AGAT WORK ORDER: 21T830287

PROJECT: 211-10139-00

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

CLIENT NAME: WSP CANADA INC.

SAMPLING SITE: ORBY Rail

ATTENTION TO: Vanessa Oetinger

SAMPLED BY: Matthew Roy

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

DATE RECEIVED: 2021-11-15

DATE REPORTED: 2021-11-27

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 3: Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition - Soil - Industrial/Commercial/Community Property Use - Coarse Textured Soils

Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

3211731-3211736 EC was determined on the DI water extract obtained from the 2:1 leaching procedure (2 parts DI water:1 part soil). pH was determined on the 0.01M CaCl2 extract prepared at 2:1 ratio. SAR is a calculated parameter.

Analysis performed at AGAT Toronto (unless marked by \*)

Certified By:







## Certificate of Analysis

AGAT WORK ORDER: 21T830287

PROJECT: 211-10139-00

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

CLIENT NAME: WSP CANADA INC.

SAMPLING SITE: ORBY Rail

ATTENTION TO: Vanessa Oetinger

SAMPLED BY: Matthew Roy

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

DATE RECEIVED: 2021-11-15

DATE REPORTED: 2021-11-27

Parameter	Unit	SAMPLE DESCRIPTION:		BH21-13 SS1	BH21-32 SS3
		G / S	RDL	3211730	3211737
Naphthalene	µg/g	9.6	0.05	<0.05	<0.05
Acenaphthylene	µg/g	0.15	0.05	<0.05	<0.05
Acenaphthene	µg/g	96	0.05	<0.05	<0.05
Fluorene	µg/g	62	0.05	<0.05	<0.05
Phenanthrene	µg/g	12	0.05	<0.05	<0.05
Anthracene	µg/g	0.67	0.05	<0.05	<0.05
Fluoranthene	µg/g	9.6	0.05	<0.05	<0.05
Pyrene	µg/g	96	0.05	<0.05	<0.05
Benz(a)anthracene	µg/g	0.96	0.05	<0.05	<0.05
Chrysene	µg/g	9.6	0.05	<0.05	<0.05
Benzo(b)fluoranthene	µg/g	0.96	0.05	<0.05	<0.05
Benzo(k)fluoranthene	µg/g	0.96	0.05	<0.05	<0.05
Benzo(a)pyrene	µg/g	0.3	0.05	<0.05	<0.05
Indeno(1,2,3-cd)pyrene	µg/g	0.76	0.05	<0.05	<0.05
Dibenz(a,h)anthracene	µg/g	0.1	0.05	<0.05	<0.05
Benzo(g,h,i)perylene	µg/g	9.6	0.05	<0.05	<0.05
1 and 2 Methyl naphthalene	µg/g	76	0.05	<0.05	<0.05
Moisture Content	%		0.1	15.0	18.2
Surrogate	Unit	Acceptable Limits			
Naphthalene-d8	%		50-140	78	90
Acridine-d9	%		50-140	84	83
Terphenyl-d14	%		50-140	88	74

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 3: Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition - Soil - Industrial/Commercial/Community Property Use - Coarse Textured Soils  
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

3211730-3211737 Results are based on the dry weight of the soil.

Note: The result for Benzo(b)Fluoranthene is the total of the Benzo(b&j)Fluoranthene isomers because the isomers co-elute on the GC column.  
2- and 1-Methyl Naphthalene is a calculated parameter. The calculated value is the sum of 2-Methyl Naphthalene and 1-Methyl Naphthalene.

Analysis performed at AGAT Toronto (unless marked by \*)

Certified By:



## Certificate of Analysis

AGAT WORK ORDER: 21T830287

PROJECT: 211-10139-00

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CLIENT NAME: WSP CANADA INC.

SAMPLING SITE: ORBY Rail

ATTENTION TO: Vanessa Oetinger

SAMPLED BY: Matthew Roy

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

DATE RECEIVED: 2021-11-15

DATE REPORTED: 2021-11-27

Parameter	Unit	SAMPLE DESCRIPTION:		BH21-13 SS5	BH21-32 SS4
		G / S	RDL	3211735	3211745
F1 (C6 - C10)	µg/g	55	5	<5	<5
F1 (C6 to C10) minus BTEX	µg/g	55	5	<5	<5
F2 (C10 to C16)	µg/g	230	10	<10	<10
F3 (C16 to C34)	µg/g	1700	50	<50	<50
F4 (C34 to C50)	µg/g	3300	50	<50	<50
Gravimetric Heavy Hydrocarbons	µg/g	3300	50	NA	NA
Moisture Content	%		0.1	20.0	23.1
Surrogate	Unit	Acceptable Limits			
Toluene-d8	% Recovery		50-140	90	92
Terphenyl	%		60-140	92	92

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 3: Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition - Soil - Industrial/Commercial/Community Property Use - Coarse Textured Soils

Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

3211735-3211745 Results are based on sample dry weight.

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

C6-C10 (F1 minus BTEX) is a calculated parameter. The calculated value is F1 minus BTEX. The calculated parameter is non-accredited. The parameters that are components of the calculation are accredited.

The C10 - C16, C16 - C34, and C34 - C50 fractions are calculated using the average response factor for n-C10, n-C16, and n-C34.

Gravimetric Heavy Hydrocarbons are not included in the Total C16-C50 and are only determined if the chromatogram of the C34 - C50 hydrocarbons indicates that hydrocarbons >C50 are present.

The chromatogram has returned to baseline by the retention time of nC50.

Total C6 - C50 results are corrected for BTEX contribution.

This method complies with the Reference Method for the CWS PHC and is validated for use in the laboratory.

nC6 and nC10 response factors are within 30% of Toluene response factor.

nC10, nC16 and nC34 response factors are within 10% of their average.

C50 response factor is within 70% of nC10 + nC16 + nC34 average.

Linearity is within 15%.

Extraction and holding times were met for this sample.

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

Analysis performed at AGAT Toronto (unless marked by \*)

Certified By:



## Certificate of Analysis

AGAT WORK ORDER: 21T830287

PROJECT: 211-10139-00

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CLIENT NAME: WSP CANADA INC.

SAMPLING SITE: ORBY Rail

ATTENTION TO: Vanessa Oetinger

SAMPLED BY: Matthew Roy

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

DATE RECEIVED: 2021-11-15

DATE REPORTED: 2021-11-27

Parameter	Unit	SAMPLE DESCRIPTION:		BH21-13 SS5	BH21-32 SS4
		G / S	RDL	Soil	Soil
		DATE SAMPLED:		2021-11-15	2021-11-15
				18:51	18:51
				3211735	3211745
Dichlorodifluoromethane	µg/g	16	0.05	<0.05	<0.05
Vinyl Chloride	ug/g	0.032	0.02	<0.02	<0.02
Bromomethane	ug/g	0.05	0.05	<0.05	<0.05
Trichlorofluoromethane	ug/g	4	0.05	<0.05	<0.05
Acetone	ug/g	16	0.50	<0.50	<0.50
1,1-Dichloroethylene	ug/g	0.064	0.05	<0.05	<0.05
Methylene Chloride	ug/g	1.6	0.05	<0.05	<0.05
Trans- 1,2-Dichloroethylene	ug/g	1.3	0.05	<0.05	<0.05
Methyl tert-butyl Ether	ug/g	11	0.05	<0.05	<0.05
1,1-Dichloroethane	ug/g	17	0.02	<0.02	<0.02
Methyl Ethyl Ketone	ug/g	70	0.50	<0.50	<0.50
Cis- 1,2-Dichloroethylene	ug/g	55	0.02	<0.02	<0.02
Chloroform	ug/g	0.47	0.04	<0.04	<0.04
1,2-Dichloroethane	ug/g	0.05	0.03	<0.03	<0.03
1,1,1-Trichloroethane	ug/g	6.1	0.05	<0.05	<0.05
Carbon Tetrachloride	ug/g	0.21	0.05	<0.05	<0.05
Benzene	ug/g	0.32	0.02	<0.02	<0.02
1,2-Dichloropropane	ug/g	0.16	0.03	<0.03	<0.03
Trichloroethylene	ug/g	0.91	0.03	<0.03	<0.03
Bromodichloromethane	ug/g	18	0.05	<0.05	<0.05
Methyl Isobutyl Ketone	ug/g	31	0.50	<0.50	<0.50
1,1,2-Trichloroethane	ug/g	0.05	0.04	<0.04	<0.04
Toluene	ug/g	68	0.05	<0.05	<0.05
Dibromochloromethane	ug/g	13	0.05	<0.05	<0.05
Ethylene Dibromide	ug/g	0.05	0.04	<0.04	<0.04
Tetrachloroethylene	ug/g	4.5	0.05	<0.05	<0.05
1,1,1,2-Tetrachloroethane	ug/g	0.087	0.04	<0.04	<0.04
Chlorobenzene	ug/g	2.4	0.05	<0.05	<0.05
Ethylbenzene	ug/g	9.5	0.05	<0.05	<0.05

Certified By:





## Certificate of Analysis

AGAT WORK ORDER: 21T830287

PROJECT: 211-10139-00

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CLIENT NAME: WSP CANADA INC.

SAMPLING SITE: ORBY Rail

ATTENTION TO: Vanessa Oetinger

SAMPLED BY: Matthew Roy

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

DATE RECEIVED: 2021-11-15

DATE REPORTED: 2021-11-27

Parameter	Unit	SAMPLE DESCRIPTION:		BH21-13 SS5	BH21-32 SS4
		G / S	RDL	3211735	3211745
m & p-Xylene	ug/g		0.05	<0.05	<0.05
Bromoform	ug/g	0.61	0.05	<0.05	<0.05
Styrene	ug/g	34	0.05	<0.05	<0.05
1,1,2,2-Tetrachloroethane	ug/g	0.05	0.05	<0.05	<0.05
o-Xylene	ug/g		0.05	<0.05	<0.05
1,3-Dichlorobenzene	ug/g	9.6	0.05	<0.05	<0.05
1,4-Dichlorobenzene	ug/g	0.2	0.05	<0.05	<0.05
1,2-Dichlorobenzene	ug/g	6.8	0.05	<0.05	<0.05
Xylenes (Total)	ug/g	26	0.05	<0.05	<0.05
1,3-Dichloropropene (Cis + Trans)	µg/g	0.18	0.04	<0.04	<0.04
n-Hexane	µg/g	46	0.05	<0.05	<0.05
Moisture Content	%		0.1	20.0	23.1
Surrogate	Unit	Acceptable Limits			
Toluene-d8	% Recovery	50-140		93	97
4-Bromofluorobenzene	% Recovery	50-140		80	90

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 3: Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition - Soil - Industrial/Commercial/Community Property Use - Coarse Textured Soils

Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

3211735-3211745 The sample was analyzed using the high level technique. The sample was extracted using methanol, a small amount of the methanol extract was diluted in water and the purge & trap GC/MS analysis was performed. Results are based on the dry weight of the soil.

Xylenes total is a calculated parameter. The calculated value is the sum of m&p-Xylene + o-Xylene.

1,3-Dichloropropene total is a calculated parameter. The calculated value is the sum of Cis-1,3-Dichloropropene and Trans-1,3-Dichloropropene.

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

Analysis performed at AGAT Toronto (unless marked by \*)

Certified By:

## Quality Assurance

CLIENT NAME: WSP CANADA INC.  
 PROJECT: 211-10139-00  
 SAMPLING SITE: ORBY Rail

AGAT WORK ORDER: 21T830287  
 ATTENTION TO: Vanessa Oetinger  
 SAMPLED BY: Matthew Roy

Soil Analysis															
RPT Date: Nov 27, 2021			DUPLICATE				Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE		MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Measured Value		Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
O. Reg. 153(511) - Metals & Inorganics (Soil)															
Antimony	3211731	3211731	<0.8	<0.8	NA	< 0.8	129%	70%	130%	109%	80%	120%	99%	70%	130%
Arsenic	3211731	3211731	2	2	NA	< 1	116%	70%	130%	106%	80%	120%	103%	70%	130%
Barium	3211731	3211731	10.6	10.5	0.9%	< 2.0	109%	70%	130%	105%	80%	120%	104%	70%	130%
Beryllium	3211731	3211731	<0.4	<0.4	NA	< 0.4	111%	70%	130%	116%	80%	120%	112%	70%	130%
Boron	3211731	3211731	<5	<5	NA	< 5	83%	70%	130%	117%	80%	120%	105%	70%	130%
Boron (Hot Water Soluble)	3211731	3211731	<0.10	<0.10	NA	< 0.10	97%	60%	140%	101%	70%	130%	94%	60%	140%
Cadmium	3211731	3211731	<0.5	<0.5	NA	< 0.5	113%	70%	130%	108%	80%	120%	106%	70%	130%
Chromium	3211731	3211731	5	5	NA	< 5	108%	70%	130%	105%	80%	120%	105%	70%	130%
Cobalt	3211731	3211731	1.7	1.8	NA	< 0.5	102%	70%	130%	105%	80%	120%	99%	70%	130%
Copper	3211731	3211731	3.4	3.4	NA	< 1.0	96%	70%	130%	107%	80%	120%	102%	70%	130%
Lead	3211731	3211731	3	3	NA	< 1	108%	70%	130%	108%	80%	120%	107%	70%	130%
Molybdenum	3211731	3211731	<0.5	<0.5	NA	< 0.5	109%	70%	130%	108%	80%	120%	102%	70%	130%
Nickel	3211731	3211731	3	3	NA	< 1	98%	70%	130%	102%	80%	120%	96%	70%	130%
Selenium	3211731	3211731	<0.8	<0.8	NA	< 0.8	135%	70%	130%	113%	80%	120%	105%	70%	130%
Silver	3211731	3211731	<0.5	<0.5	NA	< 0.5	105%	70%	130%	110%	80%	120%	101%	70%	130%
Thallium	3211731	3211731	<0.5	<0.5	NA	< 0.5	115%	70%	130%	105%	80%	120%	103%	70%	130%
Uranium	3211731	3211731	<0.50	<0.50	NA	< 0.50	116%	70%	130%	107%	80%	120%	108%	70%	130%
Vanadium	3211731	3211731	10.9	11.5	5.4%	< 0.4	110%	70%	130%	103%	80%	120%	98%	70%	130%
Zinc	3211731	3211731	13	10	NA	< 5	107%	70%	130%	112%	80%	120%	110%	70%	130%
Chromium, Hexavalent	3220567		<0.2	<0.2	NA	< 0.2	105%	70%	130%	104%	80%	120%	90%	70%	130%
Cyanide, Free	3215870		<0.040	<0.040	NA	< 0.040	103%	70%	130%	106%	80%	120%	102%	70%	130%
Mercury	3211731	3211731	<0.10	<0.10	NA	< 0.10	115%	70%	130%	106%	80%	120%	105%	70%	130%
Electrical Conductivity (2:1)	3211731	3211731	0.078	0.085	8.6%	< 0.005	109%	80%	120%						
Sodium Adsorption Ratio (2:1) (Calc.)	3211731	3211731	0.205	0.199	3.0%	NA									
pH, 2:1 CaCl2 Extraction	3215870		7.86	7.80	0.8%	NA	101%	80%	120%						

Comments: NA signifies Not Applicable.

pH duplicates QA acceptance criteria was met relative as stated in Table 5-15 of Analytical Protocol document.

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

For a multi-element scan for lab control standards and matrix spikes, up to 10% of analytes may exceed the quoted limits by up to 10% absolute and it is considered acceptable.

Certified By: \_\_\_\_\_



## Quality Assurance

CLIENT NAME: WSP CANADA INC.

AGAT WORK ORDER: 21T830287

PROJECT: 211-10139-00

ATTENTION TO: Vanessa Oetinger

SAMPLING SITE: ORBY Rail

SAMPLED BY: Matthew Roy

Trace Organics Analysis															
RPT Date: Nov 27, 2021			DUPLICATE				Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE		MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Measured Value		Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper

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

Naphthalene	3230140		< 0.05	< 0.05	NA	< 0.05	105%	50%	140%	115%	50%	140%	101%	50%	140%
Acenaphthylene	3230140		< 0.05	< 0.05	NA	< 0.05	89%	50%	140%	74%	50%	140%	82%	50%	140%
Acenaphthene	3230140		< 0.05	< 0.05	NA	< 0.05	85%	50%	140%	93%	50%	140%	83%	50%	140%
Fluorene	3230140		< 0.05	< 0.05	NA	< 0.05	93%	50%	140%	93%	50%	140%	94%	50%	140%
Phenanthrene	3230140		< 0.05	< 0.05	NA	< 0.05	92%	50%	140%	92%	50%	140%	98%	50%	140%
Anthracene	3230140		< 0.05	< 0.05	NA	< 0.05	67%	50%	140%	64%	50%	140%	85%	50%	140%
Fluoranthene	3230140		< 0.05	< 0.05	NA	< 0.05	87%	50%	140%	97%	50%	140%	105%	50%	140%
Pyrene	3230140		< 0.05	< 0.05	NA	< 0.05	85%	50%	140%	85%	50%	140%	78%	50%	140%
Benz(a)anthracene	3230140		< 0.05	< 0.05	NA	< 0.05	93%	50%	140%	96%	50%	140%	85%	50%	140%
Chrysene	3230140		< 0.05	< 0.05	NA	< 0.05	92%	50%	140%	105%	50%	140%	93%	50%	140%
Benzo(b)fluoranthene	3230140		< 0.05	< 0.05	NA	< 0.05	105%	50%	140%	78%	50%	140%	92%	50%	140%
Benzo(k)fluoranthene	3230140		< 0.05	< 0.05	NA	< 0.05	78%	50%	140%	88%	50%	140%	105%	50%	140%
Benzo(a)pyrene	3230140		< 0.05	< 0.05	NA	< 0.05	88%	50%	140%	96%	50%	140%	78%	50%	140%
Indeno(1,2,3-cd)pyrene	3230140		< 0.05	< 0.05	NA	< 0.05	75%	50%	140%	92%	50%	140%	88%	50%	140%
Dibenz(a,h)anthracene	3230140		< 0.05	< 0.05	NA	< 0.05	96%	50%	140%	105%	50%	140%	96%	50%	140%
Benzo(g,h,i)perylene	3230140		< 0.05	< 0.05	NA	< 0.05	93%	50%	140%	80%	50%	140%	93%	50%	140%

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

F1 (C6 - C10)	3211735	3211735	< 5	< 5	NA	< 5	89%	60%	140%	110%	60%	140%	79%	60%	140%
F2 (C10 to C16)	3230140		< 10	< 10	NA	< 10	94%	60%	140%	83%	60%	140%	84%	60%	140%
F3 (C16 to C34)	3230140		< 50	< 50	NA	< 50	90%	60%	140%	76%	60%	140%	65%	60%	140%
F4 (C34 to C50)	3230140		< 50	< 50	NA	< 50	94%	60%	140%	79%	60%	140%	60%	60%	140%

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

Dichlorodifluoromethane	3211745	3211745	< 0.05	< 0.05	NA	< 0.05	75%	50%	140%	101%	50%	140%	86%	50%	140%
Vinyl Chloride	3211745	3211745	< 0.02	< 0.02	NA	< 0.02	103%	50%	140%	106%	50%	140%	108%	50%	140%
Bromomethane	3211745	3211745	< 0.05	< 0.05	NA	< 0.05	101%	50%	140%	93%	50%	140%	91%	50%	140%
Trichlorofluoromethane	3211745	3211745	< 0.05	< 0.05	NA	< 0.05	84%	50%	140%	93%	50%	140%	88%	50%	140%
Acetone	3211745	3211745	< 0.50	< 0.50	NA	< 0.50	104%	50%	140%	99%	50%	140%	102%	50%	140%
1,1-Dichloroethylene	3211745	3211745	< 0.05	< 0.05	NA	< 0.05	85%	50%	140%	98%	60%	130%	86%	50%	140%
Methylene Chloride	3211745	3211745	< 0.05	< 0.05	NA	< 0.05	97%	50%	140%	110%	60%	130%	113%	50%	140%
Trans- 1,2-Dichloroethylene	3211745	3211745	< 0.05	< 0.05	NA	< 0.05	90%	50%	140%	107%	60%	130%	84%	50%	140%
Methyl tert-butyl Ether	3211745	3211745	< 0.05	< 0.05	NA	< 0.05	107%	50%	140%	77%	60%	130%	92%	50%	140%
1,1-Dichloroethane	3211745	3211745	< 0.02	< 0.02	NA	< 0.02	98%	50%	140%	116%	60%	130%	89%	50%	140%
Methyl Ethyl Ketone	3211745	3211745	< 0.50	< 0.50	NA	< 0.50	102%	50%	140%	101%	50%	140%	100%	50%	140%
Cis- 1,2-Dichloroethylene	3211745	3211745	< 0.02	< 0.02	NA	< 0.02	106%	50%	140%	120%	60%	130%	98%	50%	140%
Chloroform	3211745	3211745	< 0.04	< 0.04	NA	< 0.04	113%	50%	140%	108%	60%	130%	112%	50%	140%
1,2-Dichloroethane	3211745	3211745	< 0.03	< 0.03	NA	< 0.03	116%	50%	140%	108%	60%	130%	117%	50%	140%
1,1,1-Trichloroethane	3211745	3211745	< 0.05	< 0.05	NA	< 0.05	112%	50%	140%	77%	60%	130%	109%	50%	140%
Carbon Tetrachloride	3211745	3211745	< 0.05	< 0.05	NA	< 0.05	72%	50%	140%	90%	60%	130%	87%	50%	140%





## Quality Assurance

CLIENT NAME: WSP CANADA INC.  
 PROJECT: 211-10139-00  
 SAMPLING SITE: ORBY Rail

AGAT WORK ORDER: 21T830287  
 ATTENTION TO: Vanessa Oetinger  
 SAMPLED BY: Matthew Roy

### Trace Organics Analysis (Continued)

RPT Date: Nov 27, 2021			DUPLICATE			Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD		Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
Benzene	3211745	3211745	< 0.02	< 0.02	NA	< 0.02	94%	50%	140%	116%	60%	130%	94%	50%	140%
1,2-Dichloropropane	3211745	3211745	< 0.03	< 0.03	NA	< 0.03	81%	50%	140%	105%	60%	130%	82%	50%	140%
Trichloroethylene	3211745	3211745	< 0.03	< 0.03	NA	< 0.03	75%	50%	140%	94%	60%	130%	81%	50%	140%
Bromodichloromethane	3211745	3211745	< 0.05	< 0.05	NA	< 0.05	90%	50%	140%	112%	60%	130%	85%	50%	140%
Methyl Isobutyl Ketone	3211745	3211745	< 0.50	< 0.50	NA	< 0.50	100%	50%	140%	100%	50%	140%	102%	50%	140%
1,1,2-Trichloroethane	3211745	3211745	< 0.04	< 0.04	NA	< 0.04	94%	50%	140%	103%	60%	130%	118%	50%	140%
Toluene	3211745	3211745	< 0.05	< 0.05	NA	< 0.05	97%	50%	140%	103%	60%	130%	96%	50%	140%
Dibromochloromethane	3211745	3211745	< 0.05	< 0.05	NA	< 0.05	99%	50%	140%	92%	60%	130%	98%	50%	140%
Ethylene Dibromide	3211745	3211745	< 0.04	< 0.04	NA	< 0.04	115%	50%	140%	101%	60%	130%	96%	50%	140%
Tetrachloroethylene	3211745	3211745	< 0.05	< 0.05	NA	< 0.05	89%	50%	140%	90%	60%	130%	97%	50%	140%
1,1,1,2-Tetrachloroethane	3211745	3211745	< 0.04	< 0.04	NA	< 0.04	111%	50%	140%	88%	60%	130%	98%	50%	140%
Chlorobenzene	3211745	3211745	< 0.05	< 0.05	NA	< 0.05	100%	50%	140%	90%	60%	130%	106%	50%	140%
Ethylbenzene	3211745	3211745	< 0.05	< 0.05	NA	< 0.05	70%	50%	140%	72%	60%	130%	71%	50%	140%
m & p-Xylene	3211745	3211745	< 0.05	< 0.05	NA	< 0.05	101%	50%	140%	93%	60%	130%	100%	50%	140%
Bromoform	3211745	3211745	< 0.05	< 0.05	NA	< 0.05	120%	50%	140%	95%	60%	130%	113%	50%	140%
Styrene	3211745	3211745	< 0.05	< 0.05	NA	< 0.05	75%	50%	140%	77%	60%	130%	75%	50%	140%
1,1,2,2-Tetrachloroethane	3211745	3211745	< 0.05	< 0.05	NA	< 0.05	114%	50%	140%	97%	60%	130%	90%	50%	140%
o-Xylene	3211745	3211745	< 0.05	< 0.05	NA	< 0.05	98%	50%	140%	79%	60%	130%	111%	50%	140%
1,3-Dichlorobenzene	3211745	3211745	< 0.05	< 0.05	NA	< 0.05	97%	50%	140%	113%	60%	130%	103%	50%	140%
1,4-Dichlorobenzene	3211745	3211745	< 0.05	< 0.05	NA	< 0.05	87%	50%	140%	112%	60%	130%	112%	50%	140%
1,2-Dichlorobenzene	3211745	3211745	< 0.05	< 0.05	NA	< 0.05	96%	50%	140%	107%	60%	130%	84%	50%	140%
n-Hexane	3211745	3211745	< 0.05	< 0.05	NA	< 0.05	73%	50%	140%	79%	60%	130%	71%	50%	140%

Comments: When the average of the sample and duplicate results is less than 5x the RDL, the Relative Percent Difference (RPD) will be indicated as Not Applicable (NA).

Certified By: \_\_\_\_\_

## QC Exceedance

CLIENT NAME: WSP CANADA INC.

AGAT WORK ORDER: 21T830287

PROJECT: 211-10139-00

ATTENTION TO: Vanessa Oetinger

RPT Date: Nov 27, 2021											
				REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE	
PARAMETER	Sample Id	Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits		
			Lower	Upper		Lower	Upper		Lower	Upper	
O. Reg. 153(511) - Metals & Inorganics (Soil)											
Selenium	3211731	135%	70%	130%	113%	80%	120%	105%	70%	130%	

Comments: NA signifies Not Applicable.

pH duplicates QA acceptance criteria was met relative as stated in Table 5-15 of Analytical Protocol document.

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

For a multi-element scan for lab control standards and matrix spikes, up to 10% of analytes may exceed the quoted limits by up to 10% absolute and it is considered acceptable.



## Method Summary

CLIENT NAME: WSP CANADA INC.  
 PROJECT: 211-10139-00  
 SAMPLING SITE: ORBY Rail

AGAT WORK ORDER: 21T830287  
 ATTENTION TO: Vanessa Oetinger  
 SAMPLED BY: Matthew Roy

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Soil Analysis			
Antimony	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Arsenic	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Barium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Beryllium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Boron	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Boron (Hot Water Soluble)	MET-93-6104	modified from EPA 6010D and MSA PART 3, CH 21	ICP/OES
Cadmium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Chromium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Cobalt	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Copper	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Lead	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Molybdenum	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Nickel	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Selenium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Silver	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Thallium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Uranium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Vanadium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Zinc	MET 93 -6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Chromium, Hexavalent	INOR-93-6068	modified from EPA 3060 and EPA 7196	SPECTROPHOTOMETER
Cyanide, Free	INOR-93-6052	modified from ON MOECC E3015, SM 4500-CN- I, G-387	TECHNICON AUTO ANALYZER
Mercury	MET-93-6103	modified from EPA 7471B and SM 3112 B	ICP-MS
Electrical Conductivity (2:1)	INOR-93-6036	modified from MSA PART 3, CH 14 and SM 2510 B	EC METER
Sodium Adsorption Ratio (2:1) (Calc.)	INOR-93-6007	modified from EPA 6010D & Analytical Protocol	ICP/OES
pH, 2:1 CaCl <sub>2</sub> Extraction	INOR-93-6031	modified from EPA 9045D and MCKEAGUE 3.11	PH METER



## Method Summary

CLIENT NAME: WSP CANADA INC.

AGAT WORK ORDER: 21T830287

PROJECT: 211-10139-00

ATTENTION TO: Vanessa Oetinger

SAMPLING SITE: ORBY Rail

SAMPLED BY: Matthew Roy

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Trace Organics Analysis			
Naphthalene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Acenaphthylene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Acenaphthene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Fluorene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Phenanthrene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Anthracene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Fluoranthene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Pyrene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Benz(a)anthracene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Chrysene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Benzo(b)fluoranthene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Benzo(k)fluoranthene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Benzo(a)pyrene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Indeno(1,2,3-cd)pyrene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Dibenz(a,h)anthracene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Benzo(g,h,i)perylene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
1 and 2 Methylnaphthalene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Naphthalene-d8	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Acridine-d9	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Terphenyl-d14	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Moisture Content	VOL-91-5009	CCME Tier 1 Method	BALANCE
F1 (C6 - C10)	VOL-91-5009	modified from CCME Tier 1 Method	(P&T)GC/FID
F1 (C6 to C10) minus BTEX	VOL-91-5009	modified from CCME Tier 1 Method	(P&T)GC/FID
Toluene-d8	VOL-91-5009	modified from EPA SW-846 5030C & 8260D	(P&T)GC/MS
F2 (C10 to C16)	VOL-91-5009	modified from CCME Tier 1 Method	GC/FID
F3 (C16 to C34)	VOL-91-5009	modified from CCME Tier 1 Method	GC/FID
F4 (C34 to C50)	VOL-91-5009	modified from CCME Tier 1 Method	GC/FID
Gravimetric Heavy Hydrocarbons	VOL-91-5009	modified from CCME Tier 1 Method	BALANCE
Terphenyl	VOL-91-5009	modified from CCME Tier 1 Method	GC/FID
Dichlorodifluoromethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Vinyl Chloride	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS



## Method Summary

CLIENT NAME: WSP CANADA INC.  
PROJECT: 211-10139-00  
SAMPLING SITE: ORBY Rail

AGAT WORK ORDER: 21T830287  
ATTENTION TO: Vanessa Oetinger  
SAMPLED BY: Matthew Roy

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Bromomethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Trichlorofluoromethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Acetone	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,1-Dichloroethylene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Methylene Chloride	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Trans- 1,2-Dichloroethylene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Methyl tert-butyl Ether	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,1-Dichloroethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Methyl Ethyl Ketone	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Cis- 1,2-Dichloroethylene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Chloroform	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,2-Dichloroethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,1,1-Trichloroethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Carbon Tetrachloride	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Benzene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,2-Dichloropropane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Trichloroethylene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Bromodichloromethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Methyl Isobutyl Ketone	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,1,2-Trichloroethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Toluene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Dibromochloromethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Ethylene Dibromide	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Tetrachloroethylene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,1,1,2-Tetrachloroethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Chlorobenzene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Ethylbenzene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
m & p-Xylene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS

## Method Summary

CLIENT NAME: WSP CANADA INC.

AGAT WORK ORDER: 21T830287

PROJECT: 211-10139-00

ATTENTION TO: Vanessa Oetinger

SAMPLING SITE: ORBY Rail

SAMPLED BY: Matthew Roy

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Bromoform	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Styrene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,1,2,2-Tetrachloroethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
o-Xylene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,3-Dichlorobenzene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,4-Dichlorobenzene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,2-Dichlorobenzene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Xylenes (Total)	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,3-Dichloropropene (Cis + Trans)	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
n-Hexane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Toluene-d8	VOL-91-5002	modified from EPA 5035A & EPA 8260D	(P&T)GC/MS
4-Bromofluorobenzene	VOL-91-5002	modified from EPA 5035A & EPA 8260D	(P&T)GC/MS
Moisture Content	VOL-91-5009	modified from CCME Tier 1 Method	BALANCE





# AGAT Laboratories

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

### Laboratory Use Only

Work Order #: 21T830287

Cooler Quantity: 1 large  
Arrival Temperatures: 13.1 13.2 14.1

Custody Seal Intact:  Yes  No  N/A  
Notes: Free Ice

## Chain of Custody Record

If this is a Drinking Water sample, please use Drinking Water Chain of Custody Form (potable water consumed by humans)

### Report Information:

Company: WSP Inc.  
Contact: Vanessa Oettinger  
Address: 2 International Blvd, Etobicoke  
  
Phone: \_\_\_\_\_ Fax: \_\_\_\_\_  
Reports to be sent to:  
1. Email: vanessa.oettinger@wsp.com  
2. Email: matt.roy@wsp.com

### Regulatory Requirements:

(Please check all applicable boxes)

- Regulation 153/04  Excess Soils R406  Sewer Use  
 Sanitary  Storm  
Table 3  Ind/Corn  Res/Park  Agriculture  Region  
 Regulation 558  Prov. Water Quality Objectives (PWQO)  
Soil Texture (Check One)  CCME  Other  
 Coarse  Fine  Indicate One

### Is this submission for a Record of Site Condition?

Yes  No

### Report Guideline on Certificate of Analysis

Yes  No

### Project Information:

Project: 211-10139-00  
Site Location: ORBY Rail  
Sampled By: Matthew Roy  
AGAT Quote #: \_\_\_\_\_ PO: \_\_\_\_\_  
Please note: If quotation number is not provided, client will be billed full price for analysis.

### Invoice Information:

Company: \_\_\_\_\_  
Contact: \_\_\_\_\_  
Address: \_\_\_\_\_  
Email: payables.ontario@wsp.com  
Bill To Same: Yes  No

### Sample Matrix Legend

- B** Biota  
**GW** Ground Water  
**O** Oil  
**P** Paint  
**S** Soil  
**SD** Sediment  
**SW** Surface Water

Sample Identification	Date Sampled	Time Sampled	# of Containers	Sample Matrix	Comments/ Special Instructions	Y / N	0. Reg 153		0. Reg 55R		0. Reg 406		OC Pesticides	HOLD	Potentially Hazardous or High Concentration (Y/N)
							Metals & Inorganics	Metals - CrVI, Hg, HWSB	Landfill Disposal Characterization TCLP: IM&VOCs, ABNS, BAP, PCBs	Excess Soils SPLP Rainwater Leach	SPLP: Metals, VOCs, SVOCs	Excess Soils Characterization Package pH, ICPMS Metals, BTEX, F1-F4			
BH21-13 SS1	11/15/21	PM	1	S											
BH21-13 SS2		PM	1	S			X								
BH21-13 SS4		PM	3	S	HOLD SAMPLE									X	
BH21-13 SS5		PM	3	S											
BH21-32 SS1		AM	1	S			X								
BH21-32 SS3		AM	1	S											
BH21-32 SS4		AM	4	S	HOLD 250ml Jar (M/I)		X	X						X	X
		AM													
		PM													
		AM													
		PM													
		AM													
		PM													

Sample Relinquished By (Print Name and Sign): <u>Matthew Roy</u>	Date: <u>11/15/21</u>	Time: <u>1500</u>	Samples Received By (Print Name and Sign): <u>NEAC G 29</u>	Date: _____	Time: _____
Sample Relinquished By (Print Name and Sign):	Date: _____	Time: _____	Samples Received By (Print Name and Sign):	Date: _____	Time: _____
Sample Relinquished By (Print Name and Sign):	Date: _____	Time: _____	Samples Received By (Print Name and Sign):	Date: _____	Time: _____

Page 1 of 1  
N#: **T 126068**



CLIENT NAME: WSP CANADA INC.  
2 INTERNATIONAL BLVD SUITE 201  
ETOBICOKE, ON M9W1A2  
(416) 798-0065

ATTENTION TO: Vanessa Oetinger

PROJECT: 211-10139-00

AGAT WORK ORDER: 21T830891

SOIL ANALYSIS REVIEWED BY: Nivine Basily, Inorganics Report Writer

TRACE ORGANICS REVIEWED BY: Neli Popnikolova, Senior Chemist

DATE REPORTED: Nov 26, 2021

PAGES (INCLUDING COVER): 16

VERSION\*: 1

Should you require any information regarding this analysis please contact your client services representative at (905) 712-5100

\*Notes

Disclaimer:

- All work conducted herein has been done using accepted standard protocols, and generally accepted practices and methods. AGAT test methods may incorporate modifications from the specified reference methods to improve performance.
- All samples will be disposed of within 30 days after receipt unless a Long Term Storage Agreement is signed and returned. Some specialty analysis may be exempt, please contact your Client Project Manager for details.
- AGAT's liability in connection with any delay, performance or non-performance of these services is only to the Client and does not extend to any other third party. Unless expressly agreed otherwise in writing, AGAT's liability is limited to the actual cost of the specific analysis or analyses included in the services.
- This Certificate shall not be reproduced except in full, without the written approval of the laboratory.
- The test results reported herewith relate only to the samples as received by the laboratory.
- Application of guidelines is provided "as is" without warranty of any kind, either expressed or implied, including, but not limited to, warranties of merchantability, fitness for a particular purpose, or non-infringement. AGAT assumes no responsibility for any errors or omissions in the guidelines contained in this document.
- All reportable information as specified by ISO/IEC 17025:2017 is available from AGAT Laboratories upon request.



## Certificate of Analysis

AGAT WORK ORDER: 21T830891

PROJECT: 211-10139-00

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

CLIENT NAME: WSP CANADA INC.

SAMPLING SITE: ORBY Rail

ATTENTION TO: Vanessa Oetinger

SAMPLED BY: Matthew Roy

### O. Reg. 153(511) - Metals & Inorganics (Soil)

DATE RECEIVED: 2021-11-16

DATE REPORTED: 2021-11-26

Parameter	Unit	SAMPLE DESCRIPTION:		BH21-36 SS1	BH21-25 SS2
		G / S	RDL	Soil	Soil
		DATE SAMPLED:		2021-11-16	2021-11-16 12:00
		3216079		3216087	
Antimony	µg/g	40	0.8	1.1	<0.8
Arsenic	µg/g	18	1	11	8
Barium	µg/g	670	2.0	103	85.3
Beryllium	µg/g	8	0.4	<0.4	0.5
Boron	µg/g	120	5	6	<5
Boron (Hot Water Soluble)	µg/g	2	0.10	0.23	0.35
Cadmium	µg/g	1.9	0.5	<0.5	<0.5
Chromium	µg/g	160	5	12	23
Cobalt	µg/g	80	0.5	5.1	12.6
Copper	µg/g	230	1.0	53.7	35.5
Lead	µg/g	120	1	205	12
Molybdenum	µg/g	40	0.5	1.2	<0.5
Nickel	µg/g	270	1	11	26
Selenium	µg/g	5.5	0.8	<0.8	<0.8
Silver	µg/g	40	0.5	<0.5	<0.5
Thallium	µg/g	3.3	0.5	<0.5	<0.5
Uranium	µg/g	33	0.50	<0.50	0.50
Vanadium	µg/g	86	0.4	18.7	32.8
Zinc	µg/g	340	5	179	70
Chromium, Hexavalent	µg/g	8	0.2	<0.2	<0.2
Cyanide, Free	µg/g	0.051	0.040	<0.040	<0.040
Mercury	µg/g	3.9	0.10	0.23	<0.10
Electrical Conductivity (2:1)	mS/cm	1.4	0.005	0.156	0.174
Sodium Adsorption Ratio (2:1) (Calc.)	N/A	12	N/A	0.076	0.267
pH, 2:1 CaCl2 Extraction	pH Units	5.0-9.0	NA	7.70	7.50

Certified By:



*Matthew Roy*





**AGAT** Laboratories

# Certificate of Analysis

AGAT WORK ORDER: 21T830891

PROJECT: 211-10139-00

5835 COOPERS AVENUE  
MISSISSAUGA, ONTARIO  
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FAX (905)712-5122  
<http://www.agatlabs.com>

CLIENT NAME: WSP CANADA INC.

SAMPLING SITE: ORBY Rail

ATTENTION TO: Vanessa Oetinger

SAMPLED BY: Matthew Roy

## O. Reg. 153(511) - Metals & Inorganics (Soil)

DATE RECEIVED: 2021-11-16

DATE REPORTED: 2021-11-26

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 3: Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition - Soil - Industrial/Commercial/Community Property Use - Coarse Textured Soils

Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

3216079-3216087 EC was determined on the DI water extract obtained from the 2:1 leaching procedure (2 parts DI water:1 part soil). pH was determined on the 0.01M CaCl2 extract prepared at 2:1 ratio. SAR is a calculated parameter.

Analysis performed at AGAT Toronto (unless marked by \*)

Certified By:



*Matthew Roy*



## Certificate of Analysis

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CLIENT NAME: WSP CANADA INC.

SAMPLING SITE: ORBY Rail

ATTENTION TO: Vanessa Oetinger

SAMPLED BY: Matthew Roy

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

DATE RECEIVED: 2021-11-16

DATE REPORTED: 2021-11-26

Parameter	Unit	SAMPLE DESCRIPTION:		BH21-36 SS3	BH21-25 SS1
		G / S	RDL	3216080	3216086
Naphthalene	µg/g	0.09	0.05	<0.05	<0.05
Acenaphthylene	µg/g	0.093	0.05	<0.05	<0.05
Acenaphthene	µg/g	0.072	0.05	<0.05	<0.05
Fluorene	µg/g	0.12	0.05	<0.05	<0.05
Phenanthrene	µg/g	0.69	0.05	<0.05	<0.05
Anthracene	µg/g	0.16	0.05	<0.05	<0.05
Fluoranthene	µg/g	0.56	0.05	<0.05	<0.05
Pyrene	µg/g	1	0.05	<0.05	<0.05
Benz(a)anthracene	µg/g	0.36	0.05	<0.05	<0.05
Chrysene	µg/g	2.8	0.05	<0.05	<0.05
Benzo(b)fluoranthene	µg/g	0.47	0.05	<0.05	<0.05
Benzo(k)fluoranthene	µg/g	0.48	0.05	<0.05	<0.05
Benzo(a)pyrene	µg/g	0.3	0.05	<0.05	<0.05
Indeno(1,2,3-cd)pyrene	µg/g	0.46	0.05	<0.05	<0.05
Dibenz(a,h)anthracene	µg/g	0.1	0.05	<0.05	<0.05
Benzo(g,h,i)perylene	µg/g	0.68	0.05	<0.05	<0.05
1 and 2 Methyl naphthalene	µg/g	0.59	0.05	<0.05	<0.05
Moisture Content	%		0.1	11.3	7.1
Surrogate	Unit	Acceptable Limits			
Naphthalene-d8	%	50-140		78	108
Acridine-d9	%	50-140		85	96
Terphenyl-d14	%	50-140		99	99

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 1: Full Depth Background Site Condition Standards - Soil - Residential/Parkland/Institutional/Industrial/Commercial/Community Property Use  
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

3216080-3216086 Results are based on the dry weight of the soil.

Note: The result for Benzo(b)Fluoranthene is the total of the Benzo(b&j)Fluoranthene isomers because the isomers co-elute on the GC column.  
2- and 1-Methyl Naphthalene is a calculated parameter. The calculated value is the sum of 2-Methyl Naphthalene and 1-Methyl Naphthalene.

Analysis performed at AGAT Toronto (unless marked by \*)

Certified By:



## Certificate of Analysis

AGAT WORK ORDER: 21T830891

PROJECT: 211-10139-00

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CLIENT NAME: WSP CANADA INC.

SAMPLING SITE: ORBY Rail

ATTENTION TO: Vanessa Oetinger

SAMPLED BY: Matthew Roy

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

DATE RECEIVED: 2021-11-16

DATE REPORTED: 2021-11-26

Parameter	Unit	SAMPLE DESCRIPTION:		BH21-36 SS6	BH21-25 SS6
		G / S	RDL	3216085	3216089
F1 (C6 - C10)	µg/g	55	5	<5	<5
F1 (C6 to C10) minus BTEX	µg/g	55	5	<5	<5
F2 (C10 to C16)	µg/g	230	10	<10	<10
F3 (C16 to C34)	µg/g	1700	50	<50	<50
F4 (C34 to C50)	µg/g	3300	50	<50	<50
Gravimetric Heavy Hydrocarbons	µg/g	3300	50	NA	NA
Moisture Content	%		0.1	17.4	15.3
Surrogate	Unit	Acceptable Limits			
Toluene-d8	% Recovery	50-140		71	90
Terphenyl	%	60-140		94	87

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 3: Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition - Soil - Industrial/Commercial/Community Property Use - Coarse Textured Soils

Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

3216085-3216089 Results are based on sample dry weight.

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

C6-C10 (F1 minus BTEX) is a calculated parameter. The calculated value is F1 minus BTEX. The calculated parameter is non-accredited. The parameters that are components of the calculation are accredited.

The C10 - C16, C16 - C34, and C34 - C50 fractions are calculated using the average response factor for n-C10, n-C16, and n-C34.

Gravimetric Heavy Hydrocarbons are not included in the Total C16-C50 and are only determined if the chromatogram of the C34 - C50 hydrocarbons indicates that hydrocarbons >C50 are present.

The chromatogram has returned to baseline by the retention time of nC50.

Total C6 - C50 results are corrected for BTEX contribution.

This method complies with the Reference Method for the CWS PHC and is validated for use in the laboratory.

nC6 and nC10 response factors are within 30% of Toluene response factor.

nC10, nC16 and nC34 response factors are within 10% of their average.

C50 response factor is within 70% of nC10 + nC16 + nC34 average.

Linearity is within 15%.

Extraction and holding times were met for this sample.

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

Analysis performed at AGAT Toronto (unless marked by \*)

Certified By:





## Certificate of Analysis

AGAT WORK ORDER: 21T830891

PROJECT: 211-10139-00

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CLIENT NAME: WSP CANADA INC.

SAMPLING SITE: ORBY Rail

ATTENTION TO: Vanessa Oetinger

SAMPLED BY: Matthew Roy

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

DATE RECEIVED: 2021-11-16

DATE REPORTED: 2021-11-26

Parameter	Unit	SAMPLE DESCRIPTION:		BH21-36 SS6	BH21-25 SS6
		G / S	RDL	Soil	Soil
		DATE SAMPLED:		2021-11-16	2021-11-16 12:00
		3216085	3216089		
Dichlorodifluoromethane	µg/g	16	0.05	<0.05	<0.05
Vinyl Chloride	ug/g	0.032	0.02	<0.02	<0.02
Bromomethane	ug/g	0.05	0.05	<0.05	<0.05
Trichlorofluoromethane	ug/g	4	0.05	<0.05	<0.05
Acetone	ug/g	16	0.50	<0.50	<0.50
Dichloroethylene, 1,1-	ug/g	0.064	0.05	<0.05	<0.05
Methylene Chloride	ug/g	1.6	0.05	<0.05	<0.05
Dichloroethylene, Trans- 1,2-	ug/g	1.3	0.05	<0.05	<0.05
Methyl tert-butyl Ether	ug/g	11	0.05	<0.05	<0.05
Dichloroethane, 1,1-	ug/g	17	0.02	<0.02	<0.02
Methyl Ethyl Ketone	ug/g	70	0.50	<0.50	<0.50
Dichloroethylene, Cis- 1,2-	ug/g	55	0.02	<0.02	<0.02
Chloroform	ug/g	0.47	0.04	<0.04	<0.04
Dichloroethane, 1,2-	ug/g	0.05	0.03	<0.03	<0.03
Trichloroethane, 1,1,1-	ug/g	6.1	0.05	<0.05	<0.05
Carbon Tetrachloride	ug/g	0.21	0.05	<0.05	<0.05
Benzene	ug/g	0.32	0.02	<0.02	<0.02
Dichloropropane, 1,2-	ug/g	0.16	0.03	<0.03	<0.03
Trichloroethylene	ug/g	0.91	0.03	<0.03	<0.03
Bromodichloromethane	ug/g	18	0.05	<0.05	<0.05
Methyl Isobutyl Ketone	ug/g	31	0.50	<0.50	<0.50
Trichloroethane, 1,1,2-	ug/g	0.05	0.04	<0.04	<0.04
Toluene	ug/g	68	0.05	<0.05	<0.05
Dibromochloromethane	ug/g	13	0.05	<0.05	<0.05
Ethylene Dibromide	ug/g	0.05	0.04	<0.04	<0.04
Tetrachloroethylene	ug/g	4.5	0.05	<0.05	<0.05
Tetrachloroethane, 1,1,1,2-	ug/g	0.087	0.04	<0.04	<0.04
Chlorobenzene	ug/g	2.4	0.05	<0.05	<0.05
Ethylbenzene	ug/g	9.5	0.05	<0.05	<0.05

Certified By:





## Certificate of Analysis

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SAMPLING SITE: ORBY Rail

ATTENTION TO: Vanessa Oetinger

SAMPLED BY: Matthew Roy

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

DATE RECEIVED: 2021-11-16

DATE REPORTED: 2021-11-26

Parameter	Unit	SAMPLE DESCRIPTION:		BH21-36 SS6	BH21-25 SS6
		G / S	RDL	3216085	3216089
Bromoform	ug/g	0.61	0.05	<0.05	<0.05
Styrene	ug/g	34	0.05	<0.05	<0.05
Tetrachloroethane, 1,1,2,2-	ug/g	0.05	0.05	<0.05	<0.05
Dichlorobenzene, 1,3-	ug/g	9.6	0.05	<0.05	<0.05
Dichlorobenzene, 1,4-	ug/g	0.2	0.05	<0.05	<0.05
Dichlorobenzene, 1,2-	ug/g	6.8	0.05	<0.05	<0.05
Xylenes (Total)	ug/g	26	0.05	<0.05	<0.05
1,3-Dichloropropene (Cis + Trans)	µg/g	0.18	0.04	<0.04	<0.04
Hexane, n-	µg/g	46	0.05	<0.05	<0.05
Surrogate	Unit	Acceptable Limits			
Toluene-d8	% Recovery	50-140	110	98	
4-Bromofluorobenzene	% Recovery	50-140	79	76	

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 3: Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition - Soil -

Industrial/Commercial/Community Property Use - Coarse Textured Soils

Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

3216085-3216089 The sample was analyzed using the high level technique. The sample was extracted using methanol, a small amount of the methanol extract was diluted in water and the purge & trap GC/MS analysis was performed. Results are based on the dry weight of the soil.

Xylenes total is a calculated parameter. The calculated value is the sum of m&p-Xylene + o-Xylene.

1,3-Dichloropropene total is a calculated parameter. The calculated value is the sum of Cis-1,3-Dichloropropene and Trans-1,3-Dichloropropene.

Analysis performed at AGAT Toronto (unless marked by \*)

Certified By:



### Exceedance Summary

AGAT WORK ORDER: 21T830891

PROJECT: 211-10139-00

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CLIENT NAME: WSP CANADA INC.

ATTENTION TO: Vanessa Oetinger

SAMPLEID	SAMPLE TITLE	GUIDELINE	ANALYSIS PACKAGE	PARAMETER	UNIT	GUIDEVALUE	RESULT
3216079	BH21-36 SS1	ON T3 S ICC CT	O. Reg. 153(511) - Metals & Inorganics (Soil)	Lead	µg/g	120	205



## Quality Assurance

CLIENT NAME: WSP CANADA INC.  
 PROJECT: 211-10139-00  
 SAMPLING SITE: ORBY Rail

AGAT WORK ORDER: 21T830891  
 ATTENTION TO: Vanessa Oetinger  
 SAMPLED BY: Matthew Roy

Soil Analysis															
RPT Date: Nov 26, 2021			DUPLICATE			Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD		Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
O. Reg. 153(511) - Metals & Inorganics (Soil)															
Antimony	3229207		<0.8	<0.8	NA	< 0.8	133%	70%	130%	105%	80%	120%	84%	70%	130%
Arsenic	3229207		4	4	NA	< 1	122%	70%	130%	111%	80%	120%	115%	70%	130%
Barium	3229207		84.6	80.5	5.0%	< 2.0	107%	70%	130%	109%	80%	120%	107%	70%	130%
Beryllium	3229207		0.4	<0.4	NA	< 0.4	74%	70%	130%	91%	80%	120%	80%	70%	130%
Boron	3229207		7	7	NA	< 5	70%	70%	130%	102%	80%	120%	86%	70%	130%
Boron (Hot Water Soluble)	3211731		<0.10	<0.10	NA	< 0.10	97%	60%	140%	101%	70%	130%	94%	60%	140%
Cadmium	3229207		<0.5	<0.5	NA	< 0.5	111%	70%	130%	104%	80%	120%	106%	70%	130%
Chromium	3229207		22	21	NA	< 5	102%	70%	130%	106%	80%	120%	NA	70%	130%
Cobalt	3229207		8.8	8.6	2.3%	< 0.5	103%	70%	130%	108%	80%	120%	104%	70%	130%
Copper	3229207		16.4	15.7	4.4%	< 1.0	95%	70%	130%	114%	80%	120%	91%	70%	130%
Lead	3229207		8	7	13.3%	< 1	105%	70%	130%	111%	80%	120%	97%	70%	130%
Molybdenum	3229207		<0.5	<0.5	NA	< 0.5	111%	70%	130%	112%	80%	120%	116%	70%	130%
Nickel	3229207		16	16	0.0%	< 1	102%	70%	130%	105%	80%	120%	97%	70%	130%
Selenium	3229207		<0.8	<0.8	NA	< 0.8	100%	70%	130%	108%	80%	120%	110%	70%	130%
Silver	3229207		<0.5	<0.5	NA	< 0.5	100%	70%	130%	101%	80%	120%	95%	70%	130%
Thallium	3229207		<0.5	<0.5	NA	< 0.5	105%	70%	130%	103%	80%	120%	93%	70%	130%
Uranium	3229207		0.61	0.59	NA	< 0.50	112%	70%	130%	109%	80%	120%	107%	70%	130%
Vanadium	3229207		32.9	32.6	0.9%	< 0.4	110%	70%	130%	103%	80%	120%	107%	70%	130%
Zinc	3229207		43	41	4.8%	< 5	107%	70%	130%	116%	80%	120%	95%	70%	130%
Chromium, Hexavalent	3216087	3216087	<0.2	<0.2	NA	< 0.2	93%	70%	130%	91%	80%	120%	87%	70%	130%
Cyanide, Free	3222492		<0.040	<0.040	NA	< 0.040	101%	70%	130%	102%	80%	120%	105%	70%	130%
Mercury	3229207		<0.10	<0.10	NA	< 0.10	113%	70%	130%	113%	80%	120%	108%	70%	130%
Electrical Conductivity (2:1)	3211731		0.078	0.085	8.6%	< 0.005	109%	80%	120%						
Sodium Adsorption Ratio (2:1) (Calc.)	3211731		0.205	0.199	3.0%	NA									
pH, 2:1 CaCl2 Extraction	3222492		7.65	7.63	0.3%	NA	99%	80%	120%						

Comments: NA signifies Not Applicable.

pH duplicates QA acceptance criteria was met relative as stated in Table 5-15 of Analytical Protocol document.

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

More than 90% of the elements met acceptance limits and overall data quality is acceptable for use. For a multi-element scan up to 10% of analytes may exceed the quoted limits by up to 10% absolute.

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

Certified By:



*Nivine Basily*

## Quality Assurance

CLIENT NAME: WSP CANADA INC.

AGAT WORK ORDER: 21T830891

PROJECT: 211-10139-00

ATTENTION TO: Vanessa Oetinger

SAMPLING SITE: ORBY Rail

SAMPLED BY: Matthew Roy

Trace Organics Analysis															
RPT Date: Nov 26, 2021			DUPLICATE				Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE		MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Measured Value		Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper

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

Naphthalene	3188273	< 0.05	< 0.05	NA	< 0.05	105%	50%	140%	70%	50%	140%	114%	50%	140%
Acenaphthylene	3188273	< 0.05	< 0.05	NA	< 0.05	78%	50%	140%	75%	50%	140%	75%	50%	140%
Acenaphthene	3188273	< 0.05	< 0.05	NA	< 0.05	85%	50%	140%	94%	50%	140%	96%	50%	140%
Fluorene	3188273	< 0.05	< 0.05	NA	< 0.05	78%	50%	140%	85%	50%	140%	93%	50%	140%
Phenanthrene	3188273	< 0.05	< 0.05	NA	< 0.05	90%	50%	140%	78%	50%	140%	92%	50%	140%
Anthracene	3188273	< 0.05	< 0.05	NA	< 0.05	85%	50%	140%	74%	50%	140%	104%	50%	140%
Fluoranthene	3188273	< 0.05	< 0.05	NA	< 0.05	96%	50%	140%	109%	50%	140%	78%	50%	140%
Pyrene	3188273	< 0.05	< 0.05	NA	< 0.05	105%	50%	140%	86%	50%	140%	85%	50%	140%
Benz(a)anthracene	3188273	< 0.05	< 0.05	NA	< 0.05	78%	50%	140%	95%	50%	140%	93%	50%	140%
Chrysene	3188273	< 0.05	< 0.05	NA	< 0.05	88%	50%	140%	77%	50%	140%	92%	50%	140%
Benzo(b)fluoranthene	3188273	< 0.05	< 0.05	NA	< 0.05	74%	50%	140%	71%	50%	140%	91%	50%	140%
Benzo(k)fluoranthene	3188273	< 0.05	< 0.05	NA	< 0.05	85%	50%	140%	85%	50%	140%	114%	50%	140%
Benzo(a)pyrene	3188273	< 0.05	< 0.05	NA	< 0.05	93%	50%	140%	93%	50%	140%	78%	50%	140%
Indeno(1,2,3-cd)pyrene	3188273	< 0.05	< 0.05	NA	< 0.05	92%	50%	140%	92%	50%	140%	95%	50%	140%
Dibenz(a,h)anthracene	3188273	< 0.05	< 0.05	NA	< 0.05	91%	50%	140%	104%	50%	140%	93%	50%	140%
Benzo(g,h,i)perylene	3188273	< 0.05	< 0.05	NA	< 0.05	97%	50%	140%	77%	50%	140%	92%	50%	140%

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

F1 (C6 - C10)	3223827	< 5	< 5	NA	< 5	91%	60%	140%	109%	60%	140%	87%	60%	140%
F2 (C10 to C16)	3230140	< 10	< 10	NA	< 10	94%	60%	140%	83%	60%	140%	84%	60%	140%
F3 (C16 to C34)	3230140	< 50	< 50	NA	< 50	90%	60%	140%	76%	60%	140%	65%	60%	140%
F4 (C34 to C50)	3230140	< 50	< 50	NA	< 50	94%	60%	140%	79%	60%	140%	60%	60%	140%

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

Dichlorodifluoromethane	3217949	<0.05	<0.05	NA	< 0.05	113%	50%	140%	90%	50%	140%	73%	50%	140%
Vinyl Chloride	3217949	<0.02	<0.02	NA	< 0.02	99%	50%	140%	95%	50%	140%	86%	50%	140%
Bromomethane	3217949	<0.05	<0.05	NA	< 0.05	97%	50%	140%	88%	50%	140%	99%	50%	140%
Trichlorofluoromethane	3217949	<0.05	<0.05	NA	< 0.05	95%	50%	140%	96%	50%	140%	79%	50%	140%
Acetone	3217949	<0.50	<0.50	NA	< 0.50	83%	50%	140%	95%	50%	140%	88%	50%	140%
Dichloroethylene, 1,1-	3217949	<0.05	<0.05	NA	< 0.05	90%	50%	140%	94%	60%	130%	84%	50%	140%
Methylene Chloride	3217949	<0.05	<0.05	NA	< 0.05	93%	50%	140%	111%	60%	130%	110%	50%	140%
Dichloroethylene, Trans- 1,2-	3217949	<0.05	<0.05	NA	< 0.05	114%	50%	140%	96%	60%	130%	80%	50%	140%
Methyl tert-butyl Ether	3217949	<0.05	<0.05	NA	< 0.05	72%	50%	140%	79%	60%	130%	70%	50%	140%
Dichloroethane, 1,1-	3217949	<0.02	<0.02	NA	< 0.02	90%	50%	140%	94%	60%	130%	80%	50%	140%
Methyl Ethyl Ketone	3217949	<0.50	<0.50	NA	< 0.50	99%	50%	140%	85%	50%	140%	83%	50%	140%
Dichloroethylene, Cis- 1,2-	3217949	<0.02	<0.02	NA	< 0.02	76%	50%	140%	87%	60%	130%	95%	50%	140%
Chloroform	3217949	<0.04	<0.04	NA	< 0.04	71%	50%	140%	100%	60%	130%	105%	50%	140%
Dichloroethane, 1,2-	3217949	<0.03	<0.03	NA	< 0.03	83%	50%	140%	103%	60%	130%	99%	50%	140%
Trichloroethane, 1,1,1-	3217949	<0.05	<0.05	NA	< 0.05	100%	50%	140%	114%	60%	130%	77%	50%	140%
Carbon Tetrachloride	3217949	<0.05	<0.05	NA	< 0.05	73%	50%	140%	75%	60%	130%	80%	50%	140%

## Quality Assurance

CLIENT NAME: WSP CANADA INC.  
 PROJECT: 211-10139-00  
 SAMPLING SITE: ORBY Rail

AGAT WORK ORDER: 21T830891  
 ATTENTION TO: Vanessa Oetinger  
 SAMPLED BY: Matthew Roy

### Trace Organics Analysis (Continued)

RPT Date: Nov 26, 2021			DUPLICATE			Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD		Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
Benzene	3217949		<0.02	<0.02	NA	< 0.02	75%	50%	140%	85%	60%	130%	81%	50%	140%
Dichloropropane, 1,2-	3217949		<0.03	<0.03	NA	< 0.03	99%	50%	140%	105%	60%	130%	77%	50%	140%
Trichloroethylene	3217949		<0.03	<0.03	NA	< 0.03	85%	50%	140%	75%	60%	130%	94%	50%	140%
Bromodichloromethane	3217949		<0.05	<0.05	NA	< 0.05	81%	50%	140%	73%	60%	130%	85%	50%	140%
Methyl Isobutyl Ketone	3217949		<0.50	<0.50	NA	< 0.50	75%	50%	140%	98%	50%	140%	90%	50%	140%
Trichloroethane, 1,1,2-	3217949		<0.04	<0.04	NA	< 0.04	97%	50%	140%	104%	60%	130%	109%	50%	140%
Toluene	3217949		<0.05	<0.05	NA	< 0.05	100%	50%	140%	104%	60%	130%	80%	50%	140%
Dibromochloromethane	3217949		<0.05	<0.05	NA	< 0.05	94%	50%	140%	94%	60%	130%	108%	50%	140%
Ethylene Dibromide	3217949		<0.04	<0.04	NA	< 0.04	89%	50%	140%	117%	60%	130%	106%	50%	140%
Tetrachloroethylene	3217949		<0.05	<0.05	NA	< 0.05	88%	50%	140%	92%	60%	130%	90%	50%	140%
Tetrachloroethane, 1,1,1,2-	3217949		<0.04	<0.04	NA	< 0.04	117%	50%	140%	110%	60%	130%	101%	50%	140%
Chlorobenzene	3217949		<0.05	<0.05	NA	< 0.05	101%	50%	140%	109%	60%	130%	95%	50%	140%
Ethylbenzene	3217949		<0.05	<0.05	NA	< 0.05	72%	50%	140%	82%	60%	130%	80%	50%	140%
Bromoform	3217949		<0.05	<0.05	NA	< 0.05	93%	50%	140%	102%	60%	130%	102%	50%	140%
Styrene	3217949		<0.05	<0.05	NA	< 0.05	71%	50%	140%	80%	60%	130%	77%	50%	140%
Tetrachloroethane, 1,1,2,2-	3217949		<0.05	<0.05	NA	< 0.05	100%	50%	140%	87%	60%	130%	94%	50%	140%
Dichlorobenzene, 1,3-	3217949		<0.05	<0.05	NA	< 0.05	110%	50%	140%	107%	60%	130%	94%	50%	140%
Dichlorobenzene, 1,4-	3217949		<0.05	<0.05	NA	< 0.05	96%	50%	140%	96%	60%	130%	100%	50%	140%
Dichlorobenzene, 1,2-	3217949		<0.05	<0.05	NA	< 0.05	94%	50%	140%	100%	60%	130%	97%	50%	140%
Hexane, n-	3217949		<0.05	<0.05	NA	< 0.05	78%	50%	140%	108%	60%	130%	78%	50%	140%

Comments: When the average of the sample and duplicate results is less than 5x the RDL, the Relative Percent Difference (RPD) will be indicated as Not Applicable (NA).

Certified By: \_\_\_\_\_





## QC Exceedance

CLIENT NAME: WSP CANADA INC.

AGAT WORK ORDER: 21T830891

PROJECT: 211-10139-00

ATTENTION TO: Vanessa Oetinger

RPT Date: Nov 26, 2021		REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Sample Id	Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
			Lower	Upper		Lower	Upper		Lower	Upper

O. Reg. 153(511) - Metals &amp; Inorganics (Soil)

	133%	70%	130%	105%	80%	120%	84%	70%	130%
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Comments: NA signifies Not Applicable.

pH duplicates QA acceptance criteria was met relative as stated in Table 5-15 of Analytical Protocol document.

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

More than 90% of the elements met acceptance limits and overall data quality is acceptable for use. For a multi-element scan up to 10% of analytes may exceed the quoted limits by up to 10% absolute.

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



## Method Summary

CLIENT NAME: WSP CANADA INC.  
PROJECT: 211-10139-00  
SAMPLING SITE: ORBY Rail

AGAT WORK ORDER: 21T830891  
ATTENTION TO: Vanessa Oetinger  
SAMPLED BY: Matthew Roy

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Soil Analysis			
Antimony	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Arsenic	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Barium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Beryllium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Boron	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Boron (Hot Water Soluble)	MET-93-6104	modified from EPA 6010D and MSA PART 3, CH 21	ICP/OES
Cadmium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Chromium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Cobalt	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Copper	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Lead	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Molybdenum	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Nickel	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Selenium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Silver	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Thallium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Uranium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Vanadium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Zinc	MET 93 -6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Chromium, Hexavalent	INOR-93-6068	modified from EPA 3060 and EPA 7196	SPECTROPHOTOMETER
Cyanide, Free	INOR-93-6052	modified from ON MOECC E3015, SM 4500-CN- I, G-387	TECHNICON AUTO ANALYZER
Mercury	MET-93-6103	modified from EPA 7471B and SM 3112 B	ICP-MS
Electrical Conductivity (2:1)	INOR-93-6036	modified from MSA PART 3, CH 14 and SM 2510 B	EC METER
Sodium Adsorption Ratio (2:1) (Calc.)	INOR-93-6007	modified from EPA 6010D & Analytical Protocol	ICP/OES
pH, 2:1 CaCl <sub>2</sub> Extraction	INOR-93-6031	modified from EPA 9045D and MCKEAGUE 3.11	PH METER

## Method Summary

CLIENT NAME: WSP CANADA INC.

AGAT WORK ORDER: 21T830891

PROJECT: 211-10139-00

ATTENTION TO: Vanessa Oetinger

SAMPLING SITE: ORBY Rail

SAMPLED BY: Matthew Roy

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Trace Organics Analysis			
Naphthalene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Acenaphthylene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Acenaphthene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Fluorene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Phenanthrene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Anthracene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Fluoranthene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Pyrene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Benz(a)anthracene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Chrysene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Benzo(b)fluoranthene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Benzo(k)fluoranthene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Benzo(a)pyrene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Indeno(1,2,3-cd)pyrene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Dibenz(a,h)anthracene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Benzo(g,h,i)perylene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
1 and 2 Methylnaphthalene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Naphthalene-d8	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Acridine-d9	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Terphenyl-d14	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Moisture Content	VOL-91-5009	CCME Tier 1 Method	BALANCE
F1 (C6 - C10)	VOL-91-5009	modified from CCME Tier 1 Method	(P&T)GC/FID
F1 (C6 to C10) minus BTEX	VOL-91-5009	modified from CCME Tier 1 Method	(P&T)GC/FID
Toluene-d8	VOL-91-5009	modified from EPA SW-846 5030C & 8260D	(P&T)GC/MS
F2 (C10 to C16)	VOL-91-5009	modified from CCME Tier 1 Method	GC/FID
F3 (C16 to C34)	VOL-91-5009	modified from CCME Tier 1 Method	GC/FID
F4 (C34 to C50)	VOL-91-5009	modified from CCME Tier 1 Method	GC/FID
Gravimetric Heavy Hydrocarbons	VOL-91-5009	modified from CCME Tier 1 Method	BALANCE
Terphenyl	VOL-91-5009	modified from CCME Tier 1 Method	GC/FID
Dichlorodifluoromethane	VOL-91-5002	EPA SW-846 5035 & 8260	(P&T)GC/MS
Vinyl Chloride	VOL-91-5002	EPA SW-846 5035 & 8260	(P&T)GC/MS
Bromomethane	VOL-91-5002	EPA SW-846 5035 & 8260	(P&T)GC/MS
Trichlorofluoromethane	VOL-91-5002	EPA SW-846 5035 & 8260	(P&T)GC/MS





## Method Summary

CLIENT NAME: WSP CANADA INC.  
 PROJECT: 211-10139-00  
 SAMPLING SITE: ORBY Rail

AGAT WORK ORDER: 21T830891  
 ATTENTION TO: Vanessa Oetinger  
 SAMPLED BY: Matthew Roy

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Acetone	VOL-91-5002	EPA SW-846 5035 & 8260	(P&T)GC/MS
Dichloroethylene, 1,1-	VOL-91-5002	EPA SW-846 5035 & 8260	(P&T)GC/MS
Methylene Chloride	VOL-91-5002	EPA SW-846 5035 & 8260	(P&T)GC/MS
Dichloroethylene, Trans- 1,2-	VOL-91-5002	EPA SW-846 5035 & 8260	(P&T)GC/MS
Methyl tert-butyl Ether	VOL-91-5002	EPA SW-846 5035 & 8260	(P&T)GC/MS
Dichloroethane, 1,1-	VOL-91-5002	EPA SW-846 5035 & 8260	(P&T)GC/MS
Methyl Ethyl Ketone	VOL-91-5002	EPA SW-846 5035 & 8260	(P&T)GC/MS
Dichloroethylene, Cis- 1,2-	VOL-91-5002	EPA SW-846 5035 & 8260	(P&T)GC/MS
Chloroform	VOL-91-5002	EPA SW-846 5035 & 8260	(P&T)GC/MS
Dichloroethane, 1,2-	VOL-91-5002	EPA SW-846 5035 & 8260	(P&T)GC/MS
Trichloroethane, 1,1,1-	VOL-91-5002	EPA SW-846 5035 & 8260	(P&T)GC/MS
Carbon Tetrachloride	VOL-91-5002	EPA SW-846 5035 & 8260	(P&T)GC/MS
Benzene	VOL-91-5002	modified from EPA 5035C and EPA 8260D	(P&T)GC/MS
Dichloropropane, 1,2-	VOL-91-5002	EPA SW-846 5035 & 8260	(P&T)GC/MS
Trichloroethylene	VOL-91-5002	EPA SW-846 5035 & 8260	(P&T)GC/MS
Bromodichloromethane	VOL-91-5002	EPA SW-846 5035 & 8260	(P&T)GC/MS
Methyl Isobutyl Ketone	VOL-91-5002	EPA SW-846 5035 & 8260	(P&T)GC/MS
Trichloroethane, 1,1,1,2-	VOL-91-5002	EPA SW-846 5035 & 8260	(P&T)GC/MS
Toluene	VOL-91-5002	EPA SW-846 5035 & 8260	(P&T)GC/MS
Dibromochloromethane	VOL-91-5002	EPA SW-846 5035 & 8260	(P&T)GC/MS
Ethylene Dibromide	VOL-91-5002	EPA SW-846 5035 & 8260	(P&T)GC/MS
Tetrachloroethylene	VOL-91-5002	EPA SW-846 5035 & 8260	(P&T)GC/MS
Tetrachloroethane, 1,1,1,2-	VOL-91-5002	EPA SW-846 5035 & 8260	(P&T)GC/MS
Chlorobenzene	VOL-91-5002	EPA SW-846 5035 & 8260	(P&T)GC/MS
Ethylbenzene	VOL-91-5002	EPA SW-846 5035 & 8260	(P&T)GC/MS
Bromoform	VOL-91-5002	EPA SW-846 5035 & 8260	(P&T)GC/MS
Styrene	VOL-91-5002	EPA SW-846 5035 & 8260	(P&T)GC/MS
Tetrachloroethane, 1,1,1,2,2-	VOL-91-5002	EPA SW-846 5035 & 8260	(P&T)GC/MS
Dichlorobenzene, 1,3-	VOL-91-5002	EPA SW-846 5035 & 8260	(P&T)GC/MS
Dichlorobenzene, 1,4-	VOL-91-5002	EPA SW-846 5035 & 8260	(P&T)GC/MS
Dichlorobenzene, 1,2-	VOL-91-5002	EPA SW-846 5035 & 8260	(P&T)GC/MS
Xylenes (Total)	VOL-91-5002	EPA SW-846 5035 & 8260	(P&T)GC/MS
1,3-Dichloropropene (Cis + Trans)	VOL-91-5002	EPA SW-846 5035 & 8260	(P&T)GC/MS
Hexane, n-	VOL-91-5002	EPA SW-846 5035 & 8260	(P&T)GC/MS
Toluene-d8	VOL-91-5002	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
4-Bromofluorobenzene	VOL-91-5002	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS



# AGAT Laboratories

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

### Laboratory Use Only

Work Order #: 21T830891

Cooler Quantity: \_\_\_\_\_  
Arrival Temperatures: 17.2 | 17.7 | 12.4

Custody Seal Intact:  Yes  No  N/A  
Notes: free ice

## Chain of Custody Record

If this is a Drinking Water sample, please use Drinking Water Chain of Custody Form (potable water consumed by humans)

### Report Information:

Company: WSP Inc.  
Contact: Vanessa Oettinger  
Address: 2 International Blvd, Etobicoke  
Phone: \_\_\_\_\_ Fax: \_\_\_\_\_  
Reports to be sent to:  
1. Email: Vanessa.oettinger.com  
2. Email: matth.roy@wsp.com

### Regulatory Requirements:

(Please check all applicable boxes)

Regulation 153/04  Excess Soils R406  Sewer Use  
 Res/Park  Sanitary  Storm  
 Agriculture  Regulation 558  Prov. Water Quality Objectives (PWQO)  
Soil Texture (Check One)  CCME  Other  
 Coarse  Fine

Table 3 Indicate One  
 Ind/Com  
Table \_\_\_\_\_ Indicate One  
Region \_\_\_\_\_

### Turnaround Time (TAT) Required:

Regular TAT  5 to 7 Business Days  
Rush TAT (Rush Surcharges Apply)  
 3 Business Days  2 Business Days  Next Business Day  
OR Date Required (Rush Surcharges May Apply): \_\_\_\_\_

### Project Information:

Project: 211-10139-00  
Site Location: ORBY Rail  
Sampled By: Matthew Roy  
AGAT Quote #: \_\_\_\_\_ PO: \_\_\_\_\_  
Please note: If quotation number is not provided, client will be billed full price for analysis.

### Is this submission for a Record of Site Condition?

Yes  No

### Report Guideline on Certificate of Analysis

Yes  No

Please provide prior notification for rush TAT  
\*TAT is exclusive of weekends and statutory holidays

For 'Same Day' analysis, please contact your AGAT CPM

### Invoice Information:

Bill To Same: Yes  No

Company: \_\_\_\_\_  
Contact: \_\_\_\_\_  
Address: \_\_\_\_\_  
Email: payables.ontario@wsp.com

### Sample Matrix Legend

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

Sample Identification	Date Sampled	Time Sampled	# of Containers	Sample Matrix	Comments/ Special Instructions	Y/N	Field Filtered - Metals, Hg, CrVI, DOC	0. Reg 153	0. Reg 558	0. Reg 406	Potentially Hazardous or High Concentration (Y/N)
								Metals & Inorganics	Landfill Disposal Characterization TCLP:	OC Pesticides	
								Metals - CrVI, Hg, HWBS	TCLP: M&I, VOCs, ABNS, Biop, PCBs		
								BTEX, F1-F4, PHCs	Excess Soils SPLP Rainwater Leach		
								Analyze F4G if required	SPLP: Metals, VOCs, SVOCs		
								PAHs	Excess Soils Characterization Package		
								PCBS	pH, ICPMS Metals, BTEX, F1-F4		
								VOC	Salt - EC/SAR		
BH21-36 SS1	11/16/21	PM	1	S				X			
BH21-36 SS3		PM	1	S						X	
BH21-36 SS4		PM	1	S				X			X
BH21-36 SS6		PM	4	S					X		
BH21-25 SS1		AM	1	S				X		X	
BH21-25 SS2		AM	1	S				X			
BH21-25 SS4		AM	3	S					X		X
BH21-25 SS6		AM	4	S					X		
		AM									
		AM									
		AM									
		AM									

Samples Relinquished By (Print Name and Sign): <u>Matthew Roy</u>	Date: <u>11/16/21</u>	Time: <u>1500</u>	Samples Received By (Print Name and Sign): <u>[Signature]</u>	Date: <u>[Signature]</u>	Time: <u>[Signature]</u>
Samples Relinquished By (Print Name and Sign):	Date:	Time:	Samples Received By (Print Name and Sign):	Date:	Time:
Samples Relinquished By (Print Name and Sign):	Date:	Time:	Samples Received By (Print Name and Sign):	Date:	Time:

Page 1 of 1

Nº: **T 127092**



CLIENT NAME: WSP CANADA INC.  
2 INTERNATIONAL BLVD SUITE 201  
ETOBICOKE, ON M9W1A2  
(416) 798-0065

ATTENTION TO: Martin Gedeon

PROJECT: 211-10139-00

AGAT WORK ORDER: 21T831518

SOIL ANALYSIS REVIEWED BY: Nivine Basily, Inorganics Report Writer

TRACE ORGANICS REVIEWED BY: Elena Gorobets, Report Writer

DATE REPORTED: Dec 02, 2021

PAGES (INCLUDING COVER): 20

VERSION\*: 2

Should you require any information regarding this analysis please contact your client services representative at (905) 712-5100

\*Notes

VERSION 2: Version 2 supersedes work order 21T831518, Version 1, issued November 29, 2021. VOCs included.

Disclaimer:

- All work conducted herein has been done using accepted standard protocols, and generally accepted practices and methods. AGAT test methods may incorporate modifications from the specified reference methods to improve performance.
- All samples will be disposed of within 30 days after receipt unless a Long Term Storage Agreement is signed and returned. Some specialty analysis may be exempt, please contact your Client Project Manager for details.
- AGAT's liability in connection with any delay, performance or non-performance of these services is only to the Client and does not extend to any other third party. Unless expressly agreed otherwise in writing, AGAT's liability is limited to the actual cost of the specific analysis or analyses included in the services.
- This Certificate shall not be reproduced except in full, without the written approval of the laboratory.
- The test results reported herewith relate only to the samples as received by the laboratory.
- Application of guidelines is provided "as is" without warranty of any kind, either expressed or implied, including, but not limited to, warranties of merchantability, fitness for a particular purpose, or non-infringement. AGAT assumes no responsibility for any errors or omissions in the guidelines contained in this document.
- All reportable information as specified by ISO/IEC 17025:2017 is available from AGAT Laboratories upon request.





## Certificate of Analysis

AGAT WORK ORDER: 21T831518

PROJECT: 211-10139-00

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

CLIENT NAME: WSP CANADA INC.

SAMPLING SITE: ORBY Rail

ATTENTION TO: Martin Gedeon

SAMPLED BY: Matthew Roy

### O. Reg. 153(511) - Metals & Inorganics (Soil)

DATE RECEIVED: 2021-11-17

DATE REPORTED: 2021-12-02

Parameter	Unit	SAMPLE DESCRIPTION:				
		BH21-43 SS2		BH21-44 SS1		BH21-1 SS2
		G / S	RDL	3221440	3221451	3221490
Antimony	µg/g	40	0.8	<0.8	<0.8	<0.8
Arsenic	µg/g	18	1	3	9	5
Barium	µg/g	670	2.0	28.8	37.7	55.6
Beryllium	µg/g	8	0.4	<0.4	<0.4	<0.4
Boron	µg/g	120	5	<5	5	6
Boron (Hot Water Soluble)	µg/g	2	0.10	<0.10	0.10	<0.10
Cadmium	µg/g	1.9	0.5	<0.5	<0.5	<0.5
Chromium	µg/g	160	5	8	13	17
Cobalt	µg/g	80	0.5	3.1	6.2	9.1
Copper	µg/g	230	1.0	7.2	28.4	20.3
Lead	µg/g	120	1	4	14	7
Molybdenum	µg/g	40	0.5	<0.5	<0.5	<0.5
Nickel	µg/g	270	1	6	12	17
Selenium	µg/g	5.5	0.8	<0.8	<0.8	<0.8
Silver	µg/g	40	0.5	<0.5	<0.5	<0.5
Thallium	µg/g	3.3	0.5	<0.5	<0.5	<0.5
Uranium	µg/g	33	0.50	<0.50	<0.50	0.60
Vanadium	µg/g	86	0.4	15.5	18.9	22.2
Zinc	µg/g	340	5	25	39	45
Chromium, Hexavalent	µg/g	8	0.2	<0.2	<0.2	<0.2
Cyanide, Free	µg/g	0.051	0.040	<0.040	<0.040	<0.040
Mercury	µg/g	3.9	0.10	<0.10	<0.10	<0.10
Electrical Conductivity (2:1)	mS/cm	1.4	0.005	0.103	0.107	0.508
Sodium Adsorption Ratio (2:1) (Calc.)	N/A	12	N/A	0.089	0.068	0.233
pH, 2:1 CaCl <sub>2</sub> Extraction	pH Units	5.0-9.0	NA	7.53	7.63	7.67

Certified By:



*Matthew Roy*



**AGAT** Laboratories

# Certificate of Analysis

AGAT WORK ORDER: 21T831518

PROJECT: 211-10139-00

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

CLIENT NAME: WSP CANADA INC.

SAMPLING SITE: ORBY Rail

ATTENTION TO: Martin Gedeon

SAMPLED BY: Matthew Roy

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

DATE RECEIVED: 2021-11-17

DATE REPORTED: 2021-12-02

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 3: Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition - Soil - Industrial/Commercial/Community Property Use - Coarse Textured Soils

Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

3221440-3221490 EC was determined on the DI water extract obtained from the 2:1 leaching procedure (2 parts DI water:1 part soil). pH was determined on the 0.01M CaCl2 extract prepared at 2:1 ratio. SAR is a calculated parameter.

Analysis performed at AGAT Toronto (unless marked by \*)

Certified By:



*Matthew Roy*



## Certificate of Analysis

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CLIENT NAME: WSP CANADA INC.

SAMPLING SITE: ORBY Rail

ATTENTION TO: Martin Gedeon

SAMPLED BY: Matthew Roy

### O. Reg. 153(511) - OC Pesticides + PCBs (Soil)

DATE RECEIVED: 2021-11-17

DATE REPORTED: 2021-12-02

Parameter	Unit	SAMPLE DESCRIPTION:		BH21-43 SS1	BH21-1 SS1
		SAMPLE TYPE:		Soil	Soil
		DATE SAMPLED:		2021-11-17	2021-11-17
		G / S	RDL	3221417	3221488
Gamma-Hexachlorocyclohexane	µg/g	0.056	0.005	<0.005	<0.005
Heptachlor	µg/g	0.19	0.005	<0.005	<0.005
Aldrin	µg/g	0.088	0.005	<0.005	<0.005
Heptachlor Epoxide	µg/g	0.05	0.005	<0.005	<0.005
Endosulfan I	µg/g		0.005	<0.005	<0.005
Endosulfan II	µg/g		0.005	<0.005	<0.005
Endosulfan	µg/g	0.3	0.005	<0.005	<0.005
Alpha-Chlordane	µg/g		0.005	<0.005	<0.005
gamma-Chlordane	µg/g		0.005	<0.005	<0.005
Chlordane	µg/g	0.05	0.007	<0.007	<0.007
op'-DDD	µg/g		0.005	<0.005	<0.005
pp'-DDD	µg/g		0.005	<0.005	<0.005
DDD	µg/g	4.6	0.007	<0.007	<0.007
op'-DDE	ug/g		0.005	<0.005	<0.005
pp'-DDE	µg/g		0.005	<0.005	<0.005
DDE	µg/g	0.52	0.007	<0.007	<0.007
op'-DDT	µg/g		0.005	<0.005	<0.005
pp'-DDT	µg/g		0.005	<0.005	<0.005
DDT	µg/g	1.4	0.007	<0.007	<0.007
Dieldrin	µg/g	0.088	0.005	<0.005	<0.005
Endrin	µg/g	0.04	0.005	<0.005	<0.005
Methoxychlor	µg/g	1.6	0.005	<0.005	<0.005
Hexachlorobenzene	µg/g	0.66	0.005	<0.005	<0.005
Hexachlorobutadiene	µg/g	0.031	0.01	<0.01	<0.01
Hexachloroethane	µg/g	0.21	0.01	<0.01	<0.01
Aroclor 1242	µg/g		0.10	<0.10	<0.10
Aroclor 1248	µg/g		0.10	<0.10	<0.10
Aroclor 1254	µg/g		0.10	<0.10	<0.10
Aroclor 1260	µg/g		0.10	<0.10	<0.10
Polychlorinated Biphenyls	µg/g	1.1	0.10	<0.10	<0.10

Certified By:

*Elena Gorobets*





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CLIENT NAME: WSP CANADA INC.

SAMPLING SITE: ORBY Rail

ATTENTION TO: Martin Gedeon

SAMPLED BY: Matthew Roy

### O. Reg. 153(511) - OC Pesticides + PCBs (Soil)

DATE RECEIVED: 2021-11-17

DATE REPORTED: 2021-12-02

Parameter	Unit	SAMPLE DESCRIPTION:		BH21-43 SS1	BH21-1 SS1
		G / S	RDL	3221417	3221488
Moisture Content	%		0.1	13.5	12.4
wet weight OC/PCB	g		NA	10.12	10.45
Surrogate	Unit	Acceptable Limits			
TCMX	%	50-140		83	80
Decachlorobiphenyl	%	50-140		92	86

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 3: Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition - Soil - Industrial/Commercial/Community Property Use - Coarse Textured Soils

Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

3221417-3221488 Results are based on the dry weight of the soil.

DDT total is a calculated parameter. The calculated value is the sum of op'DDT and pp'DDT.

DDD total is a calculated parameter. The calculated value is the sum of op'DDD and pp'DDD.

DDE total is a calculated parameter. The calculated value is the sum of op'DDE and pp'DDE.

Endosulfan total is a calculated parameter. The calculated value is the sum of Endosulfan I and Endosulfan II.

Chlordane total is a calculated parameter. The calculated value is the sum of Alpha-Chlordane and Gamma-Chlordane.

PCB total is a calculated parameter. The calculated value is the sum of Aroclor 1242, Aroclor 1248, Aroclor 1254 and Aroclor 1260.

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

Analysis performed at AGAT Toronto (unless marked by \*)

Certified By:

*Elena Gorobets*



## Certificate of Analysis

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CLIENT NAME: WSP CANADA INC.

SAMPLING SITE: ORBY Rail

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SAMPLED BY: Matthew Roy

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

DATE RECEIVED: 2021-11-17

DATE REPORTED: 2021-12-02

Parameter	Unit	SAMPLE DESCRIPTION:		BH21-43 SS1	BH21-1 SS2
		G / S	RDL	3221417	3221490
Naphthalene	µg/g	9.6	0.05	<0.05	<0.05
Acenaphthylene	µg/g	0.15	0.05	<0.05	<0.05
Acenaphthene	µg/g	96	0.05	<0.05	<0.05
Fluorene	µg/g	62	0.05	<0.05	<0.05
Phenanthrene	µg/g	12	0.05	<0.05	<0.05
Anthracene	µg/g	0.67	0.05	<0.05	<0.05
Fluoranthene	µg/g	9.6	0.05	0.07	<0.05
Pyrene	µg/g	96	0.05	0.07	<0.05
Benz(a)anthracene	µg/g	0.96	0.05	<0.05	<0.05
Chrysene	µg/g	9.6	0.05	0.06	<0.05
Benzo(b)fluoranthene	µg/g	0.96	0.05	0.11	<0.05
Benzo(k)fluoranthene	µg/g	0.96	0.05	<0.05	<0.05
Benzo(a)pyrene	µg/g	0.3	0.05	0.05	<0.05
Indeno(1,2,3-cd)pyrene	µg/g	0.76	0.05	0.06	<0.05
Dibenz(a,h)anthracene	µg/g	0.1	0.05	<0.05	<0.05
Benzo(g,h,i)perylene	µg/g	9.6	0.05	0.07	<0.05
1 and 2 Methylnaphthalene	µg/g	76	0.05	<0.05	<0.05
Moisture Content	%		0.1	13.5	19.8
Surrogate	Unit	Acceptable Limits			
Naphthalene-d8	%	50-140		123	78
Acridine-d9	%	50-140		80	84
Terphenyl-d14	%	50-140		96	88

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 3: Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition - Soil - Industrial/Commercial/Community Property Use - Coarse Textured Soils

Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

3221417-3221490 Results are based on the dry weight of the soil.

Note: The result for Benzo(b)Fluoranthene is the total of the Benzo(b)&j)Fluoranthene isomers because the isomers co-elute on the GC column.

2- and 1-Methyl Naphthalene is a calculated parameter. The calculated value is the sum of 2-Methyl Naphthalene and 1-Methyl Naphthalene.

Analysis performed at AGAT Toronto (unless marked by \*)

Certified By:

*Elena Gorobets*



## Certificate of Analysis

AGAT WORK ORDER: 21T831518

PROJECT: 211-10139-00

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CLIENT NAME: WSP CANADA INC.

SAMPLING SITE: ORBY Rail

ATTENTION TO: Martin Gedeon

SAMPLED BY: Matthew Roy

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

DATE RECEIVED: 2021-11-17

DATE REPORTED: 2021-12-02

Parameter	Unit	SAMPLE DESCRIPTION:				
		BH21-43 SS6		BH21-44 SS4		BH21-1 SS3
		Soil		Soil		Soil
		DATE SAMPLED: 2021-11-17		2021-11-17		2021-11-17
G / S	RDL	3221448	3221486	3221492		
Benzene	µg/g	0.005	<0.005	<0.005	<0.005	
Toluene	µg/g	0.05	<0.05	<0.05	<0.05	
Ethylbenzene	µg/g	0.01	<0.01	<0.01	<0.01	
m,p-Xylenes	ug/g	0.05	<0.05	<0.05	<0.05	
o-Xylene	ug/g	0.05	<0.05	<0.05	<0.05	
Xylenes	µg/g	0.05	<0.05	<0.05	<0.05	
C6 - C10 (F1)	ug/g	10	<10	<10	<10	
C6 - C10 (F1 minus BTEX)	ug/g	10	<10	<10	<10	
C>10 - C16	ug/g	10	<10	<10	<10	
C>16 - C34	ug/g	10	16	<10	31	
C>34 - C50	ug/g	10	15	<10	11	
Gravimetric Heavy Hydrocarbons	ug/g	1000	N/A	N/A	N/A	
Moisture Content	%	1.00	20	26	24	
Surrogate	Unit	Acceptable Limits				
Toluene-d8 (BTEX)	%	60-140	63	60	68	
o-Terphenyl (F2-F4)	%	60-140	97	98	100	

Certified By:

*Elena Gorobets*





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CLIENT NAME: WSP CANADA INC.

SAMPLING SITE: ORBY Rail

ATTENTION TO: Martin Gedeon

SAMPLED BY: Matthew Roy

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

DATE RECEIVED: 2021-11-17

DATE REPORTED: 2021-12-02

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 3: Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition - Soil - Industrial/Commercial/Community Property Use - Coarse Textured Soils  
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

3221448-3221492 Results are based on the dry weight of the sample.  
The C6-C10 (F1) fraction is calculated using toluene response factor.  
The C10 - C16 (F2), C16 - C34 (F3), and C34 - C50 (F4) fractions are calculated using the average response factor for n-C10, n-C16, and n-C34.  
Gravimetric Heavy Hydrocarbons (F4g) are not included in and cannot be added to the Total C6-C50 and are only determined if the chromatogram of the C34 - C50 hydrocarbons indicates that hydrocarbons >C50 are present.  
Quality control data is available upon request.  
Assistance in the interpretation of data is available upon request.  
This method complies with the Reference Method for the CWS PHC and is validated for use in the laboratory.  
nC6 and nC10 response factors are within 30% of Toluene response factor.  
nC10, nC16 and nC34 response factors are within 10% of their average.  
C50 response factor is within 70% of nC10 + nC16 + nC34 average.  
Linearity is within 15%.  
The chromatogram returned to baseline by the retention time of nC50.  
C6 -C10 (F1 minus BTEX) is a calculated parameter. The calculated value is F1 minus BTEX. The calculated parameter is non-accredited. The parameters that are components of the calculation are accredited.  
C>10 - C16 (F2- Napthalene) is a calculated parameter. The calculated value is F2 - Napthalene (if requested). The calculated parameter is non-accredited. The parameters that are components of the calculation are accredited.  
C>16 - C34 (F3-PAH) is a calculated parameter. The calculated value is F3-PAH (if requested). The calculated parameter is non-accredited. The parameters that are components of the calculation are accredited.  
Xylenes is a calculated parameter. The calculated value is the sum of m&p-Xylenes + o-Xylene. The calculated parameter is non-accredited. The parameters that are components of the calculation are accredited.  
Extraction and holding times were met for this sample.

Analysis performed at AGAT Calgary (unless marked by \*)

Certified By:



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CLIENT NAME: WSP CANADA INC.

SAMPLING SITE: ORBY Rail

ATTENTION TO: Martin Gedeon

SAMPLED BY: Matthew Roy

### Volatile Organic Compounds in Soil (µg/g) (Methanol Field Stabilized)

DATE RECEIVED: 2021-11-17

DATE REPORTED: 2021-12-02

SAMPLE DESCRIPTION: BH21-43 SS6

SAMPLE TYPE: Soil

DATE SAMPLED: 2021-11-17

G / S RDL 3221448

Parameter	Unit	G / S	RDL	3221448
Chloromethane	µg/g		0.01	<0.01
Vinyl Chloride	µg/g		0.0002	<0.0002
Bromomethane	µg/g		0.01	<0.01
Chloroethane	µg/g		0.01	<0.01
Trichlorofluoromethane	µg/g		0.01	<0.01
Acetone	µg/g		0.1	<0.1
1,1-Dichloroethylene	µg/g		0.01	<0.01
Methylene Chloride	µg/g		0.01	<0.01
Methyl tert-Butyl Ether	µg/g		0.01	<0.01
Methyl Ethyl Ketone	µg/g		0.1	<0.1
trans-1,2-Dichloroethylene	µg/g		0.01	<0.01
1,1-Dichloroethane	µg/g		0.01	<0.01
cis-1,2-Dichloroethylene	µg/g		0.01	<0.01
Chloroform	µg/g		0.0010	<0.0010
1,2-Dichloroethane	µg/g		0.002	<0.002
1,1,1-Trichloroethane	µg/g		0.01	<0.01
Carbon Tetrachloride	µg/g		0.0005	<0.0005
Benzene	µg/g		0.005	<0.005
1,2-Dichloropropane	µg/g		0.01	<0.01
Trichloroethylene	µg/g		0.01	<0.01
Bromodichloromethane	µg/g		0.01	<0.01
trans-1,3-Dichloropropene	µg/g		0.01	<0.01
Methyl Isobutyl Ketone	µg/g		0.1	<0.1
cis-1,3-Dichloropropene	µg/g		0.01	<0.01
1,1,2-Trichloroethane	µg/g		0.01	<0.01
Toluene	µg/g		0.01	<0.01
2-Hexanone	µg/g		0.1	<0.1
Dibromochloromethane	µg/g		0.01	<0.01
Ethylene Dibromide	µg/g		0.01	<0.01
Tetrachloroethene	µg/g		0.010	<0.010

Certified By:

*Elena Gorobets*



## Certificate of Analysis

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CLIENT NAME: WSP CANADA INC.

SAMPLING SITE: ORBY Rail

ATTENTION TO: Martin Gedeon

SAMPLED BY: Matthew Roy

### Volatile Organic Compounds in Soil (µg/g) (Methanol Field Stabilized)

DATE RECEIVED: 2021-11-17

DATE REPORTED: 2021-12-02

SAMPLE DESCRIPTION: BH21-43 SS6

SAMPLE TYPE: Soil

DATE SAMPLED: 2021-11-17

Parameter	Unit	G / S	RDL	3221448
1,1,1,2-Tetrachloroethane	µg/g		0.01	<0.01
Chlorobenzene	µg/g		0.01	<0.01
Ethylbenzene	µg/g		0.01	<0.01
m,p-Xylenes	µg/g		0.01	<0.01
Bromoform	µg/g		0.01	<0.01
Styrene	µg/g		0.01	<0.01
1,1,2,2-Tetrachloroethane	µg/g		0.01	<0.01
o-Xylene	µg/g		0.01	<0.01
1,3-Dichlorobenzene	µg/g		0.01	<0.01
1,4-Dichlorobenzene	µg/g		0.01	<0.01
1,2-Dichlorobenzene	µg/g		0.01	<0.01
1,2,4-Trichlorobenzene	µg/g		0.01	<0.01
Total Xylenes	µg/g		0.01	<0.01

Surrogate	Unit	Acceptable Limits	
Toluene-d8	%	50-140	79

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

3221448 Results were obtained based on the dry weight of the sample.

Xylenes is a calculated parameter. The calculated value is the sum of m&p-Xylenes + o-Xylene. The calculated parameter is non-accredited. The parameters that are components of the calculation are accredited.

Analysis performed at AGAT Calgary (unless marked by \*)

Certified By:

*Elena Gorobets*



## Quality Assurance

CLIENT NAME: WSP CANADA INC.  
 PROJECT: 211-10139-00  
 SAMPLING SITE: ORBY Rail

AGAT WORK ORDER: 21T831518  
 ATTENTION TO: Martin Gedeon  
 SAMPLED BY: Matthew Roy

Soil Analysis															
RPT Date: Dec 02, 2021			DUPLICATE			Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD		Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
O. Reg. 153(511) - Metals & Inorganics (Soil)															
Antimony	3220744		<0.8	<0.8	NA	< 0.8	127%	70%	130%	104%	80%	120%	98%	70%	130%
Arsenic	3220744		3	3	NA	< 1	117%	70%	130%	103%	80%	120%	108%	70%	130%
Barium	3220744		16.8	16.6	1.2%	< 2.0	108%	70%	130%	103%	80%	120%	100%	70%	130%
Beryllium	3220744		<0.4	<0.4	NA	< 0.4	90%	70%	130%	110%	80%	120%	95%	70%	130%
Boron	3220744		6	6	NA	< 5	72%	70%	130%	110%	80%	120%	94%	70%	130%
Boron (Hot Water Soluble)	3220744		<0.10	<0.10	NA	< 0.10	94%	60%	140%	103%	70%	130%	102%	60%	140%
Cadmium	3220744		<0.5	<0.5	NA	< 0.5	111%	70%	130%	105%	80%	120%	102%	70%	130%
Chromium	3220744		7	7	NA	< 5	100%	70%	130%	102%	80%	120%	101%	70%	130%
Cobalt	3220744		2.9	2.9	0.0%	< 0.5	101%	70%	130%	104%	80%	120%	101%	70%	130%
Copper	3220744		13.0	14.0	7.4%	< 1.0	95%	70%	130%	107%	80%	120%	96%	70%	130%
Lead	3220744		17	20	16.2%	< 1	105%	70%	130%	104%	80%	120%	91%	70%	130%
Molybdenum	3220744		<0.5	<0.5	NA	< 0.5	107%	70%	130%	109%	80%	120%	112%	70%	130%
Nickel	3220744		5	4	NA	< 1	98%	70%	130%	102%	80%	120%	95%	70%	130%
Selenium	3220744		<0.8	<0.8	NA	< 0.8	118%	70%	130%	102%	80%	120%	105%	70%	130%
Silver	3220744		<0.5	<0.5	NA	< 0.5	104%	70%	130%	106%	80%	120%	94%	70%	130%
Thallium	3220744		<0.5	<0.5	NA	< 0.5	106%	70%	130%	101%	80%	120%	94%	70%	130%
Uranium	3220744		<0.50	<0.50	NA	< 0.50	109%	70%	130%	106%	80%	120%	102%	70%	130%
Vanadium	3220744		14.0	13.3	5.1%	< 0.4	104%	70%	130%	96%	80%	120%	103%	70%	130%
Zinc	3220744		83	85	2.4%	< 5	102%	70%	130%	105%	80%	120%	97%	70%	130%
Chromium, Hexavalent	3221490 3221490		<0.2	<0.2	NA	< 0.2	96%	70%	130%	90%	80%	120%	90%	70%	130%
Cyanide, Free	3225915		<0.040	<0.040	NA	< 0.040	105%	70%	130%	100%	80%	120%	102%	70%	130%
Mercury	3220744		<0.10	<0.10	NA	< 0.10	103%	70%	130%	106%	80%	120%	101%	70%	130%
Electrical Conductivity (2:1)	3225912		0.213	0.214	0.5%	< 0.005	102%	80%	120%						
Sodium Adsorption Ratio (2:1) (Calc.)	3225912		0.294	0.285	3.1%	NA									
pH, 2:1 CaCl2 Extraction	3242174		7.43	7.39	0.5%	NA	101%	80%	120%						

Comments: NA signifies Not Applicable.  
 pH duplicates QA acceptance criteria was met relative as stated in Table 5-15 of Analytical Protocol document.  
 Duplicate NA: results are under 5X the RDL and will not be calculated.

Certified By: \_\_\_\_\_



*Nivine Basily*

## Quality Assurance

CLIENT NAME: WSP CANADA INC.

AGAT WORK ORDER: 21T831518

PROJECT: 211-10139-00

ATTENTION TO: Martin Gedeon

SAMPLING SITE: ORBY Rail

SAMPLED BY: Matthew Roy

### Trace Organics Analysis

RPT Date: Dec 02, 2021			DUPLICATE				Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Measured Value		Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits		
								Lower	Upper		Lower	Upper		Lower	Upper	

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

Naphthalene	3230140	< 0.05	< 0.05	NA	< 0.05	105%	50%	140%	115%	50%	140%	101%	50%	140%
Acenaphthylene	3230140	< 0.05	< 0.05	NA	< 0.05	89%	50%	140%	74%	50%	140%	82%	50%	140%
Acenaphthene	3230140	< 0.05	< 0.05	NA	< 0.05	85%	50%	140%	93%	50%	140%	83%	50%	140%
Fluorene	3230140	< 0.05	< 0.05	NA	< 0.05	93%	50%	140%	93%	50%	140%	94%	50%	140%
Phenanthrene	3230140	< 0.05	< 0.05	NA	< 0.05	92%	50%	140%	92%	50%	140%	98%	50%	140%
Anthracene	3230140	< 0.05	< 0.05	NA	< 0.05	67%	50%	140%	64%	50%	140%	85%	50%	140%
Fluoranthene	3230140	< 0.05	< 0.05	NA	< 0.05	87%	50%	140%	97%	50%	140%	105%	50%	140%
Pyrene	3230140	< 0.05	< 0.05	NA	< 0.05	85%	50%	140%	85%	50%	140%	78%	50%	140%
Benz(a)anthracene	3230140	< 0.05	< 0.05	NA	< 0.05	93%	50%	140%	96%	50%	140%	85%	50%	140%
Chrysene	3230140	< 0.05	< 0.05	NA	< 0.05	92%	50%	140%	105%	50%	140%	93%	50%	140%
Benzo(b)fluoranthene	3230140	< 0.05	< 0.05	NA	< 0.05	105%	50%	140%	78%	50%	140%	92%	50%	140%
Benzo(k)fluoranthene	3230140	< 0.05	< 0.05	NA	< 0.05	78%	50%	140%	88%	50%	140%	105%	50%	140%
Benzo(a)pyrene	3230140	< 0.05	< 0.05	NA	< 0.05	88%	50%	140%	96%	50%	140%	78%	50%	140%
Indeno(1,2,3-cd)pyrene	3230140	< 0.05	< 0.05	NA	< 0.05	75%	50%	140%	92%	50%	140%	88%	50%	140%
Dibenz(a,h)anthracene	3230140	< 0.05	< 0.05	NA	< 0.05	96%	50%	140%	105%	50%	140%	96%	50%	140%
Benzo(g,h,i)perylene	3230140	< 0.05	< 0.05	NA	< 0.05	93%	50%	140%	80%	50%	140%	93%	50%	140%

**O. Reg. 153(511) - OC Pesticides + PCBs (Soil)**

Gamma-Hexachlorocyclohexane	3223870	< 0.005	< 0.005	NA	< 0.005	90%	50%	140%	96%	50%	140%	92%	50%	140%
Heptachlor	3223870	< 0.005	< 0.005	NA	< 0.005	85%	50%	140%	85%	50%	140%	87%	50%	140%
Aldrin	3223870	< 0.005	< 0.005	NA	< 0.005	99%	50%	140%	109%	50%	140%	103%	50%	140%
Heptachlor Epoxide	3223870	< 0.005	< 0.005	NA	< 0.005	99%	50%	140%	108%	50%	140%	106%	50%	140%
Endosulfan I	3223870	< 0.005	< 0.005	NA	< 0.005	100%	50%	140%	106%	50%	140%	102%	50%	140%
Endosulfan II	3223870	< 0.005	< 0.005	NA	< 0.005	107%	50%	140%		50%	140%		50%	140%
Alpha-Chlordane	3223870	< 0.005	< 0.005	NA	< 0.005	98%	50%	140%	107%	50%	140%	104%	50%	140%
gamma-Chlordane	3223870	< 0.005	< 0.005	NA	< 0.005	95%	50%	140%	106%	50%	140%	105%	50%	140%
op'-DDD	3223870	< 0.005	< 0.005	NA	< 0.005	105%	50%	140%	107%	50%	140%	106%	50%	140%
pp'-DDD	3223870	< 0.005	< 0.005	NA	< 0.005	92%	50%	140%	109%	50%	140%	105%	50%	140%
op'-DDE	3223870	< 0.005	< 0.005	NA	< 0.005	91%	50%	140%	101%	50%	140%	102%	50%	140%
pp'-DDE	3223870	< 0.005	< 0.005	NA	< 0.005	97%	50%	140%	102%	50%	140%	104%	50%	140%
op'-DDT	3223870	< 0.005	< 0.005	NA	< 0.005	101%	50%	140%	109%	50%	140%	108%	50%	140%
pp'-DDT	3223870	< 0.005	< 0.005	NA	< 0.005	103%	50%	140%	90%	50%	140%	92%	50%	140%
Dieldrin	3223870	< 0.005	< 0.005	NA	< 0.005	103%	50%	140%	112%	50%	140%	102%	50%	140%
Endrin	3223870	< 0.005	< 0.005	NA	< 0.005	104%	50%	140%	105%	50%	140%	102%	50%	140%
Methoxychlor	3223870	< 0.005	< 0.005	NA	< 0.005	98%	50%	140%	88%	50%	140%	89%	50%	140%
Hexachlorobenzene	3223870	< 0.005	< 0.005	NA	< 0.005	98%	50%	140%	97%	50%	140%	92%	50%	140%
Hexachlorobutadiene	3223870	< 0.01	< 0.01	NA	< 0.01	88%	50%	140%	87%	50%	140%	84%	50%	140%
Hexachloroethane	3223870	< 0.01	< 0.01	NA	< 0.01	85%	50%	140%	86%	50%	140%	84%	50%	140%
Aroclor 1242	3223870	< 0.10	< 0.10	NA	< 0.10	104%	50%	140%	NA	50%	140%	NA	50%	140%

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

## Quality Assurance

CLIENT NAME: WSP CANADA INC.

AGAT WORK ORDER: 21T831518

PROJECT: 211-10139-00

ATTENTION TO: Martin Gedeon

SAMPLING SITE: ORBY Rail

SAMPLED BY: Matthew Roy

### Trace Organics Analysis (Continued)

RPT Date: Dec 02, 2021			DUPLICATE			Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD		Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
Aroclor 1248	3223870		< 0.10	< 0.10	NA	< 0.10	106%	50%	140%	NA	50%	140%	NA	50%	140%
Aroclor 1254	3223870		< 0.10	< 0.10	NA	< 0.10	102%	50%	140%	NA	50%	140%	NA	50%	140%
Aroclor 1260	3223870		< 0.10	< 0.10	NA	< 0.10	98%	50%	140%	NA	50%	140%	NA	50%	140%
Polychlorinated Biphenyls	3223870		< 0.10	< 0.10	NA	< 0.10	98%	50%	140%	94%	50%	140%	92%	50%	140%
O. Reg. 153(511) - PHCs F1-F4 (Soil)															
Benzene	3631	3231634	0.012	0.013	NA	< 0.005	119%	60%	140%	107%	60%	140%	113%	60%	140%
Toluene	3631	3231634	< 0.05	< 0.05	NA	< 0.05	109%	60%	140%	113%	60%	140%	110%	60%	140%
Ethylbenzene	3631	3231634	0.02	0.02	NA	< 0.01	97%	60%	140%	134%	60%	140%	127%	60%	140%
m,p-Xylenes	3631	3231634	< 0.05	< 0.05	NA	< 0.05	108%	50%	140%	121%	60%	130%	111%	50%	140%
o-Xylene	3631	3231634	< 0.05	< 0.05	NA	< 0.05	118%	50%	140%	121%	60%	130%	111%	50%	140%
Xylenes	3631	3231634	< 0.05	< 0.05	NA	< 0.05	112%	60%	140%	121%	60%	140%	111%	60%	140%
C6 - C10 (F1)	3631	3231634	20	20	NA	< 10	98%	60%	140%	106%	60%	140%	89%	60%	140%
C>10 - C16	7014	3221486	< 10	< 10	NA	< 10	92%	60%	140%	102%	60%	140%	103%	60%	140%
C>16 - C34	7014	3221486	< 10	13	NA	< 10	95%	60%	140%	107%	60%	140%	108%	60%	140%
C>34 - C50	7014	3221486	< 10	< 10	NA	< 10	100%	60%	140%	102%	60%	140%	101%	60%	140%

Comments: Duplicate NA: results are less than 5X the RDL and RDP will not be calculated.  
The sample spikes and dups are not from the same sample ID.

#### Volatile Organic Compounds in Soil (µg/g) (Methanol Field Stabilized)

Chloromethane	4202	3264154	< 0.01	< 0.01	NA	< 0.01	108%	50%	140%	97%	50%	140%	93%	50%	140%
Vinyl Chloride	4202	3264154	< 0.0002	< 0.0002	NA	< 0.0002	111%	50%	140%	100%	50%	140%	91%	50%	140%
Bromomethane	4202	3264154	< 0.01	< 0.01	NA	< 0.01	122%	50%	140%	107%	50%	140%	101%	50%	140%
Chloroethane	4202	3264154	< 0.01	< 0.01	NA	< 0.01	118%	50%	140%	114%	50%	140%	105%	50%	140%
Trichlorofluoromethane	4202	3264154	< 0.01	< 0.01	NA	< 0.01	86%	50%	140%	78%	60%	130%	70%	50%	140%
Acetone	4202	3264154	< 0.1	< 0.1	NA	< 0.1	127%	50%	140%	103%	50%	140%	125%	50%	140%
1,1-Dichloroethylene	4202	3264154	< 0.01	< 0.01	NA	< 0.01	100%	50%	140%	91%	60%	130%	83%	50%	140%
Methylene Chloride	4202	3264154	< 0.01	< 0.01	NA	< 0.01	110%	50%	140%	109%	60%	130%	108%	50%	140%
Methyl tert-Butyl Ether	4202	3264154	< 0.01	< 0.01	NA	< 0.01	108%	50%	140%	105%	60%	130%	105%	50%	140%
Methyl Ethyl Ketone	4202	3264154	< 0.1	< 0.1	NA	< 0.1	96%	50%	140%	128%	50%	140%	138%	50%	140%
trans-1,2-Dichloroethylene	4202	3264154	< 0.01	< 0.01	NA	< 0.01	113%	50%	140%	105%	60%	130%	95%	50%	140%
1,1-Dichloroethane	4202	3264154	< 0.01	< 0.01	NA	< 0.01	120%	50%	140%	110%	60%	130%	105%	50%	140%
cis-1,2-Dichloroethylene	4202	3264154	< 0.01	< 0.01	NA	< 0.01	111%	50%	140%	110%	60%	130%	106%	50%	140%
Chloroform	4202	3264154	< 0.0010	< 0.0010	NA	< 0.0010	100%	50%	140%	97%	60%	130%	94%	50%	140%
1,2-Dichloroethane	4202	3264154	< 0.002	< 0.002	NA	< 0.002	113%	50%	140%	108%	60%	130%	108%	50%	140%
1,1,1-Trichloroethane	4202	3264154	< 0.01	< 0.01	NA	< 0.01	107%	50%	140%	101%	60%	130%	93%	50%	140%
Carbon Tetrachloride	4202	3264154	< 0.0005	< 0.0005	NA	< 0.0005	101%	50%	140%	96%	60%	130%	88%	50%	140%
Benzene	4202	3264154	< 0.005	< 0.005	NA	< 0.005	111%	50%	140%	106%	60%	130%	104%	50%	140%
1,2-Dichloropropane	4202	3264154	< 0.01	< 0.01	NA	< 0.01	97%	50%	140%	96%	60%	130%	95%	50%	140%
Trichloroethylene	4202	3264154	< 0.01	< 0.01	NA	< 0.01	108%	50%	140%	108%	60%	130%	86%	50%	140%
Bromodichloromethane	4202	3264154	< 0.01	< 0.01	NA	< 0.01	73%	50%	140%	77%	60%	130%	75%	50%	140%
trans-1,3-Dichloropropene	4202	3264154	< 0.01	< 0.01	NA	< 0.01	85%	50%	140%	97%	60%	130%	93%	50%	140%



## Quality Assurance

 CLIENT NAME: WSP CANADA INC.  
 PROJECT: 211-10139-00  
 SAMPLING SITE: ORBY Rail

 AGAT WORK ORDER: 21T831518  
 ATTENTION TO: Martin Gedeon  
 SAMPLED BY: Matthew Roy

### Trace Organics Analysis (Continued)

RPT Date: Dec 02, 2021			DUPLICATE				Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Measured Value		Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits		
								Lower	Upper		Lower	Upper		Lower	Upper	
Methyl Isobutyl Ketone	4202	3264154	< 0.1	< 0.1	NA	< 0.1	89%	50%	140%	114%	50%	140%	120%	50%	140%	
cis-1,3-Dichloropropene	4202	3264154	< 0.01	< 0.01	NA	< 0.01	99%	50%	140%	105%	60%	130%	103%	50%	140%	
1,1,2-Trichloroethane	4202	3264154	< 0.01	< 0.01	NA	< 0.01	85%	50%	140%	96%	60%	130%	95%	50%	140%	
Toluene	4202	3264154	< 0.01	< 0.01	NA	< 0.01	106%	50%	140%	105%	60%	130%	99%	50%	140%	
2-Hexanone	4202	3264154	< 0.1	< 0.1	NA	< 0.1	111%	50%	140%	129%	50%	140%	139%	50%	140%	
Dibromochloromethane	4202	3264154	< 0.01	< 0.01	NA	< 0.01	82%	50%	140%	95%	60%	130%	92%	50%	140%	
Ethylene Dibromide	4202	3264154	< 0.01	< 0.01	NA	< 0.01	87%	50%	140%	97%	60%	130%	93%	50%	140%	
Tetrachloroethene	4202	3264154	< 0.010	< 0.010	NA	< 0.010	93%	50%	140%	92%	60%	130%	83%	50%	140%	
1,1,1,2-Tetrachloroethane	4202	3264154	< 0.01	< 0.01	NA	< 0.01	79%	50%	140%	97%	60%	130%	90%	50%	140%	
Chlorobenzene	4202	3264154	< 0.01	< 0.01	NA	< 0.01	92%	50%	140%	102%	60%	130%	97%	50%	140%	
Ethylbenzene	4202	3264154	< 0.01	< 0.01	NA	< 0.01	92%	50%	140%	96%	60%	130%	86%	50%	140%	
m,p-Xylenes	4202	3264154	< 0.01	< 0.01	NA	< 0.01	97%	50%	140%	97%	60%	130%	88%	50%	140%	
Bromoform	4202	3264154	< 0.01	< 0.01	NA	< 0.01	89%	50%	140%	108%	60%	130%	111%	50%	140%	
Styrene	4202	3264154	< 0.01	< 0.01	NA	< 0.01	88%	50%	140%	103%	60%	130%	101%	50%	140%	
o-Xylene	4202	3264154	< 0.01	< 0.01	NA	< 0.01	90%	50%	140%	88%	60%	130%	80%	50%	140%	
1,3-Dichlorobenzene	4202	3264154	< 0.01	< 0.01	NA	< 0.01	84%	50%	140%	104%	60%	130%	106%	50%	140%	
1,4-Dichlorobenzene	4202	3264154	< 0.01	< 0.01	NA	< 0.01	127%	50%	140%	128%	60%	130%	129%	50%	140%	
1,2-Dichlorobenzene	4202	3264154	< 0.01	< 0.01	NA	< 0.01	133%	50%	140%	126%	60%	130%	133%	50%	140%	
1,2,4-Trichlorobenzene	4202	3264154	< 0.01	< 0.01	NA	< 0.01	107%	50%	140%	112%	60%	130%	121%	50%	140%	
Total Xylenes	4202	3264154	< 0.01	< 0.01	NA	< 0.01	94%	50%	140%	93%	60%	130%	84%	50%	140%	

Comments: Duplicate NA: results are less than 5X the RDL and RDP will not be calculated.  
 The sample spikes and dups are not from the same sample ID.

Certified By: *Elena Gorobets*



## Method Summary

CLIENT NAME: WSP CANADA INC.  
 PROJECT: 211-10139-00  
 SAMPLING SITE: ORBY Rail

AGAT WORK ORDER: 21T831518  
 ATTENTION TO: Martin Gedeon  
 SAMPLED BY: Matthew Roy

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Soil Analysis			
Antimony	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Arsenic	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Barium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Beryllium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Boron	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Boron (Hot Water Soluble)	MET-93-6104	modified from EPA 6010D and MSA PART 3, CH 21	ICP/OES
Cadmium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Chromium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Cobalt	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Copper	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Lead	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Molybdenum	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Nickel	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Selenium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Silver	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Thallium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Uranium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Vanadium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Zinc	MET 93 -6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Chromium, Hexavalent	INOR-93-6068	modified from EPA 3060 and EPA 7196	SPECTROPHOTOMETER
Cyanide, Free	INOR-93-6052	modified from ON MOECC E3015, SM 4500-CN- I, G-387	TECHNICON AUTO ANALYZER
Mercury	MET-93-6103	modified from EPA 7471B and SM 3112 B	ICP-MS
Electrical Conductivity (2:1)	INOR-93-6036	modified from MSA PART 3, CH 14 and SM 2510 B	EC METER
Sodium Adsorption Ratio (2:1) (Calc.)	INOR-93-6007	modified from EPA 6010D & Analytical Protocol	ICP/OES
pH, 2:1 CaCl <sub>2</sub> Extraction	INOR-93-6031	modified from EPA 9045D and MCKEAGUE 3.11	PH METER

## Method Summary

CLIENT NAME: WSP CANADA INC.

AGAT WORK ORDER: 21T831518

PROJECT: 211-10139-00

ATTENTION TO: Martin Gedeon

SAMPLING SITE: ORBY Rail

SAMPLED BY: Matthew Roy

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Trace Organics Analysis			
Gamma-Hexachlorocyclohexane	ORG-91-5113	modified from EPA SW-846 3570, 3620C & 8081B	GC/ECD
Heptachlor	ORG-91-5113	modified from EPA SW-846 3570, 3620C & 8081B	GC/ECD
Aldrin	ORG-91-5113	modified from EPA SW-846 3570, 3620C & 8081B	GC/ECD
Heptachlor Epoxide	ORG-91-5113	modified from EPA SW-846 3570, 3620C & 8081B	GC/ECD
Endosulfan I	ORG-91-5113	modified from EPA SW-846 3570, 3620C & 8081B	GC/ECD
Endosulfan II	ORG-91-5113	modified from EPA SW-846 3570, 3620C & 8081B	GC/ECD
Endosulfan	ORG-91-5113	modified from EPA SW-846 3570, 3620C & 8081B	GC/ECD
Alpha-Chlordane	ORG-91-5113	modified from EPA SW-846 3570, 3620C & 8081B	GC/ECD
gamma-Chlordane	ORG-91-5113	modified from EPA SW-846 3570, 3620C & 8081B	GC/ECD
Chlordane	ORG-91-5113	modified from EPA SW-846 3570, 3620C & 8081B	CALCULATION
op'-DDD	ORG-91-5113	modified from EPA SW-846 3570, 3620C & 8081B	GC/ECD
pp'-DDD	ORG-91-5113	modified from EPA SW-846 3570, 3620C & 8081B	GC/ECD
DDD	ORG-91-5113	modified from EPA SW-846 3570, 3620C & 8081B	CALCULATION
op'-DDE	ORG-91-5113	modified from EPA SW-846 3570, 3620C & 8081B	GC/ECD
pp'-DDE	ORG-91-5113	modified from EPA SW-846 3570, 3620C & 8081B	GC/ECD
DDE	ORG-91-5113	modified from EPA SW-846 3570, 3620C & 8081B	GC/ECD
op'-DDT	ORG-91-5113	modified from EPA SW-846 3570, 3620C & 8081B	GC/ECD
pp'-DDT	ORG-91-5113	modified from EPA SW-846 3570, 3620C & 8081B	GC/ECD
DDT	ORG-91-5113	modified from EPA SW-846 3570, 3620C & 8081B	CALCULATION
Dieldrin	ORG-91-5113	modified from EPA SW-846 3570, 3620C & 8081B	GC/ECD
Endrin	ORG-91-5113	modified from EPA SW-846 3570, 3620C & 8081B	GC/ECD
Methoxychlor	ORG-91-5113	modified from EPA SW-846 3570, 3620C & 8081B	GC/ECD
Hexachlorobenzene	ORG-91-5113	modified from EPA SW-846 3570, 3620C & 8081B	GC/ECD
Hexachlorobutadiene	ORG-91-5113	modified from EPA SW-846 3570, 3620C & 8081B	GC/ECD
Hexachloroethane	ORG-91-5113	modified from EPA SW-846 3570, 3620C & 8081B	GC/ECD
Aroclor 1242	ORG-91-5113	modified from EPA SW-846 3570, 3620C & 8082A	GC/ECD
Aroclor 1248	ORG-91-5113	modified from EPA SW-846 3570, 3620C & 8082A	GC/ECD



## Method Summary

CLIENT NAME: WSP CANADA INC.

AGAT WORK ORDER: 21T831518

PROJECT: 211-10139-00

ATTENTION TO: Martin Gedeon

SAMPLING SITE: ORBY Rail

SAMPLED BY: Matthew Roy

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Aroclor 1254	ORG-91-5113	modified from EPA SW-846 3570, 3620C & 8082A	GC/ECD
Aroclor 1260	ORG-91-5113	modified from EPA SW-846 3570, 3620C & 8082A	GC/ECD
Polychlorinated Biphenyls	ORG-91-5113	modified from EPA SW-846 3570, 3620C & 8082A	GC/ECD
TCMX	ORG-91-5113	modified from EPA SW-846 3541, 3620,8081	GC/ECD
Decachlorobiphenyl	ORG-91-5113	modified from EPA SW-846 3541, 3620,8081	GC/ECD
Moisture Content	VOL-91-5009	CCME Tier 1 Method	BALANCE
wet weight OC/PCB	ORG-91-5113		BALANCE
Naphthalene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Acenaphthylene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Acenaphthene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Fluorene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Phenanthrene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Anthracene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Fluoranthene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Pyrene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Benz(a)anthracene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Chrysene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Benzo(b)fluoranthene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Benzo(k)fluoranthene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Benzo(a)pyrene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Indeno(1,2,3-cd)pyrene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Dibenz(a,h)anthracene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Benzo(g,h,i)perylene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
1 and 2 Methylnaphthalene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Naphthalene-d8	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Acridine-d9	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Terphenyl-d14	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Benzene	TO-0543	EPA SW-846 5021 & 8260	GC/MS
Toluene	TO-0543	EPA SW-846 5021 & 8260	GC/MS
Ethylbenzene	TO-0543	EPA SW-846 5021 & 8260	GC/MS
m,p-Xylenes	TO-0543	EPA SW-846 5021 & 8260	GC/MS

## Method Summary

CLIENT NAME: WSP CANADA INC.

AGAT WORK ORDER: 21T831518

PROJECT: 211-10139-00

ATTENTION TO: Martin Gedeon

SAMPLING SITE: ORBY Rail

SAMPLED BY: Matthew Roy

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
o-Xylene	TO-0543	EPA SW-846 5021 & 8260	GC/MS
Xylenes	TO-0543	EPA SW-846 5021 & 8260	GC/MS
C6 - C10 (F1)	TO-0543	CCME Tier 1 Method	GC/FID
C6 - C10 (F1 minus BTEX)	TO-0543	CCME Tier 1 Method	GC/FID
C>10 - C16	TO-0560	CCME Tier 1 Method	GC/FID
C>16 - C34	TO-0560	CCME Tier 1 Method	GC/FID
C>34 - C50	TO-0560	CCME Tier 1 Method	GC/FID
Gravimetric Heavy Hydrocarbons	TO-0560	CCME Tier 1 Method	GRAVIMETRIC
Moisture Content	TO-0560	CCME Tier 1 Method	GC/FID
Toluene-d8 (BTEX)	TO-0543	EPA SW-846 5021 & 8260	GC/MS
o-Terphenyl (F2-F4)	TO 0560	CCME Tier 1 Method	GC/FID
Chloromethane	TO-0330	EPA SW-846 5030 & 8260	GC/MS
Vinyl Chloride	TO-0330	EPA SW-846 5030 & 8260	GC/MS
Bromomethane	TO-0330	EPA SW-846 5030 & 8260	GC/MS
Chloroethane	TO-0330	EPA SW-846 5030 & 8260	GC/MS
Trichlorofluoromethane	TO-0330	EPA SW-846 5030 & 8260	GC/MS
Acetone	TO-0330	EPA SW-846 5030 & 8260	GC/MS
1,1-Dichloroethylene	TO-0330	EPA SW-846 5030 & 8260	GC/MS
Methylene Chloride	TO-0330	EPA SW-846 5030 & 8260	GC/MS
Methyl tert-Butyl Ether	TO-0330	EPA SW-846 5030 & 8260	GC/MS
Methyl Ethyl Ketone	TO-0330	EPA SW-846 5030 & 8260	GC/MS
trans-1,2-Dichloroethylene	TO-0330	EPA SW-846 5030 & 8260	GC/MS
1,1-Dichloroethane	TO-0330	EPA SW-846 5030 & 8260	GC/MS
cis-1,2-Dichloroethylene	TO-0330	EPA SW-846 5030 & 8260	GC/MS
Chloroform	TO-0330	EPA SW-846 5030 & 8260	GC/MS
1,2-Dichloroethane	TO-0330	EPA SW-846 5030 & 8260	GC/MS
1,1,1-Trichloroethane	TO-0330	EPA SW-846 5030 & 8260	GC/MS
Carbon Tetrachloride	TO-0330	EPA SW-846 5030 & 8260	GC/MS
Benzene	TO-0330	EPA SW-846 5030 & 8260	GC/MS
1,2-Dichloropropane	TO-0330	EPA SW-846 5030 & 8260	GC/MS
Trichloroethylene	TO-0330	EPA SW-846 5030 & 8260	GC/MS
Bromodichloromethane	TO-0330	EPA SW-846 5030 & 8260	GC/MS
trans-1,3-Dichloropropene	TO-0330	EPA SW-846 5030 & 8260	GC/MS
Methyl Isobutyl Ketone	TO-0330	EPA SW-846 5030 & 8260	GC/MS
cis-1,3-Dichloropropene	TO-0330	EPA SW-846 5030 & 8260	GC/MS
1,1,2-Trichloroethane	TO-0330	EPA SW-846 5030 & 8260	GC/MS
Toluene	TO-0330	EPA SW-846 5030 & 8260	GC/MS
2-Hexanone	TO-0330	EPA SW-846 5030 & 8260	GC/MS
Dibromochloromethane	TO-0330	EPA SW-846 5030 & 8260	GC/MS
Ethylene Dibromide	TO-0330	EPA SW-846 5030 & 8260	GC/MS
Tetrachloroethene	TO-0330	EPA SW-846 5030 & 8260	GC/MS
1,1,1,2-Tetrachloroethane	TO-0330	EPA SW-846 5030 & 8260	GC/MS
Chlorobenzene	TO-0330	EPA SW-846 5030 & 8260	GC/MS
Ethylbenzene	TO-0330	EPA SW-846 5030 & 8260	GC/MS
m,p-Xylenes	TO-0330	EPA SW-846 5030 & 8260	GC/MS
Bromoform	TO-0330	EPA SW-846 5030 & 8260	GC/MS
Styrene	TO-0330	EPA SW-846 5030 & 8260	GC/MS
1,1,2,2-Tetrachloroethane	TO-0330	EPA SW-846 5030 & 8260	GC/MS
o-Xylene	TO-0330	EPA SW-846 5030 & 8260	GC/MS
1,3-Dichlorobenzene	TO-0330	EPA SW-846 5030 & 8260	GC/MS

## Method Summary

CLIENT NAME: WSP CANADA INC.

AGAT WORK ORDER: 21T831518

PROJECT: 211-10139-00

ATTENTION TO: Martin Gedeon

SAMPLING SITE: ORBY Rail

SAMPLED BY: Matthew Roy

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
1,4-Dichlorobenzene	TO-0330	EPA SW-846 5030 & 8260	GC/MS
1,2-Dichlorobenzene	TO-0330	EPA SW-846 5030 & 8260	GC/MS
1,2,4-Trichlorobenzene	TO-0330	EPA SW-846 5030 & 8260	GC/MS
Total Xylenes	TO-0330	EPA SW-846 5030 & 8260	GC/MS
Toluene-d8	TO-0330	EPA SW-846 5030 & 8260	GC/MS







CLIENT NAME: WSP CANADA INC.  
2 INTERNATIONAL BLVD SUITE 201  
ETOBICOKE, ON M9W1A2  
(416) 798-0065

ATTENTION TO: Vanessa Oetinger

PROJECT: 211-10139-00

AGAT WORK ORDER: 21T831991

SOIL ANALYSIS REVIEWED BY: Amanjot Bhela, Inorganic Lab Manager

TRACE ORGANICS REVIEWED BY: Neli Popnikolova, Senior Chemist

DATE REPORTED: Nov 26, 2021

PAGES (INCLUDING COVER): 12

VERSION\*: 1

Should you require any information regarding this analysis please contact your client services representative at (905) 712-5100

\*Notes

**Disclaimer:**

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- All reportable information as specified by ISO/IEC 17025:2017 is available from AGAT Laboratories upon request.



## Certificate of Analysis

AGAT WORK ORDER: 21T831991

PROJECT: 211-10139-00

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

CLIENT NAME: WSP CANADA INC.

SAMPLING SITE: ORBY Rail

ATTENTION TO: Vanessa Oetinger

SAMPLED BY: Matthew Roy

### O. Reg. 153(511) - Metals & Inorganics (Soil)

DATE RECEIVED: 2021-11-18

DATE REPORTED: 2021-11-26

SAMPLE DESCRIPTION: BH21-42 SS1

SAMPLE TYPE: Soil

DATE SAMPLED: 2021-11-18

Parameter	Unit	G / S	RDL	3224201
Antimony	µg/g	40	0.8	<0.8
Arsenic	µg/g	18	1	7
Barium	µg/g	670	2.0	49.2
Beryllium	µg/g	8	0.4	<0.4
Boron	µg/g	120	5	7
Boron (Hot Water Soluble)	µg/g	2	0.10	<0.10
Cadmium	µg/g	1.9	0.5	<0.5
Chromium	µg/g	160	5	19
Cobalt	µg/g	80	0.5	9.2
Copper	µg/g	230	1.0	35.3
Lead	µg/g	120	1	15
Molybdenum	µg/g	40	0.5	<0.5
Nickel	µg/g	270	1	20
Selenium	µg/g	5.5	0.8	<0.8
Silver	µg/g	40	0.5	<0.5
Thallium	µg/g	3.3	0.5	<0.5
Uranium	µg/g	33	0.50	<0.50
Vanadium	µg/g	86	0.4	25.3
Zinc	µg/g	340	5	51
Chromium, Hexavalent	µg/g	8	0.2	<0.2
Cyanide, Free	µg/g	0.051	0.040	<0.040
Mercury	µg/g	3.9	0.10	<0.10
Electrical Conductivity (2:1)	mS/cm	1.4	0.005	0.110
Sodium Adsorption Ratio (2:1) (Calc.)	N/A	12	N/A	0.090
pH, 2:1 CaCl <sub>2</sub> Extraction	pH Units	5.0-9.0	NA	7.62

Certified By:







**AGAT** Laboratories

# Certificate of Analysis

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PROJECT: 211-10139-00

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<http://www.agatlabs.com>

CLIENT NAME: WSP CANADA INC.

SAMPLING SITE: ORBY Rail

ATTENTION TO: Vanessa Oetinger

SAMPLED BY: Matthew Roy

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

DATE RECEIVED: 2021-11-18

DATE REPORTED: 2021-11-26

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 3: Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition - Soil - Industrial/Commercial/Community Property Use - Coarse Textured Soils

Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

3224201 EC was determined on the DI water extract obtained from the 2:1 leaching procedure (2 parts DI water:1 part soil). pH was determined on the 0.01M CaCl2 extract prepared at 2:1 ratio. SAR is a calculated parameter.

Analysis performed at AGAT Toronto (unless marked by \*)

Certified By:

*Anamjot Bhela*



## Certificate of Analysis

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PROJECT: 211-10139-00

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CLIENT NAME: WSP CANADA INC.

SAMPLING SITE: ORBY Rail

ATTENTION TO: Vanessa Oetinger

SAMPLED BY: Matthew Roy

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

DATE RECEIVED: 2021-11-18

DATE REPORTED: 2021-11-26

SAMPLE DESCRIPTION: BH21-12 SS1

SAMPLE TYPE: Soil

DATE SAMPLED: 2021-11-18

Parameter	Unit	G / S	RDL	3223983
Naphthalene	µg/g	9.6	0.05	<0.05
Acenaphthylene	µg/g	0.15	0.05	<0.05
Acenaphthene	µg/g	96	0.05	<0.05
Fluorene	µg/g	62	0.05	<0.05
Phenanthrene	µg/g	12	0.05	<0.05
Anthracene	µg/g	0.67	0.05	<0.05
Fluoranthene	µg/g	9.6	0.05	0.06
Pyrene	µg/g	96	0.05	0.06
Benz(a)anthracene	µg/g	0.96	0.05	<0.05
Chrysene	µg/g	9.6	0.05	<0.05
Benzo(b)fluoranthene	µg/g	0.96	0.05	0.13
Benzo(k)fluoranthene	µg/g	0.96	0.05	<0.05
Benzo(a)pyrene	µg/g	0.3	0.05	0.08
Indeno(1,2,3-cd)pyrene	µg/g	0.76	0.05	0.09
Dibenz(a,h)anthracene	µg/g	0.1	0.05	<0.05
Benzo(g,h,i)perylene	µg/g	9.6	0.05	0.11
1 and 2 Methylnaphthalene	µg/g	76	0.05	<0.05
Moisture Content	%		0.1	21.2

Surrogate	Unit	Acceptable Limits
Naphthalene-d8	%	50-140 79
Acridine-d9	%	50-140 97
Terphenyl-d14	%	50-140 111

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 3: Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition - Soil - Industrial/Commercial/Community Property Use - Coarse Textured Soils  
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

3223983 Results are based on the dry weight of the soil.  
Note: The result for Benzo(b)Fluoranthene is the total of the Benzo(b)&j)Fluoranthene isomers because the isomers co-elute on the GC column.  
2- and 1-Methyl Naphthalene is a calculated parameter. The calculated value is the sum of 2-Methyl Naphthalene and 1-Methyl Naphthalene.

Analysis performed at AGAT Toronto (unless marked by \*)

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## Certificate of Analysis

AGAT WORK ORDER: 21T831991

PROJECT: 211-10139-00

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

CLIENT NAME: WSP CANADA INC.

SAMPLING SITE: ORBY Rail

ATTENTION TO: Vanessa Oetinger

SAMPLED BY: Matthew Roy

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

DATE RECEIVED: 2021-11-18

DATE REPORTED: 2021-11-26

Parameter	Unit	SAMPLE DESCRIPTION:		BH21-12 SS3	BH21-42 SS3
		G / S	RDL	3224132	3224217
Benzene	µg/g	0.005	<0.005	<0.005	<0.005
Toluene	µg/g	0.05	<0.05	<0.05	<0.05
Ethylbenzene	µg/g	0.01	<0.01	<0.01	<0.01
m,p-Xylenes	ug/g	0.05	<0.05	<0.05	<0.05
o-Xylene	ug/g	0.05	<0.05	<0.05	<0.05
Xylenes	µg/g	0.05	<0.05	<0.05	<0.05
C6 - C10 (F1)	ug/g	10	<10	<10	<10
C6 - C10 (F1 minus BTEX)	ug/g	10	<10	<10	<10
C>10 - C16	ug/g	10	<10	<10	<10
C>16 - C34	ug/g	10	61	32	
C>34 - C50	ug/g	10	22	12	
Gravimetric Heavy Hydrocarbons	ug/g	1000	N/A	N/A	
Moisture Content	%	1.00	25	22	
Surrogate	Unit	Acceptable Limits			
Toluene-d8 (BTEX)	%	60-140	70	62	
o-Terphenyl (F2-F4)	%	60-140	99	98	

Certified By:







## Certificate of Analysis

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PROJECT: 211-10139-00

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CLIENT NAME: WSP CANADA INC.

SAMPLING SITE: ORBY Rail

ATTENTION TO: Vanessa Oetinger

SAMPLED BY: Matthew Roy

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

DATE RECEIVED: 2021-11-18

DATE REPORTED: 2021-11-26

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

3224132-3224217 Results are based on the dry weight of the sample.  
 The C6-C10 (F1) fraction is calculated using toluene response factor.  
 The C10 - C16 (F2), C16 - C34 (F3), and C34 - C50 (F4) fractions are calculated using the average response factor for n-C10, n-C16, and n-C34.  
 Gravimetric Heavy Hydrocarbons (F4g) are not included in and cannot be added to the Total C6-C50 and are only determined if the chromatogram of the C34 - C50 hydrocarbons indicates that hydrocarbons >C50 are present.  
 Quality control data is available upon request.  
 Assistance in the interpretation of data is available upon request.  
 This method complies with the Reference Method for the CWS PHC and is validated for use in the laboratory.  
 nC6 and nC10 response factors are within 30% of Toluene response factor.  
 nC10, nC16 and nC34 response factors are within 10% of their average.  
 C50 response factor is within 70% of nC10 + nC16 + nC34 average.  
 Linearity is within 15%.  
 The chromatogram returned to baseline by the retention time of nC50.  
 C6 - C10 (F1 minus BTEX) is a calculated parameter. The calculated value is F1 minus BTEX. The calculated parameter is non-accredited. The parameters that are components of the calculation are accredited.  
 C>10 - C16 (F2- Naphthalene) is a calculated parameter. The calculated value is F2 - Naphthalene (if requested). The calculated parameter is non-accredited. The parameters that are components of the calculation are accredited.  
 C>16 - C34 (F3-PAH) is a calculated parameter. The calculated value is F3-PAH (if requested). The calculated parameter is non-accredited. The parameters that are components of the calculation are accredited.  
 Xylenes is a calculated parameter. The calculated value is the sum of m&p-Xylenes + o-Xylene. The calculated parameter is non-accredited. The parameters that are components of the calculation are accredited.  
 Extraction and holding times were met for this sample.

Analysis performed at AGAT Calgary (unless marked by \*)

Certified By:

## Quality Assurance

CLIENT NAME: WSP CANADA INC.  
 PROJECT: 211-10139-00  
 SAMPLING SITE: ORBY Rail

AGAT WORK ORDER: 21T831991  
 ATTENTION TO: Vanessa Oetinger  
 SAMPLED BY: Matthew Roy

Soil Analysis															
RPT Date: Nov 26, 2021			DUPLICATE			Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE		MATRIX SPIKE			
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD		Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper

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

Antimony	3221432		<0.8	<0.8	NA	< 0.8	130%	70%	130%	105%	80%	120%	101%	70%	130%
Arsenic	3221432		3	3	NA	< 1	116%	70%	130%	104%	80%	120%	100%	70%	130%
Barium	3221432		32.3	32.8	1.5%	< 2.0	106%	70%	130%	101%	80%	120%	90%	70%	130%
Beryllium	3221432		<0.4	<0.4	NA	< 0.4	94%	70%	130%	113%	80%	120%	102%	70%	130%
Boron	3221432		6	6	NA	< 5	71%	70%	130%	114%	80%	120%	83%	70%	130%
Boron (Hot Water Soluble)	3220744		<0.10	<0.10	NA	< 0.10	94%	60%	140%	103%	70%	130%	102%	60%	140%
Cadmium	3221432		<0.5	<0.5	NA	< 0.5	110%	70%	130%	109%	80%	120%	107%	70%	130%
Chromium	3221432		10	10	NA	< 5	97%	70%	130%	103%	80%	120%	106%	70%	130%
Cobalt	3221432		4.8	4.8	0.0%	< 0.5	95%	70%	130%	106%	80%	120%	96%	70%	130%
Copper	3221432		11.4	11.3	0.9%	< 1.0	94%	70%	130%	112%	80%	120%	102%	70%	130%
Lead	3221432		8	7	13.3%	< 1	100%	70%	130%	100%	80%	120%	94%	70%	130%
Molybdenum	3221432		<0.5	<0.5	NA	< 0.5	107%	70%	130%	110%	80%	120%	118%	70%	130%
Nickel	3221432		9	9	0.0%	< 1	96%	70%	130%	103%	80%	120%	96%	70%	130%
Selenium	3221432		<0.8	<0.8	NA	< 0.8	99%	70%	130%	103%	80%	120%	110%	70%	130%
Silver	3221432		<0.5	<0.5	NA	< 0.5	95%	70%	130%	103%	80%	120%	104%	70%	130%
Thallium	3221432		<0.5	<0.5	NA	< 0.5	94%	70%	130%	102%	80%	120%	98%	70%	130%
Uranium	3221432		<0.50	<0.50	NA	< 0.50	106%	70%	130%	104%	80%	120%	103%	70%	130%
Vanadium	3221432		16.3	17.2	5.4%	< 0.4	96%	70%	130%	97%	80%	120%	100%	70%	130%
Zinc	3221432		28	30	6.9%	< 5	103%	70%	130%	110%	80%	120%	101%	70%	130%
Chromium, Hexavalent	3240500		<0.2	<0.2	NA	< 0.2	96%	70%	130%	90%	80%	120%	102%	70%	130%
Cyanide, Free	3225915		<0.040	<0.040	NA	< 0.040	105%	70%	130%	100%	80%	120%	102%	70%	130%
Mercury	3221432		<0.10	<0.10	NA	< 0.10	110%	70%	130%	102%	80%	120%	100%	70%	130%
Electrical Conductivity (2:1)	3225912		0.213	0.214	0.5%	< 0.005	102%	80%	120%	NA			NA		
Sodium Adsorption Ratio (2:1) (Calc.)	3225912		0.294	0.285	3.1%	N/A	NA			NA			NA		
pH, 2:1 CaCl2 Extraction	3242174		7.43	7.39	0.5%	NA	101%	80%	120%	NA			NA		

Comments: NA signifies Not Applicable.

pH duplicates QA acceptance criteria was met relative as stated in Table 5-15 of Analytical Protocol document.

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

Certified By:



## Quality Assurance

CLIENT NAME: WSP CANADA INC.  
 PROJECT: 211-10139-00  
 SAMPLING SITE: ORBY Rail

AGAT WORK ORDER: 21T831991  
 ATTENTION TO: Vanessa Oetinger  
 SAMPLED BY: Matthew Roy

### Trace Organics Analysis

RPT Date: Nov 26, 2021			DUPLICATE				Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE		MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Measured Value		Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
O. Reg. 153(511) - PAHs (Soil)															
Naphthalene	3188273		< 0.05	< 0.05	NA	< 0.05	105%	50%	140%	70%	50%	140%	114%	50%	140%
Acenaphthylene	3188273		< 0.05	< 0.05	NA	< 0.05	78%	50%	140%	75%	50%	140%	75%	50%	140%
Acenaphthene	3188273		< 0.05	< 0.05	NA	< 0.05	85%	50%	140%	94%	50%	140%	96%	50%	140%
Fluorene	3188273		< 0.05	< 0.05	NA	< 0.05	78%	50%	140%	85%	50%	140%	93%	50%	140%
Phenanthrene	3188273		< 0.05	< 0.05	NA	< 0.05	90%	50%	140%	78%	50%	140%	92%	50%	140%
Anthracene	3188273		< 0.05	< 0.05	NA	< 0.05	85%	50%	140%	74%	50%	140%	104%	50%	140%
Fluoranthene	3188273		< 0.05	< 0.05	NA	< 0.05	96%	50%	140%	109%	50%	140%	78%	50%	140%
Pyrene	3188273		< 0.05	< 0.05	NA	< 0.05	105%	50%	140%	86%	50%	140%	85%	50%	140%
Benz(a)anthracene	3188273		< 0.05	< 0.05	NA	< 0.05	78%	50%	140%	95%	50%	140%	93%	50%	140%
Chrysene	3188273		< 0.05	< 0.05	NA	< 0.05	88%	50%	140%	77%	50%	140%	92%	50%	140%
Benzo(b)fluoranthene	3188273		< 0.05	< 0.05	NA	< 0.05	74%	50%	140%	71%	50%	140%	91%	50%	140%
Benzo(k)fluoranthene	3188273		< 0.05	< 0.05	NA	< 0.05	85%	50%	140%	85%	50%	140%	114%	50%	140%
Benzo(a)pyrene	3188273		< 0.05	< 0.05	NA	< 0.05	93%	50%	140%	93%	50%	140%	78%	50%	140%
Indeno(1,2,3-cd)pyrene	3188273		< 0.05	< 0.05	NA	< 0.05	92%	50%	140%	92%	50%	140%	95%	50%	140%
Dibenz(a,h)anthracene	3188273		< 0.05	< 0.05	NA	< 0.05	91%	50%	140%	104%	50%	140%	93%	50%	140%
Benzo(g,h,i)perylene	3188273		< 0.05	< 0.05	NA	< 0.05	97%	50%	140%	77%	50%	140%	92%	50%	140%

Comments: When the average of the sample and duplicate results is less than 5x the RDL, the Relative Percent Difference (RPD) will be indicated as Not Applicable (NA).

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

Benzene	3630	3214069	< 0.005	< 0.005	NA	< 0.005	119%	60%	140%	112%	60%	140%	101%	60%	140%
Toluene	3630	3214069	< 0.05	< 0.05	NA	< 0.05	113%	60%	140%	119%	60%	140%	80%	60%	140%
Ethylbenzene	3630	3214069	< 0.01	< 0.01	NA	< 0.01	111%	60%	140%	139%	60%	140%	73%	60%	140%
m,p-Xylenes	3630	3214069	< 0.05	< 0.05	NA	< 0.05	112%	50%	140%	122%	60%	130%	70%	50%	140%
o-Xylene	3630	3214069	< 0.05	< 0.05	NA	< 0.05	110%	50%	140%	122%	60%	130%	70%	50%	140%
Xylenes	3630	3214069	< 0.05	< 0.05	NA	< 0.05	111%	60%	140%	122%	60%	140%	70%	60%	140%
C6 - C10 (F1)	3630	3214069	< 10	< 10	NA	< 10	113%	60%	140%	103%	60%	140%	69%	60%	140%
C>10 - C16	143	3214069	< 10	< 10	NA	< 10	91%	60%	140%	88%	60%	140%	94%	60%	140%
C>16 - C34	143	3214069	< 10	< 10	NA	< 10	95%	60%	140%	87%	60%	140%	93%	60%	140%
C>34 - C50	143	3214069	< 10	< 10	NA	< 10	91%	60%	140%	86%	60%	140%	92%	60%	140%

Comments: Duplicate NA: results are less than 5X the RDL and RDP will not be calculated.  
 The sample spikes and dups are not from the same sample ID.

Certified By: \_\_\_\_\_







## Method Summary

CLIENT NAME: WSP CANADA INC.  
PROJECT: 211-10139-00  
SAMPLING SITE: ORBY Rail

AGAT WORK ORDER: 21T831991  
ATTENTION TO: Vanessa Oetinger  
SAMPLED BY: Matthew Roy

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Soil Analysis			
Antimony	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Arsenic	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Barium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Beryllium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Boron	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Boron (Hot Water Soluble)	MET-93-6104	modified from EPA 6010D and MSA PART 3, CH 21	ICP/OES
Cadmium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Chromium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Cobalt	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Copper	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Lead	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Molybdenum	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Nickel	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Selenium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Silver	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Thallium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Uranium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Vanadium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Zinc	MET 93 -6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Chromium, Hexavalent	INOR-93-6068	modified from EPA 3060 and EPA 7196	SPECTROPHOTOMETER
Cyanide, Free	INOR-93-6052	modified from ON MOECC E3015, SM 4500-CN- I, G-387	TECHNICON AUTO ANALYZER
Mercury	MET-93-6103	modified from EPA 7471B and SM 3112 B	ICP-MS
Electrical Conductivity (2:1)	INOR-93-6036	modified from MSA PART 3, CH 14 and SM 2510 B	EC METER
Sodium Adsorption Ratio (2:1) (Calc.)	INOR-93-6007	modified from EPA 6010D & Analytical Protocol	ICP/OES
pH, 2:1 CaCl <sub>2</sub> Extraction	INOR-93-6031	modified from EPA 9045D and MCKEAGUE 3.11	PH METER



## Method Summary

CLIENT NAME: WSP CANADA INC.  
 PROJECT: 211-10139-00  
 SAMPLING SITE: ORBY Rail

AGAT WORK ORDER: 21T831991  
 ATTENTION TO: Vanessa Oetinger  
 SAMPLED BY: Matthew Roy

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Trace Organics Analysis			
Naphthalene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Acenaphthylene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Acenaphthene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Fluorene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Phenanthrene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Anthracene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Fluoranthene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Pyrene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Benz(a)anthracene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Chrysene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Benzo(b)fluoranthene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Benzo(k)fluoranthene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Benzo(a)pyrene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Indeno(1,2,3-cd)pyrene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Dibenz(a,h)anthracene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Benzo(g,h,i)perylene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
1 and 2 Methylnaphthalene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Naphthalene-d8	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Acridine-d9	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Terphenyl-d14	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Moisture Content	VOL-91-5009	CCME Tier 1 Method	BALANCE
Benzene	TO-0543	EPA SW-846 5021 & 8260	GC/MS
Toluene	TO-0543	EPA SW-846 5021 & 8260	GC/MS
Ethylbenzene	TO-0543	EPA SW-846 5021 & 8260	GC/MS
m,p-Xylenes	TO-0543	EPA SW-846 5021 & 8260	GC/MS
o-Xylene	TO-0543	EPA SW-846 5021 & 8260	GC/MS
Xylenes	TO-0543	EPA SW-846 5021 & 8260	GC/MS
C6 - C10 (F1)	TO-0543	CCME Tier 1 Method	GC/FID
C6 - C10 (F1 minus BTEX)	TO-0543	CCME Tier 1 Method	GC/FID
C>10 - C16	TO-0560	CCME Tier 1 Method	GC/FID
C>16 - C34	TO-0560	CCME Tier 1 Method	GC/FID
C>34 - C50	TO-0560	CCME Tier 1 Method	GC/FID
Gravimetric Heavy Hydrocarbons	TO-0560	CCME Tier 1 Method	GRAVIMETRIC



## Method Summary

CLIENT NAME: WSP CANADA INC.

AGAT WORK ORDER: 21T831991

PROJECT: 211-10139-00

ATTENTION TO: Vanessa Oetinger

SAMPLING SITE:ORBY Rail

SAMPLED BY:Matthew Roy

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Moisture Content	TO-0560	CCME Tier 1 Method	GC/FID
Toluene-d8 (BTEX)	TO-0543	EPA SW-846 5021 & 8260	GC/MS
o-Terphenyl (F2-F4)	TO 0560	CCME Tier 1 Method	GC/FID





# AGAT Laboratories

1 large

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

### Laboratory Use Only

Work Order #: 21T831991  
Cooler Quantity: \_\_\_\_\_  
Arrival Temperatures: 48 | 53 | 54  
Custody Seal Intact:  Yes  No  N/A  
Notes: broken ice

## Chain of Custody Record

If this is a Drinking Water sample, please use Drinking Water Chain of Custody Form (potable water consumed by humans)

### Report Information:

Company: WSP Inc.  
Contact: Vanessa Oetinger  
Address: 2 International Blvd, Etobicoke  
Phone: \_\_\_\_\_ Fax: \_\_\_\_\_  
Reports to be sent to:  
1. Email: Vanessa.oetinger@wsp.com  
2. Email: Matt.roy@wsp.com

### Regulatory Requirements:

(Please check all applicable boxes)  
 Regulation 153/04  Excess Soils R406  Sewer Use  
 Ind/Com  Sanitary  Storm  
Table 3  Agriculture  Res/Park  Regulation 558  Prov. Water Quality Objectives (PWQO)  
Soil Texture (Check One)  CCME  Other  
 Coarse  Fine

### Project Information:

Project: 211-10139-00  
Site Location: ORBY RAIL  
Sampled By: Matthew Roy  
AGAT Quote #: \_\_\_\_\_ PO: \_\_\_\_\_  
Please note: If quotation number is not provided, client will be billed full price for analysis.

### Is this submission for a Record of Site Condition?

Yes  No

### Report Guideline on Certificate of Analysis

Yes  No

### Invoice Information:

Bill To Same: Yes  No   
Company: \_\_\_\_\_  
Contact: \_\_\_\_\_  
Address: \_\_\_\_\_  
Email: payables.ontario@wsp.com

### Sample Matrix Legend

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

Sample Identification	Date Sampled	Time Sampled	# of Containers	Sample Matrix	Comments/ Special Instructions	Y / N	0. Reg 153				0. Reg 406				Potentially Hazardous or High Concentration (Y/N)			
							Field Filtered - Metals, Hg, CrVI, DOC	Metals & Inorganics	Metals - CrVI, Hg, HWSB	BTEX, F1-F4 PHCs	Analyze F4G if required	PAHs	PCBs	VOC		Landfill Disposal Characterization TCLP:	Excess Soils SPLP Rainwater Leach	Excess Soils Characterization Package
BH21-12 SS1	11/16/21	PM	1	S														
BH21-12 SS1	↓	PM	1	S														
BH21-12 SS2		PM	1	S		X												
BH21-12 SS3		PM	3	S				X										
BH21-12 SS4		PM	3	S				X										
BH21-42 SS1		AM	1	S		X												
BH21-42 SS2		AM	2	S						X	X							
BH21-42 SS3		AM	3	S					X									
BH21-42 SS4		AM	1	S		X												

Sample Relinquished By (Print Name and Sign): <u>Matthew Roy</u>	Date: <u>11/18/21</u> Time: <u>1330</u>	Samples Received By (Print Name and Sign): <u>Dore Eakman</u>	Date: _____ Time: _____
Samples Relinquished By (Print Name and Sign): _____	Date: _____ Time: _____	Samples Received By (Print Name and Sign): _____	Date: _____ Time: _____

Page 1 of 1  
Nº: **T 126071**



CLIENT NAME: WSP CANADA INC.  
2 INTERNATIONAL BLVD SUITE 201  
ETOBICOKE, ON M9W1A2  
(416) 798-0065

ATTENTION TO: Vanessa Oetinger

PROJECT: 211-10139-00

AGAT WORK ORDER: 21T832162

TRACE ORGANICS REVIEWED BY: Elena Gorobets, Report Writer

DATE REPORTED: Nov 30, 2021

PAGES (INCLUDING COVER): 8

VERSION\*: 1

Should you require any information regarding this analysis please contact your client services representative at (905) 712-5100

\*Notes

Disclaimer:

- All work conducted herein has been done using accepted standard protocols, and generally accepted practices and methods. AGAT test methods may incorporate modifications from the specified reference methods to improve performance.
- All samples will be disposed of within 30 days after receipt unless a Long Term Storage Agreement is signed and returned. Some specialty analysis may be exempt, please contact your Client Project Manager for details.
- AGAT's liability in connection with any delay, performance or non-performance of these services is only to the Client and does not extend to any other third party. Unless expressly agreed otherwise in writing, AGAT's liability is limited to the actual cost of the specific analysis or analyses included in the services.
- This Certificate shall not be reproduced except in full, without the written approval of the laboratory.
- The test results reported herewith relate only to the samples as received by the laboratory.
- Application of guidelines is provided "as is" without warranty of any kind, either expressed or implied, including, but not limited to, warranties of merchantability, fitness for a particular purpose, or non-infringement. AGAT assumes no responsibility for any errors or omissions in the guidelines contained in this document.
- All reportable information as specified by ISO/IEC 17025:2017 is available from AGAT Laboratories upon request.



## Certificate of Analysis

AGAT WORK ORDER: 21T832162

PROJECT: 211-10139-00

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

CLIENT NAME: WSP CANADA INC.

SAMPLING SITE: ORBY Rail

ATTENTION TO: Vanessa Oetinger

SAMPLED BY: MR

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

DATE RECEIVED: 2021-11-18

DATE REPORTED: 2021-11-30

Parameter	Unit	SAMPLE DESCRIPTION:									
		SAMPLE TYPE:		BH21-34 S3	BH21-39 S3	BH21-29 S3	BH21-17 S2	BH21-41 S1	BH21-26 S3	BH21-27 S3	BH21-37 S3
		DATE SAMPLED:		2021-10-28	2021-11-05	2021-10-28	2021-11-05	2021-11-05	2021-10-28	2021-10-28	2021-10-27
		G / S	RDL	3225539	3225563	3225564	3225565	3225566	3225567	3225568	3225569
Benzene	µg/g	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.006	<0.005	<0.005	<0.005
Toluene	µg/g	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Ethylbenzene	µg/g	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.01	<0.01	<0.01	<0.01
m,p-Xylenes	ug/g	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.11	<0.05	<0.05	<0.05
o-Xylene	ug/g	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.11	<0.05	<0.05	<0.05
Xylenes	µg/g	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.22	<0.05	<0.05	<0.05
C6 - C10 (F1)	ug/g	10	<10	<10	<10	<10	<10	10	<10	<10	<10
C6 - C10 (F1 minus BTEX)	ug/g	10	<10	<10	<10	<10	<10	10	<10	<10	<10
C>10 - C16	ug/g	10	<10	<10	<10	<10	<10	<10	<10	<10	<10
C>16 - C34	ug/g	10	11	24	17	13	75	<10	<10	<10	15
C>34 - C50	ug/g	10	<10	<10	<10	<10	<10	19	<10	<10	<10
Gravimetric Heavy Hydrocarbons	ug/g	1000	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Moisture Content	%	1.00	13	19	14	14	18	13	2.7	3.3	
Surrogate	Unit	Acceptable Limits									
Toluene-d8 (BTEX)	%	60-140	112	104	96	106	104	106	92	88	
o-Terphenyl (F2-F4)	%	60-140	96	93	94	96	92	98	93	92	

Certified By:

*Elena Gorobets*





## Certificate of Analysis

AGAT WORK ORDER: 21T832162

PROJECT: 211-10139-00

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

CLIENT NAME: WSP CANADA INC.

ATTENTION TO: Vanessa Oetinger

SAMPLING SITE: ORBY Rail

SAMPLED BY: MR

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

DATE RECEIVED: 2021-11-18

DATE REPORTED: 2021-11-30

Parameter	Unit	SAMPLE DESCRIPTION:								
		SAMPLE TYPE:		BH21-23 S3	BH21-24 S3	BH21-35 S2	BH21-31 S3	BH21-14 S3	BH21-33 S2	BH21-10 S3
		DATE SAMPLED:		2021-11-05	2021-11-05	2021-10-27	2021-11-05	2021-10-27	2021-10-28	2021-10-27
		G / S	RDL	3225570	3225571	3225572	3225573	3225574	3225576	3225577
Benzene	µg/g	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Toluene	µg/g	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Ethylbenzene	µg/g	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
m,p-Xylenes	ug/g	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
o-Xylene	ug/g	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Xylenes	µg/g	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
C6 - C10 (F1)	ug/g	10	<10	<10	<10	<10	<10	<10	<10	<10
C6 - C10 (F1 minus BTEX)	ug/g	10	<10	<10	<10	<10	<10	<10	<10	<10
C>10 - C16	ug/g	10	<10	<10	<10	13	<10	<10	<10	<10
C>16 - C34	ug/g	10	<10	14	21	39	14	24	42	42
C>34 - C50	ug/g	10	<10	<10	<10	<10	<10	<10	<10	<10
Gravimetric Heavy Hydrocarbons	ug/g	1000	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Moisture Content	%	1.00	12	16	14	11	5.3	7.6	3.2	3.2
Surrogate	Unit	Acceptable Limits								
Toluene-d8 (BTEX)	%	60-140	99	88	75	98	130	132	109	109
o-Terphenyl (F2-F4)	%	60-140	96	96	91	93	96	95.9	94.2	94.2

Certified By:

*Elena Gorobets*



## Certificate of Analysis

AGAT WORK ORDER: 21T832162

PROJECT: 211-10139-00

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

CLIENT NAME: WSP CANADA INC.

ATTENTION TO: Vanessa Oetinger

SAMPLING SITE: ORBY Rail

SAMPLED BY: MR

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

DATE RECEIVED: 2021-11-18

DATE REPORTED: 2021-11-30

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

3225539-3225577 Results are based on the dry weight of the sample.  
 The C6-C10 (F1) fraction is calculated using toluene response factor.  
 The C10 - C16 (F2), C16 - C34 (F3), and C34 - C50 (F4) fractions are calculated using the average response factor for n-C10, n-C16, and n-C34.  
 Gravimetric Heavy Hydrocarbons (F4g) are not included in and cannot be added to the Total C6-C50 and are only determined if the chromatogram of the C34 - C50 hydrocarbons indicates that hydrocarbons >C50 are present.  
 Quality control data is available upon request.  
 Assistance in the interpretation of data is available upon request.  
 This method complies with the Reference Method for the CWS PHC and is validated for use in the laboratory.  
 nC6 and nC10 response factors are within 30% of Toluene response factor.  
 nC10, nC16 and nC34 response factors are within 10% of their average.  
 C50 response factor is within 70% of nC10 + nC16 + nC34 average.  
 Linearity is within 15%.  
 The chromatogram returned to baseline by the retention time of nC50.  
 C6 - C10 (F1 minus BTEX) is a calculated parameter. The calculated value is F1 minus BTEX. The calculated parameter is non-accredited. The parameters that are components of the calculation are accredited.  
 C>10 - C16 (F2- Naphthalene) is a calculated parameter. The calculated value is F2 - Naphthalene (if requested). The calculated parameter is non-accredited. The parameters that are components of the calculation are accredited.  
 C>16 - C34 (F3-PAH) is a calculated parameter. The calculated value is F3-PAH (if requested). The calculated parameter is non-accredited. The parameters that are components of the calculation are accredited.  
 Xylenes is a calculated parameter. The calculated value is the sum of m&p-Xylenes + o-Xylene. The calculated parameter is non-accredited. The parameters that are components of the calculation are accredited.

Sample holding time exceeded for F2-F4 analysis.

Analysis performed at AGAT Calgary (unless marked by \*)

Certified By:

*Elena Gorobets*

## Quality Assurance

 CLIENT NAME: WSP CANADA INC.  
 PROJECT: 211-10139-00  
 SAMPLING SITE: ORBY Rail

 AGAT WORK ORDER: 21T832162  
 ATTENTION TO: Vanessa Oetinger  
 SAMPLED BY: MR

### Trace Organics Analysis

RPT Date: Nov 30, 2021			DUPLICATE				Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Measured Value		Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits		
								Lower	Upper		Lower	Upper		Lower	Upper	
O. Reg. 153(511) - PHCs F1-F4 (Soil)																
Benzene	4195	3225563	< 0.005	< 0.005	NA	< 0.005	92%	60%	140%	89%	60%	140%	84%	60%	140%	
Toluene	4195	3225563	< 0.05	< 0.05	NA	< 0.05	86%	60%	140%	91%	60%	140%	86%	60%	140%	
Ethylbenzene	4195	3225563	< 0.01	< 0.01	NA	< 0.01	83%	60%	140%	99%	60%	140%	90%	60%	140%	
m,p-Xylenes	4195	3225563	< 0.05	< 0.05	NA	< 0.05	83%	50%	140%	90%	60%	130%	83%	50%	140%	
o-Xylene	4195	3225563	< 0.05	< 0.05	NA	< 0.05	83%	50%	140%	90%	60%	130%	83%	50%	140%	
Xylenes	4195	3225563	< 0.05	< 0.05	NA	< 0.05	83%	60%	140%	90%	60%	140%	83%	60%	140%	
C6 - C10 (F1)	4195	3225563	< 10	< 10	NA	< 10	114%	60%	140%	103%	60%	140%	103%	60%	140%	
C>10 - C16	6567	3225563	< 10	< 10	NA	< 10	109%	60%	140%	90%	60%	140%	92%	60%	140%	
C>16 - C34	6567	3225563	24	21	NA	< 10	110%	60%	140%	85%	60%	140%	86%	60%	140%	
C>34 - C50	6567	3225563	< 10	< 10	NA	< 10	98%	60%	140%	78%	60%	140%	79%	60%	140%	

Comments: Duplicate NA: results are less than 5X the RDL and RDP will not be calculated.  
 The sample spikes and dups are not from the same sample ID.

Certified By: *Elena Gorobets*





## Method Summary

CLIENT NAME: WSP CANADA INC.

AGAT WORK ORDER: 21T832162

PROJECT: 211-10139-00

ATTENTION TO: Vanessa Oetinger

SAMPLING SITE: ORBY Rail

SAMPLED BY: MR

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Trace Organics Analysis			
Benzene	TO-0543	EPA SW-846 5021 & 8260	GC/MS
Toluene	TO-0543	EPA SW-846 5021 & 8260	GC/MS
Ethylbenzene	TO-0543	EPA SW-846 5021 & 8260	GC/MS
m,p-Xylenes	TO-0543	EPA SW-846 5021 & 8260	GC/MS
o-Xylene	TO-0543	EPA SW-846 5021 & 8260	GC/MS
Xylenes	TO-0543	EPA SW-846 5021 & 8260	GC/MS
C6 - C10 (F1)	TO-0543	CCME Tier 1 Method	GC/FID
C6 - C10 (F1 minus BTEX)	TO-0543	CCME Tier 1 Method	GC/FID
C>10 - C16	TO-0560	CCME Tier 1 Method	GC/FID
C>16 - C34	TO-0560	CCME Tier 1 Method	GC/FID
C>34 - C50	TO-0560	CCME Tier 1 Method	GC/FID
Gravimetric Heavy Hydrocarbons	TO-0560	CCME Tier 1 Method	GRAVIMETRIC
Moisture Content	TO-0560	CCME Tier 1 Method	GC/FID
Toluene-d8 (BTEX)	TO-0543	EPA SW-846 5021 & 8260	GC/MS
o-Terphenyl (F2-F4)	TO 0560	CCME Tier 1 Method	GC/FID



**Laboratory Use Only**

Work Order #: \_\_\_\_\_  
Cooler Quantity: \_\_\_\_\_  
Arrival Temperatures: \_\_\_\_\_  
Custody Seal Intact:  Yes  No  N/A  
Notes: \_\_\_\_\_

**Chain of Custody Record** If this is a Drinking Water sample, please use Drinking Water Chain of Custody Form (potable water consumed by humans)

**Report Information:**  
Company: \_\_\_\_\_  
Contact: \_\_\_\_\_  
Address: \_\_\_\_\_  
Phone: \_\_\_\_\_ Fax: \_\_\_\_\_  
Reports to be sent to:  
1. Email: \_\_\_\_\_  
2. Email: \_\_\_\_\_

**Regulatory Requirements:**

(Please check all applicable boxes)

Regulation 153/04  Excess Soils R406  Sewer Use  
 Sanitary  Storm

Table Indicate One  Ind/Com  Res/Park  Agriculture

Table Indicate One  Regulation 558  Prov. Water Quality Objectives (PWQO)

Soil Texture (Check One)  Coarse  Fine  CCME  Other

Region: \_\_\_\_\_  
Indicate One

**Turnaround Time (TAT) Required:**

**Regular TAT**  5 to 7 Business Days  
**Rush TAT** (Rush Surcharges Apply)  
 3 Business Days  2 Business Days  Next Business Day  
**OR** Date Required (Rush Surcharges May Apply): \_\_\_\_\_

**Project Information:**  
Project: \_\_\_\_\_  
Site Location: \_\_\_\_\_  
Sampled By: \_\_\_\_\_  
AGAT Quote #: \_\_\_\_\_ PO: \_\_\_\_\_  
Please note: If quotation number is not provided, client will be billed full price for analysis.

**Is this submission for a Record of Site Condition?**

Yes  No

**Report Guideline on Certificate of Analysis**

Yes  No

Please provide prior notification for rush TAT  
\*TAT is exclusive of weekends and statutory holidays

For 'Same Day' analysis, please contact your AGAT CPM

**Invoice Information:** Bill To Same: Yes  No   
Company: \_\_\_\_\_  
Contact: \_\_\_\_\_  
Address: \_\_\_\_\_  
Email: \_\_\_\_\_

**Sample Matrix Legend**

- B** Biota
- GW** Ground Water
- O** Oil
- P** Paint
- S** Soil
- SD** Sediment
- SW** Surface Water

Sample Identification	Date Sampled	Time Sampled	# of Containers	Sample Matrix	Comments/ Special Instructions	Y / N	Field Filtered - Metals, Hg, CrVI, DOC	0. Reg 153	0. Reg 406	Potentially Hazardous or High Concentration (Y/N)
								Metals & Inorganics Metals - <input type="checkbox"/> CrVI, <input type="checkbox"/> Hg, <input type="checkbox"/> HWSB BTEX, F1-F4, PHCs Analyze F4G if required <input type="checkbox"/> Yes <input type="checkbox"/> No	Landfill Disposal Characterization TOLP: TCLP: <input type="checkbox"/> M&I <input type="checkbox"/> VOCs <input type="checkbox"/> ABNS <input type="checkbox"/> BIP <input type="checkbox"/> PCBs Excess Soils SPLP Rainwater Leach SPLP: <input type="checkbox"/> Metals <input type="checkbox"/> VOCs <input type="checkbox"/> SVOCs Excess Soils Characterization Package pH, ICPSM Metals, BTEX, F1-F4 Salt - EC/SAR	
BH21-31 S3	11/5/21	AM	2	S	Limited hold time					
BH21-14 S3	10/27/21	PM	2	S						
BH21-33 S2	10/28/21	AM	2	S						
BH21-10 S3	10/29/21	PM	2	S						
		AM								
		PM								
		AM								
		PM								
		AM								
		PM								
		AM								
		PM								

Samples Relinquished By (Print Name and Sign):	Date:	Time:	Samples Received By (Print Name and Sign): <i>Hane E. Alwan</i>	Date:	Time:	21 NOV 18 4:39
Samples Relinquished By (Print Name and Sign):	Date:	Time:	Samples Received By (Print Name and Sign):	Date:	Time:	Page 2 of 2
Samples Relinquished By (Print Name and Sign):	Date:	Time:	Samples Received By (Print Name and Sign):	Date:	Time:	Nº: T 127117





CLIENT NAME: WSP CANADA INC.  
2 INTERNATIONAL BLVD SUITE 201  
ETOBICOKE, ON M9W1A2  
(416) 798-0065

ATTENTION TO: Vanessa Oetinger

PROJECT: 211-1039-00

AGAT WORK ORDER: 21T834550

SOIL ANALYSIS REVIEWED BY: Nivine Basily, Inorganics Report Writer

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

DATE REPORTED: Dec 03, 2021

PAGES (INCLUDING COVER): 26

VERSION\*: 1

Should you require any information regarding this analysis please contact your client services representative at (905) 712-5100

\*Notes

**Disclaimer:**

- All work conducted herein has been done using accepted standard protocols, and generally accepted practices and methods. AGAT test methods may incorporate modifications from the specified reference methods to improve performance.
- All samples will be disposed of within 30 days after receipt unless a Long Term Storage Agreement is signed and returned. Some specialty analysis may be exempt, please contact your Client Project Manager for details.
- AGAT's liability in connection with any delay, performance or non-performance of these services is only to the Client and does not extend to any other third party. Unless expressly agreed otherwise in writing, AGAT's liability is limited to the actual cost of the specific analysis or analyses included in the services.
- This Certificate shall not be reproduced except in full, without the written approval of the laboratory.
- The test results reported herewith relate only to the samples as received by the laboratory.
- Application of guidelines is provided "as is" without warranty of any kind, either expressed or implied, including, but not limited to, warranties of merchantability, fitness for a particular purpose, or non-infringement. AGAT assumes no responsibility for any errors or omissions in the guidelines contained in this document.
- All reportable information as specified by ISO/IEC 17025:2017 is available from AGAT Laboratories upon request.



## Certificate of Analysis

AGAT WORK ORDER: 21T834550

PROJECT: 211-1039-00

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

CLIENT NAME: WSP CANADA INC.

SAMPLING SITE: ORBY Rail

ATTENTION TO: Vanessa Oetinger

SAMPLED BY: Matthew Roy

### O. Reg. 153(511) - Metals & Inorganics (Soil)

DATE RECEIVED: 2021-11-24

DATE REPORTED: 2021-12-03

Parameter	Unit	SAMPLE DESCRIPTION:								
		SAMPLE TYPE:		BH21-45 SS2	BH21-22 SS1	BH21-21 SS3	BH21-20 SS1	QAQC-6	BH21-19 SS2	BH21-18 SS1
		G / S	RDL	Soil	Soil	Soil	Soil	Soil	Soil	Soil
		DATE SAMPLED:		2021-11-22	2021-11-22	2021-11-23	2021-11-23	2021-11-23	2021-11-24	2021-11-24
				3248184	3248188	3248197	3248217	3248218	3248301	3248302
Antimony	µg/g	1.3	0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8
Arsenic	µg/g	18	1	7	6	5	6	5	6	6
Barium	µg/g	220	2.0	83.0	96.2	56.1	71.9	71.5	82.7	94.5
Beryllium	µg/g	2.5	0.4	0.5	0.5	<0.4	<0.4	<0.4	0.6	0.6
Boron	µg/g	36	5	9	9	8	<5	<5	11	7
Boron (Hot Water Soluble)	µg/g	NA	0.10	0.44	0.12	<0.10	0.21	0.22	0.11	0.26
Cadmium	µg/g	1.2	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Chromium	µg/g	70	5	25	24	14	20	20	25	25
Cobalt	µg/g	21	0.5	15.3	11.9	7.6	16.5	11.8	13.3	11.5
Copper	µg/g	92	1.0	33.8	29.7	23.4	48.7	25.8	25.2	33.4
Lead	µg/g	120	1	11	10	10	18	17	11	10
Molybdenum	µg/g	2	0.5	<0.5	<0.5	<0.5	0.6	0.6	<0.5	<0.5
Nickel	µg/g	82	1	33	23	13	142	25	26	24
Selenium	µg/g	1.5	0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8
Silver	µg/g	0.5	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Thallium	µg/g	1	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Uranium	µg/g	2.5	0.50	0.65	0.58	<0.50	0.51	<0.50	0.56	0.53
Vanadium	µg/g	86	0.4	34.0	34.9	22.7	30.9	30.7	35.8	35.1
Zinc	µg/g	290	5	68	57	35	61	67	59	66
Chromium, Hexavalent	µg/g	0.66	0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Cyanide, Free	µg/g	0.051	0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040
Mercury	µg/g	0.27	0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Electrical Conductivity (2:1)	mS/cm	0.57	0.005	0.314	0.125	0.088	0.154	0.157	0.110	0.154
Sodium Adsorption Ratio (2:1) (Calc.)	N/A	2.4	N/A	1.20	0.182	0.095	0.105	0.107	0.186	1.00
pH, 2:1 CaCl2 Extraction	pH Units		NA	7.60	7.64	7.62	7.44	7.36	7.56	7.55

Certified By:



*Matthew Roy*



**AGAT** Laboratories

# Certificate of Analysis

AGAT WORK ORDER: 21T834550

PROJECT: 211-1039-00

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

CLIENT NAME: WSP CANADA INC.

SAMPLING SITE: ORBY Rail

ATTENTION TO: Vanessa Oetinger

SAMPLED BY: Matthew Roy

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

DATE RECEIVED: 2021-11-24

DATE REPORTED: 2021-12-03

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 1: Full Depth Background Site Condition Standards - Soil - Residential/Parkland/Institutional/Industrial/Commercial/Community Property Use

Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

3248184-3248302 EC was determined on the DI water extract obtained from the 2:1 leaching procedure (2 parts DI water:1 part soil). pH was determined on the 0.01M CaCl2 extract prepared at 2:1 ratio. SAR is a calculated parameter.

Analysis performed at AGAT Toronto (unless marked by \*)

Certified By:



*Matthew Roy*





## Certificate of Analysis

AGAT WORK ORDER: 21T834550

PROJECT: 211-1039-00

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

CLIENT NAME: WSP CANADA INC.

SAMPLING SITE: ORBY Rail

ATTENTION TO: Vanessa Oetinger

SAMPLED BY: Matthew Roy

### O. Reg. 153(511) - OC Pesticides + PCBs (Soil)

DATE RECEIVED: 2021-11-24

DATE REPORTED: 2021-12-03

Parameter	Unit	SAMPLE DESCRIPTION:				
		BH21-45 SS1		BH21-20 SS2		QAQC-7
		G / S	RDL	3248183	3248219	3248220
Gamma-Hexachlorocyclohexane	µg/g	0.01	0.005	<0.005	<0.005	<0.005
Heptachlor	µg/g	0.05	0.005	<0.005	<0.005	<0.005
Aldrin	µg/g	0.05	0.005	<0.005	<0.005	<0.005
Heptachlor Epoxide	µg/g	0.05	0.005	<0.005	<0.005	<0.005
Endosulfan I	µg/g		0.005	<0.005	<0.005	<0.005
Endosulfan II	µg/g		0.005	<0.005	<0.005	<0.005
Endosulfan	µg/g	0.04	0.005	<0.005	<0.005	<0.005
Alpha-Chlordane	µg/g		0.005	<0.005	<0.005	<0.005
gamma-Chlordane	µg/g		0.005	<0.005	<0.005	<0.005
Chlordane	µg/g	0.05	0.007	<0.007	<0.007	<0.007
op'-DDD	µg/g		0.005	<0.005	<0.005	<0.005
pp'-DDD	µg/g		0.005	<0.005	<0.005	<0.005
DDD	µg/g	0.05	0.007	<0.007	<0.007	<0.007
op'-DDE	µg/g		0.005	<0.005	<0.005	<0.005
pp'-DDE	µg/g		0.005	<0.005	<0.005	<0.005
DDE	µg/g	0.05	0.007	<0.007	<0.007	<0.007
op'-DDT	µg/g		0.005	<0.005	<0.005	<0.005
pp'-DDT	µg/g		0.005	<0.005	<0.005	<0.005
DDT	µg/g	1.4	0.007	<0.007	<0.007	<0.007
Dieldrin	µg/g	0.05	0.005	<0.005	<0.005	<0.005
Endrin	µg/g	0.04	0.005	<0.005	<0.005	<0.005
Methoxychlor	µg/g	0.05	0.005	<0.005	<0.005	<0.005
Hexachlorobenzene	µg/g	0.01	0.005	<0.005	<0.005	<0.005
Hexachlorobutadiene	µg/g	0.01	0.01	<0.01	<0.01	<0.01
Hexachloroethane	µg/g	0.01	0.01	<0.01	<0.01	<0.01
Aroclor 1242	µg/g		0.10	<0.10	<0.10	<0.10
Aroclor 1248	µg/g		0.10	<0.10	<0.10	<0.10
Aroclor 1254	µg/g		0.10	<0.10	<0.10	<0.10
Aroclor 1260	µg/g		0.10	<0.10	<0.10	<0.10
Polychlorinated Biphenyls	µg/g	0.3	0.10	<0.10	<0.10	<0.10

Certified By:



## Certificate of Analysis

AGAT WORK ORDER: 21T834550

PROJECT: 211-1039-00

5835 COOPERS AVENUE  
MISSISSAUGA, ONTARIO  
CANADA L4Z 1Y2  
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CLIENT NAME: WSP CANADA INC.

SAMPLING SITE: ORBY Rail

ATTENTION TO: Vanessa Oetinger

SAMPLED BY: Matthew Roy

### O. Reg. 153(511) - OC Pesticides + PCBs (Soil)

DATE RECEIVED: 2021-11-24

DATE REPORTED: 2021-12-03

Parameter	Unit	SAMPLE DESCRIPTION:				
		G / S	RDL	BH21-45 SS1	BH21-20 SS2	QAQC-7
Moisture Content	%		0.1	13.1	15.2	15.4
wet weight OC/PCB	g		NA	10.60	10.23	10.91
Surrogate	Unit	Acceptable Limits				
TCMX	%	50-140	89	88	83	
Decachlorobiphenyl	%	50-140	105	86	89	

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 1: Full Depth Background Site Condition Standards - Soil - Residential/Parkland/Institutional/Industrial/Commercial/Community Property Use

Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

3248183-3248220 Results are based on the dry weight of the soil.

DDT total is a calculated parameter. The calculated value is the sum of op'DDT and pp'DDT.

DDD total is a calculated parameter. The calculated value is the sum of op'DDD and pp'DDD.

DDE total is a calculated parameter. The calculated value is the sum of op'DDE and pp'DDE.

Endosulfan total is a calculated parameter. The calculated value is the sum of Endosulfan I and Endosulfan II.

Chlordane total is a calculated parameter. The calculated value is the sum of Alpha-Chlordane and Gamma-Chlordane.

PCB total is a calculated parameter. The calculated value is the sum of Aroclor 1242, Aroclor 1248, Aroclor 1254 and Aroclor 1260.

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

Analysis performed at AGAT Toronto (unless marked by \*)

Certified By:



## Certificate of Analysis

AGAT WORK ORDER: 21T834550

PROJECT: 211-1039-00

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

CLIENT NAME: WSP CANADA INC.

SAMPLING SITE: ORBY Rail

ATTENTION TO: Vanessa Oetinger

SAMPLED BY: Matthew Roy

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

DATE RECEIVED: 2021-11-24

DATE REPORTED: 2021-12-03

Parameter	Unit	SAMPLE DESCRIPTION:								
		SAMPLE TYPE:		BH21-45 SS1	BH21-22 SS3	BH21-21 SS1	BH21-20 SS2	QAQC-7	BH21-19 SS1	BH21-18 SS2
		G / S	RDL	Soil	Soil	Soil	Soil	Soil	Soil	Soil
		DATE SAMPLED:								
		2021-11-22	2021-11-22	2021-11-23	2021-11-23	2021-11-23	2021-11-23	2021-11-24	2021-11-24	2021-11-24
		3248183	3248189	3248196	3248219	3248220	3248227	3248305		
Naphthalene	µg/g	0.09	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Acenaphthylene	µg/g	0.093	0.05	0.09	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Acenaphthene	µg/g	0.072	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Fluorene	µg/g	0.12	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Phenanthrene	µg/g	0.69	0.05	0.24	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Anthracene	µg/g	0.16	0.05	0.13	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Fluoranthene	µg/g	0.56	0.05	0.57	<0.05	<0.05	<0.05	<0.05	0.14	<0.05
Pyrene	µg/g	1	0.05	0.60	<0.05	<0.05	<0.05	<0.05	0.16	<0.05
Benz(a)anthracene	µg/g	0.36	0.05	0.39	<0.05	<0.05	<0.05	<0.05	0.17	<0.05
Chrysene	µg/g	2.8	0.05	0.35	<0.05	<0.05	<0.05	<0.05	0.07	<0.05
Benzo(b)fluoranthene	µg/g	0.47	0.05	0.45	<0.05	<0.05	<0.05	<0.05	0.10	<0.05
Benzo(k)fluoranthene	µg/g	0.48	0.05	0.19	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Benzo(a)pyrene	µg/g	0.3	0.05	0.33	<0.05	<0.05	<0.05	<0.05	0.07	<0.05
Indeno(1,2,3-cd)pyrene	µg/g	0.46	0.05	0.19	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Dibenz(a,h)anthracene	µg/g	0.1	0.05	0.06	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Benzo(g,h,i)perylene	µg/g	0.68	0.05	0.23	<0.05	<0.05	<0.05	<0.05	0.05	<0.05
1 and 2 Methylnaphthalene	µg/g	0.59	0.05	0.15	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Moisture Content	%		0.1	13.1	12.1	16.4	15.2	15.4	23.9	14.2
Surrogate	Unit	Acceptable Limits								
Naphthalene-d8	%	50-140		98	102	74	107	105	77	78
Acridine-d9	%	50-140		96	78	86	82	97	97	85
Terphenyl-d14	%	50-140		108	84	95	99	88	83	99

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 1: Full Depth Background Site Condition Standards - Soil - Residential/Parkland/Institutional/Industrial/Commercial/Community Property Use  
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

3248183-3248305 Results are based on the dry weight of the soil.

Note: The result for Benzo(b)Fluoranthene is the total of the Benzo(b)&j)Fluoranthene isomers because the isomers co-elute on the GC column.  
2- and 1-Methyl Naphthalene is a calculated parameter. The calculated value is the sum of 2-Methyl Naphthalene and 1-Methyl Naphthalene.

Analysis performed at AGAT Toronto (unless marked by \*)

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AGAT WORK ORDER: 21T834550

PROJECT: 211-1039-00

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CLIENT NAME: WSP CANADA INC.

SAMPLING SITE: ORBY Rail

ATTENTION TO: Vanessa Oetinger

SAMPLED BY: Matthew Roy

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

DATE RECEIVED: 2021-11-24

DATE REPORTED: 2021-12-03

Parameter	Unit	SAMPLE DESCRIPTION:			BH21-45 SS8	BH21-22 SS5	BH21-21 SS3
		G / S	RDL	Soil	Soil	Soil	
		DATE SAMPLED:			2021-11-22	2021-11-22	2021-11-23
		3248186	3248195	3248197			
F1 (C6 - C10)	µg/g	25	5	57	<5	<5	
F1 (C6 to C10) minus BTEX	µg/g	25	5	51	<5	<5	
F2 (C10 to C16)	µg/g	10	10	<10	<10	<10	
F3 (C16 to C34)	µg/g	240	50	<50	<50	<50	
F4 (C34 to C50)	µg/g	120	50	<50	<50	<50	
Gravimetric Heavy Hydrocarbons	µg/g	120	50	NA	NA	NA	
Moisture Content	%		0.1	10.0	12.3	10.0	
Surrogate	Unit	Acceptable Limits					
Toluene-d8	% Recovery	50-140	113	86	89		
Terphenyl	%	60-140	72	78	75		

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 1: Full Depth Background Site Condition Standards - Soil - Residential/Parkland/Institutional/Industrial/Commercial/Community Property Use  
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

3248186-3248197 Results are based on sample dry weight.  
The C6-C10 fraction is calculated using toluene response factor.  
C6-C10 (F1 minus BTEX) is a calculated parameter. The calculated value is F1 minus BTEX. The calculated parameter is non-accredited. The parameters that are components of the calculation are accredited.  
The C10 - C16, C16 - C34, and C34 - C50 fractions are calculated using the average response factor for n-C10, n-C16, and n-C34.  
Gravimetric Heavy Hydrocarbons are not included in the Total C16-C50 and are only determined if the chromatogram of the C34 - C50 hydrocarbons indicates that hydrocarbons >C50 are present. The chromatogram has returned to baseline by the retention time of nC50.  
Total C6 - C50 results are corrected for BTEX contribution.  
This method complies with the Reference Method for the CWS PHC and is validated for use in the laboratory.  
nC6 and nC10 response factors are within 30% of Toluene response factor.  
nC10, nC16 and nC34 response factors are within 10% of their average.  
C50 response factor is within 70% of nC10 + nC16 + nC34 average.  
Linearity is within 15%.  
Extraction and holding times were met for this sample.  
Fractions 1-4 are quantified without the contribution of PAHs. Under Ontario Regulation 153, results are considered valid without determining the PAH contribution if not requested by the client.

Analysis performed at AGAT Toronto (unless marked by \*)

Certified By:



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AGAT WORK ORDER: 21T834550

PROJECT: 211-1039-00

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CLIENT NAME: WSP CANADA INC.

SAMPLING SITE: ORBY Rail

ATTENTION TO: Vanessa Oetinger

SAMPLED BY: Matthew Roy

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

DATE RECEIVED: 2021-11-24

DATE REPORTED: 2021-12-03

Parameter	Unit	SAMPLE DESCRIPTION:				
		BH21-20 SS3		QAQC-8	BH21-19 SS2	
		SAMPLE TYPE:	Soil	Soil	Soil	
		DATE SAMPLED:		2021-11-23	2021-11-23	2021-11-24
		G / S	RDL	3248222	3248224	3248301
Benzene	µg/g	0.02	0.02	<0.02	<0.02	<0.02
Toluene	µg/g	0.2	0.05	<0.05	<0.05	<0.05
Ethylbenzene	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
Xylenes (Total)	µg/g	0.05	0.05	<0.05	<0.05	<0.05
F1 (C6 - C10)	µg/g	25	5	<5	<5	<5
F1 (C6 to C10) minus BTEX	µg/g	25	5	<5	<5	<5
F2 (C10 to C16)	µg/g	10	10	<10	<10	<10
F3 (C16 to C34)	µg/g	240	50	<50	<50	<50
F4 (C34 to C50)	µg/g	120	50	<50	<50	<50
Gravimetric Heavy Hydrocarbons	µg/g	120	50	NA	NA	NA
Moisture Content	%		0.1	11.4	11.3	9.6
Surrogate	Unit	Acceptable Limits				
Toluene-d8	% Recovery	60-140	94	88	77	
Terphenyl	%	60-140	74	72	75	

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CLIENT NAME: WSP CANADA INC.

ATTENTION TO: Vanessa Oetinger

SAMPLING SITE: ORBY Rail

SAMPLED BY: Matthew Roy

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

DATE RECEIVED: 2021-11-24

DATE REPORTED: 2021-12-03

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 1: Full Depth Background Site Condition Standards - Soil - Residential/Parkland/Institutional/Industrial/Commercial/Community Property Use  
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

3248222-3248301 Results are based on sample dry weight.  
The C6-C10 fraction is calculated using Toluene response factor.  
Xylenes is a calculated parameter. The calculated value is the sum of m&p-Xylene and o-Xylene.  
C6-C10 (F1 minus BTEX) is a calculated parameter. The calculated value is F1 minus BTEX.  
The calculated parameters are non-accredited. The parameters that are components of the calculation are accredited.  
The C10 - C16, C16 - C34, and C34 - C50 fractions are calculated using the average response factor for n-C10, n-C16, and n-C34.  
Gravimetric Heavy Hydrocarbons are not included in the Total C16-C50 and are only determined if the chromatogram of the C34 - C50 hydrocarbons indicates that hydrocarbons >C50 are present.  
The chromatogram has returned to baseline by the retention time of nC50.  
Total C6 - C50 results are corrected for BTEX contribution.  
This method complies with the Reference Method for the CWS PHC and is validated for use in the laboratory.  
nC6 and nC10 response factors are within 30% of Toluene response factor.  
nC10, nC16 and nC34 response factors are within 10% of their average.  
C50 response factor is within 70% of nC10 + nC16 + nC34 average.  
Linearity is within 15%.  
Extraction and holding times were met for this sample.  
Fractions 1-4 are quantified with the contribution of PAHs. Under Ontario Regulation 153, results are considered valid without determining the PAH contribution if not requested by the client.  
Quality Control Data is available upon request.

Analysis performed at AGAT Toronto (unless marked by \*)

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PROJECT: 211-1039-00

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CLIENT NAME: WSP CANADA INC.

SAMPLING SITE: ORBY Rail

ATTENTION TO: Vanessa Oettinger

SAMPLED BY: Matthew Roy

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

DATE RECEIVED: 2021-11-24

DATE REPORTED: 2021-12-03

SAMPLE DESCRIPTION: BH21-18 SS2

SAMPLE TYPE: Soil

DATE SAMPLED: 2021-11-24

Parameter	Unit	G / S	RDL	3248305
Benzene	µg/g	0.02	0.02	<0.02
Toluene	µg/g	0.2	0.05	<0.05
Ethylbenzene	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
Xylenes (Total)	µg/g	0.05	0.05	<0.05
F1 (C6 - C10)	µg/g	25	5	<5
F1 (C6 to C10) minus BTEX	µg/g	25	5	<5
F2 (C10 to C16)	µg/g	10	10	<10
F2 (C10 to C16) minus Naphthalene	µg/g		10	<10
F3 (C16 to C34)	µg/g	240	50	<50
F3 (C16 to C34) minus PAHs	µg/g		50	<50
F4 (C34 to C50)	µg/g	120	50	<50
Gravimetric Heavy Hydrocarbons	µg/g	120	50	NA
Moisture Content	%		0.1	14.2
Surrogate	Unit	Acceptable Limits		
Toluene-d8	% Recovery	60-140	72	
Terphenyl	%	60-140	80	

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PROJECT: 211-1039-00

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CLIENT NAME: WSP CANADA INC.

SAMPLING SITE: ORBY Rail

ATTENTION TO: Vanessa Oetinger

SAMPLED BY: Matthew Roy

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

DATE RECEIVED: 2021-11-24

DATE REPORTED: 2021-12-03

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 1: Full Depth Background Site Condition Standards - Soil - Residential/Parkland/Institutional/Industrial/Commercial/Community Property Use  
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

3248305 Results are based on sample dry weight.  
The C6-C10 fraction is calculated using toluene response factor.  
Xylenes total is a calculated parameter. The calculated value is the sum of m&p-Xylene and o-Xylene.  
C6-C10 (F1 minus BTEX) is a calculated parameter. The calculated value is F1 minus BTEX.  
The calculated parameters are non-accredited. The parameters that are components of the calculation are accredited.  
The C10 - C16, C16 - C34, and C34 - C50 fractions are calculated using the average response factor for n-C10, n-C16, and n-C34.  
Gravimetric Heavy Hydrocarbons are not included in the Total C16-C50 and are only determined if the chromatogram of the C34 - C50 hydrocarbons indicates that hydrocarbons >C50 are present.  
The chromatogram has returned to baseline by the retention time of nC50.  
Total C6 - C50 results are corrected for BTEX and PAH contributions.  
C>10 - C16 (F2- Naphthalene) is a calculated parameter. The calculated value is F2 - Naphthalene.  
C>16 - C34 (F3-PAH) is a calculated parameter. The calculated value is F3-PAH (PAH: sum of Phenanthrene, Benzo(a)anthracene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Benzo(a)pyrene, Fluoranthene, Dibenzo(a,h)anthracene, Indeno(1,2,3-c,d)pyrene and Pyrene).  
This method complies with the Reference Method for the CWS PHC and is validated for use in the laboratory.  
nC10, nC16 and nC34 response factors are within 10% of their average.  
C50 response factor is within 70% of nC10 + nC16 + nC34 average.  
Linearity is within 15%.  
Extraction and holding times were met for this sample.

Analysis performed at AGAT Toronto (unless marked by \*)

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PROJECT: 211-1039-00

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CLIENT NAME: WSP CANADA INC.

SAMPLING SITE: ORBY Rail

ATTENTION TO: Vanessa Oetinger

SAMPLED BY: Matthew Roy

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

DATE RECEIVED: 2021-11-24

DATE REPORTED: 2021-12-03

Parameter	Unit	SAMPLE DESCRIPTION:		BH21-45 SS8	BH21-22 SS5	BH21-21 SS3
		SAMPLE TYPE:		Soil	Soil	Soil
		DATE SAMPLED:		2021-11-22	2021-11-22	2021-11-23
	G / S	RDL	3248186	3248195	3248197	
Dichlorodifluoromethane	µg/g	0.05	0.05	<0.05	<0.05	<0.05
Vinyl Chloride	ug/g	0.02	0.02	<0.02	<0.02	<0.02
Bromomethane	ug/g	0.05	0.05	<0.05	<0.05	<0.05
Trichlorofluoromethane	ug/g	0.25	0.05	<0.05	<0.05	<0.05
Acetone	ug/g	0.5	0.50	<0.50	<0.50	<0.50
Dichloroethylene, 1,1-	ug/g	0.05	0.05	<0.05	<0.05	<0.05
Methylene Chloride	ug/g	0.05	0.05	<0.05	<0.05	<0.05
Dichloroethylene, Trans- 1,2-	ug/g	0.05	0.05	<0.05	<0.05	<0.05
Methyl tert-butyl Ether	ug/g	0.05	0.05	<0.05	<0.05	<0.05
Dichloroethane, 1,1-	ug/g	0.05	0.02	<0.02	<0.02	<0.02
Methyl Ethyl Ketone	ug/g	0.5	0.50	<0.50	<0.50	<0.50
Dichloroethylene, Cis- 1,2-	ug/g	0.05	0.02	<0.02	<0.02	<0.02
Chloroform	ug/g	0.05	0.04	<0.04	<0.04	<0.04
Dichloroethane, 1,2-	ug/g	0.05	0.03	<0.03	<0.03	<0.03
Trichloroethane, 1,1,1-	ug/g	0.05	0.05	<0.05	<0.05	<0.05
Carbon Tetrachloride	ug/g	0.05	0.05	<0.05	<0.05	<0.05
Benzene	ug/g	0.02	0.02	<0.02	<0.02	<0.02
Dichloropropane, 1,2-	ug/g	0.05	0.03	<0.03	<0.03	<0.03
Trichloroethylene	ug/g	0.05	0.03	<0.03	<0.03	<0.03
Bromodichloromethane	ug/g	0.05	0.05	<0.05	<0.05	<0.05
Methyl Isobutyl Ketone	ug/g	0.5	0.50	<0.50	<0.50	<0.50
Trichloroethane, 1,1,2-	ug/g	0.05	0.04	<0.04	<0.04	<0.04
Toluene	ug/g	0.2	0.05	<0.05	<0.05	<0.05
Dibromochloromethane	ug/g	0.05	0.05	<0.05	<0.05	<0.05
Ethylene Dibromide	ug/g	0.05	0.04	<0.04	<0.04	<0.04
Tetrachloroethylene	ug/g	0.05	0.05	<0.05	<0.05	<0.05
Tetrachloroethane, 1,1,1,2-	ug/g	0.05	0.04	<0.04	<0.04	<0.04
Chlorobenzene	ug/g	0.05	0.05	<0.05	<0.05	<0.05
Ethylbenzene	ug/g	0.05	0.05	0.90	<0.05	<0.05
Bromoform	ug/g	0.05	0.05	<0.05	<0.05	<0.05

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## Certificate of Analysis

AGAT WORK ORDER: 21T834550

PROJECT: 211-1039-00

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CLIENT NAME: WSP CANADA INC.

SAMPLING SITE: ORBY Rail

ATTENTION TO: Vanessa Oetinger

SAMPLED BY: Matthew Roy

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

DATE RECEIVED: 2021-11-24

DATE REPORTED: 2021-12-03

Parameter	Unit	SAMPLE DESCRIPTION:				
		BH21-45 SS8		BH21-22 SS5		BH21-21 SS3
		Soil		Soil		Soil
		DATE SAMPLED: 2021-11-22		2021-11-22		2021-11-23
G / S	RDL	3248186	3248195	3248197		
Styrene	ug/g	0.05	0.05	<0.05	<0.05	<0.05
Tetrachloroethane, 1,1,2,2-	ug/g	0.05	0.05	<0.05	<0.05	<0.05
Dichlorobenzene, 1,3-	ug/g	0.05	0.05	<0.05	<0.05	<0.05
Dichlorobenzene, 1,4-	ug/g	0.05	0.05	<0.05	<0.05	<0.05
Dichlorobenzene, 1,2-	ug/g	0.05	0.05	<0.05	<0.05	<0.05
Xylenes (Total)	ug/g	0.05	0.05	5.55	<0.05	<0.05
1,3-Dichloropropene (Cis + Trans)	µg/g	0.05	0.04	<0.04	<0.04	<0.04
Hexane, n-	µg/g	0.05	0.05	<0.05	<0.05	<0.05
Surrogate	Unit	Acceptable Limits				
Toluene-d8	% Recovery	50-140	105	98	90	
4-Bromofluorobenzene	% Recovery	50-140	81	76	99	

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 1: Full Depth Background Site Condition Standards - Soil - Residential/Parkland/Institutional/Industrial/Commercial/Community Property Use  
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

3248186-3248197 The sample was analyzed using the high level technique. The sample was extracted using methanol, a small amount of the methanol extract was diluted in water and the purge & trap GC/MS analysis was performed. Results are based on the dry weight of the soil.

Xylenes total is a calculated parameter. The calculated value is the sum of m&p-Xylene + o-Xylene.

1,3-Dichloropropene total is a calculated parameter. The calculated value is the sum of Cis-1,3-Dichloropropene and Trans-1,3-Dichloropropene.

Analysis performed at AGAT Toronto (unless marked by \*)

Certified By:



## Exceedance Summary

AGAT WORK ORDER: 21T834550

PROJECT: 211-1039-00

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

CLIENT NAME: WSP CANADA INC.

ATTENTION TO: Vanessa Oetinger

SAMPLEID	SAMPLE TITLE	GUIDELINE	ANALYSIS PACKAGE	PARAMETER	UNIT	GUIDEVALUE	RESULT
3248183	BH21-45 SS1	ON T1 S RPI/ICC	O. Reg. 153(511) - PAHs (Soil)	Benz(a)anthracene	µg/g	0.36	0.39
3248183	BH21-45 SS1	ON T1 S RPI/ICC	O. Reg. 153(511) - PAHs (Soil)	Benzo(a)pyrene	µg/g	0.3	0.33
3248183	BH21-45 SS1	ON T1 S RPI/ICC	O. Reg. 153(511) - PAHs (Soil)	Fluoranthene	µg/g	0.56	0.57
3248186	BH21-45 SS8	ON T1 S RPI/ICC	O. Reg. 153(511) - PHCs F1 - F4 (-BTEX) (Soil)	Ethylbenzene	µg/g	0.05	0.90
3248186	BH21-45 SS8	ON T1 S RPI/ICC	O. Reg. 153(511) - PHCs F1 - F4 (-BTEX) (Soil)	F1 (C6 - C10)	µg/g	25	57
3248186	BH21-45 SS8	ON T1 S RPI/ICC	O. Reg. 153(511) - PHCs F1 - F4 (-BTEX) (Soil)	F1 (C6 to C10) minus BTEX	µg/g	25	51
3248186	BH21-45 SS8	ON T1 S RPI/ICC	O. Reg. 153(511) - VOCs (Soil)	Ethylbenzene	ug/g	0.05	0.90
3248186	BH21-45 SS8	ON T1 S RPI/ICC	O. Reg. 153(511) - VOCs (Soil)	Xylenes (Total)	ug/g	0.05	5.55
3248217	BH21-20 SS1	ON T1 S RPI/ICC	O. Reg. 153(511) - Metals & Inorganics (Soil)	Nickel	µg/g	82	142

## Quality Assurance

CLIENT NAME: WSP CANADA INC.  
 PROJECT: 211-1039-00  
 SAMPLING SITE: ORBY Rail

AGAT WORK ORDER: 21T834550  
 ATTENTION TO: Vanessa Oetinger  
 SAMPLED BY: Matthew Roy

Soil Analysis															
RPT Date: Dec 03, 2021			DUPLICATE			Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD		Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
O. Reg. 153(511) - Metals & Inorganics (Soil)															
Antimony	3260700		<0.8	<0.8	NA	< 0.8	133%	70%	130%	110%	80%	120%	71%	70%	130%
Arsenic	3260700		4	4	NA	< 1	114%	70%	130%	107%	80%	120%	105%	70%	130%
Barium	3260700		128	126	1.6%	< 2.0	108%	70%	130%	105%	80%	120%	103%	70%	130%
Beryllium	3260700		0.7	0.7	NA	< 0.4	79%	70%	130%	100%	80%	120%	104%	70%	130%
Boron	3260700		9	9	NA	< 5	116%	70%	130%	101%	80%	120%	98%	70%	130%
Boron (Hot Water Soluble)	3259944		0.20	0.20	NA	< 0.10	99%	60%	140%	108%	70%	130%	114%	60%	140%
Cadmium	3260700		<0.5	<0.5	NA	< 0.5	91%	70%	130%	105%	80%	120%	108%	70%	130%
Chromium	3260700		31	32	3.2%	< 5	105%	70%	130%	106%	80%	120%	105%	70%	130%
Cobalt	3260700		11.3	11.4	0.9%	< 0.5	101%	70%	130%	107%	80%	120%	101%	70%	130%
Copper	3260700		20.5	20.7	1.0%	< 1.0	94%	70%	130%	106%	80%	120%	95%	70%	130%
Lead	3260700		15	14	6.9%	< 1	106%	70%	130%	110%	80%	120%	104%	70%	130%
Molybdenum	3260700		<0.5	<0.5	NA	< 0.5	103%	70%	130%	110%	80%	120%	106%	70%	130%
Nickel	3260700		24	23	4.3%	< 1	93%	70%	130%	101%	80%	120%	90%	70%	130%
Selenium	3260700		<0.8	<0.8	NA	< 0.8	98%	70%	130%	102%	80%	120%	102%	70%	130%
Silver	3260700		<0.5	<0.5	NA	< 0.5	102%	70%	130%	104%	80%	120%	97%	70%	130%
Thallium	3260700		<0.5	<0.5	NA	< 0.5	103%	70%	130%	104%	80%	120%	99%	70%	130%
Uranium	3260700		0.79	0.76	NA	< 0.50	113%	70%	130%	109%	80%	120%	106%	70%	130%
Vanadium	3260700		43.2	43.8	1.4%	< 0.4	107%	70%	130%	101%	80%	120%	105%	70%	130%
Zinc	3260700		75	71	5.5%	< 5	103%	70%	130%	105%	80%	120%	99%	70%	130%
Chromium, Hexavalent	3248684		<0.2	<0.2	NA	< 0.2	107%	70%	130%	90%	80%	120%	78%	70%	130%
Cyanide, Free	3248197	3248197	<0.040	<0.040	NA	< 0.040	97%	70%	130%	99%	80%	120%	95%	70%	130%
Mercury	3260700		<0.10	<0.10	NA	< 0.10	113%	70%	130%	107%	80%	120%	107%	70%	130%
Electrical Conductivity (2:1)	3255466		1.64	1.66	1.2%	< 0.005	107%	80%	120%						
Sodium Adsorption Ratio (2:1) (Calc.)	3255466		3.72	3.61	3.0%	NA									
pH, 2:1 CaCl2 Extraction	3259628		7.84	7.81	0.4%	NA	101%	80%	120%						

Comments: NA signifies Not Applicable.

pH duplicates QA acceptance criteria was met relative as stated in Table 5-15 of Analytical Protocol document.

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

More than 90% of the elements met acceptance limits and overall data quality is acceptable for use. For a multi-element scan up to 10% of analytes may exceed the quoted limits by up to 10% absolute.

Certified By: \_\_\_\_\_



*Nivine Basily*



## Quality Assurance

CLIENT NAME: WSP CANADA INC.  
 PROJECT: 211-1039-00  
 SAMPLING SITE: ORBY Rail

AGAT WORK ORDER: 21T834550  
 ATTENTION TO: Vanessa Oetinger  
 SAMPLED BY: Matthew Roy

### Trace Organics Analysis

RPT Date: Dec 03, 2021			DUPLICATE				Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE		MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Measured Value		Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper

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

Naphthalene	3230140	< 0.05	< 0.05	NA	< 0.05	105%	50%	140%	115%	50%	140%	101%	50%	140%
Acenaphthylene	3230140	< 0.05	< 0.05	NA	< 0.05	89%	50%	140%	74%	50%	140%	82%	50%	140%
Acenaphthene	3230140	< 0.05	< 0.05	NA	< 0.05	85%	50%	140%	93%	50%	140%	83%	50%	140%
Fluorene	3230140	< 0.05	< 0.05	NA	< 0.05	93%	50%	140%	93%	50%	140%	94%	50%	140%
Phenanthrene	3230140	< 0.05	< 0.05	NA	< 0.05	92%	50%	140%	92%	50%	140%	98%	50%	140%
Anthracene	3230140	< 0.05	< 0.05	NA	< 0.05	67%	50%	140%	64%	50%	140%	85%	50%	140%
Fluoranthene	3230140	< 0.05	< 0.05	NA	< 0.05	87%	50%	140%	97%	50%	140%	105%	50%	140%
Pyrene	3230140	< 0.05	< 0.05	NA	< 0.05	85%	50%	140%	85%	50%	140%	78%	50%	140%
Benz(a)anthracene	3230140	< 0.05	< 0.05	NA	< 0.05	93%	50%	140%	96%	50%	140%	85%	50%	140%
Chrysene	3230140	< 0.05	< 0.05	NA	< 0.05	92%	50%	140%	105%	50%	140%	93%	50%	140%
Benzo(b)fluoranthene	3230140	< 0.05	< 0.05	NA	< 0.05	105%	50%	140%	78%	50%	140%	92%	50%	140%
Benzo(k)fluoranthene	3230140	< 0.05	< 0.05	NA	< 0.05	78%	50%	140%	88%	50%	140%	105%	50%	140%
Benzo(a)pyrene	3230140	< 0.05	< 0.05	NA	< 0.05	88%	50%	140%	96%	50%	140%	78%	50%	140%
Indeno(1,2,3-cd)pyrene	3230140	< 0.05	< 0.05	NA	< 0.05	75%	50%	140%	92%	50%	140%	88%	50%	140%
Dibenz(a,h)anthracene	3230140	< 0.05	< 0.05	NA	< 0.05	96%	50%	140%	105%	50%	140%	96%	50%	140%
Benzo(g,h,i)perylene	3230140	< 0.05	< 0.05	NA	< 0.05	93%	50%	140%	80%	50%	140%	93%	50%	140%

O. Reg. 153(511) - OC Pesticides + PCBs (Soil)

Gamma-Hexachlorocyclohexane	3254478	< 0.005	< 0.005	NA	< 0.005	102%	50%	140%	86%	50%	140%	89%	50%	140%
Heptachlor	3254478	< 0.005	< 0.005	NA	< 0.005	88%	50%	140%	89%	50%	140%	80%	50%	140%
Aldrin	3254478	< 0.005	< 0.005	NA	< 0.005	108%	50%	140%	88%	50%	140%	104%	50%	140%
Heptachlor Epoxide	3254478	< 0.005	< 0.005	NA	< 0.005	109%	50%	140%	87%	50%	140%	106%	50%	140%
Endosulfan I	3254478	< 0.005	< 0.005	NA	< 0.005	112%	50%	140%	85%	50%	140%	102%	50%	140%
Endosulfan II	3254478	< 0.005	< 0.005	NA	< 0.005	106%	50%	140%	93%	50%	140%	87%	50%	140%
Alpha-Chlordane	3254478	< 0.005	< 0.005	NA	< 0.005	108%	50%	140%	86%	50%	140%	102%	50%	140%
gamma-Chlordane	3254478	< 0.005	< 0.005	NA	< 0.005	105%	50%	140%	85%	50%	140%	106%	50%	140%
op'-DDD	3254478	< 0.005	< 0.005	NA	< 0.005	105%	50%	140%	105%	50%	140%	102%	50%	140%
pp'-DDD	3254478	< 0.005	< 0.005	NA	< 0.005	106%	50%	140%	96%	50%	140%	103%	50%	140%
op'-DDE	3254478	< 0.005	< 0.005	NA	< 0.005	101%	50%	140%	95%	50%	140%	96%	50%	140%
pp'-DDE	3254478	< 0.005	< 0.005	NA	< 0.005	102%	50%	140%	89%	50%	140%	102%	50%	140%
op'-DDT	3254478	< 0.005	< 0.005	NA	< 0.005	104%	50%	140%	86%	50%	140%	103%	50%	140%
pp'-DDT	3254478	< 0.005	< 0.005	NA	< 0.005	95%	50%	140%	106%	50%	140%	98%	50%	140%
Dieldrin	3254478	< 0.005	< 0.005	NA	< 0.005	107%	50%	140%	86%	50%	140%	102%	50%	140%
Endrin	3254478	< 0.005	< 0.005	NA	< 0.005	103%	50%	140%	105%	50%	140%	106%	50%	140%
Methoxychlor	3254478	< 0.005	< 0.005	NA	< 0.005	89%	50%	140%	86%	50%	140%	102%	50%	140%
Hexachlorobenzene	3254478	< 0.005	< 0.005	NA	< 0.005	104%	50%	140%	86%	50%	140%	105%	50%	140%
Hexachlorobutadiene	3254478	< 0.01	< 0.01	NA	< 0.01	84%	50%	140%	82%	50%	140%	106%	50%	140%
Hexachloroethane	3254478	< 0.01	< 0.01	NA	< 0.01	104%	50%	140%	80%	50%	140%	102%	50%	140%
Aroclor 1242	3254478	< 0.10	< 0.10	NA	< 0.10	106%	50%	140%	NA	50%	140%	NA	50%	140%

## Quality Assurance

CLIENT NAME: WSP CANADA INC.  
 PROJECT: 211-1039-00  
 SAMPLING SITE: ORBY Rail

AGAT WORK ORDER: 21T834550  
 ATTENTION TO: Vanessa Oetinger  
 SAMPLED BY: Matthew Roy

### Trace Organics Analysis (Continued)

RPT Date: Dec 03, 2021			DUPLICATE			Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD		Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
Aroclor 1248	3254478		< 0.10	< 0.10	NA	< 0.10	102%	50%	140%	NA	50%	140%	NA	50%	140%
Aroclor 1254	3254478		< 0.10	< 0.10	NA	< 0.10	98%	50%	140%	NA	50%	140%	NA	50%	140%
Aroclor 1260	3254478		< 0.10	< 0.10	NA	< 0.10	104%	50%	140%	NA	50%	140%	NA	50%	140%
Polychlorinated Biphenyls	3254478		< 0.10	< 0.10	NA	< 0.10	103%	50%	140%	90%	50%	140%	89%	50%	140%
O. Reg. 153(511) - PHCs F1 - F4 (-BTEX) (Soil)															
F1 (C6 - C10)	3248305	3248305	< 5	< 5	NA	< 5	107%	60%	140%	100%	60%	140%	109%	60%	140%
F2 (C10 to C16)	3274561		< 10	< 10	NA	< 10	110%	60%	140%	99%	60%	140%	79%	60%	140%
F3 (C16 to C34)	3274561		< 50	< 50	NA	< 50	93%	60%	140%	95%	60%	140%	79%	60%	140%
F4 (C34 to C50)	3274561		< 50	< 50	NA	< 50	93%	60%	140%	97%	60%	140%	79%	60%	140%
O. Reg. 153(511) - VOCs (Soil)															
Dichlorodifluoromethane	3257574		< 0.05	< 0.05	NA	< 0.05	80%	50%	140%	69%	50%	140%	71%	50%	140%
Vinyl Chloride	3257574		< 0.02	< 0.02	NA	< 0.02	98%	50%	140%	81%	50%	140%	73%	50%	140%
Bromomethane	3257574		< 0.05	< 0.05	NA	< 0.05	106%	50%	140%	106%	50%	140%	97%	50%	140%
Trichlorofluoromethane	3257574		< 0.05	< 0.05	NA	< 0.05	101%	50%	140%	100%	50%	140%	105%	50%	140%
Acetone	3257574		< 0.50	< 0.50	NA	< 0.50	110%	50%	140%	103%	50%	140%	99%	50%	140%
Dichloroethylene, 1,1-	3257574		< 0.05	< 0.05	NA	< 0.05	89%	50%	140%	75%	60%	130%	85%	50%	140%
Methylene Chloride	3257574		< 0.05	< 0.05	NA	< 0.05	94%	50%	140%	107%	60%	130%	106%	50%	140%
Dichloroethylene, Trans- 1,2-	3257574		< 0.05	< 0.05	NA	< 0.05	97%	50%	140%	77%	60%	130%	97%	50%	140%
Methyl tert-butyl Ether	3257574		< 0.05	< 0.05	NA	< 0.05	89%	50%	140%	92%	60%	130%	77%	50%	140%
Dichloroethane, 1,1-	3257574		< 0.02	< 0.02	NA	< 0.02	105%	50%	140%	100%	60%	130%	114%	50%	140%
Methyl Ethyl Ketone	3257574		< 0.50	< 0.50	NA	< 0.50	107%	50%	140%	102%	50%	140%	96%	50%	140%
Dichloroethylene, Cis- 1,2-	3257574		< 0.02	< 0.02	NA	< 0.02	113%	50%	140%	83%	60%	130%	117%	50%	140%
Chloroform	3257574		< 0.04	< 0.04	NA	< 0.04	117%	50%	140%	93%	60%	130%	117%	50%	140%
Dichloroethane, 1,2-	3257574		< 0.03	< 0.03	NA	< 0.03	112%	50%	140%	119%	60%	130%	103%	50%	140%
Trichloroethane, 1,1,1-	3257574		< 0.05	< 0.05	NA	< 0.05	77%	50%	140%	98%	60%	130%	79%	50%	140%
Carbon Tetrachloride	3257574		< 0.05	< 0.05	NA	< 0.05	74%	50%	140%	76%	60%	130%	79%	50%	140%
Benzene	3257574		< 0.02	< 0.02	NA	< 0.02	104%	50%	140%	75%	60%	130%	107%	50%	140%
Dichloropropane, 1,2-	3257574		< 0.03	< 0.03	NA	< 0.03	87%	50%	140%	98%	60%	130%	95%	50%	140%
Trichloroethylene	3257574		< 0.03	< 0.03	NA	< 0.03	87%	50%	140%	110%	60%	130%	87%	50%	140%
Bromodichloromethane	3257574		< 0.05	< 0.05	NA	< 0.05	100%	50%	140%	76%	60%	130%	101%	50%	140%
Methyl Isobutyl Ketone	3257574		< 0.50	< 0.50	NA	< 0.50	99%	50%	140%	104%	50%	140%	101%	50%	140%
Trichloroethane, 1,1,2-	3257574		< 0.04	< 0.04	NA	< 0.04	93%	50%	140%	85%	60%	130%	105%	50%	140%
Toluene	3257574		< 0.05	< 0.05	NA	< 0.05	82%	50%	140%	86%	60%	130%	108%	50%	140%
Dibromochloromethane	3257574		< 0.05	< 0.05	NA	< 0.05	86%	50%	140%	100%	60%	130%	116%	50%	140%
Ethylene Dibromide	3257574		< 0.04	< 0.04	NA	< 0.04	76%	50%	140%	92%	60%	130%	102%	50%	140%
Tetrachloroethylene	3257574		< 0.05	< 0.05	NA	< 0.05	100%	50%	140%	80%	60%	130%	104%	50%	140%
Tetrachloroethane, 1,1,1,2-	3257574		< 0.04	< 0.04	NA	< 0.04	115%	50%	140%	98%	60%	130%	100%	50%	140%
Chlorobenzene	3257574		< 0.05	< 0.05	NA	< 0.05	118%	50%	140%	84%	60%	130%	106%	50%	140%
Ethylbenzene	3257574		< 0.05	< 0.05	NA	< 0.05	72%	50%	140%	87%	60%	130%	80%	50%	140%

## Quality Assurance

 CLIENT NAME: WSP CANADA INC.  
 PROJECT: 211-1039-00  
 SAMPLING SITE: ORBY Rail


 AGAT WORK ORDER: 21T834550  
 ATTENTION TO: Vanessa Oetinger  
 SAMPLED BY: Matthew Roy

### Trace Organics Analysis (Continued)

RPT Date: Dec 03, 2021			DUPLICATE				Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Measured Value		Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits		
								Lower	Upper		Lower	Upper		Lower	Upper	
Bromoform	3257574		< 0.05	< 0.05	NA	< 0.05	101%	50%	140%	108%	60%	130%	113%	50%	140%	
Styrene	3257574		< 0.05	< 0.05	NA	< 0.05	81%	50%	140%	77%	60%	130%	74%	50%	140%	
Tetrachloroethane, 1,1,2,2-	3257574		< 0.05	< 0.05	NA	< 0.05	116%	50%	140%	114%	60%	130%	94%	50%	140%	
Dichlorobenzene, 1,3-	3257574		< 0.05	< 0.05	NA	< 0.05	83%	50%	140%	102%	60%	130%	82%	50%	140%	
Dichlorobenzene, 1,4-	3257574		< 0.05	< 0.05	NA	< 0.05	92%	50%	140%	94%	60%	130%	98%	50%	140%	
Dichlorobenzene, 1,2-	3257574		< 0.05	< 0.05	NA	< 0.05	91%	50%	140%	101%	60%	130%	74%	50%	140%	
Hexane, n-	3257574		< 0.05	< 0.05	NA	< 0.05	103%	50%	140%	72%	60%	130%	71%	50%	140%	
O. Reg. 153(511) - PHCs F1 - F4 (with PAHs) (Soil)																
Benzene	3248305	3248305	<0.02	<0.02	NA	< 0.02	112%	60%	140%	110%	60%	140%	82%	60%	140%	
Toluene	3248305	3248305	<0.05	<0.05	NA	< 0.05	95%	60%	140%	94%	60%	140%	96%	60%	140%	
Ethylbenzene	3248305	3248305	<0.05	<0.05	NA	< 0.05	85%	60%	140%	85%	60%	140%	90%	60%	140%	
m & p-Xylene	3248305	3248305	<0.05	<0.05	NA	< 0.05	90%	60%	140%	115%	60%	140%	96%	60%	140%	
o-Xylene	3248305	3248305	<0.05	<0.05	NA	< 0.05	97%	60%	140%	82%	60%	140%	97%	60%	140%	
F1 (C6 - C10)	3248305	3248305	<5	<5	NA	< 5	107%	60%	140%	100%	60%	140%	109%	60%	140%	

Comments: When the average of the sample and duplicate results is less than 5x the RDL, the Relative Percent Difference (RPD) will be indicated as Not Applicable (NA).

Certified By: \_\_\_\_\_





## QC Exceedance

CLIENT NAME: WSP CANADA INC.

AGAT WORK ORDER: 21T834550

PROJECT: 211-1039-00

ATTENTION TO: Vanessa Oetinger

RPT Date: Dec 03, 2021		REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Sample Id	Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
			Lower	Upper		Lower	Upper		Lower	Upper

O. Reg. 153(511) - Metals &amp; Inorganics (Soil)

Antimony	133%	70%	130%	110%	80%	120%	71%	70%	130%
----------	------	-----	------	------	-----	------	-----	-----	------

Comments: NA signifies Not Applicable.

pH duplicates QA acceptance criteria was met relative as stated in Table 5-15 of Analytical Protocol document.

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

More than 90% of the elements met acceptance limits and overall data quality is acceptable for use. For a multi-element scan up to 10% of analytes may exceed the quoted limits by up to 10% absolute.



## Method Summary

CLIENT NAME: WSP CANADA INC.  
 PROJECT: 211-1039-00  
 SAMPLING SITE: ORBY Rail

AGAT WORK ORDER: 21T834550  
 ATTENTION TO: Vanessa Oetinger  
 SAMPLED BY: Matthew Roy

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Soil Analysis			
Antimony	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Arsenic	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Barium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Beryllium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Boron	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Boron (Hot Water Soluble)	MET-93-6104	modified from EPA 6010D and MSA PART 3, CH 21	ICP/OES
Cadmium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Chromium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Cobalt	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Copper	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Lead	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Molybdenum	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Nickel	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Selenium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Silver	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Thallium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Uranium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Vanadium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Zinc	MET 93 -6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Chromium, Hexavalent	INOR-93-6068	modified from EPA 3060 and EPA 7196	SPECTROPHOTOMETER
Cyanide, Free	INOR-93-6052	modified from ON MOECC E3015, SM 4500-CN- I, G-387	TECHNICON AUTO ANALYZER
Mercury	MET-93-6103	modified from EPA 7471B and SM 3112 B	ICP-MS
Electrical Conductivity (2:1)	INOR-93-6036	modified from MSA PART 3, CH 14 and SM 2510 B	EC METER
Sodium Adsorption Ratio (2:1) (Calc.)	INOR-93-6007	modified from EPA 6010D & Analytical Protocol	ICP/OES
pH, 2:1 CaCl <sub>2</sub> Extraction	INOR-93-6031	modified from EPA 9045D and MCKEAGUE 3.11	PH METER

## Method Summary

CLIENT NAME: WSP CANADA INC.

AGAT WORK ORDER: 21T834550

PROJECT: 211-1039-00

ATTENTION TO: Vanessa Oetinger

SAMPLING SITE: ORBY Rail

SAMPLED BY: Matthew Roy

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Trace Organics Analysis			
Gamma-Hexachlorocyclohexane	ORG-91-5113	modified from EPA SW-846 3570, 3620C & 8081B	GC/ECD
Heptachlor	ORG-91-5113	modified from EPA SW-846 3570, 3620C & 8081B	GC/ECD
Aldrin	ORG-91-5113	modified from EPA SW-846 3570, 3620C & 8081B	GC/ECD
Heptachlor Epoxide	ORG-91-5113	modified from EPA SW-846 3570, 3620C & 8081B	GC/ECD
Endosulfan I	ORG-91-5113	modified from EPA SW-846 3570, 3620C & 8081B	GC/ECD
Endosulfan II	ORG-91-5113	modified from EPA SW-846 3570, 3620C & 8081B	GC/ECD
Endosulfan	ORG-91-5113	modified from EPA SW-846 3570, 3620C & 8081B	GC/ECD
Alpha-Chlordane	ORG-91-5113	modified from EPA SW-846 3570, 3620C & 8081B	GC/ECD
gamma-Chlordane	ORG-91-5113	modified from EPA SW-846 3570, 3620C & 8081B	GC/ECD
Chlordane	ORG-91-5113	modified from EPA SW-846 3570, 3620C & 8081B	CALCULATION
op'-DDD	ORG-91-5113	modified from EPA SW-846 3570, 3620C & 8081B	GC/ECD
pp'-DDD	ORG-91-5113	modified from EPA SW-846 3570, 3620C & 8081B	GC/ECD
DDD	ORG-91-5113	modified from EPA SW-846 3570, 3620C & 8081B	CALCULATION
op'-DDE	ORG-91-5113	modified from EPA SW-846 3570, 3620C & 8081B	GC/ECD
pp'-DDE	ORG-91-5113	modified from EPA SW-846 3570, 3620C & 8081B	GC/ECD
DDE	ORG-91-5113	modified from EPA SW-846 3570, 3620C & 8081B	GC/ECD
op'-DDT	ORG-91-5113	modified from EPA SW-846 3570, 3620C & 8081B	GC/ECD
pp'-DDT	ORG-91-5113	modified from EPA SW-846 3570, 3620C & 8081B	GC/ECD
DDT	ORG-91-5113	modified from EPA SW-846 3570, 3620C & 8081B	CALCULATION
Dieldrin	ORG-91-5113	modified from EPA SW-846 3570, 3620C & 8081B	GC/ECD
Endrin	ORG-91-5113	modified from EPA SW-846 3570, 3620C & 8081B	GC/ECD
Methoxychlor	ORG-91-5113	modified from EPA SW-846 3570, 3620C & 8081B	GC/ECD
Hexachlorobenzene	ORG-91-5113	modified from EPA SW-846 3570, 3620C & 8081B	GC/ECD
Hexachlorobutadiene	ORG-91-5113	modified from EPA SW-846 3570, 3620C & 8081B	GC/ECD
Hexachloroethane	ORG-91-5113	modified from EPA SW-846 3570, 3620C & 8081B	GC/ECD
Aroclor 1242	ORG-91-5113	modified from EPA SW-846 3570, 3620C & 8082A	GC/ECD
Aroclor 1248	ORG-91-5113	modified from EPA SW-846 3570, 3620C & 8082A	GC/ECD



## Method Summary

CLIENT NAME: WSP CANADA INC.

AGAT WORK ORDER: 21T834550

PROJECT: 211-1039-00

ATTENTION TO: Vanessa Oetinger

SAMPLING SITE: ORBY Rail

SAMPLED BY: Matthew Roy

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Aroclor 1254	ORG-91-5113	modified from EPA SW-846 3570, 3620C & 8082A	GC/ECD
Aroclor 1260	ORG-91-5113	modified from EPA SW-846 3570, 3620C & 8082A	GC/ECD
Polychlorinated Biphenyls	ORG-91-5113	modified from EPA SW-846 3570, 3620C & 8082A	GC/ECD
TCMX	ORG-91-5113	modified from EPA SW-846 3541, 3620,8081	GC/ECD
Decachlorobiphenyl	ORG-91-5113	modified from EPA SW-846 3541, 3620,8081	GC/ECD
Moisture Content	VOL-91-5009	CCME Tier 1 Method	BALANCE
wet weight OC/PCB	ORG-91-5113		BALANCE
Naphthalene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Acenaphthylene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Acenaphthene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Fluorene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Phenanthrene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Anthracene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Fluoranthene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Pyrene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Benz(a)anthracene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Chrysene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Benzo(b)fluoranthene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Benzo(k)fluoranthene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Benzo(a)pyrene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Indeno(1,2,3-cd)pyrene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Dibenz(a,h)anthracene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Benzo(g,h,i)perylene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
1 and 2 Methylnaphthalene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Naphthalene-d8	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Acridine-d9	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Terphenyl-d14	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
F1 (C6 - C10)	VOL-91-5009	modified from CCME Tier 1 Method	(P&T)GC/FID
F1 (C6 to C10) minus BTEX	VOL-91-5009	modified from CCME Tier 1 Method	(P&T)GC/FID
Toluene-d8	VOL-91-5009	modified from EPA SW-846 5030C & 8260D	(P&T)GC/MS



## Method Summary

CLIENT NAME: WSP CANADA INC.  
PROJECT: 211-1039-00  
SAMPLING SITE: ORBY Rail

AGAT WORK ORDER: 21T834550  
ATTENTION TO: Vanessa Oetinger  
SAMPLED BY: Matthew Roy

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
F2 (C10 to C16)	VOL-91-5009	modified from CCME Tier 1 Method	GC/FID
F3 (C16 to C34)	VOL-91-5009	modified from CCME Tier 1 Method	GC/FID
F4 (C34 to C50)	VOL-91-5009	modified from CCME Tier 1 Method	GC/FID
Gravimetric Heavy Hydrocarbons	VOL-91-5009	modified from CCME Tier 1 Method	BALANCE
Terphenyl	VOL-91-5009	modified from CCME Tier 1 Method	GC/FID
Benzene	VOL-91-5009	modified from CCME Tier 1 Method	(P&T)GC/MS
Toluene	VOL-91-5009	modified from CCME Tier 1 Method	(P&T)GC/MS
Ethylbenzene	VOL-91-5009	modified from CCME Tier 1 Method	(P&T)GC/MS
m & p-Xylene	VOL-91-5009	modified from CCME Tier 1 Method	(P&T)GC/MS
o-Xylene	VOL-91-5009	modified from CCME Tier 1 Method	(P&T)GC/MS
Xylenes (Total)	VOL-91-5009	modified from CCME Tier 1 Method	(P&T)GC/MS
F1 (C6 to C10) minus BTEX	VOL-91-5009	modified from CCME Tier 1 Method	P&T GC/FID
F2 (C10 to C16) minus Naphthalene	VOL-91-5009	modified from CCME Tier 1 Method	GC/FID
F3 (C16 to C34)	VOL-91-5009	modified from CCME Tier 1 Method	GC/FID
F3 (C16 to C34) minus PAHs	VOL-91-5009	modified from CCME Tier 1 Method	GC/FID
Dichlorodifluoromethane	VOL-91-5002	EPA SW-846 5035 & 8260	(P&T)GC/MS
Vinyl Chloride	VOL-91-5002	EPA SW-846 5035 & 8260	(P&T)GC/MS
Bromomethane	VOL-91-5002	EPA SW-846 5035 & 8260	(P&T)GC/MS
Trichlorofluoromethane	VOL-91-5002	EPA SW-846 5035 & 8260	(P&T)GC/MS
Acetone	VOL-91-5002	EPA SW-846 5035 & 8260	(P&T)GC/MS
Dichloroethylene, 1,1-	VOL-91-5002	EPA SW-846 5035 & 8260	(P&T)GC/MS
Methylene Chloride	VOL-91-5002	EPA SW-846 5035 & 8260	(P&T)GC/MS
Dichloroethylene, Trans- 1,2-	VOL-91-5002	EPA SW-846 5035 & 8260	(P&T)GC/MS
Methyl tert-butyl Ether	VOL-91-5002	EPA SW-846 5035 & 8260	(P&T)GC/MS
Dichloroethane, 1,1-	VOL-91-5002	EPA SW-846 5035 & 8260	(P&T)GC/MS
Methyl Ethyl Ketone	VOL-91-5002	EPA SW-846 5035 & 8260	(P&T)GC/MS
Dichloroethylene, Cis- 1,2-	VOL-91-5002	EPA SW-846 5035 & 8260	(P&T)GC/MS
Chloroform	VOL-91-5002	EPA SW-846 5035 & 8260	(P&T)GC/MS
Dichloroethane, 1,2-	VOL-91-5002	EPA SW-846 5035 & 8260	(P&T)GC/MS
Trichloroethane, 1,1,1-	VOL-91-5002	EPA SW-846 5035 & 8260	(P&T)GC/MS
Carbon Tetrachloride	VOL-91-5002	EPA SW-846 5035 & 8260	(P&T)GC/MS
Benzene	VOL-91-5002	modified from EPA 5035C and EPA 8260D	(P&T)GC/MS
Dichloropropane, 1,2-	VOL-91-5002	EPA SW-846 5035 & 8260	(P&T)GC/MS
Trichloroethylene	VOL-91-5002	EPA SW-846 5035 & 8260	(P&T)GC/MS
Bromodichloromethane	VOL-91-5002	EPA SW-846 5035 & 8260	(P&T)GC/MS
Methyl Isobutyl Ketone	VOL-91-5002	EPA SW-846 5035 & 8260	(P&T)GC/MS
Trichloroethane, 1,1,2-	VOL-91-5002	EPA SW-846 5035 & 8260	(P&T)GC/MS
Toluene	VOL-91-5002	EPA SW-846 5035 & 8260	(P&T)GC/MS
Dibromochloromethane	VOL-91-5002	EPA SW-846 5035 & 8260	(P&T)GC/MS
Ethylene Dibromide	VOL-91-5002	EPA SW-846 5035 & 8260	(P&T)GC/MS
Tetrachloroethylene	VOL-91-5002	EPA SW-846 5035 & 8260	(P&T)GC/MS
Tetrachloroethane, 1,1,1,2-	VOL-91-5002	EPA SW-846 5035 & 8260	(P&T)GC/MS
Chlorobenzene	VOL-91-5002	EPA SW-846 5035 & 8260	(P&T)GC/MS
Ethylbenzene	VOL-91-5002	EPA SW-846 5035 & 8260	(P&T)GC/MS
Bromoform	VOL-91-5002	EPA SW-846 5035 & 8260	(P&T)GC/MS
Styrene	VOL-91-5002	EPA SW-846 5035 & 8260	(P&T)GC/MS
Tetrachloroethane, 1,1,2,2-	VOL-91-5002	EPA SW-846 5035 & 8260	(P&T)GC/MS
Dichlorobenzene, 1,3-	VOL-91-5002	EPA SW-846 5035 & 8260	(P&T)GC/MS
Dichlorobenzene, 1,4-	VOL-91-5002	EPA SW-846 5035 & 8260	(P&T)GC/MS

## Method Summary

CLIENT NAME: WSP CANADA INC.

AGAT WORK ORDER: 21T834550

PROJECT: 211-1039-00

ATTENTION TO: Vanessa Oetinger

SAMPLING SITE: ORBY Rail

SAMPLED BY: Matthew Roy

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Dichlorobenzene, 1,2-	VOL-91-5002	EPA SW-846 5035 & 8260	(P&T)GC/MS
Xylenes (Total)	VOL-91-5002	EPA SW-846 5035 & 8260	(P&T)GC/MS
1,3-Dichloropropene (Cis + Trans)	VOL-91-5002	EPA SW-846 5035 & 8260	(P&T)GC/MS
Hexane, n-	VOL-91-5002	EPA SW-846 5035 & 8260	(P&T)GC/MS
Toluene-d8	VOL-91-5002	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
4-Bromofluorobenzene	VOL-91-5002	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS





# AGAT Laboratories

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

## Chain of Custody Record

If this is a Drinking Water sample, please use Drinking Water Chain of Custody Form (potable water consumed by humans)

### Report Information:

Company: WSP Inc.  
Contact: Vanessa Oettinger  
Address: 2 International Blvd, Etobicoke  
Phone: \_\_\_\_\_ Fax: \_\_\_\_\_  
Reports to be sent to:  
1. Email: vanessa.oettinger@wsp.com  
2. Email: matt.roy@wsp.com

### Regulatory Requirements:

(Please check all applicable boxes)

Regulation 153/04  Excess Soils R406  Sewer Use  
 Ind/Com  Sanitary  Storm  
 Res/Park  Agriculture  Regulation 558  Prov. Water Quality Objectives (PWQO)  
 Coarse  CCME  Other  
 Fine

### Project Information:

Project: 211-10139-00  
Site Location: ORBY Rail  
Sampled By: Matthew Roy  
AGAT Quote #: \_\_\_\_\_ PO: \_\_\_\_\_

### Is this submission for a Record of Site Condition?

Yes  No

### Report Guideline on Certificate of Analysis

Yes  No

### Invoice Information:

Bill To Same: Yes  No   
Company: \_\_\_\_\_  
Contact: \_\_\_\_\_  
Address: \_\_\_\_\_  
Email: payables.ontario@wsp.com

### Sample Matrix Legend

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

### Laboratory Use Only

Work Order #: 211834550  
Cooler Quantity: 1 large  
Arrival Temperatures: 6.4 | 6.2 | 5.1  
Custody Seal Intact:  Yes  No  N/A  
Notes: Free Ice

### Turnaround Time (TAT) Required:

Regular TAT  5 to 7 Business Days  
Rush TAT (Rush Surcharges Apply)  
 3 Business Days  2 Business Days  Next Business Day  
OR Date Required (Rush Surcharges May Apply): \_\_\_\_\_

Please provide prior notification for rush TAT  
\*TAT is exclusive of weekends and statutory holidays

For 'Same Day' analysis, please contact your AGAT CPM

Sample Identification	Date Sampled	Time Sampled	# of Containers	Sample Matrix	Comments/ Special Instructions	Y/N	Field Filtered - Metals, Hg, CrVI, DOC	0. Reg 153	0. Reg 406	0. Reg 558	Potentially Hazardous or High Concentration (Y/N)
								Metals & Inorganics Metals - <input type="checkbox"/> CrVI, <input type="checkbox"/> Hg, <input type="checkbox"/> HWSB BTEX, F1-F4 PHCS Analyze F4G if required <input type="checkbox"/> Yes <input type="checkbox"/> No	Landfill Disposal Characterization TOLP: TCLP: <input type="checkbox"/> M&I <input type="checkbox"/> VOCs <input type="checkbox"/> ABNS <input type="checkbox"/> B1a/P <input type="checkbox"/> PCBs Excess Soils SPLP Rainwater Leach SPLP: <input type="checkbox"/> Metals <input type="checkbox"/> VOCs <input type="checkbox"/> SVOCs Excess Soils Characterization Package pH, ICPMs Metals, BTEX, F1-F4 Salt - EC/SAR		
BH21-45 SS1	11/22/21	PM	2	S							
BH21-45 SS2		PM	1	S		X					
BH21-45 SS4		PM	2	S			X				X
BH21-45 SS4		PM	2	S			X		X		
BH21-22 SS1		AM	1	S		X					
BH21-22 <del>SS3</del> SS3		AM	2	S				X	X		X
BH21-22 SS4		AM	1	S		X					X
BH21-22 SS5		AM	2	S				X	X		
BH21-21 SS1	11/23/21	AM	2	S							X
BH21-21 SS3		PM	3	S		X	X				
BH21-21 SS4		PM	2	S		X	X	X			X

Samples Relinquished By (Print Name and Sign): <u>Matthew Roy</u>	Date: <u>11/24/21</u> Time: <u>1430</u>	Samples Received By (Print Name and Sign): <u>NEAL</u>	Date: _____ Time: _____
Samples Relinquished By (Print Name and Sign):	Date: _____ Time: _____	Samples Received By (Print Name and Sign):	Date: _____ Time: _____
Samples Relinquished By (Print Name and Sign):	Date: _____ Time: _____	Samples Received By (Print Name and Sign):	Date: _____ Time: _____



# AGAT Laboratories

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

### Laboratory Use Only

Work Order #: \_\_\_\_\_

Cooler Quantity: \_\_\_\_\_

Arrival Temperatures: See pgl

Custody Seal Intact:  Yes  No  N/A

Notes: \_\_\_\_\_

## Chain of Custody Record

If this is a Drinking Water sample, please use Drinking Water Chain of Custody Form (potable water consumed by humans)

### Report Information:

Company: See Page 1  
Contact: \_\_\_\_\_  
Address: \_\_\_\_\_  
Phone: \_\_\_\_\_ Fax: \_\_\_\_\_  
Reports to be sent to:  
1. Email: \_\_\_\_\_  
2. Email: \_\_\_\_\_

### Regulatory Requirements:

(Please check all applicable boxes)

Regulation 153/04  Excess Soils R406  Sewer Use  
 Sanitary  Storm  
Table 1 Indicate One  Agriculture  Regulation 558  Prov. Water Quality Objectives (PWQO)  
 Ind./Com  Res/Park  CCME  Other  
 Agriculture  CCME  Other  
Soil Texture (Check One)  
 Coarse  Fine  
Indicate One

### Turnaround Time (TAT) Required:

Regular TAT  5 to 7 Business Days

Rush TAT (Rush Surcharges Apply)

3 Business Days  2 Business Days  Next Business Day

OR Date Required (Rush Surcharges May Apply): \_\_\_\_\_

Please provide prior notification for rush TAT  
\*TAT is exclusive of weekends and statutory holidays

For 'Same Day' analysis, please contact your AGAT CPM

### Project Information:

Project: 211-10139-00  
Site Location: ORBY Rail  
Sampled By: Matthew Roy  
AGAT Quote #: \_\_\_\_\_ PO: \_\_\_\_\_  
Please note: If quotation number is not provided, client will be billed full price for analysis.

### Invoice Information:

Bill To Same: Yes  No

Company: \_\_\_\_\_  
Contact: \_\_\_\_\_  
Address: \_\_\_\_\_  
Email: \_\_\_\_\_

### Is this submission for a Record of Site Condition?

Yes  No

### Report Guideline on Certificate of Analysis

Yes  No

### Sample Matrix Legend

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

Sample Identification	Date Sampled	Time Sampled	# of Containers	Sample Matrix	Comments/ Special Instructions	Y / N	0. Reg 153				0. Reg 406				Potentially Hazardous or High Concentration (Y/N)	
							Metals & Inorganics	Metals - <input type="checkbox"/> CrVI, <input type="checkbox"/> Hg, <input type="checkbox"/> HWSB	BTEX, F1-F4 PHCs	Analyze F4G if required <input type="checkbox"/> Yes <input type="checkbox"/> No	PAHs	PCBs	VOC	Landfill Disposal Characterization TCLP: <input type="checkbox"/> M&I, <input type="checkbox"/> VOCs, <input type="checkbox"/> ABNs, <input type="checkbox"/> BbP, <input type="checkbox"/> PCBs		Excess Soils SPLP Rainwater Leach
BH21-20 SS1	11/23/21	AM	1	S			X									
<del>BH21-20</del> QAQC-6		AM	1	S			X									
BH21-20 SS2		AM	2	S						X	X					
QAQC-7		AM	2	S					X	X						
BH21-20 SS3		AM	2	S				X								
QAQC-8		AM	2	S				X								
BH21-20 SS3		AM	1	S			X									
BH21-19 SS1	11/24/21	AM	1	S						X						X
BH21-19 SS2		PM	3	S			X	X								
BH21-18 SS1		AM	1	S			X									
BH21-18 SS2		AM	4	S			X	X	X							X

Sample Relinquished By (Print Name and Sign): <u>Matthew Roy</u>	Date: <u>11/24/21</u> Time: <u>1430</u>	Samples Received By (Print Name and Sign): <u>[Signature]</u>	Date: _____ Time: _____
Sample Relinquished By (Print Name and Sign):	Date: _____ Time: _____	Samples Received By (Print Name and Sign):	Date: _____ Time: _____
Sample Relinquished By (Print Name and Sign):	Date: _____ Time: _____	Samples Received By (Print Name and Sign):	Date: _____ Time: _____

Page 2 of 2

Nº: T **127099**



CLIENT NAME: WSP CANADA INC.  
2 INTERNATIONAL BLVD SUITE 201  
ETOBICOKE, ON M9W1A2  
(416) 798-0065

ATTENTION TO: Vanessa Oetinger

PROJECT: 211-10139-00

AGAT WORK ORDER: 21T836979

SOIL ANALYSIS REVIEWED BY: Jacky Zhu, Spectroscopy Technician

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

DATE REPORTED: Dec 14, 2021

PAGES (INCLUDING COVER): 19

VERSION\*: 1

Should you require any information regarding this analysis please contact your client services representative at (905) 712-5100

\*Notes

Disclaimer:

- All work conducted herein has been done using accepted standard protocols, and generally accepted practices and methods. AGAT test methods may incorporate modifications from the specified reference methods to improve performance.
- All samples will be disposed of within 30 days after receipt unless a Long Term Storage Agreement is signed and returned. Some specialty analysis may be exempt, please contact your Client Project Manager for details.
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- All reportable information as specified by ISO/IEC 17025:2017 is available from AGAT Laboratories upon request.





## Certificate of Analysis

AGAT WORK ORDER: 21T836979

PROJECT: 211-10139-00

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

CLIENT NAME: WSP CANADA INC.

SAMPLING SITE: ORBY Rail

ATTENTION TO: Vanessa Oetinger

SAMPLED BY: Matthew Roy

### O. Reg. 153(511) - Metals & Inorganics (Soil)

DATE RECEIVED: 2021-11-29

DATE REPORTED: 2021-12-14

Parameter	Unit	SAMPLE DESCRIPTION:		BH21-7 SS2	BH21-8 SS2
		SAMPLE TYPE:		Soil	Soil
		DATE SAMPLED:		2021-11-29	2021-11-29
		G / S	RDL	3269234	3269312
Antimony	µg/g	1.3	0.8	<0.8	<0.8
Arsenic	µg/g	18	1	6	6
Barium	µg/g	220	2.0	57.1	57.4
Beryllium	µg/g	2.5	0.4	0.7	0.5
Boron	µg/g	36	5	11	10
Boron (Hot Water Soluble)	µg/g	NA	0.10	0.25	0.21
Cadmium	µg/g	1.2	0.5	<0.5	<0.5
Chromium	µg/g	70	5	22	19
Cobalt	µg/g	21	0.5	10.4	10.0
Copper	µg/g	92	1.0	29.1	31.5
Lead	µg/g	120	1	10	12
Molybdenum	µg/g	2	0.5	<0.5	<0.5
Nickel	µg/g	82	1	21	20
Selenium	µg/g	1.5	0.8	<0.8	<0.8
Silver	µg/g	0.5	0.5	<0.5	<0.5
Thallium	µg/g	1	0.5	<0.5	<0.5
Uranium	µg/g	2.5	0.50	0.59	<0.50
Vanadium	µg/g	86	0.4	31.9	28.4
Zinc	µg/g	290	5	55	51
Chromium, Hexavalent	µg/g	0.66	0.2	<0.2	<0.2
Cyanide, Free	µg/g	0.051	0.040	<0.040	<0.040
Mercury	µg/g	0.27	0.10	<0.10	<0.10
Electrical Conductivity (2:1)	mS/cm	0.57	0.005	0.245	0.117
Sodium Adsorption Ratio (2:1) (Calc.)	N/A	2.4	N/A	2.17	0.122
pH, 2:1 CaCl2 Extraction	pH Units		NA	7.19	7.12

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AGAT WORK ORDER: 21T836979

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CLIENT NAME: WSP CANADA INC.

SAMPLING SITE: ORBY Rail

ATTENTION TO: Vanessa Oetinger

SAMPLED BY: Matthew Roy

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

DATE RECEIVED: 2021-11-29

DATE REPORTED: 2021-12-14

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 1: Full Depth Background Site Condition Standards - Soil - Residential/Parkland/Institutional/Industrial/Commercial/Community Property Use

Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

3269234-3269312 EC was determined on the DI water extract obtained from the 2:1 leaching procedure (2 parts DI water:1 part soil). pH was determined on the 0.01M CaCl2 extract prepared at 2:1 ratio. SAR is a calculated parameter.

Analysis performed at AGAT Toronto (unless marked by \*)

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CLIENT NAME: WSP CANADA INC.

SAMPLING SITE: ORBY Rail

ATTENTION TO: Vanessa Oetinger

SAMPLED BY: Matthew Roy

### O. Reg. 153(511) - OC Pesticides + PCBs (Soil)

DATE RECEIVED: 2021-11-29

DATE REPORTED: 2021-12-14

SAMPLE DESCRIPTION: BH21-7 SS1

SAMPLE TYPE: Soil

DATE SAMPLED: 2021-11-29

Parameter	Unit	G / S	RDL	3269233
Gamma-Hexachlorocyclohexane	µg/g	0.01	0.005	<0.005
Heptachlor	µg/g	0.05	0.005	<0.005
Aldrin	µg/g	0.05	0.005	<0.005
Heptachlor Epoxide	µg/g	0.05	0.005	<0.005
Endosulfan I	µg/g		0.005	<0.005
Endosulfan II	µg/g		0.005	<0.005
Endosulfan	µg/g	0.04	0.005	<0.005
Alpha-Chlordane	µg/g		0.005	<0.005
gamma-Chlordane	µg/g		0.005	<0.005
Chlordane	µg/g	0.05	0.007	<0.007
op'-DDD	µg/g		0.005	<0.005
pp'-DDD	µg/g		0.005	<0.005
DDD	µg/g	0.05	0.007	<0.007
op'-DDE	µg/g		0.005	<0.005
pp'-DDE	µg/g		0.005	<0.005
DDE	µg/g	0.05	0.007	<0.007
op'-DDT	µg/g		0.005	<0.005
pp'-DDT	µg/g		0.005	<0.005
DDT	µg/g	1.4	0.007	<0.007
Dieldrin	µg/g	0.05	0.005	<0.005
Endrin	µg/g	0.04	0.005	<0.005
Methoxychlor	µg/g	0.05	0.005	<0.005
Hexachlorobenzene	µg/g	0.01	0.005	<0.005
Hexachlorobutadiene	µg/g	0.01	0.01	<0.01
Hexachloroethane	µg/g	0.01	0.01	<0.01
Aroclor 1242	µg/g		0.10	<0.10
Aroclor 1248	µg/g		0.10	<0.10
Aroclor 1254	µg/g		0.10	<0.10
Aroclor 1260	µg/g		0.10	<0.10
Polychlorinated Biphenyls	µg/g	0.3	0.10	<0.10

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CLIENT NAME: WSP CANADA INC.

SAMPLING SITE: ORBY Rail

ATTENTION TO: Vanessa Oetinger

SAMPLED BY: Matthew Roy

### O. Reg. 153(511) - OC Pesticides + PCBs (Soil)

DATE RECEIVED: 2021-11-29

DATE REPORTED: 2021-12-14

SAMPLE DESCRIPTION: BH21-7 SS1

SAMPLE TYPE: Soil

DATE SAMPLED: 2021-11-29

Parameter	Unit	G / S	RDL	3269233
Moisture Content	%		0.1	22.1
wet weight OC/PCB	g		NA	10.05
Surrogate	Unit	Acceptable Limits		
TCMX	%	50-140		74
Decachlorobiphenyl	%	50-140		80

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 1: Full Depth Background Site Condition Standards - Soil - Residential/Parkland/Institutional/Industrial/Commercial/Community Property Use

Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

3269233

Results are based on the dry weight of the soil.

DDT total is a calculated parameter. The calculated value is the sum of op'DDT and pp'DDT.

DDD total is a calculated parameter. The calculated value is the sum of op'DDD and pp'DDD.

DDE total is a calculated parameter. The calculated value is the sum of op'DDE and pp'DDE.

Endosulfan total is a calculated parameter. The calculated value is the sum of Endosulfan I and Endosulfan II.

Chlordane total is a calculated parameter. The calculated value is the sum of Alpha-Chlordane and Gamma-Chlordane.

PCB total is a calculated parameter. The calculated value is the sum of Aroclor 1242, Aroclor 1248, Aroclor 1254 and Aroclor 1260.

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

Analysis performed at AGAT Toronto (unless marked by \*)

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AGAT WORK ORDER: 21T836979

PROJECT: 211-10139-00

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CLIENT NAME: WSP CANADA INC.

SAMPLING SITE: ORBY Rail

ATTENTION TO: Vanessa Oetinger

SAMPLED BY: Matthew Roy

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

DATE RECEIVED: 2021-11-29

DATE REPORTED: 2021-12-14

Parameter	Unit	SAMPLE DESCRIPTION:		BH21-7 SS1	BH21-8 SS1
		G / S	RDL	3269233	3269311
Naphthalene	µg/g	0.09	0.05	<0.05	<0.05
Acenaphthylene	µg/g	0.093	0.05	0.06	<0.05
Acenaphthene	µg/g	0.072	0.05	<0.05	<0.05
Fluorene	µg/g	0.12	0.05	<0.05	<0.05
Phenanthrene	µg/g	0.69	0.05	0.40	0.22
Anthracene	µg/g	0.16	0.05	0.18	0.10
Fluoranthene	µg/g	0.56	0.05	1.05	0.89
Pyrene	µg/g	1	0.05	0.96	0.77
Benz(a)anthracene	µg/g	0.36	0.05	0.56	0.46
Chrysene	µg/g	2.8	0.05	0.41	0.36
Benzo(b)fluoranthene	µg/g	0.47	0.05	0.60	0.66
Benzo(k)fluoranthene	µg/g	0.48	0.05	0.23	0.24
Benzo(a)pyrene	µg/g	0.3	0.05	0.40	0.40
Indeno(1,2,3-cd)pyrene	µg/g	0.46	0.05	0.22	0.26
Dibenz(a,h)anthracene	µg/g	0.1	0.05	0.05	0.05
Benzo(g,h,i)perylene	µg/g	0.68	0.05	0.27	0.34
1 and 2 Methylnaphthalene	µg/g	0.59	0.05	<0.05	<0.05
Moisture Content	%		0.1	22.1	23.9
Surrogate	Unit	Acceptable Limits			
Naphthalene-d8	%	50-140		109	109
Acridine-d9	%	50-140		109	83
Terphenyl-d14	%	50-140		96	99

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 1: Full Depth Background Site Condition Standards - Soil - Residential/Parkland/Institutional/Industrial/Commercial/Community Property Use  
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

3269233-3269311 Results are based on the dry weight of the soil.

Note: The result for Benzo(b)Fluoranthene is the total of the Benzo(b)&j)Fluoranthene isomers because the isomers co-elute on the GC column.  
2- and 1-Methyl Naphthalene is a calculated parameter. The calculated value is the sum of 2-Methyl Naphthalene and 1-Methyl Naphthalene.

Analysis performed at AGAT Toronto (unless marked by \*)

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## Certificate of Analysis

AGAT WORK ORDER: 21T836979

PROJECT: 211-10139-00

5835 COOPERS AVENUE  
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CLIENT NAME: WSP CANADA INC.

SAMPLING SITE: ORBY Rail

ATTENTION TO: Vanessa Oetinger

SAMPLED BY: Matthew Roy

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

DATE RECEIVED: 2021-11-29

DATE REPORTED: 2021-12-14

Parameter	Unit	SAMPLE DESCRIPTION:		BH21-7 SS5	BH21-8 SS7
		G / S	RDL	3269235	3269313
F1 (C6 - C10)	µg/g	25	5	<5	<5
F1 (C6 to C10) minus BTEX	µg/g	25	5	<5	<5
F2 (C10 to C16)	µg/g	10	10	<10	<10
F3 (C16 to C34)	µg/g	240	50	<50	<50
F4 (C34 to C50)	µg/g	120	50	<50	<50
Gravimetric Heavy Hydrocarbons	µg/g	120	50	NA	NA
Moisture Content	%		0.1	10.0	10.1
Surrogate	Unit	Acceptable Limits			
Toluene-d8	% Recovery	50-140	54	107	
Terphenyl	%	60-140	88	97	

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 1: Full Depth Background Site Condition Standards - Soil - Residential/Parkland/Institutional/Industrial/Commercial/Community Property Use  
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

3269235-3269313 Results are based on sample dry weight.  
The C6-C10 fraction is calculated using toluene response factor.  
C6-C10 (F1 minus BTEX) is a calculated parameter. The calculated value is F1 minus BTEX. The calculated parameter is non-accredited. The parameters that are components of the calculation are accredited.  
The C10 - C16, C16 - C34, and C34 - C50 fractions are calculated using the average response factor for n-C10, n-C16, and n-C34.  
Gravimetric Heavy Hydrocarbons are not included in the Total C16-C50 and are only determined if the chromatogram of the C34 - C50 hydrocarbons indicates that hydrocarbons >C50 are present. The chromatogram has returned to baseline by the retention time of nC50.  
Total C6 - C50 results are corrected for BTEX contribution.  
This method complies with the Reference Method for the CWS PHC and is validated for use in the laboratory.  
nC6 and nC10 response factors are within 30% of Toluene response factor.  
nC10, nC16 and nC34 response factors are within 10% of their average.  
C50 response factor is within 70% of nC10 + nC16 + nC34 average.  
Linearity is within 15%.  
Extraction and holding times were met for this sample.  
Fractions 1-4 are quantified without the contribution of PAHs. Under Ontario Regulation 153, results are considered valid without determining the PAH contribution if not requested by the client.

Analysis performed at AGAT Toronto (unless marked by \*)

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## Certificate of Analysis

AGAT WORK ORDER: 21T836979

PROJECT: 211-10139-00

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CLIENT NAME: WSP CANADA INC.

SAMPLING SITE: ORBY Rail

ATTENTION TO: Vanessa Oetinger

SAMPLED BY: Matthew Roy

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

DATE RECEIVED: 2021-11-29

DATE REPORTED: 2021-12-14

Parameter	Unit	SAMPLE DESCRIPTION:		BH21-7 SS5	BH21-8 SS7
		SAMPLE TYPE:		Soil	Soil
		DATE SAMPLED:		2021-11-29	2021-11-29
		G / S	RDL	3269235	3269313
Dichlorodifluoromethane	µg/g	0.05	0.05	<0.05	<0.05
Vinyl Chloride	ug/g	0.02	0.02	<0.02	<0.02
Bromomethane	ug/g	0.05	0.05	<0.05	<0.05
Trichlorofluoromethane	ug/g	0.25	0.05	<0.05	<0.05
Acetone	ug/g	0.5	0.50	<0.50	<0.50
Dichloroethylene, 1,1-	ug/g	0.05	0.05	<0.05	<0.05
Methylene Chloride	ug/g	0.05	0.05	<0.05	<0.05
Dichloroethylene, Trans- 1,2-	ug/g	0.05	0.05	<0.05	<0.05
Methyl tert-butyl Ether	ug/g	0.05	0.05	<0.05	<0.05
Dichloroethane, 1,1-	ug/g	0.05	0.02	<0.02	<0.02
Methyl Ethyl Ketone	ug/g	0.5	0.50	<0.50	<0.50
Dichloroethylene, Cis- 1,2-	ug/g	0.05	0.02	<0.02	<0.02
Chloroform	ug/g	0.05	0.04	<0.04	<0.04
Dichloroethane, 1,2-	ug/g	0.05	0.03	<0.03	<0.03
Trichloroethane, 1,1,1-	ug/g	0.05	0.05	<0.05	<0.05
Carbon Tetrachloride	ug/g	0.05	0.05	<0.05	<0.05
Benzene	ug/g	0.02	0.02	<0.02	<0.02
Dichloropropane, 1,2-	ug/g	0.05	0.03	<0.03	<0.03
Trichloroethylene	ug/g	0.05	0.03	<0.03	<0.03
Bromodichloromethane	ug/g	0.05	0.05	<0.05	<0.05
Methyl Isobutyl Ketone	ug/g	0.5	0.50	<0.50	<0.50
Trichloroethane, 1,1,2-	ug/g	0.05	0.04	<0.04	<0.04
Toluene	ug/g	0.2	0.05	<0.05	<0.05
Dibromochloromethane	ug/g	0.05	0.05	<0.05	<0.05
Ethylene Dibromide	ug/g	0.05	0.04	<0.04	<0.04
Tetrachloroethylene	ug/g	0.05	0.05	<0.05	<0.05
Tetrachloroethane, 1,1,1,2-	ug/g	0.05	0.04	<0.04	<0.04
Chlorobenzene	ug/g	0.05	0.05	<0.05	<0.05
Ethylbenzene	ug/g	0.05	0.05	<0.05	<0.05
Bromoform	ug/g	0.05	0.05	<0.05	<0.05

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CLIENT NAME: WSP CANADA INC.

SAMPLING SITE: ORBY Rail

ATTENTION TO: Vanessa Oetinger

SAMPLED BY: Matthew Roy

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

DATE RECEIVED: 2021-11-29

DATE REPORTED: 2021-12-14

Parameter	Unit	SAMPLE DESCRIPTION:		BH21-7 SS5	BH21-8 SS7
		G / S	RDL	3269235	3269313
Styrene	ug/g	0.05	0.05	<0.05	<0.05
Tetrachloroethane, 1,1,2,2-	ug/g	0.05	0.05	<0.05	<0.05
Dichlorobenzene, 1,3-	ug/g	0.05	0.05	<0.05	<0.05
Dichlorobenzene, 1,4-	ug/g	0.05	0.05	<0.05	<0.05
Dichlorobenzene, 1,2-	ug/g	0.05	0.05	<0.05	<0.05
Xylenes (Total)	ug/g	0.05	0.05	<0.05	<0.05
1,3-Dichloropropene (Cis + Trans)	µg/g	0.05	0.04	<0.04	<0.04
Hexane, n-	µg/g	0.05	0.05	<0.05	<0.05
Surrogate	Unit	Acceptable Limits			
Toluene-d8	% Recovery	50-140	99	104	
4-Bromofluorobenzene	% Recovery	50-140	76	74	

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 1: Full Depth Background Site Condition Standards - Soil - Residential/Parkland/Institutional/Industrial/Commercial/Community Property Use  
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

3269235-3269313 The sample was analyzed using the high level technique. The sample was extracted using methanol, a small amount of the methanol extract was diluted in water and the purge & trap GC/MS analysis was performed. Results are based on the dry weight of the soil.

Xylenes total is a calculated parameter. The calculated value is the sum of m&p-Xylene + o-Xylene.

1,3-Dichloropropene total is a calculated parameter. The calculated value is the sum of Cis-1,3-Dichloropropene and Trans-1,3-Dichloropropene.

Analysis performed at AGAT Toronto (unless marked by \*)

Certified By:



**Exceedance Summary**

AGAT WORK ORDER: 21T836979

PROJECT: 211-10139-00

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CLIENT NAME: WSP CANADA INC.

ATTENTION TO: Vanessa Oetinger

SAMPLEID	SAMPLE TITLE	GUIDELINE	ANALYSIS PACKAGE	PARAMETER	UNIT	GUIDEVALUE	RESULT
3269233	BH21-7 SS1	ON T1 S RPI/ICC	O. Reg. 153(511) - PAHs (Soil)	Anthracene	µg/g	0.16	0.18
3269233	BH21-7 SS1	ON T1 S RPI/ICC	O. Reg. 153(511) - PAHs (Soil)	Benz(a)anthracene	µg/g	0.36	0.56
3269233	BH21-7 SS1	ON T1 S RPI/ICC	O. Reg. 153(511) - PAHs (Soil)	Benzo(a)pyrene	µg/g	0.3	0.40
3269233	BH21-7 SS1	ON T1 S RPI/ICC	O. Reg. 153(511) - PAHs (Soil)	Benzo(b)fluoranthene	µg/g	0.47	0.60
3269233	BH21-7 SS1	ON T1 S RPI/ICC	O. Reg. 153(511) - PAHs (Soil)	Fluoranthene	µg/g	0.56	1.05
3269311	BH21-8 SS1	ON T1 S RPI/ICC	O. Reg. 153(511) - PAHs (Soil)	Benz(a)anthracene	µg/g	0.36	0.46
3269311	BH21-8 SS1	ON T1 S RPI/ICC	O. Reg. 153(511) - PAHs (Soil)	Benzo(a)pyrene	µg/g	0.3	0.40
3269311	BH21-8 SS1	ON T1 S RPI/ICC	O. Reg. 153(511) - PAHs (Soil)	Benzo(b)fluoranthene	µg/g	0.47	0.66
3269311	BH21-8 SS1	ON T1 S RPI/ICC	O. Reg. 153(511) - PAHs (Soil)	Fluoranthene	µg/g	0.56	0.89



## Quality Assurance

CLIENT NAME: WSP CANADA INC.  
 PROJECT: 211-10139-00  
 SAMPLING SITE: ORBY Rail

AGAT WORK ORDER: 21T836979  
 ATTENTION TO: Vanessa Oetinger  
 SAMPLED BY: Matthew Roy

Soil Analysis															
RPT Date: Dec 14, 2021			DUPLICATE			Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD		Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper

**O. Reg. 153(511) - Metals & Inorganics (Soil)**

Antimony	3281970		<0.8	<0.8	NA	< 0.8	128%	70%	130%	102%	80%	120%	77%	70%	130%
Arsenic	3281970		4	4	NA	< 1	106%	70%	130%	98%	80%	120%	96%	70%	130%
Barium	3281970		278	315	12.5%	< 2.0	103%	70%	130%	104%	80%	120%	106%	70%	130%
Beryllium	3281970		0.8	0.8	NA	< 0.4	105%	70%	130%	98%	80%	120%	92%	70%	130%
Boron	3281970		34	35	2.9%	< 5	99%	70%	130%	109%	80%	120%	114%	70%	130%
Boron (Hot Water Soluble)	3266366		2.40	2.48	3.3%	< 0.10	93%	60%	140%	99%	70%	130%	NA	60%	140%
Cadmium	3281970		<0.5	<0.5	NA	< 0.5	103%	70%	130%	101%	80%	120%	101%	70%	130%
Chromium	3281970		23	24	NA	< 5	100%	70%	130%	103%	80%	120%	110%	70%	130%
Cobalt	3281970		10.8	11.5	6.3%	< 0.5	94%	70%	130%	102%	80%	120%	98%	70%	130%
Copper	3281970		6.0	6.2	3.3%	< 1.0	92%	70%	130%	106%	80%	120%	93%	70%	130%
Lead	3281970		10	15	40.0%	< 1	105%	70%	130%	106%	80%	120%	98%	70%	130%
Molybdenum	3281970		0.9	1.0	NA	< 0.5	101%	70%	130%	104%	80%	120%	101%	70%	130%
Nickel	3281970		23	24	4.3%	< 1	93%	70%	130%	102%	80%	120%	97%	70%	130%
Selenium	3281970		<0.8	<0.8	NA	< 0.8	130%	70%	130%	94%	80%	120%	93%	70%	130%
Silver	3281970		<0.5	<0.5	NA	< 0.5	102%	70%	130%	102%	80%	120%	97%	70%	130%
Thallium	3281970		<0.5	<0.5	NA	< 0.5	107%	70%	130%	104%	80%	120%	98%	70%	130%
Uranium	3281970		0.73	0.76	NA	< 0.50	109%	70%	130%	108%	80%	120%	102%	70%	130%
Vanadium	3281970		28.4	30.5	7.1%	< 0.4	104%	70%	130%	99%	80%	120%	103%	70%	130%
Zinc	3281970		50	51	2.0%	< 5	96%	70%	130%	99%	80%	120%	96%	70%	130%
Chromium, Hexavalent	3270066		<0.2	<0.2	NA	< 0.2	103%	70%	130%	98%	80%	120%	91%	70%	130%
Cyanide, Free	3287123		<0.040	<0.040	NA	< 0.040	101%	70%	130%	103%	80%	120%	92%	70%	130%
Mercury	3281970		<0.10	<0.10	NA	< 0.10	106%	70%	130%	98%	80%	120%	90%	70%	130%
Electrical Conductivity (2:1)	3266366		2.07	2.13	2.9%	< 0.005	105%	80%	120%						
Sodium Adsorption Ratio (2:1) (Calc.)	3266366		0.191	0.196	2.6%	NA									
pH, 2:1 CaCl2 Extraction	3266373		6.99	7.06	1.0%	NA	99%	80%	120%						

Comments: NA signifies Not Applicable.

pH duplicates QA acceptance criteria was met relative as stated in Table 5-15 of Analytical Protocol document.

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

Matrix spike: Spike level < native concentration. Matrix spike acceptance limits do not apply.

Certified By:



## Quality Assurance

CLIENT NAME: WSP CANADA INC.

AGAT WORK ORDER: 21T836979

PROJECT: 211-10139-00

ATTENTION TO: Vanessa Oetinger

SAMPLING SITE: ORBY Rail

SAMPLED BY: Matthew Roy

### Trace Organics Analysis

RPT Date: Dec 14, 2021			DUPLICATE				Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Measured Value		Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits		
								Lower	Upper		Lower	Upper		Lower	Upper	

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

Naphthalene	3257319	< 0.05	< 0.05	NA	< 0.05	78%	50%	140%	105%	50%	140%	105%	50%	140%
Acenaphthylene	3257319	< 0.05	< 0.05	NA	< 0.05	84%	50%	140%	83%	50%	140%	98%	50%	140%
Acenaphthene	3257319	< 0.05	< 0.05	NA	< 0.05	85%	50%	140%	92%	50%	140%	83%	50%	140%
Fluorene	3257319	< 0.05	< 0.05	NA	< 0.05	105%	50%	140%	94%	50%	140%	88%	50%	140%
Phenanthrene	3257319	< 0.05	< 0.05	NA	< 0.05	98%	50%	140%	98%	50%	140%	74%	50%	140%
Anthracene	3257319	< 0.05	< 0.05	NA	< 0.05	86%	50%	140%	86%	50%	140%	82%	50%	140%
Fluoranthene	3257319	< 0.05	< 0.05	NA	< 0.05	68%	50%	140%	88%	50%	140%	91%	50%	140%
Pyrene	3257319	< 0.05	< 0.05	NA	< 0.05	84%	50%	140%	74%	50%	140%	107%	50%	140%
Benz(a)anthracene	3257319	< 0.05	< 0.05	NA	< 0.05	80%	50%	140%	85%	50%	140%	87%	50%	140%
Chrysene	3257319	< 0.05	< 0.05	NA	< 0.05	95%	50%	140%	90%	50%	140%	85%	50%	140%
Benzo(b)fluoranthene	3257319	< 0.05	< 0.05	NA	< 0.05	88%	50%	140%	105%	50%	140%	96%	50%	140%
Benzo(k)fluoranthene	3257319	< 0.05	< 0.05	NA	< 0.05	93%	50%	140%	98%	50%	140%	105%	50%	140%
Benzo(a)pyrene	3257319	< 0.05	< 0.05	NA	< 0.05	92%	50%	140%	86%	50%	140%	98%	50%	140%
Indeno(1,2,3-cd)pyrene	3257319	< 0.05	< 0.05	NA	< 0.05	105%	50%	140%	88%	50%	140%	86%	50%	140%
Dibenz(a,h)anthracene	3257319	< 0.05	< 0.05	NA	< 0.05	98%	50%	140%	74%	50%	140%	88%	50%	140%
Benzo(g,h,i)perylene	3257319	< 0.05	< 0.05	NA	< 0.05	86%	50%	140%	82%	50%	140%	80%	50%	140%

O. Reg. 153(511) - OC Pesticides + PCBs (Soil)

Gamma-Hexachlorocyclohexane	3287133	< 0.005	< 0.005	NA	< 0.005	94%	50%	140%	83%	50%	140%	80%	50%	140%
Heptachlor	3287133	< 0.005	< 0.005	NA	< 0.005	86%	50%	140%	83%	50%	140%	82%	50%	140%
Aldrin	3287133	< 0.005	< 0.005	NA	< 0.005	98%	50%	140%	89%	50%	140%	90%	50%	140%
Heptachlor Epoxide	3287133	< 0.005	< 0.005	NA	< 0.005	85%	50%	140%	86%	50%	140%	87%	50%	140%
Endosulfan I	3287133	< 0.005	< 0.005	NA	< 0.005	82%	50%	140%	84%	50%	140%	98%	50%	140%
Endosulfan II	3287133	< 0.005	< 0.005	NA	< 0.005	85%	50%	140%	98%	50%	140%	104%	50%	140%
Alpha-Chlordane	3287133	< 0.005	< 0.005	NA	< 0.005	82%	50%	140%	92%	50%	140%	92%	50%	140%
gamma-Chlordane	3287133	< 0.005	< 0.005	NA	< 0.005	89%	50%	140%	90%	50%	140%	96%	50%	140%
op'-DDD	3287133	< 0.005	< 0.005	NA	< 0.005	105%	50%	140%	80%	50%	140%	102%	50%	140%
pp'-DDD	3287133	< 0.005	< 0.005	NA	< 0.005	94%	50%	140%	82%	50%	140%	106%	50%	140%
op'-DDE	3287133	< 0.005	< 0.005	NA	< 0.005	86%	50%	140%	87%	50%	140%	80%	50%	140%
pp'-DDE	3287133	< 0.005	< 0.005	NA	< 0.005	94%	50%	140%	86%	50%	140%	89%	50%	140%
op'-DDT	3287133	< 0.005	< 0.005	NA	< 0.005	86%	50%	140%	80%	50%	140%	102%	50%	140%
pp'-DDT	3287133	< 0.005	< 0.005	NA	< 0.005	87%	50%	140%	84%	50%	140%	98%	50%	140%
Dieldrin	3287133	< 0.005	< 0.005	NA	< 0.005	85%	50%	140%	98%	50%	140%	104%	50%	140%
Endrin	3287133	< 0.005	< 0.005	NA	< 0.005	94%	50%	140%	102%	50%	140%	98%	50%	140%
Methoxychlor	3287133	< 0.005	< 0.005	NA	< 0.005	87%	50%	140%	96%	50%	140%	92%	50%	140%
Hexachlorobenzene	3287133	< 0.005	< 0.005	NA	< 0.005	97%	50%	140%	92%	50%	140%	90%	50%	140%
Hexachlorobutadiene	3287133	< 0.01	< 0.01	NA	< 0.01	83%	50%	140%	86%	50%	140%	84%	50%	140%
Hexachloroethane	3287133	< 0.01	< 0.01	NA	< 0.01	82%	50%	140%	79%	50%	140%	78%	50%	140%
Aroclor 1242	3287133	< 0.10	< 0.10	NA	< 0.10	104%	50%	140%	NA	50%	140%	NA	50%	140%

## Quality Assurance

CLIENT NAME: WSP CANADA INC.  
 PROJECT: 211-10139-00  
 SAMPLING SITE: ORBY Rail

AGAT WORK ORDER: 21T836979  
 ATTENTION TO: Vanessa Oetinger  
 SAMPLED BY: Matthew Roy

### Trace Organics Analysis (Continued)

RPT Date: Dec 14, 2021			DUPLICATE			Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD		Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
Aroclor 1248	3287133		< 0.10	< 0.10	NA	< 0.10	106%	50%	140%	NA	50%	140%	NA	50%	140%
Aroclor 1254	3287133		< 0.10	< 0.10	NA	< 0.10	98%	50%	140%	NA	50%	140%	NA	50%	140%
Aroclor 1260	3287133		< 0.10	< 0.10	NA	< 0.10	102%	50%	140%	NA	50%	140%	NA	50%	140%
Polychlorinated Biphenyls	3287133		< 0.10	< 0.10	NA	< 0.10	98%	50%	140%	85%	50%	140%	80%	50%	140%
O. Reg. 153(511) - PHCs F1 - F4 (-BTEX) (Soil)															
F1 (C6 - C10)	3276907		< 5	< 5	NA	< 5	100%	60%	140%	98%	60%	140%	100%	60%	140%
F2 (C10 to C16)	3269313	3269313	< 10	< 10	NA	< 10	104%	60%	140%	96%	60%	140%	77%	60%	140%
F3 (C16 to C34)	3269313	3269313	< 50	< 50	NA	< 50	85%	60%	140%	78%	60%	140%	71%	60%	140%
F4 (C34 to C50)	3269313	3269313	< 50	< 50	NA	< 50	96%	60%	140%	108%	60%	140%	112%	60%	140%
O. Reg. 153(511) - VOCs (Soil)															
Dichlorodifluoromethane	3269313	3269313	< 0.05	< 0.05	NA	< 0.05	79%	50%	140%	102%	50%	140%	103%	50%	140%
Vinyl Chloride	3269313	3269313	< 0.02	< 0.02	NA	< 0.02	98%	50%	140%	88%	50%	140%	100%	50%	140%
Bromomethane	3269313	3269313	< 0.05	< 0.05	NA	< 0.05	108%	50%	140%	81%	50%	140%	98%	50%	140%
Trichlorofluoromethane	3269313	3269313	< 0.05	< 0.05	NA	< 0.05	77%	50%	140%	88%	50%	140%	97%	50%	140%
Acetone	3269313	3269313	< 0.50	< 0.50	NA	< 0.50	98%	50%	140%	101%	50%	140%	102%	50%	140%
Dichloroethylene, 1,1-	3269313	3269313	< 0.05	< 0.05	NA	< 0.05	104%	50%	140%	85%	60%	130%	74%	50%	140%
Methylene Chloride	3269313	3269313	< 0.05	< 0.05	NA	< 0.05	80%	50%	140%	106%	60%	130%	106%	50%	140%
Dichloroethylene, Trans- 1,2-	3269313	3269313	< 0.05	< 0.05	NA	< 0.05	117%	50%	140%	105%	60%	130%	93%	50%	140%
Methyl tert-butyl Ether	3269313	3269313	< 0.05	< 0.05	NA	< 0.05	84%	50%	140%	72%	60%	130%	86%	50%	140%
Dichloroethane, 1,1-	3269313	3269313	< 0.02	< 0.02	NA	< 0.02	109%	50%	140%	108%	60%	130%	107%	50%	140%
Methyl Ethyl Ketone	3269313	3269313	< 0.50	< 0.50	NA	< 0.50	102%	50%	140%	99%	50%	140%	104%	50%	140%
Dichloroethylene, Cis- 1,2-	3269313	3269313	< 0.02	< 0.02	NA	< 0.02	101%	50%	140%	109%	60%	130%	109%	50%	140%
Chloroform	3269313	3269313	< 0.04	< 0.04	NA	< 0.04	104%	50%	140%	112%	60%	130%	105%	50%	140%
Dichloroethane, 1,2-	3269313	3269313	< 0.03	< 0.03	NA	< 0.03	102%	50%	140%	117%	60%	130%	118%	50%	140%
Trichloroethane, 1,1,1-	3269313	3269313	< 0.05	< 0.05	NA	< 0.05	82%	50%	140%	83%	60%	130%	71%	50%	140%
Carbon Tetrachloride	3269313	3269313	< 0.05	< 0.05	NA	< 0.05	90%	50%	140%	86%	60%	130%	81%	50%	140%
Benzene	3269313	3269313	< 0.02	< 0.02	NA	< 0.02	106%	50%	140%	105%	60%	130%	116%	50%	140%
Dichloropropane, 1,2-	3269313	3269313	< 0.03	< 0.03	NA	< 0.03	107%	50%	140%	87%	60%	130%	99%	50%	140%
Trichloroethylene	3269313	3269313	< 0.03	< 0.03	NA	< 0.03	109%	50%	140%	93%	60%	130%	89%	50%	140%
Bromodichloromethane	3269313	3269313	< 0.05	< 0.05	NA	< 0.05	117%	50%	140%	98%	60%	130%	114%	50%	140%
Methyl Isobutyl Ketone	3269313	3269313	< 0.50	< 0.50	NA	< 0.50	100%	50%	140%	102%	50%	140%	99%	50%	140%
Trichloroethane, 1,1,2-	3269313	3269313	< 0.04	< 0.04	NA	< 0.04	112%	50%	140%	101%	60%	130%	98%	50%	140%
Toluene	3269313	3269313	< 0.05	< 0.05	NA	< 0.05	115%	50%	140%	117%	60%	130%	115%	50%	140%
Dibromochloromethane	3269313	3269313	< 0.05	< 0.05	NA	< 0.05	81%	50%	140%	108%	60%	130%	72%	50%	140%
Ethylene Dibromide	3269313	3269313	< 0.04	< 0.04	NA	< 0.04	98%	50%	140%	91%	60%	130%	107%	50%	140%
Tetrachloroethylene	3269313	3269313	< 0.05	< 0.05	NA	< 0.05	91%	50%	140%	112%	60%	130%	98%	50%	140%
Tetrachloroethane, 1,1,1,2-	3269313	3269313	< 0.04	< 0.04	NA	< 0.04	97%	50%	140%	116%	60%	130%	94%	50%	140%
Chlorobenzene	3269313	3269313	< 0.05	< 0.05	NA	< 0.05	81%	50%	140%	112%	60%	130%	119%	50%	140%
Ethylbenzene	3269313	3269313	< 0.05	< 0.05	NA	< 0.05	94%	50%	140%	79%	60%	130%	84%	50%	140%



## Quality Assurance

 CLIENT NAME: WSP CANADA INC.  
 PROJECT: 211-10139-00  
 SAMPLING SITE: ORBY Rail


 AGAT WORK ORDER: 21T836979  
 ATTENTION TO: Vanessa Oetinger  
 SAMPLED BY: Matthew Roy

### Trace Organics Analysis (Continued)

RPT Date: Dec 14, 2021			DUPLICATE				Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Measured Value		Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits		
								Lower	Upper		Lower	Upper		Lower	Upper	
Bromoform	3269313	3269313	< 0.05	< 0.05	NA	< 0.05	107%	50%	140%	108%	60%	130%	95%	50%	140%	
Styrene	3269313	3269313	< 0.05	< 0.05	NA	< 0.05	87%	50%	140%	79%	60%	130%	77%	50%	140%	
Tetrachloroethane, 1,1,2,2-	3269313	3269313	< 0.05	< 0.05	NA	< 0.05	103%	50%	140%	82%	60%	130%	81%	50%	140%	
Dichlorobenzene, 1,3-	3269313	3269313	< 0.05	< 0.05	NA	< 0.05	95%	50%	140%	92%	60%	130%	84%	50%	140%	
Dichlorobenzene, 1,4-	3269313	3269313	< 0.05	< 0.05	NA	< 0.05	108%	50%	140%	103%	60%	130%	84%	50%	140%	
Dichlorobenzene, 1,2-	3269313	3269313	< 0.05	< 0.05	NA	< 0.05	91%	50%	140%	84%	60%	130%	86%	50%	140%	
Hexane, n-	3269313	3269313	< 0.05	< 0.05	NA	< 0.05	114%	50%	140%	103%	60%	130%	117%	50%	140%	

Comments: When the average of the sample and duplicate results is less than 5x the RDL, the Relative Percent Difference (RPD) will be indicated as Not Applicable (NA).

Certified By: \_\_\_\_\_



## Method Summary

CLIENT NAME: WSP CANADA INC.

AGAT WORK ORDER: 21T836979

PROJECT: 211-10139-00

ATTENTION TO: Vanessa Oetinger

SAMPLING SITE: ORBY Rail

SAMPLED BY: Matthew Roy

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Soil Analysis			
Antimony	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Arsenic	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Barium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Beryllium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Boron	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Boron (Hot Water Soluble)	MET-93-6104	modified from EPA 6010D and MSA PART 3, CH 21	ICP/OES
Cadmium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Chromium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Cobalt	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Copper	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Lead	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Molybdenum	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Nickel	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Selenium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Silver	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Thallium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Uranium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Vanadium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Zinc	MET 93 -6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Chromium, Hexavalent	INOR-93-6068	modified from EPA 3060 and EPA 7196	SPECTROPHOTOMETER
Cyanide, Free	INOR-93-6052	modified from ON MOECC E3015, SM 4500-CN- I, G-387	TECHNICON AUTO ANALYZER
Mercury	MET-93-6103	modified from EPA 7471B and SM 3112 B	ICP-MS
Electrical Conductivity (2:1)	INOR-93-6036	modified from MSA PART 3, CH 14 and SM 2510 B	EC METER
Sodium Adsorption Ratio (2:1) (Calc.)	INOR-93-6007	modified from EPA 6010D & Analytical Protocol	ICP/OES
pH, 2:1 CaCl <sub>2</sub> Extraction	INOR-93-6031	modified from EPA 9045D and MCKEAGUE 3.11	PH METER

## Method Summary

CLIENT NAME: WSP CANADA INC.

AGAT WORK ORDER: 21T836979

PROJECT: 211-10139-00

ATTENTION TO: Vanessa Oetinger

SAMPLING SITE: ORBY Rail

SAMPLED BY: Matthew Roy

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Trace Organics Analysis			
Gamma-Hexachlorocyclohexane	ORG-91-5113	modified from EPA SW-846 3570, 3620C & 8081B	GC/ECD
Heptachlor	ORG-91-5113	modified from EPA SW-846 3570, 3620C & 8081B	GC/ECD
Aldrin	ORG-91-5113	modified from EPA SW-846 3570, 3620C & 8081B	GC/ECD
Heptachlor Epoxide	ORG-91-5113	modified from EPA SW-846 3570, 3620C & 8081B	GC/ECD
Endosulfan I	ORG-91-5113	modified from EPA SW-846 3570, 3620C & 8081B	GC/ECD
Endosulfan II	ORG-91-5113	modified from EPA SW-846 3570, 3620C & 8081B	GC/ECD
Endosulfan	ORG-91-5113	modified from EPA SW-846 3570, 3620C & 8081B	GC/ECD
Alpha-Chlordane	ORG-91-5113	modified from EPA SW-846 3570, 3620C & 8081B	GC/ECD
gamma-Chlordane	ORG-91-5113	modified from EPA SW-846 3570, 3620C & 8081B	GC/ECD
Chlordane	ORG-91-5113	modified from EPA SW-846 3570, 3620C & 8081B	CALCULATION
op'-DDD	ORG-91-5113	modified from EPA SW-846 3570, 3620C & 8081B	GC/ECD
pp'-DDD	ORG-91-5113	modified from EPA SW-846 3570, 3620C & 8081B	GC/ECD
DDD	ORG-91-5113	modified from EPA SW-846 3570, 3620C & 8081B	CALCULATION
op'-DDE	ORG-91-5113	modified from EPA SW-846 3570, 3620C & 8081B	GC/ECD
pp'-DDE	ORG-91-5113	modified from EPA SW-846 3570, 3620C & 8081B	GC/ECD
DDE	ORG-91-5113	modified from EPA SW-846 3570, 3620C & 8081B	GC/ECD
op'-DDT	ORG-91-5113	modified from EPA SW-846 3570, 3620C & 8081B	GC/ECD
pp'-DDT	ORG-91-5113	modified from EPA SW-846 3570, 3620C & 8081B	GC/ECD
DDT	ORG-91-5113	modified from EPA SW-846 3570, 3620C & 8081B	CALCULATION
Dieldrin	ORG-91-5113	modified from EPA SW-846 3570, 3620C & 8081B	GC/ECD
Endrin	ORG-91-5113	modified from EPA SW-846 3570, 3620C & 8081B	GC/ECD
Methoxychlor	ORG-91-5113	modified from EPA SW-846 3570, 3620C & 8081B	GC/ECD
Hexachlorobenzene	ORG-91-5113	modified from EPA SW-846 3570, 3620C & 8081B	GC/ECD
Hexachlorobutadiene	ORG-91-5113	modified from EPA SW-846 3570, 3620C & 8081B	GC/ECD
Hexachloroethane	ORG-91-5113	modified from EPA SW-846 3570, 3620C & 8081B	GC/ECD
Aroclor 1242	ORG-91-5113	modified from EPA SW-846 3570, 3620C & 8082A	GC/ECD
Aroclor 1248	ORG-91-5113	modified from EPA SW-846 3570, 3620C & 8082A	GC/ECD



## Method Summary

CLIENT NAME: WSP CANADA INC.

AGAT WORK ORDER: 21T836979

PROJECT: 211-10139-00

ATTENTION TO: Vanessa Oetinger

SAMPLING SITE: ORBY Rail

SAMPLED BY: Matthew Roy

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Aroclor 1254	ORG-91-5113	modified from EPA SW-846 3570, 3620C & 8082A	GC/ECD
Aroclor 1260	ORG-91-5113	modified from EPA SW-846 3570, 3620C & 8082A	GC/ECD
Polychlorinated Biphenyls	ORG-91-5113	modified from EPA SW-846 3570, 3620C & 8082A	GC/ECD
TCMX	ORG-91-5113	modified from EPA SW-846 3541, 3620,8081	GC/ECD
Decachlorobiphenyl	ORG-91-5113	modified from EPA SW-846 3541, 3620,8081	GC/ECD
Moisture Content	VOL-91-5009	CCME Tier 1 Method	BALANCE
wet weight OC/PCB	ORG-91-5113		BALANCE
Naphthalene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Acenaphthylene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Acenaphthene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Fluorene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Phenanthrene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Anthracene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Fluoranthene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Pyrene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Benz(a)anthracene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Chrysene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Benzo(b)fluoranthene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Benzo(k)fluoranthene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Benzo(a)pyrene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Indeno(1,2,3-cd)pyrene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Dibenz(a,h)anthracene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Benzo(g,h,i)perylene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
1 and 2 Methylnaphthalene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Naphthalene-d8	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Acridine-d9	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Terphenyl-d14	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
F1 (C6 - C10)	VOL-91-5009	modified from CCME Tier 1 Method	(P&T)GC/FID
F1 (C6 to C10) minus BTEX	VOL-91-5009	modified from CCME Tier 1 Method	(P&T)GC/FID
Toluene-d8	VOL-91-5009	modified from EPA SW-846 5030C & 8260D	(P&T)GC/MS

## Method Summary

CLIENT NAME: WSP CANADA INC.

AGAT WORK ORDER: 21T836979

PROJECT: 211-10139-00

ATTENTION TO: Vanessa Oetinger

SAMPLING SITE: ORBY Rail

SAMPLED BY: Matthew Roy

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
F2 (C10 to C16)	VOL-91-5009	modified from CCME Tier 1 Method	GC/FID
F3 (C16 to C34)	VOL-91-5009	modified from CCME Tier 1 Method	GC/FID
F4 (C34 to C50)	VOL-91-5009	modified from CCME Tier 1 Method	GC/FID
Gravimetric Heavy Hydrocarbons	VOL-91-5009	modified from CCME Tier 1 Method	BALANCE
Terphenyl	VOL-91-5009	modified from CCME Tier 1 Method	GC/FID
Dichlorodifluoromethane	VOL-91-5002	EPA SW-846 5035 & 8260	(P&T)GC/MS
Vinyl Chloride	VOL-91-5002	EPA SW-846 5035 & 8260	(P&T)GC/MS
Bromomethane	VOL-91-5002	EPA SW-846 5035 & 8260	(P&T)GC/MS
Trichlorofluoromethane	VOL-91-5002	EPA SW-846 5035 & 8260	(P&T)GC/MS
Acetone	VOL-91-5002	EPA SW-846 5035 & 8260	(P&T)GC/MS
Dichloroethylene, 1,1-	VOL-91-5002	EPA SW-846 5035 & 8260	(P&T)GC/MS
Methylene Chloride	VOL-91-5002	EPA SW-846 5035 & 8260	(P&T)GC/MS
Dichloroethylene, Trans- 1,2-	VOL-91-5002	EPA SW-846 5035 & 8260	(P&T)GC/MS
Methyl tert-butyl Ether	VOL-91-5002	EPA SW-846 5035 & 8260	(P&T)GC/MS
Dichloroethane, 1,1-	VOL-91-5002	EPA SW-846 5035 & 8260	(P&T)GC/MS
Methyl Ethyl Ketone	VOL-91-5002	EPA SW-846 5035 & 8260	(P&T)GC/MS
Dichloroethylene, Cis- 1,2-	VOL-91-5002	EPA SW-846 5035 & 8260	(P&T)GC/MS
Chloroform	VOL-91-5002	EPA SW-846 5035 & 8260	(P&T)GC/MS
Dichloroethane, 1,2-	VOL-91-5002	EPA SW-846 5035 & 8260	(P&T)GC/MS
Trichloroethane, 1,1,1-	VOL-91-5002	EPA SW-846 5035 & 8260	(P&T)GC/MS
Carbon Tetrachloride	VOL-91-5002	EPA SW-846 5035 & 8260	(P&T)GC/MS
Benzene	VOL-91-5002	modified from EPA 5035C and EPA 8260D	(P&T)GC/MS
Dichloropropane, 1,2-	VOL-91-5002	EPA SW-846 5035 & 8260	(P&T)GC/MS
Trichloroethylene	VOL-91-5002	EPA SW-846 5035 & 8260	(P&T)GC/MS
Bromodichloromethane	VOL-91-5002	EPA SW-846 5035 & 8260	(P&T)GC/MS
Methyl Isobutyl Ketone	VOL-91-5002	EPA SW-846 5035 & 8260	(P&T)GC/MS
Trichloroethane, 1,1,1,2-	VOL-91-5002	EPA SW-846 5035 & 8260	(P&T)GC/MS
Toluene	VOL-91-5002	EPA SW-846 5035 & 8260	(P&T)GC/MS
Dibromochloromethane	VOL-91-5002	EPA SW-846 5035 & 8260	(P&T)GC/MS
Ethylene Dibromide	VOL-91-5002	EPA SW-846 5035 & 8260	(P&T)GC/MS
Tetrachloroethylene	VOL-91-5002	EPA SW-846 5035 & 8260	(P&T)GC/MS
Tetrachloroethane, 1,1,1,2-	VOL-91-5002	EPA SW-846 5035 & 8260	(P&T)GC/MS
Chlorobenzene	VOL-91-5002	EPA SW-846 5035 & 8260	(P&T)GC/MS
Ethylbenzene	VOL-91-5002	EPA SW-846 5035 & 8260	(P&T)GC/MS
Bromoform	VOL-91-5002	EPA SW-846 5035 & 8260	(P&T)GC/MS
Styrene	VOL-91-5002	EPA SW-846 5035 & 8260	(P&T)GC/MS
Tetrachloroethane, 1,1,1,2,2-	VOL-91-5002	EPA SW-846 5035 & 8260	(P&T)GC/MS
Dichlorobenzene, 1,3-	VOL-91-5002	EPA SW-846 5035 & 8260	(P&T)GC/MS
Dichlorobenzene, 1,4-	VOL-91-5002	EPA SW-846 5035 & 8260	(P&T)GC/MS
Dichlorobenzene, 1,2-	VOL-91-5002	EPA SW-846 5035 & 8260	(P&T)GC/MS
Xylenes (Total)	VOL-91-5002	EPA SW-846 5035 & 8260	(P&T)GC/MS
1,3-Dichloropropene (Cis + Trans)	VOL-91-5002	EPA SW-846 5035 & 8260	(P&T)GC/MS
Hexane, n-	VOL-91-5002	EPA SW-846 5035 & 8260	(P&T)GC/MS
Toluene-d8	VOL-91-5002	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
4-Bromofluorobenzene	VOL-91-5002	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS

Work Order #: **217836976**

Cooler Quantity: **1 Large**

Arrival Temperatures: **1.9 | 2.1 | 2.3**

Custody Seal Intact:  Yes  No  N/A

Notes: **See file**

## Chain of Custody Record

If this is a Drinking Water sample, please use Drinking Water Chain of Custody Form (potable water consumed by humans)

**Report Information:**

Company: **WSP Inc.**

Contact: **Vanessa Oetinger**

Address: **2 International Blvd, Etobicoke**

Phone: **437-240-3869** Fax: \_\_\_\_\_

Reports to be sent to:

1. Email: **vanessa.oetinger@wsp.com**

2. Email: **matt.roy@wsp.com**

**Regulatory Requirements:**  
(Please check all applicable boxes)

Regulation 153/04  Excess Soils R406  Sewer Use  
 Sanitary  Storm

Table 1 Indicate One  
 Ind/Com  Res/Park  Agriculture

Table \_\_\_\_\_ Indicate One  
 Region \_\_\_\_\_

Regulation 558  Prov. Water Quality Objectives (PWQO)

Soil Texture (Check One)  
 Coarse  CCME  Other

Fine  \_\_\_\_\_ Indicate One

**Turnaround Time (TAT) Required:**

**Regular TAT**  5 to 7 Business Days

**Rush TAT** (Rush Surcharges Apply)

3 Business Days  2 Business Days  Next Business Day

**OR** Date Required (Rush Surcharges May Apply): \_\_\_\_\_

**Project Information:**

Project: **211-60139-00**

Site Location: **ORBY Rail**

Sampled By: **Matthew Roy**

AGAT Quote #: \_\_\_\_\_ PO: \_\_\_\_\_

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

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

Report Guideline on **Certificate of Analysis**  Yes  No

**Invoice Information:**

Bill To Same: Yes  No

Company: \_\_\_\_\_

Contact: \_\_\_\_\_

Address: \_\_\_\_\_

Email: **payables.ontario@wsp.com**

**Sample Matrix Legend**

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

Please provide prior notification for rush TAT  
 \*TAT is exclusive of weekends and statutory holidays

**For 'Same Day' analysis, please contact your AGAT CPM**

Sample Identification	Date Sampled	Time Sampled	# of Containers	Sample Matrix	Comments/ Special Instructions	Y / N	0. Reg 153				0. Reg 558		0. Reg 406		Salt - EC/SAR	OC Pesticides	Hold Sample	Potentially Hazardous or High Concentration (Y/N)
							Metals & Inorganics	Metals - <input type="checkbox"/> CrVI, <input type="checkbox"/> Hg, <input type="checkbox"/> HWSB	BTEX, F1-F4 PHCs	Analyze F4G if required <input type="checkbox"/> Yes <input type="checkbox"/> No	PAHs	PCBS	VOC	Landfill Disposal Characterization TOLP: <input type="checkbox"/> M&I <input type="checkbox"/> VOCs <input type="checkbox"/> ABNs <input type="checkbox"/> Biop <input type="checkbox"/> PCBs				
BH21-7 SS1	11/29/21	PM	2	S														
BH21-7 SS2		PM	1	S			X											
BH21-7 SS5		PM	2	S				X				X						
BH21-7 SS7		PM	2	S				X				X					X	
BH21-8 SS1		AM	1	S					X									
BH21-8 SS1		AM	1	S						X						X	X	
BH21-8 SS2		AM	1	S			X											
BH21-8 SS7		AM	2	S				X				X						
BH21-8 SS8		AM	2	S				X				X					X	

Samples Relinquished By (Print Name and Sign): **Matthew Roy** Date: **11/29/21** Time: **1400**

Samples Received By (Print Name and Sign): **NEAL G** Date: \_\_\_\_\_ Time: \_\_\_\_\_

Page **1** of **1**

No: **T 126073**





CLIENT NAME: WSP CANADA INC.  
2 INTERNATIONAL BLVD SUITE 201  
ETOBICOKE, ON M9W1A2  
(416) 798-0065

ATTENTION TO: Marsad Jafar  
PROJECT: 211-10139-00

AGAT WORK ORDER: 21T839088

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

WATER ANALYSIS REVIEWED BY: Nivine Basily, Inorganics Report Writer

DATE REPORTED: Dec 15, 2021

PAGES (INCLUDING COVER): 20

VERSION\*: 1

Should you require any information regarding this analysis please contact your client services representative at (905) 712-5100

\*Notes

Disclaimer:

- All work conducted herein has been done using accepted standard protocols, and generally accepted practices and methods. AGAT test methods may incorporate modifications from the specified reference methods to improve performance.
- All samples will be disposed of within 30 days after receipt unless a Long Term Storage Agreement is signed and returned. Some specialty analysis may be exempt, please contact your Client Project Manager for details.
- AGAT's liability in connection with any delay, performance or non-performance of these services is only to the Client and does not extend to any other third party. Unless expressly agreed otherwise in writing, AGAT's liability is limited to the actual cost of the specific analysis or analyses included in the services.
- This Certificate shall not be reproduced except in full, without the written approval of the laboratory.
- The test results reported herewith relate only to the samples as received by the laboratory.
- Application of guidelines is provided "as is" without warranty of any kind, either expressed or implied, including, but not limited to, warranties of merchantability, fitness for a particular purpose, or non-infringement. AGAT assumes no responsibility for any errors or omissions in the guidelines contained in this document.
- All reportable information as specified by ISO/IEC 17025:2017 is available from AGAT Laboratories upon request.



## Certificate of Analysis

AGAT WORK ORDER: 21T839088

PROJECT: 211-10139-00

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

CLIENT NAME: WSP CANADA INC.

ATTENTION TO: Marsad Jafar

SAMPLING SITE:

SAMPLED BY:

### O. Reg. 153(511) - OC Pesticides + PCBs (Water)

DATE RECEIVED: 2021-12-02

DATE REPORTED: 2021-12-15

		SAMPLE DESCRIPTION:		BH21-7	
		SAMPLE TYPE:		Water	
		DATE SAMPLED:		2021-12-02	
Parameter	Unit	G / S	RDL	3296850	
Gamma-Hexachlorocyclohexane	ug/L	0.01	0.01	<0.01	
Heptachlor	ug/L	0.01	0.01	<0.01	
Aldrin	ug/L	0.01	0.01	<0.01	
Heptachlor Epoxide	ug/L	0.01	0.01	<0.01	
Endosulfan I	µg/L		0.05	<0.05	
Endosulfan II	µg/L		0.05	<0.05	
Endosulfan	ug/L	0.05	0.05	<0.05	
alpha - chlordane	µg/L		0.1	<0.1	
gamma-Chlordane	µg/L		0.2	<0.2	
Chlordane	ug/L	0.06	0.04	<0.04	
op'-DDE	µg/L		0.01	<0.01	
pp'-DDE	µg/L		0.01	<0.01	
DDE	ug/L		0.01	<0.01	
op'-DDD	µg/L		0.05	<0.05	
pp'-DDD	µg/L		0.05	<0.05	
DDD	ug/L	1.8	0.05	<0.05	
op'-DDT	µg/L		0.04	<0.04	
pp'-DDT	µg/L		0.05	<0.05	
DDT	ug/L		0.04	<0.04	
Dieldrin	ug/L	0.05	0.02	<0.02	
Endrin	ug/L	0.05	0.05	<0.05	
Methoxychlor	ug/L	0.05	0.04	<0.04	
Hexachlorobenzene	ug/L	0.01	0.01	<0.01	
Hexachlorobutadiene	ug/L	0.01	0.01	<0.01	
Hexachloroethane	ug/L	0.01	0.01	<0.01	
Aroclor 1242	ug/L		0.1	<0.1	
Aroclor 1248	ug/L		0.1	<0.1	
Aroclor 1254	ug/L		0.1	<0.1	
Aroclor 1260	ug/L		0.1	<0.1	
Polychlorinated Biphenyls	ug/L	0.2	0.1	<0.1	

Certified By:



## Certificate of Analysis

AGAT WORK ORDER: 21T839088

PROJECT: 211-10139-00

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

CLIENT NAME: WSP CANADA INC.

ATTENTION TO: Marsad Jafar

SAMPLING SITE:

SAMPLED BY:

### O. Reg. 153(511) - OC Pesticides + PCBs (Water)

DATE RECEIVED: 2021-12-02

DATE REPORTED: 2021-12-15

SAMPLE DESCRIPTION:		BH21-7	
SAMPLE TYPE:		Water	
DATE SAMPLED:		2021-12-02	
Surrogate	Unit	Acceptable Limits	3296850
TCMX	%	50-140	73
Decachlorobiphenyl	%	50-140	101

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 1: Full Depth Background Site Condition Standards - Ground Water - All Types of Property Uses  
 Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

3296850 DDT total is a calculated parameter. The calculated value is the sum of op'DDT and pp'DDT.  
 DDD total is a calculated parameter. The calculated value is the sum of op'DDD and pp'DDD.  
 DDE total is a calculated parameter. The calculated value is the sum of op'DDE and pp'DDE.  
 Endosulfan total is a calculated parameter. The calculated value is the sum of Endosulfan I and Endosulfan II.  
 Chlordane total is a calculated parameter. The calculated value is the sum of Alpha-Chlordane and Gamma-Chlordane.  
 PCB total is a calculated parameter. The calculated value is the sum of Aroclor 1242, Aroclor 1248, Aroclor 1254 and Aroclor 1260.  
 The calculated parameters are non-accredited. The parameters that are components of the calculation are accredited.

Analysis performed at AGAT Toronto (unless marked by \*)

Certified By:





## Certificate of Analysis

AGAT WORK ORDER: 21T839088

PROJECT: 211-10139-00

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

CLIENT NAME: WSP CANADA INC.

ATTENTION TO: Marsad Jafar

SAMPLING SITE:

SAMPLED BY:

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

DATE RECEIVED: 2021-12-02

DATE REPORTED: 2021-12-15

Parameter	Unit	SAMPLE DESCRIPTION:		BH21-7	BH21-8	QAQC-2
		SAMPLE TYPE:		Water	Water	Water
		DATE SAMPLED:		2021-12-02	2021-12-02	2021-12-02
	G / S	RDL	3296850	3296853	3296858	
Naphthalene	µg/L	7	0.20	<0.20	<0.20	<0.20
Acenaphthylene	µg/L	1	0.20	<0.20	<0.20	<0.20
Acenaphthene	µg/L	4.1	0.20	<0.20	<0.20	<0.20
Fluorene	µg/L	120	0.20	<0.20	<0.20	<0.20
Phenanthrene	µg/L	0.1	0.10	<0.10	<0.10	<0.10
Anthracene	µg/L	0.1	0.10	<0.10	<0.10	<0.10
Fluoranthene	µg/L	0.4	0.20	<0.20	<0.20	<0.20
Pyrene	µg/L	0.2	0.20	<0.20	<0.20	<0.20
Benzo(a)anthracene	µg/L	0.2	0.20	<0.20	<0.20	<0.20
Chrysene	µg/L	0.1	0.10	<0.10	<0.10	<0.10
Benzo(b)fluoranthene	µg/L	0.1	0.10	<0.10	<0.10	<0.10
Benzo(k)fluoranthene	µg/L	0.1	0.10	<0.10	<0.10	<0.10
Benzo(a)pyrene	µg/L	0.01	0.01	<0.01	<0.01	<0.01
Indeno(1,2,3-cd)pyrene	µg/L	0.2	0.20	<0.20	<0.20	<0.20
Dibenz(a,h)anthracene	µg/L	0.2	0.20	<0.20	<0.20	<0.20
Benzo(g,h,i)perylene	µg/L	0.2	0.20	<0.20	<0.20	<0.20
2-and 1-methyl Naphthalene	µg/L	2	0.20	<0.20	<0.20	<0.20
Sediment				No	No	No
Surrogate	Unit	Acceptable Limits				
Naphthalene-d8	%	50-140		78	109	105
Acridine-d9	%	50-140		82	83	83
Terphenyl-d14	%	50-140		99	92	77

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 1: Full Depth Background Site Condition Standards - Ground Water - All Types of Property Uses  
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

3296850-3296858 Note: The result for Benzo(b)Fluoranthene is the total of the Benzo(b)&(j)Fluoranthene isomers because the isomers co-elute on the GC column.  
2- and 1-Methyl Naphthalene is a calculated parameter. The calculated value is the sum of 2-Methyl Naphthalene and 1-Methyl Naphthalene. The calculated parameter is non-accredited. The parameters that are components of the calculation are accredited.  
Sediment parameter is comment only based on visual inspection of the sample prior to extraction and is not an accredited test.

Analysis performed at AGAT Toronto (unless marked by \*)

Certified By:



## Certificate of Analysis

AGAT WORK ORDER: 21T839088

PROJECT: 211-10139-00

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

CLIENT NAME: WSP CANADA INC.

ATTENTION TO: Marsad Jafar

SAMPLING SITE:

SAMPLED BY:

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

DATE RECEIVED: 2021-12-02

DATE REPORTED: 2021-12-15

Parameter	Unit	SAMPLE DESCRIPTION:		BH21-7	BH21-8
		G / S	RDL	3296850	3296853
F1 (C6-C10)	µg/L	420	25	<25	<25
F1 (C6 to C10) minus BTEX	µg/L	420	25	<25	<25
F2 (C10 to C16)	µg/L	150	100	<100	<100
F2 (C10 to C16) minus Naphthalene	µg/L		100	<100	<100
F3 (C16 to C34)	µg/L	500	100	<100	<100
F3 (C16 to C34) minus PAHs	µg/L		100	<100	<100
F4 (C34 to C50)	µg/L	500	100	<100	<100
Gravimetric Heavy Hydrocarbons	µg/L		500	NA	NA
Sediment				NO	NO
Surrogate	Unit	Acceptable Limits			
Toluene-d8	% Recovery	50-140		101	71.2
Terphenyl	% Recovery	60-140		79	85

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 1: Full Depth Background Site Condition Standards - Ground Water - All Types of Property Uses  
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

3296850-3296853 The C6-C10 fraction is calculated using toluene response factor.  
C6-C10 (F1 minus BTEX) is a calculated parameter. The calculated value is F1 minus BTEX. The calculated parameter is non-accredited. The parameters that are components of the calculation are accredited.  
The C10 - C16, C16 - C34, and C34 - C50 fractions are calculated using the average response factor for n-C10, n-C16, and n-C34.  
Gravimetric Heavy Hydrocarbons are not included in the Total C16-C50 and are only determined if the chromatogram of the C34 - C50 hydrocarbons indicates that hydrocarbons >C50 are present. The chromatogram has returned to baseline by the retention time of nC50.  
Total C6 - C50 results are corrected for BTEX and PAH contributions.  
C>10 - C16 (F2- Naphthalene) is a calculated parameter. The calculated value is F2 - Naphthalene.  
C>16 - C34 (F3-PAH) is a calculated parameter. The calculated value is F3-PAH (PAH: sum of Phenanthrene, Benzo(a)anthracene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Benzo(a)pyrene, Fluoranthene, Dibenzo(a,h)anthracene, Indeno(1,2,3-c,d)pyrene and Pyrene).  
This method complies with the Reference Method for the CWS PHC and is validated for use in the laboratory.  
nC10, nC16 and nC34 response factors are within 10% of their average.  
C50 response factor is within 70% of nC10 + nC16 + nC34 average.  
Linearity is within 15%.  
Extraction and holding times were met for this sample.

Sediment parameter is comment only based on visual inspection of the sample prior to extraction and is not an accredited test.

Analysis performed at AGAT Toronto (unless marked by \*)

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AGAT WORK ORDER: 21T839088

PROJECT: 211-10139-00

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CLIENT NAME: WSP CANADA INC.

ATTENTION TO: Marsad Jafar

SAMPLING SITE:

SAMPLED BY:

### O. Reg. 153(511) - PHCs F1/BTEX (Water)

DATE RECEIVED: 2021-12-02

DATE REPORTED: 2021-12-15

Parameter		Unit	G / S	RDL	3296855
SAMPLE DESCRIPTION: QAQC-1 SAMPLE TYPE: Water DATE SAMPLED: 2021-12-02					
Benzene		µg/L	0.5	0.20	<0.20
Toluene		µg/L	0.8	0.20	<0.20
Ethylbenzene		µg/L	0.5	0.10	<0.10
m & p-Xylene		µg/L		0.20	<0.20
o-Xylene		µg/L		0.10	<0.10
Xylenes (Total)		µg/L	72	0.20	<0.20
F1 (C6-C10)		µg/L	420	25	<25
F1 (C6 to C10) minus BTEX		µg/L	420	25	<25
Surrogate		Unit	Acceptable Limits		
Toluene-d8		% Recovery	60-140		71.8

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 1: Full Depth Background Site Condition Standards - Ground Water - All Types of Property Uses  
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

3296855 The C6-C10 fraction is calculated using Toluene response factor.  
Total C6-C10 results are corrected for BTEX contributions.  
Xylenes total is a calculated parameter. The calculated value is the sum of m&p-Xylene and o-Xylene.  
C6-C10 (F1 minus BTEX) is a calculated parameter. The calculated value is F1 minus BTEX.  
The calculated parameters are non-accredited. The parameters that are components of the calculation are accredited.  
This method complies with the Reference Method for the CWS PHC and is validated for use in the laboratory.  
nC6 and nC10 response factors are within 30% of Toluene response factor.  
Extraction and holding times were met for this sample.  
NA = Not Applicable

Analysis performed at AGAT Toronto (unless marked by \*)

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## Certificate of Analysis

AGAT WORK ORDER: 21T839088

PROJECT: 211-10139-00

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CLIENT NAME: WSP CANADA INC.

ATTENTION TO: Marsad Jafar

SAMPLING SITE:

SAMPLED BY:

### O. Reg. 153(511) - VOCs (Water)

DATE RECEIVED: 2021-12-02

DATE REPORTED: 2021-12-15

Parameter	Unit	SAMPLE DESCRIPTION:		BH21-7	BH21-8
		SAMPLE TYPE:		Water	Water
		DATE SAMPLED:		2021-12-02	2021-12-02
		G / S	RDL	3296850	3296853
Dichlorodifluoromethane	µg/L	590	0.20	<0.20	<0.20
Vinyl Chloride	µg/L	0.5	0.17	<0.17	<0.17
Bromomethane	µg/L	0.89	0.20	<0.20	<0.20
Trichlorofluoromethane	µg/L	150	0.40	<0.40	<0.40
Acetone	µg/L	2700	1.0	<1.0	<1.0
1,1-Dichloroethylene	µg/L	0.5	0.30	<0.30	<0.30
Methylene Chloride	µg/L	5	0.30	<0.30	<0.30
trans- 1,2-Dichloroethylene	µg/L	1.6	0.20	<0.20	<0.20
Methyl tert-butyl ether	µg/L	15	0.20	<0.20	<0.20
1,1-Dichloroethane	µg/L	0.5	0.30	<0.30	<0.30
Methyl Ethyl Ketone	µg/L	400	1.0	<1.0	<1.0
cis- 1,2-Dichloroethylene	µg/L	1.6	0.20	<0.20	<0.20
Chloroform	µg/L	2	0.20	<0.20	<0.20
1,2-Dichloroethane	µg/L	0.5	0.20	<0.20	<0.20
1,1,1-Trichloroethane	µg/L	0.5	0.30	<0.30	<0.30
Carbon Tetrachloride	µg/L	0.2	0.20	<0.20	<0.20
Benzene	µg/L	0.5	0.20	<0.20	<0.20
1,2-Dichloropropane	µg/L	0.5	0.20	<0.20	<0.20
Trichloroethylene	µg/L	0.5	0.20	<0.20	<0.20
Bromodichloromethane	µg/L	2	0.20	<0.20	<0.20
Methyl Isobutyl Ketone	µg/L	640	1.0	<1.0	<1.0
1,1,2-Trichloroethane	µg/L	0.5	0.20	<0.20	<0.20
Toluene	µg/L	0.8	0.20	<0.20	<0.20
Dibromochloromethane	µg/L	2	0.10	<0.10	<0.10
Ethylene Dibromide	µg/L	0.2	0.10	<0.10	<0.10
Tetrachloroethylene	µg/L	0.5	0.20	<0.20	<0.20
1,1,1,2-Tetrachloroethane	µg/L	1.1	0.10	<0.10	<0.10
Chlorobenzene	µg/L	0.5	0.10	<0.10	<0.10
Ethylbenzene	µg/L	0.5	0.10	<0.10	<0.10
m & p-Xylene	µg/L		0.20	<0.20	<0.20

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## Certificate of Analysis

AGAT WORK ORDER: 21T839088

PROJECT: 211-10139-00

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CLIENT NAME: WSP CANADA INC.

ATTENTION TO: Marsad Jafar

SAMPLING SITE:

SAMPLED BY:

### O. Reg. 153(511) - VOCs (Water)

DATE RECEIVED: 2021-12-02

DATE REPORTED: 2021-12-15

Parameter	Unit	SAMPLE DESCRIPTION:		BH21-7	BH21-8
		G / S	RDL	3296850	3296853
Bromoform	µg/L	5	0.10	<0.10	<0.10
Styrene	µg/L	0.5	0.10	<0.10	<0.10
1,1,2,2-Tetrachloroethane	µg/L	0.5	0.10	<0.10	<0.10
o-Xylene	µg/L		0.10	<0.10	<0.10
1,3-Dichlorobenzene	µg/L	0.5	0.10	<0.10	<0.10
1,4-Dichlorobenzene	µg/L	0.5	0.10	<0.10	<0.10
1,2-Dichlorobenzene	µg/L	0.5	0.10	<0.10	<0.10
1,3-Dichloropropene	µg/L	0.5	0.30	<0.30	<0.30
Xylenes (Total)	µg/L	72	0.20	<0.20	<0.20
n-Hexane	µg/L	5	0.20	<0.20	<0.20
Surrogate	Unit	Acceptable Limits			
Toluene-d8	% Recovery	50-140		69	86
4-Bromofluorobenzene	% Recovery	50-140		101	96

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 1: Full Depth Background Site Condition Standards - Ground Water - All Types of Property Uses  
 Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.  
 3296850-3296853 Xylenes total is a calculated parameter. The calculated value is the sum of m&p-Xylene and o-Xylene.  
 1,3-Dichloropropene total is a calculated parameter. The calculated value is the sum of Cis-1,3-Dichloropropene and Trans-1,3-Dichloropropene.  
 The calculated parameter is non-accredited. The parameters that are components of the calculation are accredited.

Analysis performed at AGAT Toronto (unless marked by \*)

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CLIENT NAME: WSP CANADA INC.

ATTENTION TO: Marsad Jafar

SAMPLING SITE:

SAMPLED BY:

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

DATE RECEIVED: 2021-12-02

DATE REPORTED: 2021-12-15

Parameter	Unit	SAMPLE DESCRIPTION:		BH21-7	BH21-8	
		SAMPLE TYPE:		Water	Water	
		DATE SAMPLED:		2021-12-02	2021-12-02	
		G / S	RDL	3296850	RDL	3296853
Dissolved Antimony	µg/L	1.5	1.0	<1.0	1.0	<1.0
Dissolved Arsenic	µg/L	13	1.0	<1.0	1.0	4.3
Dissolved Barium	µg/L	610	2.0	254	2.0	109
Dissolved Beryllium	µg/L	0.5	0.50	<0.50	0.50	<0.50
Dissolved Boron	µg/L	1700	10.0	362	10.0	131
Dissolved Cadmium	µg/L	0.5	0.20	<0.20	0.20	<0.20
Dissolved Chromium	µg/L	11	2.0	<2.0	2.0	<2.0
Dissolved Cobalt	µg/L	3.8	0.50	0.52	0.50	0.63
Dissolved Copper	µg/L	5	1.0	1.9	1.0	<1.0
Dissolved Lead	µg/L	1.9	0.50	<0.50	0.50	<0.50
Dissolved Molybdenum	µg/L	23	0.50	14.2	0.50	7.84
Dissolved Nickel	µg/L	14	1.0	2.8	1.0	9.7
Dissolved Selenium	µg/L	5	1.0	<1.0	1.0	<1.0
Dissolved Silver	µg/L	0.3	0.20	<0.20	0.20	<0.20
Dissolved Thallium	µg/L	0.5	0.30	<0.30	0.30	<0.30
Dissolved Uranium	µg/L	8.9	0.50	3.19	0.50	1.11
Dissolved Vanadium	µg/L	3.9	0.40	1.42	0.40	0.62
Dissolved Zinc	µg/L	160	5.0	<5.0	5.0	<5.0
Mercury	µg/L	0.1	0.02	<0.02	0.02	<0.02
Chromium VI	µg/L	25	2	<2	2	<2
Cyanide, Free	µg/L	5	2	<2	2	<2
Dissolved Sodium	µg/L	490000	250	417000	50	23000
Chloride	µg/L	790000	100	768000	100	72700
Electrical Conductivity	uS/cm	NA	2	2900	2	934
pH	pH Units		NA	7.97	NA	7.99

Certified By:



*Nvine Basly*





**AGAT** Laboratories

# Certificate of Analysis

AGAT WORK ORDER: 21T839088

PROJECT: 211-10139-00

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CLIENT NAME: WSP CANADA INC.

ATTENTION TO: Marsad Jafar

SAMPLING SITE:

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

DATE RECEIVED: 2021-12-02

DATE REPORTED: 2021-12-15

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 1: Full Depth Background Site Condition Standards - Ground Water - All Types of Property Uses  
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

3296850-3296853 Metals analysis completed on a filtered sample.

Dilution required, RDL has been increased accordingly.

Analysis performed at AGAT Toronto (unless marked by \*)

Certified By:



*Marsad Jafar*

## Quality Assurance

CLIENT NAME: WSP CANADA INC.

AGAT WORK ORDER: 21T839088

PROJECT: 211-10139-00

ATTENTION TO: Marsad Jafar

SAMPLING SITE:

SAMPLED BY:

Trace Organics Analysis															
RPT Date: Dec 15, 2021			DUPLICATE				Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE		MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Measured Value		Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper

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

F1 (C6-C10)	3300342		<25	<25	NA	< 25	120%	60%	140%	106%	60%	140%	101%	60%	140%
F2 (C10 to C16)	3296850	3296850	< 100	< 100	NA	< 100	78%	60%	140%	74%	60%	140%	71%	60%	140%
F3 (C16 to C34)	3296850	3296850	< 100	< 100	NA	< 100	84%	60%	140%	76%	60%	140%	75%	60%	140%
F4 (C34 to C50)	3296850	3296850	< 100	< 100	NA	< 100	79%	60%	140%	75%	60%	140%	76%	60%	140%

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

Naphthalene	3253224		< 0.20	< 0.20	NA	< 0.20	105%	50%	140%	78%	50%	140%	77%	50%	140%
Acenaphthylene	3253224		< 0.20	< 0.20	NA	< 0.20	98%	50%	140%	82%	50%	140%	107%	50%	140%
Acenaphthene	3253224		< 0.20	< 0.20	NA	< 0.20	105%	50%	140%	71%	50%	140%	81%	50%	140%
Fluorene	3253224		< 0.20	< 0.20	NA	< 0.20	86%	50%	140%	92%	50%	140%	92%	50%	140%
Phenanthrene	3253224		< 0.10	< 0.10	NA	< 0.10	98%	50%	140%	88%	50%	140%	85%	50%	140%
Anthracene	3253224		< 0.10	< 0.10	NA	< 0.10	85%	50%	140%	93%	50%	140%	78%	50%	140%
Fluoranthene	3253224		< 0.20	< 0.20	NA	< 0.20	99%	50%	140%	96%	50%	140%	93%	50%	140%
Pyrene	3253224		< 0.20	< 0.20	NA	< 0.20	78%	50%	140%	96%	50%	140%	99%	50%	140%
Benzo(a)anthracene	3253224		< 0.20	< 0.20	NA	< 0.20	96%	50%	140%	94%	50%	140%	96%	50%	140%
Chrysene	3253224		< 0.10	< 0.10	NA	< 0.10	86%	50%	140%	114%	50%	140%	84%	50%	140%
Benzo(b)fluoranthene	3253224		< 0.10	< 0.10	NA	< 0.10	92%	50%	140%	76%	50%	140%	92%	50%	140%
Benzo(k)fluoranthene	3253224		< 0.10	< 0.10	NA	< 0.10	98%	50%	140%	92%	50%	140%	78%	50%	140%
Benzo(a)pyrene	3253224		< 0.01	< 0.01	NA	< 0.01	78%	50%	140%	105%	50%	140%	101%	50%	140%
Indeno(1,2,3-cd)pyrene	3253224		< 0.20	< 0.20	NA	< 0.20	92%	50%	140%	108%	50%	140%	105%	50%	140%
Dibenz(a,h)anthracene	3253224		< 0.20	< 0.20	NA	< 0.20	95%	50%	140%	75%	50%	140%	72%	50%	140%
Benzo(g,h,i)perylene	3253224		< 0.20	< 0.20	NA	< 0.20	91%	50%	140%	85%	50%	140%	105%	50%	140%

O. Reg. 153(511) - OC Pesticides + PCBs (Water)

Gamma-Hexachlorocyclohexane	3287115		< 0.01	< 0.01	NA	< 0.01	102%	50%	140%	98%	50%	140%	98%	50%	140%
Heptachlor	3287115		< 0.01	< 0.01	NA	< 0.01	110%	50%	140%	102%	50%	140%	102%	50%	140%
Aldrin	3287115		< 0.01	< 0.01	NA	< 0.01	103%	50%	140%	102%	50%	140%	112%	50%	140%
Heptachlor Epoxide	3287115		< 0.01	< 0.01	NA	< 0.01	109%	50%	140%	104%	50%	140%	104%	50%	140%
Endosulfan I	3287115		< 0.05	< 0.05	NA	< 0.05	108%	50%	140%	102%	50%	140%	106%	50%	140%
Endosulfan II	3287115		< 0.05	< 0.05	NA	< 0.05	113%	50%	140%	99%	50%	140%	92%	50%	140%
alpha - chlordane	3287115		< 0.1	< 0.1	NA	< 0.1	103%	50%	140%	103%	50%	140%	114%	50%	140%
gamma-Chlordane	3287115		< 0.2	< 0.2	NA	< 0.2	105%	50%	140%	102%	50%	140%	112%	50%	140%
op'-DDE	3287115		< 0.01	< 0.01	NA	< 0.01	96%	50%	140%	108%	50%	140%	109%	50%	140%
pp'-DDE	3287115		< 0.01	< 0.01	NA	< 0.01	100%	50%	140%	101%	50%	140%	110%	50%	140%
op'-DDD	3287115		< 0.05	< 0.05	NA	< 0.05	113%	50%	140%	109%	50%	140%	109%	50%	140%
pp'-DDD	3287115		< 0.05	< 0.05	NA	< 0.05	102%	50%	140%	104%	50%	140%	112%	50%	140%
op'-DDT	3287115		< 0.04	< 0.04	NA	< 0.04	102%	50%	140%	107%	50%	140%	106%	50%	140%
pp'-DDT	3287115		< 0.05	< 0.05	NA	< 0.05	91%	50%	140%	92%	50%	140%	107%	50%	140%
Dieldrin	3287115		< 0.02	< 0.02	NA	< 0.02	102%	50%	140%	109%	50%	140%	113%	50%	140%
Endrin	3287115		< 0.05	< 0.05	NA	< 0.05	109%	50%	140%	103%	50%	140%	110%	50%	140%

## Quality Assurance

CLIENT NAME: WSP CANADA INC.

AGAT WORK ORDER: 21T839088

PROJECT: 211-10139-00

ATTENTION TO: Marsad Jafar

SAMPLING SITE:

SAMPLED BY:

### Trace Organics Analysis (Continued)

RPT Date: Dec 15, 2021			DUPLICATE			Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD		Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
Methoxychlor	3287115		< 0.04	< 0.04	NA	< 0.04	92%	50%	140%	88%	50%	140%	96%	50%	140%
Hexachlorobenzene	3287115		< 0.01	< 0.01	NA	< 0.01	97%	50%	140%	96%	50%	140%	98%	50%	140%
Hexachlorobutadiene	3287115		< 0.01	< 0.01	NA	< 0.01	92%	50%	140%	97%	50%	140%	94%	50%	140%
Hexachloroethane	3287115		< 0.01	< 0.01	NA	< 0.01	87%	50%	140%	103%	50%	140%	90%	50%	140%
Aroclor 1242	3287115		< 0.1	< 0.1	NA	< 0.1	NA	60%	140%	NA	60%	140%	NA	60%	140%
Aroclor 1248	3287115		< 0.1	< 0.1	NA	< 0.1	NA	60%	140%	NA	60%	140%	NA	60%	140%
Aroclor 1254	3287115		< 0.1	< 0.1	NA	< 0.1	NA	60%	140%	NA	60%	140%	NA	60%	140%
Aroclor 1260	3287115		< 0.1	< 0.1	NA	< 0.1	NA	60%	140%	NA	60%	140%	NA	60%	140%
Polychlorinated Biphenyls	3287115		< 0.1	< 0.1	NA	< 0.1	95%	60%	140%	89%	60%	140%	98%	60%	140%
O. Reg. 153(511) - VOCs (Water)															
Dichlorodifluoromethane	3268642		< 0.20	< 0.20	NA	< 0.20	91%	50%	140%	95%	50%	140%	94%	50%	140%
Vinyl Chloride	3268642		< 0.17	< 0.17	NA	< 0.17	96%	50%	140%	102%	50%	140%	85%	50%	140%
Bromomethane	3268642		< 0.20	< 0.20	NA	< 0.20	98%	50%	140%	83%	50%	140%	85%	50%	140%
Trichlorofluoromethane	3268642		< 0.40	< 0.40	NA	< 0.40	87%	50%	140%	79%	50%	140%	91%	50%	140%
Acetone	3268642		< 1.0	< 1.0	NA	< 1.0	96%	50%	140%	100%	50%	140%	103%	50%	140%
1,1-Dichloroethylene	3268642		< 0.30	< 0.30	NA	< 0.30	93%	50%	140%	73%	60%	130%	100%	50%	140%
Methylene Chloride	3268642		< 0.30	< 0.30	NA	< 0.30	120%	50%	140%	120%	60%	130%	84%	50%	140%
trans- 1,2-Dichloroethylene	3268642		< 0.20	< 0.20	NA	< 0.20	97%	50%	140%	120%	60%	130%	84%	50%	140%
Methyl tert-butyl ether	3268642		< 0.20	< 0.20	NA	< 0.20	95%	50%	140%	117%	60%	130%	87%	50%	140%
1,1-Dichloroethane	3268642		< 0.30	< 0.30	NA	< 0.30	85%	50%	140%	110%	60%	130%	73%	50%	140%
Methyl Ethyl Ketone	3268642		< 1.0	< 1.0	NA	< 1.0	98%	50%	140%	101%	50%	140%	97%	50%	140%
cis- 1,2-Dichloroethylene	3268642		< 0.20	< 0.20	NA	< 0.20	79%	50%	140%	107%	60%	130%	118%	50%	140%
Chloroform	3268642		< 0.20	< 0.20	NA	< 0.20	98%	50%	140%	101%	60%	130%	89%	50%	140%
1,2-Dichloroethane	3268642		< 0.20	< 0.20	NA	< 0.20	116%	50%	140%	97%	60%	130%	81%	50%	140%
1,1,1-Trichloroethane	3268642		< 0.30	< 0.30	NA	< 0.30	111%	50%	140%	85%	60%	130%	112%	50%	140%
Carbon Tetrachloride	3268642		< 0.20	< 0.20	NA	< 0.20	98%	50%	140%	120%	60%	130%	84%	50%	140%
Benzene	3268642		< 0.20	< 0.20	NA	< 0.20	87%	50%	140%	106%	60%	130%	94%	50%	140%
1,2-Dichloropropane	3268642		< 0.20	< 0.20	NA	< 0.20	111%	50%	140%	97%	60%	130%	100%	50%	140%
Trichloroethylene	3268642		< 0.20	< 0.20	NA	< 0.20	105%	50%	140%	98%	60%	130%	111%	50%	140%
Bromodichloromethane	3268642		< 0.20	< 0.20	NA	< 0.20	116%	50%	140%	107%	60%	130%	99%	50%	140%
Methyl Isobutyl Ketone	3268642		< 1.0	< 1.0	NA	< 1.0	109%	50%	140%	103%	50%	140%	100%	50%	140%
1,1,2-Trichloroethane	3268642		< 0.20	< 0.20	NA	< 0.20	117%	50%	140%	97%	60%	130%	78%	50%	140%
Toluene	3268642		< 0.20	< 0.20	NA	< 0.20	100%	50%	140%	75%	60%	130%	120%	50%	140%
Dibromochloromethane	3268642		< 0.10	< 0.10	NA	< 0.10	116%	50%	140%	110%	60%	130%	105%	50%	140%
Ethylene Dibromide	3268642		< 0.10	< 0.10	NA	< 0.10	111%	50%	140%	91%	60%	130%	93%	50%	140%
Tetrachloroethylene	3268642		< 0.20	< 0.20	NA	< 0.20	104%	50%	140%	91%	60%	130%	87%	50%	140%
1,1,1,2-Tetrachloroethane	3268642		< 0.10	< 0.10	NA	< 0.10	105%	50%	140%	86%	60%	130%	104%	50%	140%
Chlorobenzene	3268642		< 0.10	< 0.10	NA	< 0.10	89%	50%	140%	70%	60%	130%	97%	50%	140%
Ethylbenzene	3268642		< 0.10	< 0.10	NA	< 0.10	74%	50%	140%	87%	60%	130%	80%	50%	140%



## Quality Assurance

 CLIENT NAME: WSP CANADA INC.  
 PROJECT: 211-10139-00  
 SAMPLING SITE:

 AGAT WORK ORDER: 21T839088  
 ATTENTION TO: Marsad Jafar  
 SAMPLED BY:

### Trace Organics Analysis (Continued)


RPT Date: Dec 15, 2021			DUPLICATE				Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Measured Value		Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits		
								Lower	Upper		Lower	Upper		Lower	Upper	
m & p-Xylene	3268642		< 0.20	< 0.20	NA	< 0.20	98%	50%	140%	92%	60%	130%	90%	50%	140%	
Bromoform	3268642		< 0.10	< 0.10	NA	< 0.10	106%	50%	140%	84%	60%	130%	88%	50%	140%	
Styrene	3268642		< 0.10	< 0.10	NA	< 0.10	76%	50%	140%	82%	60%	130%	70%	50%	140%	
1,1,2,2-Tetrachloroethane	3268642		< 0.10	< 0.10	NA	< 0.10	94%	50%	140%	77%	60%	130%	84%	50%	140%	
o-Xylene	3268642		< 0.10	< 0.10	NA	< 0.10	78%	50%	140%	78%	60%	130%	79%	50%	140%	
1,3-Dichlorobenzene	3268642		< 0.10	< 0.10	NA	< 0.10	95%	50%	140%	78%	60%	130%	73%	50%	140%	
1,4-Dichlorobenzene	3268642		< 0.10	< 0.10	NA	< 0.10	101%	50%	140%	78%	60%	130%	81%	50%	140%	
1,2-Dichlorobenzene	3268642		< 0.10	< 0.10	NA	< 0.10	98%	50%	140%	80%	60%	130%	78%	50%	140%	
n-Hexane	3268642		< 0.20	< 0.20	NA	< 0.20	93%	50%	140%	95%	60%	130%	117%	50%	140%	

Comments: When the average of the sample and duplicate results is less than 5x the RDL, the Relative Percent Difference (RPD) will be indicated as Not Applicable (NA).

#### O. Reg. 153(511) - PHCs F1/BTEX (Water)

Benzene	3300342		<0.20	<0.20	NA	< 0.20	90%	60%	140%	85%	60%	140%	104%	60%	140%
Toluene	3300342		<0.20	<0.20	NA	< 0.20	85%	60%	140%	81%	60%	140%	93%	60%	140%
Ethylbenzene	3300342		<0.10	<0.10	NA	< 0.10	85%	60%	140%	84%	60%	140%	96%	60%	140%
m & p-Xylene	3300342		<0.20	<0.20	NA	< 0.20	91%	60%	140%	103%	60%	140%	106%	60%	140%
o-Xylene	3300342		<0.10	<0.10	NA	< 0.10	104%	60%	140%	82%	60%	140%	119%	60%	140%
F1 (C6-C10)	3300342		<25	<25	NA	< 25	120%	60%	140%	106%	60%	140%	101%	60%	140%

Certified By:



## Quality Assurance

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 PROJECT: 211-10139-00  
 SAMPLING SITE:

AGAT WORK ORDER: 21T839088  
 ATTENTION TO: Marsad Jafar  
 SAMPLED BY:

Water Analysis															
RPT Date: Dec 15, 2021			DUPLICATE				Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE		MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Measured Value		Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper

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

Dissolved Antimony	3295669		< 1.0	< 1.0	0.0%	< 1.0	99%	70%	130%	105%	80%	120%	101%	70%	130%
Dissolved Arsenic	3295669		1.1	1.1	NA	< 1.0	95%	70%	130%	104%	80%	120%	108%	70%	130%
Dissolved Barium	3295669		268	264	1.5%	< 2.0	102%	70%	130%	104%	80%	120%	75%	70%	130%
Dissolved Beryllium	3295669		< 0.50	< 0.50	0.0%	< 0.50	106%	70%	130%	116%	80%	120%	112%	70%	130%
Dissolved Boron	3295669		126	121	4.6%	< 10.0	103%	70%	130%	114%	80%	120%	102%	70%	130%
Dissolved Cadmium	3295669		< 0.20	< 0.20	0.0%	< 0.20	100%	70%	130%	105%	80%	120%	108%	70%	130%
Dissolved Chromium	3295669		< 2.0	< 2.0	0.0%	< 2.0	100%	70%	130%	102%	80%	120%	105%	70%	130%
Dissolved Cobalt	3295669		5.36	4.56	16.1%	< 0.50	103%	70%	130%	102%	80%	120%	105%	70%	130%
Dissolved Copper	3295669		< 1.0	< 1.0	0.0%	< 1.0	100%	70%	130%	99%	80%	120%	108%	70%	130%
Dissolved Lead	3295669		< 0.50	< 0.50	0.0%	< 0.50	100%	70%	130%	103%	80%	120%	108%	70%	130%
Dissolved Molybdenum	3295669		< 0.50	< 0.50	0.0%	< 0.50	101%	70%	130%	106%	80%	120%	112%	70%	130%
Dissolved Nickel	3295669		8.5	7.9	7.3%	< 1.0	102%	70%	130%	107%	80%	120%	103%	70%	130%
Dissolved Selenium	3295669		< 1.0	< 1.0	0.0%	< 1.0	100%	70%	130%	111%	80%	120%	106%	70%	130%
Dissolved Silver	3295669		< 0.20	< 0.20	0.0%	< 0.20	100%	70%	130%	103%	80%	120%	109%	70%	130%
Dissolved Thallium	3295669		< 0.30	< 0.30	0.0%	< 0.30	98%	70%	130%	100%	80%	120%	104%	70%	130%
Dissolved Uranium	3295669		1.28	1.23	NA	< 0.50	105%	70%	130%	113%	80%	120%	115%	70%	130%
Dissolved Vanadium	3295669		<0.40	0.61	NA	< 0.40	101%	70%	130%	103%	80%	120%	105%	70%	130%
Dissolved Zinc	3295669		5.3	<5.0	NA	< 5.0	103%	70%	130%	99%	80%	120%	112%	70%	130%
Mercury	3295007		<0.02	<0.02	NA	< 0.02	104%	70%	130%	101%	80%	120%	93%	70%	130%
Chromium VI	3285019		<2	<2	NA	< 2	103%	70%	130%	104%	80%	120%	110%	70%	130%
Cyanide, Free	3275528		<2	<2	NA	< 2	107%	70%	130%	103%	80%	120%	87%	70%	130%
Dissolved Sodium Chloride	3296853	3296853	23000	23100	0.5%	< 50	97%	70%	130%	99%	80%	120%	97%	70%	130%
Electrical Conductivity	3285316		120000	118000	1.5%	< 100	98%	70%	130%	103%	80%	120%	106%	70%	130%
pH	3295423		976	964	1.2%	< 2	104%	90%	110%						
	3295423		7.68	7.78	1.3%	NA	102%	90%	110%						

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

Certified By:



*Nivine Basily*

## Method Summary

CLIENT NAME: WSP CANADA INC.

AGAT WORK ORDER: 21T839088

PROJECT: 211-10139-00

ATTENTION TO: Marsad Jafar

SAMPLING SITE:

SAMPLED BY:

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Trace Organics Analysis			
Gamma-Hexachlorocyclohexane	ORG-91-5112	modified from EPA SW-846 3510C & 8081B	GC/ECD
Heptachlor	ORG-91-5112	modified from EPA SW-846 3510C & 8081B	GC/ECD
Aldrin	ORG-91-5112	modified from EPA SW-846 3510C & 8081B	GC/ECD
Heptachlor Epoxide	ORG-91-5112	modified from EPA SW-846 3510C & 8081B	GC/ECD
Endosulfan I	ORG-91-5112	modified from EPA SW-846 3510C & 8081B	GC/ECD
Endosulfan II	ORG-91-5112	modified from EPA SW-846 3510C & 8081B	GC/ECD
Endosulfan	ORG-91-5112	modified from EPA SW-846 3510C & 8081B	CALCULATION
alpha - chlordane	ORG-91-5112	modified from EPA SW-846 3510C & 8081B	GC/ECD
gamma-Chlordane	ORG-91-5112	modified from EPA SW-846 3510C & 8081B	GC/ECD
Chlordane	ORG-91-5112	modified from EPA SW-846 3510C & 8081B	CALCULATION
op'-DDE	ORG-91-5112	modified from EPA SW-846 3510C & 8081B	GC/ECD
pp'-DDE	ORG-91-5112	modified from EPA SW-846 3510C & 8081B	GC/ECD
DDE	ORG-91-5112	modified from EPA SW-846 3510C & 8081B	CALCULATION
op'-DDD	ORG-91-5112	modified from EPA SW-846 3510C & 8081B	GC/ECD
pp'-DDD	ORG-91-5112	modified from EPA SW-846 3510C & 8081B	GC/ECD
DDD	ORG-91-5112	modified from EPA SW-846 3510C & 8081B	CALCULATION
op'-DDT	ORG-91-5112	modified from EPA SW-846 3510C & 8081B	GC/ECD
pp'-DDT	ORG-91-5112	modified from EPA SW-846 3510C & 8081B	GC/ECD
DDT	ORG-91-5112	modified from EPA SW-846 3510C & 8081B	CALCULATION
Dieldrin	ORG-91-5112	modified from EPA SW-846 3510C & 8081B	GC/ECD
Endrin	ORG-91-5112	modified from EPA SW-846 3510C & 8081B	GC/ECD
Methoxychlor	ORG-91-5112	modified from EPA SW-846 3510C & 8081B	GC/ECD
Hexachlorobenzene	ORG-91-5112	modified from EPA SW-846 3510C & 8081B	GC/ECD
Hexachlorobutadiene	ORG-91-5112	modified from EPA SW-846 3510C & 8081B	GC/ECD
Hexachloroethane	ORG-91-5112	modified from EPA SW-846 3510C & 8081B	GC/ECD
Aroclor 1242	ORG-91-5112	modified from EPA SW-846 3510C & 8082A	GC/ECD
Aroclor 1248	ORG-91-5112	modified from EPA SW-846 3510C & 8082A	GC/ECD



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PROJECT: 211-10139-00

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PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Aroclor 1254	ORG-91-5112	modified from EPA SW-846 3510C & 8082A	GC/ECD
Aroclor 1260	ORG-91-5112	modified from EPA SW-846 3510C & 8082A	GC/ECD
Polychlorinated Biphenyls	ORG-91-5112	modified from EPA SW-846 3510C & 8082A	GC/ECD
TCMX	ORG-91-5112	modified from EPA SW-846 3510C & 8081B	GC/ECD
Decachlorobiphenyl	ORG-91-5112	modified from EPA SW-846 3510C & 8081B	GC/ECD
Naphthalene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Acenaphthylene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Acenaphthene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Fluorene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Phenanthrene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Anthracene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Fluoranthene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Pyrene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Benzo(a)anthracene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Chrysene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Benzo(b)fluoranthene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Benzo(k)fluoranthene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Benzo(a)pyrene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Indeno(1,2,3-cd)pyrene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Dibenz(a,h)anthracene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Benzo(g,h,i)perylene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
2-and 1-methyl Naphthalene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Naphthalene-d8	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Acridine-d9	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Terphenyl-d14	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Sediment			
F1 (C6-C10)	VOL-91-5010	modified from MOE PHC-E3421	(P&T)GC/FID
F1 (C6 to C10) minus BTEX	VOL-91-5010	modified from MOE PHC-E3421	P&T GC/FID
Toluene-d8	VOL-91-5010	modified from MOE PHC-E3421	(P&T)GC/MS
F2 (C10 to C16)	VOL-91-5010	modified from MOE PHC-E3421	GC/FID
F2 (C10 to C16) minus Naphthalene	VOL-91-5010	modified from MOE PHC-E3421	GC/FID

## Method Summary

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PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
F3 (C16 to C34)	VOL-91-5010	modified from MOE PHC-E3421	GC/FID
F3 (C16 to C34) minus PAHs	VOL-91-5010	modified from MOE PHC-E3421	GC/FID
F4 (C34 to C50)	VOL-91-5010	modified from MOE PHC-E3421	GC/FID
Gravimetric Heavy Hydrocarbons	VOL-91-5010	modified from MOE PHC-E3421	BALANCE
Terphenyl	VOL-91-5010	modified from MOE PHC-E3421	GC/FID
Benzene	VOL-91-5010	modified from EPA SW-846 5030C & 8260D	(P&T)GC/MS
Toluene	VOL-91-5010	modified from EPA SW-846 5030C & 8260D	(P&T)GC/MS
Ethylbenzene	VOL-91-5010	modified from EPA SW-846 5030C & 8260D	(P&T)GC/MS
m & p-Xylene	VOL-91-5010	modified from EPA SW-846 5030C & 8260D	(P&T)GC/MS
o-Xylene	VOL-91-5010	modified from EPA SW-846 5030C & 8260D	(P&T)GC/MS
Xylenes (Total)	VOL-91-5010	modified from EPA SW-846 5030C & 8260D	(P&T)GC/MS
F1 (C6-C10)	VOL-91-5010	modified from MOE E3421	(P&T)GC/FID
F1 (C6 to C10) minus BTEX	VOL-91-5010	modified from MOE E3421	(P&T)GC/FID
Dichlorodifluoromethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Vinyl Chloride	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Bromomethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Trichlorofluoromethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Acetone	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1-Dichloroethylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Methylene Chloride	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
trans- 1,2-Dichloroethylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Methyl tert-butyl ether	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1-Dichloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Methyl Ethyl Ketone	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
cis- 1,2-Dichloroethylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Chloroform	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,2-Dichloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1,1-Trichloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Carbon Tetrachloride	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Benzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,2-Dichloropropane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS

## Method Summary

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SAMPLED BY:

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Trichloroethylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Bromodichloromethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Methyl Isobutyl Ketone	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1,2-Trichloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Toluene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Dibromochloromethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Ethylene Dibromide	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Tetrachloroethylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1,1,2-Tetrachloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Chlorobenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Ethylbenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
m & p-Xylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Bromoform	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Styrene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1,2,2-Tetrachloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
o-Xylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,3-Dichlorobenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,4-Dichlorobenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,2-Dichlorobenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,3-Dichloropropene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Xylenes (Total)	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
n-Hexane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Toluene-d8	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
4-Bromofluorobenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS



## Method Summary

CLIENT NAME: WSP CANADA INC.

AGAT WORK ORDER: 21T839088

PROJECT: 211-10139-00

ATTENTION TO: Marsad Jafar

SAMPLING SITE:

SAMPLED BY:

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Water Analysis			
Dissolved Antimony	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Arsenic	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Barium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Beryllium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Boron	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Cadmium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Chromium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Cobalt	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Copper	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Lead	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Molybdenum	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Nickel	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Selenium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Silver	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Thallium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Uranium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Vanadium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Zinc	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Mercury	MET-93-6100	modified from EPA 245.2 and SM 3112 B	CVAAS
Chromium VI	INOR-93-6034	modified from SM 3500-CR B	LACHAT FIA
Cyanide, Free	INOR-93-6052	modified from ON MOECC E3015, SM 4500-CN- I, G-387	TECHNICON AUTO ANALYZER
Dissolved Sodium Chloride	MET-93-6105	modified from EPA 6010D	ICP/OES
Electrical Conductivity	INOR-93-6004	modified from SM 4110 B	ION CHROMATOGRAPH
pH	INOR-93-6000	SM 2510 B	PC TITRATE
	INOR-93-6000	modified from SM 4500-H+ B	PC TITRATE





CLIENT NAME: WSP CANADA INC.  
2 INTERNATIONAL BLVD SUITE 201  
ETOBICOKE, ON M9W1A2  
(416) 798-0065

ATTENTION TO: Vanessa Oetinger

PROJECT: 211-10139-00

AGAT WORK ORDER: 21T839096

SOIL ANALYSIS REVIEWED BY: Amanjot Bhela, Inorganic Lab Manager

TRACE ORGANICS REVIEWED BY: Inga Kuzmina, Trace Organics Lab Manager

DATE REPORTED: Dec 23, 2021

PAGES (INCLUDING COVER): 21

VERSION\*: 2

Should you require any information regarding this analysis please contact your client services representative at (905) 712-5100

\*Notes

VERSION 2: Version 2 supersedes work order 21T839096, Version 1, issued December 15, 2021. 924 for PAHs and 925 for O. Reg 153 M&I.

Disclaimer:

- All work conducted herein has been done using accepted standard protocols, and generally accepted practices and methods. AGAT test methods may incorporate modifications from the specified reference methods to improve performance.
- All samples will be disposed of within 30 days after receipt unless a Long Term Storage Agreement is signed and returned. Some specialty analysis may be exempt, please contact your Client Project Manager for details.
- AGAT's liability in connection with any delay, performance or non-performance of these services is only to the Client and does not extend to any other third party. Unless expressly agreed otherwise in writing, AGAT's liability is limited to the actual cost of the specific analysis or analyses included in the services.
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- All reportable information as specified by ISO/IEC 17025:2017 is available from AGAT Laboratories upon request.





## Certificate of Analysis

AGAT WORK ORDER: 21T839096

PROJECT: 211-10139-00

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

CLIENT NAME: WSP CANADA INC.

ATTENTION TO: Vanessa Oetinger

SAMPLING SITE:

SAMPLED BY:

### O. Reg. 153(511) - Metals & Inorganics (Soil)

DATE RECEIVED: 2021-12-02

DATE REPORTED: 2021-12-23

Parameter	Unit	SAMPLE DESCRIPTION:						
		G / S	RDL	BH21-2 SS2	BH21-3 SS1	QAQC-12	BH21-6 SS2	BH21-16 SS1
				Soil	Soil	Soil	Soil	Soil
				2021-12-02	2021-12-02	2021-12-02	2021-12-01	2021-12-01
				12:00	12:00	12:00	12:00	12:00
				3293886	3293919	3293920	3293925	3293929
Antimony	µg/g	1.3	0.8	<0.8	<0.8	<0.8	<0.8	2.8
Arsenic	µg/g	18	1	6	4	6	4	8
Barium	µg/g	220	2.0	89.8	77.5	52.7	54.5	88.5
Beryllium	µg/g	2.5	0.4	0.8	0.6	0.5	<0.4	0.5
Boron	µg/g	36	5	10	8	7	7	9
Boron (Hot Water Soluble)	µg/g	NA	0.10	0.42	0.12	0.17	0.17	0.50
Cadmium	µg/g	1.2	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Chromium	µg/g	70	5	20	17	15	14	35
Cobalt	µg/g	21	0.5	9.2	7.8	7.8	8.1	10.6
Copper	µg/g	92	1.0	42.9	24.8	33.3	32.0	69.0
Lead	µg/g	120	1	60	9	12	8	79
Molybdenum	µg/g	2	0.5	0.6	<0.5	<0.5	<0.5	3.7
Nickel	µg/g	82	1	19	17	22	15	31
Selenium	µg/g	1.5	0.8	<0.8	<0.8	<0.8	<0.8	0.8
Silver	µg/g	0.5	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Thallium	µg/g	1	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Uranium	µg/g	2.5	0.50	0.55	<0.50	<0.50	<0.50	<0.50
Vanadium	µg/g	86	0.4	30.4	25.5	22.4	23.8	33.8
Zinc	µg/g	290	5	95	44	43	39	468
Chromium, Hexavalent	µg/g	0.66	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Cyanide, Free	µg/g	0.051	0.040	<0.040	<0.040	<0.040	<0.040	<0.040
Mercury	µg/g	0.27	0.10	<0.10	<0.10	<0.10	<0.10	0.22
Electrical Conductivity (2:1)	mS/cm	0.57	0.005	0.353	0.216	0.185	0.327	0.290
Sodium Adsorption Ratio (2:1) (Calc.)	N/A	2.4	N/A	1.56	0.438	0.300	2.14	1.64
pH, 2:1 CaCl2 Extraction	pH Units		NA	7.29	7.25	7.32	7.61	7.50

Certified By:

*Anamjot Bhela*  




## Certificate of Analysis

AGAT WORK ORDER: 21T839096

PROJECT: 211-10139-00

5835 COOPERS AVENUE  
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CLIENT NAME: WSP CANADA INC.

ATTENTION TO: Vanessa Oetinger

SAMPLING SITE:

SAMPLED BY:

### O. Reg. 153(511) - Metals & Inorganics (Soil)

DATE RECEIVED: 2021-12-02

DATE REPORTED: 2021-12-23

- Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 1: Full Depth Background Site Condition Standards - Soil - Residential/Parkland/Institutional/Industrial/Commercial/Community Property Use  
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.
- 3293886-3293920 EC was determined on the DI water extract obtained from the 2:1 leaching procedure (2 parts DI water:1 part soil). pH was determined on the 0.01M CaCl2 extract prepared at 2:1 ratio. SAR is a calculated parameter.
- 3293925 EC was determined on the DI water extract obtained from the 2:1 leaching procedure (2 parts DI water:1 part soil). pH was determined on the 0.01M CaCl2 extract prepared at 2:1 ratio. SAR is a calculated parameter.  
Cyanide analysis was performed beyond recommended hold time.
- 3293929 EC was determined on the DI water extract obtained from the 2:1 leaching procedure (2 parts DI water:1 part soil). pH was determined on the 0.01M CaCl2 extract prepared at 2:1 ratio. SAR is a calculated parameter.
- Analysis performed at AGAT Toronto (unless marked by \*)

Certified By:





## Certificate of Analysis

AGAT WORK ORDER: 21T839096

PROJECT: 211-10139-00

5835 COOPERS AVENUE  
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CLIENT NAME: WSP CANADA INC.

ATTENTION TO: Vanessa Oetinger

SAMPLING SITE:

SAMPLED BY:

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

DATE RECEIVED: 2021-12-02

DATE REPORTED: 2021-12-23

Parameter	Unit	G / S	RDL	SAMPLE DESCRIPTION:			
				BH21-2 SS2	BH21-6 SS1	BH21-16 SS2	QAQC-10
				Soil	Soil	Soil	Soil
DATE SAMPLED:				2021-12-02	2021-12-01 12:00	2021-12-01	2021-12-01
				3293886	3293924	3293931	3293943
Naphthalene	µg/g		0.05	<0.05	<0.05	<0.05	<0.05
Acenaphthylene	µg/g		0.05	<0.05	<0.05	<0.05	<0.05
Acenaphthene	µg/g		0.05	<0.05	<0.05	<0.05	<0.05
Fluorene	µg/g		0.05	<0.05	<0.05	<0.05	<0.05
Phenanthrene	µg/g		0.05	<0.05	<0.05	<0.05	<0.05
Anthracene	µg/g		0.05	<0.05	<0.05	<0.05	<0.05
Fluoranthene	µg/g		0.05	<0.05	<0.05	<0.05	<0.05
Pyrene	µg/g		0.05	<0.05	<0.05	<0.05	<0.05
Benz(a)anthracene	µg/g		0.05	<0.05	<0.05	<0.05	<0.05
Chrysene	µg/g		0.05	<0.05	<0.05	<0.05	<0.05
Benzo(b)fluoranthene	µg/g		0.05	<0.05	<0.05	<0.05	<0.05
Benzo(k)fluoranthene	µg/g		0.05	<0.05	<0.05	<0.05	<0.05
Benzo(a)pyrene	µg/g		0.05	<0.05	<0.05	<0.05	<0.05
Indeno(1,2,3-cd)pyrene	µg/g		0.05	<0.05	<0.05	<0.05	<0.05
Dibenz(a,h)anthracene	µg/g		0.05	<0.05	<0.05	<0.05	<0.05
Benzo(g,h,i)perylene	µg/g		0.05	<0.05	<0.05	<0.05	<0.05
1 and 2 Methyl naphthalene	µg/g		0.05	<0.05	<0.05	<0.05	<0.05
Moisture Content	%		0.1	20.3	13.2	17.9	15.8
Surrogate	Unit	Acceptable Limits					
Naphthalene-d8	%		50-140	78	78	108	106
Acridine-d9	%		50-140	93	84	75	93
Terphenyl-d14	%		50-140	92	77	96	94

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

3293886-3293943 Results are based on the dry weight of the soil.

Note: The result for Benzo(b)Fluoranthene is the total of the Benzo(b)&j)Fluoranthene isomers because the isomers co-elute on the GC column.  
2- and 1-Methyl Naphthalene is a calculated parameter. The calculated value is the sum of 2-Methyl Naphthalene and 1-Methyl Naphthalene.

Analysis performed at AGAT Toronto (unless marked by \*)

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## Certificate of Analysis

AGAT WORK ORDER: 21T839096

PROJECT: 211-10139-00

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CLIENT NAME: WSP CANADA INC.

ATTENTION TO: Vanessa Oetinger

SAMPLING SITE:

SAMPLED BY:

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

DATE RECEIVED: 2021-12-02

DATE REPORTED: 2021-12-23

SAMPLE DESCRIPTION: BH21-16 SS8

SAMPLE TYPE: Soil

DATE SAMPLED: 2021-12-01

Parameter	Unit	G / S	RDL	3293947
F1 (C6 - C10)	µg/g	25	5	<5
F1 (C6 to C10) minus BTEX	µg/g	25	5	<5
F2 (C10 to C16)	µg/g	10	10	<10
F3 (C16 to C34)	µg/g	240	50	<50
F4 (C34 to C50)	µg/g	120	50	<50
Gravimetric Heavy Hydrocarbons	µg/g	120	50	NA
Moisture Content	%		0.1	9.3
Surrogate	Unit	Acceptable Limits		
Toluene-d8	% Recovery	50-140		95
Terphenyl	%	60-140		104

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 1: Full Depth Background Site Condition Standards - Soil - Residential/Parkland/Institutional/Industrial/Commercial/Community Property Use  
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

3293947 Results are based on sample dry weight.  
The C6-C10 fraction is calculated using toluene response factor.  
C6-C10 (F1 minus BTEX) is a calculated parameter. The calculated value is F1 minus BTEX. The calculated parameter is non-accredited. The parameters that are components of the calculation are accredited.  
The C10 - C16, C16 - C34, and C34 - C50 fractions are calculated using the average response factor for n-C10, n-C16, and n-C34.  
Gravimetric Heavy Hydrocarbons are not included in the Total C16-C50 and are only determined if the chromatogram of the C34 - C50 hydrocarbons indicates that hydrocarbons >C50 are present. The chromatogram has returned to baseline by the retention time of nC50.  
Total C6 - C50 results are corrected for BTEX contribution.  
This method complies with the Reference Method for the CWS PHC and is validated for use in the laboratory.  
nC6 and nC10 response factors are within 30% of Toluene response factor.  
nC10, nC16 and nC34 response factors are within 10% of their average.  
C50 response factor is within 70% of nC10 + nC16 + nC34 average.  
Linearity is within 15%.  
Extraction and holding times were met for this sample.  
Fractions 1-4 are quantified without the contribution of PAHs. Under Ontario Regulation 153, results are considered valid without determining the PAH contribution if not requested by the client.

Analysis performed at AGAT Toronto (unless marked by \*)

Certified By:



## Certificate of Analysis

AGAT WORK ORDER: 21T839096

PROJECT: 211-10139-00

5835 COOPERS AVENUE  
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CLIENT NAME: WSP CANADA INC.

ATTENTION TO: Vanessa Oetinger

SAMPLING SITE:

SAMPLED BY:

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

DATE RECEIVED: 2021-12-02

DATE REPORTED: 2021-12-23

Parameter	Unit	SAMPLE DESCRIPTION:				
		G / S	RDL	BH21-2 SS5	BH21-3 SS6	BH21-6 SS6
				Soil	Soil	Soil
				2021-12-02	2021-12-02	2021-12-01
				12:00	12:00	
				3293910	3293922	3293927
Benzene	µg/g	0.02	0.02	<0.02	<0.02	<0.02
Toluene	µg/g	0.2	0.05	<0.05	<0.05	<0.05
Ethylbenzene	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
Xylenes (Total)	µg/g	0.05	0.05	<0.05	<0.05	<0.05
F1 (C6 - C10)	µg/g	25	5	<5	<5	<5
F1 (C6 to C10) minus BTEX	µg/g	25	5	<5	<5	<5
F2 (C10 to C16)	µg/g	10	10	<10	<10	<10
F3 (C16 to C34)	µg/g	240	50	<50	<50	<50
F4 (C34 to C50)	µg/g	120	50	<50	<50	<50
Gravimetric Heavy Hydrocarbons	µg/g	120	50	NA	NA	NA
Moisture Content	%		0.1	22.0	17.6	12.7
Surrogate	Unit	Acceptable Limits				
Toluene-d8	% Recovery	60-140	90	99	108	
Terphenyl	%	60-140	85	88	89	

Certified By:



## Certificate of Analysis

AGAT WORK ORDER: 21T839096

PROJECT: 211-10139-00

5835 COOPERS AVENUE  
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CLIENT NAME: WSP CANADA INC.

ATTENTION TO: Vanessa Oetinger

SAMPLING SITE:

SAMPLED BY:

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

DATE RECEIVED: 2021-12-02

DATE REPORTED: 2021-12-23

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 1: Full Depth Background Site Condition Standards - Soil - Residential/Parkland/Institutional/Industrial/Commercial/Community Property Use  
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

3293910-3293927 Results are based on sample dry weight.  
The C6-C10 fraction is calculated using Toluene response factor.  
Xylenes is a calculated parameter. The calculated value is the sum of m&p-Xylene and o-Xylene.  
C6-C10 (F1 minus BTEX) is a calculated parameter. The calculated value is F1 minus BTEX.  
The calculated parameters are non-accredited. The parameters that are components of the calculation are accredited.  
The C10 - C16, C16 - C34, and C34 - C50 fractions are calculated using the average response factor for n-C10, n-C16, and n-C34.  
Gravimetric Heavy Hydrocarbons are not included in the Total C16-C50 and are only determined if the chromatogram of the C34 - C50 hydrocarbons indicates that hydrocarbons >C50 are present.  
The chromatogram has returned to baseline by the retention time of nC50.  
Total C6 - C50 results are corrected for BTEX contribution.  
This method complies with the Reference Method for the CWS PHC and is validated for use in the laboratory.  
nC6 and nC10 response factors are within 30% of Toluene response factor.  
nC10, nC16 and nC34 response factors are within 10% of their average.  
C50 response factor is within 70% of nC10 + nC16 + nC34 average.  
Linearity is within 15%.  
Extraction and holding times were met for this sample.  
Fractions 1-4 are quantified with the contribution of PAHs. Under Ontario Regulation 153, results are considered valid without determining the PAH contribution if not requested by the client.  
Quality Control Data is available upon request.

Analysis performed at AGAT Toronto (unless marked by \*)

Certified By:





## Certificate of Analysis

AGAT WORK ORDER: 21T839096

PROJECT: 211-10139-00

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<http://www.agatlabs.com>

CLIENT NAME: WSP CANADA INC.

ATTENTION TO: Vanessa Oetinger

SAMPLING SITE:

SAMPLED BY:

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

DATE RECEIVED: 2021-12-02

DATE REPORTED: 2021-12-23

SAMPLE DESCRIPTION: BH21-16 SS8

SAMPLE TYPE: Soil

DATE SAMPLED: 2021-12-01

3293947

Parameter	Unit	G / S	RDL	3293947
Dichlorodifluoromethane	µg/g	0.05	0.05	<0.05
Vinyl Chloride	ug/g	0.02	0.02	<0.02
Bromomethane	ug/g	0.05	0.05	<0.05
Trichlorofluoromethane	ug/g	0.25	0.05	<0.05
Acetone	ug/g	0.5	0.50	<0.50
1,1-Dichloroethylene	ug/g	0.05	0.05	<0.05
Methylene Chloride	ug/g	0.05	0.05	<0.05
Trans- 1,2-Dichloroethylene	ug/g	0.05	0.05	<0.05
Methyl tert-butyl Ether	ug/g	0.05	0.05	<0.05
1,1-Dichloroethane	ug/g	0.05	0.02	<0.02
Methyl Ethyl Ketone	ug/g	0.5	0.50	<0.50
Cis- 1,2-Dichloroethylene	ug/g	0.05	0.02	<0.02
Chloroform	ug/g	0.05	0.04	<0.04
1,2-Dichloroethane	ug/g	0.05	0.03	<0.03
1,1,1-Trichloroethane	ug/g	0.05	0.05	<0.05
Carbon Tetrachloride	ug/g	0.05	0.05	<0.05
Benzene	ug/g	0.02	0.02	<0.02
1,2-Dichloropropane	ug/g	0.05	0.03	<0.03
Trichloroethylene	ug/g	0.05	0.03	<0.03
Bromodichloromethane	ug/g	0.05	0.05	<0.05
Methyl Isobutyl Ketone	ug/g	0.5	0.50	<0.50
1,1,2-Trichloroethane	ug/g	0.05	0.04	<0.04
Toluene	ug/g	0.2	0.05	<0.05
Dibromochloromethane	ug/g	0.05	0.05	<0.05
Ethylene Dibromide	ug/g	0.05	0.04	<0.04
Tetrachloroethylene	ug/g	0.05	0.05	<0.05
1,1,1,2-Tetrachloroethane	ug/g	0.05	0.04	<0.04
Chlorobenzene	ug/g	0.05	0.05	<0.05
Ethylbenzene	ug/g	0.05	0.05	<0.05
m & p-Xylene	ug/g	0.05	0.05	<0.05

Certified By:



## Certificate of Analysis

AGAT WORK ORDER: 21T839096

PROJECT: 211-10139-00

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

CLIENT NAME: WSP CANADA INC.

ATTENTION TO: Vanessa Oetinger

SAMPLING SITE:

SAMPLED BY:

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

DATE RECEIVED: 2021-12-02

DATE REPORTED: 2021-12-23

SAMPLE DESCRIPTION: BH21-16 SS8

SAMPLE TYPE: Soil

DATE SAMPLED: 2021-12-01

Parameter	Unit	G / S	RDL	3293947
Bromoform	ug/g	0.05	0.05	<0.05
Styrene	ug/g	0.05	0.05	<0.05
1,1,2,2-Tetrachloroethane	ug/g	0.05	0.05	<0.05
o-Xylene	ug/g		0.05	<0.05
1,3-Dichlorobenzene	ug/g	0.05	0.05	<0.05
1,4-Dichlorobenzene	ug/g	0.05	0.05	<0.05
1,2-Dichlorobenzene	ug/g	0.05	0.05	<0.05
Xylenes (Total)	ug/g	0.05	0.05	<0.05
1,3-Dichloropropene (Cis + Trans)	µg/g	0.05	0.04	<0.04
n-Hexane	µg/g	0.05	0.05	<0.05
Moisture Content	%		0.1	9.3
Surrogate	Unit	Acceptable Limits		
Toluene-d8	% Recovery	50-140		94
4-Bromofluorobenzene	% Recovery	50-140		71

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 1: Full Depth Background Site Condition Standards - Soil - Residential/Parkland/Institutional/Industrial/Commercial/Community Property Use

Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

3293947 The sample was analyzed using the high level technique. The sample was extracted using methanol, a small amount of the methanol extract was diluted in water and the purge & trap GC/MS analysis was performed. Results are based on the dry weight of the soil.

Xylenes total is a calculated parameter. The calculated value is the sum of m&p-Xylene + o-Xylene.

1,3-Dichloropropene total is a calculated parameter. The calculated value is the sum of Cis-1,3-Dichloropropene and Trans-1,3-Dichloropropene.

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

Analysis performed at AGAT Toronto (unless marked by \*)

Certified By:



**Exceedance Summary**

AGAT WORK ORDER: 21T839096

PROJECT: 211-10139-00

5835 COOPERS AVENUE  
 MISSISSAUGA, ONTARIO  
 CANADA L4Z 1Y2  
 TEL (905)712-5100  
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CLIENT NAME: WSP CANADA INC.

ATTENTION TO: Vanessa Oetinger

SAMPLEID	SAMPLE TITLE	GUIDELINE	ANALYSIS PACKAGE	PARAMETER	UNIT	GUIDEVALUE	RESULT
3293929	BH21-16 SS1	ON T1 S RPI/ICC	O. Reg. 153(511) - Metals & Inorganics (Soil)	Antimony	µg/g	1.3	2.8
3293929	BH21-16 SS1	ON T1 S RPI/ICC	O. Reg. 153(511) - Metals & Inorganics (Soil)	Molybdenum	µg/g	2	3.7
3293929	BH21-16 SS1	ON T1 S RPI/ICC	O. Reg. 153(511) - Metals & Inorganics (Soil)	Zinc	µg/g	290	468



## Quality Assurance

CLIENT NAME: WSP CANADA INC.

AGAT WORK ORDER: 21T839096

PROJECT: 211-10139-00

ATTENTION TO: Vanessa Oetinger

SAMPLING SITE:

SAMPLED BY:

Soil Analysis															
RPT Date: Dec 23, 2021			DUPLICATE				Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE		MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Measured Value		Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
<b>O. Reg. 153(511) - Metals &amp; Inorganics (Soil)</b>															
Antimony	3296184		<0.8	<0.8	NA	< 0.8	134%	70%	130%	98%	80%	120%	92%	70%	130%
Arsenic	3296184		4	4	NA	< 1	113%	70%	130%	103%	80%	120%	107%	70%	130%
Barium	3296184		37.9	40.4	6.4%	< 2.0	112%	70%	130%	108%	80%	120%	108%	70%	130%
Beryllium	3296184		<0.4	<0.4	NA	< 0.4	102%	70%	130%	108%	80%	120%	109%	70%	130%
Boron	3296184		<5	<5	NA	< 5	89%	70%	130%	111%	80%	120%	112%	70%	130%
Boron (Hot Water Soluble)	3319050		0.40	0.39	NA	< 0.10	107%	60%	140%	105%	70%	130%	108%	60%	140%
Cadmium	3296184		0.7	0.8	NA	< 0.5	94%	70%	130%	102%	80%	120%	108%	70%	130%
Chromium	3296184		10	10	NA	< 5	99%	70%	130%	101%	80%	120%	110%	70%	130%
Cobalt	3296184		4.0	4.2	4.9%	< 0.5	103%	70%	130%	106%	80%	120%	106%	70%	130%
Copper	3296184		14.4	15.4	6.7%	< 1.0	100%	70%	130%	108%	80%	120%	110%	70%	130%
Lead	3296184		29	29	0.0%	< 1	103%	70%	130%	103%	80%	120%	99%	70%	130%
Molybdenum	3296184		<0.5	<0.5	NA	< 0.5	105%	70%	130%	104%	80%	120%	110%	70%	130%
Nickel	3296184		7	8	13.3%	< 1	101%	70%	130%	103%	80%	120%	102%	70%	130%
Selenium	3296184		<0.8	<0.8	NA	< 0.8	98%	70%	130%	98%	80%	120%	104%	70%	130%
Silver	3296184		<0.5	<0.5	NA	< 0.5	114%	70%	130%	102%	80%	120%	96%	70%	130%
Thallium	3296184		<0.5	<0.5	NA	< 0.5	99%	70%	130%	100%	80%	120%	96%	70%	130%
Uranium	3296184		<0.50	<0.50	NA	< 0.50	103%	70%	130%	100%	80%	120%	100%	70%	130%
Vanadium	3296184		17.6	19.0	7.7%	< 0.4	102%	70%	130%	101%	80%	120%	111%	70%	130%
Zinc	3296184		85	89	4.6%	< 5	102%	70%	130%	103%	80%	120%	112%	70%	130%
Chromium, Hexavalent	3309312		<0.2	<0.2	NA	< 0.2	102%	70%	130%	88%	80%	120%	81%	70%	130%
Cyanide, Free	3304561		<0.040	<0.040	NA	< 0.040	101%	70%	130%	97%	80%	120%	104%	70%	130%
Mercury	3296184		<0.10	<0.10	NA	< 0.10	103%	70%	130%	101%	80%	120%	101%	70%	130%
Electrical Conductivity (2:1)	3304572		0.176	0.163	7.7%	< 0.005	106%	80%	120%						
Sodium Adsorption Ratio (2:1) (Calc.)	3296184		0.060	0.062	3.3%	NA									
pH, 2:1 CaCl2 Extraction	3275481		6.60	6.84	3.6%	NA	101%	80%	120%						

Comments: NA signifies Not Applicable.

pH duplicates QA acceptance criteria was met relative as stated in Table 5-15 of Analytical Protocol document.

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

More than 90% of the elements met acceptance limits and overall data quality is acceptable for use. For a multi-element scan up to 10% of analytes may exceed the quoted limits by up to 10% absolute.

**O. Reg. 153(511) - Metals & Inorganics (Soil)**

Antimony	3347188		<0.8	<0.8	NA	< 0.8	123%	70%	130%	97%	80%	120%	78%	70%	130%
Arsenic	3347188		2	2	NA	< 1	105%	70%	130%	90%	80%	120%	97%	70%	130%
Barium	3347188		61.3	60.2	1.8%	< 2.0	96%	70%	130%	89%	80%	120%	89%	70%	130%
Beryllium	3347188		<0.4	<0.4	NA	< 0.4	87%	70%	130%	97%	80%	120%	80%	70%	130%
Boron	3347188		5	6	NA	< 5	73%	70%	130%	100%	80%	120%	86%	70%	130%
Boron (Hot Water Soluble)	3372103		0.70	0.71	1.4%	< 0.10	95%	60%	140%	95%	70%	130%	99%	60%	140%
Cadmium	3347188		<0.5	<0.5	NA	< 0.5	105%	70%	130%	100%	80%	120%	94%	70%	130%
Chromium	3347188		16	15	NA	< 5	99%	70%	130%	95%	80%	120%	99%	70%	130%

## Quality Assurance

CLIENT NAME: WSP CANADA INC.  
 PROJECT: 211-10139-00  
 SAMPLING SITE:

AGAT WORK ORDER: 21T839096  
 ATTENTION TO: Vanessa Oetinger  
 SAMPLED BY:

Soil Analysis (Continued)																
RPT Date: Dec 23, 2021			DUPLICATE				Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Measured Value		Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits		
								Lower	Upper		Lower	Upper		Lower	Upper	
Cobalt	3347188		6.2	6.1	1.6%	< 0.5	103%	70%	130%	95%	80%	120%	97%	70%	130%	
Copper	3347188		10.4	10.4	0.0%	< 1.0	91%	70%	130%	93%	80%	120%	86%	70%	130%	
Lead	3347188		6	6	0.0%	< 1	105%	70%	130%	98%	80%	120%	90%	70%	130%	
Molybdenum	3347188		<0.5	<0.5	NA	< 0.5	114%	70%	130%	105%	80%	120%	113%	70%	130%	
Nickel	3347188		12	12	0.0%	< 1	100%	70%	130%	93%	80%	120%	93%	70%	130%	
Selenium	3347188		0.9	<0.8	NA	< 0.8	96%	70%	130%	98%	80%	120%	101%	70%	130%	
Silver	3347188		<0.5	<0.5	NA	< 0.5	98%	70%	130%	94%	80%	120%	87%	70%	130%	
Thallium	3347188		<0.5	<0.5	NA	< 0.5	97%	70%	130%	96%	80%	120%	92%	70%	130%	
Uranium	3347188		<0.50	<0.50	NA	< 0.50	107%	70%	130%	95%	80%	120%	100%	70%	130%	
Vanadium	3347188		24.8	24.2	2.4%	< 0.4	103%	70%	130%	95%	80%	120%	101%	70%	130%	
Zinc	3347188		30	29	3.4%	< 5	99%	70%	130%	99%	80%	120%	87%	70%	130%	
Chromium, Hexavalent	3346586		<0.2	<0.2	NA	< 0.2	101%	70%	130%	103%	80%	120%	101%	70%	130%	
Cyanide, Free	3293925	3293925	< 0.040	< 0.040	NA	< 0.040	102%	70%	130%	98%	80%	120%	99%	70%	130%	
Mercury	3347188		<0.10	<0.10	NA	< 0.10	106%	70%	130%	98%	80%	120%	94%	70%	130%	
Electrical Conductivity (2:1)	3348804		0.251	0.268	6.6%	< 0.005	109%	80%	120%	NA			NA			
Sodium Adsorption Ratio (2:1) (Calc.)	3336543		1.31	1.32	0.8%	N/A	NA			NA			NA			
pH, 2:1 CaCl2 Extraction	3372115		7.47	7.70	3.0%	NA	99%	80%	120%	NA			NA			

Comments: NA signifies Not Applicable.  
 pH duplicates QA acceptance criteria was met relative as stated in Table 5-15 of Analytical Protocol document.  
 Duplicate NA: results are under 5X the RDL and will not be calculated.

More than 90% of the elements met acceptance limits and overall data quality is acceptable for use. For a multi-element scan up to 10% of analytes may exceed the quoted limits by up to 10% absolute.

Certified By:




## Quality Assurance

CLIENT NAME: WSP CANADA INC.  
 PROJECT: 211-10139-00  
 SAMPLING SITE:

AGAT WORK ORDER: 21T839096  
 ATTENTION TO: Vanessa Oetinger  
 SAMPLED BY:

### Trace Organics Analysis

RPT Date: Dec 23, 2021			DUPLICATE			Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD		Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper

O. Reg. 153(511) - PAHs (Soil)															
Naphthalene	3257319		< 0.05	< 0.05	NA	< 0.05	78%	50%	140%	105%	50%	140%	105%	50%	140%
Acenaphthylene	3257319		< 0.05	< 0.05	NA	< 0.05	84%	50%	140%	83%	50%	140%	98%	50%	140%
Acenaphthene	3257319		< 0.05	< 0.05	NA	< 0.05	85%	50%	140%	92%	50%	140%	83%	50%	140%
Fluorene	3257319		< 0.05	< 0.05	NA	< 0.05	105%	50%	140%	94%	50%	140%	88%	50%	140%
Phenanthrene	3257319		< 0.05	< 0.05	NA	< 0.05	98%	50%	140%	98%	50%	140%	74%	50%	140%
Anthracene	3257319		< 0.05	< 0.05	NA	< 0.05	86%	50%	140%	86%	50%	140%	82%	50%	140%
Fluoranthene	3257319		< 0.05	< 0.05	NA	< 0.05	68%	50%	140%	88%	50%	140%	91%	50%	140%
Pyrene	3257319		< 0.05	< 0.05	NA	< 0.05	84%	50%	140%	74%	50%	140%	107%	50%	140%
Benz(a)anthracene	3257319		< 0.05	< 0.05	NA	< 0.05	80%	50%	140%	85%	50%	140%	87%	50%	140%
Chrysene	3257319		< 0.05	< 0.05	NA	< 0.05	95%	50%	140%	90%	50%	140%	85%	50%	140%
Benzo(b)fluoranthene	3257319		< 0.05	< 0.05	NA	< 0.05	88%	50%	140%	105%	50%	140%	96%	50%	140%
Benzo(k)fluoranthene	3257319		< 0.05	< 0.05	NA	< 0.05	93%	50%	140%	98%	50%	140%	105%	50%	140%
Benzo(a)pyrene	3257319		< 0.05	< 0.05	NA	< 0.05	92%	50%	140%	86%	50%	140%	98%	50%	140%
Indeno(1,2,3-cd)pyrene	3257319		< 0.05	< 0.05	NA	< 0.05	105%	50%	140%	88%	50%	140%	86%	50%	140%
Dibenz(a,h)anthracene	3257319		< 0.05	< 0.05	NA	< 0.05	98%	50%	140%	74%	50%	140%	88%	50%	140%
Benzo(g,h,i)perylene	3257319		< 0.05	< 0.05	NA	< 0.05	86%	50%	140%	82%	50%	140%	80%	50%	140%
O. Reg. 153(511) - PHCs F1 - F4 (Soil)															
Benzene	3296192		<0.02	<0.02	NA	< 0.02	83%	60%	140%	87%	60%	140%	103%	60%	140%
Toluene	3296192		<0.05	<0.05	NA	< 0.05	100%	60%	140%	102%	60%	140%	81%	60%	140%
Ethylbenzene	3296192		<0.05	<0.05	NA	< 0.05	108%	60%	140%	112%	60%	140%	75%	60%	140%
m & p-Xylene	3296192		<0.05	<0.05	NA	< 0.05	98%	60%	140%	98%	60%	140%	105%	60%	140%
o-Xylene	3296192		<0.05	<0.05	NA	< 0.05	117%	60%	140%	105%	60%	140%	101%	60%	140%
F1 (C6 - C10)	3296192		<5	<5	NA	< 5	102%	60%	140%	99%	60%	140%	100%	60%	140%
F2 (C10 to C16)	3253580		47	44	NA	< 10	102%	60%	140%	85%	60%	140%	85%	60%	140%
F3 (C16 to C34)	3253580		870	650	28.9%	< 50	106%	60%	140%	86%	60%	140%	95%	60%	140%
F4 (C34 to C50)	3253580		170	790	NA	< 50	115%	60%	140%	78%	60%	140%	74%	60%	140%
O. Reg. 153(511) - PHCs F1 - F4 (-BTEX) (Soil)															
F1 (C6 - C10)	3303708		<5	<5	NA	< 5	85%	60%	140%	115%	60%	140%	103%	60%	140%
O. Reg. 153(511) - VOCs (Soil)															
Dichlorodifluoromethane	3290917		< 0.05	< 0.05	NA	< 0.05	97%	50%	140%	73%	50%	140%	79%	50%	140%
Vinyl Chloride	3290917		< 0.02	< 0.02	NA	< 0.02	108%	50%	140%	80%	50%	140%	95%	50%	140%
Bromomethane	3290917		< 0.05	< 0.05	NA	< 0.05	94%	50%	140%	91%	50%	140%	96%	50%	140%
Trichlorofluoromethane	3290917		< 0.05	< 0.05	NA	< 0.05	98%	50%	140%	87%	50%	140%	99%	50%	140%
Acetone	3290917		< 0.50	< 0.50	NA	< 0.50	104%	50%	140%	103%	50%	140%	103%	50%	140%
1,1-Dichloroethylene	3290917		< 0.05	< 0.05	NA	< 0.05	113%	50%	140%	90%	60%	130%	107%	50%	140%
Methylene Chloride	3290917		< 0.05	< 0.05	NA	< 0.05	117%	50%	140%	119%	60%	130%	85%	50%	140%
Trans- 1,2-Dichloroethylene	3290917		< 0.05	< 0.05	NA	< 0.05	100%	50%	140%	92%	60%	130%	97%	50%	140%
Methyl tert-butyl Ether	3290917		< 0.05	< 0.05	NA	< 0.05	117%	50%	140%	108%	60%	130%	107%	50%	140%



## Quality Assurance

CLIENT NAME: WSP CANADA INC.  
 PROJECT: 211-10139-00  
 SAMPLING SITE:

AGAT WORK ORDER: 21T839096  
 ATTENTION TO: Vanessa Oetinger  
 SAMPLED BY:

### Trace Organics Analysis (Continued)

RPT Date: Dec 23, 2021			DUPLICATE			Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD		Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
1,1-Dichloroethane	3290917		< 0.02	< 0.02	NA	< 0.02	107%	50%	140%	88%	60%	130%	101%	50%	140%
Methyl Ethyl Ketone	3290917		< 0.50	< 0.50	NA	< 0.50	96%	50%	140%	102%	50%	140%	101%	50%	140%
Cis- 1,2-Dichloroethylene	3290917		< 0.02	< 0.02	NA	< 0.02	109%	50%	140%	113%	60%	130%	113%	50%	140%
Chloroform	3290917		< 0.04	< 0.04	NA	< 0.04	116%	50%	140%	112%	60%	130%	105%	50%	140%
1,2-Dichloroethane	3290917		< 0.03	< 0.03	NA	< 0.03	116%	50%	140%	112%	60%	130%	116%	50%	140%
1,1,1-Trichloroethane	3290917		< 0.05	< 0.05	NA	< 0.05	78%	50%	140%	96%	60%	130%	79%	50%	140%
Carbon Tetrachloride	3290917		< 0.05	< 0.05	NA	< 0.05	82%	50%	140%	80%	60%	130%	76%	50%	140%
Benzene	3290917		0.21	0.19	NA	< 0.02	118%	50%	140%	99%	60%	130%	111%	50%	140%
1,2-Dichloropropane	3290917		< 0.03	< 0.03	NA	< 0.03	102%	50%	140%	113%	60%	130%	87%	50%	140%
Trichloroethylene	3290917		< 0.03	< 0.03	NA	< 0.03	106%	50%	140%	96%	60%	130%	97%	50%	140%
Bromodichloromethane	3290917		< 0.05	< 0.05	NA	< 0.05	118%	50%	140%	117%	60%	130%	102%	50%	140%
Methyl Isobutyl Ketone	3290917		< 0.50	< 0.50	NA	< 0.50	94%	50%	140%	101%	50%	140%	97%	50%	140%
1,1,2-Trichloroethane	3290917		< 0.04	< 0.04	NA	< 0.04	111%	50%	140%	111%	60%	130%	116%	50%	140%
Toluene	3290917		< 0.05	< 0.05	NA	< 0.05	102%	50%	140%	104%	60%	130%	117%	50%	140%
Dibromochloromethane	3290917		< 0.05	< 0.05	NA	< 0.05	111%	50%	140%	110%	60%	130%	97%	50%	140%
Ethylene Dibromide	3290917		< 0.04	< 0.04	NA	< 0.04	110%	50%	140%	107%	60%	130%	108%	50%	140%
Tetrachloroethylene	3290917		< 0.05	< 0.05	NA	< 0.05	85%	50%	140%	77%	60%	130%	80%	50%	140%
1,1,1,2-Tetrachloroethane	3290917		< 0.04	< 0.04	NA	< 0.04	94%	50%	140%	97%	60%	130%	72%	50%	140%
Chlorobenzene	3290917		< 0.05	< 0.05	NA	< 0.05	98%	50%	140%	97%	60%	130%	89%	50%	140%
Ethylbenzene	3290917		< 0.05	< 0.05	NA	< 0.05	102%	50%	140%	75%	60%	130%	74%	50%	140%
m & p-Xylene	3290917		< 0.05	< 0.05	NA	< 0.05	93%	50%	140%	93%	60%	130%	94%	50%	140%
Bromoform	3290917		< 0.05	< 0.05	NA	< 0.05	115%	50%	140%	114%	60%	130%	92%	50%	140%
Styrene	3290917		< 0.05	< 0.05	NA	< 0.05	74%	50%	140%	71%	60%	130%	75%	50%	140%
1,1,1,2,2-Tetrachloroethane	3290917		< 0.05	< 0.05	NA	< 0.05	98%	50%	140%	95%	60%	130%	109%	50%	140%
o-Xylene	3290917		< 0.05	< 0.05	NA	< 0.05	98%	50%	140%	93%	60%	130%	88%	50%	140%
1,3-Dichlorobenzene	3290917		< 0.05	< 0.05	NA	< 0.05	102%	50%	140%	99%	60%	130%	113%	50%	140%
1,4-Dichlorobenzene	3290917		< 0.05	< 0.05	NA	< 0.05	98%	50%	140%	106%	60%	130%	115%	50%	140%
1,2-Dichlorobenzene	3290917		< 0.05	< 0.05	NA	< 0.05	117%	50%	140%	94%	60%	130%	103%	50%	140%
n-Hexane	3290917		< 0.05	< 0.05	NA	< 0.05	76%	50%	140%	88%	60%	130%	82%	50%	140%

Comments: When the average of the sample and duplicate results is less than 5x the RDL, the Relative Percent Difference (RPD) will be indicated as Not Applicable (NA).

Certified By: \_\_\_\_\_



## QC Exceedance

CLIENT NAME: WSP CANADA INC.

AGAT WORK ORDER: 21T839096

PROJECT: 211-10139-00

ATTENTION TO: Vanessa Oetinger

RPT Date: Dec 23, 2021		REFERENCE MATERIAL		METHOD BLANK SPIKE			MATRIX SPIKE			
PARAMETER	Sample Id	Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
			Lower	Upper		Lower	Upper		Lower	Upper

O. Reg. 153(511) - Metals &amp; Inorganics (Soil)

Antimony	134%	70%	130%	98%	80%	120%	92%	70%	130%
----------	------	-----	------	-----	-----	------	-----	-----	------

Comments: NA signifies Not Applicable.

pH duplicates QA acceptance criteria was met relative as stated in Table 5-15 of Analytical Protocol document.

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

More than 90% of the elements met acceptance limits and overall data quality is acceptable for use. For a multi-element scan up to 10% of analytes may exceed the quoted limits by up to 10% absolute.



## Method Summary

CLIENT NAME: WSP CANADA INC.  
 PROJECT: 211-10139-00  
 SAMPLING SITE:

AGAT WORK ORDER: 21T839096  
 ATTENTION TO: Vanessa Oetinger  
 SAMPLED BY:

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Soil Analysis			
Antimony	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Arsenic	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Barium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Beryllium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Boron	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Boron (Hot Water Soluble)	MET-93-6104	modified from EPA 6010D and MSA PART 3, CH 21	ICP/OES
Cadmium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Chromium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Cobalt	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Copper	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Lead	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Molybdenum	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Nickel	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Selenium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Silver	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Thallium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Uranium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Vanadium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Zinc	MET 93 -6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Chromium, Hexavalent	INOR-93-6068	modified from EPA 3060 and EPA 7196	SPECTROPHOTOMETER
Cyanide, Free	INOR-93-6052	modified from ON MOECC E3015, SM 4500-CN- I, G-387	TECHNICON AUTO ANALYZER
Mercury	MET-93-6103	modified from EPA 7471B and SM 3112 B	ICP-MS
Electrical Conductivity (2:1)	INOR-93-6036	modified from MSA PART 3, CH 14 and SM 2510 B	EC METER
Sodium Adsorption Ratio (2:1) (Calc.)	INOR-93-6007	modified from EPA 6010D & Analytical Protocol	ICP/OES
pH, 2:1 CaCl <sub>2</sub> Extraction	INOR-93-6031	modified from EPA 9045D and MCKEAGUE 3.11	PH METER



## Method Summary

CLIENT NAME: WSP CANADA INC.

AGAT WORK ORDER: 21T839096

PROJECT: 211-10139-00

ATTENTION TO: Vanessa Oetinger

SAMPLING SITE:

SAMPLED BY:

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Trace Organics Analysis			
Naphthalene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Acenaphthylene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Acenaphthene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Fluorene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Phenanthrene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Anthracene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Fluoranthene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Pyrene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Benz(a)anthracene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Chrysene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Benzo(b)fluoranthene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Benzo(k)fluoranthene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Benzo(a)pyrene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Indeno(1,2,3-cd)pyrene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Dibenz(a,h)anthracene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Benzo(g,h,i)perylene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
1 and 2 Methylnaphthalene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Naphthalene-d8	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Acridine-d9	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Terphenyl-d14	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Moisture Content	VOL-91-5009	CCME Tier 1 Method	BALANCE
F1 (C6 - C10)	VOL-91-5009	modified from CCME Tier 1 Method	(P&T)GC/FID
F1 (C6 to C10) minus BTEX	VOL-91-5009	modified from CCME Tier 1 Method	(P&T)GC/FID
Toluene-d8	VOL-91-5009	modified from EPA SW-846 5030C & 8260D	(P&T)GC/MS
F2 (C10 to C16)	VOL-91-5009	modified from CCME Tier 1 Method	GC/FID
F3 (C16 to C34)	VOL-91-5009	modified from CCME Tier 1 Method	GC/FID
F4 (C34 to C50)	VOL-91-5009	modified from CCME Tier 1 Method	GC/FID
Gravimetric Heavy Hydrocarbons	VOL-91-5009	modified from CCME Tier 1 Method	BALANCE
Terphenyl	VOL-91-5009	modified from CCME Tier 1 Method	GC/FID
Benzene	VOL-91-5009	modified from CCME Tier 1 Method	(P&T)GC/MS
Toluene	VOL-91-5009	modified from CCME Tier 1 Method	(P&T)GC/MS
Ethylbenzene	VOL-91-5009	modified from CCME Tier 1 Method	(P&T)GC/MS
m & p-Xylene	VOL-91-5009	modified from CCME Tier 1 Method	(P&T)GC/MS



## Method Summary

CLIENT NAME: WSP CANADA INC.

AGAT WORK ORDER: 21T839096

PROJECT: 211-10139-00

ATTENTION TO: Vanessa Oetinger

SAMPLING SITE:

SAMPLED BY:

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
o-Xylene	VOL-91-5009	modified from CCME Tier 1 Method	(P&T)GC/MS
Xylenes (Total)	VOL-91-5009	modified from CCME Tier 1 Method	(P&T)GC/MS
F1 (C6 to C10) minus BTEX	VOL-91-5009	modified from CCME Tier 1 Method	P&T GC/FID
Dichlorodifluoromethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Vinyl Chloride	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Bromomethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Trichlorofluoromethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Acetone	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,1-Dichloroethylene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Methylene Chloride	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Trans- 1,2-Dichloroethylene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Methyl tert-butyl Ether	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,1-Dichloroethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Methyl Ethyl Ketone	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Cis- 1,2-Dichloroethylene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Chloroform	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,2-Dichloroethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,1,1-Trichloroethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Carbon Tetrachloride	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Benzene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,2-Dichloropropane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Trichloroethylene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Bromodichloromethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Methyl Isobutyl Ketone	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,1,2-Trichloroethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Toluene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Dibromochloromethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Ethylene Dibromide	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Tetrachloroethylene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS

## Method Summary

CLIENT NAME: WSP CANADA INC.

AGAT WORK ORDER: 21T839096

PROJECT: 211-10139-00

ATTENTION TO: Vanessa Oetinger

SAMPLING SITE:

SAMPLED BY:

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
1,1,1,2-Tetrachloroethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Chlorobenzene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Ethylbenzene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
m & p-Xylene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Bromoform	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Styrene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,1,2,2-Tetrachloroethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
o-Xylene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,3-Dichlorobenzene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,4-Dichlorobenzene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,2-Dichlorobenzene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Xylenes (Total)	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,3-Dichloropropene (Cis + Trans)	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
n-Hexane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Toluene-d8	VOL-91-5002	modified from EPA 5035A & EPA 8260D	(P&T)GC/MS
4-Bromofluorobenzene	VOL-91-5002	modified from EPA 5035A & EPA 8260D	(P&T)GC/MS
Moisture Content	VOL-91-5009	modified from CCME Tier 1 Method	BALANCE



**Laboratory Use Only**

Work Order #: 21T839096

Cooler Quantity: 1 large blk

Arrival Temperatures: 3.8 | 1.9 | 4.5

Custody Seal Intact:  Yes  No  N/A

Notes: free ice

**Chain of Custody Record** If this is a Drinking Water sample, please use Drinking Water Chain of Custody Form (potable water consumed by humans)

**Report Information:**

Company: WSP Inc.

Contact: Vanessa Oetinger

Address: 2 International Blvd, Etobicoke

Phone: \_\_\_\_\_ Fax: \_\_\_\_\_

Reports to be sent to:

1. Email: Vanessa.oetinger@wsp.com

2. Email: matth.roy@wsp.com

**Regulatory Requirements:**  
*(Please check all applicable boxes)*

Regulation 153/04  Excess Soils R406  Sewer Use  
 Sanitary  Storm

Table 1 Indicate One

Ind/Com  Res/Park  Agriculture

Table \_\_\_\_\_ Indicate One

Region \_\_\_\_\_

Regulation 558  Prov. Water Quality Objectives (PWQO)

Soil Texture (Check One)  CCME  Other

Coarse  Fine

Indicate One

**Turnaround Time (TAT) Required:**

**Regular TAT**  5 to 7 Business Days

**Rush TAT** (Rush Surcharges Apply)

3 Business Days  2 Business Days  Next Business Day

**OR** Date Required (Rush Surcharges May Apply): \_\_\_\_\_

Please provide prior notification for rush TAT  
\*TAT is exclusive of weekends and statutory holidays

**For 'Same Day' analysis, please contact your AGAT CPM**

**Project Information:**

Project: 211-10139-00

Site Location: ORBY Rail

Sampled By: Matthew Roy

AGAT Quote #: \_\_\_\_\_ PO: \_\_\_\_\_

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

Is this submission for a **Report of Site Condition?**

Yes  No

Report Guideline on **Certificate of Analysis**

Yes  No

**Invoice Information:** Bill To Same: Yes  No

Company: \_\_\_\_\_

Contact: \_\_\_\_\_

Address: \_\_\_\_\_

Email: payables.ontario@wsp.com

- Sample Matrix Legend**
- B** Biota
  - GW** Ground Water
  - O** Oil
  - P** Paint
  - S** Soil
  - SD** Sediment
  - SW** Surface Water

Sample Identification	Date Sampled	Time Sampled	# of Containers	Sample Matrix	Comments/ Special Instructions	Y / N	0. Reg 153		0. Reg 558		0. Reg 406		Potentially Hazardous or High Concentration (Y/N)
							Metals & Inorganics	Metals - CrVI, Hg, HWSB	Landfill Disposal Characterization TOLP: M&I, VOCs, APHs, Biop, PCBs	Excess Soils SPLP Rainwater Leach	Excess Soils Characterization Package pH, ICPMS Metals, BTEX, F1-F4	Salt - EC/SAR	
BH21-2 SS2	12/2/21		2	S			X						
BH21-2 SS5			2	S				X					
QAQC-11			1	S	PHC only			X					
BH21-2 SS6			2	S								X	
BH21-3 SS1			1	S			X						
QAQC-12			1	S			X						
BH21-3 SS2			1	S								X	
BH21-3 SS6			2	S				X					
BH21-3 SS7			2	S				X					X
BH21-6 SS1	12/1/21		1	S									
BH21-6 SS2			1	S									

Samples Relinquished By (Print Name and Sign): <u>Matthew Roy</u>	Date: <u>12/2/21</u> Time: <u>1500</u>	Samples Received By (Print Name and Sign): <u>Adriana Bellavia</u>	Date: _____ Time: _____	21DEC 2 3:42PM
Samples Relinquished By (Print Name and Sign):	Date: _____ Time: _____	Samples Received By (Print Name and Sign):	Date: _____ Time: _____	Page <u>1</u> of <u>2</u>
Samples Relinquished By (Print Name and Sign):	Date: _____ Time: _____	Samples Received By (Print Name and Sign):	Date: _____ Time: _____	No: <b>T 126072</b>





CLIENT NAME: WSP CANADA INC.  
2 INTERNATIONAL BLVD SUITE 201  
ETOBICOKE, ON M9W1A2  
(416) 798-0065

ATTENTION TO: Vanessa Oetinger  
PROJECT: 211-10139-00 200 02

AGAT WORK ORDER: 21T839249

SOIL ANALYSIS REVIEWED BY: Jacky Zhu, Spectroscopy Technician  
TRACE ORGANICS REVIEWED BY: Oksana Gushyla, Trace Organics Lab Supervisor

DATE REPORTED: Dec 20, 2021

PAGES (INCLUDING COVER): 14

VERSION\*: 1

Should you require any information regarding this analysis please contact your client services representative at (905) 712-5100

\*Notes

Disclaimer:

- All work conducted herein has been done using accepted standard protocols, and generally accepted practices and methods. AGAT test methods may incorporate modifications from the specified reference methods to improve performance.
- All samples will be disposed of within 30 days after receipt unless a Long Term Storage Agreement is signed and returned. Some specialty analysis may be exempt, please contact your Client Project Manager for details.
- AGAT's liability in connection with any delay, performance or non-performance of these services is only to the Client and does not extend to any other third party. Unless expressly agreed otherwise in writing, AGAT's liability is limited to the actual cost of the specific analysis or analyses included in the services.
- This Certificate shall not be reproduced except in full, without the written approval of the laboratory.
- The test results reported herewith relate only to the samples as received by the laboratory.
- Application of guidelines is provided "as is" without warranty of any kind, either expressed or implied, including, but not limited to, warranties of merchantability, fitness for a particular purpose, or non-infringement. AGAT assumes no responsibility for any errors or omissions in the guidelines contained in this document.
- All reportable information as specified by ISO/IEC 17025:2017 is available from AGAT Laboratories upon request.





## Certificate of Analysis

AGAT WORK ORDER: 21T839249

PROJECT: 211-10139-00 200 02

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

CLIENT NAME: WSP CANADA INC.

ATTENTION TO: Vanessa Oetinger

SAMPLING SITE:

SAMPLED BY:

### O. Reg. 153(511) - Metals & Inorganics (Soil)

DATE RECEIVED: 2021-12-02

DATE REPORTED: 2021-12-20

Parameter	Unit	SAMPLE DESCRIPTION:				
		BH21-10 SS3		BH21-32 SS2		BH21-36 SS2
		G / S	RDL	3291580	3291585	3291586
Antimony	µg/g	1.3	0.8	<0.8	<0.8	<0.8
Arsenic	µg/g	18	1	8	2	4
Barium	µg/g	220	2.0	27.0	35.6	26.3
Beryllium	µg/g	2.5	0.4	<0.4	<0.4	<0.4
Boron	µg/g	36	5	8	<5	7
Boron (Hot Water Soluble)	µg/g	NA	0.10	0.21	0.16	0.15
Cadmium	µg/g	1.2	0.5	<0.5	<0.5	<0.5
Chromium	µg/g	70	5	10	11	11
Cobalt	µg/g	21	0.5	5.2	4.5	5.4
Copper	µg/g	92	1.0	23.7	16.7	26.2
Lead	µg/g	120	1	15	9	13
Molybdenum	µg/g	2	0.5	1.0	<0.5	<0.5
Nickel	µg/g	82	1	7	9	9
Selenium	µg/g	1.5	0.8	<0.8	<0.8	<0.8
Silver	µg/g	0.5	0.5	<0.5	<0.5	<0.5
Thallium	µg/g	1	0.5	<0.5	<0.5	<0.5
Uranium	µg/g	2.5	0.50	<0.50	<0.50	<0.50
Vanadium	µg/g	86	0.4	15.3	20.5	21.4
Zinc	µg/g	290	5	54	34	39
Chromium, Hexavalent	µg/g	0.66	0.2	<0.2	<0.2	<0.2
Cyanide, Free	µg/g	0.051	0.040	<0.040	<0.040	<0.040
Mercury	µg/g	0.27	0.10	<0.10	<0.10	<0.10
Electrical Conductivity (2:1)	mS/cm	0.57	0.005	0.210	0.134	0.115
Sodium Adsorption Ratio (2:1) (Calc.)	N/A	2.4	N/A	0.295	0.199	0.139
pH, 2:1 CaCl2 Extraction	pH Units		NA	7.39	7.15	7.08

Certified By:





**AGAT** Laboratories

# Certificate of Analysis

AGAT WORK ORDER: 21T839249

PROJECT: 211-10139-00 200 02

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

CLIENT NAME: WSP CANADA INC.

ATTENTION TO: Vanessa Oetinger

SAMPLING SITE:

SAMPLED BY:

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

DATE RECEIVED: 2021-12-02

DATE REPORTED: 2021-12-20

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 1: Full Depth Background Site Condition Standards - Soil - Residential/Parkland/Institutional/Industrial/Commercial/Community Property Use

Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

3291580-3291586 EC was determined on the DI water extract obtained from the 2:1 leaching procedure (2 parts DI water:1 part soil). pH was determined on the 0.01M CaCl2 extract prepared at 2:1 ratio. SAR is a calculated parameter.

Analysis performed at AGAT Toronto (unless marked by \*)

Certified By:





## Certificate of Analysis

AGAT WORK ORDER: 21T839249

PROJECT: 211-10139-00 200 02

5835 COOPERS AVENUE  
MISSISSAUGA, ONTARIO  
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CLIENT NAME: WSP CANADA INC.

ATTENTION TO: Vanessa Oetinger

SAMPLING SITE:

SAMPLED BY:

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

DATE RECEIVED: 2021-12-02

DATE REPORTED: 2021-12-20

Parameter	Unit	SAMPLE DESCRIPTION:		BH21-9 SS4	BH21-40 SS1
		G / S	RDL	3291568	3291574
Naphthalene	µg/g	0.09	0.05	<0.05	0.31
Acenaphthylene	µg/g	0.093	0.05	<0.05	0.14
Acenaphthene	µg/g	0.072	0.05	<0.05	<0.05
Fluorene	µg/g	0.12	0.05	<0.05	<0.05
Phenanthrene	µg/g	0.69	0.05	0.22	0.78
Anthracene	µg/g	0.16	0.05	0.07	0.27
Fluoranthene	µg/g	0.56	0.05	0.44	2.11
Pyrene	µg/g	1	0.05	0.41	1.94
Benz(a)anthracene	µg/g	0.36	0.05	0.20	1.13
Chrysene	µg/g	2.8	0.05	0.12	1.25
Benzo(b)fluoranthene	µg/g	0.47	0.05	0.18	1.61
Benzo(k)fluoranthene	µg/g	0.48	0.05	0.09	0.63
Benzo(a)pyrene	µg/g	0.3	0.05	0.16	0.86
Indeno(1,2,3-cd)pyrene	µg/g	0.46	0.05	0.07	0.48
Dibenz(a,h)anthracene	µg/g	0.1	0.05	<0.05	0.13
Benzo(g,h,i)perylene	µg/g	0.68	0.05	0.08	0.55
1 and 2 Methylnaphthalene	µg/g	0.59	0.05	<0.05	0.82
Moisture Content	%		0.1	10.5	19.6
Surrogate	Unit	Acceptable Limits			
Naphthalene-d8	%	50-140		92	108
Acridine-d9	%	50-140		100	91
Terphenyl-d14	%	50-140		75	106

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 1: Full Depth Background Site Condition Standards - Soil - Residential/Parkland/Institutional/Industrial/Commercial/Community Property Use  
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

3291568-3291574 Results are based on the dry weight of the soil.

Note: The result for Benzo(b)Fluoranthene is the total of the Benzo(b)&j)Fluoranthene isomers because the isomers co-elute on the GC column.  
2- and 1-Methyl Naphthalene is a calculated parameter. The calculated value is the sum of 2-Methyl Naphthalene and 1-Methyl Naphthalene.

Analysis performed at AGAT Toronto (unless marked by \*)

Certified By:





## Certificate of Analysis

AGAT WORK ORDER: 21T839249

PROJECT: 211-10139-00 200 02

5835 COOPERS AVENUE  
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CLIENT NAME: WSP CANADA INC.

ATTENTION TO: Vanessa Oetinger

SAMPLING SITE:

SAMPLED BY:

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

DATE RECEIVED: 2021-12-02

DATE REPORTED: 2021-12-20

SAMPLE DESCRIPTION: BH21-31 SS3

SAMPLE TYPE: Soil

DATE SAMPLED: 2021-11-05

Parameter	Unit	G / S	RDL	3291573
Benzene	µg/g	0.02	0.02	<0.02
Toluene	µg/g	0.2	0.05	<0.05
Ethylbenzene	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
Xylenes (Total)	µg/g	0.05	0.05	<0.05
F1 (C6 - C10)	µg/g	25	5	7.8
F1 (C6 to C10) minus BTEX	µg/g	25	5	8
F2 (C10 to C16)	µg/g	10	10	<10
F3 (C16 to C34)	µg/g	240	50	<50
F4 (C34 to C50)	µg/g	120	50	<50
Gravimetric Heavy Hydrocarbons	µg/g	120	50	NA
Moisture Content	%		0.1	10.0

Surrogate	Unit	Acceptable Limits	
Toluene-d8	% Recovery	60-140	91
Terphenyl	%	60-140	89

Certified By:



## Certificate of Analysis

AGAT WORK ORDER: 21T839249

PROJECT: 211-10139-00 200 02

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CLIENT NAME: WSP CANADA INC.

ATTENTION TO: Vanessa Oetinger

SAMPLING SITE:

SAMPLED BY:

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

DATE RECEIVED: 2021-12-02

DATE REPORTED: 2021-12-20

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 1: Full Depth Background Site Condition Standards - Soil - Residential/Parkland/Institutional/Industrial/Commercial/Community Property Use  
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

3291573 Results are based on sample dry weight.  
The C6-C10 fraction is calculated using Toluene response factor.  
Xylenes is a calculated parameter. The calculated value is the sum of m&p-Xylene and o-Xylene.  
C6-C10 (F1 minus BTEX) is a calculated parameter. The calculated value is F1 minus BTEX.  
The calculated parameters are non-accredited. The parameters that are components of the calculation are accredited.  
The C10 - C16, C16 - C34, and C34 - C50 fractions are calculated using the average response factor for n-C10, n-C16, and n-C34.  
Gravimetric Heavy Hydrocarbons are not included in the Total C16-C50 and are only determined if the chromatogram of the C34 - C50 hydrocarbons indicates that hydrocarbons >C50 are present.  
The chromatogram has returned to baseline by the retention time of nC50.  
Total C6 - C50 results are corrected for BTEX contribution.  
This method complies with the Reference Method for the CWS PHC and is validated for use in the laboratory.  
nC6 and nC10 response factors are within 30% of Toluene response factor.  
nC10, nC16 and nC34 response factors are within 10% of their average.  
C50 response factor is within 70% of nC10 + nC16 + nC34 average.  
Linearity is within 15%.  
Extraction and holding times were not met for this sample.  
Fractions 1-4 are quantified with the contribution of PAHs. Under Ontario Regulation 153, results are considered valid without determining the PAH contribution if not requested by the client.  
Quality Control Data is available upon request.

Analysis performed at AGAT Toronto (unless marked by \*)

Certified By:



## Exceedance Summary

AGAT WORK ORDER: 21T839249

PROJECT: 211-10139-00 200 02

5835 COOPERS AVENUE  
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CLIENT NAME: WSP CANADA INC.

ATTENTION TO: Vanessa Oetinger

SAMPLEID	SAMPLE TITLE	GUIDELINE	ANALYSIS PACKAGE	PARAMETER	UNIT	GUIDEVALUE	RESULT
3291574	BH21-40 SS1	ON T1 S RPI/ICC	O. Reg. 153(511) - PAHs (Soil)	1 and 2 Methlynaphthalene	µg/g	0.59	0.82
3291574	BH21-40 SS1	ON T1 S RPI/ICC	O. Reg. 153(511) - PAHs (Soil)	Acenaphthylene	µg/g	0.093	0.14
3291574	BH21-40 SS1	ON T1 S RPI/ICC	O. Reg. 153(511) - PAHs (Soil)	Anthracene	µg/g	0.16	0.27
3291574	BH21-40 SS1	ON T1 S RPI/ICC	O. Reg. 153(511) - PAHs (Soil)	Benz(a)anthracene	µg/g	0.36	1.13
3291574	BH21-40 SS1	ON T1 S RPI/ICC	O. Reg. 153(511) - PAHs (Soil)	Benzo(a)pyrene	µg/g	0.3	0.86
3291574	BH21-40 SS1	ON T1 S RPI/ICC	O. Reg. 153(511) - PAHs (Soil)	Benzo(b)fluoranthene	µg/g	0.47	1.61
3291574	BH21-40 SS1	ON T1 S RPI/ICC	O. Reg. 153(511) - PAHs (Soil)	Benzo(k)fluoranthene	µg/g	0.48	0.63
3291574	BH21-40 SS1	ON T1 S RPI/ICC	O. Reg. 153(511) - PAHs (Soil)	Dibenz(a,h)anthracene	µg/g	0.1	0.13
3291574	BH21-40 SS1	ON T1 S RPI/ICC	O. Reg. 153(511) - PAHs (Soil)	Fluoranthene	µg/g	0.56	2.11
3291574	BH21-40 SS1	ON T1 S RPI/ICC	O. Reg. 153(511) - PAHs (Soil)	Indeno(1,2,3-cd)pyrene	µg/g	0.46	0.48
3291574	BH21-40 SS1	ON T1 S RPI/ICC	O. Reg. 153(511) - PAHs (Soil)	Naphthalene	µg/g	0.09	0.31
3291574	BH21-40 SS1	ON T1 S RPI/ICC	O. Reg. 153(511) - PAHs (Soil)	Phenanthrene	µg/g	0.69	0.78
3291574	BH21-40 SS1	ON T1 S RPI/ICC	O. Reg. 153(511) - PAHs (Soil)	Pyrene	µg/g	1	1.94



## Quality Assurance

CLIENT NAME: WSP CANADA INC.  
 PROJECT: 211-10139-00 200 02  
 SAMPLING SITE:

AGAT WORK ORDER: 21T839249  
 ATTENTION TO: Vanessa Oetinger  
 SAMPLED BY:

Soil Analysis															
RPT Date: Dec 20, 2021			DUPLICATE				Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE		MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Measured Value		Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper

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

Antimony	3325188		<0.8	<0.8	NA	< 0.8	138%	70%	130%	106%	80%	120%	99%	70%	130%
Arsenic	3325188		<1	<1	NA	< 1	121%	70%	130%	104%	80%	120%	105%	70%	130%
Barium	3325188		34.2	35.0	2.3%	< 2.0	100%	70%	130%	99%	80%	120%	96%	70%	130%
Beryllium	3325188		<0.4	<0.4	NA	< 0.4	84%	70%	130%	99%	80%	120%	91%	70%	130%
Boron	3325188		<5	<5	NA	< 5	81%	70%	130%	102%	80%	120%	87%	70%	130%
Boron (Hot Water Soluble)	3296197		0.11	0.12	NA	< 0.10	86%	60%	140%	108%	70%	130%	104%	60%	140%
Cadmium	3325188		<0.5	<0.5	NA	< 0.5	115%	70%	130%	105%	80%	120%	106%	70%	130%
Chromium	3325188		9	9	NA	< 5	100%	70%	130%	99%	80%	120%	105%	70%	130%
Cobalt	3325188		4.2	4.1	2.4%	< 0.5	106%	70%	130%	99%	80%	120%	99%	70%	130%
Copper	3325188		16.7	16.3	2.4%	< 1.0	97%	70%	130%	99%	80%	120%	98%	70%	130%
Lead	3325188		1	1	NA	< 1	105%	70%	130%	98%	80%	120%	96%	70%	130%
Molybdenum	3325188		<0.5	<0.5	NA	< 0.5	116%	70%	130%	110%	80%	120%	110%	70%	130%
Nickel	3325188		6	6	0.0%	< 1	105%	70%	130%	100%	80%	120%	101%	70%	130%
Selenium	3325188		0.8	1.0	NA	< 0.8	95%	70%	130%	107%	80%	120%	108%	70%	130%
Silver	3325188		<0.5	<0.5	NA	< 0.5	105%	70%	130%	104%	80%	120%	101%	70%	130%
Thallium	3325188		<0.5	<0.5	NA	< 0.5	113%	70%	130%	110%	80%	120%	107%	70%	130%
Uranium	3325188		<0.50	<0.50	NA	< 0.50	112%	70%	130%	103%	80%	120%	101%	70%	130%
Vanadium	3325188		24.0	24.6	2.5%	< 0.4	107%	70%	130%	96%	80%	120%	100%	70%	130%
Zinc	3325188		16	16	NA	< 5	102%	70%	130%	102%	80%	120%	104%	70%	130%
Chromium, Hexavalent	3309312		<0.2	<0.2	NA	< 0.2	102%	70%	130%	88%	80%	120%	81%	70%	130%
Cyanide, Free	3304561		<0.040	<0.040	NA	< 0.040	101%	70%	130%	97%	80%	120%	104%	70%	130%
Mercury	3325188		<0.10	<0.10	NA	< 0.10	106%	70%	130%	105%	80%	120%	104%	70%	130%
Electrical Conductivity (2:1)	3291580	3291580	0.210	0.223	6.0%	< 0.005	106%	80%	120%						
Sodium Adsorption Ratio (2:1) (Calc.)	3291580	3291580	0.295	0.294	0.3%	NA									
pH, 2:1 CaCl2 Extraction	3296258		6.92	7.35	6.0%	NA	100%	80%	120%						

Comments: NA signifies Not Applicable.

pH duplicates QA acceptance criteria was met relative as stated in Table 5-15 of Analytical Protocol document.

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

For a multi-element scan for lab control standards and matrix spikes, up to 10% of analytes may exceed the quoted limits by up to 10% absolute and it is considered acceptable.

Certified By: \_\_\_\_\_



## Quality Assurance

CLIENT NAME: WSP CANADA INC.  
 PROJECT: 211-10139-00 200 02  
 SAMPLING SITE:

AGAT WORK ORDER: 21T839249  
 ATTENTION TO: Vanessa Oetinger  
 SAMPLED BY:

### Trace Organics Analysis

RPT Date: Dec 20, 2021			DUPLICATE			Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD		Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper

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

Naphthalene	3319161	< 0.05	< 0.05	NA	< 0.05	78%	50%	140%	86%	50%	140%	80%	50%	140%
Acenaphthylene	3319161	< 0.05	< 0.05	NA	< 0.05	84%	50%	140%	93%	50%	140%	89%	50%	140%
Acenaphthene	3319161	< 0.05	< 0.05	NA	< 0.05	82%	50%	140%	92%	50%	140%	89%	50%	140%
Fluorene	3319161	< 0.05	< 0.05	NA	< 0.05	93%	50%	140%	101%	50%	140%	80%	50%	140%
Phenanthrene	3319161	< 0.05	< 0.05	NA	< 0.05	105%	50%	140%	78%	50%	140%	85%	50%	140%
Anthracene	3319161	< 0.05	< 0.05	NA	< 0.05	98%	50%	140%	85%	50%	140%	111%	50%	140%
Fluoranthene	3319161	< 0.05	< 0.05	NA	< 0.05	86%	50%	140%	90%	50%	140%	99%	50%	140%
Pyrene	3319161	< 0.05	< 0.05	NA	< 0.05	93%	50%	140%	105%	50%	140%	86%	50%	140%
Benz(a)anthracene	3319161	< 0.05	< 0.05	NA	< 0.05	92%	50%	140%	98%	50%	140%	109%	50%	140%
Chrysene	3319161	< 0.05	< 0.05	NA	< 0.05	94%	50%	140%	86%	50%	140%	103%	50%	140%
Benzo(b)fluoranthene	3319161	< 0.05	< 0.05	NA	< 0.05	98%	50%	140%	77%	50%	140%	102%	50%	140%
Benzo(k)fluoranthene	3319161	< 0.05	< 0.05	NA	< 0.05	78%	50%	140%	85%	50%	140%	76%	50%	140%
Benzo(a)pyrene	3319161	< 0.05	< 0.05	NA	< 0.05	88%	50%	140%	93%	50%	140%	89%	50%	140%
Indeno(1,2,3-cd)pyrene	3319161	< 0.05	< 0.05	NA	< 0.05	85%	50%	140%	102%	50%	140%	75%	50%	140%
Dibenz(a,h)anthracene	3319161	< 0.05	< 0.05	NA	< 0.05	93%	50%	140%	98%	50%	140%	112%	50%	140%
Benzo(g,h,i)perylene	3319161	< 0.05	< 0.05	NA	< 0.05	92%	50%	140%	86%	50%	140%	97%	50%	140%

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

Benzene	3308152	<0.02	<0.02	NA	< 0.02	94%	60%	140%	102%	60%	140%	103%	60%	140%
Toluene	3308152	0.07	0.08	NA	< 0.05	104%	60%	140%	102%	60%	140%	112%	60%	140%
Ethylbenzene	3308152	<0.05	0.06	NA	< 0.05	98%	60%	140%	96%	60%	140%	109%	60%	140%
m & p-Xylene	3308152	0.14	0.19	NA	< 0.05	102%	60%	140%	102%	60%	140%	101%	60%	140%
o-Xylene	3308152	0.11	<0.05	NA	< 0.05	91%	60%	140%	103%	60%	140%	98%	60%	140%
F1 (C6 - C10)	3308152	11	12	NA	< 5	84%	60%	140%	93%	60%	140%	73%	60%	140%
F2 (C10 to C16)	3276907	< 10	< 10	NA	< 10	89%	60%	140%	89%	60%	140%	84%	60%	140%
F3 (C16 to C34)	3276907	480	410	15.7%	< 50	85%	60%	140%	89%	60%	140%	85%	60%	140%
F4 (C34 to C50)	3276907	150	140	NA	< 50	87%	60%	140%	89%	60%	140%	84%	60%	140%

Comments: When the average of the sample and duplicate results is less than 5x the RDL, the Relative Percent Difference (RPD) will be indicated as Not Applicable (NA).

Certified By: \_\_\_\_\_



## QC Exceedance

CLIENT NAME: WSP CANADA INC.

AGAT WORK ORDER: 21T839249

PROJECT: 211-10139-00 200 02

ATTENTION TO: Vanessa Oetinger

RPT Date: Dec 20, 2021		REFERENCE MATERIAL		METHOD BLANK SPIKE			MATRIX SPIKE			
PARAMETER	Sample Id	Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
			Lower	Upper		Lower	Upper		Lower	Upper

O. Reg. 153(511) - Metals &amp; Inorganics (Soil)

	138%	70%	130%	106%	80%	120%	99%	70%	130%
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Comments: NA signifies Not Applicable.

pH duplicates QA acceptance criteria was met relative as stated in Table 5-15 of Analytical Protocol document.

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

For a multi-element scan for lab control standards and matrix spikes, up to 10% of analytes may exceed the quoted limits by up to 10% absolute and it is considered acceptable.



## Method Summary

CLIENT NAME: WSP CANADA INC.

AGAT WORK ORDER: 21T839249

PROJECT: 211-10139-00 200 02

ATTENTION TO: Vanessa Oetinger

SAMPLING SITE:

SAMPLED BY:

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Soil Analysis			
Antimony	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Arsenic	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Barium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Beryllium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Boron	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Boron (Hot Water Soluble)	MET-93-6104	modified from EPA 6010D and MSA PART 3, CH 21	ICP/OES
Cadmium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Chromium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Cobalt	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Copper	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Lead	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Molybdenum	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Nickel	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Selenium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Silver	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Thallium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Uranium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Vanadium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Zinc	MET 93 -6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Chromium, Hexavalent	INOR-93-6068	modified from EPA 3060 and EPA 7196	SPECTROPHOTOMETER
Cyanide, Free	INOR-93-6052	modified from ON MOECC E3015, SM 4500-CN- I, G-387	TECHNICON AUTO ANALYZER
Mercury	MET-93-6103	modified from EPA 7471B and SM 3112 B	ICP-MS
Electrical Conductivity (2:1)	INOR-93-6036	modified from MSA PART 3, CH 14 and SM 2510 B	EC METER
Sodium Adsorption Ratio (2:1) (Calc.)	INOR-93-6007	modified from EPA 6010D & Analytical Protocol	ICP/OES
pH, 2:1 CaCl <sub>2</sub> Extraction	INOR-93-6031	modified from EPA 9045D and MCKEAGUE 3.11	PH METER



## Method Summary

CLIENT NAME: WSP CANADA INC.

AGAT WORK ORDER: 21T839249

PROJECT: 211-10139-00 200 02

ATTENTION TO: Vanessa Oetinger

SAMPLING SITE:

SAMPLED BY:

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Trace Organics Analysis			
Naphthalene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Acenaphthylene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Acenaphthene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Fluorene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Phenanthrene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Anthracene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Fluoranthene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Pyrene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Benz(a)anthracene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Chrysene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Benzo(b)fluoranthene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Benzo(k)fluoranthene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Benzo(a)pyrene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Indeno(1,2,3-cd)pyrene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Dibenz(a,h)anthracene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Benzo(g,h,i)perylene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
1 and 2 Methylnaphthalene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Naphthalene-d8	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Acridine-d9	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Terphenyl-d14	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Moisture Content	VOL-91-5009	CCME Tier 1 Method	BALANCE
Benzene	VOL-91-5009	modified from CCME Tier 1 Method	(P&T)GC/MS
Toluene	VOL-91-5009	modified from CCME Tier 1 Method	(P&T)GC/MS
Ethylbenzene	VOL-91-5009	modified from CCME Tier 1 Method	(P&T)GC/MS
m & p-Xylene	VOL-91-5009	modified from CCME Tier 1 Method	(P&T)GC/MS
o-Xylene	VOL-91-5009	modified from CCME Tier 1 Method	(P&T)GC/MS
Xylenes (Total)	VOL-91-5009	modified from CCME Tier 1 Method	(P&T)GC/MS
F1 (C6 - C10)	VOL-91-5009	modified from CCME Tier 1 Method	(P&T)GC/FID
F1 (C6 to C10) minus BTEX	VOL-91-5009	modified from CCME Tier 1 Method	P&T GC/FID
Toluene-d8	VOL-91-5009	modified from EPA SW-846 5030C & 8260D	(P&T)GC/MS
F2 (C10 to C16)	VOL-91-5009	modified from CCME Tier 1 Method	GC/FID
F3 (C16 to C34)	VOL-91-5009	modified from CCME Tier 1 Method	GC/FID
F4 (C34 to C50)	VOL-91-5009	modified from CCME Tier 1 Method	GC/FID

## Method Summary

CLIENT NAME: WSP CANADA INC.

AGAT WORK ORDER: 21T839249

PROJECT: 211-10139-00 200 02

ATTENTION TO: Vanessa Oetinger

SAMPLING SITE:

SAMPLED BY:

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Gravimetric Heavy Hydrocarbons	VOL-91-5009	modified from CCME Tier 1 Method	BALANCE
Terphenyl	VOL-91-5009	modified from CCME Tier 1 Method	GC/FID







CLIENT NAME: WSP CANADA INC.  
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ATTENTION TO: Vanessa Oetinger

PROJECT: 211-10139-00

AGAT WORK ORDER: 21T840564

SOIL ANALYSIS REVIEWED BY: Amanjot Bhela, Inorganic Lab Manager

TRACE ORGANICS REVIEWED BY: Inga Kuzmina, Trace Organics Lab Manager

DATE REPORTED: Dec 18, 2021

PAGES (INCLUDING COVER): 17

VERSION\*: 1

Should you require any information regarding this analysis please contact your client services representative at (905) 712-5100

\*Notes

**Disclaimer:**

- All work conducted herein has been done using accepted standard protocols, and generally accepted practices and methods. AGAT test methods may incorporate modifications from the specified reference methods to improve performance.
- All samples will be disposed of within 30 days after receipt unless a Long Term Storage Agreement is signed and returned. Some specialty analysis may be exempt, please contact your Client Project Manager for details.
- AGAT's liability in connection with any delay, performance or non-performance of these services is only to the Client and does not extend to any other third party. Unless expressly agreed otherwise in writing, AGAT's liability is limited to the actual cost of the specific analysis or analyses included in the services.
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- The test results reported herewith relate only to the samples as received by the laboratory.
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- All reportable information as specified by ISO/IEC 17025:2017 is available from AGAT Laboratories upon request.



## Certificate of Analysis

AGAT WORK ORDER: 21T840564

PROJECT: 211-10139-00

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

CLIENT NAME: WSP CANADA INC.

SAMPLING SITE: ORBY Rail

ATTENTION TO: Vanessa Oetinger

SAMPLED BY: Matthew Roy

### O. Reg. 153(511) - Metals & Inorganics (Soil)

DATE RECEIVED: 2021-12-06

DATE REPORTED: 2021-12-18

Parameter	Unit	SAMPLE DESCRIPTION:		BH21-4 SS1	BH21-5 SS1
		SAMPLE TYPE:		Soil	Soil
		DATE SAMPLED:		2021-12-06	2021-12-06
		G / S	RDL	3304637	3304642
Antimony	µg/g	1.3	0.8	<0.8	<0.8
Arsenic	µg/g	18	1	4	7
Barium	µg/g	220	2.0	37.4	60.0
Beryllium	µg/g	2.5	0.4	0.5	0.7
Boron	µg/g	36	5	<5	7
Boron (Hot Water Soluble)	µg/g	NA	0.10	0.12	0.26
Cadmium	µg/g	1.2	0.5	<0.5	<0.5
Chromium	µg/g	70	5	12	18
Cobalt	µg/g	21	0.5	5.6	6.6
Copper	µg/g	92	1.0	24.7	23.3
Lead	µg/g	120	1	9	18
Molybdenum	µg/g	2	0.5	<0.5	0.6
Nickel	µg/g	82	1	12	14
Selenium	µg/g	1.5	0.8	<0.8	<0.8
Silver	µg/g	0.5	0.5	<0.5	<0.5
Thallium	µg/g	1	0.5	<0.5	<0.5
Uranium	µg/g	2.5	0.50	<0.50	<0.50
Vanadium	µg/g	86	0.4	20.4	28.1
Zinc	µg/g	290	5	32	51
Chromium, Hexavalent	µg/g	0.66	0.2	<0.2	<0.2
Cyanide, Free	µg/g	0.051	0.040	<0.040	<0.040
Mercury	µg/g	0.27	0.10	<0.10	<0.10
Electrical Conductivity (2:1)	mS/cm	0.57	0.005	0.124	0.200
Sodium Adsorption Ratio (2:1) (Calc.)	N/A	2.4	N/A	0.143	0.116
pH, 2:1 CaCl2 Extraction	pH Units		NA	7.19	7.04

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# Certificate of Analysis

AGAT WORK ORDER: 21T840564

PROJECT: 211-10139-00

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CLIENT NAME: WSP CANADA INC.

SAMPLING SITE: ORBY Rail

ATTENTION TO: Vanessa Oetinger

SAMPLED BY: Matthew Roy

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

DATE RECEIVED: 2021-12-06

DATE REPORTED: 2021-12-18

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 1: Full Depth Background Site Condition Standards - Soil - Residential/Parkland/Institutional/Industrial/Commercial/Community Property Use

Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

3304637-3304642 EC was determined on the DI water extract obtained from the 2:1 leaching procedure (2 parts DI water:1 part soil). pH was determined on the 0.01M CaCl2 extract prepared at 2:1 ratio. SAR is a calculated parameter.

Analysis performed at AGAT Toronto (unless marked by \*)

Certified By:

*Anamjot Bhela*  




## Certificate of Analysis

AGAT WORK ORDER: 21T840564

PROJECT: 211-10139-00

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CLIENT NAME: WSP CANADA INC.

SAMPLING SITE: ORBY Rail

ATTENTION TO: Vanessa Oetinger

SAMPLED BY: Matthew Roy

### O. Reg. 153(511) - OC Pesticides + PCBs (Soil)

DATE RECEIVED: 2021-12-06

DATE REPORTED: 2021-12-18

Parameter	Unit	SAMPLE DESCRIPTION:		BH21-4 SS2	BH21-5 SS3
		SAMPLE TYPE:		Soil	Soil
		DATE SAMPLED:		2021-12-06	2021-12-06
		G / S	RDL	3304639	3304644
Gamma-Hexachlorocyclohexane	µg/g	0.01	0.005	<0.005	<0.005
Heptachlor	µg/g	0.05	0.005	<0.005	<0.005
Aldrin	µg/g	0.05	0.005	<0.005	<0.005
Heptachlor Epoxide	µg/g	0.05	0.005	<0.005	<0.005
Endosulfan I	µg/g		0.005	<0.005	<0.005
Endosulfan II	µg/g		0.005	<0.005	<0.005
Endosulfan	µg/g	0.04	0.005	<0.005	<0.005
Alpha-Chlordane	µg/g		0.005	<0.005	<0.005
gamma-Chlordane	µg/g		0.005	<0.005	<0.005
Chlordane	µg/g	0.05	0.007	<0.007	<0.007
op'-DDD	µg/g		0.005	<0.005	<0.005
pp'-DDD	µg/g		0.005	<0.005	<0.005
DDD	µg/g	0.05	0.007	<0.007	<0.007
op'-DDE	ug/g		0.005	<0.005	<0.005
pp'-DDE	µg/g		0.005	<0.005	<0.005
DDE	µg/g	0.05	0.007	<0.007	<0.007
op'-DDT	µg/g		0.005	<0.005	<0.005
pp'-DDT	µg/g		0.005	<0.005	<0.005
DDT	µg/g	1.4	0.007	<0.007	<0.007
Dieldrin	µg/g	0.05	0.005	<0.005	<0.005
Endrin	µg/g	0.04	0.005	<0.005	<0.005
Methoxychlor	µg/g	0.05	0.005	<0.005	<0.005
Hexachlorobenzene	µg/g	0.01	0.005	<0.005	<0.005
Hexachlorobutadiene	µg/g	0.01	0.01	<0.01	<0.01
Hexachloroethane	µg/g	0.01	0.01	<0.01	<0.01
Aroclor 1242	µg/g		0.10	<0.10	<0.10
Aroclor 1248	µg/g		0.10	<0.10	<0.10
Aroclor 1254	µg/g		0.10	<0.10	<0.10
Aroclor 1260	µg/g		0.10	<0.10	<0.10
Polychlorinated Biphenyls	µg/g	0.3	0.10	<0.10	<0.10

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AGAT WORK ORDER: 21T840564

PROJECT: 211-10139-00

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CLIENT NAME: WSP CANADA INC.

SAMPLING SITE: ORBY Rail

ATTENTION TO: Vanessa Oettinger

SAMPLED BY: Matthew Roy

### O. Reg. 153(511) - OC Pesticides + PCBs (Soil)

DATE RECEIVED: 2021-12-06

DATE REPORTED: 2021-12-18

Parameter	Unit	SAMPLE DESCRIPTION:		BH21-4 SS2	BH21-5 SS3
		G / S	RDL	3304639	3304644
Moisture Content	%		0.1	14.6	12.6
wet weight OC/PCB	g		NA	10.03	10.12
Surrogate	Unit	Acceptable Limits			
TCMX	%	50-140		76	74
Decachlorobiphenyl	%	50-140		77	85

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 1: Full Depth Background Site Condition Standards - Soil - Residential/Parkland/Institutional/Industrial/Commercial/Community Property Use

Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

3304639-3304644 Results are based on the dry weight of the soil.

DDT total is a calculated parameter. The calculated value is the sum of op'DDT and pp'DDT.

DDD total is a calculated parameter. The calculated value is the sum of op'DDD and pp'DDD.

DDE total is a calculated parameter. The calculated value is the sum of op'DDE and pp'DDE.

Endosulfan total is a calculated parameter. The calculated value is the sum of Endosulfan I and Endosulfan II.

Chlordane total is a calculated parameter. The calculated value is the sum of Alpha-Chlordane and Gamma-Chlordane.

PCB total is a calculated parameter. The calculated value is the sum of Aroclor 1242, Aroclor 1248, Aroclor 1254 and Aroclor 1260.

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

Analysis performed at AGAT Toronto (unless marked by \*)

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PROJECT: 211-10139-00

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CLIENT NAME: WSP CANADA INC.

SAMPLING SITE: ORBY Rail

ATTENTION TO: Vanessa Oetinger

SAMPLED BY: Matthew Roy

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

DATE RECEIVED: 2021-12-06

DATE REPORTED: 2021-12-18

Parameter	Unit	SAMPLE DESCRIPTION:		BH21-4 SS1	BH21-5 SS1
		G / S	RDL	3304637	3304642
Naphthalene	µg/g	0.09	0.05	<0.05	<0.05
Acenaphthylene	µg/g	0.093	0.05	<0.05	<0.05
Acenaphthene	µg/g	0.072	0.05	<0.05	<0.05
Fluorene	µg/g	0.12	0.05	<0.05	<0.05
Phenanthrene	µg/g	0.69	0.05	<0.05	<0.05
Anthracene	µg/g	0.16	0.05	<0.05	<0.05
Fluoranthene	µg/g	0.56	0.05	<0.05	<0.05
Pyrene	µg/g	1	0.05	<0.05	<0.05
Benz(a)anthracene	µg/g	0.36	0.05	<0.05	<0.05
Chrysene	µg/g	2.8	0.05	<0.05	<0.05
Benzo(b)fluoranthene	µg/g	0.47	0.05	<0.05	<0.05
Benzo(k)fluoranthene	µg/g	0.48	0.05	<0.05	<0.05
Benzo(a)pyrene	µg/g	0.3	0.05	<0.05	<0.05
Indeno(1,2,3-cd)pyrene	µg/g	0.46	0.05	<0.05	<0.05
Dibenz(a,h)anthracene	µg/g	0.1	0.05	<0.05	<0.05
Benzo(g,h,i)perylene	µg/g	0.68	0.05	<0.05	<0.05
1 and 2 Methylnaphthalene	µg/g	0.59	0.05	<0.05	<0.05
Moisture Content	%		0.1	14.7	19.6
Surrogate	Unit	Acceptable Limits			
Naphthalene-d8	%	50-140		78	109
Acridine-d9	%	50-140		84	86
Terphenyl-d14	%	50-140		88	99

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 1: Full Depth Background Site Condition Standards - Soil - Residential/Parkland/Institutional/Industrial/Commercial/Community Property Use

Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

3304637-3304642 Results are based on the dry weight of the soil.

Note: The result for Benzo(b)Fluoranthene is the total of the Benzo(b)&j)Fluoranthene isomers because the isomers co-elute on the GC column.

2- and 1-Methyl Naphthalene is a calculated parameter. The calculated value is the sum of 2-Methyl Naphthalene and 1-Methyl Naphthalene.

Analysis performed at AGAT Toronto (unless marked by \*)

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## Certificate of Analysis

AGAT WORK ORDER: 21T840564

PROJECT: 211-10139-00

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CLIENT NAME: WSP CANADA INC.

SAMPLING SITE: ORBY Rail

ATTENTION TO: Vanessa Oetinger

SAMPLED BY: Matthew Roy

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

DATE RECEIVED: 2021-12-06

DATE REPORTED: 2021-12-18

Parameter	Unit	SAMPLE DESCRIPTION:		BH21-4 SS3	BH21-5 SS2
		G / S	RDL	3304640	3304643
Benzene	µg/g	0.02	0.02	<0.02	<0.02
Toluene	µg/g	0.2	0.05	<0.05	<0.05
Ethylbenzene	µg/g	0.05	0.05	<0.05	<0.05
m & p-Xylene	µg/g		0.05	<0.05	<0.05
o-Xylene	µg/g		0.05	<0.05	<0.05
Xylenes (Total)	µg/g	0.05	0.05	<0.05	<0.05
F1 (C6 - C10)	µg/g	25	5	<5	<5
F1 (C6 to C10) minus BTEX	µg/g	25	5	<5	<5
F2 (C10 to C16)	µg/g	10	10	<10	<10
F3 (C16 to C34)	µg/g	240	50	<50	<50
F4 (C34 to C50)	µg/g	120	50	<50	<50
Gravimetric Heavy Hydrocarbons	µg/g	120	50	NA	NA
Moisture Content	%		0.1	14.0	20.1
Surrogate	Unit	Acceptable Limits			
Toluene-d8	% Recovery	60-140	75	86	
Terphenyl	%	60-140	73	86	

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AGAT WORK ORDER: 21T840564

PROJECT: 211-10139-00

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CLIENT NAME: WSP CANADA INC.

SAMPLING SITE: ORBY Rail

ATTENTION TO: Vanessa Oetinger

SAMPLED BY: Matthew Roy

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

DATE RECEIVED: 2021-12-06

DATE REPORTED: 2021-12-18

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 1: Full Depth Background Site Condition Standards - Soil - Residential/Parkland/Institutional/Industrial/Commercial/Community Property Use  
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

3304640-3304643 Results are based on sample dry weight.  
The C6-C10 fraction is calculated using Toluene response factor.  
Xylenes is a calculated parameter. The calculated value is the sum of m&p-Xylene and o-Xylene.  
C6-C10 (F1 minus BTEX) is a calculated parameter. The calculated value is F1 minus BTEX.  
The calculated parameters are non-accredited. The parameters that are components of the calculation are accredited.  
The C10 - C16, C16 - C34, and C34 - C50 fractions are calculated using the average response factor for n-C10, n-C16, and n-C34.  
Gravimetric Heavy Hydrocarbons are not included in the Total C16-C50 and are only determined if the chromatogram of the C34 - C50 hydrocarbons indicates that hydrocarbons >C50 are present.  
The chromatogram has returned to baseline by the retention time of nC50.  
Total C6 - C50 results are corrected for BTEX contribution.  
This method complies with the Reference Method for the CWS PHC and is validated for use in the laboratory.  
nC6 and nC10 response factors are within 30% of Toluene response factor.  
nC10, nC16 and nC34 response factors are within 10% of their average.  
C50 response factor is within 70% of nC10 + nC16 + nC34 average.  
Linearity is within 15%.  
Extraction and holding times were met for this sample.  
Fractions 1-4 are quantified with the contribution of PAHs. Under Ontario Regulation 153, results are considered valid without determining the PAH contribution if not requested by the client.  
Quality Control Data is available upon request.

Analysis performed at AGAT Toronto (unless marked by \*)

Certified By:



## Quality Assurance

CLIENT NAME: WSP CANADA INC.  
 PROJECT: 211-10139-00  
 SAMPLING SITE: ORBY Rail

AGAT WORK ORDER: 21T840564  
 ATTENTION TO: Vanessa Oetinger  
 SAMPLED BY: Matthew Roy

Soil Analysis															
RPT Date: Dec 18, 2021			DUPLICATE			Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD		Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper

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

Antimony	3303320		<0.8	<0.8	NA	< 0.8	133%	70%	130%	105%	80%	120%	83%	70%	130%
Arsenic	3303320		2	2	NA	< 1	117%	70%	130%	97%	80%	120%	97%	70%	130%
Barium	3303320		34.4	34.9	1.4%	< 2.0	99%	70%	130%	97%	80%	120%	98%	70%	130%
Beryllium	3303320		<0.4	<0.4	NA	< 0.4	104%	70%	130%	112%	80%	120%	108%	70%	130%
Boron	3303320		<5	<5	NA	< 5	88%	70%	130%	115%	80%	120%	101%	70%	130%
Boron (Hot Water Soluble)	3286879		0.14	0.14	NA	< 0.10	92%	60%	140%	101%	70%	130%	95%	60%	140%
Cadmium	3303320		<0.5	<0.5	NA	< 0.5	110%	70%	130%	102%	80%	120%	104%	70%	130%
Chromium	3303320		12	12	NA	< 5	101%	70%	130%	94%	80%	120%	98%	70%	130%
Cobalt	3303320		3.8	3.8	0.0%	< 0.5	111%	70%	130%	98%	80%	120%	97%	70%	130%
Copper	3303320		4.9	4.9	NA	< 1.0	93%	70%	130%	96%	80%	120%	92%	70%	130%
Lead	3303320		5	5	0.0%	< 1	102%	70%	130%	98%	80%	120%	94%	70%	130%
Molybdenum	3303320		<0.5	<0.5	NA	< 0.5	116%	70%	130%	108%	80%	120%	110%	70%	130%
Nickel	3303320		8	8	0.0%	< 1	108%	70%	130%	100%	80%	120%	97%	70%	130%
Selenium	3303320		<0.8	<0.8	NA	< 0.8	116%	70%	130%	102%	80%	120%	100%	70%	130%
Silver	3303320		<0.5	<0.5	NA	< 0.5	99%	70%	130%	97%	80%	120%	97%	70%	130%
Thallium	3303320		<0.5	<0.5	NA	< 0.5	114%	70%	130%	100%	80%	120%	99%	70%	130%
Uranium	3303320		<0.50	<0.50	NA	< 0.50	111%	70%	130%	98%	80%	120%	97%	70%	130%
Vanadium	3303320		19.2	19.4	1.0%	< 0.4	111%	70%	130%	95%	80%	120%	97%	70%	130%
Zinc	3303320		23	23	NA	< 5	104%	70%	130%	96%	80%	120%	94%	70%	130%
Chromium, Hexavalent	3321512		<0.2	<0.2	NA	< 0.2	106%	70%	130%	97%	80%	120%	87%	70%	130%
Cyanide, Free	3303310		<0.040	<0.040	NA	< 0.040	101%	70%	130%	99%	80%	120%	95%	70%	130%
Mercury	3303320		<0.10	<0.10	NA	< 0.10	101%	70%	130%	102%	80%	120%	101%	70%	130%
Electrical Conductivity (2:1)	3286879		0.260	0.261	0.4%	< 0.005	109%	80%	120%	NA			NA		
Sodium Adsorption Ratio (2:1) (Calc.)	3286879		3.22	3.15	2.2%	N/A	NA			NA			NA		
pH, 2:1 CaCl2 Extraction	3303699		6.59	6.84	3.7%	NA	100%	80%	120%	NA			NA		

Comments: NA signifies Not Applicable.

pH duplicates QA acceptance criteria was met relative as stated in Table 5-15 of Analytical Protocol document.

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

More than 90% of the elements met acceptance limits and overall data quality is acceptable for use. For a multi-element scan up to 10% of analytes may exceed the quoted limits by up to 10% absolute.

Certified By:

*Amanjot Bhela*  


## Quality Assurance

CLIENT NAME: WSP CANADA INC.

AGAT WORK ORDER: 21T840564

PROJECT: 211-10139-00

ATTENTION TO: Vanessa Oetinger

SAMPLING SITE: ORBY Rail

SAMPLED BY: Matthew Roy

Trace Organics Analysis															
RPT Date: Dec 18, 2021			DUPLICATE			Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD		Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper

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

Naphthalene	3257319		< 0.05	< 0.05	NA	< 0.05	78%	50%	140%	105%	50%	140%	105%	50%	140%
Acenaphthylene	3257319		< 0.05	< 0.05	NA	< 0.05	84%	50%	140%	83%	50%	140%	98%	50%	140%
Acenaphthene	3257319		< 0.05	< 0.05	NA	< 0.05	85%	50%	140%	92%	50%	140%	83%	50%	140%
Fluorene	3257319		< 0.05	< 0.05	NA	< 0.05	105%	50%	140%	94%	50%	140%	88%	50%	140%
Phenanthrene	3257319		< 0.05	< 0.05	NA	< 0.05	98%	50%	140%	98%	50%	140%	74%	50%	140%
Anthracene	3257319		< 0.05	< 0.05	NA	< 0.05	86%	50%	140%	86%	50%	140%	82%	50%	140%
Fluoranthene	3257319		< 0.05	< 0.05	NA	< 0.05	68%	50%	140%	88%	50%	140%	91%	50%	140%
Pyrene	3257319		< 0.05	< 0.05	NA	< 0.05	84%	50%	140%	74%	50%	140%	107%	50%	140%
Benz(a)anthracene	3257319		< 0.05	< 0.05	NA	< 0.05	80%	50%	140%	85%	50%	140%	87%	50%	140%
Chrysene	3257319		< 0.05	< 0.05	NA	< 0.05	95%	50%	140%	90%	50%	140%	85%	50%	140%
Benzo(b)fluoranthene	3257319		< 0.05	< 0.05	NA	< 0.05	88%	50%	140%	105%	50%	140%	96%	50%	140%
Benzo(k)fluoranthene	3257319		< 0.05	< 0.05	NA	< 0.05	93%	50%	140%	98%	50%	140%	105%	50%	140%
Benzo(a)pyrene	3257319		< 0.05	< 0.05	NA	< 0.05	92%	50%	140%	86%	50%	140%	98%	50%	140%
Indeno(1,2,3-cd)pyrene	3257319		< 0.05	< 0.05	NA	< 0.05	105%	50%	140%	88%	50%	140%	86%	50%	140%
Dibenz(a,h)anthracene	3257319		< 0.05	< 0.05	NA	< 0.05	98%	50%	140%	74%	50%	140%	88%	50%	140%
Benzo(g,h,i)perylene	3257319		< 0.05	< 0.05	NA	< 0.05	86%	50%	140%	82%	50%	140%	80%	50%	140%

**O. Reg. 153(511) - OC Pesticides + PCBs (Soil)**

Gamma-Hexachlorocyclohexane	3296567		< 0.005	< 0.005	NA	< 0.005	86%	50%	140%	90%	50%	140%	76%	50%	140%
Heptachlor	3296567		< 0.005	< 0.005	NA	< 0.005	82%	50%	140%	88%	50%	140%	85%	50%	140%
Aldrin	3296567		< 0.005	< 0.005	NA	< 0.005	96%	50%	140%	99%	50%	140%	80%	50%	140%
Heptachlor Epoxide	3296567		< 0.005	< 0.005	NA	< 0.005	97%	50%	140%	98%	50%	140%	85%	50%	140%
Endosulfan I	3296567		< 0.005	< 0.005	NA	< 0.005	97%	50%	140%	98%	50%	140%	82%	50%	140%
Endosulfan II	3296567		< 0.005	< 0.005	NA	< 0.005	98%	50%	140%	96%	50%	140%	83%	50%	140%
Alpha-Chlordane	3296567		< 0.005	< 0.005	NA	< 0.005	95%	50%	140%	97%	50%	140%	85%	50%	140%
gamma-Chlordane	3296567		< 0.005	< 0.005	NA	< 0.005	93%	50%	140%	96%	50%	140%	82%	50%	140%
op'-DDD	3296567		< 0.005	< 0.005	NA	< 0.005	97%	50%	140%	106%	50%	140%	102%	50%	140%
pp'-DDD	3296567		< 0.005	< 0.005	NA	< 0.005	83%	50%	140%	99%	50%	140%	83%	50%	140%
op'-DDE	3296567		< 0.005	< 0.005	NA	< 0.005	92%	50%	140%	103%	50%	140%	80%	50%	140%
pp'-DDE	3296567		< 0.005	< 0.005	NA	< 0.005	89%	50%	140%	95%	50%	140%	84%	50%	140%
op'-DDT	3296567		< 0.005	< 0.005	NA	< 0.005	88%	50%	140%	105%	50%	140%	106%	50%	140%
pp'-DDT	3296567		< 0.005	< 0.005	NA	< 0.005	86%	50%	140%	88%	50%	140%	101%	50%	140%
Dieldrin	3296567		< 0.005	< 0.005	NA	< 0.005	97%	50%	140%	100%	50%	140%	86%	50%	140%
Endrin	3296567		< 0.005	< 0.005	NA	< 0.005	88%	50%	140%	101%	50%	140%	106%	50%	140%
Methoxychlor	3296567		< 0.005	< 0.005	NA	< 0.005	82%	50%	140%	90%	50%	140%	107%	50%	140%
Hexachlorobenzene	3296567		< 0.005	< 0.005	NA	< 0.005	89%	50%	140%	92%	50%	140%	89%	50%	140%
Hexachlorobutadiene	3296567		< 0.01	< 0.01	NA	< 0.01	85%	50%	140%	92%	50%	140%	81%	50%	140%
Hexachloroethane	3296567		< 0.01	< 0.01	NA	< 0.01	87%	50%	140%	98%	50%	140%	80%	50%	140%
Aroclor 1242	3296567		< 0.10	< 0.10	NA	< 0.10	98%	50%	140%	NA	50%	140%	NA	50%	140%

## Quality Assurance

CLIENT NAME: WSP CANADA INC.  
 PROJECT: 211-10139-00  
 SAMPLING SITE: ORBY Rail

AGAT WORK ORDER: 21T840564  
 ATTENTION TO: Vanessa Oetinger  
 SAMPLED BY: Matthew Roy

### Trace Organics Analysis (Continued)

RPT Date: Dec 18, 2021			DUPLICATE			Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD		Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
Aroclor 1248	3296567		< 0.10	< 0.10	NA	< 0.10	106%	50%	140%	NA	50%	140%	NA	50%	140%
Aroclor 1254	3296567		< 0.10	< 0.10	NA	< 0.10	104%	50%	140%	NA	50%	140%	NA	50%	140%
Aroclor 1260	3296567		< 0.10	< 0.10	NA	< 0.10	92%	50%	140%	NA	50%	140%	NA	50%	140%
Polychlorinated Biphenyls	3296567		< 0.10	< 0.10	NA	< 0.10	98%	50%	140%	102%	50%	140%	95%	50%	140%
O. Reg. 153(511) - PHCs F1 - F4 (Soil)															
Benzene	3304559		<0.02	<0.02	NA	< 0.02	104%	60%	140%	94%	60%	140%	104%	60%	140%
Toluene	3304559		<0.05	<0.05	NA	< 0.05	95%	60%	140%	87%	60%	140%	108%	60%	140%
Ethylbenzene	3304559		<0.05	<0.05	NA	< 0.05	99%	60%	140%	93%	60%	140%	95%	60%	140%
m & p-Xylene	3304559		<0.05	<0.05	NA	< 0.05	99%	60%	140%	105%	60%	140%	101%	60%	140%
o-Xylene	3304559		<0.05	<0.05	NA	< 0.05	114%	60%	140%	93%	60%	140%	91%	60%	140%
F1 (C6 - C10)	3304559		<5	<5	NA	< 5	90%	60%	140%	74%	60%	140%	80%	60%	140%
F2 (C10 to C16)	3308615		< 10	< 10	NA	< 10	101%	60%	140%	75%	60%	140%	85%	60%	140%
F3 (C16 to C34)	3308615		< 50	< 50	NA	< 50	110%	60%	140%	76%	60%	140%	87%	60%	140%
F4 (C34 to C50)	3308615		< 50	< 50	NA	< 50	115%	60%	140%	74%	60%	140%	89%	60%	140%

Comments: When the average of the sample and duplicate results is less than 5x the RDL, the Relative Percent Difference (RPD) will be indicated as Not Applicable (NA).

Certified By: \_\_\_\_\_





## QC Exceedance

CLIENT NAME: WSP CANADA INC.

AGAT WORK ORDER: 21T840564

PROJECT: 211-10139-00

ATTENTION TO: Vanessa Oetinger

RPT Date: Dec 18, 2021		REFERENCE MATERIAL		METHOD BLANK SPIKE			MATRIX SPIKE			
PARAMETER	Sample Id	Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
			Lower	Upper		Lower	Upper		Lower	Upper

O. Reg. 153(511) - Metals &amp; Inorganics (Soil)

	133%	70%	130%	105%	80%	120%	83%	70%	130%
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Comments: NA signifies Not Applicable.

pH duplicates QA acceptance criteria was met relative as stated in Table 5-15 of Analytical Protocol document.

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

More than 90% of the elements met acceptance limits and overall data quality is acceptable for use. For a multi-element scan up to 10% of analytes may exceed the quoted limits by up to 10% absolute.



## Method Summary

CLIENT NAME: WSP CANADA INC.  
 PROJECT: 211-10139-00  
 SAMPLING SITE: ORBY Rail

AGAT WORK ORDER: 21T840564  
 ATTENTION TO: Vanessa Oetinger  
 SAMPLED BY: Matthew Roy

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Soil Analysis			
Antimony	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Arsenic	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Barium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Beryllium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Boron	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Boron (Hot Water Soluble)	MET-93-6104	modified from EPA 6010D and MSA PART 3, CH 21	ICP/OES
Cadmium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Chromium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Cobalt	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Copper	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Lead	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Molybdenum	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Nickel	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Selenium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Silver	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Thallium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Uranium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Vanadium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Zinc	MET 93 -6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Chromium, Hexavalent	INOR-93-6068	modified from EPA 3060 and EPA 7196	SPECTROPHOTOMETER
Cyanide, Free	INOR-93-6052	modified from ON MOECC E3015, SM 4500-CN- I, G-387	TECHNICON AUTO ANALYZER
Mercury	MET-93-6103	modified from EPA 7471B and SM 3112 B	ICP-MS
Electrical Conductivity (2:1)	INOR-93-6036	modified from MSA PART 3, CH 14 and SM 2510 B	EC METER
Sodium Adsorption Ratio (2:1) (Calc.)	INOR-93-6007	modified from EPA 6010D & Analytical Protocol	ICP/OES
pH, 2:1 CaCl <sub>2</sub> Extraction	INOR-93-6031	modified from EPA 9045D and MCKEAGUE 3.11	PH METER

## Method Summary

CLIENT NAME: WSP CANADA INC.

AGAT WORK ORDER: 21T840564

PROJECT: 211-10139-00

ATTENTION TO: Vanessa Oetinger

SAMPLING SITE: ORBY Rail

SAMPLED BY: Matthew Roy

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Trace Organics Analysis			
Gamma-Hexachlorocyclohexane	ORG-91-5113	modified from EPA SW-846 3570, 3620C & 8081B	GC/ECD
Heptachlor	ORG-91-5113	modified from EPA SW-846 3570, 3620C & 8081B	GC/ECD
Aldrin	ORG-91-5113	modified from EPA SW-846 3570, 3620C & 8081B	GC/ECD
Heptachlor Epoxide	ORG-91-5113	modified from EPA SW-846 3570, 3620C & 8081B	GC/ECD
Endosulfan I	ORG-91-5113	modified from EPA SW-846 3570, 3620C & 8081B	GC/ECD
Endosulfan II	ORG-91-5113	modified from EPA SW-846 3570, 3620C & 8081B	GC/ECD
Endosulfan	ORG-91-5113	modified from EPA SW-846 3570, 3620C & 8081B	GC/ECD
Alpha-Chlordane	ORG-91-5113	modified from EPA SW-846 3570, 3620C & 8081B	GC/ECD
gamma-Chlordane	ORG-91-5113	modified from EPA SW-846 3570, 3620C & 8081B	GC/ECD
Chlordane	ORG-91-5113	modified from EPA SW-846 3570, 3620C & 8081B	CALCULATION
op'-DDD	ORG-91-5113	modified from EPA SW-846 3570, 3620C & 8081B	GC/ECD
pp'-DDD	ORG-91-5113	modified from EPA SW-846 3570, 3620C & 8081B	GC/ECD
DDD	ORG-91-5113	modified from EPA SW-846 3570, 3620C & 8081B	CALCULATION
op'-DDE	ORG-91-5113	modified from EPA SW-846 3570, 3620C & 8081B	GC/ECD
pp'-DDE	ORG-91-5113	modified from EPA SW-846 3570, 3620C & 8081B	GC/ECD
DDE	ORG-91-5113	modified from EPA SW-846 3570, 3620C & 8081B	GC/ECD
op'-DDT	ORG-91-5113	modified from EPA SW-846 3570, 3620C & 8081B	GC/ECD
pp'-DDT	ORG-91-5113	modified from EPA SW-846 3570, 3620C & 8081B	GC/ECD
DDT	ORG-91-5113	modified from EPA SW-846 3570, 3620C & 8081B	CALCULATION
Dieldrin	ORG-91-5113	modified from EPA SW-846 3570, 3620C & 8081B	GC/ECD
Endrin	ORG-91-5113	modified from EPA SW-846 3570, 3620C & 8081B	GC/ECD
Methoxychlor	ORG-91-5113	modified from EPA SW-846 3570, 3620C & 8081B	GC/ECD
Hexachlorobenzene	ORG-91-5113	modified from EPA SW-846 3570, 3620C & 8081B	GC/ECD
Hexachlorobutadiene	ORG-91-5113	modified from EPA SW-846 3570, 3620C & 8081B	GC/ECD
Hexachloroethane	ORG-91-5113	modified from EPA SW-846 3570, 3620C & 8081B	GC/ECD
Aroclor 1242	ORG-91-5113	modified from EPA SW-846 3570, 3620C & 8082A	GC/ECD
Aroclor 1248	ORG-91-5113	modified from EPA SW-846 3570, 3620C & 8082A	GC/ECD





## Method Summary

CLIENT NAME: WSP CANADA INC.  
 PROJECT: 211-10139-00  
 SAMPLING SITE: ORBY Rail

AGAT WORK ORDER: 21T840564  
 ATTENTION TO: Vanessa Oetinger  
 SAMPLED BY: Matthew Roy

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Aroclor 1254	ORG-91-5113	modified from EPA SW-846 3570, 3620C & 8082A	GC/ECD
Aroclor 1260	ORG-91-5113	modified from EPA SW-846 3570, 3620C & 8082A	GC/ECD
Polychlorinated Biphenyls	ORG-91-5113	modified from EPA SW-846 3570, 3620C & 8082A	GC/ECD
TCMX	ORG-91-5113	modified from EPA SW-846 3541, 3620,8081	GC/ECD
Decachlorobiphenyl	ORG-91-5113	modified from EPA SW-846 3541, 3620,8081	GC/ECD
Moisture Content	VOL-91-5009	CCME Tier 1 Method	BALANCE
wet weight OC/PCB	ORG-91-5113		BALANCE
Naphthalene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Acenaphthylene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Acenaphthene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Fluorene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Phenanthrene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Anthracene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Fluoranthene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Pyrene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Benz(a)anthracene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Chrysene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Benzo(b)fluoranthene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Benzo(k)fluoranthene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Benzo(a)pyrene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Indeno(1,2,3-cd)pyrene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Dibenz(a,h)anthracene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Benzo(g,h,i)perylene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
1 and 2 Methylnaphthalene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Naphthalene-d8	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Acridine-d9	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Terphenyl-d14	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Benzene	VOL-91-5009	modified from CCME Tier 1 Method	(P&T)GC/MS
Toluene	VOL-91-5009	modified from CCME Tier 1 Method	(P&T)GC/MS
Ethylbenzene	VOL-91-5009	modified from CCME Tier 1 Method	(P&T)GC/MS
m & p-Xylene	VOL-91-5009	modified from CCME Tier 1 Method	(P&T)GC/MS

## Method Summary

CLIENT NAME: WSP CANADA INC.

AGAT WORK ORDER: 21T840564

PROJECT: 211-10139-00

ATTENTION TO: Vanessa Oetinger

SAMPLING SITE: ORBY Rail

SAMPLED BY: Matthew Roy

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
o-Xylene	VOL-91-5009	modified from CCME Tier 1 Method	(P&T)GC/MS
Xylenes (Total)	VOL-91-5009	modified from CCME Tier 1 Method	(P&T)GC/MS
F1 (C6 - C10)	VOL-91-5009	modified from CCME Tier 1 Method	(P&T)GC/FID
F1 (C6 to C10) minus BTEX	VOL-91-5009	modified from CCME Tier 1 Method	P&T GC/FID
Toluene-d8	VOL-91-5009	modified from EPA SW-846 5030C & 8260D	(P&T)GC/MS
F2 (C10 to C16)	VOL-91-5009	modified from CCME Tier 1 Method	GC/FID
F3 (C16 to C34)	VOL-91-5009	modified from CCME Tier 1 Method	GC/FID
F4 (C34 to C50)	VOL-91-5009	modified from CCME Tier 1 Method	GC/FID
Gravimetric Heavy Hydrocarbons	VOL-91-5009	modified from CCME Tier 1 Method	BALANCE
Terphenyl	VOL-91-5009	modified from CCME Tier 1 Method	GC/FID



# AGAT Laboratories

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

**Laboratory Use Only**  
Work Order #: 2IT840564  
Cooler Quantity: 1 large blk  
Arrival Temperatures: 3.4 4.9 5.0  
Custody Seal Intact:  Yes  No  N/A  
Notes: logged ice

## Chain of Custody Record

If this is a Drinking Water sample, please use Drinking Water Chain of Custody Form (potable water consumed by humans)

**Report Information:**  
Company: WSP Inc.  
Contact: Vanessa Oetinger  
Address: 2 International Blvd, Etobicoke  
Phone: \_\_\_\_\_ Fax: \_\_\_\_\_  
Reports to be sent to:  
1. Email: Vanessa.oetinger@wsp.com  
2. Email: Matt.roy@wsp.com

**Regulatory Requirements:**  
*(Please check all applicable boxes)*

Regulation 153/04  Excess Soils R406  Sewer Use  
 Sanitary  Storm  
Table 1  Ind/Corn  Agriculture  Res/Park  Regulation 558  Prov. Water Quality Objectives (PWQO)  
 CCME  Other  
Soil Texture (Check One)  Coarse  Fine

**Turnaround Time (TAT) Required:**  
Regular TAT  5 to 7 Business Days  
Rush TAT (Rush Surcharges Apply)  
 3 Business Days  2 Business Days  Next Business Day  
OR Date Required (Rush Surcharges May Apply): \_\_\_\_\_  
Please provide prior notification for rush TAT  
\*TAT is exclusive of weekends and statutory holidays

**Project Information:**  
Project: 211-10139-00  
Site Location: ORBY Rail  
Sampled By: Matthew Roy  
AGAT Quote #: \_\_\_\_\_ PO: \_\_\_\_\_  
Please note: If quotation number is not provided, client will be billed full price for analysis.

Is this submission for a Record of Site Condition?  Yes  No  
Report Guideline on Certificate of Analysis  Yes  No

**Invoice Information:** Bill To Same: Yes  No   
Company: \_\_\_\_\_  
Contact: \_\_\_\_\_  
Address: \_\_\_\_\_  
Email: payables.ontario@wsp.com

Sample Matrix Legend	Field Filtered - Metals, Hg, CrVI, DOC	0. Reg 153				0. Reg 558				0. Reg 406				Potentially Hazardous or High Concentration (Y/N)	
		Metals & Inorganics	Metals - CrVI, Hg, HWSB	BTEX, F1-F4 PHCs	Analyze F4G if required	PAHs	PCBs	VOC	Landfill Disposal Characterization TOL	Excess Soils SPLP Rainwater Leach	Excess Soils Characterization Package	pH, ICPMS Metals, BTEX, F1-F4	Salt - EC/SAR		
B BioLe															
GW Ground Water															
O Oil															
P Paint															
S Soil															
SD Sediment															
SW Surface Water															

Sample Identification	Date Sampled	Time Sampled	# of Containers	Sample Matrix	Comments/ Special Instructions	Y/N
BH21-4 SS1	12/6/21	AM	2	S		
BH21-4 SS2		PM	1	S		
BH21-4 SS3		PM	2	S		
BH21-5 SS1		PM	2	S		
BH21-5 SS2		PM	2	S		
BH21-5 SS3		PM	1	S		
		AM				
		PM				
		AM				
		PM				
		AM				
		PM				

Samples Relinquished By (Print Name and Sign): <u>Matthew Roy</u>	Date: <u>12/6/21</u>	Time: <u>1200</u>	Samples Received By (Print Name and Sign): <u>Adriana Bellavia</u>	Date: _____	Time: _____
Samples Relinquished By (Print Name and Sign): _____	Date: _____	Time: _____	Samples Received By (Print Name and Sign): _____	Date: _____	Time: _____
Samples Relinquished By (Print Name and Sign): _____	Date: _____	Time: _____	Samples Received By (Print Name and Sign): _____	Date: _____	Time: _____

Page 1 of 1  
No: **T 127090**





CLIENT NAME: WSP CANADA INC.  
2 INTERNATIONAL BLVD SUITE 201  
ETOBICOKE, ON M9W1A2  
(416) 798-0065

ATTENTION TO: Vanessa Oetinger  
PROJECT: 211-10139-00 200 02

AGAT WORK ORDER: 21T841262

SOIL ANALYSIS REVIEWED BY: Yris Verastegui, Report Reviewer  
TRACE ORGANICS REVIEWED BY: Inga Kuzmina, Trace Organics Lab Manager

DATE REPORTED: Dec 20, 2021

PAGES (INCLUDING COVER): 16

VERSION\*: 1

Should you require any information regarding this analysis please contact your client services representative at (905) 712-5100

\*Notes

**Disclaimer:**

- All work conducted herein has been done using accepted standard protocols, and generally accepted practices and methods. AGAT test methods may incorporate modifications from the specified reference methods to improve performance.
- All samples will be disposed of within 30 days after receipt unless a Long Term Storage Agreement is signed and returned. Some specialty analysis may be exempt, please contact your Client Project Manager for details.
- AGAT's liability in connection with any delay, performance or non-performance of these services is only to the Client and does not extend to any other third party. Unless expressly agreed otherwise in writing, AGAT's liability is limited to the actual cost of the specific analysis or analyses included in the services.
- This Certificate shall not be reproduced except in full, without the written approval of the laboratory.
- The test results reported herewith relate only to the samples as received by the laboratory.
- Application of guidelines is provided "as is" without warranty of any kind, either expressed or implied, including, but not limited to, warranties of merchantability, fitness for a particular purpose, or non-infringement. AGAT assumes no responsibility for any errors or omissions in the guidelines contained in this document.
- All reportable information as specified by ISO/IEC 17025:2017 is available from AGAT Laboratories upon request.



## Certificate of Analysis

AGAT WORK ORDER: 21T841262

PROJECT: 211-10139-00 200 02

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

CLIENT NAME: WSP CANADA INC.

SAMPLING SITE: ORBY

ATTENTION TO: Vanessa Oetinger

SAMPLED BY: Matthew Roy

### O. Reg. 153(511) - Metals & Inorganics (Soil)

DATE RECEIVED: 2021-12-07

DATE REPORTED: 2021-12-20

SAMPLE DESCRIPTION: BH21-20 SS4

SAMPLE TYPE: Soil

DATE SAMPLED: 2021-11-23

3310262

Parameter	Unit	G / S	RDL	3310262
Antimony	µg/g	1.3	0.8	<0.8
Arsenic	µg/g	18	1	5
Barium	µg/g	220	2.0	95.4
Beryllium	µg/g	2.5	0.4	0.6
Boron	µg/g	36	5	24
Boron (Hot Water Soluble)	µg/g	NA	0.10	0.26
Cadmium	µg/g	1.2	0.5	<0.5
Chromium	µg/g	70	5	25
Cobalt	µg/g	21	0.5	14.8
Copper	µg/g	92	1.0	10.6
Lead	µg/g	120	1	12
Molybdenum	µg/g	2	0.5	1.2
Nickel	µg/g	82	1	27
Selenium	µg/g	1.5	0.8	<0.8
Silver	µg/g	0.5	0.5	<0.5
Thallium	µg/g	1	0.5	<0.5
Uranium	µg/g	2.5	0.50	0.79
Vanadium	µg/g	86	0.4	40.2
Zinc	µg/g	290	5	63
Chromium, Hexavalent	µg/g	0.66	0.2	<0.2
Cyanide, Free	µg/g	0.051	0.040	<0.040
Mercury	µg/g	0.27	0.10	<0.10
Electrical Conductivity (2:1)	mS/cm	0.57	0.005	0.125
Sodium Adsorption Ratio (2:1) (Calc.)	N/A	2.4	N/A	0.344
pH, 2:1 CaCl2 Extraction	pH Units		NA	7.13

Certified By:

*Jris Veraítegui*



**AGAT** Laboratories

# Certificate of Analysis

AGAT WORK ORDER: 21T841262

PROJECT: 211-10139-00 200 02

5835 COOPERS AVENUE  
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CLIENT NAME: WSP CANADA INC.

SAMPLING SITE: ORBY

ATTENTION TO: Vanessa Oetinger

SAMPLED BY: Matthew Roy

## O. Reg. 153(511) - Metals & Inorganics (Soil)

DATE RECEIVED: 2021-12-07

DATE REPORTED: 2021-12-20

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 1: Full Depth Background Site Condition Standards - Soil - Residential/Parkland/Institutional/Industrial/Commercial/Community Property Use

Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

3310262 EC was determined on the DI water extract obtained from the 2:1 leaching procedure (2 parts DI water:1 part soil). pH was determined on the 0.01M CaCl<sub>2</sub> extract prepared at 2:1 ratio. SAR is a calculated parameter.

Analysis performed at AGAT Toronto (unless marked by \*)

Certified By:





## Certificate of Analysis

AGAT WORK ORDER: 21T841262

PROJECT: 211-10139-00 200 02

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<http://www.agatlabs.com>

CLIENT NAME: WSP CANADA INC.

SAMPLING SITE: ORBY

ATTENTION TO: Vanessa Oetinger

SAMPLED BY: Matthew Roy

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

DATE RECEIVED: 2021-12-07

DATE REPORTED: 2021-12-20

SAMPLE DESCRIPTION: BH21-45 SS2

SAMPLE TYPE: Soil

DATE SAMPLED: 2021-11-22

Parameter	Unit	G / S	RDL	3310265
Naphthalene	µg/g	0.09	0.05	<0.05
Acenaphthylene	µg/g	0.093	0.05	<0.05
Acenaphthene	µg/g	0.072	0.05	<0.05
Fluorene	µg/g	0.12	0.05	<0.05
Phenanthrene	µg/g	0.69	0.05	<0.05
Anthracene	µg/g	0.16	0.05	<0.05
Fluoranthene	µg/g	0.56	0.05	<0.05
Pyrene	µg/g	1	0.05	<0.05
Benz(a)anthracene	µg/g	0.36	0.05	<0.05
Chrysene	µg/g	2.8	0.05	<0.05
Benzo(b)fluoranthene	µg/g	0.47	0.05	<0.05
Benzo(k)fluoranthene	µg/g	0.48	0.05	<0.05
Benzo(a)pyrene	µg/g	0.3	0.05	<0.05
Indeno(1,2,3-cd)pyrene	µg/g	0.46	0.05	<0.05
Dibenz(a,h)anthracene	µg/g	0.1	0.05	<0.05
Benzo(g,h,i)perylene	µg/g	0.68	0.05	<0.05
1 and 2 Methylnaphthalene	µg/g	0.59	0.05	<0.05
Moisture Content	%		0.1	14.8

Surrogate	Unit	Acceptable Limits
Naphthalene-d8	%	50-140 115
Acridine-d9	%	50-140 90
Terphenyl-d14	%	50-140 94

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 1: Full Depth Background Site Condition Standards - Soil - Residential/Parkland/Institutional/Industrial/Commercial/Community Property Use  
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

3310265 Results are based on the dry weight of the soil.  
Note: The result for Benzo(b)Fluoranthene is the total of the Benzo(b)&j)Fluoranthene isomers because the isomers co-elute on the GC column.  
2- and 1-Methyl Naphthalene is a calculated parameter. The calculated value is the sum of 2-Methyl Naphthalene and 1-Methyl Naphthalene.

Analysis performed at AGAT Toronto (unless marked by \*)

Certified By:



## Certificate of Analysis

AGAT WORK ORDER: 21T841262

PROJECT: 211-10139-00 200 02

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

CLIENT NAME: WSP CANADA INC.

SAMPLING SITE: ORBY

ATTENTION TO: Vanessa Oetinger

SAMPLED BY: Matthew Roy

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

DATE RECEIVED: 2021-12-07

DATE REPORTED: 2021-12-20

SAMPLE DESCRIPTION: BH21-45 SS9

SAMPLE TYPE: Soil

DATE SAMPLED: 2021-11-22

Parameter	Unit	G / S	RDL	3310271
F1 (C6 - C10)	µg/g	25	5	<5
F1 (C6 to C10) minus BTEX	µg/g	25	5	<5
F2 (C10 to C16)	µg/g	10	10	<10
F3 (C16 to C34)	µg/g	240	50	<50
F4 (C34 to C50)	µg/g	120	50	<50
Gravimetric Heavy Hydrocarbons	µg/g	120	50	NA
Moisture Content	%		0.1	10.3
Surrogate	Unit	Acceptable Limits		
Toluene-d8	% Recovery	50-140		76
Terphenyl	%	60-140		96

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 1: Full Depth Background Site Condition Standards - Soil - Residential/Parkland/Institutional/Industrial/Commercial/Community Property Use  
 Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

3310271 Results are based on sample dry weight.  
 The C6-C10 fraction is calculated using toluene response factor.  
 C6-C10 (F1 minus BTEX) is a calculated parameter. The calculated value is F1 minus BTEX. The calculated parameter is non-accredited. The parameters that are components of the calculation are accredited.  
 The C10 - C16, C16 - C34, and C34 - C50 fractions are calculated using the average response factor for n-C10, n-C16, and n-C34.  
 Gravimetric Heavy Hydrocarbons are not included in the Total C16-C50 and are only determined if the chromatogram of the C34 - C50 hydrocarbons indicates that hydrocarbons >C50 are present.  
 The chromatogram has returned to baseline by the retention time of nC50.  
 Total C6 - C50 results are corrected for BTEX contribution.  
 This method complies with the Reference Method for the CWS PHC and is validated for use in the laboratory.  
 nC6 and nC10 response factors are within 30% of Toluene response factor.  
 nC10, nC16 and nC34 response factors are within 10% of their average.  
 C50 response factor is within 70% of nC10 + nC16 + nC34 average.  
 Linearity is within 15%.  
 Extraction and holding times were met for this sample.  
 Fractions 1-4 are quantified without the contribution of PAHs. Under Ontario Regulation 153, results are considered valid without determining the PAH contribution if not requested by the client.

Analysis performed at AGAT Toronto (unless marked by \*)

Certified By:



## Certificate of Analysis

AGAT WORK ORDER: 21T841262

PROJECT: 211-10139-00 200 02

5835 COOPERS AVENUE  
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CLIENT NAME: WSP CANADA INC.

SAMPLING SITE: ORBY

ATTENTION TO: Vanessa Oetinger

SAMPLED BY: Matthew Roy

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

DATE RECEIVED: 2021-12-07

DATE REPORTED: 2021-12-20

SAMPLE DESCRIPTION: BH21-45 SS9

SAMPLE TYPE: Soil

DATE SAMPLED: 2021-11-22

3310271

Parameter	Unit	G / S	RDL	3310271
Dichlorodifluoromethane	µg/g	0.05	0.05	<0.05
Vinyl Chloride	ug/g	0.02	0.02	<0.02
Bromomethane	ug/g	0.05	0.05	<0.05
Trichlorofluoromethane	ug/g	0.25	0.05	<0.05
Acetone	ug/g	0.5	0.50	<0.50
1,1-Dichloroethylene	ug/g	0.05	0.05	<0.05
Methylene Chloride	ug/g	0.05	0.05	<0.05
Trans- 1,2-Dichloroethylene	ug/g	0.05	0.05	<0.05
Methyl tert-butyl Ether	ug/g	0.05	0.05	<0.05
1,1-Dichloroethane	ug/g	0.05	0.02	<0.02
Methyl Ethyl Ketone	ug/g	0.5	0.50	<0.50
Cis- 1,2-Dichloroethylene	ug/g	0.05	0.02	<0.02
Chloroform	ug/g	0.05	0.04	<0.04
1,2-Dichloroethane	ug/g	0.05	0.03	<0.03
1,1,1-Trichloroethane	ug/g	0.05	0.05	<0.05
Carbon Tetrachloride	ug/g	0.05	0.05	<0.05
Benzene	ug/g	0.02	0.02	<0.02
1,2-Dichloropropane	ug/g	0.05	0.03	<0.03
Trichloroethylene	ug/g	0.05	0.03	<0.03
Bromodichloromethane	ug/g	0.05	0.05	<0.05
Methyl Isobutyl Ketone	ug/g	0.5	0.50	<0.50
1,1,2-Trichloroethane	ug/g	0.05	0.04	<0.04
Toluene	ug/g	0.2	0.05	<0.05
Dibromochloromethane	ug/g	0.05	0.05	<0.05
Ethylene Dibromide	ug/g	0.05	0.04	<0.04
Tetrachloroethylene	ug/g	0.05	0.05	<0.05
1,1,1,2-Tetrachloroethane	ug/g	0.05	0.04	<0.04
Chlorobenzene	ug/g	0.05	0.05	<0.05
Ethylbenzene	ug/g	0.05	0.05	<0.05
m & p-Xylene	ug/g		0.05	<0.05

Certified By:





## Certificate of Analysis

AGAT WORK ORDER: 21T841262

PROJECT: 211-10139-00 200 02

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CLIENT NAME: WSP CANADA INC.

SAMPLING SITE: ORBY

ATTENTION TO: Vanessa Oetinger

SAMPLED BY: Matthew Roy

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

DATE RECEIVED: 2021-12-07

DATE REPORTED: 2021-12-20

SAMPLE DESCRIPTION: BH21-45 SS9

SAMPLE TYPE: Soil

DATE SAMPLED: 2021-11-22

Parameter	Unit	G / S	RDL	3310271
Bromoform	ug/g	0.05	0.05	<0.05
Styrene	ug/g	0.05	0.05	<0.05
1,1,2,2-Tetrachloroethane	ug/g	0.05	0.05	<0.05
o-Xylene	ug/g		0.05	<0.05
1,3-Dichlorobenzene	ug/g	0.05	0.05	<0.05
1,4-Dichlorobenzene	ug/g	0.05	0.05	<0.05
1,2-Dichlorobenzene	ug/g	0.05	0.05	<0.05
Xylenes (Total)	ug/g	0.05	0.05	<0.05
1,3-Dichloropropene (Cis + Trans)	µg/g	0.05	0.04	<0.04
n-Hexane	µg/g	0.05	0.05	<0.05
Moisture Content	%		0.1	10.3
Surrogate	Unit	Acceptable Limits		
Toluene-d8	% Recovery	50-140		96
4-Bromofluorobenzene	% Recovery	50-140		90

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 1: Full Depth Background Site Condition Standards - Soil - Residential/Parkland/Institutional/Industrial/Commercial/Community Property Use

Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

3310271 The sample was analyzed using the high level technique. The sample was extracted using methanol, a small amount of the methanol extract was diluted in water and the purge & trap GC/MS analysis was performed. Results are based on the dry weight of the soil.

Xylenes total is a calculated parameter. The calculated value is the sum of m&p-Xylene + o-Xylene.

1,3-Dichloropropene total is a calculated parameter. The calculated value is the sum of Cis-1,3-Dichloropropene and Trans-1,3-Dichloropropene.

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

Analysis performed at AGAT Toronto (unless marked by \*)

Certified By:

## Quality Assurance

CLIENT NAME: WSP CANADA INC.  
 PROJECT: 211-10139-00 200 02  
 SAMPLING SITE: ORBY

AGAT WORK ORDER: 21T841262  
 ATTENTION TO: Vanessa Oetinger  
 SAMPLED BY: Matthew Roy

Soil Analysis															
RPT Date: Dec 20, 2021			DUPLICATE			Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD		Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper

O. Reg. 153(511) - Metals & Inorganics (Soil)															
Antimony	3304656		<0.8	<0.8	NA	< 0.8	131%	70%	130%	100%	80%	120%	95%	70%	130%
Arsenic	3304656		3	3	NA	< 1	122%	70%	130%	101%	80%	120%	109%	70%	130%
Barium	3304656		26.3	26.3	0.0%	< 2.0	104%	70%	130%	100%	80%	120%	104%	70%	130%
Beryllium	3304656		<0.4	<0.4	NA	< 0.4	100%	70%	130%	108%	80%	120%	94%	70%	130%
Boron	3304656		<5	<5	NA	< 5	84%	70%	130%	110%	80%	120%	99%	70%	130%
Boron (Hot Water Soluble)	3315413		0.25	0.25	NA	< 0.10	94%	60%	140%	97%	70%	130%	98%	60%	140%
Cadmium	3304656		<0.5	<0.5	NA	< 0.5	113%	70%	130%	100%	80%	120%	99%	70%	130%
Chromium	3304656		<5	<5	NA	< 5	108%	70%	130%	104%	80%	120%	111%	70%	130%
Cobalt	3304656		2.6	2.6	0.0%	< 0.5	116%	70%	130%	103%	80%	120%	109%	70%	130%
Copper	3304656		22.1	22.5	1.8%	< 1.0	101%	70%	130%	103%	80%	120%	102%	70%	130%
Lead	3304656		8	8	0.0%	< 1	110%	70%	130%	96%	80%	120%	95%	70%	130%
Molybdenum	3304656		<0.5	<0.5	NA	< 0.5	121%	70%	130%	108%	80%	120%	115%	70%	130%
Nickel	3304656		3	3	NA	< 1	111%	70%	130%	103%	80%	120%	104%	70%	130%
Selenium	3304656		<0.8	0.8	NA	< 0.8	109%	70%	130%	103%	80%	120%	107%	70%	130%
Silver	3304656		<0.5	<0.5	NA	< 0.5	99%	70%	130%	98%	80%	120%	95%	70%	130%
Thallium	3304656		<0.5	<0.5	NA	< 0.5	110%	70%	130%	105%	80%	120%	100%	70%	130%
Uranium	3304656		0.91	0.91	NA	< 0.50	111%	70%	130%	99%	80%	120%	105%	70%	130%
Vanadium	3304656		7.9	8.1	2.5%	< 0.4	113%	70%	130%	99%	80%	120%	112%	70%	130%
Zinc	3304656		169	171	1.2%	< 5	110%	70%	130%	104%	80%	120%	114%	70%	130%
Chromium, Hexavalent	3328954		<0.2	<0.2	NA	< 0.2	106%	70%	130%	92%	80%	120%	83%	70%	130%
Cyanide, Free	3317042		<0.040	<0.040	NA	< 0.040	98%	70%	130%	94%	80%	120%	100%	70%	130%
Mercury	3304656		<0.10	<0.10	NA	< 0.10	105%	70%	130%	100%	80%	120%	101%	70%	130%
Electrical Conductivity (2:1)	3337822		0.162	0.166	2.4%	< 0.005	106%	80%	120%	NA			NA		
Sodium Adsorption Ratio (2:1) (Calc.)	3309969		0.630	0.631	0.2%	N/A	NA			NA			NA		
pH, 2:1 CaCl2 Extraction	3312912		6.54	6.89	5.2%	NA	100%	80%	120%	NA			NA		

Comments: NA signifies Not Applicable.

pH duplicates QA acceptance criteria was met relative as stated in Table 5-15 of Analytical Protocol document.

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

QA Qualifier for metals – Antimony: For a multi-element scan for lab control standards and matrix spikes, up to 10% of analytes may exceed the quoted limits by up to 10% absolute and it is considered acceptable.

Certified By: \_\_\_\_\_

*Jris Verastegui*

## Quality Assurance

CLIENT NAME: WSP CANADA INC.

AGAT WORK ORDER: 21T841262

PROJECT: 211-10139-00 200 02

ATTENTION TO: Vanessa Oetinger

SAMPLING SITE: ORBY

SAMPLED BY: Matthew Roy

Trace Organics Analysis															
RPT Date: Dec 20, 2021			DUPLICATE				Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE		MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Measured Value		Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper

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

Naphthalene	3319161	< 0.05	< 0.05	NA	< 0.05	78%	50%	140%	86%	50%	140%	80%	50%	140%
Acenaphthylene	3319161	< 0.05	< 0.05	NA	< 0.05	84%	50%	140%	93%	50%	140%	89%	50%	140%
Acenaphthene	3319161	< 0.05	< 0.05	NA	< 0.05	82%	50%	140%	92%	50%	140%	89%	50%	140%
Fluorene	3319161	< 0.05	< 0.05	NA	< 0.05	93%	50%	140%	101%	50%	140%	80%	50%	140%
Phenanthrene	3319161	< 0.05	< 0.05	NA	< 0.05	105%	50%	140%	78%	50%	140%	85%	50%	140%
Anthracene	3319161	< 0.05	< 0.05	NA	< 0.05	98%	50%	140%	85%	50%	140%	111%	50%	140%
Fluoranthene	3319161	< 0.05	< 0.05	NA	< 0.05	86%	50%	140%	90%	50%	140%	99%	50%	140%
Pyrene	3319161	< 0.05	< 0.05	NA	< 0.05	93%	50%	140%	105%	50%	140%	86%	50%	140%
Benz(a)anthracene	3319161	< 0.05	< 0.05	NA	< 0.05	92%	50%	140%	98%	50%	140%	109%	50%	140%
Chrysene	3319161	< 0.05	< 0.05	NA	< 0.05	94%	50%	140%	86%	50%	140%	103%	50%	140%
Benzo(b)fluoranthene	3319161	< 0.05	< 0.05	NA	< 0.05	98%	50%	140%	77%	50%	140%	102%	50%	140%
Benzo(k)fluoranthene	3319161	< 0.05	< 0.05	NA	< 0.05	78%	50%	140%	85%	50%	140%	76%	50%	140%
Benzo(a)pyrene	3319161	< 0.05	< 0.05	NA	< 0.05	88%	50%	140%	93%	50%	140%	89%	50%	140%
Indeno(1,2,3-cd)pyrene	3319161	< 0.05	< 0.05	NA	< 0.05	85%	50%	140%	102%	50%	140%	75%	50%	140%
Dibenz(a,h)anthracene	3319161	< 0.05	< 0.05	NA	< 0.05	93%	50%	140%	98%	50%	140%	112%	50%	140%
Benzo(g,h,i)perylene	3319161	< 0.05	< 0.05	NA	< 0.05	92%	50%	140%	86%	50%	140%	97%	50%	140%

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

F1 (C6 - C10)	3304559	< 5	< 5	NA	< 5	90%	60%	140%	74%	60%	140%	80%	60%	140%
F2 (C10 to C16)	3335234	< 10	< 10	NA	< 10	116%	60%	140%	64%	60%	140%	110%	60%	140%
F3 (C16 to C34)	3335234	< 50	< 50	NA	< 50	110%	60%	140%	65%	60%	140%	97%	60%	140%
F4 (C34 to C50)	3335234	< 50	< 50	NA	< 50	83%	60%	140%	72%	60%	140%	116%	60%	140%

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

Dichlorodifluoromethane	3340448	< 0.05	< 0.05	NA	< 0.05	77%	50%	140%	84%	50%	140%	80%	50%	140%
Vinyl Chloride	3340448	< 0.02	< 0.02	NA	< 0.02	87%	50%	140%	80%	50%	140%	106%	50%	140%
Bromomethane	3340448	< 0.05	< 0.05	NA	< 0.05	108%	50%	140%	103%	50%	140%	75%	50%	140%
Trichlorofluoromethane	3340448	< 0.05	< 0.05	NA	< 0.05	108%	50%	140%	98%	50%	140%	86%	50%	140%
Acetone	3340448	< 0.50	< 0.50	NA	< 0.50	106%	50%	140%	103%	50%	140%	101%	50%	140%
1,1-Dichloroethylene	3340448	< 0.05	< 0.05	NA	< 0.05	107%	50%	140%	75%	60%	130%	78%	50%	140%
Methylene Chloride	3340448	< 0.05	< 0.05	NA	< 0.05	92%	50%	140%	103%	60%	130%	115%	50%	140%
Trans- 1,2-Dichloroethylene	3340448	< 0.05	< 0.05	NA	< 0.05	80%	50%	140%	84%	60%	130%	89%	50%	140%
Methyl tert-butyl Ether	3340448	< 0.05	< 0.05	NA	< 0.05	89%	50%	140%	92%	60%	130%	77%	50%	140%
1,1-Dichloroethane	3340448	< 0.02	< 0.02	NA	< 0.02	102%	50%	140%	90%	60%	130%	83%	50%	140%
Methyl Ethyl Ketone	3340448	< 0.50	< 0.50	NA	< 0.50	97%	50%	140%	101%	50%	140%	101%	50%	140%
Cis- 1,2-Dichloroethylene	3340448	< 0.02	< 0.02	NA	< 0.02	102%	50%	140%	120%	60%	130%	116%	50%	140%
Chloroform	3340448	< 0.04	< 0.04	NA	< 0.04	113%	50%	140%	107%	60%	130%	99%	50%	140%
1,2-Dichloroethane	3340448	< 0.03	< 0.03	NA	< 0.03	117%	50%	140%	114%	60%	130%	99%	50%	140%
1,1,1-Trichloroethane	3340448	< 0.05	< 0.05	NA	< 0.05	105%	50%	140%	75%	60%	130%	79%	50%	140%
Carbon Tetrachloride	3340448	< 0.05	< 0.05	NA	< 0.05	102%	50%	140%	77%	60%	130%	74%	50%	140%



## Quality Assurance

CLIENT NAME: WSP CANADA INC.

AGAT WORK ORDER: 21T841262

PROJECT: 211-10139-00 200 02

ATTENTION TO: Vanessa Oetinger

SAMPLING SITE: ORBY

SAMPLED BY: Matthew Roy

### Trace Organics Analysis (Continued)

RPT Date: Dec 20, 2021			DUPLICATE			Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD		Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
Benzene	3340448		< 0.02	< 0.02	NA	< 0.02	98%	50%	140%	114%	60%	130%	114%	50%	140%
1,2-Dichloropropane	3340448		< 0.03	< 0.03	NA	< 0.03	104%	50%	140%	95%	60%	130%	96%	50%	140%
Trichloroethylene	3340448		< 0.03	< 0.03	NA	< 0.03	101%	50%	140%	93%	60%	130%	102%	50%	140%
Bromodichloromethane	3340448		< 0.05	< 0.05	NA	< 0.05	107%	50%	140%	114%	60%	130%	113%	50%	140%
Methyl Isobutyl Ketone	3340448		< 0.50	< 0.50	NA	< 0.50	103%	50%	140%	104%	50%	140%	104%	50%	140%
1,1,2-Trichloroethane	3340448		< 0.04	< 0.04	NA	< 0.04	114%	50%	140%	106%	60%	130%	119%	50%	140%
Toluene	3340448		< 0.05	< 0.05	NA	< 0.05	99%	50%	140%	116%	60%	130%	96%	50%	140%
Dibromochloromethane	3340448		< 0.05	< 0.05	NA	< 0.05	108%	50%	140%	106%	60%	130%	116%	50%	140%
Ethylene Dibromide	3340448		< 0.04	< 0.04	NA	< 0.04	91%	50%	140%	96%	60%	130%	108%	50%	140%
Tetrachloroethylene	3340448		< 0.05	< 0.05	NA	< 0.05	86%	50%	140%	103%	60%	130%	72%	50%	140%
1,1,1,2-Tetrachloroethane	3340448		< 0.04	< 0.04	NA	< 0.04	101%	50%	140%	116%	60%	130%	71%	50%	140%
Chlorobenzene	3340448		< 0.05	< 0.05	NA	< 0.05	98%	50%	140%	96%	60%	130%	90%	50%	140%
Ethylbenzene	3340448		< 0.05	< 0.05	NA	< 0.05	91%	50%	140%	92%	60%	130%	84%	50%	140%
m & p-Xylene	3340448		< 0.05	< 0.05	NA	< 0.05	106%	50%	140%	93%	60%	130%	105%	50%	140%
Bromoform	3340448		< 0.05	< 0.05	NA	< 0.05	96%	50%	140%	79%	60%	130%	112%	50%	140%
Styrene	3340448		< 0.05	< 0.05	NA	< 0.05	105%	50%	140%	78%	60%	130%	84%	50%	140%
1,1,2,2-Tetrachloroethane	3340448		< 0.05	< 0.05	NA	< 0.05	105%	50%	140%	110%	60%	130%	82%	50%	140%
o-Xylene	3340448		< 0.05	< 0.05	NA	< 0.05	99%	50%	140%	106%	60%	130%	78%	50%	140%
1,3-Dichlorobenzene	3340448		< 0.05	< 0.05	NA	< 0.05	112%	50%	140%	101%	60%	130%	110%	50%	140%
1,4-Dichlorobenzene	3340448		< 0.05	< 0.05	NA	< 0.05	106%	50%	140%	95%	60%	130%	112%	50%	140%
1,2-Dichlorobenzene	3340448		< 0.05	< 0.05	NA	< 0.05	102%	50%	140%	92%	60%	130%	102%	50%	140%
n-Hexane	3340448		< 0.05	< 0.05	NA	< 0.05	108%	50%	140%	98%	60%	130%	92%	50%	140%

Comments: When the average of the sample and duplicate results is less than 5x the RDL, the Relative Percent Difference (RPD) will be indicated as Not Applicable (NA).

Certified By: \_\_\_\_\_



## QC Exceedance

CLIENT NAME: WSP CANADA INC.

AGAT WORK ORDER: 21T841262

PROJECT: 211-10139-00 200 02

ATTENTION TO: Vanessa Oetinger

RPT Date: Dec 20, 2021		REFERENCE MATERIAL		METHOD BLANK SPIKE			MATRIX SPIKE			
PARAMETER	Sample Id	Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
			Lower	Upper		Lower	Upper		Lower	Upper

O. Reg. 153(511) - Metals &amp; Inorganics (Soil)

Antimony	131%	70%	130%	100%	80%	120%	95%	70%	130%
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Comments: NA signifies Not Applicable.

pH duplicates QA acceptance criteria was met relative as stated in Table 5-15 of Analytical Protocol document.

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

QA Qualifier for metals – Antimony: For a multi-element scan for lab control standards and matrix spikes, up to 10% of analytes may exceed the quoted limits by up to 10% absolute and it is considered acceptable.



## Method Summary

CLIENT NAME: WSP CANADA INC.  
 PROJECT: 211-10139-00 200 02  
 SAMPLING SITE:ORBY

AGAT WORK ORDER: 21T841262  
 ATTENTION TO: Vanessa Oetinger  
 SAMPLED BY:Matthew Roy

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Soil Analysis			
Antimony	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Arsenic	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Barium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Beryllium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Boron	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Boron (Hot Water Soluble)	MET-93-6104	modified from EPA 6010D and MSA PART 3, CH 21	ICP/OES
Cadmium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Chromium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Cobalt	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Copper	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Lead	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Molybdenum	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Nickel	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Selenium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Silver	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Thallium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Uranium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Vanadium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Zinc	MET 93 -6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Chromium, Hexavalent	INOR-93-6068	modified from EPA 3060 and EPA 7196	SPECTROPHOTOMETER
Cyanide, Free	INOR-93-6052	modified from ON MOECC E3015, SM 4500-CN- I, G-387	TECHNICON AUTO ANALYZER
Mercury	MET-93-6103	modified from EPA 7471B and SM 3112 B	ICP-MS
Electrical Conductivity (2:1)	INOR-93-6036	modified from MSA PART 3, CH 14 and SM 2510 B	EC METER
Sodium Adsorption Ratio (2:1) (Calc.)	INOR-93-6007	modified from EPA 6010D & Analytical Protocol	ICP/OES
pH, 2:1 CaCl <sub>2</sub> Extraction	INOR-93-6031	modified from EPA 9045D and MCKEAGUE 3.11	PH METER



## Method Summary

CLIENT NAME: WSP CANADA INC.

AGAT WORK ORDER: 21T841262

PROJECT: 211-10139-00 200 02

ATTENTION TO: Vanessa Oetinger

SAMPLING SITE:ORBY

SAMPLED BY:Matthew Roy

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Trace Organics Analysis			
Naphthalene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Acenaphthylene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Acenaphthene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Fluorene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Phenanthrene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Anthracene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Fluoranthene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Pyrene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Benz(a)anthracene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Chrysene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Benzo(b)fluoranthene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Benzo(k)fluoranthene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Benzo(a)pyrene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Indeno(1,2,3-cd)pyrene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Dibenz(a,h)anthracene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Benzo(g,h,i)perylene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
1 and 2 Methlynaphthalene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Naphthalene-d8	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Acridine-d9	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Terphenyl-d14	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Moisture Content	VOL-91-5009	CCME Tier 1 Method	BALANCE
F1 (C6 - C10)	VOL-91-5009	modified from CCME Tier 1 Method	(P&T)GC/FID
F1 (C6 to C10) minus BTEX	VOL-91-5009	modified from CCME Tier 1 Method	(P&T)GC/FID
Toluene-d8	VOL-91-5009	modified from EPA SW-846 5030C & 8260D	(P&T)GC/MS
F2 (C10 to C16)	VOL-91-5009	modified from CCME Tier 1 Method	GC/FID
F3 (C16 to C34)	VOL-91-5009	modified from CCME Tier 1 Method	GC/FID
F4 (C34 to C50)	VOL-91-5009	modified from CCME Tier 1 Method	GC/FID
Gravimetric Heavy Hydrocarbons	VOL-91-5009	modified from CCME Tier 1 Method	BALANCE
Terphenyl	VOL-91-5009	modified from CCME Tier 1 Method	GC/FID
Dichlorodifluoromethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Vinyl Chloride	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS



## Method Summary

CLIENT NAME: WSP CANADA INC.

PROJECT: 211-10139-00 200 02

SAMPLING SITE:ORBY

AGAT WORK ORDER: 21T841262

ATTENTION TO: Vanessa Oetinger

SAMPLED BY:Matthew Roy

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Bromomethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Trichlorofluoromethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Acetone	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,1-Dichloroethylene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Methylene Chloride	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Trans- 1,2-Dichloroethylene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Methyl tert-butyl Ether	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,1-Dichloroethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Methyl Ethyl Ketone	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Cis- 1,2-Dichloroethylene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Chloroform	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,2-Dichloroethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,1,1-Trichloroethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Carbon Tetrachloride	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Benzene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,2-Dichloropropane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Trichloroethylene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Bromodichloromethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Methyl Isobutyl Ketone	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,1,2-Trichloroethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Toluene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Dibromochloromethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Ethylene Dibromide	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Tetrachloroethylene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,1,1,2-Tetrachloroethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Chlorobenzene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Ethylbenzene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
m & p-Xylene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS



## Method Summary

CLIENT NAME: WSP CANADA INC.  
 PROJECT: 211-10139-00 200 02  
 SAMPLING SITE:ORBY

AGAT WORK ORDER: 21T841262  
 ATTENTION TO: Vanessa Oetinger  
 SAMPLED BY:Matthew Roy

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Bromoform	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Styrene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,1,2,2-Tetrachloroethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
o-Xylene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,3-Dichlorobenzene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,4-Dichlorobenzene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,2-Dichlorobenzene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Xylenes (Total)	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,3-Dichloropropene (Cis + Trans)	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
n-Hexane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Toluene-d8	VOL-91-5002	modified from EPA 5035A & EPA 8260D	(P&T)GC/MS
4-Bromofluorobenzene	VOL-91-5002	modified from EPA 5035A & EPA 8260D	(P&T)GC/MS
Moisture Content	VOL-91-5009	modified from CCME Tier 1 Method	BALANCE







CLIENT NAME: WSP CANADA INC.  
2 INTERNATIONAL BLVD SUITE 201  
ETOBICOKE, ON M9W1A2  
(416) 798-0065

ATTENTION TO: Marsad Jafar  
PROJECT: 211-10139-00 200 02

AGAT WORK ORDER: 21T841270

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

WATER ANALYSIS REVIEWED BY: Nivine Basily, Inorganics Report Writer

DATE REPORTED: Dec 21, 2021

PAGES (INCLUDING COVER): 18

VERSION\*: 1

Should you require any information regarding this analysis please contact your client services representative at (905) 712-5100

\*Notes

**Disclaimer:**

- All work conducted herein has been done using accepted standard protocols, and generally accepted practices and methods. AGAT test methods may incorporate modifications from the specified reference methods to improve performance.
- All samples will be disposed of within 30 days after receipt unless a Long Term Storage Agreement is signed and returned. Some specialty analysis may be exempt, please contact your Client Project Manager for details.
- AGAT's liability in connection with any delay, performance or non-performance of these services is only to the Client and does not extend to any other third party. Unless expressly agreed otherwise in writing, AGAT's liability is limited to the actual cost of the specific analysis or analyses included in the services.
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- The test results reported herewith relate only to the samples as received by the laboratory.
- Application of guidelines is provided "as is" without warranty of any kind, either expressed or implied, including, but not limited to, warranties of merchantability, fitness for a particular purpose, or non-infringement. AGAT assumes no responsibility for any errors or omissions in the guidelines contained in this document.
- All reportable information as specified by ISO/IEC 17025:2017 is available from AGAT Laboratories upon request.



## Certificate of Analysis

AGAT WORK ORDER: 21T841270

PROJECT: 211-10139-00 200 02

5835 COOPERS AVENUE  
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CLIENT NAME: WSP CANADA INC.

SAMPLING SITE: ORBY

ATTENTION TO: Marsad Jafar

SAMPLED BY: Marsad Jafar

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

DATE RECEIVED: 2021-12-07

DATE REPORTED: 2021-12-21

SAMPLE DESCRIPTION:		BH21-16		
SAMPLE TYPE:		Water		
DATE SAMPLED:		2021-12-06		
Parameter	Unit	G / S	RDL	3310367
Naphthalene	µg/L	7	0.20	<0.20
Acenaphthylene	µg/L	1	0.20	<0.20
Acenaphthene	µg/L	4.1	0.20	<0.20
Fluorene	µg/L	120	0.20	<0.20
Phenanthrene	µg/L	0.1	0.10	<0.10
Anthracene	µg/L	0.1	0.10	<0.10
Fluoranthene	µg/L	0.4	0.20	<0.20
Pyrene	µg/L	0.2	0.20	<0.20
Benzo(a)anthracene	µg/L	0.2	0.20	<0.20
Chrysene	µg/L	0.1	0.10	<0.10
Benzo(b)fluoranthene	µg/L	0.1	0.10	<0.10
Benzo(k)fluoranthene	µg/L	0.1	0.10	<0.10
Benzo(a)pyrene	µg/L	0.01	0.01	<0.01
Indeno(1,2,3-cd)pyrene	µg/L	0.2	0.20	<0.20
Dibenz(a,h)anthracene	µg/L	0.2	0.20	<0.20
Benzo(g,h,i)perylene	µg/L	0.2	0.20	<0.20
2-and 1-methyl Naphthalene	µg/L	2	0.20	<0.20
Sediment				No
Surrogate	Unit	Acceptable Limits		
Naphthalene-d8	%	50-140		120
Acridine-d9	%	50-140		98
Terphenyl-d14	%	50-140		85

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 1: Full Depth Background Site Condition Standards - Ground Water - All Types of Property Uses  
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

3310367 Note: The result for Benzo(b)Fluoranthene is the total of the Benzo(b)&(j)Fluoranthene isomers because the isomers co-elute on the GC column.  
2- and 1-Methyl Naphthalene is a calculated parameter. The calculated value is the sum of 2-Methyl Naphthalene and 1-Methyl Naphthalene. The calculated parameter is non-accredited. The parameters that are components of the calculation are accredited.  
Sediment parameter is comment only based on visual inspection of the sample prior to extraction and is not an accredited test.

Analysis performed at AGAT Toronto (unless marked by \*)

Certified By:





## Certificate of Analysis

AGAT WORK ORDER: 21T841270

PROJECT: 211-10139-00 200 02

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CLIENT NAME: WSP CANADA INC.

SAMPLING SITE: ORBY

ATTENTION TO: Marsad Jafar

SAMPLED BY: Marsad Jafar

### O. Reg. 153(511) - PHCs F1 - F4 (Water)

DATE RECEIVED: 2021-12-07

DATE REPORTED: 2021-12-21

Parameter	Unit	SAMPLE DESCRIPTION:				
		G / S		RDL		
		BH21-6	BH21-2	QAQC-2		
		SAMPLE TYPE: Water		Water		Water
		DATE SAMPLED: 2021-12-06		2021-12-07		2021-12-06
		3310483	3310484	3310486		
Benzene	µg/L	0.5	0.20	<0.20	<0.20	<0.20
Toluene	µg/L	0.8	0.20	<0.20	<0.20	<0.20
Ethylbenzene	µg/L	0.5	0.10	<0.10	<0.10	<0.10
m & p-Xylene	µg/L		0.20	<0.20	<0.20	<0.20
o-Xylene	µg/L		0.10	<0.10	<0.10	<0.10
Xylenes (Total)	µg/L	72	0.20	<0.20	<0.20	<0.20
F1 (C6 - C10)	µg/L	420	25	<25	<25	<25
F1 (C6 to C10) minus BTEX	µg/L	420	25	<25	<25	<25
F2 (C10 to C16)	µg/L	150	100	<100	<100	<100
F3 (C16 to C34)	µg/L	500	100	<100	<100	<100
F4 (C34 to C50)	µg/L	500	100	<100	<100	<100
Gravimetric Heavy Hydrocarbons	µg/L		500	NA	NA	NA
Sediment				NO	NO	NO
Surrogate	Unit	Acceptable Limits				
Toluene-d8	% Recovery	60-140	79.5	78.2	123	
Terphenyl	% Recovery	60-140	92	101	96	

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## Certificate of Analysis

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CLIENT NAME: WSP CANADA INC.

SAMPLING SITE: ORBY

ATTENTION TO: Marsad Jafar

SAMPLED BY: Marsad Jafar

### O. Reg. 153(511) - PHCs F1 - F4 (Water)

DATE RECEIVED: 2021-12-07

DATE REPORTED: 2021-12-21

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 1: Full Depth Background Site Condition Standards - Ground Water - All Types of Property Uses  
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

3310483-3310486 The C6-C10 fraction is calculated using Toluene response factor.  
Xylenes total is a calculated parameter. The calculated value is the sum of m&p-Xylene and o-Xylene.  
C6-C10 (F1 minus BTEX) is a calculated parameter. The calculated value is F1 minus BTEX.  
The calculated parameters are non-accredited. The parameters that are components of the calculation are accredited.  
The C10 - C16, C16 - C34, and C34 - C50 fractions are calculated using the average response factor for n-C10, n-C16, and nC34.  
Gravimetric Heavy Hydrocarbons are not included in the Total C16 - C50 and are only determined if the chromatogram of the C34 - C50 Hydrocarbons indicated that hydrocarbons >C50 are present.  
The chromatogram has returned to baseline by the retention time of nC50.  
Total C6-C50 results are corrected for BTEX contribution.  
This method complies with the Reference Method for the CWS PHC and is validated for use in the laboratory.  
nC6 and nC10 response factors are within 30% of Toluene response factor.  
nC10, nC16 and nC34 response factors are within 10% of their average.  
C50 response factor is within 70% of nC10 + nC16 nC34 average.  
Linearity is within 15%.  
Extraction and holding times were met for this sample.  
Fractions 1-4 are quantified with the contribution of PAHs. Under Ontario Regulation 153/04, results are considered valid without determining the PAH contribution if not requested by the client.  
NA = Not Applicable

Sediment parameter is comment only based on visual inspection of the sample prior to extraction and is not an accredited test.

Analysis performed at AGAT Toronto (unless marked by \*)

Certified By:



## Certificate of Analysis

AGAT WORK ORDER: 21T841270

PROJECT: 211-10139-00 200 02

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CLIENT NAME: WSP CANADA INC.

SAMPLING SITE: ORBY

ATTENTION TO: Marsad Jafar

SAMPLED BY: Marsad Jafar

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

DATE RECEIVED: 2021-12-07

DATE REPORTED: 2021-12-21

SAMPLE DESCRIPTION:		BH21-16		
SAMPLE TYPE:		Water		
DATE SAMPLED:		2021-12-06		
Parameter	Unit	G / S	RDL	3310367
F1 (C6-C10)	µg/L	420	25	<25
F1 (C6 to C10) minus BTEX	µg/L	420	25	<25
F2 (C10 to C16)	µg/L	150	100	<100
F2 (C10 to C16) minus Naphthalene	µg/L		100	<100
F3 (C16 to C34)	µg/L	500	100	<100
F3 (C16 to C34) minus PAHs	µg/L		100	<100
F4 (C34 to C50)	µg/L	500	100	<100
Gravimetric Heavy Hydrocarbons	µg/L		500	NA
Sediment				NO
Surrogate	Unit	Acceptable Limits		
Toluene-d8	% Recovery	50-140		74.5
Terphenyl	% Recovery	60-140		84

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 1: Full Depth Background Site Condition Standards - Ground Water - All Types of Property Uses  
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

3310367 The C6-C10 fraction is calculated using toluene response factor.  
C6-C10 (F1 minus BTEX) is a calculated parameter. The calculated value is F1 minus BTEX. The calculated parameter is non-accredited. The parameters that are components of the calculation are accredited.  
The C10 - C16, C16 - C34, and C34 - C50 fractions are calculated using the average response factor for n-C10, n-C16, and n-C34.  
Gravimetric Heavy Hydrocarbons are not included in the Total C16-C50 and are only determined if the chromatogram of the C34 - C50 hydrocarbons indicates that hydrocarbons >C50 are present.  
The chromatogram has returned to baseline by the retention time of nC50.  
Total C6 - C50 results are corrected for BTEX and PAH contributions.  
C>10 - C16 (F2- Naphthalene) is a calculated parameter. The calculated value is F2 - Naphthalene.  
C>16 - C34 (F3-PAH) is a calculated parameter. The calculated value is F3-PAH (PAH: sum of Phenanthrene, Benzo(a)anthracene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Benzo(a)pyrene, Fluoranthene, Dibenzo(a,h)anthracene, Indeno(1,2,3-c,d)pyrene and Pyrene).  
This method complies with the Reference Method for the CWS PHC and is validated for use in the laboratory.  
nC10, nC16 and nC34 response factors are within 10% of their average.  
C50 response factor is within 70% of nC10 + nC16 + nC34 average.  
Linearity is within 15%.  
Extraction and holding times were met for this sample.

Sediment parameter is comment only based on visual inspection of the sample prior to extraction and is not an accredited test.

Analysis performed at AGAT Toronto (unless marked by \*)

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PROJECT: 211-10139-00 200 02

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CLIENT NAME: WSP CANADA INC.

SAMPLING SITE: ORBY

ATTENTION TO: Marsad Jafar

SAMPLED BY: Marsad Jafar

### O. Reg. 153(511) - VOCs (Water)

DATE RECEIVED: 2021-12-07

DATE REPORTED: 2021-12-21

Parameter	Unit	SAMPLE DESCRIPTION:		BH21-16	QAQC-1	Trip Blank
		SAMPLE TYPE:		Water	Water	Water
		DATE SAMPLED:		2021-12-06	2021-12-06	2021-12-04
	G / S	RDL	3310367	3310485	3310488	
Dichlorodifluoromethane	µg/L	590	0.20	<0.20	<0.20	<0.20
Vinyl Chloride	µg/L	0.5	0.17	<0.17	<0.17	<0.17
Bromomethane	µg/L	0.89	0.20	<0.20	<0.20	<0.20
Trichlorofluoromethane	µg/L	150	0.40	<0.40	<0.40	<0.40
Acetone	µg/L	2700	1.0	<1.0	<1.0	<1.0
1,1-Dichloroethylene	µg/L	0.5	0.30	<0.30	<0.30	<0.30
Methylene Chloride	µg/L	5	0.30	<0.30	<0.30	<0.30
trans- 1,2-Dichloroethylene	µg/L	1.6	0.20	<0.20	<0.20	<0.20
Methyl tert-butyl ether	µg/L	15	0.20	<0.20	<0.20	<0.20
1,1-Dichloroethane	µg/L	0.5	0.30	<0.30	<0.30	<0.30
Methyl Ethyl Ketone	µg/L	400	1.0	<1.0	<1.0	<1.0
cis- 1,2-Dichloroethylene	µg/L	1.6	0.20	<0.20	<0.20	<0.20
Chloroform	µg/L	2	0.20	<0.20	<0.20	<0.20
1,2-Dichloroethane	µg/L	0.5	0.20	<0.20	<0.20	<0.20
1,1,1-Trichloroethane	µg/L	0.5	0.30	<0.30	<0.30	<0.30
Carbon Tetrachloride	µg/L	0.2	0.20	<0.20	<0.20	<0.20
Benzene	µg/L	0.5	0.20	<0.20	<0.20	<0.20
1,2-Dichloropropane	µg/L	0.5	0.20	<0.20	<0.20	<0.20
Trichloroethylene	µg/L	0.5	0.20	<0.20	<0.20	<0.20
Bromodichloromethane	µg/L	2	0.20	<0.20	<0.20	<0.20
Methyl Isobutyl Ketone	µg/L	640	1.0	<1.0	<1.0	<1.0
1,1,2-Trichloroethane	µg/L	0.5	0.20	<0.20	<0.20	<0.20
Toluene	µg/L	0.8	0.20	<0.20	<0.20	<0.20
Dibromochloromethane	µg/L	2	0.10	<0.10	<0.10	<0.10
Ethylene Dibromide	µg/L	0.2	0.10	<0.10	<0.10	<0.10
Tetrachloroethylene	µg/L	0.5	0.20	<0.20	<0.20	<0.20
1,1,1,2-Tetrachloroethane	µg/L	1.1	0.10	<0.10	<0.10	<0.10
Chlorobenzene	µg/L	0.5	0.10	<0.10	<0.10	<0.10
Ethylbenzene	µg/L	0.5	0.10	<0.10	<0.10	<0.10
m & p-Xylene	µg/L		0.20	<0.20	<0.20	<0.20

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PROJECT: 211-10139-00 200 02

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CLIENT NAME: WSP CANADA INC.

SAMPLING SITE: ORBY

ATTENTION TO: Marsad Jafar

SAMPLED BY: Marsad Jafar

### O. Reg. 153(511) - VOCs (Water)

DATE RECEIVED: 2021-12-07

DATE REPORTED: 2021-12-21

Parameter	Unit	SAMPLE DESCRIPTION:		BH21-16	QAQC-1	Trip Blank
		G / S	RDL	3310367	3310485	3310488
Bromoform	µg/L	5	0.10	<0.10	<0.10	<0.10
Styrene	µg/L	0.5	0.10	<0.10	<0.10	<0.10
1,1,2,2-Tetrachloroethane	µg/L	0.5	0.10	<0.10	<0.10	<0.10
o-Xylene	µg/L		0.10	<0.10	<0.10	<0.10
1,3-Dichlorobenzene	µg/L	0.5	0.10	<0.10	<0.10	<0.10
1,4-Dichlorobenzene	µg/L	0.5	0.10	<0.10	<0.10	<0.10
1,2-Dichlorobenzene	µg/L	0.5	0.10	<0.10	<0.10	<0.10
1,3-Dichloropropene	µg/L	0.5	0.30	<0.30	<0.30	<0.30
Xylenes (Total)	µg/L	72	0.20	<0.20	<0.20	<0.20
n-Hexane	µg/L	5	0.20	<0.20	<0.20	<0.20
Surrogate	Unit	Acceptable Limits				
Toluene-d8	% Recovery	50-140		88	107	82
4-Bromofluorobenzene	% Recovery	50-140		79	73	82

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 1: Full Depth Background Site Condition Standards - Ground Water - All Types of Property Uses  
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

3310367-3310488 Xylenes total is a calculated parameter. The calculated value is the sum of m&p-Xylene and o-Xylene.  
1,3-Dichloropropene total is a calculated parameter. The calculated value is the sum of Cis-1,3-Dichloropropene and Trans-1,3-Dichloropropene.  
The calculated parameter is non-accredited. The parameters that are components of the calculation are accredited.

Analysis performed at AGAT Toronto (unless marked by \*)

Certified By:



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CLIENT NAME: WSP CANADA INC.

SAMPLING SITE: ORBY

ATTENTION TO: Marsad Jafar

SAMPLED BY: Marsad Jafar

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

DATE RECEIVED: 2021-12-07

DATE REPORTED: 2021-12-21

Parameter	Unit	SAMPLE DESCRIPTION:		BH21-16	BH21-6	
		SAMPLE TYPE:		Water	Water	
		DATE SAMPLED:		2021-12-06	2021-12-06	
		G / S	RDL	3310367	RDL	3310483
Dissolved Antimony	µg/L	1.5	1.0	1.1	1.0	<1.0
Dissolved Arsenic	µg/L	13	1.0	<1.0	1.0	4.7
Dissolved Barium	µg/L	610	2.0	63.9	2.0	271
Dissolved Beryllium	µg/L	0.5	0.50	<0.50	0.50	<0.50
Dissolved Boron	µg/L	1700	100.0	1676	10.0	279
Dissolved Cadmium	µg/L	0.5	0.20	<0.20	0.20	<0.20
Dissolved Chromium	µg/L	11	2.0	<2.0	2.0	25.3
Dissolved Cobalt	µg/L	3.8	0.50	<0.50	0.50	4.53
Dissolved Copper	µg/L	5	1.0	<1.0	1.0	2.7
Dissolved Lead	µg/L	1.9	0.50	<0.50	0.50	0.93
Dissolved Molybdenum	µg/L	23	0.50	24.7	0.50	6.45
Dissolved Nickel	µg/L	14	1.0	1.1	1.0	6.9
Dissolved Selenium	µg/L	5	1.0	1.6	1.0	<1.0
Dissolved Silver	µg/L	0.3	0.20	<0.20	0.20	<0.20
Dissolved Thallium	µg/L	0.5	0.30	<0.30	0.30	<0.30
Dissolved Uranium	µg/L	8.9	0.50	1.86	0.50	3.52
Dissolved Vanadium	µg/L	3.9	0.40	0.62	0.40	3.29
Dissolved Zinc	µg/L	160	5.0	<5.0	5.0	6.1
Mercury	µg/L	0.1	0.02	<0.02	0.02	<0.02
Chromium VI	µg/L	25	2	<2	2	5.43
Cyanide, Free	µg/L	5	2	<2	2	<2
Dissolved Sodium	µg/L	490000	250	210000	1000	342000
Chloride	µg/L	790000	100	286000	122	1460000
Electrical Conductivity	uS/cm	NA	2	1570	2	4940
pH	pH Units		NA	7.68	NA	7.72

Certified By:



*Marsad Jafar*





**AGAT** Laboratories

# Certificate of Analysis

AGAT WORK ORDER: 21T841270

PROJECT: 211-10139-00 200 02

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CLIENT NAME: WSP CANADA INC.

SAMPLING SITE: ORBY

ATTENTION TO: Marsad Jafar

SAMPLED BY: Marsad Jafar

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

DATE RECEIVED: 2021-12-07

DATE REPORTED: 2021-12-21

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 1: Full Depth Background Site Condition Standards - Ground Water - All Types of Property Uses  
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

3310367-3310483 Metals analysis completed on a filtered sample.

Dilution required, RDL has been increased accordingly.

Analysis performed at AGAT Toronto (unless marked by \*)

Certified By:



*Marsad Jafar*



### Exceedance Summary

AGAT WORK ORDER: 21T841270

PROJECT: 211-10139-00 200 02

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CLIENT NAME: WSP CANADA INC.

ATTENTION TO: Marsad Jafar

SAMPLEID	SAMPLE TITLE	GUIDELINE	ANALYSIS PACKAGE	PARAMETER	UNIT	GUIDEVALUE	RESULT
3310367	BH21-16	ON T1 GW	O. Reg. 153(511) - Metals & Inorganics (Water)	Dissolved Molybdenum	µg/L	23	24.7
3310483	BH21-6	ON T1 GW	O. Reg. 153(511) - Metals & Inorganics (Water)	Chloride	µg/L	790000	1460000
3310483	BH21-6	ON T1 GW	O. Reg. 153(511) - Metals & Inorganics (Water)	Dissolved Chromium	µg/L	11	25.3
3310483	BH21-6	ON T1 GW	O. Reg. 153(511) - Metals & Inorganics (Water)	Dissolved Cobalt	µg/L	3.8	4.53

## Quality Assurance

CLIENT NAME: WSP CANADA INC.

AGAT WORK ORDER: 21T841270

PROJECT: 211-10139-00 200 02

ATTENTION TO: Marsad Jafar

SAMPLING SITE: ORBY

SAMPLED BY: Marsad Jafar

Trace Organics Analysis															
RPT Date: Dec 21, 2021			DUPLICATE				Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE		MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Measured Value		Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper

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

F1 (C6-C10)	3296537	<25	<25	NA	< 25	108%	60%	140%	98%	60%	140%	109%	60%	140%
F2 (C10 to C16)	3304778	< 100	< 100	NA	< 100	102%	60%	140%	85%	60%	140%	78%	60%	140%
F3 (C16 to C34)	3304778	< 100	< 100	NA	< 100	110%	60%	140%	75%	60%	140%	75%	60%	140%
F4 (C34 to C50)	3304778	< 100	< 100	NA	< 100	115%	60%	140%	76%	60%	140%	74%	60%	140%

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

Naphthalene	3227991	< 0.20	< 0.20	NA	< 0.20	105%	50%	140%	78%	50%	140%	77%	50%	140%
Acenaphthylene	3227991	< 0.20	< 0.20	NA	< 0.20	98%	50%	140%	82%	50%	140%	107%	50%	140%
Acenaphthene	3227991	< 0.20	< 0.20	NA	< 0.20	105%	50%	140%	71%	50%	140%	81%	50%	140%
Fluorene	3227991	< 0.20	< 0.20	NA	< 0.20	86%	50%	140%	92%	50%	140%	92%	50%	140%
Phenanthrene	3227991	< 0.10	< 0.10	NA	< 0.10	98%	50%	140%	88%	50%	140%	85%	50%	140%
Anthracene	3227991	< 0.10	< 0.10	NA	< 0.10	85%	50%	140%	93%	50%	140%	78%	50%	140%
Fluoranthene	3227991	< 0.20	< 0.20	NA	< 0.20	99%	50%	140%	96%	50%	140%	93%	50%	140%
Pyrene	3227991	< 0.20	< 0.20	NA	< 0.20	78%	50%	140%	96%	50%	140%	99%	50%	140%
Benzo(a)anthracene	3227991	< 0.20	< 0.20	NA	< 0.20	96%	50%	140%	94%	50%	140%	96%	50%	140%
Chrysene	3227991	< 0.10	< 0.10	NA	< 0.10	86%	50%	140%	114%	50%	140%	84%	50%	140%
Benzo(b)fluoranthene	3227991	< 0.10	< 0.10	NA	< 0.10	92%	50%	140%	76%	50%	140%	92%	50%	140%
Benzo(k)fluoranthene	3227991	< 0.10	< 0.10	NA	< 0.10	98%	50%	140%	92%	50%	140%	78%	50%	140%
Benzo(a)pyrene	3227991	< 0.01	< 0.01	NA	< 0.01	78%	50%	140%	105%	50%	140%	101%	50%	140%
Indeno(1,2,3-cd)pyrene	3227991	< 0.20	< 0.20	NA	< 0.20	92%	50%	140%	108%	50%	140%	105%	50%	140%
Dibenz(a,h)anthracene	3227991	< 0.20	< 0.20	NA	< 0.20	95%	50%	140%	75%	50%	140%	72%	50%	140%
Benzo(g,h,i)perylene	3227991	< 0.20	< 0.20	NA	< 0.20	91%	50%	140%	85%	50%	140%	105%	50%	140%

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

Dichlorodifluoromethane	3315412	<0.20	<0.20	NA	< 0.20	89%	50%	140%	103%	50%	140%	74%	50%	140%
Vinyl Chloride	3315412	<0.17	<0.17	NA	< 0.17	106%	50%	140%	83%	50%	140%	105%	50%	140%
Bromomethane	3315412	<0.20	<0.20	NA	< 0.20	96%	50%	140%	86%	50%	140%	95%	50%	140%
Trichlorofluoromethane	3315412	<0.40	<0.40	NA	< 0.40	107%	50%	140%	94%	50%	140%	94%	50%	140%
Acetone	3315412	<1.0	<1.0	NA	< 1.0	104%	50%	140%	102%	50%	140%	102%	50%	140%
1,1-Dichloroethylene	3315412	<0.30	<0.30	NA	< 0.30	93%	50%	140%	76%	60%	130%	107%	50%	140%
Methylene Chloride	3315412	<0.30	<0.30	NA	< 0.30	105%	50%	140%	89%	60%	130%	102%	50%	140%
trans- 1,2-Dichloroethylene	3315412	<0.20	<0.20	NA	< 0.20	88%	50%	140%	95%	60%	130%	70%	50%	140%
Methyl tert-butyl ether	3315412	<0.20	<0.20	NA	< 0.20	101%	50%	140%	97%	60%	130%	76%	50%	140%
1,1-Dichloroethane	3315412	<0.30	<0.30	NA	< 0.30	119%	50%	140%	96%	60%	130%	99%	50%	140%
Methyl Ethyl Ketone	3315412	<1.0	<1.0	NA	< 1.0	94%	50%	140%	99%	50%	140%	102%	50%	140%
cis- 1,2-Dichloroethylene	3315412	<0.20	<0.20	NA	< 0.20	106%	50%	140%	114%	60%	130%	80%	50%	140%
Chloroform	3315412	1.42	1.35	5.1%	< 0.20	98%	50%	140%	104%	60%	130%	62%	50%	140%
1,2-Dichloroethane	3315412	<0.20	<0.20	NA	< 0.20	111%	50%	140%	109%	60%	130%	95%	50%	140%
1,1,1-Trichloroethane	3315412	<0.30	<0.30	NA	< 0.30	79%	50%	140%	75%	60%	130%	71%	50%	140%
Carbon Tetrachloride	3315412	<0.20	<0.20	NA	< 0.20	116%	50%	140%	73%	60%	130%	77%	50%	140%



## Quality Assurance

CLIENT NAME: WSP CANADA INC.

AGAT WORK ORDER: 21T841270

PROJECT: 211-10139-00 200 02

ATTENTION TO: Marsad Jafar

SAMPLING SITE: ORBY

SAMPLED BY: Marsad Jafar

### Trace Organics Analysis (Continued)

RPT Date: Dec 21, 2021			DUPLICATE			Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD		Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
Benzene	3315412		<0.20	<0.20	NA	< 0.20	116%	50%	140%	102%	60%	130%	79%	50%	140%
1,2-Dichloropropane	3315412		<0.20	<0.20	NA	< 0.20	117%	50%	140%	82%	60%	130%	96%	50%	140%
Trichloroethylene	3315412		<0.20	<0.20	NA	< 0.20	111%	50%	140%	92%	60%	130%	73%	50%	140%
Bromodichloromethane	3315412		<0.20	<0.20	NA	< 0.20	113%	50%	140%	103%	60%	130%	87%	50%	140%
Methyl Isobutyl Ketone	3315412		<1.0	<1.0	NA	< 1.0	106%	50%	140%	98%	50%	140%	103%	50%	140%
1,1,2-Trichloroethane	3315412		<0.20	<0.20	NA	< 0.20	101%	50%	140%	119%	60%	130%	110%	50%	140%
Toluene	3315412		1.14	1.37	18.3%	< 0.20	97%	50%	140%	102%	60%	130%	76%	50%	140%
Dibromochloromethane	3315412		<0.10	<0.10	NA	< 0.10	97%	50%	140%	113%	60%	130%	111%	50%	140%
Ethylene Dibromide	3315412		<0.10	<0.10	NA	< 0.10	77%	50%	140%	118%	60%	130%	100%	50%	140%
Tetrachloroethylene	3315412		<0.20	<0.20	NA	< 0.20	109%	50%	140%	110%	60%	130%	81%	50%	140%
1,1,1,2-Tetrachloroethane	3315412		<0.10	<0.10	NA	< 0.10	95%	50%	140%	116%	60%	130%	71%	50%	140%
Chlorobenzene	3315412		<0.10	<0.10	NA	< 0.10	106%	50%	140%	116%	60%	130%	87%	50%	140%
Ethylbenzene	3315412		<0.10	<0.10	NA	< 0.10	119%	50%	140%	72%	60%	130%	74%	50%	140%
m & p-Xylene	3315412		<0.20	<0.20	NA	< 0.20	100%	50%	140%	96%	60%	130%	105%	50%	140%
Bromoform	3315412		<0.10	<0.10	NA	< 0.10	93%	50%	140%	105%	60%	130%	96%	50%	140%
Styrene	3315412		<0.10	<0.10	NA	< 0.10	96%	50%	140%	74%	60%	130%	73%	50%	140%
1,1,2,2-Tetrachloroethane	3315412		<0.10	<0.10	NA	< 0.10	104%	50%	140%	106%	60%	130%	87%	50%	140%
o-Xylene	3315412		<0.10	<0.10	NA	< 0.10	84%	50%	140%	102%	60%	130%	81%	50%	140%
1,3-Dichlorobenzene	3315412		<0.10	<0.10	NA	< 0.10	100%	50%	140%	89%	60%	130%	113%	50%	140%
1,4-Dichlorobenzene	3315412		<0.10	<0.10	NA	< 0.10	106%	50%	140%	100%	60%	130%	114%	50%	140%
1,2-Dichlorobenzene	3315412		<0.10	<0.10	NA	< 0.10	109%	50%	140%	103%	60%	130%	103%	50%	140%
n-Hexane	3315412		<0.20	<0.20	NA	< 0.20	94%	50%	140%	94%	60%	130%	76%	50%	140%

Comments: When the average of the sample and duplicate results is less than 5x the RDL, the Relative Percent Difference (RPD) will be indicated as Not Applicable (NA).

**O. Reg. 153(511) - PHCs F1 - F4 (Water)**

Benzene	3296537		<0.20	<0.20	NA	< 0.20	96%	60%	140%	89%	60%	140%	106%	60%	140%
Toluene	3296537		<0.20	<0.20	NA	< 0.20	82%	60%	140%	85%	60%	140%	86%	60%	140%
Ethylbenzene	3296537		<0.10	<0.10	NA	< 0.10	87%	60%	140%	96%	60%	140%	94%	60%	140%
m & p-Xylene	3296537		<0.20	<0.20	NA	< 0.20	99%	60%	140%	80%	60%	140%	94%	60%	140%
o-Xylene	3296537		<0.10	<0.10	NA	< 0.10	90%	60%	140%	104%	60%	140%	80%	60%	140%
F1 (C6 - C10)	3296537		<25	<25	NA	< 25	108%	60%	140%	98%	60%	140%	109%	60%	140%

Certified By: \_\_\_\_\_



## Quality Assurance

CLIENT NAME: WSP CANADA INC.  
 PROJECT: 211-10139-00 200 02  
 SAMPLING SITE: ORBY

AGAT WORK ORDER: 21T841270  
 ATTENTION TO: Marsad Jafar  
 SAMPLED BY: Marsad Jafar

Water Analysis															
RPT Date: Dec 21, 2021			DUPLICATE			Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE		MATRIX SPIKE			
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD		Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper

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

Dissolved Antimony	3308730		<1.0	<1.0	NA	< 1.0	99%	70%	130%	101%	80%	120%	109%	70%	130%
Dissolved Arsenic	3308730		<1.0	2.6	NA	< 1.0	94%	70%	130%	103%	80%	120%	115%	70%	130%
Dissolved Barium	3308730		107	90.7	16.5%	< 2.0	102%	70%	130%	100%	80%	120%	108%	70%	130%
Dissolved Beryllium	3308730		<0.50	<0.50	NA	< 0.50	103%	70%	130%	107%	80%	120%	113%	70%	130%
Dissolved Boron	3308730		114	107	6.3%	< 10.0	101%	70%	130%	105%	80%	120%	110%	70%	130%
Dissolved Cadmium	3308730		<0.20	<0.20	NA	< 0.20	99%	70%	130%	100%	80%	120%	113%	70%	130%
Dissolved Chromium	3308730		<2.0	<2.0	NA	< 2.0	102%	70%	130%	100%	80%	120%	102%	70%	130%
Dissolved Cobalt	3308730		<0.50	<0.50	NA	< 0.50	96%	70%	130%	106%	80%	120%	107%	70%	130%
Dissolved Copper	3308730		<1.0	<1.0	NA	< 1.0	100%	70%	130%	105%	80%	120%	106%	70%	130%
Dissolved Lead	3308730		<0.50	<0.50	NA	< 0.50	99%	70%	130%	100%	80%	120%	107%	70%	130%
Dissolved Molybdenum	3308730		1.32	1.62	NA	< 0.50	99%	70%	130%	104%	80%	120%	113%	70%	130%
Dissolved Nickel	3308730		1.9	1.9	NA	< 1.0	98%	70%	130%	106%	80%	120%	108%	70%	130%
Dissolved Selenium	3308730		<1.0	<1.0	NA	< 1.0	99%	70%	130%	105%	80%	120%	119%	70%	130%
Dissolved Silver	3308730		<0.20	<0.20	NA	< 0.20	97%	70%	130%	106%	80%	120%	100%	70%	130%
Dissolved Thallium	3308730		<0.30	<0.30	NA	< 0.30	98%	70%	130%	99%	80%	120%	105%	70%	130%
Dissolved Uranium	3308730		<0.50	<0.50	NA	< 0.50	101%	70%	130%	108%	80%	120%	121%	70%	130%
Dissolved Vanadium	3308730		1.15	0.82	NA	< 0.40	97%	70%	130%	103%	80%	120%	103%	70%	130%
Dissolved Zinc	3308730		<5.0	<5.0	NA	< 5.0	100%	70%	130%	99%	80%	120%	111%	70%	130%
Mercury	3295856		<0.02	<0.02	NA	< 0.02	101%	70%	130%	96%	80%	120%	99%	70%	130%
Chromium VI	3315551		<2	2.02	NA	< 2	101%	70%	130%	105%	80%	120%	98%	70%	130%
Cyanide, Free	3319579		<2	<2	NA	< 2	104%	70%	130%	101%	80%	120%	109%	70%	130%
Dissolved Sodium	3293826		6250	6210	0.6%	< 50	95%	70%	130%	97%	80%	120%	99%	70%	130%
Chloride	3295003		551000	551000	0.0%	< 100	94%	70%	130%	103%	80%	120%	NA	70%	130%
Electrical Conductivity	3306912		1350	1340	0.7%	< 2	104%	90%	110%						
pH	3306912		7.78	7.78	0.0%	NA	102%	90%	110%						

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

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

Certified By: \_\_\_\_\_



*Nivine Basily*

## Method Summary

CLIENT NAME: WSP CANADA INC.

AGAT WORK ORDER: 21T841270

PROJECT: 211-10139-00 200 02

ATTENTION TO: Marsad Jafar

SAMPLING SITE: ORBY

SAMPLED BY: Marsad Jafar

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Trace Organics Analysis			
Naphthalene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Acenaphthylene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Acenaphthene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Fluorene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Phenanthrene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Anthracene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Fluoranthene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Pyrene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Benzo(a)anthracene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Chrysene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Benzo(b)fluoranthene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Benzo(k)fluoranthene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Benzo(a)pyrene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Indeno(1,2,3-cd)pyrene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Dibenz(a,h)anthracene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Benzo(g,h,i)perylene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
2-and 1-methyl Naphthalene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Naphthalene-d8	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Acridine-d9	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Terphenyl-d14	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Sediment			
Benzene	VOL-91-5010	modified from MOE PHC-E3421	(P&T)GC/MS
Toluene	VOL-91-5010	modified from MOE PHC-E3421	(P&T)GC/MS
Ethylbenzene	VOL-91-5010	modified from MOE PHC-E3421	(P&T)GC/MS
m & p-Xylene	VOL-91-5010	modified from MOE PHC-E3421	(P&T)GC/MS
o-Xylene	VOL-91-5010	modified from MOE PHC-E3421	(P&T)GC/MS
Xylenes (Total)	VOL-91-5010	modified from MOE PHC-E3421	(P&T)GC/MS
F1 (C6 - C10)	VOL-91-5010	modified from MOE PHC-E3421	(P&T)GC/FID
F1 (C6 to C10) minus BTEX	VOL-91-5010	modified from MOE PHC-E3421	(P&T)GC/FID
Toluene-d8	VOL-91-5010	modified from MOE PHC-E3421	(P&T)GC/MS
F2 (C10 to C16)	VOL-91-5010	modified from MOE PHC-E3421	GC/FID
F3 (C16 to C34)	VOL-91-5010	modified from MOE PHC-E3421	GC/FID
F4 (C34 to C50)	VOL-91-5010	modified from MOE PHC-E3421	GC/FID



## Method Summary

CLIENT NAME: WSP CANADA INC.

AGAT WORK ORDER: 21T841270

PROJECT: 211-10139-00 200 02

ATTENTION TO: Marsad Jafar

SAMPLING SITE:ORBY

SAMPLED BY:Marsad Jafar

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Gravimetric Heavy Hydrocarbons	VOL-91-5010	modified from MOE PHC-E3421	BALANCE
Terphenyl	VOL-91-5010	modified from MOE PHC-E3421	GC/FID
F1 (C6-C10)	VOL-91-5010	modified from MOE PHC-E3421	(P&T)GC/FID
F1 (C6 to C10) minus BTEX	VOL-91-5010	modified from MOE PHC-E3421	P&T GC/FID
Toluene-d8	VOL-91-5010	modified from MOE PHC-E3421	(P&T)GC/MS
F2 (C10 to C16) minus Naphthalene	VOL-91-5010	modified from MOE PHC-E3421	GC/FID
F3 (C16 to C34)	VOL-91-5010	modified from MOE PHC-E3421	GC/FID
F3 (C16 to C34) minus PAHs	VOL-91-5010	modified from MOE PHC-E3421	GC/FID
Dichlorodifluoromethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Vinyl Chloride	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Bromomethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Trichlorofluoromethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Acetone	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1-Dichloroethylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Methylene Chloride	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
trans- 1,2-Dichloroethylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Methyl tert-butyl ether	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1-Dichloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Methyl Ethyl Ketone	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
cis- 1,2-Dichloroethylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Chloroform	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,2-Dichloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1,1-Trichloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Carbon Tetrachloride	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Benzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,2-Dichloropropane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Trichloroethylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Bromodichloromethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Methyl Isobutyl Ketone	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1,2-Trichloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Toluene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS

## Method Summary

CLIENT NAME: WSP CANADA INC.

AGAT WORK ORDER: 21T841270

PROJECT: 211-10139-00 200 02

ATTENTION TO: Marsad Jafar

SAMPLING SITE:ORBY

SAMPLED BY:Marsad Jafar

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Dibromochloromethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Ethylene Dibromide	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Tetrachloroethylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1,1,2-Tetrachloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Chlorobenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Ethylbenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
m & p-Xylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Bromoform	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Styrene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1,2,2-Tetrachloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
o-Xylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,3-Dichlorobenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,4-Dichlorobenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,2-Dichlorobenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,3-Dichloropropene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Xylenes (Total)	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
n-Hexane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Toluene-d8	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
4-Bromofluorobenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS



## Method Summary

CLIENT NAME: WSP CANADA INC.  
 PROJECT: 211-10139-00 200 02  
 SAMPLING SITE: ORBY

AGAT WORK ORDER: 21T841270  
 ATTENTION TO: Marsad Jafar  
 SAMPLED BY: Marsad Jafar

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Water Analysis			
Dissolved Antimony	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Arsenic	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Barium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Beryllium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Boron	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Cadmium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Chromium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Cobalt	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Copper	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Lead	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Molybdenum	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Nickel	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Selenium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Silver	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Thallium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Uranium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Vanadium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Zinc	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Mercury	MET-93-6100	modified from EPA 245.2 and SM 3112 B	CVAAS
Chromium VI	INOR-93-6034	modified from SM 3500-CR B	LACHAT FIA
Cyanide, Free	INOR-93-6052	modified from ON MOECC E3015, SM 4500-CN- I, G-387	TECHNICON AUTO ANALYZER
Dissolved Sodium Chloride	MET-93-6105	modified from EPA 6010D	ICP/OES
Electrical Conductivity	INOR-93-6004	modified from SM 4110 B	ION CHROMATOGRAPH
pH	INOR-93-6000	SM 2510 B	PC TITRATE
	INOR-93-6000	modified from SM 4500-H+ B	PC TITRATE





# AGAT Laboratories

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

## Laboratory Use Only

Work Order #: 217841270  
Cooler Quantity: 1 BIK (bagged ice)  
Arrival Temperatures: 1.9 3.5 2.0  
Custody Seal Intact:  Yes  No  N/A  
Notes:

## Chain of Custody Record

If this is a Drinking Water sample, please use Drinking Water Chain of Custody Form (potable water consumed by humans)

### Report Information:

Company: WSP  
Contact: Marsad Jafar  
Address: 2 International Blvd, Toronto ON  
Phone: 437-233-2935 Fax: \_\_\_\_\_  
Reports to be sent to:  
1. Email: vanessa.oetinger@wsp.com  
2. Email: Marsad.jafar@wsp.com

### Regulatory Requirements:

(Please check all applicable boxes)

Regulation 153/04  Excess Soils R406  Sewer Use  
 Ind./Corn  Sanitary  Storm  
 Res./Park  Agriculture  Prov. Water Quality Objectives (PWQO)  
 Agriculture  Regulation 558  Other  
Soil Texture (Check One)  CCME  Other  
 Coarse  Fine

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

Report Guideline on Certificate of Analysis  
 Yes  No

### Project Information:

Project: 211-10139-00 Ph 200 02  
Site Location: ORBY  
Sampled By: Marsad Jafar  
AGAT Quote #: \_\_\_\_\_ PO: \_\_\_\_\_  
Please note: If quotation number is not provided, client will be billed full price for analysis.

### Invoice Information:

Bill To Same: Yes  No

Company: \_\_\_\_\_  
Contact: \_\_\_\_\_  
Address: \_\_\_\_\_  
Email: payables.ontario@wsp.com

### Sample Matrix Legend

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

Sample Identification	Date Sampled	Time Sampled	# of Containers	Sample Matrix	Comments/ Special Instructions	Y / N	0. Reg 153		PAHs	PCBs	VOC	0. Reg 406		Salt - EC/SAR	Potentially Hazardous or High Concentration (Y/N)
							Metals & Inorganics	Metals - <input type="checkbox"/> CrVI, <input type="checkbox"/> Hg, <input type="checkbox"/> HWSB				Landfill Disposal Characterization TCLP: <input type="checkbox"/> M&I, <input type="checkbox"/> VOCs, <input type="checkbox"/> ABNs, <input type="checkbox"/> BtP, <input type="checkbox"/> PCBs	Excess Soils SPLP Rainwater Leach		
BH21-16	Dec 06/21	AM	16	GW		Y	X	X	X	X					
BH21-6	Dec 06/21	AM	11	GW		Y	X	X	X						
BH21-2	Dec 07/21	AM	5	GW		Y	X	X							
QAQC-1	Dec 06/21	AM	3	GW		Y				X					
QAQC-2	Dec 06/21	AM	5	GW		Y		X							
Trip Blank	-	AM	3	GW		-				X					

Samples Relinquished By (Print Name and Sign): <u>Marsad Jafar</u>	Date: <u>Dec 07/21</u>	Time:	Samples Received By (Print Name and Sign): <u>Weil Ramnarain</u>	Date:	Time:
Samples Relinquished By (Print Name and Sign):	Date:	Time:	Samples Received By (Print Name and Sign):	Date:	Time:
Samples Relinquished By (Print Name and Sign):	Date:	Time:	Samples Received By (Print Name and Sign):	Date:	Time:

No: **T 128116**



CLIENT NAME: WSP CANADA INC.  
2 INTERNATIONAL BLVD SUITE 201  
ETOBICOKE, ON M9W1A2  
(416) 798-0065

ATTENTION TO: Marsad Jafar  
PROJECT: 211-10139-00 Phase 200 02

AGAT WORK ORDER: 21T843989

TRACE ORGANICS REVIEWED BY: Inga Kuzmina, Trace Organics Lab Manager

DATE REPORTED: Dec 15, 2021

PAGES (INCLUDING COVER): 5

VERSION\*: 1

Should you require any information regarding this analysis please contact your client services representative at (905) 712-5100

\*Notes

Disclaimer:

- All work conducted herein has been done using accepted standard protocols, and generally accepted practices and methods. AGAT test methods may incorporate modifications from the specified reference methods to improve performance.
- All samples will be disposed of within 30 days after receipt unless a Long Term Storage Agreement is signed and returned. Some specialty analysis may be exempt, please contact your Client Project Manager for details.
- AGAT's liability in connection with any delay, performance or non-performance of these services is only to the Client and does not extend to any other third party. Unless expressly agreed otherwise in writing, AGAT's liability is limited to the actual cost of the specific analysis or analyses included in the services.
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- All reportable information as specified by ISO/IEC 17025:2017 is available from AGAT Laboratories upon request.



## Certificate of Analysis

AGAT WORK ORDER: 21T843989  
PROJECT: 211-10139-00 Phase 200 02

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

CLIENT NAME: WSP CANADA INC.  
SAMPLING SITE:

ATTENTION TO: Marsad Jafar  
SAMPLED BY:

### O. Reg. 153(511) - PHCs F2 - F4 (Water)

DATE RECEIVED: 2021-12-13

DATE REPORTED: 2021-12-15

SAMPLE DESCRIPTION:		BH21-30		
SAMPLE TYPE:		Water		
DATE SAMPLED:		2021-12-13		
Parameter	Unit	G / S	RDL	3337872
F2 (C10 to C16)	µg/L	150	100	<100
F3 (C16 to C34)	µg/L	500	100	<100
F4 (C34 to C50)	µg/L	500	100	<100
Gravimetric Heavy Hydrocarbons	µg/L		500	NA
Sediment				No
Surrogate	Unit	Acceptable Limits		
Terphenyl	%	60-140		111

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 1: Full Depth Background Site Condition Standards - Ground Water - All Types of Property Uses  
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

3337872 The C10 - C16, C16 - C34, and C34 - C50 fractions are calculated using the average response factor for n-C10, n-C16, and nC34.  
Gravimetric Heavy Hydrocarbons are not included in the Total C16 - C50 and are only determined if the chromatogram of the C34 - C50 Hydrocarbons indicated that hydrocarbons >C50 are present.  
The chromatogram has returned to baseline by the retention time of nC50.  
This method complies with the Reference Method for the CWS PHC and is validated for use in the laboratory.  
nC10, nC16 and nC34 response factors are within 10% of their average.  
C50 response factor is within 70% of nC10 + nC16 nC34 average.  
Linearity is within 15%.  
Extraction and holding times were met for this sample.  
Fractions 2-4 are quantified with the contribution of PAHs. Under Ontario Regulation 153, results are considered valid without determining the PAH contribution if not requested by the client.

Sediment parameter is comment only based on visual inspection of the sample prior to extraction and is not an accredited test.

Analysis performed at AGAT Toronto (unless marked by \*)

Certified By:



## Quality Assurance

 CLIENT NAME: WSP CANADA INC.  
 PROJECT: 211-10139-00 Phase 200 02  
 SAMPLING SITE:

 AGAT WORK ORDER: 21T843989  
 ATTENTION TO: Marsad Jafar  
 SAMPLED BY:

### Trace Organics Analysis

RPT Date: Dec 15, 2021			DUPLICATE			Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD		Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper

O. Reg. 153(511) - PHCs F2 - F4 (Water)															
F2 (C10 to C16)	3285019		< 100	< 100	NA	< 100	102%	60%	140%	85%	60%	140%	95%	60%	140%
F3 (C16 to C34)	3285019		< 100	< 100	NA	< 100	106%	60%	140%	76%	60%	140%	86%	60%	140%
F4 (C34 to C50)	3285019		< 100	< 100	NA	< 100	85%	60%	140%	74%	60%	140%	87%	60%	140%

Comments: When the average of the sample and duplicate results is less than 5x the RDL, the Relative Percent Difference (RPD) will be indicated as Not Applicable (NA).

Certified By: \_\_\_\_\_





## Method Summary

CLIENT NAME: WSP CANADA INC.

AGAT WORK ORDER: 21T843989

PROJECT: 211-10139-00 Phase 200 02

ATTENTION TO: Marsad Jafar

SAMPLING SITE:

SAMPLED BY:

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Trace Organics Analysis			
F2 (C10 to C16)	VOL-91-5010	modified from MOE PHC E3421	GC/FID
F3 (C16 to C34)	VOL-91-5010	modified from MOE PHC E3421	GC/FID
F4 (C34 to C50)	VOL-91-5010	modified from MOE PHC E3421	GC/FID
Gravimetric Heavy Hydrocarbons	VOL-91-5010	modified from MOE PHC E3421	BALANCE
Terphenyl	VOL-91-5010	modified from MOE PHC E3421	GC/FID
Sediment			







CLIENT NAME: WSP CANADA INC.  
2 INTERNATIONAL BLVD SUITE 201  
ETOBICOKE, ON M9W1A2  
(416) 798-0065

ATTENTION TO: Vaness Oetinger

PROJECT: 211-10139-00

AGAT WORK ORDER: 21T834096

TRACE ORGANICS REVIEWED BY: Inga Kuzmina, Trace Organics Lab Manager

WATER ANALYSIS REVIEWED BY: Amanjot Bhela, Inorganic Lab Manager

DATE REPORTED: Dec 03, 2021

PAGES (INCLUDING COVER): 22

VERSION\*: 1

Should you require any information regarding this analysis please contact your client services representative at (905) 712-5100

\*Notes

Disclaimer:

- All work conducted herein has been done using accepted standard protocols, and generally accepted practices and methods. AGAT test methods may incorporate modifications from the specified reference methods to improve performance.
- All samples will be disposed of within 30 days after receipt unless a Long Term Storage Agreement is signed and returned. Some specialty analysis may be exempt, please contact your Client Project Manager for details.
- AGAT's liability in connection with any delay, performance or non-performance of these services is only to the Client and does not extend to any other third party. Unless expressly agreed otherwise in writing, AGAT's liability is limited to the actual cost of the specific analysis or analyses included in the services.
- This Certificate shall not be reproduced except in full, without the written approval of the laboratory.
- The test results reported herewith relate only to the samples as received by the laboratory.
- Application of guidelines is provided "as is" without warranty of any kind, either expressed or implied, including, but not limited to, warranties of merchantability, fitness for a particular purpose, or non-infringement. AGAT assumes no responsibility for any errors or omissions in the guidelines contained in this document.
- All reportable information as specified by ISO/IEC 17025:2017 is available from AGAT Laboratories upon request.



## Certificate of Analysis

AGAT WORK ORDER: 21T834096

PROJECT: 211-10139-00

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<http://www.agatlabs.com>

CLIENT NAME: WSP CANADA INC.

SAMPLING SITE: ORBY

ATTENTION TO: Vaness Oetinger

SAMPLED BY: Marsad Jafar

### O. Reg. 153(511) - OC Pesticides + PCBs (Water)

DATE RECEIVED: 2021-11-23

DATE REPORTED: 2021-12-03

Parameter	Unit	SAMPLE DESCRIPTION:		BH21-12	BH21-44
		G / S	RDL	3246761	3246768
Gamma-Hexachlorocyclohexane	ug/L	0.01	0.01	<0.01	<0.01
Heptachlor	ug/L	0.01	0.01	<0.01	<0.01
Aldrin	ug/L	0.01	0.01	<0.01	<0.01
Heptachlor Epoxide	ug/L	0.01	0.01	<0.01	<0.01
Endosulfan I	µg/L		0.05	<0.05	<0.05
Endosulfan II	µg/L		0.05	<0.05	<0.05
Endosulfan	ug/L	0.05	0.05	<0.05	<0.05
alpha - chlordane	µg/L		0.1	<0.1	<0.1
gamma-Chlordane	µg/L		0.2	<0.2	<0.2
Chlordane	ug/L	0.06	0.04	<0.04	<0.04
op'-DDE	µg/L		0.01	<0.01	<0.01
pp'-DDE	µg/L		0.01	<0.01	<0.01
DDE	ug/L		0.01	<0.01	<0.01
op'-DDD	µg/L		0.05	<0.05	<0.05
pp'-DDD	µg/L		0.05	<0.05	<0.05
DDD	ug/L	1.8	0.05	<0.05	<0.05
op'-DDT	µg/L		0.04	<0.04	<0.04
pp'-DDT	µg/L		0.05	<0.05	<0.05
DDT	ug/L		0.04	<0.04	<0.04
Dieldrin	ug/L	0.05	0.02	<0.02	<0.02
Endrin	ug/L	0.05	0.05	<0.05	<0.05
Methoxychlor	ug/L	0.05	0.04	<0.04	<0.04
Hexachlorobenzene	ug/L	0.01	0.01	<0.01	<0.01
Hexachlorobutadiene	ug/L	0.01	0.01	<0.01	<0.01
Hexachloroethane	ug/L	0.01	0.01	<0.01	<0.01
Aroclor 1242	ug/L		0.1	<0.1	<0.1
Aroclor 1248	ug/L		0.1	<0.1	<0.1
Aroclor 1254	ug/L		0.1	<0.1	<0.1
Aroclor 1260	ug/L		0.1	<0.1	<0.1

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## Certificate of Analysis

AGAT WORK ORDER: 21T834096

PROJECT: 211-10139-00

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

CLIENT NAME: WSP CANADA INC.

SAMPLING SITE: ORBY

ATTENTION TO: Vaness Oetinger

SAMPLED BY: Marsad Jafar

### O. Reg. 153(511) - OC Pesticides + PCBs (Water)

DATE RECEIVED: 2021-11-23

DATE REPORTED: 2021-12-03

		SAMPLE DESCRIPTION:		BH21-12	BH21-44
		SAMPLE TYPE:		Water	Water
		DATE SAMPLED:		2021-11-23 09:00	2021-11-23 10:00
Parameter	Unit	G / S	RDL	3246761	3246768
Polychlorinated Biphenyls	ug/L	0.2	0.1	<0.1	<0.1
Surrogate	Unit	Acceptable Limits			
TCMX	%	50-140	80	104	
Decachlorobiphenyl	%	50-140	98	112	

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 1: Full Depth Background Site Condition Standards - Ground Water - All Types of Property Uses  
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

3246761-3246768 DDT total is a calculated parameter. The calculated value is the sum of op'DDT and pp'DDT.  
DDD total is a calculated parameter. The calculated value is the sum of op'DDD and pp'DDD.  
DDE total is a calculated parameter. The calculated value is the sum of op'DDE and pp'DDE.  
Endosulfan total is a calculated parameter. The calculated value is the sum of Endosulfan I and Endosulfan II.  
Chlordane total is a calculated parameter. The calculated value is the sum of Alpha-Chlordane and Gamma-Chlordane.  
PCB total is a calculated parameter. The calculated value is the sum of Aroclor 1242, Aroclor 1248, Aroclor 1254 and Aroclor 1260.  
The calculated parameters are non-accredited. The parameters that are components of the calculation are accredited.

Analysis performed at AGAT Toronto (unless marked by \*)

Certified By:





## Certificate of Analysis

AGAT WORK ORDER: 21T834096

PROJECT: 211-10139-00

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FAX (905)712-5122  
<http://www.agatlabs.com>

CLIENT NAME: WSP CANADA INC.

SAMPLING SITE: ORBY

ATTENTION TO: Vaness Oetinger

SAMPLED BY: Marsad Jafar

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

DATE RECEIVED: 2021-11-23

DATE REPORTED: 2021-12-03

Parameter	Unit	SAMPLE DESCRIPTION:				
		G / S	RDL	BH21-12	BH21-44	BH21-36
				Water	Water	Water
				2021-11-23 09:00	2021-11-23 10:00	2021-11-23 13:00
				3246761	3246768	3246774
Naphthalene	µg/L	7	0.20	<0.20	<0.20	<0.20
Acenaphthylene	µg/L	1	0.20	<0.20	<0.20	<0.20
Acenaphthene	µg/L	4.1	0.20	<0.20	<0.20	<0.20
Fluorene	µg/L	120	0.20	<0.20	<0.20	<0.20
Phenanthrene	µg/L	0.1	0.10	<0.10	<0.10	<0.10
Anthracene	µg/L	0.1	0.10	<0.10	<0.10	<0.10
Fluoranthene	µg/L	0.4	0.20	<0.20	<0.20	<0.20
Pyrene	µg/L	0.2	0.20	<0.20	<0.20	<0.20
Benzo(a)anthracene	µg/L	0.2	0.20	<0.20	<0.20	<0.20
Chrysene	µg/L	0.1	0.10	<0.10	<0.10	<0.10
Benzo(b)fluoranthene	µg/L	0.1	0.10	<0.10	<0.10	<0.10
Benzo(k)fluoranthene	µg/L	0.1	0.10	<0.10	<0.10	<0.10
Benzo(a)pyrene	µg/L	0.01	0.01	<0.01	<0.01	<0.01
Indeno(1,2,3-cd)pyrene	µg/L	0.2	0.20	<0.20	<0.20	<0.20
Dibenz(a,h)anthracene	µg/L	0.2	0.20	<0.20	<0.20	<0.20
Benzo(g,h,i)perylene	µg/L	0.2	0.20	<0.20	<0.20	<0.20
2-and 1-methyl Naphthalene	µg/L	2	0.20	<0.20	<0.20	<0.20
Sediment				No	No	No
Surrogate	Unit	Acceptable Limits				
Naphthalene-d8	%	50-140	78	102	82	
Acridine-d9	%	50-140	96	83	94	
Terphenyl-d14	%	50-140	95	92	78	

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 1: Full Depth Background Site Condition Standards - Ground Water - All Types of Property Uses  
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

3246761-3246774 Note: The result for Benzo(b)Fluoranthene is the total of the Benzo(b)&(j)Fluoranthene isomers because the isomers co-elute on the GC column.  
2- and 1-Methyl Naphthalene is a calculated parameter. The calculated value is the sum of 2-Methyl Naphthalene and 1-Methyl Naphthalene. The calculated parameter is non-accredited. The parameters that are components of the calculation are accredited.  
Sediment parameter is comment only based on visual inspection of the sample prior to extraction and is not an accredited test.

Analysis performed at AGAT Toronto (unless marked by \*)

Certified By:



## Certificate of Analysis

AGAT WORK ORDER: 21T834096

PROJECT: 211-10139-00

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<http://www.agatlabs.com>

CLIENT NAME: WSP CANADA INC.

SAMPLING SITE: ORBY

ATTENTION TO: Vaness Oetinger

SAMPLED BY: Marsad Jafar

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

DATE RECEIVED: 2021-11-23

DATE REPORTED: 2021-12-03

SAMPLE DESCRIPTION: BH21-36  
SAMPLE TYPE: Water  
DATE SAMPLED: 2021-11-23  
13:00  
3246774

Parameter	Unit	G / S	RDL	3246774
F1 (C6-C10)	µg/L	420	25	<25
F1 (C6 to C10) minus BTEX	µg/L	420	25	<25
F2 (C10 to C16)	µg/L	150	100	<100
F2 (C10 to C16) minus Naphthalene	µg/L		100	<100
F3 (C16 to C34)	µg/L	500	100	<100
F3 (C16 to C34) minus PAHs	µg/L		100	<100
F4 (C34 to C50)	µg/L	500	100	<100
Gravimetric Heavy Hydrocarbons	µg/L		500	NA
Sediment				No
Surrogate	Unit	Acceptable Limits		
Toluene-d8	% Recovery	50-140		82.8
Terphenyl	% Recovery	60-140		90

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 1: Full Depth Background Site Condition Standards - Ground Water - All Types of Property Uses  
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

3246774 The C6-C10 fraction is calculated using toluene response factor.  
C6-C10 (F1 minus BTEX) is a calculated parameter. The calculated value is F1 minus BTEX. The calculated parameter is non-accredited. The parameters that are components of the calculation are accredited.  
The C10 - C16, C16 - C34, and C34 - C50 fractions are calculated using the average response factor for n-C10, n-C16, and n-C34.  
Gravimetric Heavy Hydrocarbons are not included in the Total C16-C50 and are only determined if the chromatogram of the C34 - C50 hydrocarbons indicates that hydrocarbons >C50 are present. The chromatogram has returned to baseline by the retention time of nC50.  
Total C6 - C50 results are corrected for BTEX and PAH contributions.  
C>10 - C16 (F2- Naphthalene) is a calculated parameter. The calculated value is F2 - Naphthalene.  
C>16 - C34 (F3-PAH) is a calculated parameter. The calculated value is F3-PAH (PAH: sum of Phenanthrene, Benzo(a)anthracene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Benzo(a)pyrene, Fluoranthene, Dibenzo(a,h)anthracene, Indeno(1,2,3-c,d)pyrene and Pyrene).  
This method complies with the Reference Method for the CWS PHC and is validated for use in the laboratory.  
nC10, nC16 and nC34 response factors are within 10% of their average.  
C50 response factor is within 70% of nC10 + nC16 + nC34 average.  
Linearity is within 15%.  
Extraction and holding times were met for this sample.

Sediment parameter is comment only based on visual inspection of the sample prior to extraction and is not an accredited test.

Analysis performed at AGAT Toronto (unless marked by \*)

Certified By:



## Certificate of Analysis

AGAT WORK ORDER: 21T834096

PROJECT: 211-10139-00

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

CLIENT NAME: WSP CANADA INC.

SAMPLING SITE: ORBY

ATTENTION TO: Vaness Oetinger

SAMPLED BY: Marsad Jafar

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

DATE RECEIVED: 2021-11-23

DATE REPORTED: 2021-12-03

		SAMPLE DESCRIPTION:		BH21-12	BH21-44
		SAMPLE TYPE:		Water	Water
		DATE SAMPLED:		2021-11-23 09:00	2021-11-23 10:00
Parameter	Unit	G / S	RDL	3246761	3246768
Benzene	µg/L	0.5	0.20	<0.20	<0.20
Toluene	µg/L	0.8	0.20	<0.20	0.41
Ethylbenzene	µg/L	0.5	0.10	<0.10	<0.10
m & p-Xylene	µg/L		0.20	<0.20	<0.20
o-Xylene	µg/L		0.10	<0.10	<0.10
Xylenes (Total)	µg/L	72	0.20	<0.20	<0.20
F1 (C6-C10)	µg/L	420	25	<25	<25
F1 (C6 to C10) minus BTEX	µg/L	420	25	<25	<25
F2 (C10 to C16)	µg/L	150	100	<100	<100
F2 (C10 to C16) minus Naphthalene	µg/L		100	<100	<100
F3 (C16 to C34)	µg/L	500	100	<100	<100
F3 (C16 to C34) minus PAHs	µg/L		100	<100	<100
F4 (C34 to C50)	µg/L	500	100	<100	<100
Gravimetric Heavy Hydrocarbons	µg/L		500	NA	NA
Sediment				No	No
Surrogate	Unit	Acceptable Limits			
Toluene-d8	% Recovery	60-140	85.0	81.2	
Terphenyl	% Recovery	60-140	87	94	

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CLIENT NAME: WSP CANADA INC.

SAMPLING SITE: ORBY

ATTENTION TO: Vaness Oetinger

SAMPLED BY: Marsad Jafar

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

DATE RECEIVED: 2021-11-23

DATE REPORTED: 2021-12-03

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 1: Full Depth Background Site Condition Standards - Ground Water - All Types of Property Uses  
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

3246761-3246768 The C6-C10 fraction is calculated using toluene response factor.  
Xylenes total is a calculated parameter. The calculated value is the sum of m&p-Xylene and o-Xylene.  
C6-C10 (F1 minus BTEX) is a calculated parameter. The calculated value is F1 minus BTEX.  
The calculated parameters are non-accredited. The parameters that are components of the calculation are accredited.  
The C10 - C16, C16 - C34, and C34 - C50 fractions are calculated using the average response factor for n-C10, n-C16, and n-C34.  
Gravimetric Heavy Hydrocarbons are not included in the Total C16-C50 and are only determined if the chromatogram of the C34 - C50 hydrocarbons indicates that hydrocarbons >C50 are present.  
The chromatogram has returned to baseline by the retention time of nC50.  
Total C6 - C50 results are corrected for BTEX and PAH contributions.  
C>10 - C16 (F2- Naphthalene) is a calculated parameter. The calculated value is F2 - Naphthalene.  
C>16 - C34 (F3-PAH) is a calculated parameter. The calculated value is F3-PAH (PAH: sum of Phenanthrene, Benzo(a)anthracene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Benzo(a)pyrene, Fluoranthene, Dibenzo(a,h)anthracene, Indeno(1,2,3-c,d)pyrene and Pyrene).  
This method complies with the Reference Method for the CWS PHC and is validated for use in the laboratory.  
nC10, nC16 and nC34 response factors are within 10% of their average.  
C50 response factor is within 70% of nC10 + nC16 + nC34 average.  
Linearity is within 15%.  
Extraction and holding times were met for this sample.

Sediment parameter is comment only based on visual inspection of the sample prior to extraction and is not an accredited test.

Analysis performed at AGAT Toronto (unless marked by \*)

Certified By:



## Certificate of Analysis

AGAT WORK ORDER: 21T834096

PROJECT: 211-10139-00

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CLIENT NAME: WSP CANADA INC.

SAMPLING SITE: ORBY

ATTENTION TO: Vaness Oetinger

SAMPLED BY: Marsad Jafar

### O. Reg. 153(511) - VOCs (Water)

DATE RECEIVED: 2021-11-23

DATE REPORTED: 2021-12-03

Parameter	Unit	SAMPLE DESCRIPTION:		BH21-36	Trip Blank
		G / S	RDL	3246774	3246787
Dichlorodifluoromethane	µg/L	590	0.20	<0.20	<0.20
Vinyl Chloride	µg/L	0.5	0.17	<0.17	<0.17
Bromomethane	µg/L	0.89	0.20	<0.20	<0.20
Trichlorofluoromethane	µg/L	150	0.40	<0.40	<0.40
Acetone	µg/L	2700	1.0	<1.0	<1.0
1,1-Dichloroethylene	µg/L	0.5	0.30	<0.30	<0.30
Methylene Chloride	µg/L	5	0.30	<0.30	<0.30
trans- 1,2-Dichloroethylene	µg/L	1.6	0.20	<0.20	<0.20
Methyl tert-butyl ether	µg/L	15	0.20	<0.20	<0.20
1,1-Dichloroethane	µg/L	0.5	0.30	<0.30	<0.30
Methyl Ethyl Ketone	µg/L	400	1.0	<1.0	<1.0
cis- 1,2-Dichloroethylene	µg/L	1.6	0.20	<0.20	<0.20
Chloroform	µg/L	2	0.20	<0.20	<0.20
1,2-Dichloroethane	µg/L	0.5	0.20	<0.20	<0.20
1,1,1-Trichloroethane	µg/L	0.5	0.30	<0.30	<0.30
Carbon Tetrachloride	µg/L	0.2	0.20	<0.20	<0.20
Benzene	µg/L	0.5	0.20	<0.20	<0.20
1,2-Dichloropropane	µg/L	0.5	0.20	<0.20	<0.20
Trichloroethylene	µg/L	0.5	0.20	<0.20	<0.20
Bromodichloromethane	µg/L	2	0.20	<0.20	<0.20
Methyl Isobutyl Ketone	µg/L	640	1.0	<1.0	<1.0
1,1,2-Trichloroethane	µg/L	0.5	0.20	<0.20	<0.20
Toluene	µg/L	0.8	0.20	<0.20	<0.20
Dibromochloromethane	µg/L	2	0.10	<0.10	<0.10
Ethylene Dibromide	µg/L	0.2	0.10	<0.10	<0.10
Tetrachloroethylene	µg/L	0.5	0.20	<0.20	<0.20
1,1,1,2-Tetrachloroethane	µg/L	1.1	0.10	<0.10	<0.10
Chlorobenzene	µg/L	0.5	0.10	<0.10	<0.10
Ethylbenzene	µg/L	0.5	0.10	<0.10	<0.10

Certified By:



## Certificate of Analysis

AGAT WORK ORDER: 21T834096

PROJECT: 211-10139-00

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CLIENT NAME: WSP CANADA INC.

SAMPLING SITE: ORBY

ATTENTION TO: Vaness Oetinger

SAMPLED BY: Marsad Jafar

### O. Reg. 153(511) - VOCs (Water)

DATE RECEIVED: 2021-11-23

DATE REPORTED: 2021-12-03

		SAMPLE DESCRIPTION:		BH21-36	Trip Blank
		SAMPLE TYPE:		Water	Water
		DATE SAMPLED:		2021-11-23	2021-11-23
				13:00	13:00
Parameter	Unit	G / S	RDL	3246774	3246787
m & p-Xylene	µg/L		0.20	<0.20	<0.20
Bromoform	µg/L	5	0.10	<0.10	<0.10
Styrene	µg/L	0.5	0.10	<0.10	<0.10
1,1,2,2-Tetrachloroethane	µg/L	0.5	0.10	<0.10	<0.10
o-Xylene	µg/L		0.10	<0.10	<0.10
1,3-Dichlorobenzene	µg/L	0.5	0.10	<0.10	<0.10
1,4-Dichlorobenzene	µg/L	0.5	0.10	<0.10	<0.10
1,2-Dichlorobenzene	µg/L	0.5	0.10	<0.10	<0.10
1,3-Dichloropropene	µg/L	0.5	0.30	<0.30	<0.30
Xylenes (Total)	µg/L	72	0.20	<0.20	<0.20
n-Hexane	µg/L	5	0.20	<0.20	<0.20
Surrogate	Unit	Acceptable Limits			
Toluene-d8	% Recovery	50-140		95	95
4-Bromofluorobenzene	% Recovery	50-140		102	99

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 1: Full Depth Background Site Condition Standards - Ground Water - All Types of Property Uses  
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

3246774-3246787 Xylenes total is a calculated parameter. The calculated value is the sum of m&p-Xylene and o-Xylene.  
1,3-Dichloropropene total is a calculated parameter. The calculated value is the sum of Cis-1,3-Dichloropropene and Trans-1,3-Dichloropropene.  
The calculated parameter is non-accredited. The parameters that are components of the calculation are accredited.

Analysis performed at AGAT Toronto (unless marked by \*)

Certified By:





## Certificate of Analysis

AGAT WORK ORDER: 21T834096

PROJECT: 211-10139-00

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CLIENT NAME: WSP CANADA INC.

SAMPLING SITE: ORBY

ATTENTION TO: Vaness Oetinger

SAMPLED BY: Marsad Jafar

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

DATE RECEIVED: 2021-11-23

DATE REPORTED: 2021-12-03

Parameter	Unit	SAMPLE DESCRIPTION: BH21-12			BH21-44		BH21-36	
		G / S	RDL	3246761	RDL	3246768	3246774	
Dissolved Antimony	µg/L	1.5	1.0	<1.0	1.0	<1.0	<1.0	
Dissolved Arsenic	µg/L	13	1.0	7.8	1.0	2.0	<1.0	
Dissolved Barium	µg/L	610	2.0	119	2.0	101	188	
Dissolved Beryllium	µg/L	0.5	0.50	<0.50	0.50	<0.50	<0.50	
Dissolved Boron	µg/L	1700	10.0	221	10.0	37.7	115	
Dissolved Cadmium	µg/L	0.5	0.20	<0.20	0.20	<0.20	<0.20	
Dissolved Chromium	µg/L	11	2.0	<2.0	2.0	<2.0	<2.0	
Dissolved Cobalt	µg/L	3.8	0.50	<0.50	0.50	0.67	<0.50	
Dissolved Copper	µg/L	5	1.0	1.7	1.0	<1.0	1.5	
Dissolved Lead	µg/L	1.9	0.50	<0.50	0.50	<0.50	<0.50	
Dissolved Molybdenum	µg/L	23	0.50	5.87	0.50	0.60	0.80	
Dissolved Nickel	µg/L	14	1.0	1.9	1.0	<1.0	<1.0	
Dissolved Selenium	µg/L	5	1.0	1.6	1.0	2.0	3.3	
Dissolved Silver	µg/L	0.3	0.20	<0.20	0.20	<0.20	<0.20	
Dissolved Thallium	µg/L	0.5	0.30	<0.30	0.30	<0.30	<0.30	
Dissolved Uranium	µg/L	8.9	0.50	1.74	0.50	1.32	1.65	
Dissolved Vanadium	µg/L	3.9	0.40	0.78	0.40	<0.40	1.01	
Dissolved Zinc	µg/L	160	5.0	<5.0	5.0	<5.0	<5.0	
Mercury	µg/L	0.1	0.02	<0.02	0.02	<0.02	<0.02	
Chromium VI	µg/L	25	2.000	<2.000	2.000	<2.000	<2.000	
Cyanide, Free	µg/L	5	2	<2	2	<2	<2	
Dissolved Sodium	µg/L	490000	50	30100	100	8980	56000	
Chloride	µg/L	790000	100	7260	100	7770	4740	
Electrical Conductivity	uS/cm	NA	2	535	2	974	1000	
pH	pH Units		NA	7.89	NA	7.60	7.65	

Certified By:





**AGAT** Laboratories

# Certificate of Analysis

AGAT WORK ORDER: 21T834096

PROJECT: 211-10139-00

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CLIENT NAME: WSP CANADA INC.

SAMPLING SITE: ORBY

ATTENTION TO: Vaness Oetinger

SAMPLED BY: Marsad Jafar

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

DATE RECEIVED: 2021-11-23

DATE REPORTED: 2021-12-03

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 1: Full Depth Background Site Condition Standards - Ground Water - All Types of Property Uses  
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

3246761 Metals analysis completed on a filtered sample.

3246768-3246774 Metals analysis completed on a filtered sample.  
Dilution required, RDL has been increased accordingly.

Analysis performed at AGAT Toronto (unless marked by \*)

Certified By:

*Anamjot Bhela*  


## Quality Assurance

CLIENT NAME: WSP CANADA INC.

AGAT WORK ORDER: 21T834096

PROJECT: 211-10139-00

ATTENTION TO: Vaness Oetinger

SAMPLING SITE: ORBY

SAMPLED BY: Marsad Jafar

Trace Organics Analysis															
RPT Date: Dec 03, 2021			DUPLICATE				Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE		MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Measured Value		Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper

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

Naphthalene	3227991		< 0.20	< 0.20	NA	< 0.20	105%	50%	140%	78%	50%	140%	77%	50%	140%
Acenaphthylene	3227991		< 0.20	< 0.20	NA	< 0.20	98%	50%	140%	82%	50%	140%	107%	50%	140%
Acenaphthene	3227991		< 0.20	< 0.20	NA	< 0.20	105%	50%	140%	71%	50%	140%	81%	50%	140%
Fluorene	3227991		< 0.20	< 0.20	NA	< 0.20	86%	50%	140%	92%	50%	140%	92%	50%	140%
Phenanthrene	3227991		< 0.10	< 0.10	NA	< 0.10	98%	50%	140%	88%	50%	140%	85%	50%	140%
Anthracene	3227991		< 0.10	< 0.10	NA	< 0.10	85%	50%	140%	93%	50%	140%	78%	50%	140%
Fluoranthene	3227991		< 0.20	< 0.20	NA	< 0.20	99%	50%	140%	96%	50%	140%	93%	50%	140%
Pyrene	3227991		< 0.20	< 0.20	NA	< 0.20	78%	50%	140%	96%	50%	140%	99%	50%	140%
Benzo(a)anthracene	3227991		< 0.20	< 0.20	NA	< 0.20	96%	50%	140%	94%	50%	140%	96%	50%	140%
Chrysene	3227991		< 0.10	< 0.10	NA	< 0.10	86%	50%	140%	114%	50%	140%	84%	50%	140%
Benzo(b)fluoranthene	3227991		< 0.10	< 0.10	NA	< 0.10	92%	50%	140%	76%	50%	140%	92%	50%	140%
Benzo(k)fluoranthene	3227991		< 0.10	< 0.10	NA	< 0.10	98%	50%	140%	92%	50%	140%	78%	50%	140%
Benzo(a)pyrene	3227991		< 0.01	< 0.01	NA	< 0.01	78%	50%	140%	105%	50%	140%	101%	50%	140%
Indeno(1,2,3-cd)pyrene	3227991		< 0.20	< 0.20	NA	< 0.20	92%	50%	140%	108%	50%	140%	105%	50%	140%
Dibenz(a,h)anthracene	3227991		< 0.20	< 0.20	NA	< 0.20	95%	50%	140%	75%	50%	140%	72%	50%	140%
Benzo(g,h,i)perylene	3227991		< 0.20	< 0.20	NA	< 0.20	91%	50%	140%	85%	50%	140%	105%	50%	140%

**O. Reg. 153(511) - OC Pesticides + PCBs (Water)**

Gamma-Hexachlorocyclohexane	3246774	3246774	< 0.01	< 0.01	NA	< 0.01	102%	50%	140%	103%	50%	140%	78%	50%	140%
Heptachlor	3246774	3246774	< 0.01	< 0.01	NA	< 0.01	109%	50%	140%	107%	50%	140%	88%	50%	140%
Aldrin	3246774	3246774	< 0.01	< 0.01	NA	< 0.01	103%	50%	140%	93%	50%	140%	91%	50%	140%
Heptachlor Epoxide	3246774	3246774	< 0.01	< 0.01	NA	< 0.01	104%	50%	140%	102%	50%	140%	81%	50%	140%
Endosulfan I	3246774	3246774	< 0.05	< 0.05	NA	< 0.05	98%	50%	140%	103%	50%	140%	75%	50%	140%
Endosulfan II	3246774	3246774	< 0.05	< 0.05	NA	< 0.05	94%	50%	140%	100%	50%	140%	79%	50%	140%
alpha - chlordane	3246774	3246774	< 0.1	< 0.1	NA	< 0.1	90%	50%	140%	97%	50%	140%	89%	50%	140%
gamma-Chlordane	3246774	3246774	< 0.2	< 0.2	NA	< 0.2	96%	50%	140%	89%	50%	140%	105%	50%	140%
op'-DDE	3246774	3246774	< 0.01	< 0.01	NA	< 0.01	106%	50%	140%	91%	50%	140%	83%	50%	140%
pp'-DDE	3246774	3246774	< 0.01	< 0.01	NA	< 0.01	109%	50%	140%	93%	50%	140%	87%	50%	140%
op'-DDD	3246774	3246774	< 0.05	< 0.05	NA	< 0.05	112%	50%	140%	104%	50%	140%	102%	50%	140%
pp'-DDD	3246774	3246774	< 0.05	< 0.05	NA	< 0.05	114%	50%	140%	108%	50%	140%	94%	50%	140%
op'-DDT	3246774	3246774	< 0.04	< 0.04	NA	< 0.04	102%	50%	140%	88%	50%	140%	87%	50%	140%
pp'-DDT	3246774	3246774	< 0.05	< 0.05	NA	< 0.05	104%	50%	140%	85%	50%	140%	84%	50%	140%
Dieldrin	3246774	3246774	< 0.02	< 0.02	NA	< 0.02	112%	50%	140%	104%	50%	140%	80%	50%	140%
Endrin	3246774	3246774	< 0.05	< 0.05	NA	< 0.05	108%	50%	140%	101%	50%	140%	79%	50%	140%
Methoxychlor	3246774	3246774	< 0.04	< 0.04	NA	< 0.04	106%	50%	140%		50%	140%	102%	50%	140%
Hexachlorobenzene	3246774	3246774	< 0.01	< 0.01	NA	< 0.01	104%	50%	140%	94%	50%	140%	93%	50%	140%
Hexachlorobutadiene	3246774	3246774	< 0.01	< 0.01	NA	< 0.01	94%	50%	140%	102%	50%	140%	82%	50%	140%
Hexachloroethane	3246774	3246774	< 0.01	< 0.01	NA	< 0.01	83%	50%	140%	99%	50%	140%	79%	50%	140%

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



## Quality Assurance

CLIENT NAME: WSP CANADA INC.

AGAT WORK ORDER: 21T834096

PROJECT: 211-10139-00

ATTENTION TO: Vaness Oetinger

SAMPLING SITE: ORBY

SAMPLED BY: Marsad Jafar

### Trace Organics Analysis (Continued)

RPT Date: Dec 03, 2021			DUPLICATE			Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD		Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
Benzene	3249261		<0.20	<0.20	NA	< 0.20	110%	60%	140%	95%	60%	140%	78%	60%	140%
Toluene	3249261		<0.20	<0.20	NA	< 0.20	107%	60%	140%	94%	60%	140%	83%	60%	140%
Ethylbenzene	3249261		<0.10	<0.10	NA	< 0.10	107%	60%	140%	82%	60%	140%	85%	60%	140%
m & p-Xylene	3249261		<0.20	<0.20	NA	< 0.20	104%	60%	140%	101%	60%	140%	100%	60%	140%
o-Xylene	3249261		<0.10	<0.10	NA	< 0.10	102%	60%	140%	87%	60%	140%	104%	60%	140%
F1 (C6-C10)	3249261		<25	<25	NA	< 25	93%	60%	140%	106%	60%	140%	105%	60%	140%
F2 (C10 to C16)	3260916		< 100	< 100	NA	< 100	109%	60%	140%	63%	60%	140%	80%	60%	140%
F3 (C16 to C34)	3260916		< 100	< 100	NA	< 100	106%	60%	140%	61%	60%	140%	69%	60%	140%
F4 (C34 to C50)	3260916		< 100	< 100	NA	< 100	99%	60%	140%	107%	60%	140%	87%	60%	140%
O. Reg. 153(511) - VOCs (Water)															
Dichlorodifluoromethane	3251511		<0.20	<0.20	NA	< 0.20	101%	50%	140%	84%	50%	140%	96%	50%	140%
Vinyl Chloride	3251511		<0.17	<0.17	NA	< 0.17	84%	50%	140%	82%	50%	140%	99%	50%	140%
Bromomethane	3251511		<0.20	<0.20	NA	< 0.20	103%	50%	140%	80%	50%	140%	81%	50%	140%
Trichlorofluoromethane	3251511		<0.40	<0.40	NA	< 0.40	78%	50%	140%	85%	50%	140%	88%	50%	140%
Acetone	3251511		<1.0	<1.0	NA	< 1.0	102%	50%	140%	98%	50%	140%	99%	50%	140%
1,1-Dichloroethylene	3251511		<0.30	<0.30	NA	< 0.30	80%	50%	140%	117%	60%	130%	110%	50%	140%
Methylene Chloride	3251511		<0.30	<0.30	NA	< 0.30	95%	50%	140%	98%	60%	130%	110%	50%	140%
trans- 1,2-Dichloroethylene	3251511		<0.20	<0.20	NA	< 0.20	88%	50%	140%	83%	60%	130%	106%	50%	140%
Methyl tert-butyl ether	3251511		<0.20	<0.20	NA	< 0.20	102%	50%	140%	119%	60%	130%	94%	50%	140%
1,1-Dichloroethane	3251511		<0.30	<0.30	NA	< 0.30	96%	50%	140%	87%	60%	130%	90%	50%	140%
Methyl Ethyl Ketone	3251511		<1.0	<1.0	NA	< 1.0	99%	50%	140%	103%	50%	140%	103%	50%	140%
cis- 1,2-Dichloroethylene	3251511		<0.20	<0.20	NA	< 0.20	114%	50%	140%	95%	60%	130%	81%	50%	140%
Chloroform	3251511		<0.20	<0.20	NA	< 0.20	115%	50%	140%	113%	60%	130%	86%	50%	140%
1,2-Dichloroethane	3251511		<0.20	<0.20	NA	< 0.20	120%	50%	140%	113%	60%	130%	71%	50%	140%
1,1,1-Trichloroethane	3251511		<0.30	<0.30	NA	< 0.30	103%	50%	140%	108%	60%	130%	88%	50%	140%
Carbon Tetrachloride	3251511		<0.20	<0.20	NA	< 0.20	97%	50%	140%	75%	60%	130%	95%	50%	140%
Benzene	3251511		<0.20	<0.20	NA	< 0.20	83%	50%	140%	82%	60%	130%	87%	50%	140%
1,2-Dichloropropane	3251511		<0.20	<0.20	NA	< 0.20	112%	50%	140%	112%	60%	130%	113%	50%	140%
Trichloroethylene	3251511		<0.20	<0.20	NA	< 0.20	117%	50%	140%	104%	60%	130%	84%	50%	140%
Bromodichloromethane	3251511		<0.20	<0.20	NA	< 0.20	110%	50%	140%	87%	60%	130%	115%	50%	140%
Methyl Isobutyl Ketone	3251511		<1.0	<1.0	NA	< 1.0	103%	50%	140%	101%	50%	140%	99%	50%	140%
1,1,2-Trichloroethane	3251511		<0.20	<0.20	NA	< 0.20	118%	50%	140%	118%	60%	130%	98%	50%	140%
Toluene	3251511		0.46	0.46	NA	< 0.20	116%	50%	140%	96%	60%	130%	50%	50%	140%
Dibromochloromethane	3251511		<0.10	<0.10	NA	< 0.10	111%	50%	140%	77%	60%	130%	120%	50%	140%
Ethylene Dibromide	3251511		<0.10	<0.10	NA	< 0.10	114%	50%	140%	110%	60%	130%	116%	50%	140%
Tetrachloroethylene	3251511		<0.20	<0.20	NA	< 0.20	83%	50%	140%	105%	60%	130%	109%	50%	140%
1,1,1,2-Tetrachloroethane	3251511		<0.10	<0.10	NA	< 0.10	109%	50%	140%	106%	60%	130%	109%	50%	140%
Chlorobenzene	3251511		<0.10	<0.10	NA	< 0.10	88%	50%	140%	107%	60%	130%	98%	50%	140%
Ethylbenzene	3251511		<0.10	<0.10	NA	< 0.10	73%	50%	140%	102%	60%	130%	83%	50%	140%

## Quality Assurance

CLIENT NAME: WSP CANADA INC.  
 PROJECT: 211-10139-00  
 SAMPLING SITE: ORBY

AGAT WORK ORDER: 21T834096  
 ATTENTION TO: Vaness Oetinger  
 SAMPLED BY: Marsad Jafar

### Trace Organics Analysis (Continued)

RPT Date: Dec 03, 2021			DUPLICATE				Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Measured Value		Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits		
								Lower	Upper		Lower	Upper		Lower	Upper	
m & p-Xylene	3251511		<0.20	<0.20	NA	< 0.20	100%	50%	140%	105%	60%	130%	88%	50%	140%	
Bromoform	3251511		<0.10	<0.10	NA	< 0.10	88%	50%	140%	88%	60%	130%	97%	50%	140%	
Styrene	3251511		<0.10	<0.10	NA	< 0.10	81%	50%	140%	86%	60%	130%	76%	50%	140%	
1,1,2,2-Tetrachloroethane	3251511		<0.10	<0.10	NA	< 0.10	113%	50%	140%	116%	60%	130%	114%	50%	140%	
o-Xylene	3251511		<0.10	<0.10	NA	< 0.10	75%	50%	140%	102%	60%	130%	87%	50%	140%	
1,3-Dichlorobenzene	3251511		<0.10	<0.10	NA	< 0.10	72%	50%	140%	92%	60%	130%	80%	50%	140%	
1,4-Dichlorobenzene	3251511		<0.10	<0.10	NA	< 0.10	86%	50%	140%	95%	60%	130%	90%	50%	140%	
1,2-Dichlorobenzene	3251511		<0.10	<0.10	NA	< 0.10	83%	50%	140%	97%	60%	130%	85%	50%	140%	
n-Hexane	3251511		<0.20	<0.20	NA	< 0.20	115%	50%	140%	99%	60%	130%	83%	50%	140%	
O. Reg. 153(511) - PHCs F1 - F4 (with PAHs and VOC) (Water)																
F1 (C6-C10)	3259635		<25	<25	NA	< 25	102%	60%	140%	99%	60%	140%	107%	60%	140%	
O. Reg. 153(511) - VOCs (Water)																
Dichlorodifluoromethane	3251511		<0.20	<0.20	NA	< 0.20	101%	50%	140%	84%	50%	140%	96%	50%	140%	
Vinyl Chloride	3251511		<0.17	<0.17	NA	< 0.17	84%	50%	140%	82%	50%	140%	99%	50%	140%	
Bromomethane	3251511		<0.20	<0.20	NA	< 0.20	103%	50%	140%	80%	50%	140%	81%	50%	140%	
Trichlorofluoromethane	3251511		<0.40	<0.40	NA	< 0.40	78%	50%	140%	85%	50%	140%	88%	50%	140%	
Acetone	3251511		<1.0	<1.0	NA	< 1.0	102%	50%	140%	98%	50%	140%	99%	50%	140%	
1,1-Dichloroethylene	3251511		<0.30	<0.30	NA	< 0.30	80%	50%	140%	117%	60%	130%	110%	50%	140%	
Methylene Chloride	3251511		<0.30	<0.30	NA	< 0.30	95%	50%	140%	98%	60%	130%	110%	50%	140%	
trans- 1,2-Dichloroethylene	3251511		<0.20	<0.20	NA	< 0.20	88%	50%	140%	83%	60%	130%	106%	50%	140%	
Methyl tert-butyl ether	3251511		<0.20	<0.20	NA	< 0.20	102%	50%	140%	119%	60%	130%	94%	50%	140%	
1,1-Dichloroethane	3251511		<0.30	<0.30	NA	< 0.30	96%	50%	140%	87%	60%	130%	90%	50%	140%	
Methyl Ethyl Ketone	3251511		<1.0	<1.0	NA	< 1.0	99%	50%	140%	103%	50%	140%	103%	50%	140%	
cis- 1,2-Dichloroethylene	3251511		<0.20	<0.20	NA	< 0.20	114%	50%	140%	95%	60%	130%	81%	50%	140%	
Chloroform	3251511		<0.20	<0.20	NA	< 0.20	115%	50%	140%	113%	60%	130%	86%	50%	140%	
1,2-Dichloroethane	3251511		<0.20	<0.20	NA	< 0.20	120%	50%	140%	113%	60%	130%	71%	50%	140%	
1,1,1-Trichloroethane	3251511		<0.30	<0.30	NA	< 0.30	103%	50%	140%	108%	60%	130%	88%	50%	140%	
Carbon Tetrachloride	3251511		<0.20	<0.20	NA	< 0.20	97%	50%	140%	75%	60%	130%	95%	50%	140%	
Benzene	3251511		<0.20	<0.20	NA	< 0.20	83%	50%	140%	82%	60%	130%	87%	50%	140%	
1,2-Dichloropropane	3251511		<0.20	<0.20	NA	< 0.20	112%	50%	140%	112%	60%	130%	113%	50%	140%	
Trichloroethylene	3251511		<0.20	<0.20	NA	< 0.20	117%	50%	140%	104%	60%	130%	84%	50%	140%	
Bromodichloromethane	3251511		<0.20	<0.20	NA	< 0.20	110%	50%	140%	87%	60%	130%	115%	50%	140%	
Methyl Isobutyl Ketone	3251511		<1.0	<1.0	NA	< 1.0	103%	50%	140%	101%	50%	140%	99%	50%	140%	
1,1,2-Trichloroethane	3251511		<0.20	<0.20	NA	< 0.20	118%	50%	140%	118%	60%	130%	98%	50%	140%	
Toluene	3251511		0.46	0.46	NA	< 0.20	116%	50%	140%	96%	60%	130%	50%	50%	140%	
Dibromochloromethane	3251511		<0.10	<0.10	NA	< 0.10	111%	50%	140%	77%	60%	130%	120%	50%	140%	
Ethylene Dibromide	3251511		<0.10	<0.10	NA	< 0.10	114%	50%	140%	110%	60%	130%	116%	50%	140%	
Tetrachloroethylene	3251511		<0.20	<0.20	NA	< 0.20	83%	50%	140%	105%	60%	130%	109%	50%	140%	

## Quality Assurance

 CLIENT NAME: WSP CANADA INC.  
 PROJECT: 211-10139-00  
 SAMPLING SITE: ORBY

 AGAT WORK ORDER: 21T834096  
 ATTENTION TO: Vaness Oetinger  
 SAMPLED BY: Marsad Jafar

### Trace Organics Analysis (Continued)

RPT Date: Dec 03, 2021			DUPLICATE			Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD		Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
1,1,1,2-Tetrachloroethane	3251511		<0.10	<0.10	NA	< 0.10	109%	50%	140%	106%	60%	130%	109%	50%	140%
Chlorobenzene	3251511		<0.10	<0.10	NA	< 0.10	88%	50%	140%	107%	60%	130%	98%	50%	140%
Ethylbenzene	3251511		<0.10	<0.10	NA	< 0.10	73%	50%	140%	102%	60%	130%	83%	50%	140%
m & p-Xylene	3251511		<0.20	<0.20	NA	< 0.20	100%	50%	140%	105%	60%	130%	88%	50%	140%
Bromoform	3251511		<0.10	<0.10	NA	< 0.10	88%	50%	140%	88%	60%	130%	97%	50%	140%
Styrene	3251511		<0.10	<0.10	NA	< 0.10	81%	50%	140%	86%	60%	130%	76%	50%	140%
1,1,2,2-Tetrachloroethane	3251511		<0.10	<0.10	NA	< 0.10	113%	50%	140%	116%	60%	130%	114%	50%	140%
o-Xylene	3251511		<0.10	<0.10	NA	< 0.10	75%	50%	140%	102%	60%	130%	87%	50%	140%
1,3-Dichlorobenzene	3251511		<0.10	<0.10	NA	< 0.10	72%	50%	140%	92%	60%	130%	80%	50%	140%
1,4-Dichlorobenzene	3251511		<0.10	<0.10	NA	< 0.10	86%	50%	140%	95%	60%	130%	90%	50%	140%
1,2-Dichlorobenzene	3251511		<0.10	<0.10	NA	< 0.10	83%	50%	140%	97%	60%	130%	85%	50%	140%
n-Hexane	3251511		<0.20	<0.20	NA	< 0.20	115%	50%	140%	99%	60%	130%	83%	50%	140%

Comments: When the average of the sample and duplicate results is less than 5x the RDL, the Relative Percent Difference (RPD) will be indicated as Not Applicable (NA).

Certified By: \_\_\_\_\_





## Quality Assurance

CLIENT NAME: WSP CANADA INC.

AGAT WORK ORDER: 21T834096

PROJECT: 211-10139-00

ATTENTION TO: Vaness Oetinger

SAMPLING SITE: ORBY

SAMPLED BY: Marsad Jafar

Water Analysis															
RPT Date: Dec 03, 2021			DUPLICATE			Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD		Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
O. Reg. 153(511) - Metals & Inorganics (Water)															
Dissolved Antimony	3249194		<1.0	<1.0	NA	< 1.0	99%	70%	130%	99%	80%	120%	98%	70%	130%
Dissolved Arsenic	3249194		<1.0	<1.0	NA	< 1.0	94%	70%	130%	99%	80%	120%	105%	70%	130%
Dissolved Barium	3249194		147	155	5.3%	< 2.0	99%	70%	130%	103%	80%	120%	107%	70%	130%
Dissolved Beryllium	3249194		<0.50	<0.50	NA	< 0.50	104%	70%	130%	110%	80%	120%	116%	70%	130%
Dissolved Boron	3249194		69.5	70.1	0.9%	< 10.0	100%	70%	130%	105%	80%	120%	115%	70%	130%
Dissolved Cadmium	3249194		<0.20	<0.20	NA	< 0.20	100%	70%	130%	104%	80%	120%	107%	70%	130%
Dissolved Chromium	3249194		4.5	3.0	NA	< 2.0	100%	70%	130%	105%	80%	120%	104%	70%	130%
Dissolved Cobalt	3249194		<0.50	<0.50	NA	< 0.50	102%	70%	130%	108%	80%	120%	107%	70%	130%
Dissolved Copper	3249194		5.1	5.1	0.0%	< 1.0	99%	70%	130%	105%	80%	120%	104%	70%	130%
Dissolved Lead	3249194		<0.50	<0.50	NA	< 0.50	97%	70%	130%	102%	80%	120%	102%	70%	130%
Dissolved Molybdenum	3249194		1.90	1.97	NA	< 0.50	99%	70%	130%	102%	80%	120%	106%	70%	130%
Dissolved Nickel	3249194		<1.0	<1.0	NA	< 1.0	104%	70%	130%	110%	80%	120%	105%	70%	130%
Dissolved Selenium	3249194		<1.0	<1.0	NA	< 1.0	105%	70%	130%	110%	80%	120%	117%	70%	130%
Dissolved Silver	3249194		<0.20	<0.20	NA	< 0.20	100%	70%	130%	105%	80%	120%	107%	70%	130%
Dissolved Thallium	3249194		<0.30	<0.30	NA	< 0.30	104%	70%	130%	108%	80%	120%	109%	70%	130%
Dissolved Uranium	3249194		<0.50	<0.50	NA	< 0.50	100%	70%	130%	103%	80%	120%	103%	70%	130%
Dissolved Vanadium	3249194		0.52	<0.40	NA	< 0.40	97%	70%	130%	101%	80%	120%	101%	70%	130%
Dissolved Zinc	3249194		93.0	97.8	5.0%	< 5.0	100%	70%	130%	105%	80%	120%	108%	70%	130%
Mercury	3245238		<0.02	<0.02	NA	< 0.02	102%	70%	130%	98%	80%	120%	92%	70%	130%
Chromium VI	3241136		<2.000	<2.000	NA	< 2	100%	70%	130%	98%	80%	120%	107%	70%	130%
Cyanide, Free	3229156		<2	<2	NA	< 2	96%	70%	130%	92%	80%	120%	98%	70%	130%
Dissolved Sodium Chloride	3246761	3246761	30100	30500	1.3%	< 50	101%	70%	130%	100%	80%	120%	101%	70%	130%
Electrical Conductivity	3245263		1700	1710	0.6%	< 2	103%	90%	110%	NA			NA		
pH	3245263		7.61	7.73	1.6%	NA	103%	90%	110%	NA			NA		

Comments: NA Signifies Not Applicable

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

Certified By:




## Method Summary

CLIENT NAME: WSP CANADA INC.

AGAT WORK ORDER: 21T834096

PROJECT: 211-10139-00

ATTENTION TO: Vaness Oetinger

SAMPLING SITE:ORBY

SAMPLED BY: Marsad Jafar

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Trace Organics Analysis			
Gamma-Hexachlorocyclohexane	ORG-91-5112	modified from EPA SW-846 3510C & 8081B	GC/ECD
Heptachlor	ORG-91-5112	modified from EPA SW-846 3510C & 8081B	GC/ECD
Aldrin	ORG-91-5112	modified from EPA SW-846 3510C & 8081B	GC/ECD
Heptachlor Epoxide	ORG-91-5112	modified from EPA SW-846 3510C & 8081B	GC/ECD
Endosulfan I	ORG-91-5112	modified from EPA SW-846 3510C & 8081B	GC/ECD
Endosulfan II	ORG-91-5112	modified from EPA SW-846 3510C & 8081B	GC/ECD
Endosulfan	ORG-91-5112	modified from EPA SW-846 3510C & 8081B	CALCULATION
alpha - chlordane	ORG-91-5112	modified from EPA SW-846 3510C & 8081B	GC/ECD
gamma-Chlordane	ORG-91-5112	modified from EPA SW-846 3510C & 8081B	GC/ECD
Chlordane	ORG-91-5112	modified from EPA SW-846 3510C & 8081B	CALCULATION
op'-DDE	ORG-91-5112	modified from EPA SW-846 3510C & 8081B	GC/ECD
pp'-DDE	ORG-91-5112	modified from EPA SW-846 3510C & 8081B	GC/ECD
DDE	ORG-91-5112	modified from EPA SW-846 3510C & 8081B	CALCULATION
op'-DDD	ORG-91-5112	modified from EPA SW-846 3510C & 8081B	GC/ECD
pp'-DDD	ORG-91-5112	modified from EPA SW-846 3510C & 8081B	GC/ECD
DDD	ORG-91-5112	modified from EPA SW-846 3510C & 8081B	CALCULATION
op'-DDT	ORG-91-5112	modified from EPA SW-846 3510C & 8081B	GC/ECD
pp'-DDT	ORG-91-5112	modified from EPA SW-846 3510C & 8081B	GC/ECD
DDT	ORG-91-5112	modified from EPA SW-846 3510C & 8081B	CALCULATION
Dieldrin	ORG-91-5112	modified from EPA SW-846 3510C & 8081B	GC/ECD
Endrin	ORG-91-5112	modified from EPA SW-846 3510C & 8081B	GC/ECD
Methoxychlor	ORG-91-5112	modified from EPA SW-846 3510C & 8081B	GC/ECD
Hexachlorobenzene	ORG-91-5112	modified from EPA SW-846 3510C & 8081B	GC/ECD
Hexachlorobutadiene	ORG-91-5112	modified from EPA SW-846 3510C & 8081B	GC/ECD
Hexachloroethane	ORG-91-5112	modified from EPA SW-846 3510C & 8081B	GC/ECD
Aroclor 1242	ORG-91-5112	modified from EPA SW-846 3510C & 8082A	GC/ECD
Aroclor 1248	ORG-91-5112	modified from EPA SW-846 3510C & 8082A	GC/ECD

## Method Summary

CLIENT NAME: WSP CANADA INC.

AGAT WORK ORDER: 21T834096

PROJECT: 211-10139-00

ATTENTION TO: Vaness Oetinger

SAMPLING SITE:ORBY

SAMPLED BY:Marsad Jafar

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Aroclor 1254	ORG-91-5112	modified from EPA SW-846 3510C & 8082A	GC/ECD
Aroclor 1260	ORG-91-5112	modified from EPA SW-846 3510C & 8082A	GC/ECD
Polychlorinated Biphenyls	ORG-91-5112	modified from EPA SW-846 3510C & 8082A	GC/ECD
TCMX	ORG-91-5112	modified from EPA SW-846 3510C & 8081B	GC/ECD
Decachlorobiphenyl	ORG-91-5112	modified from EPA SW-846 3510C & 8081B	GC/ECD
Naphthalene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Acenaphthylene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Acenaphthene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Fluorene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Phenanthrene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Anthracene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Fluoranthene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Pyrene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Benzo(a)anthracene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Chrysene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Benzo(b)fluoranthene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Benzo(k)fluoranthene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Benzo(a)pyrene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Indeno(1,2,3-cd)pyrene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Dibenz(a,h)anthracene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Benzo(g,h,i)perylene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
2-and 1-methyl Naphthalene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Naphthalene-d8	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Acridine-d9	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Terphenyl-d14	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Sediment			
F1 (C6-C10)	VOL-91-5010	modified from MOE PHC-E3421	(P&T)GC/FID
F1 (C6 to C10) minus BTEX	VOL-91-5010	modified from MOE PHC-E3421	P&T GC/FID
Toluene-d8	VOL-91-5010	modified from MOE PHC-E3421	(P&T)GC/MS
F2 (C10 to C16)	VOL-91-5010	modified from MOE PHC-E3421	GC/FID
F2 (C10 to C16) minus Naphthalene	VOL-91-5010	modified from MOE PHC-E3421	GC/FID



## Method Summary

CLIENT NAME: WSP CANADA INC.

AGAT WORK ORDER: 21T834096

PROJECT: 211-10139-00

ATTENTION TO: Vaness Oetinger

SAMPLING SITE: ORBY

SAMPLED BY: Marsad Jafar

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
F3 (C16 to C34)	VOL-91-5010	modified from MOE PHC-E3421	GC/FID
F3 (C16 to C34) minus PAHs	VOL-91-5010	modified from MOE PHC-E3421	GC/FID
F4 (C34 to C50)	VOL-91-5010	modified from MOE PHC-E3421	GC/FID
Gravimetric Heavy Hydrocarbons	VOL-91-5010	modified from MOE PHC-E3421	BALANCE
Terphenyl	VOL-91-5010	modified from MOE PHC-E3421	GC/FID
Benzene	VOL-91-5010	modified from MOE PHC-E3421	(P&T)GC/MS
Toluene	VOL-91-5010	modified from MOE PHC-E3421	(P&T)GC/MS
Ethylbenzene	VOL-91-5010	modified from MOE PHC-E3421	(P&T)GC/MS
m & p-Xylene	VOL-91-5010	modified from MOE PHC-E3421	(P&T)GC/MS
o-Xylene	VOL-91-5010	modified from MOE PHC-E3421	(P&T)GC/MS
Xylenes (Total)	VOL-91-5010	modified from MOE PHC-E3421	(P&T)GC/MS
F1 (C6-C10)	VOL-91-5010	modified from MOE PHC-E3421	P&T GC/FID
F1 (C6 to C10) minus BTEX	VOL-91-5010	modified from MOE PHC-E3421	P&T GC/FID
F2 (C10 to C16)	VOL-91-5010	modified from MOE PHC-E3421	GC/FID
F2 (C10 to C16) minus Naphthalene	VOL-91-5010	modified from MOE PHC-E3421	GC/FID
F3 (C16 to C34)	VOL-91-5010	modified from MOE PHC-E3421	GC/FID
F3 (C16 to C34) minus PAHs	VOL-91-5010	modified from MOE PHC-E3421	GC/FID
F4 (C34 to C50)	VOL-91-5010	modified from MOE PHC-E3421	GC/FID
Gravimetric Heavy Hydrocarbons	VOL-91-5010	modified from MOE PHC-E3421	BALANCE
Terphenyl	VOL-91-5010	modified from MOE PHC-E3421	GC/FID
Dichlorodifluoromethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Vinyl Chloride	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Bromomethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Trichlorofluoromethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Acetone	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1-Dichloroethylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Methylene Chloride	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
trans- 1,2-Dichloroethylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Methyl tert-butyl ether	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1-Dichloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Methyl Ethyl Ketone	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
cis- 1,2-Dichloroethylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Chloroform	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,2-Dichloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1,1-Trichloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Carbon Tetrachloride	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Benzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS

## Method Summary

CLIENT NAME: WSP CANADA INC.

AGAT WORK ORDER: 21T834096

PROJECT: 211-10139-00

ATTENTION TO: Vaness Oetinger

SAMPLING SITE: ORBY

SAMPLED BY: Marsad Jafar

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
1,2-Dichloropropane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Trichloroethylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Bromodichloromethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Methyl Isobutyl Ketone	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1,2-Trichloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Toluene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Dibromochloromethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Ethylene Dibromide	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Tetrachloroethylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1,1,2-Tetrachloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Chlorobenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Ethylbenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
m & p-Xylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Bromoform	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Styrene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1,2,2-Tetrachloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
o-Xylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,3-Dichlorobenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,4-Dichlorobenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,2-Dichlorobenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,3-Dichloropropene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Xylenes (Total)	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
n-Hexane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Toluene-d8	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
4-Bromofluorobenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS

## Method Summary

CLIENT NAME: WSP CANADA INC.

AGAT WORK ORDER: 21T834096

PROJECT: 211-10139-00

ATTENTION TO: Vaness Oetinger

SAMPLING SITE: ORBY

SAMPLED BY: Marsad Jafar

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Water Analysis			
Dissolved Antimony	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Arsenic	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Barium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Beryllium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Boron	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Cadmium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Chromium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Cobalt	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Copper	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Lead	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Molybdenum	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Nickel	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Selenium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Silver	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Thallium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Uranium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Vanadium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Zinc	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Mercury	MET-93-6100	modified from EPA 245.2 and SM 3112 B	CVAAS
Chromium VI	INOR-93-6034	modified from SM 3500-CR B	LACHAT FIA
Cyanide, Free	INOR-93-6052	modified from ON MOECC E3015, SM 4500-CN- I, G-387	TECHNICON AUTO ANALYZER
Dissolved Sodium Chloride	MET-93-6105	modified from EPA 6010D	ICP/OES
Electrical Conductivity	INOR-93-6004	modified from SM 4110 B	ION CHROMATOGRAPH
pH	INOR-93-6000	SM 2510 B	PC TITRATE
	INOR-93-6000	modified from SM 4500-H+ B	PC TITRATE





# AGAT Laboratories

6235 Coopers Avenue  
Mississauga, Ontario L4Z 1Y2  
Ph: 905.712.5100 Fax: 905.712.5122  
webearth.agatlabs.com

### Laboratory Use Only

Work Order #: 217834096  
Cooler Quantity: \_\_\_\_\_  
Arrival Temperatures: 4.2 | 5.3 | 4.8  
Custody Seal Intact:  Yes  No  N/A  
Notes: On Ice

## Chain of Custody Record

If this is a Drinking Water sample, please use Drinking Water Chain of Custody Form (potable water consumed by humans)

### Report Information:

Company: WSP  
Contact: Vanessa Oefinger  
Address: 2 International Blvd, Toronto, ON  
Phone: 437-233-2935 Fax: \_\_\_\_\_  
Reports to be sent to:  
1. Email: vanessa.oefinger@wsp.com  
2. Email: Marsad Jafar @wsp.com

### Regulatory Requirements:

(Please check all applicable boxes)

Regulation 153/04  Excess Soils R406  Sewer Use  
 Ind/Com  Sanitary  Storm  
 Res/Park  Agriculture  Region  
 Agriculture  Regulation 558  Prov. Water Quality Objectives (PWQO)  
Soil Texture (Check One)  CCME  Other  
 Coarse  Fine  Indicate One

### Project Information:

Project: 211-10139-00  
Site Location: ORBY  
Sampled By: Marsad Jafar  
AGAT Quote #: \_\_\_\_\_ PO: \_\_\_\_\_  
Please note: If quotation number is not provided, client will be billed full price for analysis.

### Is this submission for a Record of Site Condition?

Yes  No

### Report Guideline on Certificate of Analysis

Yes  No

### Invoice Information:

Bill To Same: Yes  No   
Company: \_\_\_\_\_  
Contact: \_\_\_\_\_  
Address: \_\_\_\_\_  
Email: payables.ontario@wsp.com

### Sample Matrix Legend

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

Field Filtered - Metals, Hg, CrVI, DOC	0. Reg 153				VOC	0. Reg 558		0. Reg 406		Potentially Hazardous or High Concentration (Y/N)
	Metals & Inorganics	Metals - CrVI, Hg, HWSB	BTEX, F1-F4 PHCs	Analyze F4G if required		Landfill Disposal Characterization TCLP: <input type="checkbox"/> M&I <input type="checkbox"/> VOCs <input type="checkbox"/> ABNS <input type="checkbox"/> BAP <input type="checkbox"/> PCBs	Excess Soils SPLP Rainwater Leach	SPLP: <input type="checkbox"/> Metals <input type="checkbox"/> VOCs <input type="checkbox"/> SVOCs	Excess Soils Characterization Package pH, ICPMS Metals, BTEX, F1-F4	
	X	X	X	X					X	
	X	X	X	X					X	
	X	X	X	X					X	
									X	
					X					

Sample Identification	Date Sampled	Time Sampled	# of Containers	Sample Matrix	Comments/Special Instructions	Y/N
BH21-12	Nov 23/21	9:00 AM	17	GW	Ignore sample date label	
BH21-4M	Nov 23/21	10:00 AM	17	GW		
BH21-3G	Nov 23/21	1:00 PM	17	GW		
QAQC-1	Nov 23/21	-	2	GW		
Trip Blank	Nov 23/21	-	3	GW		

Samples Relinquished By (Print Name and Sign): <u>Marsad Jafar</u>	Date: <u>Nov 23/2021</u>	Time: <u>3:00 pm</u>	Samples Received By (Print Name and Sign): <u>Joseph ...</u>	Date:	Time:
Samples Relinquished By (Print Name and Sign):	Date:	Time:	Samples Received By (Print Name and Sign):	Date:	Time:
Samples Relinquished By (Print Name and Sign):	Date:	Time:	Samples Received By (Print Name and Sign):	Date:	Time:

Page \_\_\_\_\_ of \_\_\_\_\_

No: **T 127455**



CLIENT NAME: WSP CANADA INC.  
2 INTERNATIONAL BLVD SUITE 201  
ETOBICOKE, ON M9W1A2  
(416) 798-0065

ATTENTION TO: Vanessa Oetinger

PROJECT: 211-10139-00

AGAT WORK ORDER: 21T838602

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

WATER ANALYSIS REVIEWED BY: Nivine Basily, Inorganics Report Writer

DATE REPORTED: Dec 16, 2021

PAGES (INCLUDING COVER): 24

VERSION\*: 1

Should you require any information regarding this analysis please contact your client services representative at (905) 712-5100

\*Notes

**Disclaimer:**

- All work conducted herein has been done using accepted standard protocols, and generally accepted practices and methods. AGAT test methods may incorporate modifications from the specified reference methods to improve performance.
- All samples will be disposed of within 30 days after receipt unless a Long Term Storage Agreement is signed and returned. Some specialty analysis may be exempt, please contact your Client Project Manager for details.
- AGAT's liability in connection with any delay, performance or non-performance of these services is only to the Client and does not extend to any other third party. Unless expressly agreed otherwise in writing, AGAT's liability is limited to the actual cost of the specific analysis or analyses included in the services.
- This Certificate shall not be reproduced except in full, without the written approval of the laboratory.
- The test results reported herewith relate only to the samples as received by the laboratory.
- Application of guidelines is provided "as is" without warranty of any kind, either expressed or implied, including, but not limited to, warranties of merchantability, fitness for a particular purpose, or non-infringement. AGAT assumes no responsibility for any errors or omissions in the guidelines contained in this document.
- All reportable information as specified by ISO/IEC 17025:2017 is available from AGAT Laboratories upon request.



## Certificate of Analysis

AGAT WORK ORDER: 21T838602

PROJECT: 211-10139-00

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

CLIENT NAME: WSP CANADA INC.

SAMPLING SITE: ORBY

ATTENTION TO: Vanessa Oetinger

SAMPLED BY: SA/MJ

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

DATE RECEIVED: 2021-12-01

DATE REPORTED: 2021-12-16

Parameter	Unit	SAMPLE DESCRIPTION:		BH21-45	BH21-9	BH21-13	BH21-11	QA/QC	BH21-28	BH21-25	BH21-22
		SAMPLE TYPE:		Water	Water	Water	Water	Water	Water	Water	Water
		DATE SAMPLED:		2021-12-01	2021-11-30	2021-11-30	2021-11-30	2021-11-30	2021-12-01	2021-12-01	2021-12-01
		G / S	RDL	3285019	3285046	3285052	3285144	3285169	3285251	3285258	3285299
Naphthalene	µg/L	7	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Acenaphthylene	µg/L	1	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Acenaphthene	µg/L	4.1	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Fluorene	µg/L	120	0.20	<0.20	<0.20	<0.20	<0.20	0.56	<0.20	<0.20	<0.20
Phenanthrene	µg/L	0.1	0.10	12.0	<0.10	<0.10	<0.10	9.08	<0.10	<0.10	<0.10
Anthracene	µg/L	0.1	0.10	1.79	<0.10	<0.10	<0.10	1.00	<0.10	<0.10	<0.10
Fluoranthene	µg/L	0.4	0.20	17.9	<0.20	<0.20	<0.20	11.2	<0.20	<0.20	<0.20
Pyrene	µg/L	0.2	0.20	14.6	<0.20	<0.20	<0.20	9.52	<0.20	<0.20	<0.20
Benzo(a)anthracene	µg/L	0.2	0.20	2.4	<0.20	<0.20	<0.20	1.67	<0.20	<0.20	<0.20
Chrysene	µg/L	0.1	0.10	5.59	<0.10	<0.10	<0.10	4.01	<0.10	<0.10	<0.10
Benzo(b)fluoranthene	µg/L	0.1	0.10	4.92	<0.10	<0.10	<0.10	3.29	<0.10	<0.10	<0.10
Benzo(k)fluoranthene	µg/L	0.1	0.10	2.19	<0.10	<0.10	<0.10	1.86	<0.10	<0.10	<0.10
Benzo(a)pyrene	µg/L	0.01	0.01	3.67	<0.01	<0.01	<0.01	2.80	<0.01	<0.01	<0.01
Indeno(1,2,3-cd)pyrene	µg/L	0.2	0.20	1.80	<0.20	<0.20	<0.20	1.35	<0.20	<0.20	<0.20
Dibenz(a,h)anthracene	µg/L	0.2	0.20	0.32	<0.20	<0.20	<0.20	0.21	<0.20	<0.20	<0.20
Benzo(g,h,i)perylene	µg/L	0.2	0.20	2.48	<0.20	<0.20	<0.20	1.89	<0.20	<0.20	<0.20
2-and 1-methyl Naphthalene	µg/L	2	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Sediment				No	No	No	No	No	No	No	No
Surrogate	Unit	Acceptable Limits									
Naphthalene-d8	%	50-140		105	80	93	82	98	78	78	90
Acridine-d9	%	50-140		98	99	72	91	86	85	85	97
Terphenyl-d14	%	50-140		88	74	94	78	88	99	99	88

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 1: Full Depth Background Site Condition Standards - Ground Water - All Types of Property Uses  
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

3285019-3285299 Note: The result for Benzo(b)Fluoranthene is the total of the Benzo(b)&(j)Fluoranthene isomers because the isomers co-elute on the GC column.  
2- and 1-Methyl Naphthalene is a calculated parameter. The calculated value is the sum of 2-Methyl Naphthalene and 1-Methyl Naphthalene. The calculated parameter is non-accredited. The parameters that are components of the calculation are accredited.  
Sediment parameter is comment only based on visual inspection of the sample prior to extraction and is not an accredited test.

Analysis performed at AGAT Toronto (unless marked by \*)

Certified By:





## Certificate of Analysis

AGAT WORK ORDER: 21T838602

PROJECT: 211-10139-00

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

CLIENT NAME: WSP CANADA INC.  
SAMPLING SITE: ORBY

ATTENTION TO: Vanessa Oetinger  
SAMPLED BY: SA/MJ

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

DATE RECEIVED: 2021-12-01

DATE REPORTED: 2021-12-16

		SAMPLE DESCRIPTION: BH21-45			BH21-9			BH21-13			QA/QC	BH21-28	BH21-25
		SAMPLE TYPE: Water			Water			Water			Water	Water	Water
		DATE SAMPLED: 2021-12-01			2021-11-30			2021-11-30			2021-11-30	2021-12-01	2021-12-01
Parameter	Unit	G / S	RDL	3285019	3285046	RDL	3285052	RDL	3285169	3285251	3285258		
F1 (C6-C10)	µg/L	420	25	<25	<25	25	<25	25	<25	<25	<25		
F1 (C6 to C10) minus BTEX	µg/L	420	25	<25	<25	25	<25	25	<25	<25	<25		
F2 (C10 to C16)	µg/L	150	100	<100	<100	100	<100	100	<100	<100	<100		
F2 (C10 to C16) minus Naphthalene	µg/L		100	<100	<100	100	<100	100	<100	<100	<100		
F3 (C16 to C34)	µg/L	500	100	<100	<100	100	<100	100	<100	<100	<100		
F3 (C16 to C34) minus PAHs	µg/L		100	<100	<100	100	<100	100	<100	<100	<100		
F4 (C34 to C50)	µg/L	500	100	<100	<100	100	<100	100	<100	<100	<100		
Gravimetric Heavy Hydrocarbons	µg/L		500	NA	NA	500	NA	500	NA	NA	NA		
Sediment				No	No		No		No	No	No		
Surrogate	Unit	Acceptable Limits											
Toluene-d8	% Recovery	50-140	83.5	73.5	1	90	1.00	76.8	124	103			
Terphenyl	% Recovery	60-140	79	119		66		67	61	67			
		SAMPLE DESCRIPTION: BH21-22											
		SAMPLE TYPE: Water											
		DATE SAMPLED: 2021-12-01											
Parameter	Unit	G / S	RDL	3285299									
F1 (C6-C10)	µg/L	420	25	<25									
F1 (C6 to C10) minus BTEX	µg/L	420	25	<25									
F2 (C10 to C16)	µg/L	150	100	<100									
F2 (C10 to C16) minus Naphthalene	µg/L		100	<100									
F3 (C16 to C34)	µg/L	500	100	<100									
F3 (C16 to C34) minus PAHs	µg/L		100	<100									
F4 (C34 to C50)	µg/L	500	100	<100									
Gravimetric Heavy Hydrocarbons	µg/L		500	NA									
Sediment				No									
Surrogate	Unit	Acceptable Limits											
Toluene-d8	% Recovery	50-140	74.2										
Terphenyl	% Recovery	60-140	101										

Certified By:



## Certificate of Analysis

AGAT WORK ORDER: 21T838602

PROJECT: 211-10139-00

5835 COOPERS AVENUE  
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CLIENT NAME: WSP CANADA INC.

ATTENTION TO: Vanessa Oetinger

SAMPLING SITE: ORBY

SAMPLED BY: SA/MJ

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

DATE RECEIVED: 2021-12-01

DATE REPORTED: 2021-12-16

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 1: Full Depth Background Site Condition Standards - Ground Water - All Types of Property Uses  
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

3285019-3285299 The C6-C10 fraction is calculated using toluene response factor.  
C6-C10 (F1 minus BTEX) is a calculated parameter. The calculated value is F1 minus BTEX. The calculated parameter is non-accredited. The parameters that are components of the calculation are accredited.  
The C10 - C16, C16 - C34, and C34 - C50 fractions are calculated using the average response factor for n-C10, n-C16, and n-C34.  
Gravimetric Heavy Hydrocarbons are not included in the Total C16-C50 and are only determined if the chromatogram of the C34 - C50 hydrocarbons indicates that hydrocarbons >C50 are present.  
The chromatogram has returned to baseline by the retention time of nC50.  
Total C6 - C50 results are corrected for BTEX and PAH contributions.  
C>10 - C16 (F2- Naphthalene) is a calculated parameter. The calculated value is F2 - Naphthalene.  
C>16 - C34 (F3-PAH) is a calculated parameter. The calculated value is F3-PAH (PAH: sum of Phenanthrene, Benzo(a)anthracene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Benzo(a)pyrene, Fluoranthene, Dibenzo(a,h)anthracene, Indeno(1,2,3-c,d)pyrene and Pyrene).  
This method complies with the Reference Method for the CWS PHC and is validated for use in the laboratory.  
nC10, nC16 and nC34 response factors are within 10% of their average.  
C50 response factor is within 70% of nC10 + nC16 + nC34 average.  
Linearity is within 15%.  
Extraction and holding times were met for this sample.

Sediment parameter is comment only based on visual inspection of the sample prior to extraction and is not an accredited test.

Analysis performed at AGAT Toronto (unless marked by \*)

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AGAT WORK ORDER: 21T838602

PROJECT: 211-10139-00

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CLIENT NAME: WSP CANADA INC.

SAMPLING SITE: ORBY

ATTENTION TO: Vanessa Oetinger

SAMPLED BY: SA/MJ

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

DATE RECEIVED: 2021-12-01

DATE REPORTED: 2021-12-16

SAMPLE DESCRIPTION: BH21-11  
 SAMPLE TYPE: Water  
 DATE SAMPLED: 2021-11-30  
 3285144

Parameter	Unit	G / S	RDL	3285144
Benzene	µg/L	0.5	0.20	<0.20
Toluene	µg/L	0.8	0.20	<0.20
Ethylbenzene	µg/L	0.5	0.10	<0.10
m & p-Xylene	µg/L		0.20	<0.20
o-Xylene	µg/L		0.10	<0.10
Xylenes (Total)	µg/L	72	0.20	<0.20
F1 (C6-C10)	µg/L	420	25	<25
F1 (C6 to C10) minus BTEX	µg/L	420	25	<25
F2 (C10 to C16)	µg/L	150	100	<100
F2 (C10 to C16) minus Naphthalene	µg/L		100	<100
F3 (C16 to C34)	µg/L	500	100	<100
F3 (C16 to C34) minus PAHs	µg/L		100	<100
F4 (C34 to C50)	µg/L	500	100	<100
Gravimetric Heavy Hydrocarbons	µg/L		500	NA
Sediment				No
Surrogate	Unit	Acceptable Limits		
Toluene-d8	% Recovery	60-140		70.0
Terphenyl	% Recovery	60-140		76

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PROJECT: 211-10139-00

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SAMPLING SITE: ORBY

ATTENTION TO: Vanessa Oettinger

SAMPLED BY: SA/MJ

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

DATE RECEIVED: 2021-12-01

DATE REPORTED: 2021-12-16

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 1: Full Depth Background Site Condition Standards - Ground Water - All Types of Property Uses  
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

3285144 The C6-C10 fraction is calculated using toluene response factor.  
Xylenes total is a calculated parameter. The calculated value is the sum of m&p-Xylene and o-Xylene.  
C6-C10 (F1 minus BTEX) is a calculated parameter. The calculated value is F1 minus BTEX.  
The calculated parameters are non-accredited. The parameters that are components of the calculation are accredited.  
The C10 - C16, C16 - C34, and C34 - C50 fractions are calculated using the average response factor for n-C10, n-C16, and n-C34.  
Gravimetric Heavy Hydrocarbons are not included in the Total C16-C50 and are only determined if the chromatogram of the C34 - C50 hydrocarbons indicates that hydrocarbons >C50 are present.  
The chromatogram has returned to baseline by the retention time of nC50.  
Total C6 - C50 results are corrected for BTEX and PAH contributions.  
C>10 - C16 (F2- Naphthalene) is a calculated parameter. The calculated value is F2 - Naphthalene.  
C>16 - C34 (F3-PAH) is a calculated parameter. The calculated value is F3-PAH (PAH: sum of Phenanthrene, Benzo(a)anthracene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Benzo(a)pyrene, Fluoranthene, Dibenzo(a,h)anthracene, Indeno(1,2,3-c,d)pyrene and Pyrene).  
This method complies with the Reference Method for the CWS PHC and is validated for use in the laboratory.  
nC10, nC16 and nC34 response factors are within 10% of their average.  
C50 response factor is within 70% of nC10 + nC16 + nC34 average.  
Linearity is within 15%.  
Extraction and holding times were met for this sample.

Sediment parameter is comment only based on visual inspection of the sample prior to extraction and is not an accredited test.

Analysis performed at AGAT Toronto (unless marked by \*)

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PROJECT: 211-10139-00

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CLIENT NAME: WSP CANADA INC.

SAMPLING SITE: ORBY

ATTENTION TO: Vanessa Oetinger

SAMPLED BY: SA/MJ

### O. Reg. 153(511) - PHCs F1/BTEX (Water)

DATE RECEIVED: 2021-12-01

DATE REPORTED: 2021-12-16

Parameter	Unit	SAMPLE DESCRIPTION:		Trip Blank	
		G / S	RDL		
				3285248	3285328
Benzene	µg/L	0.5	0.20	<0.20	<0.20
Toluene	µg/L	0.8	0.20	<0.20	<0.20
Ethylbenzene	µg/L	0.5	0.10	<0.10	<0.10
m & p-Xylene	µg/L		0.20	<0.20	<0.20
o-Xylene	µg/L		0.10	<0.10	<0.10
Xylenes (Total)	µg/L	72	0.20	<0.20	<0.20
F1 (C6-C10)	µg/L	420	25	<25	<25
F1 (C6 to C10) minus BTEX	µg/L	420	25	<25	<25
Surrogate	Unit	Acceptable Limits			
Toluene-d8	% Recovery	60-140	74.8	97.5	

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 1: Full Depth Background Site Condition Standards - Ground Water - All Types of Property Uses  
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

3285248-3285328 The C6-C10 fraction is calculated using Toluene response factor.  
Total C6-C10 results are corrected for BTEX contributions.  
Xylenes total is a calculated parameter. The calculated value is the sum of m&p-Xylene and o-Xylene.  
C6-C10 (F1 minus BTEX) is a calculated parameter. The calculated value is F1 minus BTEX.  
The calculated parameters are non-accredited. The parameters that are components of the calculation are accredited.  
This method complies with the Reference Method for the CWS PHC and is validated for use in the laboratory.  
nC6 and nC10 response factors are within 30% of Toluene response factor.  
Extraction and holding times were met for this sample.  
NA = Not Applicable

Analysis performed at AGAT Toronto (unless marked by \*)

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## Certificate of Analysis

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CLIENT NAME: WSP CANADA INC.

SAMPLING SITE: ORBY

ATTENTION TO: Vanessa Oetinger

SAMPLED BY: SA/MJ

### O. Reg. 153(511) - VOCs (Water)

DATE RECEIVED: 2021-12-01

DATE REPORTED: 2021-12-16

Parameter	Unit	SAMPLE DESCRIPTION:		BH21-45	BH21-9	BH21-13	QA/QC	BH21-28	BH21-25	BH21-22	Trip Blank
		SAMPLE TYPE:		Water	Water	Water	Water	Water	Water	Water	Water
		DATE SAMPLED:		2021-12-01	2021-11-30	2021-11-30	2021-11-30	2021-12-01	2021-12-01	2021-12-01	2021-12-01
		G / S	RDL	3285019	3285046	3285052	3285169	3285251	3285258	3285299	3285328
Dichlorodifluoromethane	µg/L	590	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Vinyl Chloride	µg/L	0.5	0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17
Bromomethane	µg/L	0.89	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Trichlorofluoromethane	µg/L	150	0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40
Acetone	µg/L	2700	1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,1-Dichloroethylene	µg/L	0.5	0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30
Methylene Chloride	µg/L	5	0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30
trans- 1,2-Dichloroethylene	µg/L	1.6	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Methyl tert-butyl ether	µg/L	15	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
1,1-Dichloroethane	µg/L	0.5	0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30
Methyl Ethyl Ketone	µg/L	400	1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
cis- 1,2-Dichloroethylene	µg/L	1.6	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Chloroform	µg/L	2	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
1,2-Dichloroethane	µg/L	0.5	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
1,1,1-Trichloroethane	µg/L	0.5	0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30
Carbon Tetrachloride	µg/L	0.2	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Benzene	µg/L	0.5	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
1,2-Dichloropropane	µg/L	0.5	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Trichloroethylene	µg/L	0.5	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Bromodichloromethane	µg/L	2	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Methyl Isobutyl Ketone	µg/L	640	1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,1,2-Trichloroethane	µg/L	0.5	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Toluene	µg/L	0.8	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Dibromochloromethane	µg/L	2	0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Ethylene Dibromide	µg/L	0.2	0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Tetrachloroethylene	µg/L	0.5	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
1,1,1,2-Tetrachloroethane	µg/L	1.1	0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Chlorobenzene	µg/L	0.5	0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Ethylbenzene	µg/L	0.5	0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
m & p-Xylene	µg/L		0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20

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AGAT WORK ORDER: 21T838602

PROJECT: 211-10139-00

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CLIENT NAME: WSP CANADA INC.

SAMPLING SITE: ORBY

ATTENTION TO: Vanessa Oetinger

SAMPLED BY: SA/MJ

### O. Reg. 153(511) - VOCs (Water)

DATE RECEIVED: 2021-12-01

DATE REPORTED: 2021-12-16

Parameter	Unit	SAMPLE DESCRIPTION:		BH21-45	BH21-9	BH21-13	QA/QC	BH21-28	BH21-25	BH21-22	Trip Blank	
		SAMPLE TYPE:		Water	Water	Water	Water	Water	Water	Water	Water	Water
		DATE SAMPLED:		2021-12-01	2021-11-30	2021-11-30	2021-11-30	2021-12-01	2021-12-01	2021-12-01	2021-12-01	3285328
		G / S	RDL	3285019	3285046	3285052	3285169	3285251	3285258	3285299	3285328	
Bromoform	µg/L	5	0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	
Styrene	µg/L	0.5	0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	
1,1,2,2-Tetrachloroethane	µg/L	0.5	0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	
o-Xylene	µg/L		0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	
1,3-Dichlorobenzene	µg/L	0.5	0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	
1,4-Dichlorobenzene	µg/L	0.5	0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	
1,2-Dichlorobenzene	µg/L	0.5	0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	
1,3-Dichloropropene	µg/L	0.5	0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	
Xylenes (Total)	µg/L	72	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	
n-Hexane	µg/L	5	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	
Surrogate	Unit	Acceptable Limits										
Toluene-d8	% Recovery	50-140		54	82	86	72	86	77	103	73	
4-Bromofluorobenzene	% Recovery	50-140		86	94	104	97	100	105	108	88	

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 1: Full Depth Background Site Condition Standards - Ground Water - All Types of Property Uses  
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

3285019-3285328 Xylenes total is a calculated parameter. The calculated value is the sum of m&p-Xylene and o-Xylene.

1,3-Dichloropropene total is a calculated parameter. The calculated value is the sum of Cis-1,3-Dichloropropene and Trans-1,3-Dichloropropene.  
The calculated parameter is non-accredited. The parameters that are components of the calculation are accredited.

Analysis performed at AGAT Toronto (unless marked by \*)

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AGAT WORK ORDER: 21T838602

PROJECT: 211-10139-00

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CLIENT NAME: WSP CANADA INC.

SAMPLING SITE: ORBY

ATTENTION TO: Vanessa Oetinger

SAMPLED BY: SA/MJ

### Total PCBs (water)

DATE RECEIVED: 2021-12-01

DATE REPORTED: 2021-12-16

SAMPLE DESCRIPTION:		BH21-45	BH21-9	BH21-11	QA/QC	BH21-28
SAMPLE TYPE:		Water	Water	Water	Water	Water
DATE SAMPLED:		2021-12-01	2021-11-30	2021-11-30	2021-11-30	2021-12-01
Parameter	Unit	G / S	RDL			
PCBs	µg/L	0.2	0.1	<0.1	<0.1	<0.1
Surrogate	Unit	Acceptable Limits				
Decachlorobiphenyl	%	60-130	93	88	89	76
						103

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 1: Full Depth Background Site Condition Standards - Ground Water - All Types of Property Uses  
 Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

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CLIENT NAME: WSP CANADA INC.

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SAMPLED BY: SA/MJ

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

DATE RECEIVED: 2021-12-01

DATE REPORTED: 2021-12-16

Parameter	Unit	SAMPLE DESCRIPTION:		BH21-45	BH21-9	BH21-13	BH21-11	QA/QC	RDL	BH21-28
		SAMPLE TYPE:		Water	Water	Water	Water	Water		Water
		DATE SAMPLED:		2021-12-01	2021-11-30	2021-11-30	2021-11-30	2021-11-30		2021-11-30
		G / S	RDL	3285019	3285046	3285052	3285144	3285169		3285251
Dissolved Antimony	µg/L	1.5	1.0	<1.0	<1.0	<1.0	<1.0	<1.0	1.0	<1.0
Dissolved Arsenic	µg/L	13	1.0	4.7	<1.0	<1.0	<1.0	1.6	1.0	5.7
Dissolved Barium	µg/L	610	2.0	80.5	54.0	102	134	62.4	2.0	79.5
Dissolved Beryllium	µg/L	0.5	0.50	<0.50	<0.50	<0.50	<0.50	<0.50	0.50	<0.50
Dissolved Boron	µg/L	1700	10.0	682	85.2	35.7	61.0	115	10.0	222
Dissolved Cadmium	µg/L	0.5	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	0.20	<0.20
Dissolved Chromium	µg/L	11	2.0	<2.0	<2.0	<2.0	<2.0	<2.0	2.0	<2.0
Dissolved Cobalt	µg/L	3.8	0.50	0.66	2.06	<0.50	<0.50	2.87	0.50	<0.50
Dissolved Copper	µg/L	5	1.0	<1.0	<1.0	<1.0	1.3	<1.0	1.0	<1.0
Dissolved Lead	µg/L	1.9	0.50	<0.50	<0.50	0.53	<0.50	<0.50	0.50	<0.50
Dissolved Molybdenum	µg/L	23	0.50	28.0	3.50	0.70	<0.50	4.27	0.50	4.81
Dissolved Nickel	µg/L	14	1.0	4.7	3.9	<1.0	1.2	4.2	1.0	<1.0
Dissolved Selenium	µg/L	5	1.0	<1.0	1.0	<1.0	1.7	<1.0	1.0	<1.0
Dissolved Silver	µg/L	0.3	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	0.20	<0.20
Dissolved Thallium	µg/L	0.5	0.30	<0.30	<0.30	<0.30	<0.30	<0.30	0.30	<0.30
Dissolved Uranium	µg/L	8.9	0.50	1.50	0.73	0.88	<0.50	0.96	0.50	<0.50
Dissolved Vanadium	µg/L	3.9	0.40	0.83	<0.40	<0.40	<0.40	<0.40	0.40	<0.40
Dissolved Zinc	µg/L	160	5.0	<5.0	<5.0	<5.0	<5.0	<5.0	5.0	<5.0
Mercury	µg/L	0.1	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	0.02	<0.02
Chromium VI	µg/L	25	2	<2	<2	<2	<2	<2	2	<2
Cyanide, Free	µg/L	5	2	<2	<2	<2	<2	<2	2	<2
Dissolved Sodium	µg/L	490000	250	205000	92000	349000	135000	77700	50	33000
Chloride	µg/L	790000	100	326000	162000	557000	285000	156000	100	17600
Electrical Conductivity	uS/cm	NA	2	1830	1330	2760	1740	1300	2	620
pH	pH Units		NA	7.82	7.72	7.80	7.75	7.72	NA	7.74

Certified By:



*Allyson Beach*





## Certificate of Analysis

AGAT WORK ORDER: 21T838602

PROJECT: 211-10139-00

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

CLIENT NAME: WSP CANADA INC.

SAMPLING SITE: ORBY

ATTENTION TO: Vanessa Oetinger

SAMPLED BY: SA/MJ

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

DATE RECEIVED: 2021-12-01

DATE REPORTED: 2021-12-16

Parameter	Unit	SAMPLE DESCRIPTION:		BH21-25	BH21-22	
		SAMPLE TYPE:		Water	Water	
		DATE SAMPLED:		2021-12-01	2021-12-01	
		G / S	RDL	3285258	RDL	3285299
Dissolved Antimony	µg/L	1.5	1.0	<1.0	1.0	<1.0
Dissolved Arsenic	µg/L	13	1.0	<1.0	1.0	1.1
Dissolved Barium	µg/L	610	2.0	189	2.0	91.9
Dissolved Beryllium	µg/L	0.5	0.50	<0.50	0.50	<0.50
Dissolved Boron	µg/L	1700	10.0	117	10.0	219
Dissolved Cadmium	µg/L	0.5	0.20	<0.20	0.20	<0.20
Dissolved Chromium	µg/L	11	2.0	<2.0	2.0	<2.0
Dissolved Cobalt	µg/L	3.8	0.50	<0.50	0.50	1.06
Dissolved Copper	µg/L	5	1.0	<1.0	1.0	<1.0
Dissolved Lead	µg/L	1.9	0.50	<0.50	0.50	<0.50
Dissolved Molybdenum	µg/L	23	0.50	5.47	0.50	4.41
Dissolved Nickel	µg/L	14	1.0	1.3	1.0	1.9
Dissolved Selenium	µg/L	5	1.0	<1.0	1.0	<1.0
Dissolved Silver	µg/L	0.3	0.20	<0.20	0.20	<0.20
Dissolved Thallium	µg/L	0.5	0.30	<0.30	0.30	<0.30
Dissolved Uranium	µg/L	8.9	0.50	5.02	0.50	2.18
Dissolved Vanadium	µg/L	3.9	0.40	<0.40	0.40	0.63
Dissolved Zinc	µg/L	160	5.0	<5.0	5.0	<5.0
Mercury	µg/L	0.1	0.02	<0.02	0.02	<0.02
Chromium VI	µg/L	25	2	<2	2	<2
Cyanide, Free	µg/L	5	2	<2	2	<2
Dissolved Sodium	µg/L	490000	100	18600	250	43800
Chloride	µg/L	790000	100	12800	100	63300
Electrical Conductivity	uS/cm	NA	2	872	2	1310
pH	pH Units		NA	7.80	NA	7.76

Certified By:



*Nvine Basly*



**AGAT** Laboratories

# Certificate of Analysis

AGAT WORK ORDER: 21T838602

PROJECT: 211-10139-00

5835 COOPERS AVENUE  
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CLIENT NAME: WSP CANADA INC.

SAMPLING SITE: ORBY

ATTENTION TO: Vanessa Oetinger

SAMPLED BY: SA/MJ

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

DATE RECEIVED: 2021-12-01

DATE REPORTED: 2021-12-16

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 1: Full Depth Background Site Condition Standards - Ground Water - All Types of Property Uses  
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

3285019-3285299 Metals analysis completed on a filtered sample.

Dilution required, RDL has been increased accordingly.

Analysis performed at AGAT Toronto (unless marked by \*)

Certified By:





## Exceedance Summary

AGAT WORK ORDER: 21T838602

PROJECT: 211-10139-00

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CLIENT NAME: WSP CANADA INC.

ATTENTION TO: Vanessa Oetinger

SAMPLEID	SAMPLE TITLE	GUIDELINE	ANALYSIS PACKAGE	PARAMETER	UNIT	GUIDEVALUE	RESULT
3285019	BH21-45	ON T1 GW	O. Reg. 153(511) - Metals & Inorganics (Water)	Dissolved Molybdenum	µg/L	23	28.0
3285019	BH21-45	ON T1 GW	O. Reg. 153(511) - PAHs (Water)	Anthracene	µg/L	0.1	1.79
3285019	BH21-45	ON T1 GW	O. Reg. 153(511) - PAHs (Water)	Benzo(a)anthracene	µg/L	0.2	2.4
3285019	BH21-45	ON T1 GW	O. Reg. 153(511) - PAHs (Water)	Benzo(a)pyrene	µg/L	0.01	3.67
3285019	BH21-45	ON T1 GW	O. Reg. 153(511) - PAHs (Water)	Benzo(b)fluoranthene	µg/L	0.1	4.92
3285019	BH21-45	ON T1 GW	O. Reg. 153(511) - PAHs (Water)	Benzo(g,h,i)perylene	µg/L	0.2	2.48
3285019	BH21-45	ON T1 GW	O. Reg. 153(511) - PAHs (Water)	Benzo(k)fluoranthene	µg/L	0.1	2.19
3285019	BH21-45	ON T1 GW	O. Reg. 153(511) - PAHs (Water)	Chrysene	µg/L	0.1	5.59
3285019	BH21-45	ON T1 GW	O. Reg. 153(511) - PAHs (Water)	Dibenz(a,h)anthracene	µg/L	0.2	0.32
3285019	BH21-45	ON T1 GW	O. Reg. 153(511) - PAHs (Water)	Fluoranthene	µg/L	0.4	17.9
3285019	BH21-45	ON T1 GW	O. Reg. 153(511) - PAHs (Water)	Indeno(1,2,3-cd)pyrene	µg/L	0.2	1.80
3285019	BH21-45	ON T1 GW	O. Reg. 153(511) - PAHs (Water)	Phenanthrene	µg/L	0.1	12.0
3285019	BH21-45	ON T1 GW	O. Reg. 153(511) - PAHs (Water)	Pyrene	µg/L	0.2	14.6
3285019	BH21-45	ON T1 GW	O. Reg. 153(511) - PHCs F1 - F4 (with PAHs and VOC) (Water)	Benzo(a)anthracene	µg/L	0.2	2.43
3285019	BH21-45	ON T1 GW	O. Reg. 153(511) - PHCs F1 - F4 (with PAHs and VOC) (Water)	Benzo(a)pyrene	µg/L	0.01	3.67
3285019	BH21-45	ON T1 GW	O. Reg. 153(511) - PHCs F1 - F4 (with PAHs and VOC) (Water)	Benzo(b)fluoranthene	µg/L	0.1	4.92
3285019	BH21-45	ON T1 GW	O. Reg. 153(511) - PHCs F1 - F4 (with PAHs and VOC) (Water)	Benzo(k)fluoranthene	µg/L	0.1	2.19
3285019	BH21-45	ON T1 GW	O. Reg. 153(511) - PHCs F1 - F4 (with PAHs and VOC) (Water)	Dibenzo(a,h)anthracene	µg/L	0.2	0.32
3285019	BH21-45	ON T1 GW	O. Reg. 153(511) - PHCs F1 - F4 (with PAHs and VOC) (Water)	Fluoranthene	µg/L	0.4	17.9
3285019	BH21-45	ON T1 GW	O. Reg. 153(511) - PHCs F1 - F4 (with PAHs and VOC) (Water)	Indeno(1,2,3-cd)pyrene	µg/L	0.2	1.80
3285019	BH21-45	ON T1 GW	O. Reg. 153(511) - PHCs F1 - F4 (with PAHs and VOC) (Water)	Phenanthrene	µg/L	0.1	12.0
3285019	BH21-45	ON T1 GW	O. Reg. 153(511) - PHCs F1 - F4 (with PAHs and VOC) (Water)	Pyrene	µg/L	0.2	14.6
3285169	QA/QC	ON T1 GW	O. Reg. 153(511) - PAHs (Water)	Anthracene	µg/L	0.1	1.00
3285169	QA/QC	ON T1 GW	O. Reg. 153(511) - PAHs (Water)	Benzo(a)anthracene	µg/L	0.2	1.67
3285169	QA/QC	ON T1 GW	O. Reg. 153(511) - PAHs (Water)	Benzo(a)pyrene	µg/L	0.01	2.80
3285169	QA/QC	ON T1 GW	O. Reg. 153(511) - PAHs (Water)	Benzo(b)fluoranthene	µg/L	0.1	3.29
3285169	QA/QC	ON T1 GW	O. Reg. 153(511) - PAHs (Water)	Benzo(g,h,i)perylene	µg/L	0.2	1.89
3285169	QA/QC	ON T1 GW	O. Reg. 153(511) - PAHs (Water)	Benzo(k)fluoranthene	µg/L	0.1	1.86
3285169	QA/QC	ON T1 GW	O. Reg. 153(511) - PAHs (Water)	Chrysene	µg/L	0.1	4.01
3285169	QA/QC	ON T1 GW	O. Reg. 153(511) - PAHs (Water)	Dibenz(a,h)anthracene	µg/L	0.2	0.21
3285169	QA/QC	ON T1 GW	O. Reg. 153(511) - PAHs (Water)	Fluoranthene	µg/L	0.4	11.2
3285169	QA/QC	ON T1 GW	O. Reg. 153(511) - PAHs (Water)	Indeno(1,2,3-cd)pyrene	µg/L	0.2	1.35
3285169	QA/QC	ON T1 GW	O. Reg. 153(511) - PAHs (Water)	Phenanthrene	µg/L	0.1	9.08
3285169	QA/QC	ON T1 GW	O. Reg. 153(511) - PAHs (Water)	Pyrene	µg/L	0.2	9.52
3285169	QA/QC	ON T1 GW	O. Reg. 153(511) - PHCs F1 - F4 (with PAHs and VOC) (Water)	Benzo(a)anthracene	µg/L	0.2	1.67





**Exceedance Summary**

AGAT WORK ORDER: 21T838602

PROJECT: 211-10139-00

5835 COOPERS AVENUE  
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CLIENT NAME: WSP CANADA INC.

ATTENTION TO: Vanessa Oetinger

SAMPLEID	SAMPLE TITLE	GUIDELINE	ANALYSIS PACKAGE	PARAMETER	UNIT	GUIDEVALUE	RESULT
3285169	QA/QC	ON T1 GW	O. Reg. 153(511) - PHCs F1 - F4 (with PAHs and VOC) (Water)	Benzo(a)pyrene	µg/L	0.01	2.80
3285169	QA/QC	ON T1 GW	O. Reg. 153(511) - PHCs F1 - F4 (with PAHs and VOC) (Water)	Benzo(b)fluoranthene	µg/L	0.1	3.30
3285169	QA/QC	ON T1 GW	O. Reg. 153(511) - PHCs F1 - F4 (with PAHs and VOC) (Water)	Benzo(k)fluoranthene	µg/L	0.1	1.86
3285169	QA/QC	ON T1 GW	O. Reg. 153(511) - PHCs F1 - F4 (with PAHs and VOC) (Water)	Dibenzo(a,h)anthracene	µg/L	0.2	0.21
3285169	QA/QC	ON T1 GW	O. Reg. 153(511) - PHCs F1 - F4 (with PAHs and VOC) (Water)	Fluoranthene	µg/L	0.4	11.2
3285169	QA/QC	ON T1 GW	O. Reg. 153(511) - PHCs F1 - F4 (with PAHs and VOC) (Water)	Indeno(1,2,3-cd)pyrene	µg/L	0.2	1.35
3285169	QA/QC	ON T1 GW	O. Reg. 153(511) - PHCs F1 - F4 (with PAHs and VOC) (Water)	Phenanthrene	µg/L	0.1	9.08
3285169	QA/QC	ON T1 GW	O. Reg. 153(511) - PHCs F1 - F4 (with PAHs and VOC) (Water)	Pyrene	µg/L	0.2	9.52

## Quality Assurance

CLIENT NAME: WSP CANADA INC.

AGAT WORK ORDER: 21T838602

PROJECT: 211-10139-00

ATTENTION TO: Vanessa Oetinger

SAMPLING SITE: ORBY

SAMPLED BY: SA/MJ

Trace Organics Analysis															
RPT Date: Dec 16, 2021			DUPLICATE				Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE		MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Measured Value		Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
O. Reg. 153(511) - PHCs F1 - F4 (with PAHs and VOC) (Water)															
F1 (C6-C10)	3300342		<25	<25	NA	< 25	120%	60%	140%	106%	60%	140%	101%	60%	140%
F2 (C10 to C16)	3285019	3285019	< 100	< 100	NA	< 100	102%	60%	140%	85%	60%	140%	95%	60%	140%
F3 (C16 to C34)	3285019	3285019	< 100	< 100	NA	< 100	106%	60%	140%	76%	60%	140%	86%	60%	140%
F4 (C34 to C50)	3285019	3285019	< 100	< 100	NA	< 100	85%	60%	140%	74%	60%	140%	87%	60%	140%
O. Reg. 153(511) - PAHs (Water)															
Naphthalene	3227991		< 0.20	< 0.20	NA	< 0.20	105%	50%	140%	78%	50%	140%	77%	50%	140%
Acenaphthylene	3227991		< 0.20	< 0.20	NA	< 0.20	98%	50%	140%	82%	50%	140%	107%	50%	140%
Acenaphthene	3227991		< 0.20	< 0.20	NA	< 0.20	105%	50%	140%	71%	50%	140%	81%	50%	140%
Fluorene	3227991		< 0.20	< 0.20	NA	< 0.20	86%	50%	140%	92%	50%	140%	92%	50%	140%
Phenanthrene	3227991		< 0.10	< 0.10	NA	< 0.10	98%	50%	140%	88%	50%	140%	85%	50%	140%
Anthracene	3227991		< 0.10	< 0.10	NA	< 0.10	85%	50%	140%	93%	50%	140%	78%	50%	140%
Fluoranthene	3227991		< 0.20	< 0.20	NA	< 0.20	99%	50%	140%	96%	50%	140%	93%	50%	140%
Pyrene	3227991		< 0.20	< 0.20	NA	< 0.20	78%	50%	140%	96%	50%	140%	99%	50%	140%
Benzo(a)anthracene	3227991		< 0.20	< 0.20	NA	< 0.20	96%	50%	140%	94%	50%	140%	96%	50%	140%
Chrysene	3227991		< 0.10	< 0.10	NA	< 0.10	86%	50%	140%	114%	50%	140%	84%	50%	140%
Benzo(b)fluoranthene	3227991		< 0.10	< 0.10	NA	< 0.10	92%	50%	140%	76%	50%	140%	92%	50%	140%
Benzo(k)fluoranthene	3227991		< 0.10	< 0.10	NA	< 0.10	98%	50%	140%	92%	50%	140%	78%	50%	140%
Benzo(a)pyrene	3227991		< 0.01	< 0.01	NA	< 0.01	78%	50%	140%	105%	50%	140%	101%	50%	140%
Indeno(1,2,3-cd)pyrene	3227991		< 0.20	< 0.20	NA	< 0.20	92%	50%	140%	108%	50%	140%	105%	50%	140%
Dibenz(a,h)anthracene	3227991		< 0.20	< 0.20	NA	< 0.20	95%	50%	140%	75%	50%	140%	72%	50%	140%
Benzo(g,h,i)perylene	3227991		< 0.20	< 0.20	NA	< 0.20	91%	50%	140%	85%	50%	140%	105%	50%	140%
Total PCBs (water)															
PCBs	3295989		< 0.1	< 0.1	NA	< 0.1	95%	50%	140%	89%	50%	140%	98%	50%	140%
O. Reg. 153(511) - VOCs (Water)															
Dichlorodifluoromethane	3268642		<0.20	<0.20	NA	< 0.20	91%	50%	140%	95%	50%	140%	94%	50%	140%
Vinyl Chloride	3268642		<0.17	<0.17	NA	< 0.17	96%	50%	140%	102%	50%	140%	85%	50%	140%
Bromomethane	3268642		<0.20	<0.20	NA	< 0.20	98%	50%	140%	83%	50%	140%	85%	50%	140%
Trichlorofluoromethane	3268642		<0.40	<0.40	NA	< 0.40	87%	50%	140%	79%	50%	140%	91%	50%	140%
Acetone	3268642		<1.0	<1.0	NA	< 1.0	96%	50%	140%	100%	50%	140%	103%	50%	140%
1,1-Dichloroethylene	3268642		<0.30	<0.30	NA	< 0.30	93%	50%	140%	73%	60%	130%	100%	50%	140%
Methylene Chloride	3268642		<0.30	<0.30	NA	< 0.30	120%	50%	140%	120%	60%	130%	84%	50%	140%
trans- 1,2-Dichloroethylene	3268642		<0.20	<0.20	NA	< 0.20	97%	50%	140%	120%	60%	130%	84%	50%	140%
Methyl tert-butyl ether	3268642		<0.20	<0.20	NA	< 0.20	95%	50%	140%	117%	60%	130%	87%	50%	140%
1,1-Dichloroethane	3268642		<0.30	<0.30	NA	< 0.30	85%	50%	140%	110%	60%	130%	73%	50%	140%
Methyl Ethyl Ketone	3268642		<1.0	<1.0	NA	< 1.0	98%	50%	140%	101%	50%	140%	97%	50%	140%
cis- 1,2-Dichloroethylene	3268642		<0.20	<0.20	NA	< 0.20	79%	50%	140%	107%	60%	130%	118%	50%	140%
Chloroform	3268642		<0.20	<0.20	NA	< 0.20	98%	50%	140%	101%	60%	130%	89%	50%	140%
1,2-Dichloroethane	3268642		<0.20	<0.20	NA	< 0.20	116%	50%	140%	97%	60%	130%	81%	50%	140%

## Quality Assurance

CLIENT NAME: WSP CANADA INC.

AGAT WORK ORDER: 21T838602

PROJECT: 211-10139-00

ATTENTION TO: Vanessa Oetinger

SAMPLING SITE: ORBY

SAMPLED BY: SA/MJ

### Trace Organics Analysis (Continued)

RPT Date: Dec 16, 2021			DUPLICATE			Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD		Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
1,1,1-Trichloroethane	3268642		<0.30	<0.30	NA	< 0.30	111%	50%	140%	85%	60%	130%	112%	50%	140%
Carbon Tetrachloride	3268642		<0.20	<0.20	NA	< 0.20	98%	50%	140%	120%	60%	130%	84%	50%	140%
Benzene	3268642		<0.20	<0.20	NA	< 0.20	87%	50%	140%	106%	60%	130%	94%	50%	140%
1,2-Dichloropropane	3268642		<0.20	<0.20	NA	< 0.20	111%	50%	140%	97%	60%	130%	100%	50%	140%
Trichloroethylene	3268642		<0.20	<0.20	NA	< 0.20	105%	50%	140%	98%	60%	130%	111%	50%	140%
Bromodichloromethane	3268642		<0.20	<0.20	NA	< 0.20	116%	50%	140%	107%	60%	130%	99%	50%	140%
Methyl Isobutyl Ketone	3268642		<1.0	<1.0	NA	< 1.0	109%	50%	140%	103%	50%	140%	100%	50%	140%
1,1,2-Trichloroethane	3268642		<0.20	<0.20	NA	< 0.20	117%	50%	140%	97%	60%	130%	78%	50%	140%
Toluene	3268642		<0.20	<0.20	NA	< 0.20	100%	50%	140%	75%	60%	130%	120%	50%	140%
Dibromochloromethane	3268642		<0.10	<0.10	NA	< 0.10	116%	50%	140%	110%	60%	130%	105%	50%	140%
Ethylene Dibromide	3268642		<0.10	<0.10	NA	< 0.10	111%	50%	140%	91%	60%	130%	93%	50%	140%
Tetrachloroethylene	3268642		<0.20	<0.20	NA	< 0.20	104%	50%	140%	91%	60%	130%	87%	50%	140%
1,1,1,2-Tetrachloroethane	3268642		<0.10	<0.10	NA	< 0.10	105%	50%	140%	86%	60%	130%	104%	50%	140%
Chlorobenzene	3268642		<0.10	<0.10	NA	< 0.10	89%	50%	140%	70%	60%	130%	97%	50%	140%
Ethylbenzene	3268642		<0.10	<0.10	NA	< 0.10	74%	50%	140%	87%	60%	130%	80%	50%	140%
m & p-Xylene	3268642		<0.20	<0.20	NA	< 0.20	98%	50%	140%	92%	60%	130%	90%	50%	140%
Bromoform	3268642		<0.10	<0.10	NA	< 0.10	106%	50%	140%	84%	60%	130%	88%	50%	140%
Styrene	3268642		<0.10	<0.10	NA	< 0.10	76%	50%	140%	82%	60%	130%	70%	50%	140%
1,1,2,2-Tetrachloroethane	3268642		<0.10	<0.10	NA	< 0.10	94%	50%	140%	77%	60%	130%	84%	50%	140%
o-Xylene	3268642		<0.10	<0.10	NA	< 0.10	78%	50%	140%	78%	60%	130%	79%	50%	140%
1,3-Dichlorobenzene	3268642		<0.10	<0.10	NA	< 0.10	95%	50%	140%	78%	60%	130%	73%	50%	140%
1,4-Dichlorobenzene	3268642		<0.10	<0.10	NA	< 0.10	101%	50%	140%	78%	60%	130%	81%	50%	140%
1,2-Dichlorobenzene	3268642		<0.10	<0.10	NA	< 0.10	98%	50%	140%	80%	60%	130%	78%	50%	140%
n-Hexane	3268642		<0.20	<0.20	NA	< 0.20	93%	50%	140%	95%	60%	130%	117%	50%	140%

Comments: When the average of the sample and duplicate results is less than 5x the RDL, the Relative Percent Difference (RPD) will be indicated as Not Applicable (NA).

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

Benzene	3300342		<0.20	<0.20	NA	< 0.20	90%	60%	140%	85%	60%	140%	104%	60%	140%
Toluene	3300342		<0.20	<0.20	NA	< 0.20	85%	60%	140%	81%	60%	140%	93%	60%	140%
Ethylbenzene	3300342		<0.10	<0.10	NA	< 0.10	85%	60%	140%	84%	60%	140%	96%	60%	140%
m & p-Xylene	3300342		<0.20	<0.20	NA	< 0.20	91%	60%	140%	103%	60%	140%	106%	60%	140%
o-Xylene	3300342		<0.10	<0.10	NA	< 0.10	104%	60%	140%	82%	60%	140%	119%	60%	140%

**O. Reg. 153(511) - PHCs F1/BTEX (Water)**

Benzene	3300342		<0.20	<0.20	NA	< 0.20	90%	60%	140%	85%	60%	140%	104%	60%	140%
Toluene	3300342		<0.20	<0.20	NA	< 0.20	85%	60%	140%	81%	60%	140%	93%	60%	140%
Ethylbenzene	3300342		<0.10	<0.10	NA	< 0.10	85%	60%	140%	84%	60%	140%	96%	60%	140%
m & p-Xylene	3300342		<0.20	<0.20	NA	< 0.20	91%	60%	140%	103%	60%	140%	106%	60%	140%
o-Xylene	3300342		<0.10	<0.10	NA	< 0.10	104%	60%	140%	82%	60%	140%	119%	60%	140%

F1 (C6-C10)	3300342		<25	<25	NA	< 25	120%	60%	140%	106%	60%	140%	101%	60%	140%
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## Quality Assurance

CLIENT NAME: WSP CANADA INC.  
PROJECT: 211-10139-00  
SAMPLING SITE: ORBY

AGAT WORK ORDER: 21T838602  
ATTENTION TO: Vanessa Oetinger  
SAMPLED BY: SA/MJ

### Trace Organics Analysis (Continued)

RPT Date: Dec 16, 2021			DUPLICATE			Method Blank	REFERENCE MATERIAL		METHOD BLANK SPIKE		MATRIX SPIKE				
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD		Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper

Certified By: \_\_\_\_\_

## Quality Assurance

CLIENT NAME: WSP CANADA INC.

AGAT WORK ORDER: 21T838602

PROJECT: 211-10139-00

ATTENTION TO: Vanessa Oetinger

SAMPLING SITE: ORBY

SAMPLED BY: SA/MJ

Water Analysis															
RPT Date: Dec 16, 2021			DUPLICATE			Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE		MATRIX SPIKE			
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD		Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper

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

Dissolved Antimony	3286010		<1.0	<1.0	NA	< 1.0	103%	70%	130%	101%	80%	120%	95%	70%	130%
Dissolved Arsenic	3286010		<1.0	<1.0	NA	< 1.0	98%	70%	130%	103%	80%	120%	108%	70%	130%
Dissolved Barium	3286010		527	528	0.2%	< 2.0	103%	70%	130%	102%	80%	120%	104%	70%	130%
Dissolved Beryllium	3286010		<0.50	<0.50	NA	< 0.50	105%	70%	130%	104%	80%	120%	117%	70%	130%
Dissolved Boron	3286010		85.3	92.5	8.1%	< 10.0	103%	70%	130%	101%	80%	120%	111%	70%	130%
Dissolved Cadmium	3286010		<0.20	<0.20	NA	< 0.20	100%	70%	130%	100%	80%	120%	101%	70%	130%
Dissolved Chromium	3286010		<2.0	<2.0	NA	< 2.0	101%	70%	130%	101%	80%	120%	98%	70%	130%
Dissolved Cobalt	3286010		0.79	0.81	NA	< 0.50	102%	70%	130%	105%	80%	120%	97%	70%	130%
Dissolved Copper	3286010		<1.0	<1.0	NA	< 1.0	101%	70%	130%	102%	80%	120%	95%	70%	130%
Dissolved Lead	3286010		0.78	0.68	NA	< 0.50	104%	70%	130%	97%	80%	120%	94%	70%	130%
Dissolved Molybdenum	3286010		4.75	5.36	12.1%	< 0.50	104%	70%	130%	104%	80%	120%	105%	70%	130%
Dissolved Nickel	3286010		3.4	3.7	NA	< 1.0	104%	70%	130%	103%	80%	120%	96%	70%	130%
Dissolved Selenium	3286010		2.4	<1.0	NA	< 1.0	101%	70%	130%	99%	80%	120%	115%	70%	130%
Dissolved Silver	3286010		<0.20	<0.20	NA	< 0.20	102%	70%	130%	104%	80%	120%	95%	70%	130%
Dissolved Thallium	3286010		<0.30	<0.30	NA	< 0.30	104%	70%	130%	103%	80%	120%	103%	70%	130%
Dissolved Uranium	3286010		2.13	2.02	NA	< 0.50	104%	70%	130%	105%	80%	120%	104%	70%	130%
Dissolved Vanadium	3286010		0.54	0.88	NA	< 0.40	101%	70%	130%	101%	80%	120%	101%	70%	130%
Dissolved Zinc	3286010		9.3	15.3	NA	< 5.0	102%	70%	130%	95%	80%	120%	100%	70%	130%
Mercury	3284500		<0.02	<0.02	NA	< 0.02	103%	70%	130%	101%	80%	120%	101%	70%	130%
Chromium VI	3285019 3285019		<2	<2	NA	< 2	103%	70%	130%	104%	80%	120%	110%	70%	130%
Cyanide, Free	3273743		<2	<2	NA	< 2	105%	70%	130%	96%	80%	120%	99%	70%	130%
Dissolved Sodium	3304482		167000	167000	0.0%	< 50	95%	70%	130%	98%	80%	120%	106%	70%	130%
Chloride	3283197		38900	39200	0.8%	< 100	97%	70%	130%	103%	80%	120%	108%	70%	130%
Electrical Conductivity	3284500		1290	1290	0.0%	< 2	102%	90%	110%						
pH	3284500		7.50	7.55	0.7%	NA	102%	90%	110%						

Comments: NA signifies Not Applicable.

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

Certified By:


*Nivine Basily*

## Method Summary

CLIENT NAME: WSP CANADA INC.

AGAT WORK ORDER: 21T838602

PROJECT: 211-10139-00

ATTENTION TO: Vanessa Oetinger

SAMPLING SITE: ORBY

SAMPLED BY: SA/MJ

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Trace Organics Analysis			
Naphthalene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Acenaphthylene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Acenaphthene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Fluorene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Phenanthrene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Anthracene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Fluoranthene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Pyrene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Benzo(a)anthracene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Chrysene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Benzo(b)fluoranthene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Benzo(k)fluoranthene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Benzo(a)pyrene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Indeno(1,2,3-cd)pyrene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Dibenz(a,h)anthracene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Benzo(g,h,i)perylene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
2-and 1-methyl Naphthalene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Naphthalene-d8	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Acridine-d9	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Terphenyl-d14	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Sediment			
F1 (C6-C10)	VOL-91-5010	modified from MOE PHC-E3421	(P&T)GC/FID
F1 (C6 to C10) minus BTEX	VOL-91-5010	modified from MOE PHC-E3421	P&T GC/FID
Toluene-d8	VOL-91-5010	modified from MOE PHC-E3421	(P&T)GC/MS
F2 (C10 to C16)	VOL-91-5010	modified from MOE PHC-E3421	GC/FID
F2 (C10 to C16) minus Naphthalene	VOL-91-5010	modified from MOE PHC-E3421	GC/FID
F3 (C16 to C34)	VOL-91-5010	modified from MOE PHC-E3421	GC/FID
F3 (C16 to C34) minus PAHs	VOL-91-5010	modified from MOE PHC-E3421	GC/FID
F4 (C34 to C50)	VOL-91-5010	modified from MOE PHC-E3421	GC/FID
Gravimetric Heavy Hydrocarbons	VOL-91-5010	modified from MOE PHC-E3421	BALANCE
Terphenyl	VOL-91-5010	modified from MOE PHC-E3421	GC/FID
Benzene	VOL-91-5010	modified from MOE PHC-E3421	(P&T)GC/MS
Toluene	VOL-91-5010	modified from MOE PHC-E3421	(P&T)GC/MS



## Method Summary

CLIENT NAME: WSP CANADA INC.

AGAT WORK ORDER: 21T838602

PROJECT: 211-10139-00

ATTENTION TO: Vanessa Oetinger

SAMPLING SITE: ORBY

SAMPLED BY: SA/MJ

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Ethylbenzene	VOL-91-5010	modified from MOE PHC-E3421	(P&T)GC/MS
m & p-Xylene	VOL-91-5010	modified from MOE PHC-E3421	(P&T)GC/MS
o-Xylene	VOL-91-5010	modified from MOE PHC-E3421	(P&T)GC/MS
Xylenes (Total)	VOL-91-5010	modified from MOE PHC-E3421	(P&T)GC/MS
F1 (C6-C10)	VOL-91-5010	modified from MOE PHC-E3421	P&T GC/FID
F1 (C6 to C10) minus BTEX	VOL-91-5010	modified from MOE PHC-E3421	P&T GC/FID
F2 (C10 to C16)	VOL-91-5010	modified from MOE PHC-E3421	GC/FID
F2 (C10 to C16) minus Naphthalene	VOL-91-5010	modified from MOE PHC-E3421	GC/FID
F3 (C16 to C34)	VOL-91-5010	modified from MOE PHC-E3421	GC/FID
F3 (C16 to C34) minus PAHs	VOL-91-5010	modified from MOE PHC-E3421	GC/FID
F4 (C34 to C50)	VOL-91-5010	modified from MOE PHC-E3421	GC/FID
Gravimetric Heavy Hydrocarbons	VOL-91-5010	modified from MOE PHC-E3421	BALANCE
Terphenyl	VOL-91-5010	modified from MOE PHC-E3421	GC/FID
Benzene	VOL-91-5010	modified from EPA SW-846 5030C & 8260D	(P&T)GC/MS
Toluene	VOL-91-5010	modified from EPA SW-846 5030C & 8260D	(P&T)GC/MS
Ethylbenzene	VOL-91-5010	modified from EPA SW-846 5030C & 8260D	(P&T)GC/MS
m & p-Xylene	VOL-91-5010	modified from EPA SW-846 5030C & 8260D	(P&T)GC/MS
o-Xylene	VOL-91-5010	modified from EPA SW-846 5030C & 8260D	(P&T)GC/MS
Xylenes (Total)	VOL-91-5010	modified from EPA SW-846 5030C & 8260D	(P&T)GC/MS
F1 (C6-C10)	VOL-91-5010	modified from MOE E3421	(P&T)GC/FID
F1 (C6 to C10) minus BTEX	VOL-91-5010	modified from MOE E3421	(P&T)GC/FID
Dichlorodifluoromethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Vinyl Chloride	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Bromomethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Trichlorofluoromethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Acetone	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1-Dichloroethylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Methylene Chloride	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
trans- 1,2-Dichloroethylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Methyl tert-butyl ether	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1-Dichloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Methyl Ethyl Ketone	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
cis- 1,2-Dichloroethylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Chloroform	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS



## Method Summary

CLIENT NAME: WSP CANADA INC.  
 PROJECT: 211-10139-00  
 SAMPLING SITE: ORBY

AGAT WORK ORDER: 21T838602  
 ATTENTION TO: Vanessa Oetinger  
 SAMPLED BY: SA/MJ

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
1,2-Dichloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1,1-Trichloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Carbon Tetrachloride	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Benzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,2-Dichloropropane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Trichloroethylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Bromodichloromethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Methyl Isobutyl Ketone	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1,2-Trichloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Toluene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Dibromochloromethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Ethylene Dibromide	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Tetrachloroethylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1,1,2-Tetrachloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Chlorobenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Ethylbenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
m & p-Xylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Bromoform	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Styrene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1,2,2-Tetrachloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
o-Xylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,3-Dichlorobenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,4-Dichlorobenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,2-Dichlorobenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,3-Dichloropropene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Xylenes (Total)	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
n-Hexane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Toluene-d8	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS

## Method Summary

CLIENT NAME: WSP CANADA INC.

AGAT WORK ORDER: 21T838602

PROJECT: 211-10139-00

ATTENTION TO: Vanessa Oetinger

SAMPLING SITE:ORBY

SAMPLED BY:SA/MJ

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
4-Bromofluorobenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
PCBs	ORG-91-5112	EPA SW-846 3510 & 8082	GC/ECD
Decachlorobiphenyl	ORG-91-5112	EPA SW-846 3510 & 8082	GC/ECD
Water Analysis			
Dissolved Antimony	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Arsenic	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Barium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Beryllium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Boron	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Cadmium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Chromium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Cobalt	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Copper	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Lead	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Molybdenum	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Nickel	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Selenium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Silver	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Thallium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Uranium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Vanadium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Zinc	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Mercury	MET-93-6100	modified from EPA 245.2 and SM 3112 B	CVAAS
Chromium VI	INOR-93-6034	modified from SM 3500-CR B	LACHAT FIA
Cyanide, Free	INOR-93-6052	modified from ON MOECC E3015, SM 4500-CN- I, G-387	TECHNICON AUTO ANALYZER
Dissolved Sodium	MET-93-6105	modified from EPA 6010D	ICP/OES
Chloride	INOR-93-6004	modified from SM 4110 B	ION CHROMATOGRAPH
Electrical Conductivity	INOR-93-6000	SM 2510 B	PC TITRATE
pH	INOR-93-6000	modified from SM 4500-H+ B	PC TITRATE



### Laboratory Use Only

Work Order #: 21T838602  
Cooler Quantity: 6.3 6.4 6.0  
Arrival Temperatures: 8.4 8.6 8.3  
7.1 8.2 8.4  
Custody Seal Intact:  Yes  No  N/A  
Notes: 3 Large / Pre-Bo

## Chain of Custody Record

If this is a Drinking Water sample, please use Drinking Water Chain of Custody Form (potable water consumed by humans)

### Report Information:

Company: WSP Canada Inc.  
Contact: Vanessa Oetinger  
Address: 2 International Blvd.  
Toronto, ON  
Phone: \_\_\_\_\_ Fax: \_\_\_\_\_  
Reports to be sent to: Vanessa.Oetinger@wsp.com  
1. Email: \_\_\_\_\_  
2. Email: \_\_\_\_\_

### Regulatory Requirements:

(Please check all applicable boxes)

Regulation 153/04  Excess Soils R406  Sewer Use  
 Ind/Com  Sanitary  Storm  
Table 1 Indicate One  Agriculture  Res/Park  CCME  Prov. Water Quality Objectives (PWQO)  
Soil Texture (Check One)  Coarse  Fine  Other Indicate One

### Turnaround Time (TAT) Required:

Regular TAT  5 to 7 Business Days  
Rush TAT (Rush Surcharges Apply)  
 3 Business Days  2 Business Days  Next Business Day  
OR Date Required (Rush Surcharges May Apply): \_\_\_\_\_  
Please provide prior notification for rush TAT  
\*TAT is exclusive of weekends and statutory holidays  
For 'Same Day' analysis, please contact your AGAT CPM

### Project Information:

Project: 211-10139-00  
Site Location: ORBY  
Sampled By: SA/MJ  
AGAT Quote #: \_\_\_\_\_ PO: \_\_\_\_\_  
Please note: If quotation number is not provided, client will be billed full price for analysis.

### Is this submission for a Record of Site Condition?

Yes  No

### Report Guideline on Certificate of Analysis

Yes  No

### Sample Matrix Legend

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

### Invoice Information:

Company: WSP Canada Inc. Bill To Same: Yes  No   
Contact: \_\_\_\_\_  
Address: \_\_\_\_\_  
Email: payables.ontario@wsp.com

Sample Identification	Date Sampled	Time Sampled	# of Containers	Sample Matrix	Comments/ Special Instructions	Field Filtered - Metals, Hg, CrVI, DOC	O. Reg 153				O. Reg 552				O. Reg 406				Potentially Hazardous or High Concentration (Y/N)
							Metals & Inorganics	Metals - CrVI, Hg, HWSB	BTEX, F1-F4 PHCs	Analyze F4G if required Yes No	PAHs	PCBs	VOC	Landfill Disposal Characterization TCLP: M&I, VOCs, ABNs, BtP, PCBs	Excess Soils SPLP Rainwater Leach SPLP: Metals, VOCs, SVOCs	Excess Soils Characterization Package pH, ICPMS Metals, BTEX, F1-F4	Salt - EC/SAR		
BH21-45	12/1/21	AM	18	GW			X	X	X	X	X	X							
BH21-9	11/30/21	PM	19	GW			X	X	X	X	X	X							
BH21-13	11/30/21	PM	16	GW			X	X	X	X	X	X							
BH21-11	11/30/21	PM	15	GW			X	X	X	X	X	X							
QA/QC	11/30/21	PM	19	GW			X	X	X	X	X	X							
BH21-30	12/1/21	PM	3	GW			X	X	X	X	X	X							
BH21-28	12/1/21	PM	19	GW			X	X	X	X	X	X							
BH21-25	12/1/21	PM	16	GW			X	X	X	X	X	X							
BH21-22	12/1/21	PM	16	GW			X	X	X	X	X	X							

Samples Relinquished By (Print Name and Sign): <u>Steven Andrachuk SA/109</u>	Date: <u>12/1/21</u>	Time: <u>6:40 PM</u>	Samples Received By (Print Name and Sign): <u>NEAL</u>	Date: _____	Time: _____
Samples Relinquished By (Print Name and Sign): _____	Date: _____	Time: _____	Samples Received By (Print Name and Sign): <u>4-20</u>	Date: _____	Time: _____
Samples Relinquished By (Print Name and Sign): _____	Date: _____	Time: _____	Samples Received By (Print Name and Sign): _____	Date: _____	Time: _____

Page 1 of 1  
N°: **T 127950**



CLIENT NAME: WSP CANADA INC.  
2 INTERNATIONAL BLVD SUITE 201  
ETOBICOKE, ON M9W1A2  
(416) 798-0065

ATTENTION TO: Marsad Jafar  
PROJECT: 211-10139-00

AGAT WORK ORDER: 21T839088

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

WATER ANALYSIS REVIEWED BY: Nivine Basily, Inorganics Report Writer

DATE REPORTED: Dec 15, 2021

PAGES (INCLUDING COVER): 20

VERSION\*: 1

Should you require any information regarding this analysis please contact your client services representative at (905) 712-5100

\*Notes

**Disclaimer:**

- All work conducted herein has been done using accepted standard protocols, and generally accepted practices and methods. AGAT test methods may incorporate modifications from the specified reference methods to improve performance.
- All samples will be disposed of within 30 days after receipt unless a Long Term Storage Agreement is signed and returned. Some specialty analysis may be exempt, please contact your Client Project Manager for details.
- AGAT's liability in connection with any delay, performance or non-performance of these services is only to the Client and does not extend to any other third party. Unless expressly agreed otherwise in writing, AGAT's liability is limited to the actual cost of the specific analysis or analyses included in the services.
- This Certificate shall not be reproduced except in full, without the written approval of the laboratory.
- The test results reported herewith relate only to the samples as received by the laboratory.
- Application of guidelines is provided "as is" without warranty of any kind, either expressed or implied, including, but not limited to, warranties of merchantability, fitness for a particular purpose, or non-infringement. AGAT assumes no responsibility for any errors or omissions in the guidelines contained in this document.
- All reportable information as specified by ISO/IEC 17025:2017 is available from AGAT Laboratories upon request.



## Certificate of Analysis

AGAT WORK ORDER: 21T839088

PROJECT: 211-10139-00

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

CLIENT NAME: WSP CANADA INC.

ATTENTION TO: Marsad Jafar

SAMPLING SITE:

SAMPLED BY:

### O. Reg. 153(511) - OC Pesticides + PCBs (Water)

DATE RECEIVED: 2021-12-02

DATE REPORTED: 2021-12-15

Parameter	Unit	SAMPLE DESCRIPTION: BH21-7		
		G / S	RDL	3296850
Gamma-Hexachlorocyclohexane	ug/L	0.01	0.01	<0.01
Heptachlor	ug/L	0.01	0.01	<0.01
Aldrin	ug/L	0.01	0.01	<0.01
Heptachlor Epoxide	ug/L	0.01	0.01	<0.01
Endosulfan I	µg/L		0.05	<0.05
Endosulfan II	µg/L		0.05	<0.05
Endosulfan	ug/L	0.05	0.05	<0.05
alpha - chlordane	µg/L		0.1	<0.1
gamma-Chlordane	µg/L		0.2	<0.2
Chlordane	ug/L	0.06	0.04	<0.04
op'-DDE	µg/L		0.01	<0.01
pp'-DDE	µg/L		0.01	<0.01
DDE	ug/L		0.01	<0.01
op'-DDD	µg/L		0.05	<0.05
pp'-DDD	µg/L		0.05	<0.05
DDD	ug/L	1.8	0.05	<0.05
op'-DDT	µg/L		0.04	<0.04
pp'-DDT	µg/L		0.05	<0.05
DDT	ug/L		0.04	<0.04
Dieldrin	ug/L	0.05	0.02	<0.02
Endrin	ug/L	0.05	0.05	<0.05
Methoxychlor	ug/L	0.05	0.04	<0.04
Hexachlorobenzene	ug/L	0.01	0.01	<0.01
Hexachlorobutadiene	ug/L	0.01	0.01	<0.01
Hexachloroethane	ug/L	0.01	0.01	<0.01
Aroclor 1242	ug/L		0.1	<0.1
Aroclor 1248	ug/L		0.1	<0.1
Aroclor 1254	ug/L		0.1	<0.1
Aroclor 1260	ug/L		0.1	<0.1
Polychlorinated Biphenyls	ug/L	0.2	0.1	<0.1

Certified By:





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### O. Reg. 153(511) - OC Pesticides + PCBs (Water)

DATE RECEIVED: 2021-12-02

DATE REPORTED: 2021-12-15

SAMPLE DESCRIPTION:		BH21-7	
SAMPLE TYPE:		Water	
DATE SAMPLED:		2021-12-02	
Surrogate	Unit	Acceptable Limits	3296850
TCMX	%	50-140	73
Decachlorobiphenyl	%	50-140	101

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 1: Full Depth Background Site Condition Standards - Ground Water - All Types of Property Uses  
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

3296850 DDT total is a calculated parameter. The calculated value is the sum of op'DDT and pp'DDT.  
DDD total is a calculated parameter. The calculated value is the sum of op'DDD and pp'DDD.  
DDE total is a calculated parameter. The calculated value is the sum of op'DDE and pp'DDE.  
Endosulfan total is a calculated parameter. The calculated value is the sum of Endosulfan I and Endosulfan II.  
Chlordane total is a calculated parameter. The calculated value is the sum of Alpha-Chlordane and Gamma-Chlordane.  
PCB total is a calculated parameter. The calculated value is the sum of Aroclor 1242, Aroclor 1248, Aroclor 1254 and Aroclor 1260.  
The calculated parameters are non-accredited. The parameters that are components of the calculation are accredited.

Analysis performed at AGAT Toronto (unless marked by \*)

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## Certificate of Analysis

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PROJECT: 211-10139-00

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CLIENT NAME: WSP CANADA INC.

ATTENTION TO: Marsad Jafar

SAMPLING SITE:

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

DATE RECEIVED: 2021-12-02

DATE REPORTED: 2021-12-15

Parameter	Unit	SAMPLE DESCRIPTION:		BH21-7	BH21-8	QAQC-2
		SAMPLE TYPE:		Water	Water	Water
		DATE SAMPLED:		2021-12-02	2021-12-02	2021-12-02
		G / S	RDL	3296850	3296853	3296858
Naphthalene	µg/L	7	0.20	<0.20	<0.20	<0.20
Acenaphthylene	µg/L	1	0.20	<0.20	<0.20	<0.20
Acenaphthene	µg/L	4.1	0.20	<0.20	<0.20	<0.20
Fluorene	µg/L	120	0.20	<0.20	<0.20	<0.20
Phenanthrene	µg/L	0.1	0.10	<0.10	<0.10	<0.10
Anthracene	µg/L	0.1	0.10	<0.10	<0.10	<0.10
Fluoranthene	µg/L	0.4	0.20	<0.20	<0.20	<0.20
Pyrene	µg/L	0.2	0.20	<0.20	<0.20	<0.20
Benzo(a)anthracene	µg/L	0.2	0.20	<0.20	<0.20	<0.20
Chrysene	µg/L	0.1	0.10	<0.10	<0.10	<0.10
Benzo(b)fluoranthene	µg/L	0.1	0.10	<0.10	<0.10	<0.10
Benzo(k)fluoranthene	µg/L	0.1	0.10	<0.10	<0.10	<0.10
Benzo(a)pyrene	µg/L	0.01	0.01	<0.01	<0.01	<0.01
Indeno(1,2,3-cd)pyrene	µg/L	0.2	0.20	<0.20	<0.20	<0.20
Dibenz(a,h)anthracene	µg/L	0.2	0.20	<0.20	<0.20	<0.20
Benzo(g,h,i)perylene	µg/L	0.2	0.20	<0.20	<0.20	<0.20
2-and 1-methyl Naphthalene	µg/L	2	0.20	<0.20	<0.20	<0.20
Sediment				No	No	No
Surrogate	Unit	Acceptable Limits				
Naphthalene-d8	%	50-140		78	109	105
Acridine-d9	%	50-140		82	83	83
Terphenyl-d14	%	50-140		99	92	77

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 1: Full Depth Background Site Condition Standards - Ground Water - All Types of Property Uses  
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

3296850-3296858 Note: The result for Benzo(b)Fluoranthene is the total of the Benzo(b)&(j)Fluoranthene isomers because the isomers co-elute on the GC column.  
2- and 1-Methyl Naphthalene is a calculated parameter. The calculated value is the sum of 2-Methyl Naphthalene and 1-Methyl Naphthalene. The calculated parameter is non-accredited. The parameters that are components of the calculation are accredited.  
Sediment parameter is comment only based on visual inspection of the sample prior to extraction and is not an accredited test.

Analysis performed at AGAT Toronto (unless marked by \*)

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## Certificate of Analysis

AGAT WORK ORDER: 21T839088

PROJECT: 211-10139-00

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CLIENT NAME: WSP CANADA INC.

ATTENTION TO: Marsad Jafar

SAMPLING SITE:

SAMPLED BY:

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

DATE RECEIVED: 2021-12-02

DATE REPORTED: 2021-12-15

Parameter	Unit	SAMPLE DESCRIPTION:		BH21-7	BH21-8
		G / S	RDL	3296850	3296853
F1 (C6-C10)	µg/L	420	25	<25	<25
F1 (C6 to C10) minus BTEX	µg/L	420	25	<25	<25
F2 (C10 to C16)	µg/L	150	100	<100	<100
F2 (C10 to C16) minus Naphthalene	µg/L		100	<100	<100
F3 (C16 to C34)	µg/L	500	100	<100	<100
F3 (C16 to C34) minus PAHs	µg/L		100	<100	<100
F4 (C34 to C50)	µg/L	500	100	<100	<100
Gravimetric Heavy Hydrocarbons	µg/L		500	NA	NA
Sediment				NO	NO
Surrogate	Unit	Acceptable Limits			
Toluene-d8	% Recovery	50-140		101	71.2
Terphenyl	% Recovery	60-140		79	85

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 1: Full Depth Background Site Condition Standards - Ground Water - All Types of Property Uses  
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

3296850-3296853 The C6-C10 fraction is calculated using toluene response factor.  
C6-C10 (F1 minus BTEX) is a calculated parameter. The calculated value is F1 minus BTEX. The calculated parameter is non-accredited. The parameters that are components of the calculation are accredited.  
The C10 - C16, C16 - C34, and C34 - C50 fractions are calculated using the average response factor for n-C10, n-C16, and n-C34.  
Gravimetric Heavy Hydrocarbons are not included in the Total C16-C50 and are only determined if the chromatogram of the C34 - C50 hydrocarbons indicates that hydrocarbons >C50 are present. The chromatogram has returned to baseline by the retention time of nC50.  
Total C6 - C50 results are corrected for BTEX and PAH contributions.  
C>10 - C16 (F2- Naphthalene) is a calculated parameter. The calculated value is F2 - Naphthalene.  
C>16 - C34 (F3-PAH) is a calculated parameter. The calculated value is F3-PAH (PAH: sum of Phenanthrene, Benzo(a)anthracene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Benzo(a)pyrene, Fluoranthene, Dibenzo(a,h)anthracene, Indeno(1,2,3-c,d)pyrene and Pyrene).  
This method complies with the Reference Method for the CWS PHC and is validated for use in the laboratory.  
nC10, nC16 and nC34 response factors are within 10% of their average.  
C50 response factor is within 70% of nC10 + nC16 + nC34 average.  
Linearity is within 15%.  
Extraction and holding times were met for this sample.

Sediment parameter is comment only based on visual inspection of the sample prior to extraction and is not an accredited test.

Analysis performed at AGAT Toronto (unless marked by \*)

Certified By:





## Certificate of Analysis

AGAT WORK ORDER: 21T839088

PROJECT: 211-10139-00

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CLIENT NAME: WSP CANADA INC.

ATTENTION TO: Marsad Jafar

SAMPLING SITE:

SAMPLED BY:

### O. Reg. 153(511) - PHCs F1/BTEX (Water)

DATE RECEIVED: 2021-12-02

DATE REPORTED: 2021-12-15

Parameter		Unit	G / S	RDL	3296855
SAMPLE DESCRIPTION: QAQC-1 SAMPLE TYPE: Water DATE SAMPLED: 2021-12-02					
Benzene		µg/L	0.5	0.20	<0.20
Toluene		µg/L	0.8	0.20	<0.20
Ethylbenzene		µg/L	0.5	0.10	<0.10
m & p-Xylene		µg/L		0.20	<0.20
o-Xylene		µg/L		0.10	<0.10
Xylenes (Total)		µg/L	72	0.20	<0.20
F1 (C6-C10)		µg/L	420	25	<25
F1 (C6 to C10) minus BTEX		µg/L	420	25	<25
Surrogate		Unit	Acceptable Limits		
Toluene-d8		% Recovery	60-140		71.8

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 1: Full Depth Background Site Condition Standards - Ground Water - All Types of Property Uses  
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

3296855 The C6-C10 fraction is calculated using Toluene response factor.  
Total C6-C10 results are corrected for BTEX contributions.  
Xylenes total is a calculated parameter. The calculated value is the sum of m&p-Xylene and o-Xylene.  
C6-C10 (F1 minus BTEX) is a calculated parameter. The calculated value is F1 minus BTEX.  
The calculated parameters are non-accredited. The parameters that are components of the calculation are accredited.  
This method complies with the Reference Method for the CWS PHC and is validated for use in the laboratory.  
nC6 and nC10 response factors are within 30% of Toluene response factor.  
Extraction and holding times were met for this sample.  
NA = Not Applicable

Analysis performed at AGAT Toronto (unless marked by \*)

Certified By:



## Certificate of Analysis

AGAT WORK ORDER: 21T839088

PROJECT: 211-10139-00

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CLIENT NAME: WSP CANADA INC.

ATTENTION TO: Marsad Jafar

SAMPLING SITE:

SAMPLED BY:

### O. Reg. 153(511) - VOCs (Water)

DATE RECEIVED: 2021-12-02

DATE REPORTED: 2021-12-15

Parameter	Unit	SAMPLE DESCRIPTION:		BH21-7	BH21-8
		SAMPLE TYPE:		Water	Water
		DATE SAMPLED:		2021-12-02	2021-12-02
		G / S	RDL	3296850	3296853
Dichlorodifluoromethane	µg/L	590	0.20	<0.20	<0.20
Vinyl Chloride	µg/L	0.5	0.17	<0.17	<0.17
Bromomethane	µg/L	0.89	0.20	<0.20	<0.20
Trichlorofluoromethane	µg/L	150	0.40	<0.40	<0.40
Acetone	µg/L	2700	1.0	<1.0	<1.0
1,1-Dichloroethylene	µg/L	0.5	0.30	<0.30	<0.30
Methylene Chloride	µg/L	5	0.30	<0.30	<0.30
trans- 1,2-Dichloroethylene	µg/L	1.6	0.20	<0.20	<0.20
Methyl tert-butyl ether	µg/L	15	0.20	<0.20	<0.20
1,1-Dichloroethane	µg/L	0.5	0.30	<0.30	<0.30
Methyl Ethyl Ketone	µg/L	400	1.0	<1.0	<1.0
cis- 1,2-Dichloroethylene	µg/L	1.6	0.20	<0.20	<0.20
Chloroform	µg/L	2	0.20	<0.20	<0.20
1,2-Dichloroethane	µg/L	0.5	0.20	<0.20	<0.20
1,1,1-Trichloroethane	µg/L	0.5	0.30	<0.30	<0.30
Carbon Tetrachloride	µg/L	0.2	0.20	<0.20	<0.20
Benzene	µg/L	0.5	0.20	<0.20	<0.20
1,2-Dichloropropane	µg/L	0.5	0.20	<0.20	<0.20
Trichloroethylene	µg/L	0.5	0.20	<0.20	<0.20
Bromodichloromethane	µg/L	2	0.20	<0.20	<0.20
Methyl Isobutyl Ketone	µg/L	640	1.0	<1.0	<1.0
1,1,2-Trichloroethane	µg/L	0.5	0.20	<0.20	<0.20
Toluene	µg/L	0.8	0.20	<0.20	<0.20
Dibromochloromethane	µg/L	2	0.10	<0.10	<0.10
Ethylene Dibromide	µg/L	0.2	0.10	<0.10	<0.10
Tetrachloroethylene	µg/L	0.5	0.20	<0.20	<0.20
1,1,1,2-Tetrachloroethane	µg/L	1.1	0.10	<0.10	<0.10
Chlorobenzene	µg/L	0.5	0.10	<0.10	<0.10
Ethylbenzene	µg/L	0.5	0.10	<0.10	<0.10
m & p-Xylene	µg/L		0.20	<0.20	<0.20

Certified By:



## Certificate of Analysis

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SAMPLING SITE:

SAMPLED BY:

### O. Reg. 153(511) - VOCs (Water)

DATE RECEIVED: 2021-12-02

DATE REPORTED: 2021-12-15

Parameter	Unit	SAMPLE DESCRIPTION:		BH21-7	BH21-8
		G / S	RDL	3296850	3296853
Bromoform	µg/L	5	0.10	<0.10	<0.10
Styrene	µg/L	0.5	0.10	<0.10	<0.10
1,1,2,2-Tetrachloroethane	µg/L	0.5	0.10	<0.10	<0.10
o-Xylene	µg/L		0.10	<0.10	<0.10
1,3-Dichlorobenzene	µg/L	0.5	0.10	<0.10	<0.10
1,4-Dichlorobenzene	µg/L	0.5	0.10	<0.10	<0.10
1,2-Dichlorobenzene	µg/L	0.5	0.10	<0.10	<0.10
1,3-Dichloropropene	µg/L	0.5	0.30	<0.30	<0.30
Xylenes (Total)	µg/L	72	0.20	<0.20	<0.20
n-Hexane	µg/L	5	0.20	<0.20	<0.20
Surrogate	Unit	Acceptable Limits			
Toluene-d8	% Recovery	50-140		69	86
4-Bromofluorobenzene	% Recovery	50-140		101	96

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 1: Full Depth Background Site Condition Standards - Ground Water - All Types of Property Uses  
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

3296850-3296853 Xylenes total is a calculated parameter. The calculated value is the sum of m&p-Xylene and o-Xylene.  
1,3-Dichloropropene total is a calculated parameter. The calculated value is the sum of Cis-1,3-Dichloropropene and Trans-1,3-Dichloropropene.  
The calculated parameter is non-accredited. The parameters that are components of the calculation are accredited.

Analysis performed at AGAT Toronto (unless marked by \*)

Certified By:





## Certificate of Analysis

AGAT WORK ORDER: 21T839088

PROJECT: 211-10139-00

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

CLIENT NAME: WSP CANADA INC.

ATTENTION TO: Marsad Jafar

SAMPLING SITE:

SAMPLED BY:

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

DATE RECEIVED: 2021-12-02

DATE REPORTED: 2021-12-15

Parameter	Unit	SAMPLE DESCRIPTION:		BH21-7	BH21-8	
		SAMPLE TYPE:		Water	Water	
		DATE SAMPLED:		2021-12-02	2021-12-02	
		G / S	RDL	3296850	RDL	3296853
Dissolved Antimony	µg/L	1.5	1.0	<1.0	1.0	<1.0
Dissolved Arsenic	µg/L	13	1.0	<1.0	1.0	4.3
Dissolved Barium	µg/L	610	2.0	254	2.0	109
Dissolved Beryllium	µg/L	0.5	0.50	<0.50	0.50	<0.50
Dissolved Boron	µg/L	1700	10.0	362	10.0	131
Dissolved Cadmium	µg/L	0.5	0.20	<0.20	0.20	<0.20
Dissolved Chromium	µg/L	11	2.0	<2.0	2.0	<2.0
Dissolved Cobalt	µg/L	3.8	0.50	0.52	0.50	0.63
Dissolved Copper	µg/L	5	1.0	1.9	1.0	<1.0
Dissolved Lead	µg/L	1.9	0.50	<0.50	0.50	<0.50
Dissolved Molybdenum	µg/L	23	0.50	14.2	0.50	7.84
Dissolved Nickel	µg/L	14	1.0	2.8	1.0	9.7
Dissolved Selenium	µg/L	5	1.0	<1.0	1.0	<1.0
Dissolved Silver	µg/L	0.3	0.20	<0.20	0.20	<0.20
Dissolved Thallium	µg/L	0.5	0.30	<0.30	0.30	<0.30
Dissolved Uranium	µg/L	8.9	0.50	3.19	0.50	1.11
Dissolved Vanadium	µg/L	3.9	0.40	1.42	0.40	0.62
Dissolved Zinc	µg/L	160	5.0	<5.0	5.0	<5.0
Mercury	µg/L	0.1	0.02	<0.02	0.02	<0.02
Chromium VI	µg/L	25	2	<2	2	<2
Cyanide, Free	µg/L	5	2	<2	2	<2
Dissolved Sodium	µg/L	490000	250	417000	50	23000
Chloride	µg/L	790000	100	768000	100	72700
Electrical Conductivity	uS/cm	NA	2	2900	2	934
pH	pH Units		NA	7.97	NA	7.99

Certified By:



*Nvine Dasly*



**AGAT** Laboratories

# Certificate of Analysis

AGAT WORK ORDER: 21T839088

PROJECT: 211-10139-00

5835 COOPERS AVENUE  
MISSISSAUGA, ONTARIO  
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TEL (905)712-5100  
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<http://www.agatlabs.com>

CLIENT NAME: WSP CANADA INC.

ATTENTION TO: Marsad Jafar

SAMPLING SITE:

SAMPLED BY:

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

DATE RECEIVED: 2021-12-02

DATE REPORTED: 2021-12-15

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 1: Full Depth Background Site Condition Standards - Ground Water - All Types of Property Uses  
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

3296850-3296853 Metals analysis completed on a filtered sample.

Dilution required, RDL has been increased accordingly.

Analysis performed at AGAT Toronto (unless marked by \*)

Certified By:



*Marsad Jafar*

## Quality Assurance

CLIENT NAME: WSP CANADA INC.

AGAT WORK ORDER: 21T839088

PROJECT: 211-10139-00

ATTENTION TO: Marsad Jafar

SAMPLING SITE:

SAMPLED BY:

Trace Organics Analysis														
RPT Date: Dec 15, 2021			DUPLICATE				Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE		MATRIX SPIKE	
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Measured Value		Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits
							Lower	Upper	Lower		Upper	Lower		Upper

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

F1 (C6-C10)	3300342		<25	<25	NA	< 25	120%	60%	140%	106%	60%	140%	101%	60%	140%
F2 (C10 to C16)	3296850	3296850	< 100	< 100	NA	< 100	78%	60%	140%	74%	60%	140%	71%	60%	140%
F3 (C16 to C34)	3296850	3296850	< 100	< 100	NA	< 100	84%	60%	140%	76%	60%	140%	75%	60%	140%
F4 (C34 to C50)	3296850	3296850	< 100	< 100	NA	< 100	79%	60%	140%	75%	60%	140%	76%	60%	140%

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

Naphthalene	3253224		< 0.20	< 0.20	NA	< 0.20	105%	50%	140%	78%	50%	140%	77%	50%	140%
Acenaphthylene	3253224		< 0.20	< 0.20	NA	< 0.20	98%	50%	140%	82%	50%	140%	107%	50%	140%
Acenaphthene	3253224		< 0.20	< 0.20	NA	< 0.20	105%	50%	140%	71%	50%	140%	81%	50%	140%
Fluorene	3253224		< 0.20	< 0.20	NA	< 0.20	86%	50%	140%	92%	50%	140%	92%	50%	140%
Phenanthrene	3253224		< 0.10	< 0.10	NA	< 0.10	98%	50%	140%	88%	50%	140%	85%	50%	140%
Anthracene	3253224		< 0.10	< 0.10	NA	< 0.10	85%	50%	140%	93%	50%	140%	78%	50%	140%
Fluoranthene	3253224		< 0.20	< 0.20	NA	< 0.20	99%	50%	140%	96%	50%	140%	93%	50%	140%
Pyrene	3253224		< 0.20	< 0.20	NA	< 0.20	78%	50%	140%	96%	50%	140%	99%	50%	140%
Benzo(a)anthracene	3253224		< 0.20	< 0.20	NA	< 0.20	96%	50%	140%	94%	50%	140%	96%	50%	140%
Chrysene	3253224		< 0.10	< 0.10	NA	< 0.10	86%	50%	140%	114%	50%	140%	84%	50%	140%
Benzo(b)fluoranthene	3253224		< 0.10	< 0.10	NA	< 0.10	92%	50%	140%	76%	50%	140%	92%	50%	140%
Benzo(k)fluoranthene	3253224		< 0.10	< 0.10	NA	< 0.10	98%	50%	140%	92%	50%	140%	78%	50%	140%
Benzo(a)pyrene	3253224		< 0.01	< 0.01	NA	< 0.01	78%	50%	140%	105%	50%	140%	101%	50%	140%
Indeno(1,2,3-cd)pyrene	3253224		< 0.20	< 0.20	NA	< 0.20	92%	50%	140%	108%	50%	140%	105%	50%	140%
Dibenz(a,h)anthracene	3253224		< 0.20	< 0.20	NA	< 0.20	95%	50%	140%	75%	50%	140%	72%	50%	140%
Benzo(g,h,i)perylene	3253224		< 0.20	< 0.20	NA	< 0.20	91%	50%	140%	85%	50%	140%	105%	50%	140%

O. Reg. 153(511) - OC Pesticides + PCBs (Water)

Gamma-Hexachlorocyclohexane	3287115		< 0.01	< 0.01	NA	< 0.01	102%	50%	140%	98%	50%	140%	98%	50%	140%
Heptachlor	3287115		< 0.01	< 0.01	NA	< 0.01	110%	50%	140%	102%	50%	140%	102%	50%	140%
Aldrin	3287115		< 0.01	< 0.01	NA	< 0.01	103%	50%	140%	102%	50%	140%	112%	50%	140%
Heptachlor Epoxide	3287115		< 0.01	< 0.01	NA	< 0.01	109%	50%	140%	104%	50%	140%	104%	50%	140%
Endosulfan I	3287115		< 0.05	< 0.05	NA	< 0.05	108%	50%	140%	102%	50%	140%	106%	50%	140%
Endosulfan II	3287115		< 0.05	< 0.05	NA	< 0.05	113%	50%	140%	99%	50%	140%	92%	50%	140%
alpha - chlordane	3287115		< 0.1	< 0.1	NA	< 0.1	103%	50%	140%	103%	50%	140%	114%	50%	140%
gamma-Chlordane	3287115		< 0.2	< 0.2	NA	< 0.2	105%	50%	140%	102%	50%	140%	112%	50%	140%
op'-DDE	3287115		< 0.01	< 0.01	NA	< 0.01	96%	50%	140%	108%	50%	140%	109%	50%	140%
pp'-DDE	3287115		< 0.01	< 0.01	NA	< 0.01	100%	50%	140%	101%	50%	140%	110%	50%	140%
op'-DDD	3287115		< 0.05	< 0.05	NA	< 0.05	113%	50%	140%	109%	50%	140%	109%	50%	140%
pp'-DDD	3287115		< 0.05	< 0.05	NA	< 0.05	102%	50%	140%	104%	50%	140%	112%	50%	140%
op'-DDT	3287115		< 0.04	< 0.04	NA	< 0.04	102%	50%	140%	107%	50%	140%	106%	50%	140%
pp'-DDT	3287115		< 0.05	< 0.05	NA	< 0.05	91%	50%	140%	92%	50%	140%	107%	50%	140%
Dieldrin	3287115		< 0.02	< 0.02	NA	< 0.02	102%	50%	140%	109%	50%	140%	113%	50%	140%
Endrin	3287115		< 0.05	< 0.05	NA	< 0.05	109%	50%	140%	103%	50%	140%	110%	50%	140%

## Quality Assurance

CLIENT NAME: WSP CANADA INC.

AGAT WORK ORDER: 21T839088

PROJECT: 211-10139-00

ATTENTION TO: Marsad Jafar

SAMPLING SITE:

SAMPLED BY:

### Trace Organics Analysis (Continued)

RPT Date: Dec 15, 2021			DUPLICATE			Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD		Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
Methoxychlor	3287115		< 0.04	< 0.04	NA	< 0.04	92%	50%	140%	88%	50%	140%	96%	50%	140%
Hexachlorobenzene	3287115		< 0.01	< 0.01	NA	< 0.01	97%	50%	140%	96%	50%	140%	98%	50%	140%
Hexachlorobutadiene	3287115		< 0.01	< 0.01	NA	< 0.01	92%	50%	140%	97%	50%	140%	94%	50%	140%
Hexachloroethane	3287115		< 0.01	< 0.01	NA	< 0.01	87%	50%	140%	103%	50%	140%	90%	50%	140%
Aroclor 1242	3287115		< 0.1	< 0.1	NA	< 0.1	NA	60%	140%	NA	60%	140%	NA	60%	140%
Aroclor 1248	3287115		< 0.1	< 0.1	NA	< 0.1	NA	60%	140%	NA	60%	140%	NA	60%	140%
Aroclor 1254	3287115		< 0.1	< 0.1	NA	< 0.1	NA	60%	140%	NA	60%	140%	NA	60%	140%
Aroclor 1260	3287115		< 0.1	< 0.1	NA	< 0.1	NA	60%	140%	NA	60%	140%	NA	60%	140%
Polychlorinated Biphenyls	3287115		< 0.1	< 0.1	NA	< 0.1	95%	60%	140%	89%	60%	140%	98%	60%	140%
O. Reg. 153(511) - VOCs (Water)															
Dichlorodifluoromethane	3268642		< 0.20	< 0.20	NA	< 0.20	91%	50%	140%	95%	50%	140%	94%	50%	140%
Vinyl Chloride	3268642		< 0.17	< 0.17	NA	< 0.17	96%	50%	140%	102%	50%	140%	85%	50%	140%
Bromomethane	3268642		< 0.20	< 0.20	NA	< 0.20	98%	50%	140%	83%	50%	140%	85%	50%	140%
Trichlorofluoromethane	3268642		< 0.40	< 0.40	NA	< 0.40	87%	50%	140%	79%	50%	140%	91%	50%	140%
Acetone	3268642		< 1.0	< 1.0	NA	< 1.0	96%	50%	140%	100%	50%	140%	103%	50%	140%
1,1-Dichloroethylene	3268642		< 0.30	< 0.30	NA	< 0.30	93%	50%	140%	73%	60%	130%	100%	50%	140%
Methylene Chloride	3268642		< 0.30	< 0.30	NA	< 0.30	120%	50%	140%	120%	60%	130%	84%	50%	140%
trans- 1,2-Dichloroethylene	3268642		< 0.20	< 0.20	NA	< 0.20	97%	50%	140%	120%	60%	130%	84%	50%	140%
Methyl tert-butyl ether	3268642		< 0.20	< 0.20	NA	< 0.20	95%	50%	140%	117%	60%	130%	87%	50%	140%
1,1-Dichloroethane	3268642		< 0.30	< 0.30	NA	< 0.30	85%	50%	140%	110%	60%	130%	73%	50%	140%
Methyl Ethyl Ketone	3268642		< 1.0	< 1.0	NA	< 1.0	98%	50%	140%	101%	50%	140%	97%	50%	140%
cis- 1,2-Dichloroethylene	3268642		< 0.20	< 0.20	NA	< 0.20	79%	50%	140%	107%	60%	130%	118%	50%	140%
Chloroform	3268642		< 0.20	< 0.20	NA	< 0.20	98%	50%	140%	101%	60%	130%	89%	50%	140%
1,2-Dichloroethane	3268642		< 0.20	< 0.20	NA	< 0.20	116%	50%	140%	97%	60%	130%	81%	50%	140%
1,1,1-Trichloroethane	3268642		< 0.30	< 0.30	NA	< 0.30	111%	50%	140%	85%	60%	130%	112%	50%	140%
Carbon Tetrachloride	3268642		< 0.20	< 0.20	NA	< 0.20	98%	50%	140%	120%	60%	130%	84%	50%	140%
Benzene	3268642		< 0.20	< 0.20	NA	< 0.20	87%	50%	140%	106%	60%	130%	94%	50%	140%
1,2-Dichloropropane	3268642		< 0.20	< 0.20	NA	< 0.20	111%	50%	140%	97%	60%	130%	100%	50%	140%
Trichloroethylene	3268642		< 0.20	< 0.20	NA	< 0.20	105%	50%	140%	98%	60%	130%	111%	50%	140%
Bromodichloromethane	3268642		< 0.20	< 0.20	NA	< 0.20	116%	50%	140%	107%	60%	130%	99%	50%	140%
Methyl Isobutyl Ketone	3268642		< 1.0	< 1.0	NA	< 1.0	109%	50%	140%	103%	50%	140%	100%	50%	140%
1,1,2-Trichloroethane	3268642		< 0.20	< 0.20	NA	< 0.20	117%	50%	140%	97%	60%	130%	78%	50%	140%
Toluene	3268642		< 0.20	< 0.20	NA	< 0.20	100%	50%	140%	75%	60%	130%	120%	50%	140%
Dibromochloromethane	3268642		< 0.10	< 0.10	NA	< 0.10	116%	50%	140%	110%	60%	130%	105%	50%	140%
Ethylene Dibromide	3268642		< 0.10	< 0.10	NA	< 0.10	111%	50%	140%	91%	60%	130%	93%	50%	140%
Tetrachloroethylene	3268642		< 0.20	< 0.20	NA	< 0.20	104%	50%	140%	91%	60%	130%	87%	50%	140%
1,1,1,2-Tetrachloroethane	3268642		< 0.10	< 0.10	NA	< 0.10	105%	50%	140%	86%	60%	130%	104%	50%	140%
Chlorobenzene	3268642		< 0.10	< 0.10	NA	< 0.10	89%	50%	140%	70%	60%	130%	97%	50%	140%
Ethylbenzene	3268642		< 0.10	< 0.10	NA	< 0.10	74%	50%	140%	87%	60%	130%	80%	50%	140%



## Quality Assurance

 CLIENT NAME: WSP CANADA INC.  
 PROJECT: 211-10139-00  
 SAMPLING SITE:

 AGAT WORK ORDER: 21T839088  
 ATTENTION TO: Marsad Jafar  
 SAMPLED BY:

### Trace Organics Analysis (Continued)


RPT Date: Dec 15, 2021			DUPLICATE				Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Measured Value		Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits		
								Lower	Upper		Lower	Upper		Lower	Upper	
m & p-Xylene	3268642		< 0.20	< 0.20	NA	< 0.20	98%	50%	140%	92%	60%	130%	90%	50%	140%	
Bromoform	3268642		< 0.10	< 0.10	NA	< 0.10	106%	50%	140%	84%	60%	130%	88%	50%	140%	
Styrene	3268642		< 0.10	< 0.10	NA	< 0.10	76%	50%	140%	82%	60%	130%	70%	50%	140%	
1,1,2,2-Tetrachloroethane	3268642		< 0.10	< 0.10	NA	< 0.10	94%	50%	140%	77%	60%	130%	84%	50%	140%	
o-Xylene	3268642		< 0.10	< 0.10	NA	< 0.10	78%	50%	140%	78%	60%	130%	79%	50%	140%	
1,3-Dichlorobenzene	3268642		< 0.10	< 0.10	NA	< 0.10	95%	50%	140%	78%	60%	130%	73%	50%	140%	
1,4-Dichlorobenzene	3268642		< 0.10	< 0.10	NA	< 0.10	101%	50%	140%	78%	60%	130%	81%	50%	140%	
1,2-Dichlorobenzene	3268642		< 0.10	< 0.10	NA	< 0.10	98%	50%	140%	80%	60%	130%	78%	50%	140%	
n-Hexane	3268642		< 0.20	< 0.20	NA	< 0.20	93%	50%	140%	95%	60%	130%	117%	50%	140%	

Comments: When the average of the sample and duplicate results is less than 5x the RDL, the Relative Percent Difference (RPD) will be indicated as Not Applicable (NA).

#### O. Reg. 153(511) - PHCs F1/BTEX (Water)

Benzene	3300342		<0.20	<0.20	NA	< 0.20	90%	60%	140%	85%	60%	140%	104%	60%	140%
Toluene	3300342		<0.20	<0.20	NA	< 0.20	85%	60%	140%	81%	60%	140%	93%	60%	140%
Ethylbenzene	3300342		<0.10	<0.10	NA	< 0.10	85%	60%	140%	84%	60%	140%	96%	60%	140%
m & p-Xylene	3300342		<0.20	<0.20	NA	< 0.20	91%	60%	140%	103%	60%	140%	106%	60%	140%
o-Xylene	3300342		<0.10	<0.10	NA	< 0.10	104%	60%	140%	82%	60%	140%	119%	60%	140%
F1 (C6-C10)	3300342		<25	<25	NA	< 25	120%	60%	140%	106%	60%	140%	101%	60%	140%

Certified By: \_\_\_\_\_



## Quality Assurance

CLIENT NAME: WSP CANADA INC.  
 PROJECT: 211-10139-00  
 SAMPLING SITE:

AGAT WORK ORDER: 21T839088  
 ATTENTION TO: Marsad Jafar  
 SAMPLED BY:

Water Analysis															
RPT Date: Dec 15, 2021			DUPLICATE				Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE		MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Measured Value		Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper

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

Dissolved Antimony	3295669		< 1.0	< 1.0	0.0%	< 1.0	99%	70%	130%	105%	80%	120%	101%	70%	130%
Dissolved Arsenic	3295669		1.1	1.1	NA	< 1.0	95%	70%	130%	104%	80%	120%	108%	70%	130%
Dissolved Barium	3295669		268	264	1.5%	< 2.0	102%	70%	130%	104%	80%	120%	75%	70%	130%
Dissolved Beryllium	3295669		< 0.50	< 0.50	0.0%	< 0.50	106%	70%	130%	116%	80%	120%	112%	70%	130%
Dissolved Boron	3295669		126	121	4.6%	< 10.0	103%	70%	130%	114%	80%	120%	102%	70%	130%
Dissolved Cadmium	3295669		< 0.20	< 0.20	0.0%	< 0.20	100%	70%	130%	105%	80%	120%	108%	70%	130%
Dissolved Chromium	3295669		< 2.0	< 2.0	0.0%	< 2.0	100%	70%	130%	102%	80%	120%	105%	70%	130%
Dissolved Cobalt	3295669		5.36	4.56	16.1%	< 0.50	103%	70%	130%	102%	80%	120%	105%	70%	130%
Dissolved Copper	3295669		< 1.0	< 1.0	0.0%	< 1.0	100%	70%	130%	99%	80%	120%	108%	70%	130%
Dissolved Lead	3295669		< 0.50	< 0.50	0.0%	< 0.50	100%	70%	130%	103%	80%	120%	108%	70%	130%
Dissolved Molybdenum	3295669		< 0.50	< 0.50	0.0%	< 0.50	101%	70%	130%	106%	80%	120%	112%	70%	130%
Dissolved Nickel	3295669		8.5	7.9	7.3%	< 1.0	102%	70%	130%	107%	80%	120%	103%	70%	130%
Dissolved Selenium	3295669		< 1.0	< 1.0	0.0%	< 1.0	100%	70%	130%	111%	80%	120%	106%	70%	130%
Dissolved Silver	3295669		< 0.20	< 0.20	0.0%	< 0.20	100%	70%	130%	103%	80%	120%	109%	70%	130%
Dissolved Thallium	3295669		< 0.30	< 0.30	0.0%	< 0.30	98%	70%	130%	100%	80%	120%	104%	70%	130%
Dissolved Uranium	3295669		1.28	1.23	NA	< 0.50	105%	70%	130%	113%	80%	120%	115%	70%	130%
Dissolved Vanadium	3295669		<0.40	0.61	NA	< 0.40	101%	70%	130%	103%	80%	120%	105%	70%	130%
Dissolved Zinc	3295669		5.3	<5.0	NA	< 5.0	103%	70%	130%	99%	80%	120%	112%	70%	130%
Mercury	3295007		<0.02	<0.02	NA	< 0.02	104%	70%	130%	101%	80%	120%	93%	70%	130%
Chromium VI	3285019		<2	<2	NA	< 2	103%	70%	130%	104%	80%	120%	110%	70%	130%
Cyanide, Free	3275528		<2	<2	NA	< 2	107%	70%	130%	103%	80%	120%	87%	70%	130%
Dissolved Sodium Chloride	3296853	3296853	23000	23100	0.5%	< 50	97%	70%	130%	99%	80%	120%	97%	70%	130%
Electrical Conductivity	3285316		120000	118000	1.5%	< 100	98%	70%	130%	103%	80%	120%	106%	70%	130%
pH	3295423		976	964	1.2%	< 2	104%	90%	110%						
	3295423		7.68	7.78	1.3%	NA	102%	90%	110%						

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

Certified By:



*Nivine Basily*

## Method Summary

CLIENT NAME: WSP CANADA INC.

AGAT WORK ORDER: 21T839088

PROJECT: 211-10139-00

ATTENTION TO: Marsad Jafar

SAMPLING SITE:

SAMPLED BY:

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Trace Organics Analysis			
Gamma-Hexachlorocyclohexane	ORG-91-5112	modified from EPA SW-846 3510C & 8081B	GC/ECD
Heptachlor	ORG-91-5112	modified from EPA SW-846 3510C & 8081B	GC/ECD
Aldrin	ORG-91-5112	modified from EPA SW-846 3510C & 8081B	GC/ECD
Heptachlor Epoxide	ORG-91-5112	modified from EPA SW-846 3510C & 8081B	GC/ECD
Endosulfan I	ORG-91-5112	modified from EPA SW-846 3510C & 8081B	GC/ECD
Endosulfan II	ORG-91-5112	modified from EPA SW-846 3510C & 8081B	GC/ECD
Endosulfan	ORG-91-5112	modified from EPA SW-846 3510C & 8081B	CALCULATION
alpha - chlordane	ORG-91-5112	modified from EPA SW-846 3510C & 8081B	GC/ECD
gamma-Chlordane	ORG-91-5112	modified from EPA SW-846 3510C & 8081B	GC/ECD
Chlordane	ORG-91-5112	modified from EPA SW-846 3510C & 8081B	CALCULATION
op'-DDE	ORG-91-5112	modified from EPA SW-846 3510C & 8081B	GC/ECD
pp'-DDE	ORG-91-5112	modified from EPA SW-846 3510C & 8081B	GC/ECD
DDE	ORG-91-5112	modified from EPA SW-846 3510C & 8081B	CALCULATION
op'-DDD	ORG-91-5112	modified from EPA SW-846 3510C & 8081B	GC/ECD
pp'-DDD	ORG-91-5112	modified from EPA SW-846 3510C & 8081B	GC/ECD
DDD	ORG-91-5112	modified from EPA SW-846 3510C & 8081B	CALCULATION
op'-DDT	ORG-91-5112	modified from EPA SW-846 3510C & 8081B	GC/ECD
pp'-DDT	ORG-91-5112	modified from EPA SW-846 3510C & 8081B	GC/ECD
DDT	ORG-91-5112	modified from EPA SW-846 3510C & 8081B	CALCULATION
Dieldrin	ORG-91-5112	modified from EPA SW-846 3510C & 8081B	GC/ECD
Endrin	ORG-91-5112	modified from EPA SW-846 3510C & 8081B	GC/ECD
Methoxychlor	ORG-91-5112	modified from EPA SW-846 3510C & 8081B	GC/ECD
Hexachlorobenzene	ORG-91-5112	modified from EPA SW-846 3510C & 8081B	GC/ECD
Hexachlorobutadiene	ORG-91-5112	modified from EPA SW-846 3510C & 8081B	GC/ECD
Hexachloroethane	ORG-91-5112	modified from EPA SW-846 3510C & 8081B	GC/ECD
Aroclor 1242	ORG-91-5112	modified from EPA SW-846 3510C & 8082A	GC/ECD
Aroclor 1248	ORG-91-5112	modified from EPA SW-846 3510C & 8082A	GC/ECD

## Method Summary

CLIENT NAME: WSP CANADA INC.

AGAT WORK ORDER: 21T839088

PROJECT: 211-10139-00

ATTENTION TO: Marsad Jafar

SAMPLING SITE:

SAMPLED BY:

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Aroclor 1254	ORG-91-5112	modified from EPA SW-846 3510C & 8082A	GC/ECD
Aroclor 1260	ORG-91-5112	modified from EPA SW-846 3510C & 8082A	GC/ECD
Polychlorinated Biphenyls	ORG-91-5112	modified from EPA SW-846 3510C & 8082A	GC/ECD
TCMX	ORG-91-5112	modified from EPA SW-846 3510C & 8081B	GC/ECD
Decachlorobiphenyl	ORG-91-5112	modified from EPA SW-846 3510C & 8081B	GC/ECD
Naphthalene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Acenaphthylene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Acenaphthene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Fluorene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Phenanthrene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Anthracene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Fluoranthene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Pyrene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Benzo(a)anthracene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Chrysene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Benzo(b)fluoranthene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Benzo(k)fluoranthene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Benzo(a)pyrene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Indeno(1,2,3-cd)pyrene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Dibenz(a,h)anthracene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Benzo(g,h,i)perylene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
2-and 1-methyl Naphthalene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Naphthalene-d8	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Acridine-d9	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Terphenyl-d14	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Sediment			
F1 (C6-C10)	VOL-91-5010	modified from MOE PHC-E3421	(P&T)GC/FID
F1 (C6 to C10) minus BTEX	VOL-91-5010	modified from MOE PHC-E3421	P&T GC/FID
Toluene-d8	VOL-91-5010	modified from MOE PHC-E3421	(P&T)GC/MS
F2 (C10 to C16)	VOL-91-5010	modified from MOE PHC-E3421	GC/FID
F2 (C10 to C16) minus Naphthalene	VOL-91-5010	modified from MOE PHC-E3421	GC/FID



## Method Summary

CLIENT NAME: WSP CANADA INC.

AGAT WORK ORDER: 21T839088

PROJECT: 211-10139-00

ATTENTION TO: Marsad Jafar

SAMPLING SITE:

SAMPLED BY:

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
F3 (C16 to C34)	VOL-91-5010	modified from MOE PHC-E3421	GC/FID
F3 (C16 to C34) minus PAHs	VOL-91-5010	modified from MOE PHC-E3421	GC/FID
F4 (C34 to C50)	VOL-91-5010	modified from MOE PHC-E3421	GC/FID
Gravimetric Heavy Hydrocarbons	VOL-91-5010	modified from MOE PHC-E3421	BALANCE
Terphenyl	VOL-91-5010	modified from MOE PHC-E3421	GC/FID
Benzene	VOL-91-5010	modified from EPA SW-846 5030C & 8260D	(P&T)GC/MS
Toluene	VOL-91-5010	modified from EPA SW-846 5030C & 8260D	(P&T)GC/MS
Ethylbenzene	VOL-91-5010	modified from EPA SW-846 5030C & 8260D	(P&T)GC/MS
m & p-Xylene	VOL-91-5010	modified from EPA SW-846 5030C & 8260D	(P&T)GC/MS
o-Xylene	VOL-91-5010	modified from EPA SW-846 5030C & 8260D	(P&T)GC/MS
Xylenes (Total)	VOL-91-5010	modified from EPA SW-846 5030C & 8260D	(P&T)GC/MS
F1 (C6-C10)	VOL-91-5010	modified from MOE E3421	(P&T)GC/FID
F1 (C6 to C10) minus BTEX	VOL-91-5010	modified from MOE E3421	(P&T)GC/FID
Dichlorodifluoromethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Vinyl Chloride	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Bromomethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Trichlorofluoromethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Acetone	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1-Dichloroethylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Methylene Chloride	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
trans- 1,2-Dichloroethylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Methyl tert-butyl ether	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1-Dichloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Methyl Ethyl Ketone	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
cis- 1,2-Dichloroethylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Chloroform	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,2-Dichloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1,1-Trichloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Carbon Tetrachloride	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Benzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,2-Dichloropropane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS

## Method Summary

CLIENT NAME: WSP CANADA INC.

AGAT WORK ORDER: 21T839088

PROJECT: 211-10139-00

ATTENTION TO: Marsad Jafar

SAMPLING SITE:

SAMPLED BY:

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Trichloroethylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Bromodichloromethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Methyl Isobutyl Ketone	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1,2-Trichloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Toluene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Dibromochloromethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Ethylene Dibromide	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Tetrachloroethylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1,1,2-Tetrachloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Chlorobenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Ethylbenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
m & p-Xylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Bromoform	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Styrene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1,2,2-Tetrachloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
o-Xylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,3-Dichlorobenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,4-Dichlorobenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,2-Dichlorobenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,3-Dichloropropene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Xylenes (Total)	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
n-Hexane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Toluene-d8	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
4-Bromofluorobenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS

## Method Summary

CLIENT NAME: WSP CANADA INC.

AGAT WORK ORDER: 21T839088

PROJECT: 211-10139-00

ATTENTION TO: Marsad Jafar

SAMPLING SITE:

SAMPLED BY:

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Water Analysis			
Dissolved Antimony	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Arsenic	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Barium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Beryllium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Boron	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Cadmium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Chromium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Cobalt	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Copper	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Lead	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Molybdenum	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Nickel	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Selenium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Silver	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Thallium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Uranium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Vanadium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Zinc	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Mercury	MET-93-6100	modified from EPA 245.2 and SM 3112 B	CVAAS
Chromium VI	INOR-93-6034	modified from SM 3500-CR B	LACHAT FIA
Cyanide, Free	INOR-93-6052	modified from ON MOECC E3015, SM 4500-CN- I, G-387	TECHNICON AUTO ANALYZER
Dissolved Sodium Chloride	MET-93-6105	modified from EPA 6010D	ICP/OES
Electrical Conductivity	INOR-93-6004	modified from SM 4110 B	ION CHROMATOGRAPH
pH	INOR-93-6000	SM 2510 B	PC TITRATE
	INOR-93-6000	modified from SM 4500-H+ B	PC TITRATE







CLIENT NAME: WSP CANADA INC.  
2 INTERNATIONAL BLVD SUITE 201  
ETOBICOKE, ON M9W1A2  
(416) 798-0065

ATTENTION TO: Vanessa Oetinger

PROJECT: 211-10139-00

AGAT WORK ORDER: 21T839096

SOIL ANALYSIS REVIEWED BY: Nivine Basily, Inorganics Report Writer

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

DATE REPORTED: Dec 15, 2021

PAGES (INCLUDING COVER): 20

VERSION\*: 1

Should you require any information regarding this analysis please contact your client services representative at (905) 712-5100

\*Notes

**Disclaimer:**

- All work conducted herein has been done using accepted standard protocols, and generally accepted practices and methods. AGAT test methods may incorporate modifications from the specified reference methods to improve performance.
- All samples will be disposed of within 30 days after receipt unless a Long Term Storage Agreement is signed and returned. Some specialty analysis may be exempt, please contact your Client Project Manager for details.
- AGAT's liability in connection with any delay, performance or non-performance of these services is only to the Client and does not extend to any other third party. Unless expressly agreed otherwise in writing, AGAT's liability is limited to the actual cost of the specific analysis or analyses included in the services.
- This Certificate shall not be reproduced except in full, without the written approval of the laboratory.
- The test results reported herewith relate only to the samples as received by the laboratory.
- Application of guidelines is provided "as is" without warranty of any kind, either expressed or implied, including, but not limited to, warranties of merchantability, fitness for a particular purpose, or non-infringement. AGAT assumes no responsibility for any errors or omissions in the guidelines contained in this document.
- All reportable information as specified by ISO/IEC 17025:2017 is available from AGAT Laboratories upon request.



## Certificate of Analysis

AGAT WORK ORDER: 21T839096

PROJECT: 211-10139-00

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

CLIENT NAME: WSP CANADA INC.

ATTENTION TO: Vanessa Oetinger

SAMPLING SITE:

SAMPLED BY:

### O. Reg. 153(511) - Metals & Inorganics (Soil)

DATE RECEIVED: 2021-12-02

DATE REPORTED: 2021-12-15

Parameter	Unit	SAMPLE DESCRIPTION:		BH21-2 SS2	BH21-3 SS1	QAQC-12	BH21-16 SS1
		G / S	RDL	Soil	Soil	Soil	Soil
		DATE SAMPLED:		2021-12-02	2021-12-02 12:00	2021-12-02 12:00	2021-12-01
		3293886	3293919	3293920	3293929		
Antimony	µg/g	1.3	0.8	<0.8	<0.8	<0.8	2.8
Arsenic	µg/g	18	1	6	4	6	8
Barium	µg/g	220	2.0	89.8	77.5	52.7	88.5
Beryllium	µg/g	2.5	0.4	0.8	0.6	0.5	0.5
Boron	µg/g	36	5	10	8	7	9
Boron (Hot Water Soluble)	µg/g	NA	0.10	0.42	0.12	0.17	0.50
Cadmium	µg/g	1.2	0.5	<0.5	<0.5	<0.5	<0.5
Chromium	µg/g	70	5	20	17	15	35
Cobalt	µg/g	21	0.5	9.2	7.8	7.8	10.6
Copper	µg/g	92	1.0	42.9	24.8	33.3	69.0
Lead	µg/g	120	1	60	9	12	79
Molybdenum	µg/g	2	0.5	0.6	<0.5	<0.5	3.7
Nickel	µg/g	82	1	19	17	22	31
Selenium	µg/g	1.5	0.8	<0.8	<0.8	<0.8	0.8
Silver	µg/g	0.5	0.5	<0.5	<0.5	<0.5	<0.5
Thallium	µg/g	1	0.5	<0.5	<0.5	<0.5	<0.5
Uranium	µg/g	2.5	0.50	0.55	<0.50	<0.50	<0.50
Vanadium	µg/g	86	0.4	30.4	25.5	22.4	33.8
Zinc	µg/g	290	5	95	44	43	468
Chromium, Hexavalent	µg/g	0.66	0.2	<0.2	<0.2	<0.2	<0.2
Cyanide, Free	µg/g	0.051	0.040	<0.040	<0.040	<0.040	<0.040
Mercury	µg/g	0.27	0.10	<0.10	<0.10	<0.10	0.22
Electrical Conductivity (2:1)	mS/cm	0.57	0.005	0.353	0.216	0.185	0.290
Sodium Adsorption Ratio (2:1) (Calc.)	N/A	2.4	N/A	1.56	0.438	0.300	1.64
pH, 2:1 CaCl2 Extraction	pH Units		NA	7.29	7.25	7.32	7.50

Certified By:



*Allyson B...*



**AGAT** Laboratories

# Certificate of Analysis

AGAT WORK ORDER: 21T839096

PROJECT: 211-10139-00

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

CLIENT NAME: WSP CANADA INC.

ATTENTION TO: Vanessa Oetinger

SAMPLING SITE:

SAMPLED BY:

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

DATE RECEIVED: 2021-12-02

DATE REPORTED: 2021-12-15

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 1: Full Depth Background Site Condition Standards - Soil - Residential/Parkland/Institutional/Industrial/Commercial/Community Property Use

Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

3293886-3293929 EC was determined on the DI water extract obtained from the 2:1 leaching procedure (2 parts DI water:1 part soil). pH was determined on the 0.01M CaCl2 extract prepared at 2:1 ratio. SAR is a calculated parameter.

Analysis performed at AGAT Toronto (unless marked by \*)

Certified By:



*Nivine Basly*



## Certificate of Analysis

AGAT WORK ORDER: 21T839096

PROJECT: 211-10139-00

5835 COOPERS AVENUE  
MISSISSAUGA, ONTARIO  
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CLIENT NAME: WSP CANADA INC.

ATTENTION TO: Vanessa Oetinger

SAMPLING SITE:

SAMPLED BY:

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

DATE RECEIVED: 2021-12-02

DATE REPORTED: 2021-12-15

Parameter	Unit	SAMPLE DESCRIPTION:				
		BH21-2 SS2		BH21-16 SS2		QAQC-10
		G / S	RDL	G / S	RDL	G / S
		2021-12-02	2021-12-02	2021-12-01	2021-12-01	2021-12-01
		3293886	3293886	3293931	3293931	3293943
Naphthalene	µg/g	0.05	<0.05	<0.05	<0.05	<0.05
Acenaphthylene	µg/g	0.05	<0.05	<0.05	<0.05	<0.05
Acenaphthene	µg/g	0.05	<0.05	<0.05	<0.05	<0.05
Fluorene	µg/g	0.05	<0.05	<0.05	<0.05	<0.05
Phenanthrene	µg/g	0.05	<0.05	<0.05	<0.05	<0.05
Anthracene	µg/g	0.05	<0.05	<0.05	<0.05	<0.05
Fluoranthene	µg/g	0.05	<0.05	<0.05	<0.05	<0.05
Pyrene	µg/g	0.05	<0.05	<0.05	<0.05	<0.05
Benz(a)anthracene	µg/g	0.05	<0.05	<0.05	<0.05	<0.05
Chrysene	µg/g	0.05	<0.05	<0.05	<0.05	<0.05
Benzo(b)fluoranthene	µg/g	0.05	<0.05	<0.05	<0.05	<0.05
Benzo(k)fluoranthene	µg/g	0.05	<0.05	<0.05	<0.05	<0.05
Benzo(a)pyrene	µg/g	0.05	<0.05	<0.05	<0.05	<0.05
Indeno(1,2,3-cd)pyrene	µg/g	0.05	<0.05	<0.05	<0.05	<0.05
Dibenz(a,h)anthracene	µg/g	0.05	<0.05	<0.05	<0.05	<0.05
Benzo(g,h,i)perylene	µg/g	0.05	<0.05	<0.05	<0.05	<0.05
1 and 2 Methyl naphthalene	µg/g	0.05	<0.05	<0.05	<0.05	<0.05
Moisture Content	%	0.1	20.3	17.9	15.8	
Surrogate	Unit	Acceptable Limits				
Naphthalene-d8	%	50-140	78	108	106	
Acridine-d9	%	50-140	93	75	93	
Terphenyl-d14	%	50-140	92	96	94	

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

3293886-3293943 Results are based on the dry weight of the soil.

Note: The result for Benzo(b)Fluoranthene is the total of the Benzo(b&j)Fluoranthene isomers because the isomers co-elute on the GC column.

2- and 1-Methyl Naphthalene is a calculated parameter. The calculated value is the sum of 2-Methyl Naphthalene and 1-Methyl Naphthalene.

Analysis performed at AGAT Toronto (unless marked by \*)

Certified By:





## Certificate of Analysis

AGAT WORK ORDER: 21T839096

PROJECT: 211-10139-00

5835 COOPERS AVENUE  
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CLIENT NAME: WSP CANADA INC.

ATTENTION TO: Vanessa Oetinger

SAMPLING SITE:

SAMPLED BY:

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

DATE RECEIVED: 2021-12-02

DATE REPORTED: 2021-12-15

SAMPLE DESCRIPTION: BH21-16 SS8

SAMPLE TYPE: Soil

DATE SAMPLED: 2021-12-01

3293947

Parameter	Unit	G / S	RDL	3293947
F1 (C6 - C10)	µg/g	25	5	<5
F1 (C6 to C10) minus BTEX	µg/g	25	5	<5
F2 (C10 to C16)	µg/g	10	10	<10
F3 (C16 to C34)	µg/g	240	50	<50
F4 (C34 to C50)	µg/g	120	50	<50
Gravimetric Heavy Hydrocarbons	µg/g	120	50	NA
Moisture Content	%		0.1	9.3
Surrogate	Unit	Acceptable Limits		
Toluene-d8	% Recovery	50-140		95
Terphenyl	%	60-140		104

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 1: Full Depth Background Site Condition Standards - Soil - Residential/Parkland/Institutional/Industrial/Commercial/Community Property Use  
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

3293947 Results are based on sample dry weight.  
The C6-C10 fraction is calculated using toluene response factor.  
C6-C10 (F1 minus BTEX) is a calculated parameter. The calculated value is F1 minus BTEX. The calculated parameter is non-accredited. The parameters that are components of the calculation are accredited.  
The C10 - C16, C16 - C34, and C34 - C50 fractions are calculated using the average response factor for n-C10, n-C16, and n-C34.  
Gravimetric Heavy Hydrocarbons are not included in the Total C16-C50 and are only determined if the chromatogram of the C34 - C50 hydrocarbons indicates that hydrocarbons >C50 are present. The chromatogram has returned to baseline by the retention time of nC50.  
Total C6 - C50 results are corrected for BTEX contribution.  
This method complies with the Reference Method for the CWS PHC and is validated for use in the laboratory.  
nC6 and nC10 response factors are within 30% of Toluene response factor.  
nC10, nC16 and nC34 response factors are within 10% of their average.  
C50 response factor is within 70% of nC10 + nC16 + nC34 average.  
Linearity is within 15%.  
Extraction and holding times were met for this sample.  
Fractions 1-4 are quantified without the contribution of PAHs. Under Ontario Regulation 153, results are considered valid without determining the PAH contribution if not requested by the client.

Analysis performed at AGAT Toronto (unless marked by \*)

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## Certificate of Analysis

AGAT WORK ORDER: 21T839096

PROJECT: 211-10139-00

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CLIENT NAME: WSP CANADA INC.

ATTENTION TO: Vanessa Oetinger

SAMPLING SITE:

SAMPLED BY:

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

DATE RECEIVED: 2021-12-02

DATE REPORTED: 2021-12-15

Parameter	Unit	SAMPLE DESCRIPTION:				
		G / S	RDL	BH21-2 SS5	BH21-3 SS6	BH21-6 SS6
				Soil	Soil	Soil
				2021-12-02	2021-12-02	2021-12-01
				12:00	12:00	
				3293910	3293922	3293927
Benzene	µg/g	0.02	0.02	<0.02	<0.02	<0.02
Toluene	µg/g	0.2	0.05	<0.05	<0.05	<0.05
Ethylbenzene	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
Xylenes (Total)	µg/g	0.05	0.05	<0.05	<0.05	<0.05
F1 (C6 - C10)	µg/g	25	5	<5	<5	<5
F1 (C6 to C10) minus BTEX	µg/g	25	5	<5	<5	<5
F2 (C10 to C16)	µg/g	10	10	<10	<10	<10
F3 (C16 to C34)	µg/g	240	50	<50	<50	<50
F4 (C34 to C50)	µg/g	120	50	<50	<50	<50
Gravimetric Heavy Hydrocarbons	µg/g	120	50	NA	NA	NA
Moisture Content	%		0.1	22.0	17.6	12.7
Surrogate	Unit	Acceptable Limits				
Toluene-d8	% Recovery	60-140	90	99	108	
Terphenyl	%	60-140	85	88	89	

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CLIENT NAME: WSP CANADA INC.

ATTENTION TO: Vanessa Oetinger

SAMPLING SITE:

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

DATE RECEIVED: 2021-12-02

DATE REPORTED: 2021-12-15

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 1: Full Depth Background Site Condition Standards - Soil - Residential/Parkland/Institutional/Industrial/Commercial/Community Property Use  
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

3293910-3293927 Results are based on sample dry weight.  
The C6-C10 fraction is calculated using Toluene response factor.  
Xylenes is a calculated parameter. The calculated value is the sum of m&p-Xylene and o-Xylene.  
C6-C10 (F1 minus BTEX) is a calculated parameter. The calculated value is F1 minus BTEX.  
The calculated parameters are non-accredited. The parameters that are components of the calculation are accredited.  
The C10 - C16, C16 - C34, and C34 - C50 fractions are calculated using the average response factor for n-C10, n-C16, and n-C34.  
Gravimetric Heavy Hydrocarbons are not included in the Total C16-C50 and are only determined if the chromatogram of the C34 - C50 hydrocarbons indicates that hydrocarbons >C50 are present.  
The chromatogram has returned to baseline by the retention time of nC50.  
Total C6 - C50 results are corrected for BTEX contribution.  
This method complies with the Reference Method for the CWS PHC and is validated for use in the laboratory.  
nC6 and nC10 response factors are within 30% of Toluene response factor.  
nC10, nC16 and nC34 response factors are within 10% of their average.  
C50 response factor is within 70% of nC10 + nC16 + nC34 average.  
Linearity is within 15%.  
Extraction and holding times were met for this sample.  
Fractions 1-4 are quantified with the contribution of PAHs. Under Ontario Regulation 153, results are considered valid without determining the PAH contribution if not requested by the client.  
Quality Control Data is available upon request.

Analysis performed at AGAT Toronto (unless marked by \*)

Certified By:



## Certificate of Analysis

AGAT WORK ORDER: 21T839096

PROJECT: 211-10139-00

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CLIENT NAME: WSP CANADA INC.

ATTENTION TO: Vanessa Oetinger

SAMPLING SITE:

SAMPLED BY:

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

DATE RECEIVED: 2021-12-02

DATE REPORTED: 2021-12-15

SAMPLE DESCRIPTION: BH21-16 SS8

SAMPLE TYPE: Soil

DATE SAMPLED: 2021-12-01

3293947

Parameter	Unit	G / S	RDL	3293947
Dichlorodifluoromethane	µg/g	0.05	0.05	<0.05
Vinyl Chloride	ug/g	0.02	0.02	<0.02
Bromomethane	ug/g	0.05	0.05	<0.05
Trichlorofluoromethane	ug/g	0.25	0.05	<0.05
Acetone	ug/g	0.5	0.50	<0.50
1,1-Dichloroethylene	ug/g	0.05	0.05	<0.05
Methylene Chloride	ug/g	0.05	0.05	<0.05
Trans- 1,2-Dichloroethylene	ug/g	0.05	0.05	<0.05
Methyl tert-butyl Ether	ug/g	0.05	0.05	<0.05
1,1-Dichloroethane	ug/g	0.05	0.02	<0.02
Methyl Ethyl Ketone	ug/g	0.5	0.50	<0.50
Cis- 1,2-Dichloroethylene	ug/g	0.05	0.02	<0.02
Chloroform	ug/g	0.05	0.04	<0.04
1,2-Dichloroethane	ug/g	0.05	0.03	<0.03
1,1,1-Trichloroethane	ug/g	0.05	0.05	<0.05
Carbon Tetrachloride	ug/g	0.05	0.05	<0.05
Benzene	ug/g	0.02	0.02	<0.02
1,2-Dichloropropane	ug/g	0.05	0.03	<0.03
Trichloroethylene	ug/g	0.05	0.03	<0.03
Bromodichloromethane	ug/g	0.05	0.05	<0.05
Methyl Isobutyl Ketone	ug/g	0.5	0.50	<0.50
1,1,2-Trichloroethane	ug/g	0.05	0.04	<0.04
Toluene	ug/g	0.2	0.05	<0.05
Dibromochloromethane	ug/g	0.05	0.05	<0.05
Ethylene Dibromide	ug/g	0.05	0.04	<0.04
Tetrachloroethylene	ug/g	0.05	0.05	<0.05
1,1,1,2-Tetrachloroethane	ug/g	0.05	0.04	<0.04
Chlorobenzene	ug/g	0.05	0.05	<0.05
Ethylbenzene	ug/g	0.05	0.05	<0.05
m & p-Xylene	ug/g		0.05	<0.05

Certified By:





## Certificate of Analysis

AGAT WORK ORDER: 21T839096

PROJECT: 211-10139-00

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CLIENT NAME: WSP CANADA INC.

ATTENTION TO: Vanessa Oetinger

SAMPLING SITE:

SAMPLED BY:

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

DATE RECEIVED: 2021-12-02

DATE REPORTED: 2021-12-15

SAMPLE DESCRIPTION: BH21-16 SS8

SAMPLE TYPE: Soil

DATE SAMPLED: 2021-12-01

Parameter	Unit	G / S	RDL	3293947
Bromoform	ug/g	0.05	0.05	<0.05
Styrene	ug/g	0.05	0.05	<0.05
1,1,2,2-Tetrachloroethane	ug/g	0.05	0.05	<0.05
o-Xylene	ug/g		0.05	<0.05
1,3-Dichlorobenzene	ug/g	0.05	0.05	<0.05
1,4-Dichlorobenzene	ug/g	0.05	0.05	<0.05
1,2-Dichlorobenzene	ug/g	0.05	0.05	<0.05
Xylenes (Total)	ug/g	0.05	0.05	<0.05
1,3-Dichloropropene (Cis + Trans)	µg/g	0.05	0.04	<0.04
n-Hexane	µg/g	0.05	0.05	<0.05
Moisture Content	%		0.1	9.3
Surrogate	Unit	Acceptable Limits		
Toluene-d8	% Recovery	50-140		94
4-Bromofluorobenzene	% Recovery	50-140		71

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 1: Full Depth Background Site Condition Standards - Soil - Residential/Parkland/Institutional/Industrial/Commercial/Community Property Use

Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

3293947 The sample was analyzed using the high level technique. The sample was extracted using methanol, a small amount of the methanol extract was diluted in water and the purge & trap GC/MS analysis was performed. Results are based on the dry weight of the soil.

Xylenes total is a calculated parameter. The calculated value is the sum of m&p-Xylene + o-Xylene.

1,3-Dichloropropene total is a calculated parameter. The calculated value is the sum of Cis-1,3-Dichloropropene and Trans-1,3-Dichloropropene.

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

Analysis performed at AGAT Toronto (unless marked by \*)

Certified By:



**Exceedance Summary**

AGAT WORK ORDER: 21T839096

PROJECT: 211-10139-00

5835 COOPERS AVENUE  
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CLIENT NAME: WSP CANADA INC.

ATTENTION TO: Vanessa Oetinger

SAMPLEID	SAMPLE TITLE	GUIDELINE	ANALYSIS PACKAGE	PARAMETER	UNIT	GUIDEVALUE	RESULT
3293929	BH21-16 SS1	ON T1 S RPI/ICC	O. Reg. 153(511) - Metals & Inorganics (Soil)	Antimony	µg/g	1.3	2.8
3293929	BH21-16 SS1	ON T1 S RPI/ICC	O. Reg. 153(511) - Metals & Inorganics (Soil)	Molybdenum	µg/g	2	3.7
3293929	BH21-16 SS1	ON T1 S RPI/ICC	O. Reg. 153(511) - Metals & Inorganics (Soil)	Zinc	µg/g	290	468

## Quality Assurance

CLIENT NAME: WSP CANADA INC.  
 PROJECT: 211-10139-00  
 SAMPLING SITE:

AGAT WORK ORDER: 21T839096  
 ATTENTION TO: Vanessa Oetinger  
 SAMPLED BY:

Soil Analysis															
RPT Date: Dec 15, 2021			DUPLICATE				Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE		MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Measured Value		Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper

**O. Reg. 153(511) - Metals & Inorganics (Soil)**

Antimony	3296184		<0.8	<0.8	NA	< 0.8	134%	70%	130%	98%	80%	120%	92%	70%	130%
Arsenic	3296184		4	4	NA	< 1	113%	70%	130%	103%	80%	120%	107%	70%	130%
Barium	3296184		37.9	40.4	6.4%	< 2.0	112%	70%	130%	108%	80%	120%	108%	70%	130%
Beryllium	3296184		<0.4	<0.4	NA	< 0.4	102%	70%	130%	108%	80%	120%	109%	70%	130%
Boron	3296184		<5	<5	NA	< 5	89%	70%	130%	111%	80%	120%	112%	70%	130%
Boron (Hot Water Soluble)	3319050		0.40	0.39	NA	< 0.10	107%	60%	140%	105%	70%	130%	108%	60%	140%
Cadmium	3296184		0.7	0.8	NA	< 0.5	94%	70%	130%	102%	80%	120%	108%	70%	130%
Chromium	3296184		10	10	NA	< 5	99%	70%	130%	101%	80%	120%	110%	70%	130%
Cobalt	3296184		4.0	4.2	4.9%	< 0.5	103%	70%	130%	106%	80%	120%	106%	70%	130%
Copper	3296184		14.4	15.4	6.7%	< 1.0	100%	70%	130%	108%	80%	120%	110%	70%	130%
Lead	3296184		29	29	0.0%	< 1	103%	70%	130%	103%	80%	120%	99%	70%	130%
Molybdenum	3296184		<0.5	<0.5	NA	< 0.5	105%	70%	130%	104%	80%	120%	110%	70%	130%
Nickel	3296184		7	8	13.3%	< 1	101%	70%	130%	103%	80%	120%	102%	70%	130%
Selenium	3296184		<0.8	<0.8	NA	< 0.8	98%	70%	130%	98%	80%	120%	104%	70%	130%
Silver	3296184		<0.5	<0.5	NA	< 0.5	114%	70%	130%	102%	80%	120%	96%	70%	130%
Thallium	3296184		<0.5	<0.5	NA	< 0.5	99%	70%	130%	100%	80%	120%	96%	70%	130%
Uranium	3296184		<0.50	<0.50	NA	< 0.50	103%	70%	130%	100%	80%	120%	100%	70%	130%
Vanadium	3296184		17.6	19.0	7.7%	< 0.4	102%	70%	130%	101%	80%	120%	111%	70%	130%
Zinc	3296184		85	89	4.6%	< 5	102%	70%	130%	103%	80%	120%	112%	70%	130%
Chromium, Hexavalent	3309312		<0.2	<0.2	NA	< 0.2	102%	70%	130%	88%	80%	120%	81%	70%	130%
Cyanide, Free	3304561		<0.040	<0.040	NA	< 0.040	101%	70%	130%	97%	80%	120%	104%	70%	130%
Mercury	3296184		<0.10	<0.10	NA	< 0.10	103%	70%	130%	101%	80%	120%	101%	70%	130%
Electrical Conductivity (2:1)	3304572		0.176	0.163	7.7%	< 0.005	106%	80%	120%						
Sodium Adsorption Ratio (2:1) (Calc.)	3296184		0.060	0.062	3.3%	NA									
pH, 2:1 CaCl2 Extraction	3275481		6.60	6.84	3.6%	NA	101%	80%	120%						

Comments: NA signifies Not Applicable.

pH duplicates QA acceptance criteria was met relative as stated in Table 5-15 of Analytical Protocol document.

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

More than 90% of the elements met acceptance limits and overall data quality is acceptable for use. For a multi-element scan up to 10% of analytes may exceed the quoted limits by up to 10% absolute.

Certified By:



*Nivine Basily*

## Quality Assurance

CLIENT NAME: WSP CANADA INC.  
 PROJECT: 211-10139-00  
 SAMPLING SITE:

AGAT WORK ORDER: 21T839096  
 ATTENTION TO: Vanessa Oetinger  
 SAMPLED BY:

### Trace Organics Analysis

RPT Date: Dec 15, 2021			DUPLICATE			Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD		Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper

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

Naphthalene	3257319	< 0.05	< 0.05	NA	< 0.05	78%	50%	140%	105%	50%	140%	105%	50%	140%
Acenaphthylene	3257319	< 0.05	< 0.05	NA	< 0.05	84%	50%	140%	83%	50%	140%	98%	50%	140%
Acenaphthene	3257319	< 0.05	< 0.05	NA	< 0.05	85%	50%	140%	92%	50%	140%	83%	50%	140%
Fluorene	3257319	< 0.05	< 0.05	NA	< 0.05	105%	50%	140%	94%	50%	140%	88%	50%	140%
Phenanthrene	3257319	< 0.05	< 0.05	NA	< 0.05	98%	50%	140%	98%	50%	140%	74%	50%	140%
Anthracene	3257319	< 0.05	< 0.05	NA	< 0.05	86%	50%	140%	86%	50%	140%	82%	50%	140%
Fluoranthene	3257319	< 0.05	< 0.05	NA	< 0.05	68%	50%	140%	88%	50%	140%	91%	50%	140%
Pyrene	3257319	< 0.05	< 0.05	NA	< 0.05	84%	50%	140%	74%	50%	140%	107%	50%	140%
Benz(a)anthracene	3257319	< 0.05	< 0.05	NA	< 0.05	80%	50%	140%	85%	50%	140%	87%	50%	140%
Chrysene	3257319	< 0.05	< 0.05	NA	< 0.05	95%	50%	140%	90%	50%	140%	85%	50%	140%
Benzo(b)fluoranthene	3257319	< 0.05	< 0.05	NA	< 0.05	88%	50%	140%	105%	50%	140%	96%	50%	140%
Benzo(k)fluoranthene	3257319	< 0.05	< 0.05	NA	< 0.05	93%	50%	140%	98%	50%	140%	105%	50%	140%
Benzo(a)pyrene	3257319	< 0.05	< 0.05	NA	< 0.05	92%	50%	140%	86%	50%	140%	98%	50%	140%
Indeno(1,2,3-cd)pyrene	3257319	< 0.05	< 0.05	NA	< 0.05	105%	50%	140%	88%	50%	140%	86%	50%	140%
Dibenz(a,h)anthracene	3257319	< 0.05	< 0.05	NA	< 0.05	98%	50%	140%	74%	50%	140%	88%	50%	140%
Benzo(g,h,i)perylene	3257319	< 0.05	< 0.05	NA	< 0.05	86%	50%	140%	82%	50%	140%	80%	50%	140%

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

Benzene	3296192	<0.02	<0.02	NA	< 0.02	83%	60%	140%	87%	60%	140%	103%	60%	140%
Toluene	3296192	<0.05	<0.05	NA	< 0.05	100%	60%	140%	102%	60%	140%	81%	60%	140%
Ethylbenzene	3296192	<0.05	<0.05	NA	< 0.05	108%	60%	140%	112%	60%	140%	75%	60%	140%
m & p-Xylene	3296192	<0.05	<0.05	NA	< 0.05	98%	60%	140%	98%	60%	140%	105%	60%	140%
o-Xylene	3296192	<0.05	<0.05	NA	< 0.05	117%	60%	140%	105%	60%	140%	101%	60%	140%
F1 (C6 - C10)	3296192	<5	<5	NA	< 5	102%	60%	140%	99%	60%	140%	100%	60%	140%
F2 (C10 to C16)	3253580	47	44	NA	< 10	102%	60%	140%	85%	60%	140%	85%	60%	140%
F3 (C16 to C34)	3253580	870	650	28.9%	< 50	106%	60%	140%	86%	60%	140%	95%	60%	140%
F4 (C34 to C50)	3253580	170	790	NA	< 50	115%	60%	140%	78%	60%	140%	74%	60%	140%

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

Dichlorodifluoromethane	3290917	< 0.05	< 0.05	NA	< 0.05	97%	50%	140%	73%	50%	140%	79%	50%	140%
Vinyl Chloride	3290917	< 0.02	< 0.02	NA	< 0.02	108%	50%	140%	80%	50%	140%	95%	50%	140%
Bromomethane	3290917	< 0.05	< 0.05	NA	< 0.05	94%	50%	140%	91%	50%	140%	96%	50%	140%
Trichlorofluoromethane	3290917	< 0.05	< 0.05	NA	< 0.05	98%	50%	140%	87%	50%	140%	99%	50%	140%
Acetone	3290917	< 0.50	< 0.50	NA	< 0.50	104%	50%	140%	103%	50%	140%	103%	50%	140%
1,1-Dichloroethylene	3290917	< 0.05	< 0.05	NA	< 0.05	113%	50%	140%	90%	60%	130%	107%	50%	140%
Methylene Chloride	3290917	< 0.05	< 0.05	NA	< 0.05	117%	50%	140%	119%	60%	130%	85%	50%	140%
Trans- 1,2-Dichloroethylene	3290917	< 0.05	< 0.05	NA	< 0.05	100%	50%	140%	92%	60%	130%	97%	50%	140%
Methyl tert-butyl Ether	3290917	< 0.05	< 0.05	NA	< 0.05	117%	50%	140%	108%	60%	130%	107%	50%	140%
1,1-Dichloroethane	3290917	< 0.02	< 0.02	NA	< 0.02	107%	50%	140%	88%	60%	130%	101%	50%	140%
Methyl Ethyl Ketone	3290917	< 0.50	< 0.50	NA	< 0.50	96%	50%	140%	102%	50%	140%	101%	50%	140%



## Quality Assurance

CLIENT NAME: WSP CANADA INC.  
 PROJECT: 211-10139-00  
 SAMPLING SITE:

AGAT WORK ORDER: 21T839096  
 ATTENTION TO: Vanessa Oetinger  
 SAMPLED BY:

### Trace Organics Analysis (Continued)

RPT Date: Dec 15, 2021			DUPLICATE			Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD		Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
Cis- 1,2-Dichloroethylene	3290917		< 0.02	< 0.02	NA	< 0.02	109%	50%	140%	113%	60%	130%	113%	50%	140%
Chloroform	3290917		< 0.04	< 0.04	NA	< 0.04	116%	50%	140%	112%	60%	130%	105%	50%	140%
1,2-Dichloroethane	3290917		< 0.03	< 0.03	NA	< 0.03	116%	50%	140%	112%	60%	130%	116%	50%	140%
1,1,1-Trichloroethane	3290917		< 0.05	< 0.05	NA	< 0.05	78%	50%	140%	96%	60%	130%	79%	50%	140%
Carbon Tetrachloride	3290917		< 0.05	< 0.05	NA	< 0.05	82%	50%	140%	80%	60%	130%	76%	50%	140%
Benzene	3290917		0.21	0.19	NA	< 0.02	118%	50%	140%	99%	60%	130%	111%	50%	140%
1,2-Dichloropropane	3290917		< 0.03	< 0.03	NA	< 0.03	102%	50%	140%	113%	60%	130%	87%	50%	140%
Trichloroethylene	3290917		< 0.03	< 0.03	NA	< 0.03	106%	50%	140%	96%	60%	130%	97%	50%	140%
Bromodichloromethane	3290917		< 0.05	< 0.05	NA	< 0.05	118%	50%	140%	117%	60%	130%	102%	50%	140%
Methyl Isobutyl Ketone	3290917		< 0.50	< 0.50	NA	< 0.50	94%	50%	140%	101%	50%	140%	97%	50%	140%
1,1,2-Trichloroethane	3290917		< 0.04	< 0.04	NA	< 0.04	111%	50%	140%	111%	60%	130%	116%	50%	140%
Toluene	3290917		< 0.05	< 0.05	NA	< 0.05	102%	50%	140%	104%	60%	130%	117%	50%	140%
Dibromochloromethane	3290917		< 0.05	< 0.05	NA	< 0.05	111%	50%	140%	110%	60%	130%	97%	50%	140%
Ethylene Dibromide	3290917		< 0.04	< 0.04	NA	< 0.04	110%	50%	140%	107%	60%	130%	108%	50%	140%
Tetrachloroethylene	3290917		< 0.05	< 0.05	NA	< 0.05	85%	50%	140%	77%	60%	130%	80%	50%	140%
1,1,1,2-Tetrachloroethane	3290917		< 0.04	< 0.04	NA	< 0.04	94%	50%	140%	97%	60%	130%	72%	50%	140%
Chlorobenzene	3290917		< 0.05	< 0.05	NA	< 0.05	98%	50%	140%	97%	60%	130%	89%	50%	140%
Ethylbenzene	3290917		< 0.05	< 0.05	NA	< 0.05	102%	50%	140%	75%	60%	130%	74%	50%	140%
m & p-Xylene	3290917		< 0.05	< 0.05	NA	< 0.05	93%	50%	140%	93%	60%	130%	94%	50%	140%
Bromoform	3290917		< 0.05	< 0.05	NA	< 0.05	115%	50%	140%	114%	60%	130%	92%	50%	140%
Styrene	3290917		< 0.05	< 0.05	NA	< 0.05	74%	50%	140%	71%	60%	130%	75%	50%	140%
1,1,2,2-Tetrachloroethane	3290917		< 0.05	< 0.05	NA	< 0.05	98%	50%	140%	95%	60%	130%	109%	50%	140%
o-Xylene	3290917		< 0.05	< 0.05	NA	< 0.05	98%	50%	140%	93%	60%	130%	88%	50%	140%
1,3-Dichlorobenzene	3290917		< 0.05	< 0.05	NA	< 0.05	102%	50%	140%	99%	60%	130%	113%	50%	140%
1,4-Dichlorobenzene	3290917		< 0.05	< 0.05	NA	< 0.05	98%	50%	140%	106%	60%	130%	115%	50%	140%
1,2-Dichlorobenzene	3290917		< 0.05	< 0.05	NA	< 0.05	117%	50%	140%	94%	60%	130%	103%	50%	140%
n-Hexane	3290917		< 0.05	< 0.05	NA	< 0.05	76%	50%	140%	88%	60%	130%	82%	50%	140%

Comments: When the average of the sample and duplicate results is less than 5x the RDL, the Relative Percent Difference (RPD) will be indicated as Not Applicable (NA).

Certified By: 

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

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

## QC Exceedance

CLIENT NAME: WSP CANADA INC.

AGAT WORK ORDER: 21T839096

PROJECT: 211-10139-00

ATTENTION TO: Vanessa Oetinger

RPT Date: Dec 15, 2021		REFERENCE MATERIAL		METHOD BLANK SPIKE			MATRIX SPIKE			
PARAMETER	Sample Id	Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
			Lower	Upper		Lower	Upper		Lower	Upper

O. Reg. 153(511) - Metals &amp; Inorganics (Soil)

Antimony	134%	70%	130%	98%	80%	120%	92%	70%	130%
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Comments: NA signifies Not Applicable.

pH duplicates QA acceptance criteria was met relative as stated in Table 5-15 of Analytical Protocol document.

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

More than 90% of the elements met acceptance limits and overall data quality is acceptable for use. For a multi-element scan up to 10% of analytes may exceed the quoted limits by up to 10% absolute.



## Method Summary

CLIENT NAME: WSP CANADA INC.  
 PROJECT: 211-10139-00  
 SAMPLING SITE:

AGAT WORK ORDER: 21T839096  
 ATTENTION TO: Vanessa Oetinger  
 SAMPLED BY:

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Soil Analysis			
Antimony	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Arsenic	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Barium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Beryllium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Boron	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Boron (Hot Water Soluble)	MET-93-6104	modified from EPA 6010D and MSA PART 3, CH 21	ICP/OES
Cadmium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Chromium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Cobalt	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Copper	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Lead	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Molybdenum	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Nickel	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Selenium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Silver	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Thallium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Uranium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Vanadium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Zinc	MET 93 -6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Chromium, Hexavalent	INOR-93-6068	modified from EPA 3060 and EPA 7196	SPECTROPHOTOMETER
Cyanide, Free	INOR-93-6052	modified from ON MOECC E3015, SM 4500-CN- I, G-387	TECHNICON AUTO ANALYZER
Mercury	MET-93-6103	modified from EPA 7471B and SM 3112 B	ICP-MS
Electrical Conductivity (2:1)	INOR-93-6036	modified from MSA PART 3, CH 14 and SM 2510 B	EC METER
Sodium Adsorption Ratio (2:1) (Calc.)	INOR-93-6007	modified from EPA 6010D & Analytical Protocol	ICP/OES
pH, 2:1 CaCl <sub>2</sub> Extraction	INOR-93-6031	modified from EPA 9045D and MCKEAGUE 3.11	PH METER

## Method Summary

CLIENT NAME: WSP CANADA INC.

AGAT WORK ORDER: 21T839096

PROJECT: 211-10139-00

ATTENTION TO: Vanessa Oetinger

SAMPLING SITE:

SAMPLED BY:

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Trace Organics Analysis			
Naphthalene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Acenaphthylene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Acenaphthene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Fluorene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Phenanthrene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Anthracene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Fluoranthene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Pyrene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Benz(a)anthracene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Chrysene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Benzo(b)fluoranthene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Benzo(k)fluoranthene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Benzo(a)pyrene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Indeno(1,2,3-cd)pyrene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Dibenz(a,h)anthracene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Benzo(g,h,i)perylene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
1 and 2 Methylnaphthalene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Naphthalene-d8	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Acridine-d9	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Terphenyl-d14	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Moisture Content	VOL-91-5009	CCME Tier 1 Method	BALANCE
F1 (C6 - C10)	VOL-91-5009	modified from CCME Tier 1 Method	(P&T)GC/FID
F1 (C6 to C10) minus BTEX	VOL-91-5009	modified from CCME Tier 1 Method	(P&T)GC/FID
Toluene-d8	VOL-91-5009	modified from EPA SW-846 5030C & 8260D	(P&T)GC/MS
F2 (C10 to C16)	VOL-91-5009	modified from CCME Tier 1 Method	GC/FID
F3 (C16 to C34)	VOL-91-5009	modified from CCME Tier 1 Method	GC/FID
F4 (C34 to C50)	VOL-91-5009	modified from CCME Tier 1 Method	GC/FID
Gravimetric Heavy Hydrocarbons	VOL-91-5009	modified from CCME Tier 1 Method	BALANCE
Terphenyl	VOL-91-5009	modified from CCME Tier 1 Method	GC/FID
Benzene	VOL-91-5009	modified from CCME Tier 1 Method	(P&T)GC/MS
Toluene	VOL-91-5009	modified from CCME Tier 1 Method	(P&T)GC/MS
Ethylbenzene	VOL-91-5009	modified from CCME Tier 1 Method	(P&T)GC/MS
m & p-Xylene	VOL-91-5009	modified from CCME Tier 1 Method	(P&T)GC/MS





## Method Summary

CLIENT NAME: WSP CANADA INC.

AGAT WORK ORDER: 21T839096

PROJECT: 211-10139-00

ATTENTION TO: Vanessa Oetinger

SAMPLING SITE:

SAMPLED BY:

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
o-Xylene	VOL-91-5009	modified from CCME Tier 1 Method	(P&T)GC/MS
Xylenes (Total)	VOL-91-5009	modified from CCME Tier 1 Method	(P&T)GC/MS
F1 (C6 to C10) minus BTEX	VOL-91-5009	modified from CCME Tier 1 Method	P&T GC/FID
Dichlorodifluoromethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Vinyl Chloride	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Bromomethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Trichlorofluoromethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Acetone	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,1-Dichloroethylene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Methylene Chloride	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Trans- 1,2-Dichloroethylene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Methyl tert-butyl Ether	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,1-Dichloroethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Methyl Ethyl Ketone	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Cis- 1,2-Dichloroethylene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Chloroform	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,2-Dichloroethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,1,1-Trichloroethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Carbon Tetrachloride	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Benzene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,2-Dichloropropane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Trichloroethylene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Bromodichloromethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Methyl Isobutyl Ketone	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,1,2-Trichloroethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Toluene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Dibromochloromethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Ethylene Dibromide	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Tetrachloroethylene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS

## Method Summary

CLIENT NAME: WSP CANADA INC.

AGAT WORK ORDER: 21T839096

PROJECT: 211-10139-00

ATTENTION TO: Vanessa Oetinger

SAMPLING SITE:

SAMPLED BY:

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
1,1,1,2-Tetrachloroethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Chlorobenzene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Ethylbenzene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
m & p-Xylene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Bromoform	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Styrene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,1,2,2-Tetrachloroethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
o-Xylene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,3-Dichlorobenzene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,4-Dichlorobenzene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,2-Dichlorobenzene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Xylenes (Total)	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,3-Dichloropropene (Cis + Trans)	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
n-Hexane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Toluene-d8	VOL-91-5002	modified from EPA 5035A & EPA 8260D	(P&T)GC/MS
4-Bromofluorobenzene	VOL-91-5002	modified from EPA 5035A & EPA 8260D	(P&T)GC/MS
Moisture Content	VOL-91-5009	modified from CCME Tier 1 Method	BALANCE

**Laboratory Use Only**

Work Order #: 21T839096

Cooler Quantity: 1 large blk

Arrival Temperatures: 3.8 | 1.9 | 4.5

Custody Seal Intact:  Yes  No  N/A

Notes: free ice

**Chain of Custody Record** If this is a Drinking Water sample, please use Drinking Water Chain of Custody Form (potable water consumed by humans)

**Report Information:**

Company: WSP Inc.

Contact: Vanessa Oetinger

Address: 2 International Blvd, Etobicoke

Phone: \_\_\_\_\_ Fax: \_\_\_\_\_

Reports to be sent to:

1. Email: Vanessa.oetinger@wsp.com

2. Email:  matt.roy@wsp.com

**Regulatory Requirements:**  
*(Please check all applicable boxes)*

Regulation 153/04  Excess Soils R406  Sewer Use  
 Sanitary  Storm

Table 1 Indicate One  
 Ind/Com  Res/Park  Agriculture

Table \_\_\_\_\_ Indicate One  
 Region \_\_\_\_\_

Regulation 558  Prov. Water Quality Objectives (PWQO)

CCME  Other \_\_\_\_\_

Soil Texture (Check One)  
 Coarse  Fine

**Turnaround Time (TAT) Required:**

**Regular TAT**  5 to 7 Business Days

**Rush TAT (Rush Surcharges Apply)**

3 Business Days  2 Business Days  Next Business Day

OR Date Required (Rush Surcharges May Apply): \_\_\_\_\_

Please provide prior notification for rush TAT  
 \*TAT is exclusive of weekends and statutory holidays

For 'Same Day' analysis, please contact your AGAT CPM

**Project Information:**

Project: 211-10139-00

Site Location: ORBY Rail

Sampled By: Matthew Roy

AGAT Quote #: \_\_\_\_\_ PO: \_\_\_\_\_

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

Is this submission for a **Report of Site Condition?**

Yes  No

Report Guideline on **Certificate of Analysis**

Yes  No

**Invoice Information:** Bill To Same: Yes  No

Company: \_\_\_\_\_

Contact: \_\_\_\_\_

Address: \_\_\_\_\_

Email: payables.ontario@wsp.com

- Sample Matrix Legend**
- B Biota
  - GW Ground Water
  - O Oil
  - P Paint
  - S Soil
  - SD Sediment
  - SW Surface Water

Sample Identification	Date Sampled	Time Sampled	# of Containers	Sample Matrix	Comments/ Special Instructions	Y / N	0. Reg 153		0. Reg 558		0. Reg 406		Potentially Hazardous or High Concentration (Y/N)		
							Metals & Inorganics	Metals - CrVI, Hg, HWSB	Landfill Disposal Characterization TOLP: M&I, VOCs, APHs, B(a)P, PCBs	Excess Soils SPLP Rainwater Leach	Excess Soils Characterization Package	PH, ICPMS Metals, BTEX, F1-F4		Salt - EC/SAR	
BH21-2 SS2	12/2/21		2	S			X								
BH21-2 SS5			2	S											
QAQC-11			1	S	PHC only										
BH21-2 SS6			2	S											
BH21-3 SS1			1	S				X						X	
QAQC-12			1	S				X							
BH21-3 SS2			1	S										X	
BH21-3 SS6			2	S											
BH21-3 SS7			2	S											X
BH21-6 SS1			12/1/21		1	S									
BH21-6 SS2	1	S													

Samples Relinquished By (Print Name and Sign): <u>Matthew Roy</u>	Date: <u>12/2/21</u> Time: <u>1500</u>	Samples Received By (Print Name and Sign): <u>Adriana Bellavia</u>	Date: _____ Time: _____	21DEC 2 3:42PM
Samples Relinquished By (Print Name and Sign):	Date: _____ Time: _____	Samples Received By (Print Name and Sign):	Date: _____ Time: _____	Page <u>1</u> of <u>2</u>
Samples Relinquished By (Print Name and Sign):	Date: _____ Time: _____	Samples Received By (Print Name and Sign):	Date: _____ Time: _____	No: <b>T 126072</b>





# AGAT Laboratories

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

### Laboratory Use Only

Work Order #: \_\_\_\_\_  
Cooler Quantity: 1 large blk  
Arrival Temperatures: 3.8 | 1.9 | 4.5  
Custody Seal Intact:  Yes  No  N/A  
Notes: free ice

## Chain of Custody Record

If this is a Drinking Water sample, please use Drinking Water Chain of Custody Form (potable water consumed by humans)

**Report Information:** See Page 1  
Company: \_\_\_\_\_  
Contact: \_\_\_\_\_  
Address: \_\_\_\_\_  
Phone: \_\_\_\_\_ Fax: \_\_\_\_\_  
Reports to be sent to:  
1. Email: \_\_\_\_\_  
2. Email: \_\_\_\_\_

**Regulatory Requirements:**  
*(Please check all applicable boxes)*

Regulation 153/04  Excess Soils R406  Sewer Use  
 Sanitary  Storm  
Table 1 Indicate One  Ind/Corn  Res/Park  Agriculture  
Table \_\_\_\_\_ Indicate One \_\_\_\_\_  
Region \_\_\_\_\_  
 Regulation 558  Prov. Water Quality Objectives (PWQO)  
Soil Texture (Check One)  CCME  Other  
 Coarse  Fine Indicate One \_\_\_\_\_

Is this submission for a Record of Site Condition?  Yes  No  
Report Guideline on Certificate of Analysis  Yes  No

**Turnaround Time (TAT) Required:**  
Regular TAT  5 to 7 Business Days  
Rush TAT (Rush Surcharges Apply)  
 3 Business Days  2 Business Days  Next Business Day  
OR Date Required (Rush Surcharges May Apply): \_\_\_\_\_  
Please provide prior notification for rush TAT  
\*TAT is exclusive of weekends and statutory holidays  
For 'Same Day' analysis, please contact your AGAT CPM

**Project Information:**  
Project: 211-10139-00  
Site Location: GRBY Road  
Sampled By: Matthew Roy  
AGAT Quote #: \_\_\_\_\_ PO: \_\_\_\_\_  
*Please note: If quotation number is not provided, client will be billed full price for analysis.*

**Invoice Information:** Bill To Same: Yes  No   
Company: \_\_\_\_\_  
Contact: \_\_\_\_\_  
Address: \_\_\_\_\_  
Email: \_\_\_\_\_

**Sample Matrix Legend**

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

Sample Identification	Date Sampled	Time Sampled	# of Containers	Sample Matrix	Comments/ Special Instructions	Y / N	O. Reg 153				O. Reg 406				Potentially Hazardous or High Concentration (Y/N)				
							Metals & Inorganics	Metals: <input type="checkbox"/> CrVI, <input type="checkbox"/> Hg, <input type="checkbox"/> HWSB	BTEX, F1,F4 PHCs	Analyze F4G if required <input type="checkbox"/> Yes <input type="checkbox"/> No	PAHs	PCBs	VOC	Landfill Disposal Characterization TOLP: <input type="checkbox"/> MBI, <input type="checkbox"/> VOCs, <input type="checkbox"/> ABNs, <input type="checkbox"/> BiAP, <input type="checkbox"/> PCBs		Excess Soils SPLP Rainwater Leach SPLP: <input type="checkbox"/> Metals, <input type="checkbox"/> VOCs, <input type="checkbox"/> SVOCs	Excess Soils Characterization Package pH, ICPMS Metals, BTEX, F1,F4	Salt - EC/SAR	
BH21-6 S55	12/1/21	AM	2	S															
BH21-6 S56		AM	2	S					X										
BH21-16 S51		PM	1	S			X												
BH21-16 S52		PM	1	S							X								
<del>BH21</del> QAQC-10		PM	1	S							X								
BH21-16 S55		PM	2	S							X								X
BH21-16 S58		PM	2	S							X								
QAQC-9		PM	2	S															

Samples Relinquished By (Print Name and Sign): <u>Matthew Roy</u>	Date: <u>12/2/21</u> Time: <u>1500</u>	Samples Received By (Print Name and Sign): <u>Adriana Beltrava</u>	Date: _____ Time: _____
Samples Relinquished By (Print Name and Sign): _____	Date: _____ Time: _____	Samples Received By (Print Name and Sign): _____	Date: _____ Time: _____
Samples Relinquished By (Print Name and Sign): _____	Date: _____ Time: _____	Samples Received By (Print Name and Sign): _____	Date: _____ Time: _____

21DEC 2 7:42PM  
Page 2 of 2  
No: **T 126075**





CLIENT NAME: WSP CANADA INC.  
2 INTERNATIONAL BLVD SUITE 201  
ETOBICOKE, ON M9W1A2  
(416) 798-0065

ATTENTION TO: Marsad Jafar  
PROJECT: 211-10139-00 200 02

AGAT WORK ORDER: 21T841270

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

WATER ANALYSIS REVIEWED BY: Nivine Basily, Inorganics Report Writer

DATE REPORTED: Dec 21, 2021

PAGES (INCLUDING COVER): 18

VERSION\*: 1

Should you require any information regarding this analysis please contact your client services representative at (905) 712-5100

\*Notes

**Disclaimer:**

- All work conducted herein has been done using accepted standard protocols, and generally accepted practices and methods. AGAT test methods may incorporate modifications from the specified reference methods to improve performance.
- All samples will be disposed of within 30 days after receipt unless a Long Term Storage Agreement is signed and returned. Some specialty analysis may be exempt, please contact your Client Project Manager for details.
- AGAT's liability in connection with any delay, performance or non-performance of these services is only to the Client and does not extend to any other third party. Unless expressly agreed otherwise in writing, AGAT's liability is limited to the actual cost of the specific analysis or analyses included in the services.
- This Certificate shall not be reproduced except in full, without the written approval of the laboratory.
- The test results reported herewith relate only to the samples as received by the laboratory.
- Application of guidelines is provided "as is" without warranty of any kind, either expressed or implied, including, but not limited to, warranties of merchantability, fitness for a particular purpose, or non-infringement. AGAT assumes no responsibility for any errors or omissions in the guidelines contained in this document.
- All reportable information as specified by ISO/IEC 17025:2017 is available from AGAT Laboratories upon request.



## Certificate of Analysis

AGAT WORK ORDER: 21T841270

PROJECT: 211-10139-00 200 02

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

CLIENT NAME: WSP CANADA INC.

SAMPLING SITE: ORBY

ATTENTION TO: Marsad Jafar

SAMPLED BY: Marsad Jafar

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

DATE RECEIVED: 2021-12-07

DATE REPORTED: 2021-12-21

SAMPLE DESCRIPTION:		BH21-16		
SAMPLE TYPE:		Water		
DATE SAMPLED:		2021-12-06		
Parameter	Unit	G / S	RDL	3310367
Naphthalene	µg/L	7	0.20	<0.20
Acenaphthylene	µg/L	1	0.20	<0.20
Acenaphthene	µg/L	4.1	0.20	<0.20
Fluorene	µg/L	120	0.20	<0.20
Phenanthrene	µg/L	0.1	0.10	<0.10
Anthracene	µg/L	0.1	0.10	<0.10
Fluoranthene	µg/L	0.4	0.20	<0.20
Pyrene	µg/L	0.2	0.20	<0.20
Benzo(a)anthracene	µg/L	0.2	0.20	<0.20
Chrysene	µg/L	0.1	0.10	<0.10
Benzo(b)fluoranthene	µg/L	0.1	0.10	<0.10
Benzo(k)fluoranthene	µg/L	0.1	0.10	<0.10
Benzo(a)pyrene	µg/L	0.01	0.01	<0.01
Indeno(1,2,3-cd)pyrene	µg/L	0.2	0.20	<0.20
Dibenz(a,h)anthracene	µg/L	0.2	0.20	<0.20
Benzo(g,h,i)perylene	µg/L	0.2	0.20	<0.20
2-and 1-methyl Naphthalene	µg/L	2	0.20	<0.20
Sediment				No
Surrogate	Unit	Acceptable Limits		
Naphthalene-d8	%	50-140		120
Acridine-d9	%	50-140		98
Terphenyl-d14	%	50-140		85

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 1: Full Depth Background Site Condition Standards - Ground Water - All Types of Property Uses  
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

3310367 Note: The result for Benzo(b)Fluoranthene is the total of the Benzo(b)&(j)Fluoranthene isomers because the isomers co-elute on the GC column.  
2- and 1-Methyl Naphthalene is a calculated parameter. The calculated value is the sum of 2-Methyl Naphthalene and 1-Methyl Naphthalene. The calculated parameter is non-accredited. The parameters that are components of the calculation are accredited.  
Sediment parameter is comment only based on visual inspection of the sample prior to extraction and is not an accredited test.

Analysis performed at AGAT Toronto (unless marked by \*)

Certified By:



## Certificate of Analysis

AGAT WORK ORDER: 21T841270

PROJECT: 211-10139-00 200 02

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

CLIENT NAME: WSP CANADA INC.

SAMPLING SITE: ORBY

ATTENTION TO: Marsad Jafar

SAMPLED BY: Marsad Jafar

### O. Reg. 153(511) - PHCs F1 - F4 (Water)

DATE RECEIVED: 2021-12-07

DATE REPORTED: 2021-12-21

Parameter	Unit	SAMPLE DESCRIPTION:				
		G / S		RDL		
		BH21-6	BH21-2	QAQC-2		
		SAMPLE TYPE: Water		Water		Water
		DATE SAMPLED: 2021-12-06		2021-12-07		2021-12-06
		3310483	3310484	3310486		
Benzene	µg/L	0.5	0.20	<0.20	<0.20	<0.20
Toluene	µg/L	0.8	0.20	<0.20	<0.20	<0.20
Ethylbenzene	µg/L	0.5	0.10	<0.10	<0.10	<0.10
m & p-Xylene	µg/L		0.20	<0.20	<0.20	<0.20
o-Xylene	µg/L		0.10	<0.10	<0.10	<0.10
Xylenes (Total)	µg/L	72	0.20	<0.20	<0.20	<0.20
F1 (C6 - C10)	µg/L	420	25	<25	<25	<25
F1 (C6 to C10) minus BTEX	µg/L	420	25	<25	<25	<25
F2 (C10 to C16)	µg/L	150	100	<100	<100	<100
F3 (C16 to C34)	µg/L	500	100	<100	<100	<100
F4 (C34 to C50)	µg/L	500	100	<100	<100	<100
Gravimetric Heavy Hydrocarbons	µg/L		500	NA	NA	NA
Sediment				NO	NO	NO
Surrogate	Unit	Acceptable Limits				
Toluene-d8	% Recovery	60-140	79.5	78.2	123	
Terphenyl	% Recovery	60-140	92	101	96	

Certified By:



## Certificate of Analysis

AGAT WORK ORDER: 21T841270

PROJECT: 211-10139-00 200 02

5835 COOPERS AVENUE  
MISSISSAUGA, ONTARIO  
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FAX (905)712-5122  
<http://www.agatlabs.com>

CLIENT NAME: WSP CANADA INC.

SAMPLING SITE: ORBY

ATTENTION TO: Marsad Jafar

SAMPLED BY: Marsad Jafar

### O. Reg. 153(511) - PHCs F1 - F4 (Water)

DATE RECEIVED: 2021-12-07

DATE REPORTED: 2021-12-21

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 1: Full Depth Background Site Condition Standards - Ground Water - All Types of Property Uses  
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

3310483-3310486 The C6-C10 fraction is calculated using Toluene response factor.  
Xylenes total is a calculated parameter. The calculated value is the sum of m&p-Xylene and o-Xylene.  
C6-C10 (F1 minus BTEX) is a calculated parameter. The calculated value is F1 minus BTEX.  
The calculated parameters are non-accredited. The parameters that are components of the calculation are accredited.  
The C10 - C16, C16 - C34, and C34 - C50 fractions are calculated using the average response factor for n-C10, n-C16, and nC34.  
Gravimetric Heavy Hydrocarbons are not included in the Total C16 - C50 and are only determined if the chromatogram of the C34 - C50 Hydrocarbons indicated that hydrocarbons >C50 are present.  
The chromatogram has returned to baseline by the retention time of nC50.  
Total C6-C50 results are corrected for BTEX contribution.  
This method complies with the Reference Method for the CWS PHC and is validated for use in the laboratory.  
nC6 and nC10 response factors are within 30% of Toluene response factor.  
nC10, nC16 and nC34 response factors are within 10% of their average.  
C50 response factor is within 70% of nC10 + nC16 nC34 average.  
Linearity is within 15%.  
Extraction and holding times were met for this sample.  
Fractions 1-4 are quantified with the contribution of PAHs. Under Ontario Regulation 153/04, results are considered valid without determining the PAH contribution if not requested by the client.  
NA = Not Applicable

Sediment parameter is comment only based on visual inspection of the sample prior to extraction and is not an accredited test.

Analysis performed at AGAT Toronto (unless marked by \*)

Certified By:





## Certificate of Analysis

AGAT WORK ORDER: 21T841270

PROJECT: 211-10139-00 200 02

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

CLIENT NAME: WSP CANADA INC.

SAMPLING SITE: ORBY

ATTENTION TO: Marsad Jafar

SAMPLED BY: Marsad Jafar

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

DATE RECEIVED: 2021-12-07

DATE REPORTED: 2021-12-21

SAMPLE DESCRIPTION:		BH21-16		
SAMPLE TYPE:		Water		
DATE SAMPLED:		2021-12-06		
Parameter	Unit	G / S	RDL	3310367
F1 (C6-C10)	µg/L	420	25	<25
F1 (C6 to C10) minus BTEX	µg/L	420	25	<25
F2 (C10 to C16)	µg/L	150	100	<100
F2 (C10 to C16) minus Naphthalene	µg/L		100	<100
F3 (C16 to C34)	µg/L	500	100	<100
F3 (C16 to C34) minus PAHs	µg/L		100	<100
F4 (C34 to C50)	µg/L	500	100	<100
Gravimetric Heavy Hydrocarbons	µg/L		500	NA
Sediment				NO
Surrogate	Unit	Acceptable Limits		
Toluene-d8	% Recovery	50-140		74.5
Terphenyl	% Recovery	60-140		84

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 1: Full Depth Background Site Condition Standards - Ground Water - All Types of Property Uses  
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

3310367 The C6-C10 fraction is calculated using toluene response factor.  
C6-C10 (F1 minus BTEX) is a calculated parameter. The calculated value is F1 minus BTEX. The calculated parameter is non-accredited. The parameters that are components of the calculation are accredited.  
The C10 - C16, C16 - C34, and C34 - C50 fractions are calculated using the average response factor for n-C10, n-C16, and n-C34.  
Gravimetric Heavy Hydrocarbons are not included in the Total C16-C50 and are only determined if the chromatogram of the C34 - C50 hydrocarbons indicates that hydrocarbons >C50 are present.  
The chromatogram has returned to baseline by the retention time of nC50.  
Total C6 - C50 results are corrected for BTEX and PAH contributions.  
C>10 - C16 (F2- Naphthalene) is a calculated parameter. The calculated value is F2 - Naphthalene.  
C>16 - C34 (F3-PAH) is a calculated parameter. The calculated value is F3-PAH (PAH: sum of Phenanthrene, Benzo(a)anthracene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Benzo(a)pyrene, Fluoranthene, Dibenzo(a,h)anthracene, Indeno(1,2,3-c,d)pyrene and Pyrene).  
This method complies with the Reference Method for the CWS PHC and is validated for use in the laboratory.  
nC10, nC16 and nC34 response factors are within 10% of their average.  
C50 response factor is within 70% of nC10 + nC16 + nC34 average.  
Linearity is within 15%.  
Extraction and holding times were met for this sample.

Sediment parameter is comment only based on visual inspection of the sample prior to extraction and is not an accredited test.

Analysis performed at AGAT Toronto (unless marked by \*)

Certified By:



## Certificate of Analysis

AGAT WORK ORDER: 21T841270

PROJECT: 211-10139-00 200 02

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

CLIENT NAME: WSP CANADA INC.

SAMPLING SITE: ORBY

ATTENTION TO: Marsad Jafar

SAMPLED BY: Marsad Jafar

### O. Reg. 153(511) - VOCs (Water)

DATE RECEIVED: 2021-12-07

DATE REPORTED: 2021-12-21

Parameter	Unit	SAMPLE DESCRIPTION:		BH21-16	QAQC-1	Trip Blank
		SAMPLE TYPE:		Water	Water	Water
		DATE SAMPLED:		2021-12-06	2021-12-06	2021-12-04
	G / S	RDL	3310367	3310485	3310488	
Dichlorodifluoromethane	µg/L	590	0.20	<0.20	<0.20	<0.20
Vinyl Chloride	µg/L	0.5	0.17	<0.17	<0.17	<0.17
Bromomethane	µg/L	0.89	0.20	<0.20	<0.20	<0.20
Trichlorofluoromethane	µg/L	150	0.40	<0.40	<0.40	<0.40
Acetone	µg/L	2700	1.0	<1.0	<1.0	<1.0
1,1-Dichloroethylene	µg/L	0.5	0.30	<0.30	<0.30	<0.30
Methylene Chloride	µg/L	5	0.30	<0.30	<0.30	<0.30
trans- 1,2-Dichloroethylene	µg/L	1.6	0.20	<0.20	<0.20	<0.20
Methyl tert-butyl ether	µg/L	15	0.20	<0.20	<0.20	<0.20
1,1-Dichloroethane	µg/L	0.5	0.30	<0.30	<0.30	<0.30
Methyl Ethyl Ketone	µg/L	400	1.0	<1.0	<1.0	<1.0
cis- 1,2-Dichloroethylene	µg/L	1.6	0.20	<0.20	<0.20	<0.20
Chloroform	µg/L	2	0.20	<0.20	<0.20	<0.20
1,2-Dichloroethane	µg/L	0.5	0.20	<0.20	<0.20	<0.20
1,1,1-Trichloroethane	µg/L	0.5	0.30	<0.30	<0.30	<0.30
Carbon Tetrachloride	µg/L	0.2	0.20	<0.20	<0.20	<0.20
Benzene	µg/L	0.5	0.20	<0.20	<0.20	<0.20
1,2-Dichloropropane	µg/L	0.5	0.20	<0.20	<0.20	<0.20
Trichloroethylene	µg/L	0.5	0.20	<0.20	<0.20	<0.20
Bromodichloromethane	µg/L	2	0.20	<0.20	<0.20	<0.20
Methyl Isobutyl Ketone	µg/L	640	1.0	<1.0	<1.0	<1.0
1,1,2-Trichloroethane	µg/L	0.5	0.20	<0.20	<0.20	<0.20
Toluene	µg/L	0.8	0.20	<0.20	<0.20	<0.20
Dibromochloromethane	µg/L	2	0.10	<0.10	<0.10	<0.10
Ethylene Dibromide	µg/L	0.2	0.10	<0.10	<0.10	<0.10
Tetrachloroethylene	µg/L	0.5	0.20	<0.20	<0.20	<0.20
1,1,1,2-Tetrachloroethane	µg/L	1.1	0.10	<0.10	<0.10	<0.10
Chlorobenzene	µg/L	0.5	0.10	<0.10	<0.10	<0.10
Ethylbenzene	µg/L	0.5	0.10	<0.10	<0.10	<0.10
m & p-Xylene	µg/L		0.20	<0.20	<0.20	<0.20

Certified By:



## Certificate of Analysis

AGAT WORK ORDER: 21T841270

PROJECT: 211-10139-00 200 02

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

CLIENT NAME: WSP CANADA INC.

SAMPLING SITE: ORBY

ATTENTION TO: Marsad Jafar

SAMPLED BY: Marsad Jafar

### O. Reg. 153(511) - VOCs (Water)

DATE RECEIVED: 2021-12-07

DATE REPORTED: 2021-12-21

Parameter	Unit	SAMPLE DESCRIPTION:		BH21-16	QAQC-1	Trip Blank
		G / S	RDL	3310367	3310485	3310488
Bromoform	µg/L	5	0.10	<0.10	<0.10	<0.10
Styrene	µg/L	0.5	0.10	<0.10	<0.10	<0.10
1,1,2,2-Tetrachloroethane	µg/L	0.5	0.10	<0.10	<0.10	<0.10
o-Xylene	µg/L		0.10	<0.10	<0.10	<0.10
1,3-Dichlorobenzene	µg/L	0.5	0.10	<0.10	<0.10	<0.10
1,4-Dichlorobenzene	µg/L	0.5	0.10	<0.10	<0.10	<0.10
1,2-Dichlorobenzene	µg/L	0.5	0.10	<0.10	<0.10	<0.10
1,3-Dichloropropene	µg/L	0.5	0.30	<0.30	<0.30	<0.30
Xylenes (Total)	µg/L	72	0.20	<0.20	<0.20	<0.20
n-Hexane	µg/L	5	0.20	<0.20	<0.20	<0.20
Surrogate	Unit	Acceptable Limits				
Toluene-d8	% Recovery	50-140		88	107	82
4-Bromofluorobenzene	% Recovery	50-140		79	73	82

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 1: Full Depth Background Site Condition Standards - Ground Water - All Types of Property Uses  
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

3310367-3310488 Xylenes total is a calculated parameter. The calculated value is the sum of m&p-Xylene and o-Xylene.  
1,3-Dichloropropene total is a calculated parameter. The calculated value is the sum of Cis-1,3-Dichloropropene and Trans-1,3-Dichloropropene.  
The calculated parameter is non-accredited. The parameters that are components of the calculation are accredited.

Analysis performed at AGAT Toronto (unless marked by \*)

Certified By:



## Certificate of Analysis

AGAT WORK ORDER: 21T841270

PROJECT: 211-10139-00 200 02

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

CLIENT NAME: WSP CANADA INC.

SAMPLING SITE: ORBY

ATTENTION TO: Marsad Jafar

SAMPLED BY: Marsad Jafar

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

DATE RECEIVED: 2021-12-07

DATE REPORTED: 2021-12-21

Parameter	Unit	SAMPLE DESCRIPTION:		BH21-16	BH21-6	
		SAMPLE TYPE:		Water	Water	
		DATE SAMPLED:		2021-12-06	2021-12-06	
		G / S	RDL	3310367	RDL	3310483
Dissolved Antimony	µg/L	1.5	1.0	1.1	1.0	<1.0
Dissolved Arsenic	µg/L	13	1.0	<1.0	1.0	4.7
Dissolved Barium	µg/L	610	2.0	63.9	2.0	271
Dissolved Beryllium	µg/L	0.5	0.50	<0.50	0.50	<0.50
Dissolved Boron	µg/L	1700	100.0	1676	10.0	279
Dissolved Cadmium	µg/L	0.5	0.20	<0.20	0.20	<0.20
Dissolved Chromium	µg/L	11	2.0	<2.0	2.0	25.3
Dissolved Cobalt	µg/L	3.8	0.50	<0.50	0.50	4.53
Dissolved Copper	µg/L	5	1.0	<1.0	1.0	2.7
Dissolved Lead	µg/L	1.9	0.50	<0.50	0.50	0.93
Dissolved Molybdenum	µg/L	23	0.50	24.7	0.50	6.45
Dissolved Nickel	µg/L	14	1.0	1.1	1.0	6.9
Dissolved Selenium	µg/L	5	1.0	1.6	1.0	<1.0
Dissolved Silver	µg/L	0.3	0.20	<0.20	0.20	<0.20
Dissolved Thallium	µg/L	0.5	0.30	<0.30	0.30	<0.30
Dissolved Uranium	µg/L	8.9	0.50	1.86	0.50	3.52
Dissolved Vanadium	µg/L	3.9	0.40	0.62	0.40	3.29
Dissolved Zinc	µg/L	160	5.0	<5.0	5.0	6.1
Mercury	µg/L	0.1	0.02	<0.02	0.02	<0.02
Chromium VI	µg/L	25	2	<2	2	5.43
Cyanide, Free	µg/L	5	2	<2	2	<2
Dissolved Sodium	µg/L	490000	250	210000	1000	342000
Chloride	µg/L	790000	100	286000	122	1460000
Electrical Conductivity	uS/cm	NA	2	1570	2	4940
pH	pH Units		NA	7.68	NA	7.72

Certified By:



*Nvine Basly*





**AGAT** Laboratories

# Certificate of Analysis

AGAT WORK ORDER: 21T841270

PROJECT: 211-10139-00 200 02

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

CLIENT NAME: WSP CANADA INC.

SAMPLING SITE: ORBY

ATTENTION TO: Marsad Jafar

SAMPLED BY: Marsad Jafar

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

DATE RECEIVED: 2021-12-07

DATE REPORTED: 2021-12-21

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 1: Full Depth Background Site Condition Standards - Ground Water - All Types of Property Uses  
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

3310367-3310483 Metals analysis completed on a filtered sample.

Dilution required, RDL has been increased accordingly.

Analysis performed at AGAT Toronto (unless marked by \*)

Certified By:



*Nvine Basly*



### Exceedance Summary

AGAT WORK ORDER: 21T841270

PROJECT: 211-10139-00 200 02

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

CLIENT NAME: WSP CANADA INC.

ATTENTION TO: Marsad Jafar

SAMPLEID	SAMPLE TITLE	GUIDELINE	ANALYSIS PACKAGE	PARAMETER	UNIT	GUIDEVALUE	RESULT
3310367	BH21-16	ON T1 GW	O. Reg. 153(511) - Metals & Inorganics (Water)	Dissolved Molybdenum	µg/L	23	24.7
3310483	BH21-6	ON T1 GW	O. Reg. 153(511) - Metals & Inorganics (Water)	Chloride	µg/L	790000	1460000
3310483	BH21-6	ON T1 GW	O. Reg. 153(511) - Metals & Inorganics (Water)	Dissolved Chromium	µg/L	11	25.3
3310483	BH21-6	ON T1 GW	O. Reg. 153(511) - Metals & Inorganics (Water)	Dissolved Cobalt	µg/L	3.8	4.53

## Quality Assurance

CLIENT NAME: WSP CANADA INC.

AGAT WORK ORDER: 21T841270

PROJECT: 211-10139-00 200 02

ATTENTION TO: Marsad Jafar

SAMPLING SITE: ORBY

SAMPLED BY: Marsad Jafar

Trace Organics Analysis															
RPT Date: Dec 21, 2021			DUPLICATE				Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE		MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Measured Value		Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper

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

F1 (C6-C10)	3296537	<25	<25	NA	< 25	108%	60%	140%	98%	60%	140%	109%	60%	140%
F2 (C10 to C16)	3304778	< 100	< 100	NA	< 100	102%	60%	140%	85%	60%	140%	78%	60%	140%
F3 (C16 to C34)	3304778	< 100	< 100	NA	< 100	110%	60%	140%	75%	60%	140%	75%	60%	140%
F4 (C34 to C50)	3304778	< 100	< 100	NA	< 100	115%	60%	140%	76%	60%	140%	74%	60%	140%

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

Naphthalene	3227991	< 0.20	< 0.20	NA	< 0.20	105%	50%	140%	78%	50%	140%	77%	50%	140%
Acenaphthylene	3227991	< 0.20	< 0.20	NA	< 0.20	98%	50%	140%	82%	50%	140%	107%	50%	140%
Acenaphthene	3227991	< 0.20	< 0.20	NA	< 0.20	105%	50%	140%	71%	50%	140%	81%	50%	140%
Fluorene	3227991	< 0.20	< 0.20	NA	< 0.20	86%	50%	140%	92%	50%	140%	92%	50%	140%
Phenanthrene	3227991	< 0.10	< 0.10	NA	< 0.10	98%	50%	140%	88%	50%	140%	85%	50%	140%
Anthracene	3227991	< 0.10	< 0.10	NA	< 0.10	85%	50%	140%	93%	50%	140%	78%	50%	140%
Fluoranthene	3227991	< 0.20	< 0.20	NA	< 0.20	99%	50%	140%	96%	50%	140%	93%	50%	140%
Pyrene	3227991	< 0.20	< 0.20	NA	< 0.20	78%	50%	140%	96%	50%	140%	99%	50%	140%
Benzo(a)anthracene	3227991	< 0.20	< 0.20	NA	< 0.20	96%	50%	140%	94%	50%	140%	96%	50%	140%
Chrysene	3227991	< 0.10	< 0.10	NA	< 0.10	86%	50%	140%	114%	50%	140%	84%	50%	140%
Benzo(b)fluoranthene	3227991	< 0.10	< 0.10	NA	< 0.10	92%	50%	140%	76%	50%	140%	92%	50%	140%
Benzo(k)fluoranthene	3227991	< 0.10	< 0.10	NA	< 0.10	98%	50%	140%	92%	50%	140%	78%	50%	140%
Benzo(a)pyrene	3227991	< 0.01	< 0.01	NA	< 0.01	78%	50%	140%	105%	50%	140%	101%	50%	140%
Indeno(1,2,3-cd)pyrene	3227991	< 0.20	< 0.20	NA	< 0.20	92%	50%	140%	108%	50%	140%	105%	50%	140%
Dibenz(a,h)anthracene	3227991	< 0.20	< 0.20	NA	< 0.20	95%	50%	140%	75%	50%	140%	72%	50%	140%
Benzo(g,h,i)perylene	3227991	< 0.20	< 0.20	NA	< 0.20	91%	50%	140%	85%	50%	140%	105%	50%	140%

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

Dichlorodifluoromethane	3315412	<0.20	<0.20	NA	< 0.20	89%	50%	140%	103%	50%	140%	74%	50%	140%
Vinyl Chloride	3315412	<0.17	<0.17	NA	< 0.17	106%	50%	140%	83%	50%	140%	105%	50%	140%
Bromomethane	3315412	<0.20	<0.20	NA	< 0.20	96%	50%	140%	86%	50%	140%	95%	50%	140%
Trichlorofluoromethane	3315412	<0.40	<0.40	NA	< 0.40	107%	50%	140%	94%	50%	140%	94%	50%	140%
Acetone	3315412	<1.0	<1.0	NA	< 1.0	104%	50%	140%	102%	50%	140%	102%	50%	140%
1,1-Dichloroethylene	3315412	<0.30	<0.30	NA	< 0.30	93%	50%	140%	76%	60%	130%	107%	50%	140%
Methylene Chloride	3315412	<0.30	<0.30	NA	< 0.30	105%	50%	140%	89%	60%	130%	102%	50%	140%
trans- 1,2-Dichloroethylene	3315412	<0.20	<0.20	NA	< 0.20	88%	50%	140%	95%	60%	130%	70%	50%	140%
Methyl tert-butyl ether	3315412	<0.20	<0.20	NA	< 0.20	101%	50%	140%	97%	60%	130%	76%	50%	140%
1,1-Dichloroethane	3315412	<0.30	<0.30	NA	< 0.30	119%	50%	140%	96%	60%	130%	99%	50%	140%
Methyl Ethyl Ketone	3315412	<1.0	<1.0	NA	< 1.0	94%	50%	140%	99%	50%	140%	102%	50%	140%
cis- 1,2-Dichloroethylene	3315412	<0.20	<0.20	NA	< 0.20	106%	50%	140%	114%	60%	130%	80%	50%	140%
Chloroform	3315412	1.42	1.35	5.1%	< 0.20	98%	50%	140%	104%	60%	130%	62%	50%	140%
1,2-Dichloroethane	3315412	<0.20	<0.20	NA	< 0.20	111%	50%	140%	109%	60%	130%	95%	50%	140%
1,1,1-Trichloroethane	3315412	<0.30	<0.30	NA	< 0.30	79%	50%	140%	75%	60%	130%	71%	50%	140%
Carbon Tetrachloride	3315412	<0.20	<0.20	NA	< 0.20	116%	50%	140%	73%	60%	130%	77%	50%	140%

## Quality Assurance

CLIENT NAME: WSP CANADA INC.

AGAT WORK ORDER: 21T841270

PROJECT: 211-10139-00 200 02

ATTENTION TO: Marsad Jafar

SAMPLING SITE: ORBY

SAMPLED BY: Marsad Jafar

### Trace Organics Analysis (Continued)

RPT Date: Dec 21, 2021			DUPLICATE			Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD		Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
Benzene	3315412		<0.20	<0.20	NA	< 0.20	116%	50%	140%	102%	60%	130%	79%	50%	140%
1,2-Dichloropropane	3315412		<0.20	<0.20	NA	< 0.20	117%	50%	140%	82%	60%	130%	96%	50%	140%
Trichloroethylene	3315412		<0.20	<0.20	NA	< 0.20	111%	50%	140%	92%	60%	130%	73%	50%	140%
Bromodichloromethane	3315412		<0.20	<0.20	NA	< 0.20	113%	50%	140%	103%	60%	130%	87%	50%	140%
Methyl Isobutyl Ketone	3315412		<1.0	<1.0	NA	< 1.0	106%	50%	140%	98%	50%	140%	103%	50%	140%
1,1,2-Trichloroethane	3315412		<0.20	<0.20	NA	< 0.20	101%	50%	140%	119%	60%	130%	110%	50%	140%
Toluene	3315412		1.14	1.37	18.3%	< 0.20	97%	50%	140%	102%	60%	130%	76%	50%	140%
Dibromochloromethane	3315412		<0.10	<0.10	NA	< 0.10	97%	50%	140%	113%	60%	130%	111%	50%	140%
Ethylene Dibromide	3315412		<0.10	<0.10	NA	< 0.10	77%	50%	140%	118%	60%	130%	100%	50%	140%
Tetrachloroethylene	3315412		<0.20	<0.20	NA	< 0.20	109%	50%	140%	110%	60%	130%	81%	50%	140%
1,1,1,2-Tetrachloroethane	3315412		<0.10	<0.10	NA	< 0.10	95%	50%	140%	116%	60%	130%	71%	50%	140%
Chlorobenzene	3315412		<0.10	<0.10	NA	< 0.10	106%	50%	140%	116%	60%	130%	87%	50%	140%
Ethylbenzene	3315412		<0.10	<0.10	NA	< 0.10	119%	50%	140%	72%	60%	130%	74%	50%	140%
m & p-Xylene	3315412		<0.20	<0.20	NA	< 0.20	100%	50%	140%	96%	60%	130%	105%	50%	140%
Bromoform	3315412		<0.10	<0.10	NA	< 0.10	93%	50%	140%	105%	60%	130%	96%	50%	140%
Styrene	3315412		<0.10	<0.10	NA	< 0.10	96%	50%	140%	74%	60%	130%	73%	50%	140%
1,1,2,2-Tetrachloroethane	3315412		<0.10	<0.10	NA	< 0.10	104%	50%	140%	106%	60%	130%	87%	50%	140%
o-Xylene	3315412		<0.10	<0.10	NA	< 0.10	84%	50%	140%	102%	60%	130%	81%	50%	140%
1,3-Dichlorobenzene	3315412		<0.10	<0.10	NA	< 0.10	100%	50%	140%	89%	60%	130%	113%	50%	140%
1,4-Dichlorobenzene	3315412		<0.10	<0.10	NA	< 0.10	106%	50%	140%	100%	60%	130%	114%	50%	140%
1,2-Dichlorobenzene	3315412		<0.10	<0.10	NA	< 0.10	109%	50%	140%	103%	60%	130%	103%	50%	140%
n-Hexane	3315412		<0.20	<0.20	NA	< 0.20	94%	50%	140%	94%	60%	130%	76%	50%	140%

Comments: When the average of the sample and duplicate results is less than 5x the RDL, the Relative Percent Difference (RPD) will be indicated as Not Applicable (NA).

**O. Reg. 153(511) - PHCs F1 - F4 (Water)**

Benzene	3296537		<0.20	<0.20	NA	< 0.20	96%	60%	140%	89%	60%	140%	106%	60%	140%
Toluene	3296537		<0.20	<0.20	NA	< 0.20	82%	60%	140%	85%	60%	140%	86%	60%	140%
Ethylbenzene	3296537		<0.10	<0.10	NA	< 0.10	87%	60%	140%	96%	60%	140%	94%	60%	140%
m & p-Xylene	3296537		<0.20	<0.20	NA	< 0.20	99%	60%	140%	80%	60%	140%	94%	60%	140%
o-Xylene	3296537		<0.10	<0.10	NA	< 0.10	90%	60%	140%	104%	60%	140%	80%	60%	140%
F1 (C6 - C10)	3296537		<25	<25	NA	< 25	108%	60%	140%	98%	60%	140%	109%	60%	140%

Certified By: \_\_\_\_\_





## Quality Assurance

CLIENT NAME: WSP CANADA INC.  
 PROJECT: 211-10139-00 200 02  
 SAMPLING SITE: ORBY

AGAT WORK ORDER: 21T841270  
 ATTENTION TO: Marsad Jafar  
 SAMPLED BY: Marsad Jafar

Water Analysis															
RPT Date: Dec 21, 2021			DUPLICATE			Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE		MATRIX SPIKE			
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD		Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper

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

Dissolved Antimony	3308730		<1.0	<1.0	NA	< 1.0	99%	70%	130%	101%	80%	120%	109%	70%	130%
Dissolved Arsenic	3308730		<1.0	2.6	NA	< 1.0	94%	70%	130%	103%	80%	120%	115%	70%	130%
Dissolved Barium	3308730		107	90.7	16.5%	< 2.0	102%	70%	130%	100%	80%	120%	108%	70%	130%
Dissolved Beryllium	3308730		<0.50	<0.50	NA	< 0.50	103%	70%	130%	107%	80%	120%	113%	70%	130%
Dissolved Boron	3308730		114	107	6.3%	< 10.0	101%	70%	130%	105%	80%	120%	110%	70%	130%
Dissolved Cadmium	3308730		<0.20	<0.20	NA	< 0.20	99%	70%	130%	100%	80%	120%	113%	70%	130%
Dissolved Chromium	3308730		<2.0	<2.0	NA	< 2.0	102%	70%	130%	100%	80%	120%	102%	70%	130%
Dissolved Cobalt	3308730		<0.50	<0.50	NA	< 0.50	96%	70%	130%	106%	80%	120%	107%	70%	130%
Dissolved Copper	3308730		<1.0	<1.0	NA	< 1.0	100%	70%	130%	105%	80%	120%	106%	70%	130%
Dissolved Lead	3308730		<0.50	<0.50	NA	< 0.50	99%	70%	130%	100%	80%	120%	107%	70%	130%
Dissolved Molybdenum	3308730		1.32	1.62	NA	< 0.50	99%	70%	130%	104%	80%	120%	113%	70%	130%
Dissolved Nickel	3308730		1.9	1.9	NA	< 1.0	98%	70%	130%	106%	80%	120%	108%	70%	130%
Dissolved Selenium	3308730		<1.0	<1.0	NA	< 1.0	99%	70%	130%	105%	80%	120%	119%	70%	130%
Dissolved Silver	3308730		<0.20	<0.20	NA	< 0.20	97%	70%	130%	106%	80%	120%	100%	70%	130%
Dissolved Thallium	3308730		<0.30	<0.30	NA	< 0.30	98%	70%	130%	99%	80%	120%	105%	70%	130%
Dissolved Uranium	3308730		<0.50	<0.50	NA	< 0.50	101%	70%	130%	108%	80%	120%	121%	70%	130%
Dissolved Vanadium	3308730		1.15	0.82	NA	< 0.40	97%	70%	130%	103%	80%	120%	103%	70%	130%
Dissolved Zinc	3308730		<5.0	<5.0	NA	< 5.0	100%	70%	130%	99%	80%	120%	111%	70%	130%
Mercury	3295856		<0.02	<0.02	NA	< 0.02	101%	70%	130%	96%	80%	120%	99%	70%	130%
Chromium VI	3315551		<2	2.02	NA	< 2	101%	70%	130%	105%	80%	120%	98%	70%	130%
Cyanide, Free	3319579		<2	<2	NA	< 2	104%	70%	130%	101%	80%	120%	109%	70%	130%
Dissolved Sodium	3293826		6250	6210	0.6%	< 50	95%	70%	130%	97%	80%	120%	99%	70%	130%
Chloride	3295003		551000	551000	0.0%	< 100	94%	70%	130%	103%	80%	120%	NA	70%	130%
Electrical Conductivity	3306912		1350	1340	0.7%	< 2	104%	90%	110%						
pH	3306912		7.78	7.78	0.0%	NA	102%	90%	110%						

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

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

Certified By: \_\_\_\_\_



*Nivine Basily*

## Method Summary

CLIENT NAME: WSP CANADA INC.

AGAT WORK ORDER: 21T841270

PROJECT: 211-10139-00 200 02

ATTENTION TO: Marsad Jafar

SAMPLING SITE: ORBY

SAMPLED BY: Marsad Jafar

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Trace Organics Analysis			
Naphthalene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Acenaphthylene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Acenaphthene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Fluorene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Phenanthrene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Anthracene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Fluoranthene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Pyrene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Benzo(a)anthracene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Chrysene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Benzo(b)fluoranthene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Benzo(k)fluoranthene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Benzo(a)pyrene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Indeno(1,2,3-cd)pyrene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Dibenz(a,h)anthracene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Benzo(g,h,i)perylene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
2-and 1-methyl Naphthalene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Naphthalene-d8	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Acridine-d9	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Terphenyl-d14	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Sediment			
Benzene	VOL-91-5010	modified from MOE PHC-E3421	(P&T)GC/MS
Toluene	VOL-91-5010	modified from MOE PHC-E3421	(P&T)GC/MS
Ethylbenzene	VOL-91-5010	modified from MOE PHC-E3421	(P&T)GC/MS
m & p-Xylene	VOL-91-5010	modified from MOE PHC-E3421	(P&T)GC/MS
o-Xylene	VOL-91-5010	modified from MOE PHC-E3421	(P&T)GC/MS
Xylenes (Total)	VOL-91-5010	modified from MOE PHC-E3421	(P&T)GC/MS
F1 (C6 - C10)	VOL-91-5010	modified from MOE PHC-E3421	(P&T)GC/FID
F1 (C6 to C10) minus BTEX	VOL-91-5010	modified from MOE PHC-E3421	(P&T)GC/FID
Toluene-d8	VOL-91-5010	modified from MOE PHC-E3421	(P&T)GC/MS
F2 (C10 to C16)	VOL-91-5010	modified from MOE PHC-E3421	GC/FID
F3 (C16 to C34)	VOL-91-5010	modified from MOE PHC-E3421	GC/FID
F4 (C34 to C50)	VOL-91-5010	modified from MOE PHC-E3421	GC/FID

## Method Summary

CLIENT NAME: WSP CANADA INC.

AGAT WORK ORDER: 21T841270

PROJECT: 211-10139-00 200 02

ATTENTION TO: Marsad Jafar

SAMPLING SITE:ORBY

SAMPLED BY:Marsad Jafar

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Gravimetric Heavy Hydrocarbons	VOL-91-5010	modified from MOE PHC-E3421	BALANCE
Terphenyl	VOL-91-5010	modified from MOE PHC-E3421	GC/FID
F1 (C6-C10)	VOL-91-5010	modified from MOE PHC-E3421	(P&T)GC/FID
F1 (C6 to C10) minus BTEX	VOL-91-5010	modified from MOE PHC-E3421	P&T GC/FID
Toluene-d8	VOL-91-5010	modified from MOE PHC-E3421	(P&T)GC/MS
F2 (C10 to C16) minus Naphthalene	VOL-91-5010	modified from MOE PHC-E3421	GC/FID
F3 (C16 to C34)	VOL-91-5010	modified from MOE PHC-E3421	GC/FID
F3 (C16 to C34) minus PAHs	VOL-91-5010	modified from MOE PHC-E3421	GC/FID
Dichlorodifluoromethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Vinyl Chloride	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Bromomethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Trichlorofluoromethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Acetone	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1-Dichloroethylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Methylene Chloride	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
trans- 1,2-Dichloroethylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Methyl tert-butyl ether	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1-Dichloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Methyl Ethyl Ketone	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
cis- 1,2-Dichloroethylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Chloroform	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,2-Dichloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1,1-Trichloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Carbon Tetrachloride	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Benzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,2-Dichloropropane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Trichloroethylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Bromodichloromethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Methyl Isobutyl Ketone	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1,2-Trichloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Toluene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS

## Method Summary

CLIENT NAME: WSP CANADA INC.

AGAT WORK ORDER: 21T841270

PROJECT: 211-10139-00 200 02

ATTENTION TO: Marsad Jafar

SAMPLING SITE: ORBY

SAMPLED BY: Marsad Jafar

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Dibromochloromethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Ethylene Dibromide	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Tetrachloroethylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1,1,2-Tetrachloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Chlorobenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Ethylbenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
m & p-Xylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Bromoform	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Styrene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1,2,2-Tetrachloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
o-Xylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,3-Dichlorobenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,4-Dichlorobenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,2-Dichlorobenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,3-Dichloropropene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Xylenes (Total)	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
n-Hexane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Toluene-d8	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
4-Bromofluorobenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS





## Method Summary

CLIENT NAME: WSP CANADA INC.  
 PROJECT: 211-10139-00 200 02  
 SAMPLING SITE:ORBY

AGAT WORK ORDER: 21T841270  
 ATTENTION TO: Marsad Jafar  
 SAMPLED BY: Marsad Jafar

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Water Analysis			
Dissolved Antimony	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Arsenic	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Barium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Beryllium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Boron	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Cadmium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Chromium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Cobalt	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Copper	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Lead	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Molybdenum	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Nickel	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Selenium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Silver	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Thallium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Uranium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Vanadium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Zinc	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Mercury	MET-93-6100	modified from EPA 245.2 and SM 3112 B	CVAAS
Chromium VI	INOR-93-6034	modified from SM 3500-CR B	LACHAT FIA
Cyanide, Free	INOR-93-6052	modified from ON MOECC E3015, SM 4500-CN- I, G-387	TECHNICON AUTO ANALYZER
Dissolved Sodium Chloride	MET-93-6105	modified from EPA 6010D	ICP/OES
Electrical Conductivity	INOR-93-6004	modified from SM 4110 B	ION CHROMATOGRAPH
pH	INOR-93-6000	SM 2510 B	PC TITRATE
	INOR-93-6000	modified from SM 4500-H+ B	PC TITRATE



# AGAT Laboratories

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

## Laboratory Use Only

Work Order #: 217841270  
Cooler Quantity: 1 BIK (bagged ice)  
Arrival Temperatures: 1.9 3.5 2.0  
Custody Seal Intact:  Yes  No  N/A  
Notes:

## Chain of Custody Record

If this is a Drinking Water sample, please use Drinking Water Chain of Custody Form (potable water consumed by humans)

### Report Information:

Company: WSP  
Contact: Marsad Jafar  
Address: 2 International Blvd, Toronto ON  
Phone: 437-233-2935 Fax: \_\_\_\_\_  
Reports to be sent to:  
1. Email: vanessa.oetinger@wsp.com  
2. Email: Marsad.jafar@wsp.com

### Regulatory Requirements:

(Please check all applicable boxes)

Regulation 153/04  Excess Soils R406  Sewer Use  
 Ind./Corn  Sanitary  Storm  
 Res./Park  Agriculture  Prov. Water Quality Objectives (PWQO)  
 Agriculture  Regulation 558  Other  
Soil Texture (Check One)  CCME  Other  
 Coarse  Fine  
Indicate One

### Is this submission for a Record of Site Condition?

Yes  No

### Report Guideline on Certificate of Analysis

Yes  No

### Project Information:

Project: 211-10139-00 Ph 200 02  
Site Location: ORBY  
Sampled By: Marsad Jafar  
AGAT Quote #: \_\_\_\_\_ PO: \_\_\_\_\_  
Please note: If quotation number is not provided, client will be billed full price for analysis.

### Invoice Information:

Bill To Same: Yes  No

Company: \_\_\_\_\_  
Contact: \_\_\_\_\_  
Address: \_\_\_\_\_  
Email: payables.ontario@wsp.com

### Sample Matrix Legend

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

Sample Identification	Date Sampled	Time Sampled	# of Containers	Sample Matrix	Comments/ Special Instructions	Y / N	0. Reg 153		PAHs	PCBs	VOC	0. Reg 406		Salt - EC/SAR	Potentially Hazardous or High Concentration (Y/N)
							Metals & Inorganics	Metals - <input type="checkbox"/> CrVI, <input type="checkbox"/> Hg, <input type="checkbox"/> HWSB				Landfill Disposal Characterization TCLP: <input type="checkbox"/> M&I, <input type="checkbox"/> VOCs, <input type="checkbox"/> ABNs, <input type="checkbox"/> BtP, <input type="checkbox"/> PCBs	Excess Soils SPLP Rainwater Leach		
BH21-16	Dec 06/21	AM	16	GW		Y	X	X	X	X					
BH21-6	Dec 06/21	AM	11	GW		Y	X	X	X						
BH21-2	Dec 07/21	AM	5	GW		Y	X	X							
QAQC-1	Dec 06/21	AM	3	GW		Y				X					
QAQC-2	Dec 06/21	AM	5	GW		Y		X							
Trip Blank	-	AM	3	GW		-				X					

Samples Relinquished By (Print Name and Sign): <u>Marsad Jafar</u>	Date: <u>Dec 07/21</u>	Time:	Samples Received By (Print Name and Sign): <u>Weil Ramnarain</u>	Date:	Time:
Samples Relinquished By (Print Name and Sign):	Date:	Time:	Samples Received By (Print Name and Sign):	Date:	Time:
Samples Relinquished By (Print Name and Sign):	Date:	Time:	Samples Received By (Print Name and Sign):	Date:	Time:

Nº: **T 128116**