

5578 George Street, Niagara Falls **Phase Two Environmental Site Assessment**



Project Location:
5578 George Street
Niagara Falls, ON
L2E 3E2

Prepared For:
1338284 Ontario Inc.
4-5602 George Street
Niagara Falls, ON
L2E 3E2

Prepared By:
Niagara Soils Solutions Ltd.
3300 Merrittville Highway, Unit 4
Thorold, ON
L2V 4Y6



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ACRONYMS AND ABBREVIATIONS

APECs	Areas of Potential Environmental Concern
bgs	Below Ground Surface
BTEX	Benzene, Toluene, Ethylbenzene, Xylene
COC	Chain of Custody
COPCs	Contaminants of Potential Concerns
EC	Electrical Conductivity
ESA	Environmental Site Assessment
MECP	Ministry of the Environment, Conservation and Parks
MOECC	Ministry of the Environment and Climate Change
NPCA	Niagara Peninsula Conservation Authority
O. Reg.	Ontario Regulation
PAHs	Polycyclic Aromatic Hydrocarbons
PCA	Potentially Contaminating Activity
PHCs	Petroleum Hydrocarbons
SAR	Sodium Adsorption Ratio
SOPs	Standard Operating Procedures
SCS	Site Condition Standard
VOCs	Volatile Organic Compounds

1.0 EXECUTIVE SUMMARY

Niagara Soils Solutions Ltd. (NSSL) was retained by 1338284 Ontario Inc. to conduct a Phase Two Environmental Site Assessment (ESA) of the residential property located at 5578 George Street in Niagara Falls, Ontario (herein referred to as the “Phase Two Property” or the “Site”). The Phase Two ESA is being requested to investigate the environmental conditions of the Site based upon areas of concern identified in the NSSL’s Phase One ESA report (October 2024).

The Phase One ESA identified 27 potentially contaminating activities (PCAs) within the study area, which resulted in the creation of three on-site areas of potential environmental concern (APECs) to the Site’s soil and groundwater. The activities involved the off-site storage of gasoline and related products in fixed tanks, and the maintenance and repair of vehicles. The scope of work included:

- Underground service utility locates were conducted by Ontario One Call and a private locating service.
- Three environmental boreholes were drilled across the Site, within the identified APEC areas, to a maximum depth of about 7.62 m bgs.
- Two soil hand auger samples were taken to a maximum depth of 0.75 m bgs.
- Three additional boreholes were drilled to approximately 12.19 m bgs for the installation of monitoring wells.
- Select soil and groundwater samples were submitted for laboratory testing of Metals, Hydride forming Metals (As, Sb, Se), Petroleum Hydrocarbons (PHCs) F1 to F4, Benzene, Toluene, Ethylbenzene and Xylene (BTEX), Volatile Organic Compounds (VOCs), Polycyclic Aromatic Hydrocarbons (PAHs), and Other Regulated Parameters (ORPs): Boron Hot Water Soluble, (B-HWS), Cyanide (CN⁻), Chromium VI (Cr (VI)), Mercury (Hg), pH, Sodium Adsorption Ratio (SAR) and Electrical Conductivity (EC).
- Two soil samples indicated an exceedance to Metals (Barium and Lead). Delineation samples were taken surrounding the initial sample location and analysed with the results meeting applicable criteria.

NSSL therefore concludes that all soil and groundwater results met applicable Ontario Ministry of the Environment, Conservation, and Parks Table 3 Full Depth Generic Site Condition Standards for Use in a Non-Potable Groundwater Condition for Residential/Parkland/Institutional land use, fine/medium-grained soils. No additional work is required.



2.0 INTRODUCTION

Niagara Soils Solutions Ltd. (NSSL) was retained by 1338284 Ontario Inc. to conduct a Phase Two Environmental Site Assessment (ESA) of the residential property located at 5578 George Street in Niagara Falls, Ontario (herein referred to as the “Phase Two Property” or the “Site”). The Phase Two ESA is being requested to investigate the environmental conditions of the Site based upon areas of concern identified in the NSSL’s Phase One ESA report (October 2024). See Figure 1 for Site Location.

The Phase One ESA identified 27 potentially contaminating activities (PCAs) within the study area, which resulted in the creation of three on-site areas of potential environmental concern (APECs) to the Site’s soil and groundwater. The activities involved the off-site storage of gasoline and related products in fixed tanks, and the maintenance and repair of vehicles.

2.1 Site Description

The municipal and legal description of the subject property included in the Phase One ESA is stated as LT 10 PL 31 STAMFORD SURFACE ONLY AS IN R0754732; NIAGARA FALLS. The Property Identification Number (PIN) is 64323-0267 (LT).

The Phase Two ESA Property is approximately 0.056 hectares in size. The residential lot has one single dwelling with no basement on-site, two detached sheds are located in the rear yard along with bushes and shrubs. The study area exhibits a diverse mix of features, including residential properties, industrial businesses, and commercial properties.

2.2 Property Ownership

The current Owners of the Phase Two property are Murray Gault and Anita Gault.

2.3 Current and Proposed Future Uses

The current and proposed land use remains residential.

2.4 Applicable Site Condition Standard

Under O. Reg. 153/04, as amended, the Ministry of the Environment, Conservation and Parks (MECP) has outlined Site Condition Standards (SCS) in the document “Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act” dated April 15, 2011. The following criteria and supporting rationale were utilized to determine the applicable SCS for the Phase Two ESA property.

Table 1: Site Condition Standards Applicable to the Phase Two Property

Property Use	The Site is used as residential, proposed future redevelopment will remain residential therefore, Residential/Parkland/Institutional standards were applied.
Grain Size	As per the Niagara Testing & Inspection (NTIL) report provided in Appendix D, the grain size analysis for selected samples was determined to be Fine/Medium-grained.
Water Wells	No domestic water wells were identified within 250 metres (m) of the Phase Two Property. Ten monitoring wells were found within the Study area. The Site and the surrounding properties are serviced by the municipal watermain.
Within 30 m of a Waterbody	In accordance with O. Reg. 153/04, no land on the Phase Two Property is located within 30 m of a waterbody.
Depth to Bedrock	Based on the drilling activities, there is not more than 2.0 m of soil between the ground surface and the top of the bedrock at the Site. Therefore, shallow soil criteria are applicable.
pH	The pH levels across the Site were recorded as above 5 and below 9 for the surface soil, and between 9 and 11 for the subsurface soil.
Environmentally Sensitive Area	The Phase Two Property has not been identified within an environmentally sensitive area.
Area of Natural Significance	The Phase Two Property is not classified as an environmentally sensitive area under O. Reg. 153/04, as amended. The Phase Two Property does not include land or is within 30 m of land that would be classified as an area of natural significance as defined by O. Reg. 153/04, as amended.

Based upon the above characteristics, it was determined that Table 3 Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition for Residential/Parkland/Institutional (R/P/I) land use and fine/medium textured soil criteria would be utilized for the Phase Two ESA investigation.



2.0 BACKGROUND INFORMATION

2.1 Physical Setting

A review of the Ministry of Northern Development and Mines, Geology Ontario Spatial Search tool as well as “Quaternary Geology of Southern Ontario” (Map2496) and “Bedrock Geology of Southern Ontario” (Map2544), indicate that the native overburden consists of glaciolacustrine nearshore deltaic sand and silt of the Late Wisconsinan, underlain by Lockport-Amabel dolomite of the Silurian Formation. Depth to groundwater ranges between 18 and 22 meters below ground surface (m bgs) in the study area, based on a review of local well records. The estimated depth to bedrock is > 13.2 m bgs, based on a nearby recent RSC filing (RSC# 226074) and the bedrock elevation map.

The Phase One Property land cover is characterized by a gravel parking area and overgrown vegetation. As the Site is predominately covered by a permeable surface, overland flow is considered to be limited and would be directed westward as per site gradient. Stormwater in the surrounding lands would flow westward into the street’s catch basins and be directed into the hydro water channel west of the Site. The Site was observed to be relatively flat, with a slight westward slope. The inferred local groundwater direction in the study area is northwest, based on a review of the elevations and hydrogeology of the area.

3.0 SCOPE OF INVESTIGATION

3.1 Overview of Site Investigation

The Phase Two ESA investigation at the Site encompassed the following key components:

- Underground service utility locates were conducted by Ontario One Call and a private locating service.
- Three environmental boreholes were drilled across the Site, within the identified APECs, to a maximum depth of about 7.62 m bgs.
- Two soil hand auger samples were taken to a maximum depth of 0.75 m bgs.
- Three additional boreholes were drilled to approximately 12.19 m bgs.
- All boreholes were converted into monitoring wells to a maximum depth of 12.19.
- Groundwater samples were collected from BH/MW4, BH/MW5 and BH/MW6 as initial well installations at BH/MW1, BH/MW2 and BH/MW3 were recorded as dry.
- Select soil and groundwater samples were submitted for laboratory testing of Metals, Hydride forming Metals (As, Sb, Se), Petroleum Hydrocarbons (PHCs) F1 to F4, Benzene, Toluene, Ethylbenzene and Xylene (BTEX), Volatile Organic Compounds (VOCs), Polycyclic Aromatic Hydrocarbons (PAHs), and Other Regulated Parameters (ORPs): Boron Hot Water Soluble, (B-HWS), Cyanide (CN⁻), Chromium VI (Cr (VI)), Mercury (Hg), pH, Sodium Adsorption Ratio (SAR) and Electrical Conductivity (EC).

3.2 Media Investigated

The Phase Two ESA involved the investigation of soil and groundwater at the Site.

3.3 Deviation from Sampling and Analysis Plan

There were no deviations from the sampling and analysis plan.

3.4 Impediments

No physical impediments were encountered, and there was no denial of access during the Phase Two ESA.

4.0 INVESTIGATION METHOD

4.1 Phase Two ESA General Overview

The Phase Two ESA was carried out according to the Sampling and Analysis Plan and NSSL's Standard Operating Procedures (SOPs).

Groundwater monitoring wells were installed in accordance with the Ontario Water Resource Act, R.R.O. 1990, Ontario Regulation (O. Reg.) 903 – Amended to O. Reg. 128/03. The sampling and decontamination procedures were conducted in accordance with the "Guidance on Sampling and Analytical Methods for Use at Contaminated Sites in Ontario", May 1996, revised December 1996, as amended by O. Reg. 511/09.

Laboratory analytical methods, protocols, and procedures were carried out in accordance with the 'Protocol for Analytical Methods Use in the Assessment of Properties under Part XV.1 of the Environmental Protection Act', dated March 9, 2004, amended as of July 1, 2011, in accordance with O. Reg. 511/09 and O. Reg. 269/11.

4.2 Utility Clearance

Prior to the commencement of the subsurface investigations, underground service utility locates were obtained for the Site through Ontario One Call. Additionally, a private underground service locating company, Ontario Utility Locates, located all on-site underground services (hydro, gas, water, sewer, and communications).

4.3 Drilling

Three boreholes, identified as BH1, BH2, and BH3, were advanced across the Site by Elite Drilling Ltd. Utilizing a Diedrich D50 Turbo with 150 mm hollow stem augers on October 29th, 2024. The boreholes were drilled to maximum depths of 7.62 m bgs. The locations of the field activities are shown in Figure 5, and details depicted on borehole logs are shown in Appendix A, respectively.

Two soil samples, HA1 and HA2, were taken using hand auger equipment to a maximum depth of 0.75 m bgs (see Figure 5).

Three additional monitoring wells were advanced at the Site on November 20th and 27th, 2024, by Elite Drilling Ltd. and Kodiak Drilling Inc. utilizing 150 mm solid stem augers to a maximum depth of 12.19 m bgs.

4.4 Ground Water: Monitoring Well Installation

Monitoring wells were installed into the initial three boreholes (BH1 to BH3); however, groundwater did not recover. As such three additional monitoring wells MW4 to MW6 were advanced to a depth of approximately 12.19 m bgs to allow for groundwater analysis. The monitoring wells were constructed to

Ontario Ministry of the Environment, Conservation and Parks (MECP)- recognized industry standards and consisted of a 50 mm (2-inch) diameter slotted PVC screen surrounded by a silica sand pack, attached beneath a solid 50 mm (2-inch) diameter PVC riser, surrounded by bentonite grout to ensure a seal between the ground surface and the water table. Two wells were fitted with a steel monument protective casing and four wells with a steel flush-mount protective casing. A Waterra manual lift pump was installed into the well to allow purging and development and subsequent groundwater sample collection. The monitoring well locations are shown in Figure 5, and borehole logs are provided in Appendix A.

4.5 Soil Sampling

Nine soil samples were collected from boreholes BH/MW1, BH/MW2, and BH/MW3 as well as HA1 and HA2. Upon retrieval, the soil samples were logged for essential information such as soil type, moisture content, color, texture, and any visible evidence of impacts were recorded. Subsequently, the samples were stored for potential laboratory analyses and placed in clean coolers with ice to maintain their integrity. After field screening measurements were conducted, the chosen samples were transported and submitted to AGAT Laboratories Ltd. in strict adherence to Chain of Custody (COC) protocols for subsequent chemical analyses.

4.6 Soil: Field Screening Measurements

All soil samples were screened for combustible gases using an RKI Instrument, Eagle Portable Multi-gas detector (with Methane Elimination switch), operated in the methane elimination mode. The monitor has a range of 0 to 50,000 parts per million (ppm) and an accuracy of $\pm 5\%$. The monitor was calibrated to hexane standards before field screening for both ppm and Lower Explosive Limit (LEL) in accordance with the calibration procedure outlined in the instrument's instructional manual. The instrument is regularly calibrated and tuned by the supplier, Pine Environmental. Each soil sample corresponding to either the upper or lower sample from the test pit was bagged for soil vapour analysis. Headspace vapour screening was conducted for all retrieved soil samples with a measurement registering of 0 ppm. Results for each sample are depicted on the test pit logs located in Appendix A.

4.7 Ground Water: Field Measurement of Water Quality Parameters

Several visits were undertaken to record the groundwater levels in the monitoring wells. From these recordings, the groundwater was considered to have stabilized from the installation dates. Groundwater observations were recorded for colour, clarity, the presence or absence of any free product/surface sheen, and any odours present during the purging of the wells. After each measurement, the water level measuring device was cleaned using AlconoxTM soap solution wash/scrub, followed by a distilled water rinse, to prevent potential cross-contamination between observation wells. Well purging occurred and continued until approximately eight well casing volumes were removed, and monitoring indicated that the condition in the purged well had stabilized. Purge water was contained and stored on-site in drums for future disposal.

4.8 Ground Water: Sampling

Groundwater sampling activities were conducted on November 27th and December 2nd, 2024, for MW4, MW5 and MW6. The activities were carried out using dedicated low-density polyethylene tubing and Spectra Field Pro III Peristaltic Pump. Groundwater samples were collected into laboratory-supplied containers prepared with preservatives for the analysis. Disposable latex gloves were worn at each sample location. The groundwater samples were immediately placed into coolers packed with ice, pending delivery to the analytical laboratory.

4.9 Sediment Sampling

NA.

4.10 Analytical Testing

The soil and groundwater sample analyses were completed by AGAT Laboratories Ltd., 835 Coopers Avenue, Mississauga, ON. AGAT is accredited by the Canadian Association for Laboratory Accreditation (CALA) in accordance with ISO/IEC 17025:1999 – “General Requirements for the Competence of Testing and Calibration Laboratories” for all the parameters analyzed during this investigation. This accreditation covers all the parameters that were analyzed during the course of this investigation, ensuring the reliability and quality of the analytical results.

4.11 Residue Management Procedures

Soil material, purge water, and wash water generated during equipment cleaning were conscientiously contained and stored on-site in steel drums. These drums have been designated for future disposal in accordance with appropriate environmental and regulatory protocols.

4.12 Elevation Surveying

The elevation of the existing ground surface at the sample locations was referenced to a local benchmark, noted as a manhole on George Street located southeast of the Site. Niagara Soils Solution Ltd assigned this data point a temporary elevation of 185 meters. The topographic contours of the Site, reflecting the varying elevations across the property, are visually represented in Figure 6.

4.13 Quality Assurance and Quality Control Measures

All activities undertaken as part of this Phase Two ESA were executed in strict accordance with the relevant and applicable regulatory requirements.

5.0 REVIEW AND EVALUATION

5.1 Geology

The Site exhibited an upper layer of topsoil in BH1, BH2, BH3, MW4, MW5, MW6, HA1 and HA2, ranging in depth from 0 to 0.10 m bgs. Fill and reworked material described as brown silty clay/clayey silt, with trace sand and gravel, soft and moist, extended from approximately 0.10 to 3.35 m bgs. The native silt underneath this surficial reworked material was found to be moist in all boreholes, reaching a maximum depth of 7.32 m bgs; likewise, native sand was found below the native silt between 4.11 and 12.19 m bgs. Borehole locations are illustrated in Figure 5.

5.2 Ground Water: Elevation and Flow Direction

Prior to initiating groundwater sampling activities, measurements of groundwater depths were taken from the monitoring wells. The recorded results are outlined below in Table 3. The measured groundwater at the Site provided information related to the level of unconfined groundwater across the Site. Note: BH/MW1, BH/MW2, and BH/MW3 did not intercept the water table; therefore, no measurements were taken.

Table 2: Groundwater Details

Monitoring Well ID	Well Elevation (BM in meters)	Screen Interval (meters bgs)	November 27 th , 2024		December 2 nd , 2024	
			Groundwater Level (metres bgs)	Groundwater Elevation (metres)	Groundwater Level (metres bgs)	Groundwater Elevation (metres)
BH/MW1	185.16	4.57 – 7.62	Dry (Well not used)			
BH/MW2	185.78	4.57 – 7.62				
BH/MW3	185.38	4.57 – 7.62				
BH/MW4	185.16	9.15 – 12.19	10.26	174.90	10.05	175.11
BH/MW5	185.38	9.15 – 12.19	10.38	175.00	10.01	175.37
BH/MW6	185.78	9.15 – 12.19	10.00	175.78	9.96	175.82

5.3 Ground Water: Hydraulic Gradients

The average groundwater gradient was calculated to be 0.003, with minimum and maximum values of 0.002 and 0.003, respectively.

Table 3: Hydraulic Gradient

Monitoring Well	Water Level Difference (m)	Monitoring Well Distance (m)	Hydraulic Gradient
BH/MW4 - BH/MW5	0.04	19	0.002
BH/MW5 - BH/MW6	0.05	19	0.003
BH/MW6 - BH/MW4	0.09	36	0.003

5.4 Soil Texture

Grain size analysis conducted by NTIL on three specific samples revealed that 78.5 % (BH/MW2-5), 84.9 % (HA2-1) and 77.8 % (BH/MW3-3) of the soil matrices passed through the No. 200 sieve (Table 4), indicating a fine/medium soil texture. Fine-textured soil is characterized by containing more than 50 percent by mass of particles that are 75 micrometers or smaller in mean diameter. The detailed results can be found in Appendix D.

Table 4: Results of Grain Size Analysis

Sample ID	Sample #	Soil Sample Depth (m bgs)	Soil Type	Percent Passing 75 µm (No. 200) Sieve
BH/MW2-5	1	3.05 – 3.66	Silt trace Sand	78.5% - Fine/Medium Grained
HA2-1	2	0.15 – 0.75	Silty Clay / Clayey Silt	84.9% - Fine/Medium Grained
BH/MW3-3	3	1.52 – 2.13	Silt trace Sand	77.8% - Fine/Medium Grained

5.5 Soil Quality

Soil sampling activities were carried out on October 29th, 2024. A total of nine select soil samples, collected from the fill, reworked, and native materials were sent to AGAT Laboratories Ltd. for comprehensive analyses covering Metals, Hydride forming Metals (As, Sb, Se), PHCs (F1 to F4), BTEX, VOCs, PAHs, and ORPs: B-HWS, CN⁻, Cr (VI), Hg, pH, SAR, and EC. The results of the soil analyses revealed exceedances to Metals (Lead and Barium) at two of the sampled locations, HA2 and BH/MW3-1, versus Table 3 R/P/I Fine/Medium criteria. The results of the exceedances are summarized in Table 4 below, while the detailed lab reports are provided in Appendix B.

Table 5: Soil Results versus Table 3 RPI Criteria

Parameter	Reg 153/04 (2011) Table 3 RPI	HA2	BH/MW3-1
Metals			
Lead	120 ug/g	12	135
Barium	390 ug/g	455	242

5.6 Groundwater Quality

The groundwater sampling was completed on December 2nd, 2024. Three groundwater samples were collected from the monitoring wells on-site and submitted for laboratory analysis of Metals, As, Sb, Se, Cr (VI), CN⁻, Hg, pH/EC, PHCs (F1-F4), VOCs, and PAHs. Groundwater samples revealed no exceedances as compared to MECP Table 3 Generic Site Condition Standards in a Non-Potable Groundwater Condition for Residential land use. Complete groundwater laboratory results are provided in Appendix D and displayed in Figure 9.



5.7 Sediment Quality

NA

5.8 Quality Assurance and Quality Control Results

All soil samples collected during the Phase Two ESA investigation were managed in strict adherence to the laboratory's analytical protocols, covering aspects such as holding time, preservation methods, storage conditions, and container specifications. A Certificate of Analysis has been obtained for each sample submitted for analysis, and these certificates are attached to this report. The overall quality of the field data gathered throughout this Phase Two ESA is deemed satisfactory, meeting the study's overarching objectives.

6.0 SOIL DELINEATION

On November 20th, 2024, eight hand auger samples were taken at the same depth and approximately 2.0 m around the initial exceeded locations (BH/MW3 and HA2) for delineation purposes. The average results of the delineation samples met the applicable criteria.

Table 6: Delineation Soil Results versus Table 3 RPI Criteria

Parameter	Reg 153/04 (2011) Table 3 RPI	BH/MW3	D1	D2	D3	D4	Average
Metals							
Lead	120 ug/g	135	33	62	66	61	71.4

Parameter	Reg 153/04 (2011) Table 3 RPI	HA2	D5	D6	D7	D8	Average
Metals							
Barium	390 ug/g	455	273	166	155	218	253.4

7.0 CONCLUSIONS

In conclusion, Niagara Soils Solutions Ltd. was engaged by 1338284 Ontario Inc. to carry out a Phase Two Environmental Site Assessment at 5578 George Street in Niagara Falls, Ontario. The key activities and outcomes of this Phase Two ESA include:

- Underground service utility locates were conducted by Ontario One Call and a private locating service.
- Three environmental boreholes were drilled across the Site, within the identified APECs, to a maximum depth of about 7.62 m bgs.
- Two soil hand auger samples were taken to a maximum depth of 0.75 m bgs.
- Three environmental monitoring wells were installed to a maximum depth of 12.19 m bgs.
- Select soil and groundwater samples were submitted for laboratory testing of Metals, Hydride forming Metals (As, Sb, Se), Petroleum Hydrocarbons (PHCs) F1 to F4, Benzene, Toluene, Ethylbenzene and Xylene (BTEX), Volatile Organic Compounds (VOCs), Polycyclic Aromatic Hydrocarbons (PAHs), and Other Regulated Parameters (ORPs): Boron Hot Water Soluble, (B-HWS), Cyanide (CN⁻), Chromium VI (Cr (VI)), Mercury (Hg), pH, Sodium Adsorption Ratio (SAR) and Electrical Conductivity (EC).
- The results of the delineation samples around Metals-impacted BH/MW3-1 and HA2 met the applicable criteria.

NSSL therefore concludes that all soil and groundwater results met applicable Ontario Ministry of the Environment, Conservation, and Parks Table 3 Full Depth Generic Site Condition Standards for Use in a Non-Potable Groundwater Condition for Residential/Parkland/Institutional land use, fine/medium-grained soils. No additional work is required.

7.1 Closure

This report was prepared by Helen Pimentel under the direction of Philip Adene.

Respectively submitted,
Niagara Soils Solutions Ltd.

A handwritten signature in black ink, appearing to read 'Helen Pimentel'.

Helen Pimentel, BSc, ET
Environmental Technician

A handwritten signature in black ink, appearing to read 'Philip Adene'.

Philip Adene, P. Geo, QP_{ESA}
Professional Geoscientist



8.0 LIMITATIONS

Niagara Soils Solutions Ltd. prepared this Report for the account of 1338284 Ontario Inc. and is intended to provide a Phase Two Environmental Site Assessment at 5578 George Street, Niagara Falls, ON. The material in it reflects Niagara Soils Solutions Ltd.'s best judgement in light of the information available to it at the time of preparation. Any use which a third party makes of this report, or any reliance on or decisions to be made based on it, are the responsibility of such third parties. Should additional parties require reliance on this report, written authorization from NSSL will be required. With respect to third parties, NSSL has no liability or responsibility for losses of any kind whatsoever, including direct or consequential financial effects on transactions or property values, or requirements for follow-up actions and costs.

The investigation undertaken by NSSL with respect to this report and any conclusions or recommendations made in this report reflect NSSL's judgment based on the site conditions observed at the time of the Site inspection on the date(s) set out in this report and on information available at the time of preparation of this report. This report has been prepared for specific application to this Site and it is based, in part, upon visual observation of the Phase Two Property, subsurface investigation at discrete locations and depths, and specific analysis of specific chemical parameters and materials during a specific time interval, all as described in this report. Unless otherwise stated, the findings cannot be extended to previous or future Site conditions, portions of the Phase Two Property, which were unavailable for direct investigation, subsurface locations, which were not investigated directly, or chemical parameters, materials or analysis which were not addressed. Niagara Soils Solutions Ltd. has expressed professional judgement in gathering and analysing the information obtained and in the formulation of its conclusions.

NSSL makes no other representation whatsoever, including those concerning the legal significance of its findings, or as to other legal matters touched on in this report, including but not limited to, ownership of any property, or the application of any law to the facts set forth herein. With respect to regulatory compliance issues, regulatory statutes are subject to interpretation and change. Such interpretations and regulatory changes should be reviewed with legal counsel.

Yours very truly,

Niagara Soils Solutions Ltd.

Jodie Glasier, M.MM, PD-EMA, EP
Founder & CEO



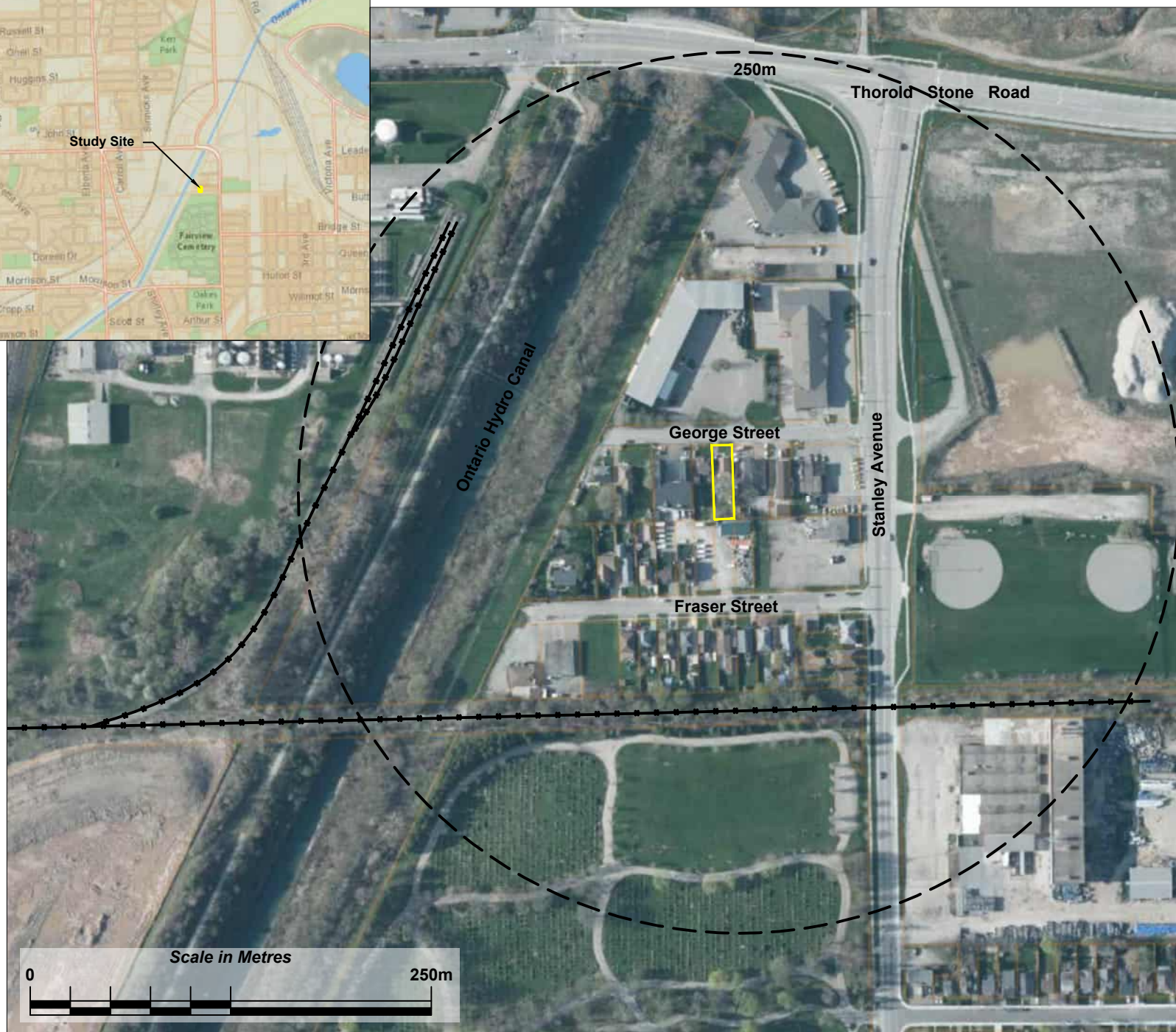
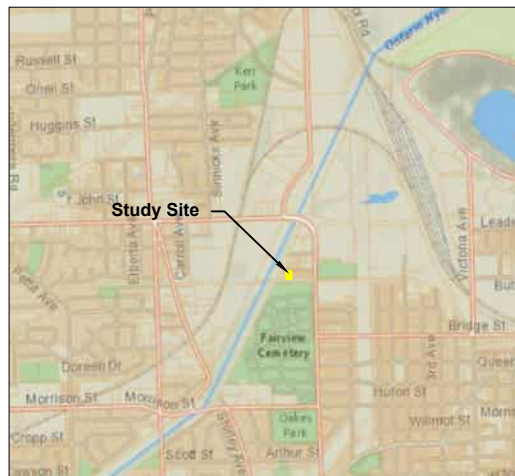
9.0 REFERENCES

The following resources were utilized as references:

- Ontario Division of Mines' "Paleozoic Geology of Southern Ontario, Map 2254".
- Ministry of Natural Resources' "Quaternary Geology, Niagara-Welland, Map P2496.
- Water Wells Ontario site.
- Ontario Oil, Gas, and Salt Resources Library
- Interactive Map – Niagara Navigator, <https://navigator.niagararegion.ca/>
- Ontario Base Mapping
- Niagara Peninsula Conservation Authority (NPCA) Watershed Explorer

FIGURES

- Figure 1: Site Location Map
- Figure 2: Site Layout & Features
- Figure 3: Potentially Contaminating Activities
- Figure 4: Areas of Potential Environmental Concern
- Figure 5: Borehole & Monitoring Well Location Plan
- Figure 6: Topographic Contour
- Figure 7: Groundwater Contour
- Figure 8: Soil/Delineation Results
- Figure 9: Groundwater Results
- Figure 10: Cross Section Plan View
- Figure 11A: Cross Section A-A'
- Figure 11B: Cross Section B-B'



LEGEND

- Phase Two ESA Property Boundary
- 250 m Study Area
- ++ Railway



CLIENT:

1338284 Ontario Inc.

PROJECT:

**PHASE TWO ENVIRONMENTAL SITE
ASSESSMENT
5578 GEORGE STREET
NIAGARA FALLS, ON**

TITLE:

SITE LOCATION PLAN

DRAWN BY:

DN/CN

CHECKED BY:

PA

DATE:

DECEMBER 2024

PROJECT NO:

NS2491-02

SCALE:

AS SHOWN

NO:

Figure 1



LEGEND

Phase Two ESA Property Boundary



CLIENT:
1338284 Ontario Inc.

PROJECT:
**PHASE TWO ENVIRONMENTAL SITE
ASSESSMENT
5578 GEORGE STREET
NIAGARA FALLS, ON**

TITLE:
SITE LAYOUT & FEATURES

DRAWN BY:
DN/CN

CHECKED BY:
PA

DATE:
DECEMBER 2024

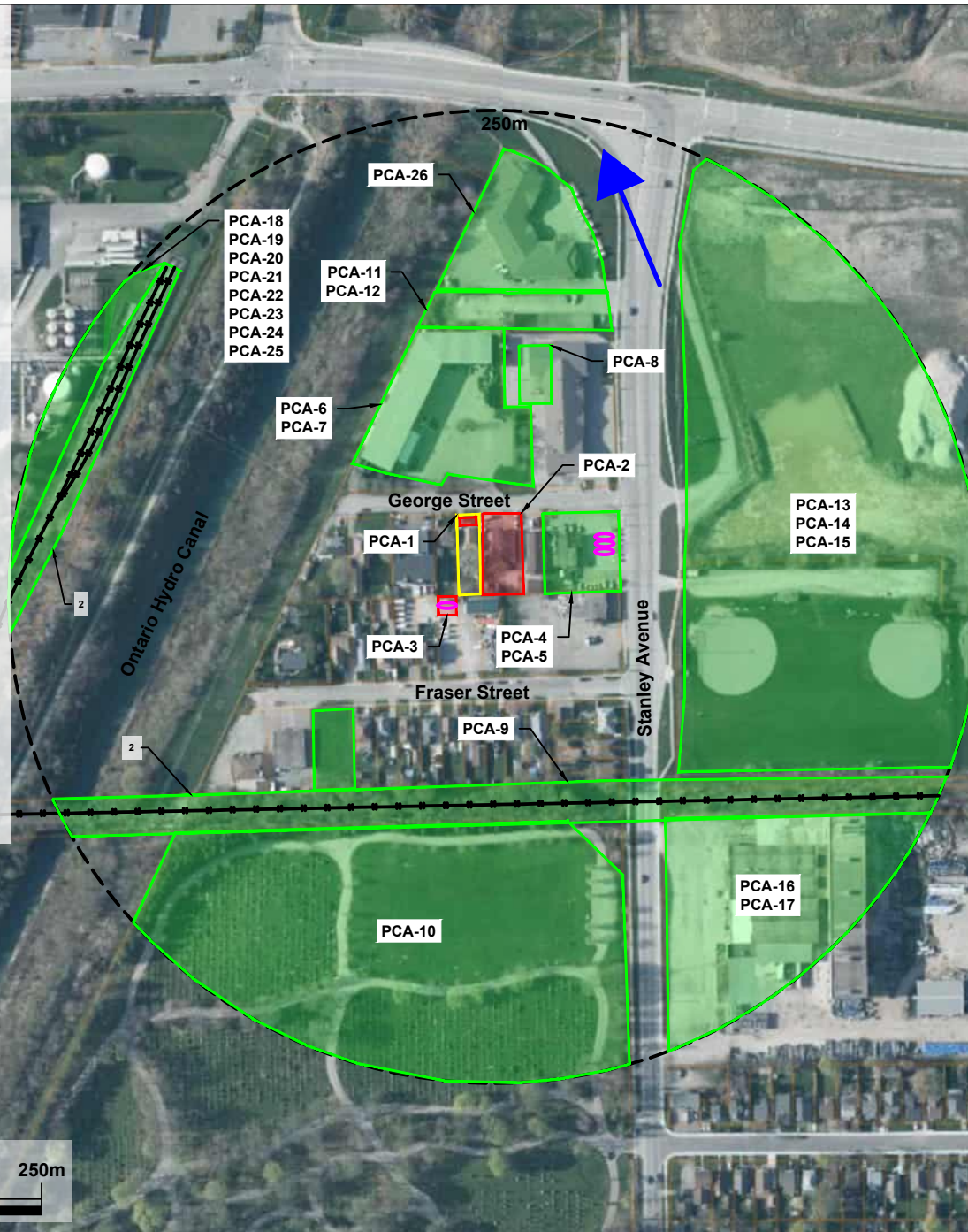
PROJECT NO:
NS2491-02

SCALE:
AS SHOWN

NO:
Figure 2

POTENTIALLY CONTAMINATING ACTIVITIES

- #1 Other. De-Icing Activities
- #2,5 52. Storage, Maintenance, Fuelling and Repair of Equipment, Vehicles, and Material Used to Maintain Transportation Systems.
- #3,4 28. Gasoline and Associated Products Storage in Fixed Tanks.
- #5 10. Commercial Autobody Shops.
- #6,8 39. Paints Manufacturing, Processing and Bulk Storage.
- #12 10. Commercial Autobody Shops.
- #7,11 46. Rail Yards, Tracks and Spurs.
- #9 58. Waste Disposal and Waste Management, including thermal treatment, landfilling and transfer of waste, other than use of biosoils as soil conditioners.
- #10 20. Explosives and Ammunition Manufacturing, Production and Bulk Storage
- #13,16 22. Fertilizer Manufacturing, Processing and Bulk Storage
- #15 8. Chemical Manufacturing, Processing and Bulk Storage.
- #17 34. Metal Fabrication
- #18 1. Acid and Alkali Manufacturing, Processing and Bulk Storage.
- #19 2. Adhesives and Resins Manufacturing, Processing and Bulk Storage.
- #20 8. Chemical Manufacturing, Processing and Bulk Storage.
- #21 28. Gasoline and Associated Products Storage in Fixed Tanks.
- #22,26 39. Paints Manufacturing, Processing and Bulk Storage.
- #23 41. Petroleum-derived Gas Refining, Manufacturing, Processing and Bulk Storage.
- #24 46. Rail Yards, Tracks and Spurs.
- #25 51. Solvent Manufacturing, Processing and Bulk Storage.



LEGEND

- Phase Two ESA Property Boundary
- 250 m Study Area
- PCA not Generating APEC
- PCA Generating APEC
- Railway
- Underground Storage Tanks [UST]
- Inferred Groundwater Flow Direction



CLIENT:
1338284 Ontario Inc.

PROJECT:
PHASE TWO ENVIRONMENTAL SITE ASSESSMENT
5578 GEORGE STREET
NIAGARA FALLS, ON

TITLE:
POTENTIALLY CONTAMINATING ACTIVITIES

DRAWN BY:
DN/CN

CHECKED BY:
PA

DATE:
DECEMBER 2024

PROJECT NO:
NS2491-02

SCALE:
AS SHOWN

NO:
Figure 3

AREAS OF POTENTIAL ENVIRONMENTAL CONCERN

- #1 Other. De-Icing Activities
- #2 52. Storage, Maintenance, Fuelling and Repair of Equipment, Vehicles, and Material Used to Maintain Transportation Systems.
- #3 28. Gasoline and Associated Products Storage in Fixed Tanks.



LEGEND

- Phase Two ESA Property Boundary
- APEC



CLIENT:
1338284 Ontario Inc.

PROJECT:
**PHASE TWO ENVIRONMENTAL SITE
ASSESSMENT**
5578 GEORGE STREET
NIAGARA FALLS, ON

TITLE:
**AREAS OF POTENTIAL
ENVIRONMENTAL CONCERN**

DRAWN BY:
DN/CN

CHECKED BY:
PA

DATE:
DECEMBER 2024

PROJECT NO:
NS2491-02

SCALE:
AS SHOWN

NO:
Figure 4



LEGEND

- Phase One ESA Property Boundary
- Borehole Location
- Hand Auger Location
- Borehole with Monitoring Well Location



CLIENT:
1338284 Ontario Inc.

PROJECT:
PHASE TWO ENVIRONMENTAL SITE ASSESSMENT
5578 GEORGE STREET
NIAGARA FALLS, ON

TITLE:
BOREHOLE LOCATIONS

DRAWN BY: CN

CHECKED BY: PA

DATE: DECEMBER 2024

PROJECT NO: NS2491-02

SCALE: AS SHOWN

NO:
Figure 5



LEGEND

 Phase One ESA Property Boundary

 Topographic Contour



CLIENT:
1338284 Ontario Inc.

PROJECT:
PHASE TWO ENVIRONMENTAL SITE ASSESSMENT
5578 GEORGE STREET
NIAGARA FALLS, ON

TITLE:
TOPOGRAPHIC CONTOUR

DRAWN BY: CN

CHECKED BY: PA

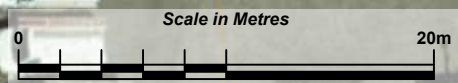
DATE: DECEMBER 2024

PROJECT NO: NS2491-02

SCALE: AS SHOWN

NO:
Figure 6

George Street



LEGEND

- Phase One ESA Property Boundary
- Groundwater Contour
- Measured Groundwater Flow Direction



CLIENT:
1338284 Ontario Inc.

PROJECT:
**PHASE TWO ENVIRONMENTAL SITE
ASSESSMENT**
5578 GEORGE STREET
NIAGARA FALLS, ON

TITLE:
GROUNDWATER CONTOUR

DRAWN BY: CN

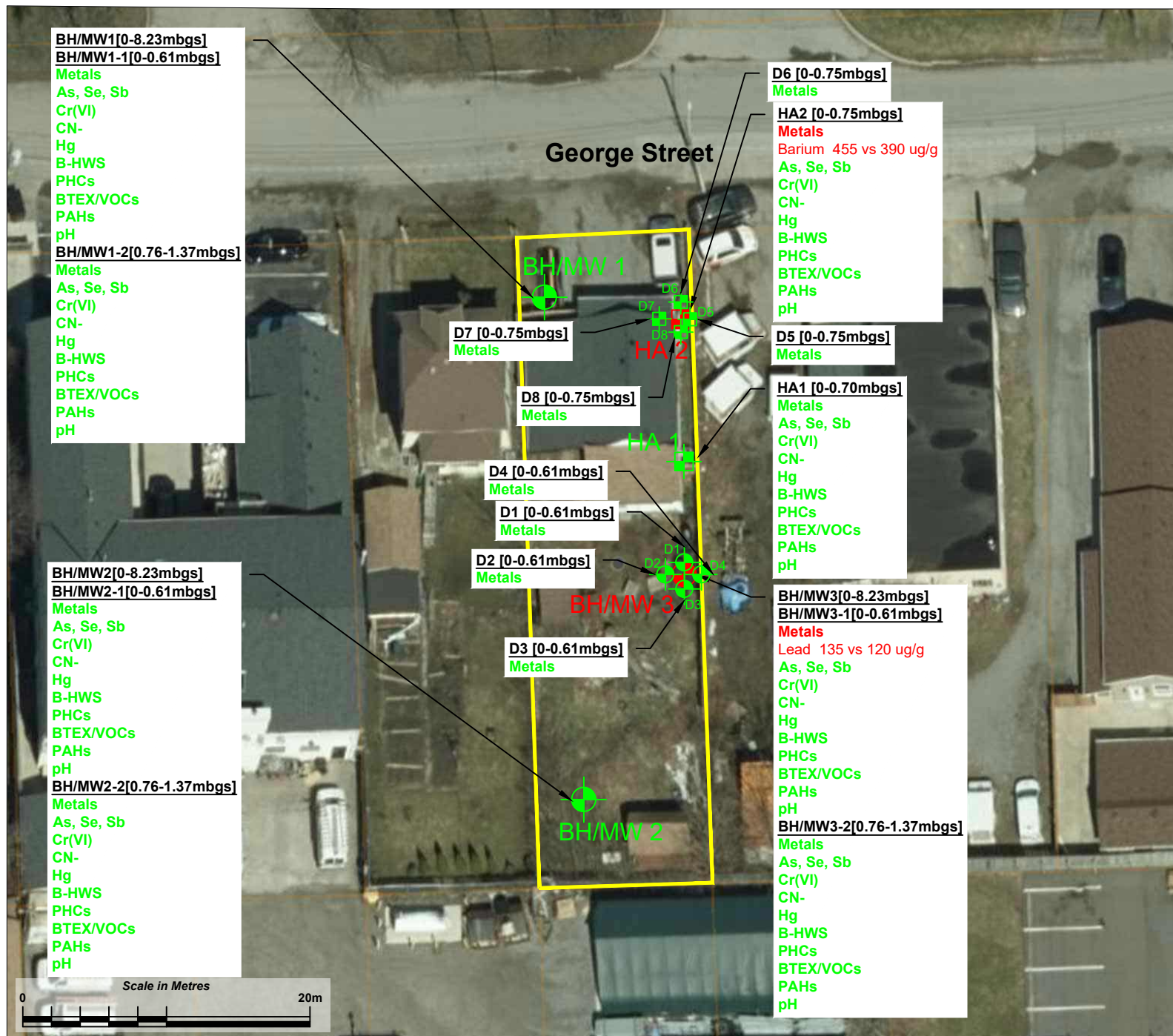
CHECKED BY: PA

DATE: DECEMBER 2024

PROJECT NO:
NS2491-02

SCALE:
AS SHOWN

NO:
Figure 7



LEGEND



Phase Two ESA
Property Boundary

HA-1

Hand Auger Location

BH/MW-1

Borehole with Monitoring
Well Location



Results Meet Criteria



Results Exceed Criteria

Results Compared to O.Reg 153/04,
Table 3: Residential Non-Potable, Fine



CLIENT:

1338284 Ontario Inc.

PROJECT:

**PHASE TWO ENVIRONMENTAL SITE
ASSESSMENT**
 5578 GEORGE STREET
 NIAGARA FALLS, ON

TITLE:

SOIL RESULTS

DRAWN BY:

CN

CHECKED BY:

PA

DATE:

DECEMBER 2024

PROJECT NO:

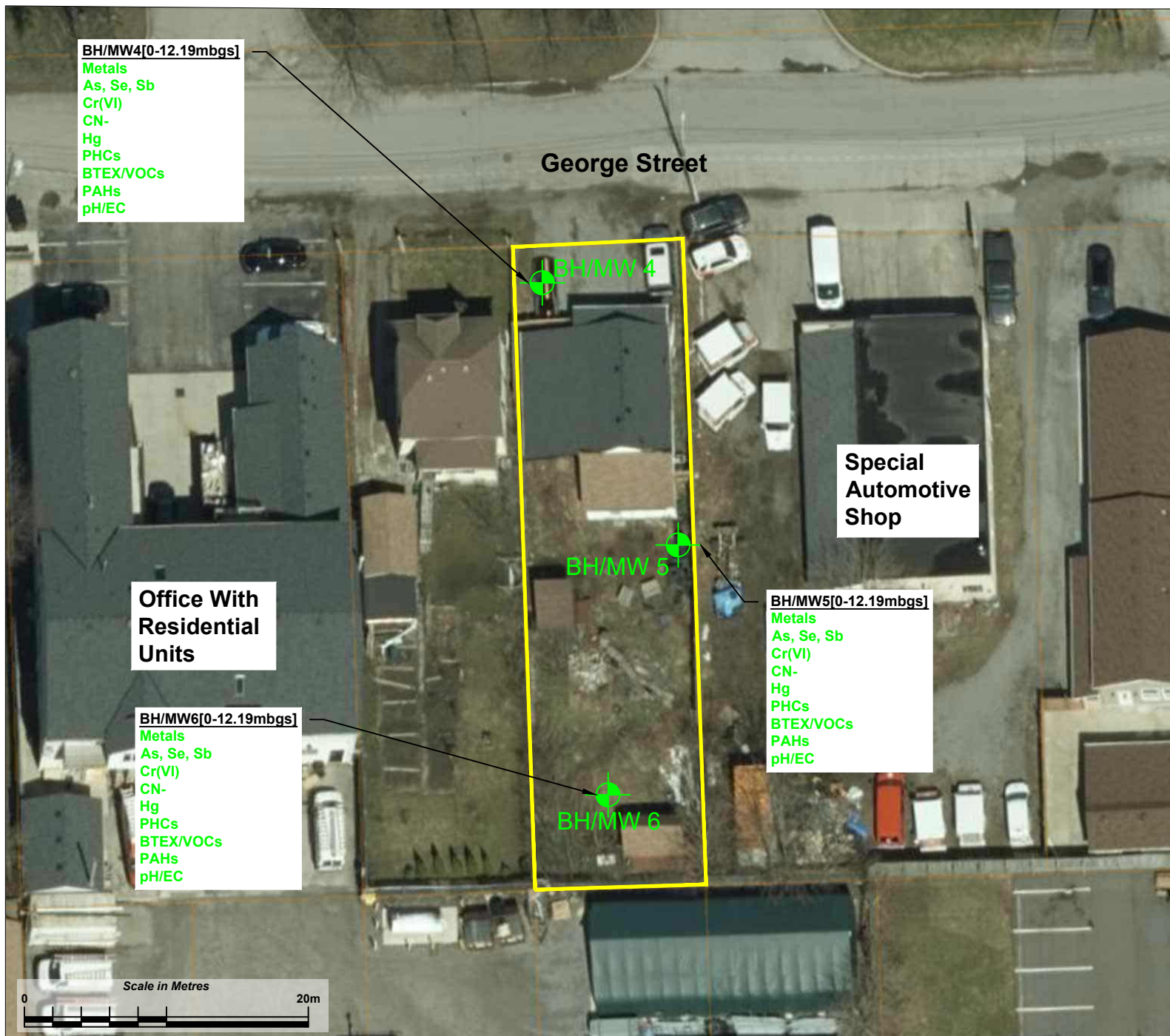
NS2491-02

SCALE:

AS SHOWN

NO:

Figure 8



LEGEND



Phase Two ESA
Property Boundary

BH/MW-1



Borehole with Monitoring
Well Location



Results Meet Criteria



Results Exceed Criteria

Results Compared to O.Reg 153/04,
Table 3: Residential Non-Potable, Fine



CLIENT:

1338284 Ontario Inc.

PROJECT:

**PHASE TWO ENVIRONMENTAL SITE
ASSESSMENT
5578 GEORGE STREET
NIAGARA FALLS, ON**

TITLE:

GROUNDWATER RESULTS

DRAWN BY:

CN

CHECKED BY:

PA

DATE:

DECEMBER 2024

PROJECT NO:

NS2491-02

SCALE:

AS SHOWN

NO:

Figure 9



LEGEND

- Phase Two ESA Property Boundary
- Borehole Location
- Hand Auger Location
- Borehole with Monitoring Well Location
- X-X' Cross Section



CLIENT:
1338284 Ontario Inc.

PROJECT:
**PHASE TWO ENVIRONMENTAL SITE
ASSESSMENT**
5578 GEORGE STREET
NIAGARA FALLS, ON

TITLE:
**CROSS SECTION PLAN VIEW;
A-A' & B-B'**

DRAWN BY: CN

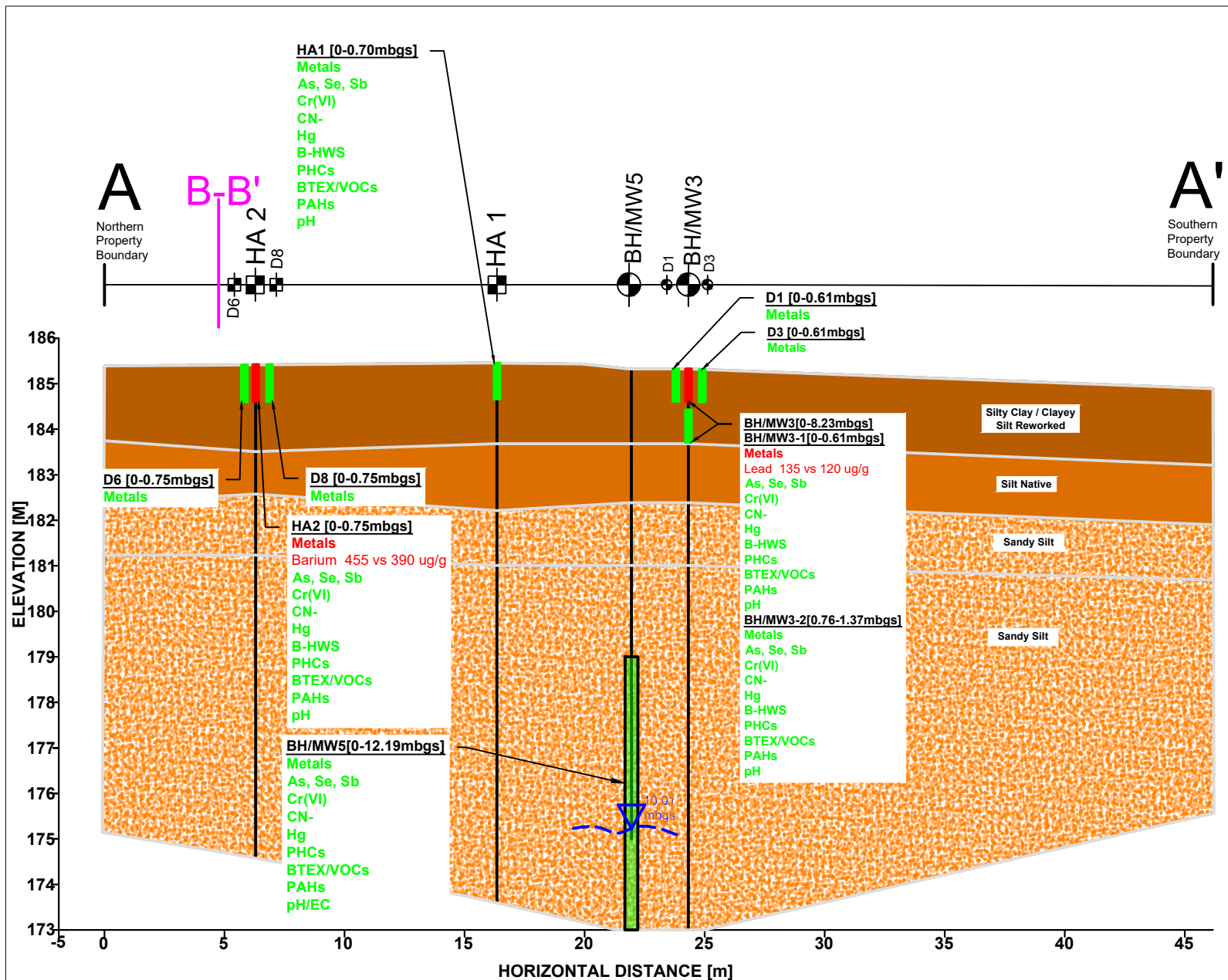
CHECKED BY: PA

DATE: DECEMBER 2024

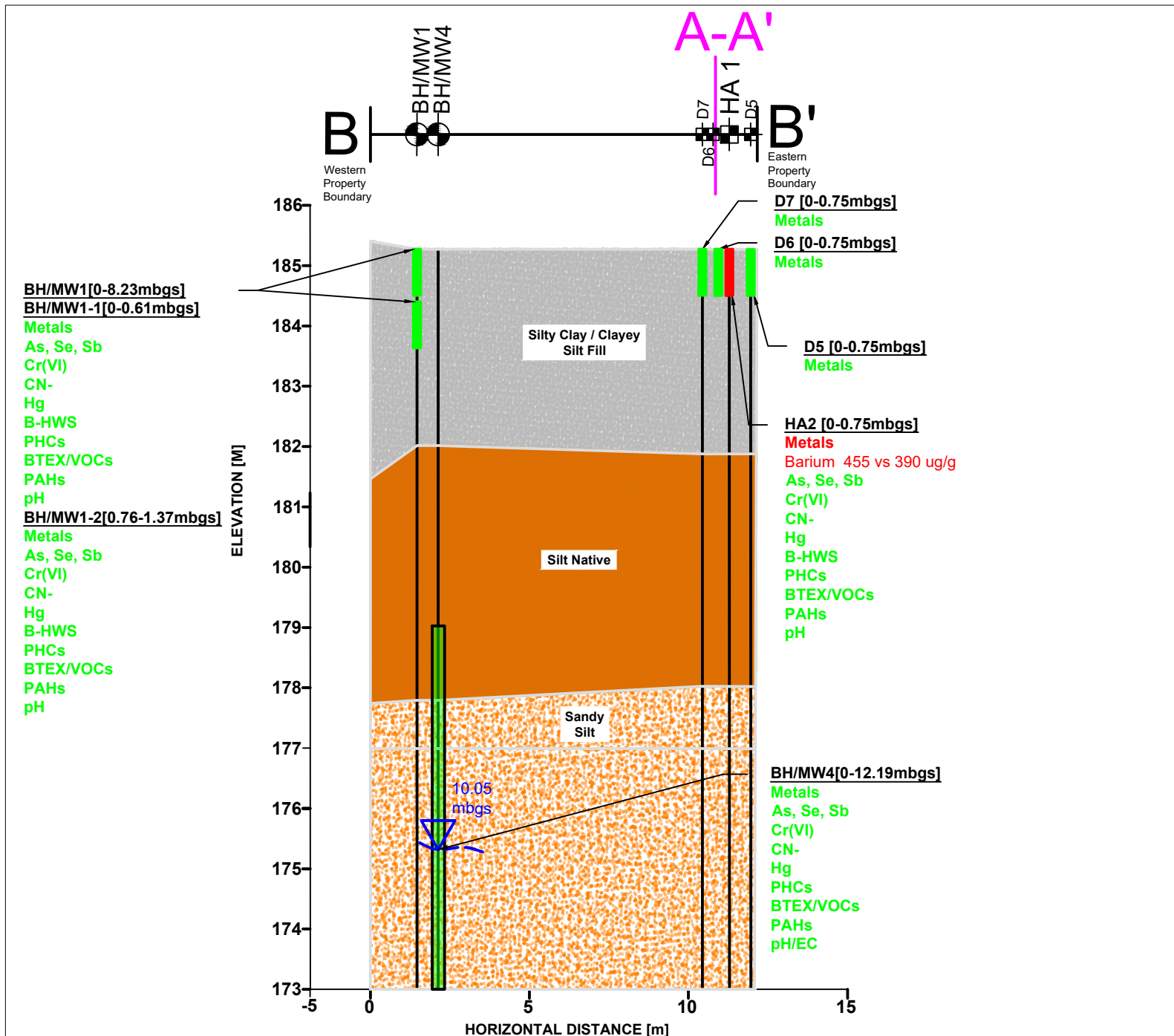
PROJECT NO:
NS2491-02

SCALE:
AS SHOWN

NO:
Figure 10



NOTE: FOR ILLUSTRATION PURPOSES ONLY, ALL LOCATIONS APPROXIMATE.



NOTE: FOR ILLUSTRATION PURPOSES ONLY, ALL LOCATIONS APPROXIMATE.

LEGEND

	Silty Clay/Clayey Silt Fill
	Silt Native
	Sandy Silt
	Meets Standards
	Exceeds Standards

Results Compared to O. Reg. 153/04,
Table 3: Residential, Fine Criteria



CLIENT:
1338284 Ontario Inc.

PROJECT:
**PHASE TWO ENVIRONMENTAL SITE
ASSESSMENT**
5578 GEORGE STREET
NIAGARA FALLS, ON

TITLE:
CROSS SECTION B-B'

DRAWN BY:
CN

CHECKED BY:
PA

DATE: DECEMBER 2024

PROJECT NO:
NS2491-02

SCALE: AS SHOWN

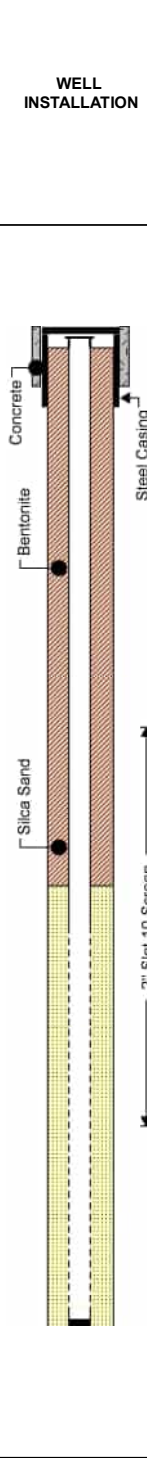
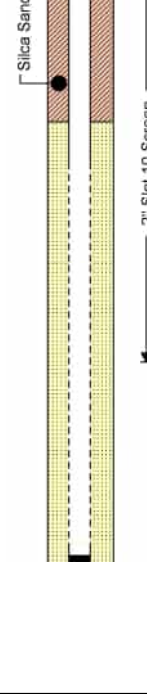
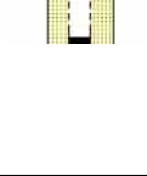
NO:
Figure 11B

APPENDIX A

FIELD LOGS

RECORD OF BOREHOLE: BH/MW-1

PROJECT NO.: NS2491-02	DRILLING COMPANY: Elite Drilling	SHEET 1 of 1
PROJECT: Phase Two ESA	DRILLING METHOD: Directional Drilling	DATE STARTED: October 29, 2024
LOCATION: 5578 George Street, Niagara Falls	DRILL RIG: Trackmount	DATE COMPLETED: October 29, 2024
CLIENT: 1338284 Ontario Inc.	BOREHOLE COORDINATE (UTM): 4775166 N, 633612 E	DATUM: Local Benchmark

LITHOLOGY PLOT	SOIL PROFILE	SAMPLES				DEPTH SCALE ft / m	ELEVATION (m / mbgs)	FIELD TESTING	LAB TESTING	WELL INSTALLATION	COMMENTS
	DESCRIPTION	TYPE	NUMBER	SPT 'N' VALUE	RECOVERY (%)			SPT (N) 25 50 75 100			
	Ground Surface					0.0	185.16				
	100 mm Rootlets and Organics	AU	1			0.0	0.00				
	Silty Clay / Clayey Silt Fill Material Brown with some sand and gravel Firm, dry					1.0		8	0	Soil: Metals, PHC/VOC, PAHs, B-HWS, CN, Cr VI, Hg, pH	
		SS	2	3, 4, 4, 5		2.0		6	0	Soil: Metals, PHC/VOC, PAHs, B-HWS, CN, Cr VI, Hg, pH	
						3.0					
		SS	3	2, 2, 4, 6		4.0					
	Silt Native Brown with trace sand Very stiff, moist					5.0					
		SS	4	3, 3, 7, 6		6.0		10	0		
						7.0					
		SS	5	4, 4, 12		8.0	181.81	16	0		
						9.0	3.35				
		SS	6	4, 4, 5, 7		10.0		9			
						11.0					
		SS	7	10, 12, 16, 23		12.0		28	0		
	Sandy Silt Brown Compact sand, moist					13.0					
						14.0					
						15.0					
		SS	8	10, 12, 18, 22		16.0					
						17.0					
						18.0					
						19.0					
						20.0					
		SS	9	10, 13, 16, 20		21.0	177.84	30	0		
						22.0	7.32				
	End of Borehole					23.0					
						24.0					
						25.0					
						26.0					
						27.0	176.93	29	0		
						28.0	8.23				

Groundwater Level Upon Completion:	INITIAL WATER LEVEL: Dry	INITIAL WATER LEVEL DATE: November 5, 2024
Secondary Groundwater Level:	SECONDARY WATER LEVEL: Dry	SECONDARY WATER LEVEL DATE: November 7, 2024
	BOREHOLE CAVE UPON COMPLETION: N/A	



RECORD OF BOREHOLE: BH/MW-2													
PROJECT NO.: NS2491-02			DRILLING COMPANY: Elite Drilling			SHEET 1 of 1							
PROJECT: Phase Two ESA			DRILLING METHOD: Directional Drilling			DATE STARTED: October 29, 2024							
LOCATION: 5578 George Street, Niagara Falls			DRILL RIG: Trackmount			DATE COMPLETED: October 29, 2024							
CLIENT: 1338284 Ontario Inc.			BOREHOLE COORDINATE (UTM): 4775129 N, 633616 E			DATUM: Local Benchmark							
SOIL PROFILE		SAMPLES			FIELD TESTING		LAB TESTING		WELL INSTALLATION	COMMENTS			
LITHOLOGY PLOT	DESCRIPTION	TYPE	NUMBER	SPT 'N' VALUE	RECOVERY (%)	DEPTH SCALE ft / m	ELEVATION (m / mbgs)	SPT (N) 25 50 75 100			COV (ppm / %LEL)	LAB ANALYSIS	
	Ground Surface					0.0	185.78 0.00						SS = Split Spoon
	100 mm Rootlets and Organics	SS	1	3, 2, 4, 4		1.0		6	0	Soil: Metals, PHC/VOC, PAHs, B-HWS, CN, Cr VI, Hg, pH			
	Silty Clay / Clayey Silt Fill Material	SS	2	4, 7, 12, 15		2.0	185.09 0.69	19	0	Soil: Metals, PHC/VOC, PAHs, B-HWS, CN, Cr VI, Hg, pH			
	Brown with some sand, gravel, and organics					3.0		26	0				
	Soft, wet					4.0		24	0				
	Silty Native	SS	3	10, 12, 14, 18		5.0		21	0				
	Brown with trace sand and gravel					6.0							
	Very compact, moist					7.0							
		SS	4	7, 10, 14, 15		8.0							
						9.0							
		SS	5	8, 12, 9, 10		10.0							
						11.0							
						12.0							
						13.0							
						14.0							
Sandy Silt	SS	6	9, 24, 30, 24		15.0	181.67 4.11	54	0					
Brown with trace gravel					16.0								
Very dense to compact sand, moist					17.0								
					18.0								
					19.0								
					20.0								
		SS	7	9, 21, 20, 17		21.0		41	0				
					22.0								
					23.0								
					24.0								
					25.0								
		SS	8	7, 11, 14, 16		26.0		25	0				
					27.0	177.55 8.23							
	End of Borehole					28.0							
						29.0							
						30.0							
Groundwater Level Upon Completion:		INITIAL WATER LEVEL: Dry			INITIAL WATER LEVEL DATE: November 5, 2024								
Secondary Groundwater Level:		SECONDARY WATER LEVEL: Dry			SECONDARY WATER LEVEL DATE: November 7, 2024								
		BOREHOLE CAVE UPON COMPLETION: N/A											
Niagara Soils Solutions Ltd. 3300 Merrittville Highway, Unit 4 Thorold, Ontario, L2V 4Y6		Note: This borehole log has been prepared for environmental purposes and does not necessarily contain information suitable for a geotechnical assessment of the subsurface conditions. Borehole details as presented, do not constitute a thorough understanding of all potential conditions present and require interpretative assistance from a qualified Professional Engineer/Geoscientist.											
		LOGGED: HP COMPILED: DN CHECKED: PA											

Niagara Soils Solutions Ltd.
3300 Merrittville Highway, Unit 4
Thorold, Ontario, L2V 4Y6

Note: This borehole log has been prepared for environmental purposes and does not necessarily contain information suitable for a geotechnical assessment of the subsurface conditions. Borehole details as presented, do not constitute a thorough understanding of all potential conditions present and require interpretative assistance from a qualified Professional Engineer/Geoscientist.

RECORD OF BOREHOLE: BH/MW-3

PROJECT NO.: NS2491-02

PROJECT: Phase Two ESA

LOCATION: 5578 George Street, Niagara Falls

CLIENT: 1338284 Ontario Inc.

DRILLING COMPANY: Elite Drilling

DRILLING METHOD: Directional Drilling

DRILL RIG: Trackmount

BOREHOLE COORDINATE (UTM): 4775146 N, 633623 E

SHEET 1 of 1

DATE STARTED: October 29, 2024

DATE COMPLETED: October 29, 2024

DATUM: Local Benchmark

SOIL PROFILE		SAMPLES				DEPTH SCALE ft / m	ELEVATION (m / mbgs)	FIELD TESTING	LAB TESTING	WELL INSTALLATION	COMMENTS
LITHOLOGY PLOT	DESCRIPTION	TYPE	NUMBER	SPT 'N' VALUE	RECOVERY (%)			SPT (N) 25 50 75 100			
	Ground Surface					0.0	185.38 0.00				
	100 mm Rootlets and Organics	SS	1	9, 4, 6, 6		1.0		10	0	Soil: Metals, PHC/VOC, PAHs, B-HWS, CN, Cr VI, Hg, pH	SS = Split Spoon
	Silty Clay / Clayey Silt Reworked Brown with some sand and gravel Firm, dry					2.0					
		SS	2	9, 10, 10, 13		3.0		20	0	Soil: Metals, PHC/VOC, PAHs, B-HWS, CN, Cr VI, Hg, pH	
						4.0					
	Silt Native Brown with trace sand Soft, very stiff	SS	3	9, 11, 16, 13		5.0	183.93 1.45	27	0	Soil: pH	
						6.0					
		SS	4	4, 7, 9, 8		8.0		16	0		
						9.0					
	Sandy Silt Brown with trace gravel Soft, moist to wet	SS	5	4, 7, 9, 8		10.0	182.41 2.97	13	0		
						11.0					
						12.0					
						13.0					
	Sandy Silt Brown with trace Compact to dense sand, moist	SS	6	5, 7, 6, 9		15.0	181.27 4.11	27	0		
						16.0					
						17.0					
						18.0					
		SS	7	6, 15, 20, 23		20.0		35	0		
						21.0					
						22.0					
						23.0					
		SS	8	5, 11, 16, 15		25.0		27	0		
						26.0					
	End of Borehole					27.0	177.15 8.23				
						28.0					

Groundwater Level Upon Completion:

Secondary Groundwater Level:

INITIAL WATER LEVEL: Dry

SECONDARY WATER LEVEL: Dry

BOREHOLE CAVE UPON COMPLETION: N/A

INITIAL WATER LEVEL DATE: November 5, 2024

SECONDARY WATER LEVEL DATE: November 7, 2024

N

NIAGARA SOILS SOLUTIONS LTD.

Niagara Soils Solutions Ltd.

3300 Merrittville Highway, Unit 4

Thorold, Ontario, L2V 4Y6

Note: This borehole log has been prepared for environmental purposes and does not necessarily contain information suitable for a geotechnical assessment of the subsurface conditions. Borehole details as presented, do not constitute a thorough understanding of all potential conditions present and require interpretative assistance from a qualified Professional Engineer/Geoscientist.

LOGGED: HP

COMPILED: DN

CHECKED: PA

FIELD LOGS

Hand Auger No: 1	Site Address: 5578 George Street		Date/Time:	10-29-2024	
Project type:	Phase Two ESA		Field Technician:	Helen Pimentel	
Project No:	NS2491-02	Location:	Niagara Falls, ON		
Weather:	Cloudy/ Rainy	Temperature:	7 °C		
Coordinates:	17T 655622 E 4775154 N				
Soil and Groundwater Conditions					
Depth (m) from-to	Description: Soil Type, Features, Inclusions, Cohesive/ Granular, Colour, Odour / Staining	Sample ID.	Sample Depth (m)	Sample Type	Fill, Reworked, or Native
0.0 – 0.70	Topsoil – 0.10 m Reworked- Brown Silty Clay/ Clayey Silt with some sand, soft and moist.	HA1	0.15-0.70	Grab	Reworked
1. Hand Auger Oriented: North & South		Photo(s)			
2. Hand Auger Size (m): 0.15					
3. Water Encountered: No					
4. Hand auger Remained Open: No					
5. Machine/Tools: Hand Auger					
6. Eagle Gas Reading: 0 ppm					
7. Additional Information:					

FIELD LOGS

Hand Auger No: 2	Site Address: 5578 George Street		Date/Time:	10-29-2024	
Project type:	Phase Two ESA		Field Technician:	Helen Pimentel	
Project No:	NS2491-02	Location:	Niagara Falls, ON		
Weather:	Cloudy	Temperature:	7 °C		
Coordinates:	17T 655622 E 4775160 N				
Soil and Groundwater Conditions					
Depth (m) from-to	Description: Soil Type, Features, Inclusions, Cohesive/ Granular, Colour, Odour / Staining	Sample ID.	Sample Depth (m)	Sample Type	Fill, Reworked, or Native
0.0 – 0.75	Topsoil – 0.10 m Reworked- Brown Silty Clay/ Clayey Silt with some sand, soft and moist.	HA2	0.15-0.75	Grab	Reworked
1. Hand Auger Oriented: North & South		Photo(s)			
2. Hand Auger Size (m): 0.15					
3. Water Encountered: No					
4. Hand auger Remained Open: No					
5. Machine/Tools: Hand Auger					
6. Eagle Gas Reading: 0 ppm					
7. Additional Information:					

RECORD OF BOREHOLE: BH/MW-4

PROJECT NO.: NS2491-02
PROJECT: Phase Two ESA
LOCATION: 5578 George Street, Niagara Falls
CLIENT: 1338284 Ontario Inc.

DRILLING COMPANY: Elite Drilling
DRILLING METHOD: Directional Drilling
DRILL RIG: Trackmount
BOREHOLE COORDINATE (UTM): 4775166 N, 633612 E

SHEET 1 of 1
DATE STARTED: November 20, 2024
DATE COMPLETED: November 20, 2024
DATUM: Local Benchmark

SOIL PROFILE		SAMPLES				DEPTH SCALE ft / m	ELEVATION (m / mbgs)	FIELD TESTING	LAB TESTING	WELL INSTALLATION	COMMENTS
LITHOLOGY PLOT	DESCRIPTION	TYPE	NUMBER	SPT 'N' VALUE	RECOVERY (%)			SPT (N) 25 50 75 100			
	Ground Surface					0.0	185.16				
	100 mm Rootlets and Organics					0.0	0.00				
	Silty Clay / Clayey Silt Fill Material Brown with some sand and gravel Firm, dry					1.0					
						2.0					
						3.0					
						4.0					
						5.0					
						6.0					
						7.0					
						8.0					
						9.0					
						10.0					
						11.0	181.81				
						12.0	3.35				
						13.0					
						14.0					
						15.0					
						16.0					
						17.0					
						18.0					
						19.0					
						20.0					
						21.0					
						22.0					
						23.0					
						24.0	177.84				
						25.0	7.32				
						26.0					
						27.0					
						28.0					
						29.0					
						30.0					
						31.0					
						32.0					
						33.0					
						34.0					
						35.0					
						36.0					
						37.0					
						38.0					
						39.0					
						40.0	172.97				
						41.0	12.19				
						42.0					
						43.0					
						44.0					
						45.0					
	End of Borehole										

Groundwater Level Upon Completion:

Secondary Groundwater Level:

INITIAL WATER LEVEL: 10.26 mbgs

SECONDARY WATER LEVEL: 10.05 mbgs

BOREHOLE CAVE UPON COMPLETION: N/A

INITIAL WATER LEVEL DATE: November 27, 2024

SECONDARY WATER LEVEL DATE: December 2, 2024

N

NIAGARA SOILS SOLUTIONS LTD.

Niagara Soils Solutions Ltd.

3300 Merrittville Highway, Unit 4

Thorold, Ontario, L2V 4Y6

LOGGED: HP

COMPILED: DN

CHECKED: PA

Note: This borehole log has been prepared for environmental purposes and does not necessarily contain information suitable for a geotechnical assessment of the subsurface conditions. Borehole details as presented, do not constitute a thorough understanding of all potential conditions present and require interpretative assistance from a qualified Professional Engineer/Geoscientist.

RECORD OF BOREHOLE: BH/MW-5

PROJECT NO.: NS2491-02

PROJECT: Phase Two ESA

LOCATION: 5578 George Street, Niagara Falls

CLIENT: 1338284 Ontario Inc.

DRILLING COMPANY: Kodiak Drilling

DRILLING METHOD: Directional Drilling

DRILL RIG: Trackmount

BOREHOLE COORDINATE (UTM): 4775146 N, 633623 E

SHEET 1 of 1

DATE STARTED: November 27, 2024

DATE COMPLETED: November 27, 2024

DATUM: Local Benchmark

SOIL PROFILE		SAMPLES				DEPTH SCALE ft / m	ELEVATION (m / mbgs)	FIELD TESTING		LAB TESTING		WELL INSTALLATION	COMMENTS
LITHOLOGY PLOT	DESCRIPTION	TYPE	NUMBER	SPT 'N' VALUE	RECOVERY (%)			SPT (N)	COV (ppm / %LEL)	LAB ANALYSIS			
	Ground Surface					ft m	185.38 0.00						
	100 mm Rootlets and Organics					0.0							
	Silty Clay / Clayey Silt Reworked Brown with some sand and gravel Firm, dry					1.0							
	Silt Native Brown with trace sand Soft, very stiff					2.0	183.93 1.45						
	Sandy Silt Brown with trace gravel Soft, moist to wet					3.0	182.41 2.97						
	Sand Brown with trace Compact to dense sand, moist					4.0	181.27 4.11						
						5.0							
						6.0							
						7.0							
						8.0							
						9.0							
						10.0							
						11.0							
						12.0							
						13.0							
						14.0							
						15.0							
						16.0							
						17.0							
						18.0							
						19.0							
						20.0							
						21.0							
						22.0							
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						28.0							
						29.0							
						30.0							
						31.0							
						32.0							
						33.0							
						34.0							
						35.0							
						36.0							
						37.0							
						38.0							
						39.0							
						40.0	173.19 12.19						
						41.0							
						42.0							
						43.0							
	End of Borehole												

Concrete

1" Steel Casing

Bentonite

#3 Silica Sand

2" Slot 10 Screen

GW: M&I,
BTX/PHC, VOC,
PAH

Groundwater Level Upon Completion:

Secondary Groundwater Level:

INITIAL WATER LEVEL: 10.38 mbgs

SECONDARY WATER LEVEL: 10.01 mbgs

BOREHOLE CAVE UPON COMPLETION: N/A

INITIAL WATER LEVEL DATE: November 27, 2024

SECONDARY WATER LEVEL DATE: December 2, 2024

N

NIAGARA SOILS SOLUTIONS LTD.

Niagara Soils Solutions Ltd.

3300 Merrittville Highway, Unit 4

Thorold, Ontario, L2V 4Y6

Note: This borehole log has been prepared for environmental purposes and does not necessarily contain information suitable for a geotechnical assessment of the subsurface conditions. Borehole details as presented, do not constitute a thorough understanding of all potential conditions present and require interpretative assistance from a qualified Professional Engineer/Geoscientist.

LOGGED: HP

COMPILED: DN

CHECKED: PA

RECORD OF BOREHOLE: BH/MW-6

PROJECT NO.: NS2491-02	DRILLING COMPANY: Kodiak Drilling	SHEET 1 of 1
PROJECT: Phase Two ESA	DRILLING METHOD: Directional Drilling	DATE STARTED: November 27, 2024
LOCATION: 5578 George Street, Niagara Falls	DRILL RIG: Trackmount	DATE COMPLETED: November 27, 2024
CLIENT: 1338284 Ontario Inc.	BOREHOLE COORDINATE (UTM): 4775129 N, 633616 E	DATUM: Local Benchmark

SOIL PROFILE		SAMPLES				DEPTH SCALE ft / m	ELEVATION (m / mbgs)	FIELD TESTING		LAB TESTING		WELL INSTALLATION	COMMENTS
LITHOLOGY PLOT	DESCRIPTION	TYPE	NUMBER	SPT 'N' VALUE	RECOVERY (%)			SPT (N)	COV (ppm / %LEL)	LAB ANALYSIS			
						ft m		25 50 75 100					
	Ground Surface					0.0	185.78						
	100 mm Rootlets and Organics					0.0	0.00						
	Silty Clay / Clayey Silt Fill Material					1.0							
	Brown with some sand, gravel, and organics					2.0	185.09						
	Soft, wet					3.0	0.69						
	Silt Native					4.0							
	Brown with trace sand and gravel					5.0							
	Very compact, moist					6.0							
						7.0							
						8.0							
						9.0							
						10.0							
						11.0							
						12.0							
						13.0							
	Sandy Silt					14.0	181.66						
	Brown with trace gravel					15.0	4.11						
	Very dense to compact sand, moist					16.0							
						17.0							
						18.0							
						19.0							
						20.0							
						21.0							
						22.0							
						23.0							
						24.0							
						25.0							
						26.0							
						27.0							
						28.0							
						29.0							
						30.0							
						31.0							
						32.0							
						33.0							
						34.0							
						35.0							
						36.0							
						37.0							
						38.0							
						39.0							
						40.0	173.59						
						41.0	12.19						
						42.0							
						43.0							
	End of Borehole												

Concrete

Bentonite

#3 Silica Sand

2" Slot 10 Screen

1" Steel Casing

GW: M&I,
BTX/PHC, VOC,
PAH

Groundwater Level Upon Completion:	INITIAL WATER LEVEL: 10.00 mbgs	INITIAL WATER LEVEL DATE: November 27, 2024
Secondary Groundwater Level:	SECONDARY WATER LEVEL: 9.96 mbgs	SECONDARY WATER LEVEL DATE: December 2, 2024
	BOREHOLE CAVE UPON COMPLETION: N/A	



APPENDIX B

CERTIFICATES OF ANALYSIS –SOIL

CLIENT NAME: NIAGARA SOIL SOLUTIONS LTD
3300 MERRITTVILLE HIGHWAY
THOROLD, ON L2V 4Y6
289-407-6341

ATTENTION TO: Jodie Glasier

PROJECT: NS2491-02

AGAT WORK ORDER: 24H215472

SOIL ANALYSIS REVIEWED BY: Sukhwinder Randhawa, Inorganic Team Lead

TRACE ORGANICS REVIEWED BY: Neli Popnikolova, Senior Chemist

DATE REPORTED: Nov 11, 2024

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.
- This Certificate shall not be reproduced except in full, without the written approval of the laboratory.
- The test results reported herewith relate only to the samples as received by the laboratory.
- Application of guidelines is provided "as is" without warranty of any kind, either expressed or implied, including, but not limited to, warranties of merchantability, fitness for a particular purpose, or non-infringement. AGAT assumes no responsibility for any errors or omissions in the guidelines contained in this document.
- All reportable information is available on request from AGAT Laboratories, in accordance with ISO/IEC 17025:2017, ISO/IEC 17025:2005 (Quebec), DR-12-PALA and/or NELAP Standards.
- This document is signed by an authorized signatory who meets the requirements of the MELCCFP, CALA, CCN and NELAP.
- For environmental samples in the Province of Quebec: The analysis is performed on and results apply to samples as received. A temperature above 6°C upon receipt, as indicated in the Sample Reception Notification (SRN), could indicate the integrity of the samples has been compromised if the delay between sampling and submission to the laboratory could not be minimized.



Certificate of Analysis

AGAT WORK ORDER: 24H215472

PROJECT: NS2491-02

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

CLIENT NAME: NIAGARA SOIL SOLUTIONS LTD

SAMPLING SITE:5578 GEORGE ST.

ATTENTION TO: Jodie Glasier

SAMPLED BY:HELEN PIMENTEL

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

DATE RECEIVED: 2024-10-30

DATE REPORTED: 2024-11-11

Parameter	Unit	SAMPLE DESCRIPTION:		BH/MW1-1	BH/MW1-2	BH/MW2-1	BH/MW2-2	BH/MW3-1	BH/MW3-2	HA1	HA2
		SAMPLE TYPE:		Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
		DATE SAMPLED:		2024-10-29	2024-10-29	2024-10-29	2024-10-29	2024-10-29	2024-10-29	2024-10-29	2024-10-29
		G / S	RDL	6279758	6279760	6279761	6279762	6279763	6279764	6279765	6279766
Antimony	µg/g	7.5	0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8
Arsenic	µg/g	18	1	13	9	16	9	10	5	5	12
Barium	µg/g	390	2.0	233	236	149	78.5	242	90.3	126	455
Beryllium	µg/g	4	0.5	1.2	1.3	0.6	<0.5	0.9	<0.5	<0.5	0.9
Boron	µg/g	120	5	14	13	<5	5	7	<5	5	7
Cadmium	µg/g	1.2	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Chromium	µg/g	160	5	25	32	16	10	24	8	16	28
Cobalt	µg/g	22	0.8	14.7	16.9	6.6	6.9	11.7	4.6	6.9	15.2
Copper	µg/g	140	1.0	29.6	25.3	13.1	9.8	19.4	6.4	12.3	17.8
Lead	µg/g	120	1	31	12	116	9	135	3	17	12
Molybdenum	µg/g	6.9	0.5	1.5	0.6	0.9	0.6	1.5	<0.5	<0.5	1.9
Nickel	µg/g	100	1	31	39	15	14	25	10	16	33
Selenium	µg/g	2.4	0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8
Silver	µg/g	20	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Thallium	µg/g	1	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Uranium	µg/g	23	0.50	2.70	1.30	0.99	0.54	2.63	<0.50	0.79	2.12
Vanadium	µg/g	86	2.0	36.3	45.3	25.1	17.0	33.5	11.7	21.1	40.5
Zinc	µg/g	340	5	82	80	108	35	140	23	57	68

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 - Residential/Parkland/Institutional 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.
Analysis performed at AGAT Toronto (unless marked by *)

Certified By:





Certificate of Analysis

AGAT WORK ORDER: 24H215472

PROJECT: NS2491-02

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

CLIENT NAME: NIAGARA SOIL SOLUTIONS LTD

SAMPLING SITE:5578 GEORGE ST.

ATTENTION TO: Jodie Glasier

SAMPLED BY:HELEN PIMENTEL

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

DATE RECEIVED: 2024-10-30

DATE REPORTED: 2024-11-11

		SAMPLE DESCRIPTION:		BH/MW1-1	BH/MW1-2	BH/MW2-1	BH/MW2-2	BH/MW3-1	BH/MW3-2	HA1	HA2
		SAMPLE TYPE:		Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
		DATE SAMPLED:		2024-10-29	2024-10-29	2024-10-29	2024-10-29	2024-10-29	2024-10-29	2024-10-29	2024-10-29
Parameter	Unit	G / S	RDL	6279758	6279760	6279761	6279762	6279763	6279764	6279765	6279766
Boron (Hot Water Soluble)	µg/g	1.5	0.10	0.26	0.19	0.34	<0.10	0.46	<0.10	0.26	0.11
Chromium, Hexavalent	µg/g	8	0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
pH, 2:1 CaCl2 Extraction	pH Units	5.0-9.0	NA	7.00	7.14	7.09	7.10	6.93	7.14	6.99	6.84
Cyanide, WAD	µg/g	0.051	0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040
Mercury	µg/g	0.27	0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
		SAMPLE DESCRIPTION:		BH/MW3-3							
		SAMPLE TYPE:		Soil							
		DATE SAMPLED:		2024-10-29							
Parameter	Unit	G / S	RDL	6279767							
pH, 2:1 CaCl2 Extraction	pH Units	5.0-9.0	NA	6.24							

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 - Residential/Parkland/Institutional 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.

6279758-6279767 pH was determined on the 0.01M CaCl2 extract obtained from 2:1 leaching procedure (2 parts extraction fluid:1 part wet soil).

Analysis performed at AGAT Toronto (unless marked by *)

Certified By:





Certificate of Analysis

AGAT WORK ORDER: 24H215472

PROJECT: NS2491-02

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

CLIENT NAME: NIAGARA SOIL SOLUTIONS LTD

SAMPLING SITE: 5578 GEORGE ST.

ATTENTION TO: Jodie Glasier

SAMPLED BY: HELEN PIMENTEL

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

DATE RECEIVED: 2024-10-30

DATE REPORTED: 2024-11-11

		SAMPLE DESCRIPTION:		BH/MW1-1	BH/MW1-2	BH/MW2-1	BH/MW2-2	BH/MW3-1	BH/MW3-2	HA1	HA2
		SAMPLE TYPE:		Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
		DATE SAMPLED:		2024-10-29	2024-10-29	2024-10-29	2024-10-29	2024-10-29	2024-10-29	2024-10-29	2024-10-29
Parameter	Unit	G / S	RDL	6279758	6279760	6279761	6279762	6279763	6279764	6279765	6279766
Naphthalene	µg/g	0.6	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	7.9	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	6.2	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	0.69	0.05	<0.05	<0.05	0.06	<0.05	<0.05	<0.05	<0.05	<0.05
Pyrene	µg/g	78	0.05	<0.05	<0.05	0.07	<0.05	<0.05	<0.05	<0.05	<0.05
Benzo(a)anthracene	µg/g	0.5	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Chrysene	µg/g	7	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Benzo(b)fluoranthene	µg/g	0.78	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Benzo(k)fluoranthene	µg/g	0.78	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Benzo(a)pyrene	µg/g	0.3	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Indeno(1,2,3-cd)pyrene	µg/g	0.38	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	6.6	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
2-and 1-methyl Naphthalene	µg/g	0.99	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Moisture Content	%		0.1	18.0	20.3	15.6	11.2	19.2	7.5	21.3	22.6
Surrogate	Unit	Acceptable Limits									
Naphthalene-d8	%	50-140		90	70	100	70	75	95	95	70
Acridine-d9	%	50-140		95	100	90	95	105	95	95	100
Terphenyl-d14	%	50-140		90	95	85	110	80	75	100	85

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 - Residential/Parkland/Institutional 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.

6279758-6279766 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: 24H215472

PROJECT: NS2491-02

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

CLIENT NAME: NIAGARA SOIL SOLUTIONS LTD

SAMPLING SITE: 5578 GEORGE ST.

ATTENTION TO: Jodie Glasier

SAMPLED BY: HELEN PIMENTEL

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

DATE RECEIVED: 2024-10-30

DATE REPORTED: 2024-11-11

Parameter	Unit	SAMPLE DESCRIPTION:		BH/MW1-1	BH/MW1-2	BH/MW2-1	BH/MW2-2	BH/MW3-1	BH/MW3-2	HA1	HA2
		SAMPLE TYPE:		Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
		DATE SAMPLED:		2024-10-29	2024-10-29	2024-10-29	2024-10-29	2024-10-29	2024-10-29	2024-10-29	2024-10-29
		G / S	RDL	6279758	6279760	6279761	6279762	6279763	6279764	6279765	6279766
F1 (C6 to C10)	µg/g	55	5	<5	<5	<5	<5	<5	<5	<5	<5
F1 (C6 to C10) minus BTEX	µg/g	55	5	<5	<5	<5	<5	<5	<5	<5	<5
F2 (C10 to C16)	µg/g	98	10	<10	<10	<10	<10	<10	<10	<10	<10
F2 (C10 to C16) minus Naphthalene	µg/g		10	<10	<10	<10	<10	<10	<10	<10	<10
F3 (C16 to C34)	µg/g	300	50	<50	<50	<50	<50	<50	<50	<50	<50
F3 (C16 to C34) minus PAHs	µg/g		50	<50	<50	<50	<50	<50	<50	<50	<50
F4 (C34 to C50)	µg/g	2800	50	<50	<50	<50	<50	<50	<50	<50	<50
Gravimetric Heavy Hydrocarbons	µg/g	2800	50	NA	NA	NA	NA	NA	NA	NA	NA
Moisture Content	%		0.1	18.0	20.3	15.6	11.2	19.2	7.5	21.3	22.6
Surrogate	Unit	Acceptable Limits									
Toluene-d8	%	50-140									
Terphenyl	%	60-140									

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 - Residential/Parkland/Institutional 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.

6279758-6279766 Results are based on sample dry weight.
The C6-C10 fraction is calculated using toluene response factor.
C6-C10 (F1 minus BTEX) is a calculated parameter. The calculated value is F1 minus BTEX. The calculated parameter is non-accredited. The parameters that are components of the calculation are accredited.
The C10 - C16, C16 - C34, and C34 - C50 fractions are calculated using the average response factor for n-C10, n-C16, and n-C34.
Gravimetric Heavy Hydrocarbons are not included in the Total C16-C50 and are only determined if the chromatogram of the C34 - C50 hydrocarbons indicates that hydrocarbons >C50 are present.
The chromatogram has returned to baseline by the retention time of nC50.
Total C6 - C50 results are corrected for BTEX and PAH contributions.
C>10 - C16 (F2- Naphthalene) is a calculated parameter. The calculated value is F2 - Naphthalene.
C>16 - C34 (F3-PAH) is a calculated parameter. The calculated value is F3-PAH (PAH: sum of Phenanthrene, Benzo(a)anthracene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Benzo(a)pyrene, Fluoranthene, Dibenzo(a,h)anthracene, Indeno(1,2,3-c,d)pyrene and Pyrene).
This method complies with the Reference Method for the CWS PHC and is validated for use in the laboratory.
nC10, nC16 and nC34 response factors are within 10% of their average.
C50 response factor is within 70% of nC10 + nC16 + nC34 average.
Linearity is within 15%.
Extraction and holding times were met for this sample.

Analysis performed at AGAT Toronto (unless marked by *)

Certified By:



Certificate of Analysis

AGAT WORK ORDER: 24H215472

PROJECT: NS2491-02

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

CLIENT NAME: NIAGARA SOIL SOLUTIONS LTD

SAMPLING SITE: 5578 GEORGE ST.

ATTENTION TO: Jodie Glasier

SAMPLED BY: HELEN PIMENTEL

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

DATE RECEIVED: 2024-10-30

DATE REPORTED: 2024-11-11

		SAMPLE DESCRIPTION:		BH/MW1-1	BH/MW1-2	BH/MW2-1	BH/MW2-2	BH/MW3-1	BH/MW3-2	HA1	HA2
		SAMPLE TYPE:		Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
		DATE SAMPLED:		2024-10-29	2024-10-29	2024-10-29	2024-10-29	2024-10-29	2024-10-29	2024-10-29	2024-10-29
Parameter	Unit	G / S	RDL	6279758	6279760	6279761	6279762	6279763	6279764	6279765	6279766
Dichlorodifluoromethane	µg/g	16	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Vinyl Chloride	ug/g	0.02	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Bromomethane	ug/g	0.05	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Trichlorofluoromethane	ug/g	4	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Acetone	ug/g	16	0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
1,1-Dichloroethylene	ug/g	0.05	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Methylene Chloride	ug/g	0.1	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Trans- 1,2-Dichloroethylene	ug/g	0.084	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Methyl tert-butyl Ether	ug/g	0.75	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
1,1-Dichloroethane	ug/g	3.5	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Methyl Ethyl Ketone	ug/g	16	0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Cis- 1,2-Dichloroethylene	ug/g	3.4	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Chloroform	ug/g	0.05	0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04
1,2-Dichloroethane	ug/g	0.05	0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
1,1,1-Trichloroethane	ug/g	0.38	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Carbon Tetrachloride	ug/g	0.05	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Benzene	ug/g	0.21	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
1,2-Dichloropropane	ug/g	0.05	0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
Trichloroethylene	ug/g	0.061	0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
Bromodichloromethane	ug/g	13	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Methyl Isobutyl Ketone	ug/g	1.7	0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
1,1,2-Trichloroethane	ug/g	0.05	0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04
Toluene	ug/g	2.3	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Dibromochloromethane	ug/g	9.4	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Ethylene Dibromide	ug/g	0.05	0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04
Tetrachloroethylene	ug/g	0.28	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
1,1,1,2-Tetrachloroethane	ug/g	0.058	0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04
Chlorobenzene	ug/g	2.4	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Ethylbenzene	ug/g	2	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
m & p-Xylene	ug/g		0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05

Certified By:



Certificate of Analysis

AGAT WORK ORDER: 24H215472

PROJECT: NS2491-02

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

CLIENT NAME: NIAGARA SOIL SOLUTIONS LTD

SAMPLING SITE:5578 GEORGE ST.

ATTENTION TO: Jodie Glasier

SAMPLED BY:HELEN PIMENTEL

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

DATE RECEIVED: 2024-10-30

DATE REPORTED: 2024-11-11

		SAMPLE DESCRIPTION:		BH/MW1-1	BH/MW1-2	BH/MW2-1	BH/MW2-2	BH/MW3-1	BH/MW3-2	HA1	HA2
		SAMPLE TYPE:		Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
		DATE SAMPLED:		2024-10-29	2024-10-29	2024-10-29	2024-10-29	2024-10-29	2024-10-29	2024-10-29	2024-10-29
Parameter	Unit	G / S	RDL	6279758	6279760	6279761	6279762	6279763	6279764	6279765	6279766
Bromoform	ug/g	0.27	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Styrene	ug/g	0.7	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
1,1,2,2-Tetrachloroethane	ug/g	0.05	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
o-Xylene	ug/g		0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
1,3-Dichlorobenzene	ug/g	4.8	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
1,4-Dichlorobenzene	ug/g	0.083	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
1,2-Dichlorobenzene	ug/g	3.4	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Xylenes (Total)	ug/g	3.1	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
1,3-Dichloropropene (Cis + Trans)	µg/g	0.05	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
n-Hexane	µg/g	2.8	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Moisture Content	%		0.1	18.0	20.3	15.6	11.2	19.2	7.5	21.3	22.6
Surrogate	Unit	Acceptable Limits									
Toluene-d8	% Recovery	50-140		88	81	80	83	84	82	84	88
4-Bromofluorobenzene	% Recovery	50-140		92	86	82	82	88	92	85	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 -

Residential/Parkland/Institutional 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.

6279758-6279766 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:



AGAT Laboratories

Exceedance Summary

AGAT WORK ORDER: 24H215472

PROJECT: NS2491-02

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

CLIENT NAME: NIAGARA SOIL SOLUTIONS LTD

ATTENTION TO: Jodie Glasier

SAMPLEID	SAMPLE TITLE	GUIDELINE	ANALYSIS PACKAGE	PARAMETER	UNIT	GUIDEVALUE	RESULT
6279763	BH/MW3-1	ON T3 S RPI CT	O. Reg. 153(511) - Metals (Including Hydrides) (Soil)	Lead	µg/g	120	135
6279766	HA2	ON T3 S RPI CT	O. Reg. 153(511) - Metals (Including Hydrides) (Soil)	Barium	µg/g	390	455

Quality Assurance

CLIENT NAME: NIAGARA SOIL SOLUTIONS LTD

PROJECT: NS2491-02

SAMPLING SITE:5578 GEORGE ST.

AGAT WORK ORDER: 24H215472

ATTENTION TO: Jodie Glasier

SAMPLED BY:HELEN PIMENTEL

Soil Analysis

RPT Date: Nov 11, 2024			DUPLICATE			Method Blank	REFERENCE MATERIAL		METHOD BLANK SPIKE		MATRIX SPIKE	
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD		Measured Value	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper

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

Boron (Hot Water Soluble)	6279595		0.13	0.12	NA	< 0.10	98%	60%	140%	97%	70%	130%	101%	60%	140%
Chromium, Hexavalent	6282342		<0.2	<0.2	NA	< 0.2	93%	70%	130%	89%	80%	120%	70%	70%	130%
pH, 2:1 CaCl2 Extraction	6275941		7.32	7.22	1.4%	NA	100%	80%	120%						
Cyanide, WAD	6279764	6279764	<0.040	<0.040	NA	< 0.040	92%	70%	130%	93%	80%	120%	84%	70%	130%
Mercury	6279226		<0.10	<0.10	NA	< 0.10	101%	70%	130%	97%	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.

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

pH, 2:1 CaCl2 Extraction	6279764	6279764	7.14	7.10	0.6%	NA	100%	80%	120%						
Mercury	6281395		<0.10	<0.10	NA	< 0.10	107%	70%	130%	91%	80%	120%	94%	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.

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

Antimony	6279226		<0.8	<0.8	NA	< 0.8	115%	70%	130%	89%	80%	120%	73%	70%	130%
Arsenic	6279226		1	1	NA	< 1	122%	70%	130%	97%	80%	120%	99%	70%	130%
Barium	6279226		25.0	25.6	2.4%	< 2.0	97%	70%	130%	101%	80%	120%	92%	70%	130%
Beryllium	6279226		<0.5	<0.5	NA	< 0.5	102%	70%	130%	109%	80%	120%	124%	70%	130%
Boron	6279226		<5	<5	NA	< 5	78%	70%	130%	97%	80%	120%	100%	70%	130%
Cadmium	6279226		<0.5	<0.5	NA	< 0.5	101%	70%	130%	98%	80%	120%	98%	70%	130%
Chromium	6279226		7	7	NA	< 5	91%	70%	130%	101%	80%	120%	92%	70%	130%
Cobalt	6279226		3.3	3.3	NA	< 0.8	100%	70%	130%	100%	80%	120%	103%	70%	130%
Copper	6279226		7.5	7.8	3.9%	< 1.0	102%	70%	130%	97%	80%	120%	93%	70%	130%
Lead	6279226		4	4	NA	< 1	111%	70%	130%	96%	80%	120%	88%	70%	130%
Molybdenum	6279226		<0.5	<0.5	NA	< 0.5	105%	70%	130%	101%	80%	120%	105%	70%	130%
Nickel	6279226		8	7	13.3%	< 1	100%	70%	130%	99%	80%	120%	94%	70%	130%
Selenium	6279226		<0.8	<0.8	NA	< 0.8	116%	70%	130%	104%	80%	120%	103%	70%	130%
Silver	6279226		<0.5	<0.5	NA	< 0.5	91%	70%	130%	92%	80%	120%	90%	70%	130%
Thallium	6279226		<0.5	<0.5	NA	< 0.5	108%	70%	130%	95%	80%	120%	87%	70%	130%
Uranium	6279226		<0.50	<0.50	NA	< 0.50	108%	70%	130%	93%	80%	120%	95%	70%	130%
Vanadium	6279226		15.2	15.0	1.3%	< 2.0	120%	70%	130%	95%	80%	120%	98%	70%	130%
Zinc	6279226		31	31	0.0%	< 5	101%	70%	130%	105%	80%	120%	118%	70%	130%

Comments: NA Signifies Not Applicable.

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

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

Antimony	6281395		<0.8	<0.8	NA	< 0.8	102%	70%	130%	88%	80%	120%	71%	70%	130%
Arsenic	6281395		1	1	NA	< 1	118%	70%	130%	111%	80%	120%	124%	70%	130%

AGAT QUALITY ASSURANCE REPORT (V1)

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

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

Quality Assurance

CLIENT NAME: NIAGARA SOIL SOLUTIONS LTD

AGAT WORK ORDER: 24H215472

PROJECT: NS2491-02

ATTENTION TO: Jodie Glasier

SAMPLING SITE: 5578 GEORGE ST.

SAMPLED BY: HELEN PIMENTEL

Soil Analysis (Continued)

RPT Date: Nov 11, 2024			DUPLICATE				REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Method Blank	Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
Barium	6281395		56.8	62.9	10.2%	< 2.0	113%	70%	130%	103%	80%	120%	128%	70%	130%
Beryllium	6281395		<0.5	<0.5	NA	< 0.5	94%	70%	130%	111%	80%	120%	127%	70%	130%
Boron	6281395		<5	5	NA	< 5	81%	70%	130%	100%	80%	120%	111%	70%	130%
Cadmium	6281395		<0.5	<0.5	NA	< 0.5	96%	70%	130%	105%	80%	120%	112%	70%	130%
Chromium	6281395		13	15	NA	< 5	110%	70%	130%	108%	80%	120%	108%	70%	130%
Cobalt	6281395		4.2	4.7	11.2%	< 0.8	102%	70%	130%	109%	80%	120%	122%	70%	130%
Copper	6281395		8.5	10.0	16.2%	< 1.0	106%	70%	130%	107%	80%	120%	129%	70%	130%
Lead	6281395		3	3	NA	< 1	110%	70%	130%	110%	80%	120%	113%	70%	130%
Molybdenum	6281395		<0.5	<0.5	NA	< 0.5	102%	70%	130%	102%	80%	120%	113%	70%	130%
Nickel	6281395		7	8	13.3%	< 1	106%	70%	130%	112%	80%	120%	122%	70%	130%
Selenium	6281395		<0.8	<0.8	NA	< 0.8	118%	70%	130%	104%	80%	120%	126%	70%	130%
Silver	6281395		<0.5	<0.5	NA	< 0.5	102%	70%	130%	109%	80%	120%	112%	70%	130%
Thallium	6281395		<0.5	<0.5	NA	< 0.5	80%	70%	130%	97%	80%	120%	109%	70%	130%
Uranium	6281395		<0.50	<0.50	NA	< 0.50	95%	70%	130%	102%	80%	120%	108%	70%	130%
Vanadium	6281395		25.3	30.8	19.6%	< 2.0	113%	70%	130%	111%	80%	120%	103%	70%	130%
Zinc	6281395		22	27	NA	< 5	108%	70%	130%	106%	80%	120%	125%	70%	130%

Comments: NA Signifies Not Applicable.

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

Certified By:



Quality Assurance

CLIENT NAME: NIAGARA SOIL SOLUTIONS LTD

AGAT WORK ORDER: 24H215472

PROJECT: NS2491-02

ATTENTION TO: Jodie Glasier

SAMPLING SITE: 5578 GEORGE ST.

SAMPLED BY: HELEN PIMENTEL

Trace Organics Analysis

RPT Date: Nov 11, 2024			DUPLICATE			Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD		Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper

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

F1 (C6 to C10)	6279766	6279766	<5	<5	NA	< 5	102%	60%	140%	87%	60%	140%	91%	60%	140%
F2 (C10 to C16)	6279766	6279766	< 10	< 10	NA	< 10	107%	60%	140%	105%	60%	140%	98%	60%	140%
F3 (C16 to C34)	6279766	6279766	< 50	< 50	NA	< 50	106%	60%	140%	123%	60%	140%	121%	60%	140%
F4 (C34 to C50)	6279766	6279766	< 50	< 50	NA	< 50	66%	60%	140%	121%	60%	140%	110%	60%	140%

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

Dichlorodifluoromethane	6279766	6279766	<0.05	<0.05	NA	< 0.05	91%	50%	140%	84%	50%	140%	118%	50%	140%
Vinyl Chloride	6279766	6279766	<0.02	<0.02	NA	< 0.02	105%	50%	140%	119%	50%	140%	112%	50%	140%
Bromomethane	6279766	6279766	<0.05	<0.05	NA	< 0.05	130%	50%	140%	108%	50%	140%	121%	50%	140%
Trichlorofluoromethane	6279766	6279766	<0.05	<0.05	NA	< 0.05	113%	50%	140%	79%	50%	140%	103%	50%	140%
Acetone	6279766	6279766	<0.50	<0.50	NA	< 0.50	83%	50%	140%	96%	50%	140%	105%	50%	140%
1,1-Dichloroethylene	6279766	6279766	<0.05	<0.05	NA	< 0.05	87%	50%	140%	98%	60%	130%	67%	50%	140%
Methylene Chloride	6279766	6279766	<0.05	<0.05	NA	< 0.05	87%	50%	140%	99%	60%	130%	84%	50%	140%
Trans- 1,2-Dichloroethylene	6279766	6279766	<0.05	<0.05	NA	< 0.05	104%	50%	140%	98%	60%	130%	94%	50%	140%
Methyl tert-butyl Ether	6279766	6279766	<0.05	<0.05	NA	< 0.05	60%	50%	140%	109%	60%	130%	109%	50%	140%
1,1-Dichloroethane	6279766	6279766	<0.02	<0.02	NA	< 0.02	93%	50%	140%	97%	60%	130%	98%	50%	140%
Methyl Ethyl Ketone	6279766	6279766	<0.50	<0.50	NA	< 0.50	85%	50%	140%	92%	50%	140%	103%	50%	140%
Cis- 1,2-Dichloroethylene	6279766	6279766	<0.02	<0.02	NA	< 0.02	98%	50%	140%	111%	60%	130%	99%	50%	140%
Chloroform	6279766	6279766	<0.04	<0.04	NA	< 0.04	101%	50%	140%	102%	60%	130%	99%	50%	140%
1,2-Dichloroethane	6279766	6279766	<0.03	<0.03	NA	< 0.03	94%	50%	140%	99%	60%	130%	98%	50%	140%
1,1,1-Trichloroethane	6279766	6279766	<0.05	<0.05	NA	< 0.05	78%	50%	140%	69%	60%	130%	66%	50%	140%
Carbon Tetrachloride	6279766	6279766	<0.05	<0.05	NA	< 0.05	67%	50%	140%	70%	60%	130%	76%	50%	140%
Benzene	6279766	6279766	<0.02	<0.02	NA	< 0.02	93%	50%	140%	109%	60%	130%	96%	50%	140%
1,2-Dichloropropane	6279766	6279766	<0.03	<0.03	NA	< 0.03	67%	50%	140%	95%	60%	130%	83%	50%	140%
Trichloroethylene	6279766	6279766	<0.03	<0.03	NA	< 0.03	100%	50%	140%	106%	60%	130%	97%	50%	140%
Bromodichloromethane	6279766	6279766	<0.05	<0.05	NA	< 0.05	90%	50%	140%	84%	60%	130%	81%	50%	140%
Methyl Isobutyl Ketone	6279766	6279766	<0.50	<0.50	NA	< 0.50	84%	50%	140%	85%	50%	140%	105%	50%	140%
1,1,2-Trichloroethane	6279766	6279766	<0.04	<0.04	NA	< 0.04	68%	50%	140%	63%	60%	130%	67%	50%	140%
Toluene	6279766	6279766	<0.05	<0.05	NA	< 0.05	93%	50%	140%	78%	60%	130%	107%	50%	140%
Dibromochloromethane	6279766	6279766	<0.05	<0.05	NA	< 0.05	66%	50%	140%	61%	60%	130%	67%	50%	140%
Ethylene Dibromide	6279766	6279766	<0.04	<0.04	NA	< 0.04	106%	50%	140%	91%	60%	130%	78%	50%	140%
Tetrachloroethylene	6279766		<0.05	<0.05	NA	< 0.05	78%	50%	140%	99%	60%	130%	100%	50%	140%
1,1,1,2-Tetrachloroethane	6279766	6279766	<0.04	<0.04	NA	< 0.04	88%	50%	140%	88%	60%	130%	84%	50%	140%
Chlorobenzene	6279766	6279766	<0.05	<0.05	NA	< 0.05	101%	50%	140%	84%	60%	130%	97%	50%	140%
Ethylbenzene	6279766	6279766	<0.05	<0.05	NA	< 0.05	99%	50%	140%	92%	60%	130%	93%	50%	140%
m & p-Xylene	6279766	6279766	<0.05	<0.05	NA	< 0.05	116%	50%	140%	91%	60%	130%	121%	50%	140%
Bromoform	6279766	6279766	<0.05	<0.05	NA	< 0.05	70%	50%	140%	68%	60%	130%	99%	50%	140%
Styrene	6279766	6279766	<0.05	<0.05	NA	< 0.05	94%	50%	140%	89%	60%	130%	99%	50%	140%
1,1,2,2-Tetrachloroethane	6279766	6279766	<0.05	<0.05	NA	< 0.05	65%	50%	140%	88%	60%	130%	77%	50%	140%
o-Xylene	6279766	6279766	<0.05	<0.05	NA	< 0.05	98%	50%	140%	95%	60%	130%	99%	50%	140%

Quality Assurance

CLIENT NAME: NIAGARA SOIL SOLUTIONS LTD

PROJECT: NS2491-02

SAMPLING SITE: 5578 GEORGE ST.

AGAT WORK ORDER: 24H215472

ATTENTION TO: Jodie Glasier

SAMPLED BY: HELEN PIMENTEL

Trace Organics Analysis (Continued)

RPT Date: Nov 11, 2024			DUPLICATE				REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Method Blank	Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
1,3-Dichlorobenzene	6279766	6279766	<0.05	<0.05	NA	< 0.05	96%	50%	140%	90%	60%	130%	106%	50%	140%
1,4-Dichlorobenzene	6279766	6279766	<0.05	<0.05	NA	< 0.05	101%	50%	140%	90%	60%	130%	101%	50%	140%
1,2-Dichlorobenzene	6279766	6279766	<0.05	<0.05	NA	< 0.05	97%	50%	140%	87%	60%	130%	94%	50%	140%
n-Hexane	6279766	6279766	<0.05	<0.05	NA	< 0.05	92%	50%	140%	98%	60%	130%	67%	50%	140%
O. Reg. 153(511) - PAHs (Soil)															
Naphthalene	6283513		<0.05	<0.05	NA	< 0.05	110%	50%	140%	110%	50%	140%	85%	50%	140%
Acenaphthylene	6283513		<0.05	<0.05	NA	< 0.05	119%	50%	140%	83%	50%	140%	98%	50%	140%
Acenaphthene	6283513		<0.05	<0.05	NA	< 0.05	106%	50%	140%	83%	50%	140%	80%	50%	140%
Fluorene	6283513		<0.05	<0.05	NA	< 0.05	137%	50%	140%	95%	50%	140%	95%	50%	140%
Phenanthrene	6283513		<0.05	<0.05	NA	< 0.05	85%	50%	140%	85%	50%	140%	108%	50%	140%
Anthracene	6283513		<0.05	<0.05	NA	< 0.05	118%	50%	140%	95%	50%	140%	78%	50%	140%
Fluoranthene	6283513		<0.05	<0.05	NA	< 0.05	119%	50%	140%	80%	50%	140%	100%	50%	140%
Pyrene	6283513		<0.05	<0.05	NA	< 0.05	136%	50%	140%	88%	50%	140%	108%	50%	140%
Benzo(a)anthracene	6283513		<0.05	<0.05	NA	< 0.05	99%	50%	140%	88%	50%	140%	83%	50%	140%
Chrysene	6283513		<0.05	<0.05	NA	< 0.05	130%	50%	140%	88%	50%	140%	68%	50%	140%
Benzo(b)fluoranthene	6283513		<0.05	<0.05	NA	< 0.05	88%	50%	140%	98%	50%	140%	90%	50%	140%
Benzo(k)fluoranthene	6283513		<0.05	<0.05	NA	< 0.05	86%	50%	140%	100%	50%	140%	75%	50%	140%
Benzo(a)pyrene	6283513		<0.05	<0.05	NA	< 0.05	108%	50%	140%	110%	50%	140%	83%	50%	140%
Indeno(1,2,3-cd)pyrene	6283513		<0.05	<0.05	NA	< 0.05	104%	50%	140%	105%	50%	140%	73%	50%	140%
Dibenz(a,h)anthracene	6283513		<0.05	<0.05	NA	< 0.05	83%	50%	140%	90%	50%	140%	75%	50%	140%
Benzo(g,h,i)perylene	6283513		<0.05	<0.05	NA	< 0.05	103%	50%	140%	95%	50%	140%	73%	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: NIAGARA SOIL SOLUTIONS LTD

PROJECT: NS2491-02

SAMPLING SITE: 5578 GEORGE ST.

AGAT WORK ORDER: 24H215472

ATTENTION TO: Jodie Glasier

SAMPLED BY: HELEN PIMENTEL

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Soil Analysis			
Antimony	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Arsenic	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Barium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Beryllium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Boron	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Cadmium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Chromium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Cobalt	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Copper	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Lead	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Molybdenum	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Nickel	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Selenium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Silver	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Thallium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Uranium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Vanadium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Zinc	MET 93 -6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Boron (Hot Water Soluble)	MET-93-6104	modified from EPA 6010D and MSA PART 3, CH 21	ICP/OES
Chromium, Hexavalent	INOR-93-6068	modified from EPA 3060 and EPA 7196	SPECTROPHOTOMETER
pH, 2:1 CaCl ₂ Extraction	INOR-93-6075	modified from EPA 9045D, MCKEAGUE 3.11 E3137	PC TITRATE
Cyanide, WAD	INOR-93-6052	modified from ON MOECC E3015, SM 4500-CN- I, G-387	SEGMENTED FLOW ANALYSIS
Mercury	MET-93-6103	modified from EPA 7471B and SM 3112 B	ICP-MS

Method Summary

CLIENT NAME: NIAGARA SOIL SOLUTIONS LTD

PROJECT: NS2491-02

SAMPLING SITE: 5578 GEORGE ST.

AGAT WORK ORDER: 24H215472

ATTENTION TO: Jodie Glasier

SAMPLED BY: HELEN PIMENTEL

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Trace Organics Analysis			
Naphthalene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Acenaphthylene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Acenaphthene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Fluorene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Phenanthrene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Anthracene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Fluoranthene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Pyrene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Benzo(a)anthracene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Chrysene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Benzo(b)fluoranthene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Benzo(k)fluoranthene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Benzo(a)pyrene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Indeno(1,2,3-cd)pyrene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Dibenz(a,h)anthracene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Benzo(g,h,i)perylene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
2-and 1-methyl Naphthalene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Naphthalene-d8	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Acridine-d9	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Terphenyl-d14	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Moisture Content	VOL-91-5009	modified from CCME Tier 1 Method	BALANCE
F1 (C6 to C10)	VOL-91-5009	modified from CCME Tier 1 Method	(P&T)GC/FID
F1 (C6 to C10) minus BTEX	VOL-91-5009	modified from CCME Tier 1 Method	P&T GC/FID
Toluene-d8	VOL-91- 5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
F2 (C10 to C16)	VOL-91-5009	modified from CCME Tier 1 Method	GC/FID
F2 (C10 to C16) minus Naphthalene	VOL-91-5009	modified from CCME Tier 1 Method	GC/FID
F3 (C16 to C34)	VOL-91-5009	modified from CCME Tier 1 Method	GC/FID
F3 (C16 to C34) minus PAHs	VOL-91-5009	modified from CCME Tier 1 Method	GC/FID
F4 (C34 to C50)	VOL-91-5009	modified from CCME Tier 1 Method	GC/FID
Gravimetric Heavy Hydrocarbons	VOL-91-5009	modified from CCME Tier 1 Method	BALANCE
Terphenyl	VOL-91-5009	modified from CCME Tier 1 Method	GC/FID
Dichlorodifluoromethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS

Method Summary

CLIENT NAME: NIAGARA SOIL SOLUTIONS LTD
PROJECT: NS2491-02
SAMPLING SITE: 5578 GEORGE ST.
AGAT WORK ORDER: 24H215472
ATTENTION TO: Jodie Glasier
SAMPLED BY: HELEN PIMENTEL

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Vinyl Chloride	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Bromomethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Trichlorofluoromethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Acetone	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,1-Dichloroethylene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Methylene Chloride	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Trans- 1,2-Dichloroethylene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Methyl tert-butyl Ether	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,1-Dichloroethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Methyl Ethyl Ketone	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Cis- 1,2-Dichloroethylene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Chloroform	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,2-Dichloroethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,1,1-Trichloroethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Carbon Tetrachloride	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Benzene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,2-Dichloropropane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Trichloroethylene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Bromodichloromethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Methyl Isobutyl Ketone	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,1,2-Trichloroethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Toluene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Dibromochloromethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Ethylene Dibromide	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Tetrachloroethylene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,1,1,2-Tetrachloroethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Chlorobenzene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Ethylbenzene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS

Method Summary

CLIENT NAME: NIAGARA SOIL SOLUTIONS LTD

AGAT WORK ORDER: 24H215472

PROJECT: NS2491-02

ATTENTION TO: Jodie Glasier

SAMPLING SITE: 5578 GEORGE ST.

SAMPLED BY: HELEN PIMENTEL

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
m & p-Xylene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Bromoform	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Styrene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,1,2,2-Tetrachloroethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
o-Xylene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,3-Dichlorobenzene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,4-Dichlorobenzene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,2-Dichlorobenzene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Xylenes (Total)	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,3-Dichloropropene (Cis + Trans)	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
n-Hexane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Toluene-d8	VOL-91-5002	modified from EPA 5035A & EPA 8260D	(P&T)GC/MS
4-Bromofluorobenzene	VOL-91-5002	modified from EPA 5035A & EPA 8260D	(P&T)GC/MS



Chain of Custody Record

If this is a Drinking Water sample, please use Drinking Water Chain of Custody Form (potable water consumed by humans)

Report Information:

Company: NSSL
Contact: Jodie Glasier
Address: 3300 Merriville Highway,
Unit 4, Thorold, ON L2V 4Y6
Phone: 289-407-6341 Fax: _____
Reports to be sent to:
1. Email: jglasier@nssl.ca
2. Email: _____

Project Information:

Project: NS 2491-02
Site Location: 5578 George St.
Sampled By: Helen Pimentel
AGAT Quote #: 1033659 EG PO: _____
Please note: If quotation number is not provided, client will be billed full price for analysis.

Invoice Information:

Company: _____
Contact: _____
Address: _____
Email: _____
Bill To Same: Yes ☒ No ☐

Regulatory Requirements:

(Please check all applicable boxes)

☒ Regulation 153/04

Table 3 Indicate One
☐ Ind/Com
☒ Res/Park
☐ Agriculture

Soil Texture (Check One)

☒ Coarse
☐ Fine

☐ Regulation 406

Table Indicate One
☐ Ind/Com
☐ Res/Park
☐ Agriculture

☐ Regulation 558

☐ CCME

☐ Sewer Use

☐ Sanitary ☐ Storm

Region _____
☐ Prov. Water Quality
Objectives (PWQO)

☐ Other

Indicate One

Is this submission for a Record
of Site Condition (RSC)?

☐ Yes ☐ No

Report Guideline on
Certificate of Analysis

☐ Yes ☐ No

Legal Sample ☐

Sample Matrix Legend

GW Ground Water SD Sediment
O Oil SW Surface Water
P Paint R Rock/Shale
S Soil

Sample Identification	Date Sampled	Time Sampled	# of Containers	Sample Matrix	Comments/ Special Instructions	Y / N	Field Filtered - Metals, Hg, CrVI, DOC	0. Reg 153	0. Reg 406	0. Reg 558	Corrosivity: ☐ Moisture ☐ Sulphide	Other	Potentially Hazardous or High Concentration (Y/N)
1. BH/MW 1-1	10/29/24	AM	3	S				X					
2. BH/MW 1-2		AM	1					X					
3. BH/MW 2-1		AM	1					X					
4. BH/MW 2-2		AM	1					X					
5. BH/MW 3-1		AM	1					X					
6. BH/MW 3-2		AM	1					X					
7. HA1		AM	3					X					
8. HA2		AM	3					X					
9. BH/MW 3-3	10/29/24	AM	1	S	only pH.			X					
10.		AM											
11.		AM											

Samples Relinquished By (Print Name and Sign): <u>Helen Pimentel</u>	Date: <u>10/30/24</u>	Time: <u>3pm</u>	Samples Received By (Print Name and Sign): <u>DMC</u>	Date: <u>10/30/24</u>	Time: <u>4:45pm</u>
Samples Relinquished By (Print Name and Sign): <u>DMC</u>	Date: <u>10/31/24</u>	Time: <u>3pm</u>	Samples Received By (Print Name and Sign): <u>DMC</u>	Date: <u>10/31/24</u>	Time: <u>4pm</u>
Samples Relinquished By (Print Name and Sign): <u>DMC</u>	Date: <u>10/31/24</u>	Time: <u>3pm</u>	Samples Received By (Print Name and Sign): <u>DMC</u>	Date: <u>10/31/24</u>	Time: <u>4pm</u>

Laboratory Use Only

Work Order #: 244215472
Cooler Quantity: 6-36 Cooler
Arrival Temperatures: 6.3 6.9 7.3
Depot Temperatures: 10.0 10.2 10.9
Custody Seal Intact: ☐ Yes ☐ No ☐ N/A
Notes: 896650 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 CSR

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

CLIENT NAME: NIAGARA SOIL SOLUTIONS LTD
3300 MERRITTVILLE HIGHWAY
THOROLD, ON L2V 4Y6
289-407-6341

ATTENTION TO: Jodie Glasier

PROJECT: NS2491-02

AGAT WORK ORDER: 24H222551

SOIL ANALYSIS REVIEWED BY: Nivine Basily, Inorganic Team Lead

DATE REPORTED: Nov 28, 2024

PAGES (INCLUDING COVER): 6

VERSION*: 1

Should you require any information regarding this analysis please contact your client services representative at (905) 712-5100

***Notes**

Disclaimer:

- All work conducted herein has been done using accepted standard protocols, and generally accepted practices and methods. AGAT test methods may incorporate modifications from the specified reference methods to improve performance.
- All samples will be disposed of within 30 days after receipt unless a Long Term Storage Agreement is signed and returned. Some specialty analysis may be exempt, please contact your Client Project Manager for details.
- AGAT's liability in connection with any delay, performance or non-performance of these services is only to the Client and does not extend to any other third party. Unless expressly agreed otherwise in writing, AGAT's liability is limited to the actual cost of the specific analysis or analyses included in the services.
- This Certificate shall not be reproduced except in full, without the written approval of the laboratory.
- The test results reported herewith relate only to the samples as received by the laboratory.
- Application of guidelines is provided "as is" without warranty of any kind, either expressed or implied, including, but not limited to, warranties of merchantability, fitness for a particular purpose, or non-infringement. AGAT assumes no responsibility for any errors or omissions in the guidelines contained in this document.
- All reportable information is available on request from AGAT Laboratories, in accordance with ISO/IEC 17025:2017, ISO/IEC 17025:2005 (Quebec), DR-12-PALA and/or NELAP Standards.
- This document is signed by an authorized signatory who meets the requirements of the MELCCFP, CALA, CCN and NELAP.
- For environmental samples in the Province of Quebec: The analysis is performed on and results apply to samples as received. A temperature above 6°C upon receipt, as indicated in the Sample Reception Notification (SRN), could indicate the integrity of the samples has been compromised if the delay between sampling and submission to the laboratory could not be minimized.



Certificate of Analysis

AGAT WORK ORDER: 24H222551

PROJECT: NS2491-02

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

CLIENT NAME: NIAGARA SOIL SOLUTIONS LTD

SAMPLING SITE: 5578 George Street

ATTENTION TO: Jodie Glasier

SAMPLED BY: Helen Pimentel

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

DATE RECEIVED: 2024-11-18

DATE REPORTED: 2024-11-28

		SAMPLE DESCRIPTION:		HA2
		SAMPLE TYPE:		Soil
		DATE SAMPLED:		2024-11-19
Parameter	Unit	G / S	RDL	6336072
Barium	µg/g	390	2.0	407

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 - Residential/Parkland/Institutional Property Use - Medium and Fine Textured Soils
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.
Analysis performed at AGAT Toronto (unless marked by *)

Certified By:





AGAT Laboratories

Exceedance Summary

AGAT WORK ORDER: 24H222551

PROJECT: NS2491-02

5835 COOPERS AVENUE
MISSISSAUGA, ONTARIO
CANADA L4Z 1Y2
TEL (905)712-5100
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CLIENT NAME: NIAGARA SOIL SOLUTIONS LTD

ATTENTION TO: Jodie Glasier

SAMPLEID	SAMPLE TITLE	GUIDELINE	ANALYSIS PACKAGE	PARAMETER	UNIT	GUIDEVALUE	RESULT
6336072	HA2	ON T3 S RPI MFT	O. Reg. 153(511) - Metals (Including Hydrides) (Soil)	Barium	µg/g	390	407

Quality Assurance

CLIENT NAME: NIAGARA SOIL SOLUTIONS LTD

PROJECT: NS2491-02

SAMPLING SITE: 5578 George Street

AGAT WORK ORDER: 24H222551

ATTENTION TO: Jodie Glasier

SAMPLED BY: Helen Pimentel

Soil Analysis

RPT Date: Nov 28, 2024			DUPLICATE			Method Blank	REFERENCE MATERIAL		METHOD BLANK SPIKE		MATRIX SPIKE			
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD		Measured Value	Acceptable Limits	Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower		Upper	Lower		Upper	Lower

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

Barium	6342546	226	206	9.3%	< 2.0	101%	70%	130%	101%	80%	120%	NA	70%	130%
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Comments: Matrix spike NA: Spike level < native concentration. Matrix spike acceptance limits do not apply and are not calculated.

Certified By:



Method Summary

CLIENT NAME: NIAGARA SOIL SOLUTIONS LTD

AGAT WORK ORDER: 24H222551

PROJECT: NS2491-02

ATTENTION TO: Jodie Glasier

SAMPLING SITE: 5578 George Street

SAMPLED BY: Helen Pimentel

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Soil Analysis			
Barium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS



Chain of Custody Record

If this is a Drinking Water sample, please use Drinking Water Chain of Custody Form (DW-COF) for water consumed by humans

Report Information:

Company: NSSL
Contact: Jodie Glasier
Address: 3300 Merrittville Highway, Unit 4
Thorold, ON. L2V 4Y6
Phone: 289-407-6341 Fax: _____
Reports to be sent to:
1. Email: Jglasier@nssl.ca
2. Email: _____

Regulatory Requirements:

(Please check all applicable boxes)

☒ Regulation 153/04

Table 3 Indicate One
☐ Ind/Com
☒ Res/Park
☐ Agriculture

Soil Texture (Check One)

☐ Coarse

☒ Fine

☐ Regulation 406

Table _____ Indicate One
☐ Ind/Com
☐ Res/Park
☐ Agriculture

☐ Regulation 558

☐ CCME

☐ Sewer Use

☐ Sanitary ☐ Storm

Region _____

☐ Prov. Water Quality Objectives (PWQO)

☐ Other

Indicate One

Is this submission for a Record of Site Condition (RSC)?

☐ Yes

☐ No

Report Guideline on Certificate of Analysis

☒ Yes

☐ No

Legal Sample ☐

Sample Matrix Legend

GW Ground Water SD Sediment
O Oil SW Surface Water
P Paint R Rock/Shale
S Soil

Laboratory Use Only

Work Order #: 24H22551

Cooler Quantity: LG COOLER

Arrival Temperatures: 3.8 | 4.0 | 4.2

Depot Temperatures: 9.8 | 8.9 | 8.3

Custody Seal Intact: ☐ Yes ☐ No ☐ N/A

Notes: BAGGED 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 CSR

Invoice Information:

Bill To Same: Yes ☒ No ☐

Company: _____
Contact: _____
Address: _____
Email: _____

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

Sample Identification	Date Sampled	Time Sampled	# of Containers	Sample Matrix	Comments/ Special Instructions	Y / N	Field Filtered - Metals, Hg, CrVI, DOC	0. Reg 153	0. Reg 406	0. Reg 558	Potentially Hazardous or High Concentration (Y/N)
1. <u>HA2</u>	<u>11/29/24</u>	<u>AM</u>	<u>1</u>	<u>S</u>	<u>only Barium</u>						
2.		<u>PM</u>									
3.		<u>AM</u>									
4.		<u>PM</u>									
5.		<u>AM</u>									
6.		<u>PM</u>									
7.		<u>AM</u>									
8.		<u>PM</u>									
9.		<u>AM</u>									
10.		<u>PM</u>									
11.		<u>AM</u>									

Samples Relinquished By (Print Name and Sign): <u>Helen Pimentel</u>	Date: <u>11/18/24</u>	Time: _____	Samples Received By (Print Name and Sign): <u>DRAC</u>	Date: <u>Nov 18/24</u>	Time: <u>9:45pm</u>
Samples Relinquished By (Print Name and Sign): <u>DRAC</u>	Date: <u>Nov 19/24</u>	Time: <u>3pm</u>	Samples Received By (Print Name and Sign): <u>TH</u>	Date: <u>Nov 19/24</u>	Time: <u>4pm</u>
Samples Relinquished By (Print Name and Sign): _____	Date: _____	Time: _____	Samples Received By (Print Name and Sign): _____	Date: _____	Time: _____

Page 1 of 1

Nº: T-162398

CLIENT NAME: NIAGARA SOIL SOLUTIONS LTD
3300 MERRITTVILLE HIGHWAY
THOROLD, ON L2V 4Y6
289-407-6341

ATTENTION TO: Jodie Glasier

PROJECT: NS2491-02

AGAT WORK ORDER: 24H223680

SOIL ANALYSIS REVIEWED BY: Nivine Basily, Inorganic Team Lead

DATE REPORTED: Nov 28, 2024

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 is available on request from AGAT Laboratories, in accordance with ISO/IEC 17025:2017, ISO/IEC 17025:2005 (Quebec), DR-12-PALA and/or NELAP Standards.
- This document is signed by an authorized signatory who meets the requirements of the MELCCFP, CALA, CCN and NELAP.
- For environmental samples in the Province of Quebec: The analysis is performed on and results apply to samples as received. A temperature above 6°C upon receipt, as indicated in the Sample Reception Notification (SRN), could indicate the integrity of the samples has been compromised if the delay between sampling and submission to the laboratory could not be minimized.



Certificate of Analysis

AGAT WORK ORDER: 24H223680

PROJECT: NS2491-02

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

CLIENT NAME: NIAGARA SOIL SOLUTIONS LTD

SAMPLING SITE: 5578 George Street

ATTENTION TO: Jodie Glasier

SAMPLED BY: J. Toldi

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

DATE RECEIVED: 2024-11-20

DATE REPORTED: 2024-11-28

		SAMPLE DESCRIPTION:		D1	D2	D3	D4	D5	D6	D7	D8
		SAMPLE TYPE:		Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
		DATE SAMPLED:		2024-11-20	2024-11-20	2024-11-20	2024-11-20	2024-11-20	2024-11-20	2024-11-20	2024-11-20
Parameter	Unit	G / S	RDL	6345581	6345582	6345583	6345584	6345585	6345586	6345587	6345588
Barium	µg/g	390	2.0					273	166	155	218
Lead	µg/g	120	1	33	62	66	61				

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 - Residential/Parkland/Institutional 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.
Analysis performed at AGAT Toronto (unless marked by *)

Certified By:



Quality Assurance

CLIENT NAME: NIAGARA SOIL SOLUTIONS LTD

PROJECT: NS2491-02

SAMPLING SITE: 5578 George Street

AGAT WORK ORDER: 24H223680

ATTENTION TO: Jodie Glasier

SAMPLED BY: J. Toldi

Soil Analysis

RPT Date: Nov 28, 2024			DUPLICATE			Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD		Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
O. Reg. 153(511) - Metals (Including Hydrides) (Soil)															
Lead	6345581	6345581	33	34	3.0%	< 1	112%	70%	130%	98%	80%	120%	101%	70%	130%
O. Reg. 153(511) - Metals (Including Hydrides) (Soil)															
Barium	6345581	6345581	733	801	8.9%	< 2.0	116%	70%	130%	98%	80%	120%	96%	70%	130%

Certified By:



Method Summary

CLIENT NAME: NIAGARA SOIL SOLUTIONS LTD

AGAT WORK ORDER: 24H223680

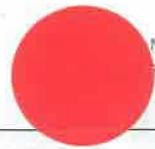
PROJECT: NS2491-02

ATTENTION TO: Jodie Glasier

SAMPLING SITE: 5578 George Street

SAMPLED BY: J. Toldi

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Soil Analysis			
Barium	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



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: NSSL
Contact: Jacob Glaser
Address: 3300 McArthurville Highway Unit 4
Thorold, ON L2V 4X6
Phone: 905-712-6341 Fax: _____
Reports to be sent to:
1. Email: jglaser@nssl.ca
2. Email: _____

Project Information:

Project: N52491-02
Site Location: 5578 George Street
Sampled By: J. Glaser
AGAT Quote #: 103659183 PO: _____
Please note: If quotation number is not provided, client will be billed full price for analysis.

Invoice Information:

Company: _____
Contact: _____
Address: _____
Email: _____
Bill To Same: Yes ☒ No ☐

Regulatory Requirements:

(Please check all applicable boxes)

☒ Regulation 153/04 ☐ Regulation 406 ☐ Sewer Use
☐ Sanitary ☐ Storm
Table Indicate One 3 Table Indicate One
☐ Ind/Com ☐ Ind/Com
☒ Res/Park ☐ Res/Park
☐ Agriculture ☐ Agriculture
Soil Texture (Check One) ☐ Regulation 558 ☐ Other
☒ Coarse ☐ CCME
☐ Fine ☐ Indicate One

Is this submission for a Record of Site Condition (RSC)?

☐ Yes ☐ No

Report Guideline on Certificate of Analysis

☒ Yes ☐ No

Legal Sample ☐

Sample Matrix Legend

GW Ground Water SD Sediment
O Oil SW Surface Water
P Paint R Rock/Shale
S Soil

Laboratory Use Only

Work Order #: 24H 223680
Cooler Quantity: LG cooler
Arrival Temperatures: 3.8 3.9 4.2
Depot Temperatures: 10.8 10.2 11.05
Custody Seal Intact: ☐ Yes ☐ No ☐ N/A
Notes: Bagged 166

Turnaround Time (TAT) Required:

Regular TAT ☒ 5 to 7 Business Days

Rush TAT (Rush Surcharges Apply)

☐ 3 Business Days ☐ 2 Business Days ☐ Next Business Day

OR Date Required (Rush Surcharges May Apply): _____

Please provide prior notification for rush TAT
*TAT is exclusive of weekends and statutory holidays

For 'Same Day' analysis, please contact your AGAT CSR

Sample Identification		Date Sampled	Time Sampled	# of Containers	Sample Matrix	Comments/ Special Instructions	Y / N	Metals	Metals	BTEX, P	VOC	PAHs	PCBs: A	Regulation pH, Met	EC, SAR	Regulation mSPLP:	Landfill TCLP: ☐	Corrosi	Lead	Cadm	Copper	Chromium	Mercury	Aluminum	Iron	Manganese	Nickel	Silver	Zinc	Barium	Boron	Calcium	Cobalt	Fluoride	Gallium	Germanium	Indium	Iodine	Lithium	Magnesium	Molybdenum	Phosphorus	Potassium	Selenium	Silicon	Sodium	Sulfur	Tantalum	Tin	Titanium	Vanadium	Antimony	Arsenic	Bismuth	Chlorine	Chromium	Copper	Fluorine	Gold	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrogen	Hydrog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APPENDIX C

CERTIFICATES OF ANALYSIS –GROUNDWATER

CLIENT NAME: NIAGARA SOIL SOLUTIONS LTD
3300 MERRITTVILLE HIGHWAY
THOROLD, ON L2V 4Y6
289-407-6341

ATTENTION TO: Jodie Glasier

PROJECT: NS2491-02

AGAT WORK ORDER: 24H226139

TRACE ORGANICS REVIEWED BY: Neli Popnikolova, Senior Chemist

WATER ANALYSIS REVIEWED BY: Nivine Basily, Inorganic Team Lead

DATE REPORTED: Dec 05, 2024

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.
- This Certificate shall not be reproduced except in full, without the written approval of the laboratory.
- The test results reported herewith relate only to the samples as received by the laboratory.
- Application of guidelines is provided "as is" without warranty of any kind, either expressed or implied, including, but not limited to, warranties of merchantability, fitness for a particular purpose, or non-infringement. AGAT assumes no responsibility for any errors or omissions in the guidelines contained in this document.
- All reportable information is available on request from AGAT Laboratories, in accordance with ISO/IEC 17025:2017, ISO/IEC 17025:2005 (Quebec), DR-12-PALA and/or NELAP Standards.
- This document is signed by an authorized signatory who meets the requirements of the MELCCFP, CALA, CCN and NELAP.
- For environmental samples in the Province of Quebec: The analysis is performed on and results apply to samples as received. A temperature above 6°C upon receipt, as indicated in the Sample Reception Notification (SRN), could indicate the integrity of the samples has been compromised if the delay between sampling and submission to the laboratory could not be minimized.



Certificate of Analysis

AGAT WORK ORDER: 24H226139

PROJECT: NS2491-02

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

CLIENT NAME: NIAGARA SOIL SOLUTIONS LTD

SAMPLING SITE: 5578 George Street

ATTENTION TO: Jodie Glasier

SAMPLED BY: J. Toldi

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

DATE RECEIVED: 2024-11-27

DATE REPORTED: 2024-12-05

		SAMPLE DESCRIPTION:		BH/MW4
		SAMPLE TYPE:		Water
		DATE SAMPLED:		2024-11-27
Parameter	Unit	G / S	RDL	6364491
Naphthalene	µg/L	11	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	1	0.10	<0.10
Anthracene	µg/L	2.4	0.10	<0.10
Fluoranthene	µg/L	0.41	0.20	<0.20
Pyrene	µg/L	4.1	0.20	<0.20
Benzo(a)anthracene	µg/L	1	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	3.2	0.20	<0.20
Sediment				1
Surrogate	Unit	Acceptable Limits		
Naphthalene-d8	%	50-140	85	
Acridine-d9	%	50-140	96	
Terphenyl-d14	%	50-140	97	

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition - Potable Ground Water - All Types of Property Uses - Medium and Fine Textured Soils

Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

6364491 Sediment parameter is comment only based on visual inspection of the sample prior to extraction and is not an accredited test.

Legend: 1 = no sediment present; 2 = sediment present; 3 = sediment present in trace amount

Note: The result for Benzo(b)Fluoranthene is the total of the Benzo(b)&(j)Fluoranthene isomers because the isomers co-elute on the GC column.

2- and 1-Methyl Naphthalene is a calculated parameter. The calculated value is the sum of 2-Methyl Naphthalene and 1-Methyl Naphthalene. The calculated parameter is non-accredited. The parameters that are components of the calculation are accredited.

Analysis performed at AGAT Toronto (unless marked by *)

Certified By:



Certificate of Analysis

AGAT WORK ORDER: 24H226139

PROJECT: NS2491-02

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

CLIENT NAME: NIAGARA SOIL SOLUTIONS LTD

SAMPLING SITE: 5578 George Street

ATTENTION TO: Jodie Glasier

SAMPLED BY: J. Toldi

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

DATE RECEIVED: 2024-11-27

DATE REPORTED: 2024-12-05

		SAMPLE DESCRIPTION:		BH/MW4
		SAMPLE TYPE:		Water
		DATE SAMPLED:		2024-11-27
Parameter	Unit	G / S	RDL	6364491
F1 (C6 to C10)	µg/L	750	25	<25
F1 (C6 to C10) minus BTEX	µg/L	750	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				1
Surrogate	Unit	Acceptable Limits		
Toluene-d8	%	50-140	98	
Terphenyl	% Recovery	60-140	77	

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CANADA L4Z 1Y2
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CLIENT NAME: NIAGARA SOIL SOLUTIONS LTD

SAMPLING SITE: 5578 George Street

ATTENTION TO: Jodie Glasier

SAMPLED BY: J. Toldi

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

DATE RECEIVED: 2024-11-27

DATE REPORTED: 2024-12-05

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition - Potable Ground Water - All Types of Property Uses - Medium and Fine Textured Soils
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

6364491 The C6-C10 fraction is calculated using toluene response factor.
C6-C10 (F1 minus BTEX) is a calculated parameter. The calculated value is F1 minus BTEX. The calculated parameter is non-accredited. The parameters that are components of the calculation are accredited.
The C10 - C16, C16 - C34, and C34 - C50 fractions are calculated using the average response factor for n-C10, n-C16, and n-C34.
Gravimetric Heavy Hydrocarbons are not included in the Total C16-C50 and are only determined if the chromatogram of the C34 - C50 hydrocarbons indicates that hydrocarbons >C50 are present.
The chromatogram has returned to baseline by the retention time of nC50.
Total C6 - C50 results are corrected for BTEX and PAH contributions.
C>10 - C16 (F2- Naphthalene) is a calculated parameter. The calculated value is F2 - Naphthalene.
C>16 - C34 (F3-PAH) is a calculated parameter. The calculated value is F3-PAH (PAH: sum of Phenanthrene, Benzo(a)anthracene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Benzo(a)pyrene, Fluoranthene, Dibenzo(a,h)anthracene, Indeno(1,2,3-c,d)pyrene and Pyrene).
This method complies with the Reference Method for the CWS PHC and is validated for use in the laboratory.
nC10, nC16 and nC34 response factors are within 10% of their average.
C50 response factor is within 70% of nC10 + nC16 + nC34 average.
Linearity is within 15%.
Extraction and holding times were met for this sample.

Sediment parameter is comment only based on visual inspection of the sample prior to extraction and is not an accredited test.
Legend: 1 = no sediment present; 2 = sediment present; 3 = sediment present in trace amounts

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FAX (905)712-5122
<http://www.agatlabs.com>

CLIENT NAME: NIAGARA SOIL SOLUTIONS LTD

SAMPLING SITE: 5578 George Street

ATTENTION TO: Jodie Glasier

SAMPLED BY: J. Toldi

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

DATE RECEIVED: 2024-11-27

DATE REPORTED: 2024-12-05

		SAMPLE DESCRIPTION:		BH/MW4
		SAMPLE TYPE:		Water
		DATE SAMPLED:		2024-11-27
Parameter	Unit	G / S	RDL	6364491
Dichlorodifluoromethane	µg/L	590	0.40	<0.40
Vinyl Chloride	µg/L	1.7	0.17	<0.17
Bromomethane	µg/L	0.89	0.20	<0.20
Trichlorofluoromethane	µg/L	150	0.40	<0.40
Acetone	µg/L	2700	1.0	<1.0
1,1-Dichloroethylene	µg/L	14	0.30	<0.30
Methylene Chloride	µg/L	50	0.30	<0.30
trans- 1,2-Dichloroethylene	µg/L	17	0.20	<0.20
Methyl tert-butyl ether	µg/L	15	0.20	<0.20
1,1-Dichloroethane	µg/L	5	0.30	<0.30
Methyl Ethyl Ketone	µg/L	1800	1.0	<1.0
cis- 1,2-Dichloroethylene	µg/L	17	0.20	<0.20
Chloroform	µg/L	22	0.20	<0.20
1,2-Dichloroethane	µg/L	5	0.20	<0.20
1,1,1-Trichloroethane	µg/L	200	0.30	<0.30
Carbon Tetrachloride	µg/L	5.0	0.20	<0.20
Benzene	µg/L	5.0	0.20	<0.20
1,2-Dichloropropane	µg/L	5	0.20	<0.20
Trichloroethylene	µg/L	5	0.20	<0.20
Bromodichloromethane	µg/L	16	0.20	<0.20
Methyl Isobutyl Ketone	µg/L	640	1.0	<1.0
1,1,2-Trichloroethane	µg/L	5	0.20	<0.20
Toluene	µg/L	24	0.20	<0.20
Dibromochloromethane	µg/L	25	0.10	<0.10
Ethylene Dibromide	µg/L	0.2	0.10	<0.10
Tetrachloroethylene	µg/L	17	0.20	<0.20
1,1,1,2-Tetrachloroethane	µg/L	1.1	0.10	<0.10
Chlorobenzene	µg/L	30	0.10	<0.10
Ethylbenzene	µg/L	2.4	0.10	<0.10
m & p-Xylene	µg/L		0.20	<0.20

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AGAT WORK ORDER: 24H226139

PROJECT: NS2491-02

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TEL (905)712-5100
FAX (905)712-5122
<http://www.agatlabs.com>

CLIENT NAME: NIAGARA SOIL SOLUTIONS LTD

SAMPLING SITE: 5578 George Street

ATTENTION TO: Jodie Glasier

SAMPLED BY: J. Toldi

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

DATE RECEIVED: 2024-11-27

DATE REPORTED: 2024-12-05

		SAMPLE DESCRIPTION:		BH/MW4
		SAMPLE TYPE:		Water
		DATE SAMPLED:		2024-11-27
Parameter	Unit	G / S	RDL	6364491
Bromoform	µg/L	25	0.10	<0.10
Styrene	µg/L	5.4	0.10	<0.10
1,1,2,2-Tetrachloroethane	µg/L	1	0.10	<0.10
o-Xylene	µg/L		0.10	<0.10
1,3-Dichlorobenzene	µg/L	59	0.10	<0.10
1,4-Dichlorobenzene	µg/L	1	0.10	<0.10
1,2-Dichlorobenzene	µg/L	3	0.10	<0.10
1,3-Dichloropropene	µg/L	0.5	0.30	<0.30
Xylenes (Total)	µg/L	300	0.20	<0.20
n-Hexane	µg/L	520	0.20	<0.20
Surrogate	Unit	Acceptable Limits		
Toluene-d8	% Recovery	50-140		98
4-Bromofluorobenzene	% Recovery	50-140		85

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition - Potable Ground Water - All Types of Property Uses - Medium and Fine Textured Soils
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

6364491 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: 24H226139

PROJECT: NS2491-02

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

CLIENT NAME: NIAGARA SOIL SOLUTIONS LTD

SAMPLING SITE:5578 George Street

ATTENTION TO: Jodie Glasier

SAMPLED BY:J. Toldi

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

DATE RECEIVED: 2024-11-27

DATE REPORTED: 2024-12-05

		SAMPLE DESCRIPTION:		BH/MW4
		SAMPLE TYPE:		Water
		DATE SAMPLED:		2024-11-27
Parameter	Unit	G / S	RDL	6364491
Dissolved Antimony	µg/L	6	1.0	<1.0
Dissolved Arsenic	µg/L	25	1.0	1.2
Dissolved Barium	µg/L	1000	2.0	50.6
Dissolved Beryllium	µg/L	4	0.50	<0.50
Dissolved Boron	µg/L	5000	10.0	74.7
Dissolved Cadmium	µg/L	2.7	0.20	0.43
Dissolved Chromium	µg/L	50	2.0	<2.0
Dissolved Cobalt	µg/L	3.8	0.50	52.5
Dissolved Copper	µg/L	87	1.0	3.0
Dissolved Lead	µg/L	10	0.50	<0.50
Dissolved Molybdenum	µg/L	70	0.50	6.24
Dissolved Nickel	µg/L	100	1.0	46.6
Dissolved Selenium	µg/L	10	1.0	1.2
Dissolved Silver	µg/L	1.5	0.20	<0.20
Dissolved Thallium	µg/L	2	0.30	<0.30
Dissolved Uranium	µg/L	20	0.50	14.5
Dissolved Vanadium	µg/L	6.2	0.40	0.42
Dissolved Zinc	µg/L	1100	5.0	11.3
Mercury	µg/L	1	0.02	<0.02
Chromium VI	µg/L	25	2.000	<2.000
Cyanide, WAD	µg/L	66	2	<2
Dissolved Sodium	µg/L	490000	50	83000
Chloride	µg/L	790000	100	129000
Electrical Conductivity	uS/cm	NA	2	1700
pH	pH Units		NA	7.78

Certified By:





Certificate of Analysis

AGAT WORK ORDER: 24H226139

PROJECT: NS2491-02

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

CLIENT NAME: NIAGARA SOIL SOLUTIONS LTD

SAMPLING SITE: 5578 George Street

ATTENTION TO: Jodie Glasier

SAMPLED BY: J. Toldi

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

DATE RECEIVED: 2024-11-27

DATE REPORTED: 2024-12-05

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition - Potable Ground Water - All Types of Property Uses - Medium and Fine Textured Soils
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

6364491 Metals analysis completed on a filtered sample.
pH is a recommended field analysis taken within 15 minutes of sample collection. Due to the potential for rapid change in sample equilibrium chemistry laboratory results may differ from field measured results

Analysis performed at AGAT Toronto (unless marked by *)

Certified By:





AGAT Laboratories

Exceedance Summary

AGAT WORK ORDER: 24H226139

PROJECT: NS2491-02

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

CLIENT NAME: NIAGARA SOIL SOLUTIONS LTD

ATTENTION TO: Jodie Glasier

SAMPLEID	SAMPLE TITLE	GUIDELINE	ANALYSIS PACKAGE	PARAMETER	UNIT	GUIDEVALUE	RESULT
6364491	BH/MW4	ON T2 PGW MFT	O. Reg. 153(511) - Metals & Inorganics (Water)	Dissolved Cobalt	µg/L	3.8	52.5

Quality Assurance

CLIENT NAME: NIAGARA SOIL SOLUTIONS LTD

AGAT WORK ORDER: 24H226139

PROJECT: NS2491-02

ATTENTION TO: Jodie Glasier

SAMPLING SITE: 5578 George Street

SAMPLED BY: J. Toldi

Trace Organics Analysis

RPT Date: Dec 05, 2024			DUPLICATE			Method Blank	REFERENCE MATERIAL		METHOD BLANK SPIKE		MATRIX SPIKE				
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD		Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper

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

Naphthalene	6364491	6364491	<0.20	<0.20	NA	< 0.20	96%	50%	140%	87%	50%	140%	89%	50%	140%
Acenaphthylene	6364491	6364491	<0.20	<0.20	NA	< 0.20	96%	50%	140%	88%	50%	140%	88%	50%	140%
Acenaphthene	6364491	6364491	<0.20	<0.20	NA	< 0.20	92%	50%	140%	89%	50%	140%	92%	50%	140%
Fluorene	6364491	6364491	<0.20	<0.20	NA	< 0.20	99%	50%	140%	95%	50%	140%	99%	50%	140%
Phenanthrene	6364491	6364491	<0.10	<0.10	NA	< 0.10	100%	50%	140%	97%	50%	140%	99%	50%	140%
Anthracene	6364491	6364491	<0.10	<0.10	NA	< 0.10	72%	50%	140%	89%	50%	140%	97%	50%	140%
Fluoranthene	6364491	6364491	<0.20	<0.20	NA	< 0.20	104%	50%	140%	100%	50%	140%	100%	50%	140%
Pyrene	6364491	6364491	<0.20	<0.20	NA	< 0.20	104%	50%	140%	99%	50%	140%	101%	50%	140%
Benzo(a)anthracene	6364491	6364491	<0.20	<0.20	NA	< 0.20	97%	50%	140%	90%	50%	140%	103%	50%	140%
Chrysene	6364491	6364491	<0.10	<0.10	NA	< 0.10	102%	50%	140%	92%	50%	140%	95%	50%	140%
Benzo(b)fluoranthene	6364491	6364491	<0.10	<0.10	NA	< 0.10	102%	50%	140%	95%	50%	140%	86%	50%	140%
Benzo(k)fluoranthene	6364491	6364491	<0.10	<0.10	NA	< 0.10	102%	50%	140%	93%	50%	140%	99%	50%	140%
Benzo(a)pyrene	6364491	6364491	<0.01	<0.01	NA	< 0.01	95%	50%	140%	87%	50%	140%	87%	50%	140%
Indeno(1,2,3-cd)pyrene	6364491	6364491	<0.20	<0.20	NA	< 0.20	91%	50%	140%	82%	50%	140%	87%	50%	140%
Dibenz(a,h)anthracene	6364491	6364491	<0.20	<0.20	NA	< 0.20	91%	50%	140%	79%	50%	140%	89%	50%	140%
Benzo(g,h,i)perylene	6364491	6364491	<0.20	<0.20	NA	< 0.20	95%	50%	140%	88%	50%	140%	91%	50%	140%

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

F1 (C6 to C10)	6350989	<25	<25	NA	< 25	90%	60%	140%	84%	60%	140%	85%	60%	140%
F2 (C10 to C16)	6368391	1260	1474	15.7%	< 100	116%	60%	140%	82%	60%	140%	88%	60%	140%
F3 (C16 to C34)	6368391	< 100	< 100	NA	< 100	127%	60%	140%	83%	60%	140%	88%	60%	140%
F4 (C34 to C50)	6368391	< 100	< 100	NA	< 100	83%	60%	140%	88%	60%	140%	100%	60%	140%

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

Dichlorodifluoromethane	6350989	<0.40	<0.40	NA	< 0.40	93%	50%	140%	105%	50%	140%	108%	50%	140%
Vinyl Chloride	6350989	<0.17	<0.17	NA	< 0.17	115%	50%	140%	107%	50%	140%	110%	50%	140%
Bromomethane	6350989	<0.20	<0.20	NA	< 0.20	96%	50%	140%	98%	50%	140%	84%	50%	140%
Trichlorofluoromethane	6350989	<0.40	<0.40	NA	< 0.40	84%	50%	140%	95%	50%	140%	100%	50%	140%
Acetone	6350989	<1.0	<1.0	NA	< 1.0	93%	50%	140%	103%	50%	140%	72%	50%	140%
1,1-Dichloroethylene	6350989	<0.30	<0.30	NA	< 0.30	75%	50%	140%	66%	60%	130%	85%	50%	140%
Methylene Chloride	6350989	<0.30	<0.30	NA	< 0.30	65%	50%	140%	69%	60%	130%	72%	50%	140%
trans- 1,2-Dichloroethylene	6350989	<0.20	<0.20	NA	< 0.20	63%	50%	140%	63%	60%	130%	75%	50%	140%
Methyl tert-butyl ether	6350989	<0.20	<0.20	NA	< 0.20	63%	50%	140%	70%	60%	130%	69%	50%	140%
1,1-Dichloroethane	6350989	<0.30	<0.30	NA	< 0.30	92%	50%	140%	89%	60%	130%	95%	50%	140%
Methyl Ethyl Ketone	6350989	<1.0	<1.0	NA	< 1.0	118%	50%	140%	92%	50%	140%	77%	50%	140%
cis- 1,2-Dichloroethylene	6350989	<0.20	<0.20	NA	< 0.20	104%	50%	140%	95%	60%	130%	110%	50%	140%
Chloroform	6350989	<0.20	<0.20	NA	< 0.20	100%	50%	140%	101%	60%	130%	120%	50%	140%
1,2-Dichloroethane	6350989	<0.20	<0.20	NA	< 0.20	100%	50%	140%	94%	60%	130%	92%	50%	140%
1,1,1-Trichloroethane	6350989	<0.30	<0.30	NA	< 0.30	118%	50%	140%	106%	60%	130%	104%	50%	140%
Carbon Tetrachloride	6350989	<0.20	<0.20	NA	< 0.20	114%	50%	140%	102%	60%	130%	93%	50%	140%

Quality Assurance

CLIENT NAME: NIAGARA SOIL SOLUTIONS LTD

AGAT WORK ORDER: 24H226139

PROJECT: NS2491-02

ATTENTION TO: Jodie Glasier

SAMPLING SITE: 5578 George Street

SAMPLED BY: J. Toldi

Trace Organics Analysis (Continued)

RPT Date: Dec 05, 2024			DUPLICATE			Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD		Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
Benzene	6350989		<0.20	<0.20	NA	< 0.20	100%	50%	140%	86%	60%	130%	102%	50%	140%
1,2-Dichloropropane	6350989		<0.20	<0.20	NA	< 0.20	111%	50%	140%	111%	60%	130%	106%	50%	140%
Trichloroethylene	6350989		<0.20	<0.20	NA	< 0.20	97%	50%	140%	85%	60%	130%	70%	50%	140%
Bromodichloromethane	6350989		<0.20	<0.20	NA	< 0.20	112%	50%	140%	87%	60%	130%	118%	50%	140%
Methyl Isobutyl Ketone	6350989		<1.0	<1.0	NA	< 1.0	95%	50%	140%	81%	50%	140%	99%	50%	140%
1,1,2-Trichloroethane	6350989		<0.20	<0.20	NA	< 0.20	92%	50%	140%	116%	60%	130%	112%	50%	140%
Toluene	6350989		<0.20	<0.20	NA	< 0.20	117%	50%	140%	109%	60%	130%	113%	50%	140%
Dibromochloromethane	6350989		<0.10	<0.10	NA	< 0.10	94%	50%	140%	100%	60%	130%	90%	50%	140%
Ethylene Dibromide	6350989		<0.10	<0.10	NA	< 0.10	99%	50%	140%	120%	60%	130%	83%	50%	140%
Tetrachloroethylene	6350989		<0.20	<0.20	NA	< 0.20	96%	50%	140%	96%	60%	130%	79%	50%	140%
1,1,1,2-Tetrachloroethane	6350989		<0.10	<0.10	NA	< 0.10	87%	50%	140%	96%	60%	130%	94%	50%	140%
Chlorobenzene	6350989		<0.10	<0.10	NA	< 0.10	110%	50%	140%	102%	60%	130%	100%	50%	140%
Ethylbenzene	6350989		<0.10	<0.10	NA	< 0.10	93%	50%	140%	91%	60%	130%	96%	50%	140%
m & p-Xylene	6350989		<0.20	<0.20	NA	< 0.20	92%	50%	140%	83%	60%	130%	93%	50%	140%
Bromoform	6350989		<0.10	<0.10	NA	< 0.10	86%	50%	140%	106%	60%	130%	63%	50%	140%
Styrene	6350989		<0.10	<0.10	NA	< 0.10	89%	50%	140%	91%	60%	130%	83%	50%	140%
1,1,2,2-Tetrachloroethane	6350989		<0.10	<0.10	NA	< 0.10	88%	50%	140%	113%	60%	130%	102%	50%	140%
o-Xylene	6350989		<0.10	<0.10	NA	< 0.10	93%	50%	140%	90%	60%	130%	88%	50%	140%
1,3-Dichlorobenzene	6350989		<0.10	<0.10	NA	< 0.10	92%	50%	140%	92%	60%	130%	96%	50%	140%
1,4-Dichlorobenzene	6350989		<0.10	<0.10	NA	< 0.10	91%	50%	140%	97%	60%	130%	94%	50%	140%
1,2-Dichlorobenzene	6350989		<0.10	<0.10	NA	< 0.10	86%	50%	140%	79%	60%	130%	90%	50%	140%
n-Hexane	6350989		<0.20	<0.20	NA	< 0.20	63%	50%	140%	102%	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).

Certified By:



Quality Assurance

CLIENT NAME: NIAGARA SOIL SOLUTIONS LTD

AGAT WORK ORDER: 24H226139

PROJECT: NS2491-02

ATTENTION TO: Jodie Glasier

SAMPLING SITE: 5578 George Street

SAMPLED BY: J. Toldi

Water Analysis															
RPT Date: Dec 05, 2024			DUPLICATE			Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD		Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
O. Reg. 153(511) - Metals & Inorganics (Water)															
Dissolved Antimony	6361282		<1.0	<1.0	NA	< 1.0	103%	70%	130%	100%	80%	120%	101%	70%	130%
Dissolved Arsenic	6361282		1.4	1.1	NA	< 1.0	111%	70%	130%	104%	80%	120%	104%	70%	130%
Dissolved Barium	6361282		74.7	75.0	0.4%	< 2.0	104%	70%	130%	105%	80%	120%	105%	70%	130%
Dissolved Beryllium	6361282		<0.50	<0.50	NA	< 0.50	88%	70%	130%	90%	80%	120%	92%	70%	130%
Dissolved Boron	6361282		30.5	32.5	NA	< 10.0	92%	70%	130%	93%	80%	120%	95%	70%	130%
Dissolved Cadmium	6361282		<0.20	<0.20	NA	< 0.20	99%	70%	130%	100%	80%	120%	99%	70%	130%
Dissolved Chromium	6361282		2.1	2.6	NA	< 2.0	102%	70%	130%	104%	80%	120%	100%	70%	130%
Dissolved Cobalt	6361282		<0.50	<0.50	NA	< 0.50	103%	70%	130%	101%	80%	120%	103%	70%	130%
Dissolved Copper	6361282		<1.0	1.1	NA	< 1.0	103%	70%	130%	103%	80%	120%	101%	70%	130%
Dissolved Lead	6361282		<0.50	<0.50	NA	< 0.50	99%	70%	130%	98%	80%	120%	96%	70%	130%
Dissolved Molybdenum	6361282		5.23	5.08	3.0%	< 0.50	94%	70%	130%	93%	80%	120%	94%	70%	130%
Dissolved Nickel	6361282		4.1	4.6	NA	< 1.0	105%	70%	130%	104%	80%	120%	102%	70%	130%
Dissolved Selenium	6361282		1.1	1.1	NA	< 1.0	96%	70%	130%	100%	80%	120%	96%	70%	130%
Dissolved Silver	6361282		<0.20	<0.20	NA	< 0.20	109%	70%	130%	103%	80%	120%	101%	70%	130%
Dissolved Thallium	6361282		<0.30	<0.30	NA	< 0.30	103%	70%	130%	101%	80%	120%	99%	70%	130%
Dissolved Uranium	6361282		0.59	0.63	NA	< 0.50	110%	70%	130%	110%	80%	120%	112%	70%	130%
Dissolved Vanadium	6361282		3.35	3.51	4.5%	< 0.40	104%	70%	130%	103%	80%	120%	104%	70%	130%
Dissolved Zinc	6361282		<5.0	5.1	NA	< 5.0	103%	70%	130%	99%	80%	120%	102%	70%	130%
Mercury	6364020		<0.02	<0.02	NA	< 0.02	102%	70%	130%	106%	80%	120%	99%	70%	130%
Chromium VI	6367584		<2.000	<2.000	NA	< 2	100%	70%	130%	105%	80%	120%	99%	70%	130%
Cyanide, WAD	6359105		<2	<2	NA	< 2	106%	70%	130%	91%	80%	120%	100%	70%	130%
Dissolved Sodium	6361282		171000	170000	0.7%	< 50	104%	70%	130%	106%	80%	120%	103%	70%	130%
Chloride	6364160		365000	360000	1.6%	< 100	96%	70%	130%	101%	80%	120%	NA	70%	130%
Electrical Conductivity	6364160		1780	1790	0.1%	< 2	103%	90%	110%						
pH	6364160		7.73	7.75	0.3%	NA	100%	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:



Method Summary

CLIENT NAME: NIAGARA SOIL SOLUTIONS LTD

AGAT WORK ORDER: 24H226139

PROJECT: NS2491-02

ATTENTION TO: Jodie Glasier

SAMPLING SITE: 5578 George Street

SAMPLED BY: J. Toldi

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Trace Organics Analysis			
Naphthalene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Acenaphthylene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Acenaphthene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Fluorene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Phenanthrene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Anthracene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Fluoranthene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Pyrene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Benzo(a)anthracene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Chrysene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Benzo(b)fluoranthene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Benzo(k)fluoranthene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Benzo(a)pyrene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Indeno(1,2,3-cd)pyrene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Dibenz(a,h)anthracene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Benzo(g,h,i)perylene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
2-and 1-methyl Naphthalene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Naphthalene-d8	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Acridine-d9	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Terphenyl-d14	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Sediment			N/A
F1 (C6 to C10)	VOL-91-5010	modified from MOE PHC-E3421	(P&T)GC/FID
F1 (C6 to C10) minus BTEX	VOL-91-5010	modified from MOE PHC-E3421	P&T GC/FID
Toluene-d8	VOL-91- 5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
F2 (C10 to C16)	VOL-91-5010	modified from MOE PHC-E3421	GC/FID
F2 (C10 to C16) minus Naphthalene	VOL-91-5010	modified from MOE PHC-E3421	GC/FID
F3 (C16 to C34)	VOL-91-5010	modified from MOE PHC-E3421	GC/FID
F3 (C16 to C34) minus PAHs	VOL-91-5010	modified from MOE PHC-E3421	GC/FID
F4 (C34 to C50)	VOL-91-5010	modified from MOE PHC-E3421	GC/FID
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

Method Summary

CLIENT NAME: NIAGARA SOIL SOLUTIONS LTD

AGAT WORK ORDER: 24H226139

PROJECT: NS2491-02

ATTENTION TO: Jodie Glasier

SAMPLING SITE: 5578 George Street

SAMPLED BY: J. Toldi

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Vinyl Chloride	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Bromomethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Trichlorofluoromethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Acetone	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1-Dichloroethylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Methylene Chloride	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
trans- 1,2-Dichloroethylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Methyl tert-butyl ether	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1-Dichloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Methyl Ethyl Ketone	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
cis- 1,2-Dichloroethylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Chloroform	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,2-Dichloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1,1-Trichloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Carbon Tetrachloride	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Benzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,2-Dichloropropane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Trichloroethylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Bromodichloromethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Methyl Isobutyl Ketone	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1,2-Trichloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Toluene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Dibromochloromethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Ethylene Dibromide	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Tetrachloroethylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1,1,2-Tetrachloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
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

Method Summary

CLIENT NAME: NIAGARA SOIL SOLUTIONS LTD

AGAT WORK ORDER: 24H226139

PROJECT: NS2491-02

ATTENTION TO: Jodie Glasier

SAMPLING SITE: 5578 George Street

SAMPLED BY: J. Toldi

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
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: NIAGARA SOIL SOLUTIONS LTD

AGAT WORK ORDER: 24H226139

PROJECT: NS2491-02

ATTENTION TO: Jodie Glasier

SAMPLING SITE: 5578 George Street

SAMPLED BY: J. Toldi

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



Laboratory Use Only

Work Order #: 241226139
Cooler Quantity: LG COOLER
Arrival Temperatures: 8.5 | 8.7 | 7.8
Depot Temperatures: 4.5 | 4.9 | 5.0
Custody Seal Intact: ☐ Yes ☐ No ☐ N/A
Notes: BAGGED 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: NSSL
Contact: Jodie Glasier
Address: 3300 Merrittville Highway, Unit 4
Thorold, ON L2V 4Y6
Phone: 289-407-6341 Fax: _____
Reports to be sent to: Jglasier@nssl.ca
1. Email: _____
2. Email: _____

Regulatory Requirements:

(Please check all applicable boxes)

☒ Regulation 153/04

☐ Regulation 406

Table Indicate One

☐ Ind/Com

☒ Res/Park

☐ Agriculture

Table Indicate One

☐ Ind/Com

☐ Res/Park

☐ Agriculture

Soil Texture (Check One)

☒ Fine

☐ Regulation 558

☐ CCME

☐ Sewer Use

☐ Sanitary ☐ Storm

Region _____

☐ Prov. Water Quality Objectives (PWQO)

☐ Other

Indicate One

Project Information:

Project: N52911-02
Site Location: 5578 George Street
Sampled By: S. Toldi
AGAT Quote #: 1033659EB 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 (RSC)?

☒ Yes ☐ No

Report Guideline on Certificate of Analysis

☒ Yes ☐ No

Legal Sample ☐

Sample Matrix Legend

GW Ground Water **SD** Sediment
O Oil **SW** Surface Water
P Paint **R** Rock/Shale
S Soil

Invoice Information:

Bill To Same: Yes ☒ No ☐

Company: _____
Contact: _____
Address: _____
Email: _____

Sample Identification	Date Sampled	Time Sampled	# of Containers	Sample Matrix	Comments/ Special Instructions	Y / N	Field Filtered - Metals, Hg, CrVI, DOC	Metals & Inorganics	Metals - ☐ CrVI, ☐ Hg, ☐ HWSB	BTEX, F1-F4 PHCS	VOC	PAHs	PCBs: Aroclors ☐	Regulation 406 Characterization Package	pH, Metals, BTEX, F1-F4	EC, SAR	Regulation 406 SPLP Rainwater Leach	mSPLP: ☐ Metals ☐ SVOCs ☐ VOCs ☐ DOC	Landfill Disposal Characterization TCLP:	TCLP: ☐ MMA ☐ VOCs ☐ AGENs ☐ Biap ☐ PCBs	Corrosivity: ☐ Moisture ☐ Sulphide	Potentially Hazardous or High Concentration (Y/N)
1. <u>BH/MW4</u>	<u>11/27/24</u>	<u>AM</u>	<u>13</u>	<u>GW</u>				☒		☒	☒	☒										
2.		AM																				
3.		AM																				
4.		AM																				
5.		AM																				
6.		AM																				
7.		AM																				
8.		AM																				
9.		AM																				
10.		AM																				
11.		AM																				

Samples Relinquished By (Print Name and Sign): <u>AGAT</u>	Date: <u>11/27/24</u>	Time: _____	Samples Received By (Print Name and Sign): <u>DTAC</u>	Date: <u>Nov 27/24</u>	Time: <u>4:45pm</u>
Samples Relinquished By (Print Name and Sign): <u>DTAC</u>	Date: <u>Nov 28/24</u>	Time: <u>3pm</u>	Samples Received By (Print Name and Sign): <u>Toldi</u>	Date: <u>Nov 28</u>	Time: <u>2:50pm</u>
Samples Relinquished By (Print Name and Sign): _____	Date: _____	Time: _____	Samples Received By (Print Name and Sign): _____	Date: _____	Time: _____

Page 1 of 1

N#: T-164244

**CLIENT NAME: NIAGARA SOIL SOLUTIONS LTD
3300 MERRITTVILLE HIGHWAY
THOROLD, ON L2V 4Y6
289-407-6341**

ATTENTION TO: Jodie Glasier

PROJECT: NS2491-02

AGAT WORK ORDER: 24H227781

TRACE ORGANICS REVIEWED BY: Neli Popnikolova, Senior Chemist

WATER ANALYSIS REVIEWED BY: Nivine Basily, Inorganic Team Lead

DATE REPORTED: Dec 11, 2024

PAGES (INCLUDING COVER): 16

VERSION*: 1

Should you require any information regarding this analysis please contact your client services representative at (905) 712-5100

***Notes**

Disclaimer:

- All work conducted herein has been done using accepted standard protocols, and generally accepted practices and methods. AGAT test methods may incorporate modifications from the specified reference methods to improve performance.
- All samples will be disposed of within 30 days after receipt unless a Long Term Storage Agreement is signed and returned. Some specialty analysis may be exempt, please contact your Client Project Manager for details.
- AGAT's liability in connection with any delay, performance or non-performance of these services is only to the Client and does not extend to any other third party. Unless expressly agreed otherwise in writing, AGAT's liability is limited to the actual cost of the specific analysis or analyses included in the services.
- This Certificate shall not be reproduced except in full, without the written approval of the laboratory.
- The test results reported herewith relate only to the samples as received by the laboratory.
- Application of guidelines is provided "as is" without warranty of any kind, either expressed or implied, including, but not limited to, warranties of merchantability, fitness for a particular purpose, or non-infringement. AGAT assumes no responsibility for any errors or omissions in the guidelines contained in this document.
- All reportable information is available on request from AGAT Laboratories, in accordance with ISO/IEC 17025:2017, ISO/IEC 17025:2005 (Quebec), DR-12-PALA and/or NELAP Standards.
- This document is signed by an authorized signatory who meets the requirements of the MELCCFP, CALA, CCN and NELAP.
- For environmental samples in the Province of Quebec: The analysis is performed on and results apply to samples as received. A temperature above 6°C upon receipt, as indicated in the Sample Reception Notification (SRN), could indicate the integrity of the samples has been compromised if the delay between sampling and submission to the laboratory could not be minimized.



Certificate of Analysis

AGAT WORK ORDER: 24H227781

PROJECT: NS2491-02

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

CLIENT NAME: NIAGARA SOIL SOLUTIONS LTD

SAMPLING SITE: 5578 George Street

ATTENTION TO: Jodie Glasier

SAMPLED BY: J. Toldi

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

DATE RECEIVED: 2024-12-03

DATE REPORTED: 2024-12-11

		SAMPLE DESCRIPTION:		BH/MW5	BH/MW6
		SAMPLE TYPE:		Water	Water
		DATE SAMPLED:		2024-12-02	2024-12-02
Parameter	Unit	G / S	RDL	6376672	6376676
Naphthalene	µg/L	1400	0.20	<0.20	<0.20
Acenaphthylene	µg/L	1.8	0.20	<0.20	<0.20
Acenaphthene	µg/L	600	0.20	<0.20	<0.20
Fluorene	µg/L	400	0.20	<0.20	<0.20
Phenanthrene	µg/L	580	0.10	<0.10	<0.10
Anthracene	µg/L	2.4	0.10	<0.10	<0.10
Fluoranthene	µg/L	130	0.20	<0.20	<0.20
Pyrene	µg/L	68	0.20	<0.20	<0.20
Benzo(a)anthracene	µg/L	4.7	0.20	<0.20	<0.20
Chrysene	µg/L	1	0.10	<0.10	<0.10
Benzo(b)fluoranthene	µg/L	0.75	0.10	<0.10	<0.10
Benzo(k)fluoranthene	µg/L	0.4	0.10	<0.10	<0.10
Benzo(a)pyrene	µg/L	0.81	0.01	<0.01	<0.01
Indeno(1,2,3-cd)pyrene	µg/L	0.2	0.20	<0.20	<0.20
Dibenz(a,h)anthracene	µg/L	0.52	0.20	<0.20	<0.20
Benzo(g,h,i)perylene	µg/L	0.2	0.20	<0.20	<0.20
2-and 1-methyl Naphthalene	µg/L	1800	0.20	<0.20	<0.20
Sediment				1	1
Surrogate	Unit	Acceptable Limits			
Naphthalene-d8	%	50-140	115	114	
Acridine-d9	%	50-140	101	90	
Terphenyl-d14	%	50-140	111	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 - Non-Potable Ground Water - All Types of Property Uses - 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.

6376672-6376676 Sediment parameter is comment only based on visual inspection of the sample prior to extraction and is not an accredited test.

Legend: 1 = no sediment present; 2 = sediment present; 3 = sediment present in trace amount

Note: The result for Benzo(b)Fluoranthene is the total of the Benzo(b)&(j)Fluoranthene isomers because the isomers co-elute on the GC column.

2- and 1-Methyl Naphthalene is a calculated parameter. The calculated value is the sum of 2-Methyl Naphthalene and 1-Methyl Naphthalene. The calculated parameter is non-accredited. The parameters that are components of the calculation are accredited.

Analysis performed at AGAT Toronto (unless marked by *)

Certified By:



Certificate of Analysis

AGAT WORK ORDER: 24H227781

PROJECT: NS2491-02

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

CLIENT NAME: NIAGARA SOIL SOLUTIONS LTD

SAMPLING SITE: 5578 George Street

ATTENTION TO: Jodie Glasier

SAMPLED BY: J. Toldi

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

DATE RECEIVED: 2024-12-03

DATE REPORTED: 2024-12-11

		SAMPLE DESCRIPTION:		BH/MW5	BH/MW6
		SAMPLE TYPE:		Water	Water
		DATE SAMPLED:		2024-12-02	2024-12-02
Parameter	Unit	G / S	RDL	6376672	6376676
F1 (C6 to C10)	µg/L	750	25	<25	<25
F1 (C6 to C10) minus BTEX	µg/L	750	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				1	1
Surrogate	Unit	Acceptable Limits			
Toluene-d8	%	50-140		102	96
Terphenyl	% Recovery	60-140		96	85

Certified By:



AGAT Laboratories

Certificate of Analysis

AGAT WORK ORDER: 24H227781

PROJECT: NS2491-02

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

CLIENT NAME: NIAGARA SOIL SOLUTIONS LTD

SAMPLING SITE: 5578 George Street

ATTENTION TO: Jodie Glasier

SAMPLED BY: J. Toldi

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

DATE RECEIVED: 2024-12-03

DATE REPORTED: 2024-12-11

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 - Non-Potable Ground Water - All Types of Property Uses - 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.

6376672-6376676 The C6-C10 fraction is calculated using toluene response factor.

C6-C10 (F1 minus BTEX) is a calculated parameter. The calculated value is F1 minus BTEX. The calculated parameter is non-accredited. The parameters that are components of the calculation are accredited.

The C10 - C16, C16 - C34, and C34 - C50 fractions are calculated using the average response factor for n-C10, n-C16, and n-C34.

Gravimetric Heavy Hydrocarbons are not included in the Total C16-C50 and are only determined if the chromatogram of the C34 - C50 hydrocarbons indicates that hydrocarbons >C50 are present.

The chromatogram has returned to baseline by the retention time of nC50.

Total C6 - C50 results are corrected for BTEX and PAH contributions.

C>10 - C16 (F2- Naphthalene) is a calculated parameter. The calculated value is F2 - Naphthalene.

C>16 - C34 (F3-PAH) is a calculated parameter. The calculated value is F3-PAH (PAH: sum of Phenanthrene, Benzo(a)anthracene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Benzo(a)pyrene, Fluoranthene, Dibenzo(a,h)anthracene, Indeno(1,2,3-c,d)pyrene and Pyrene).

This method complies with the Reference Method for the CWS PHC and is validated for use in the laboratory.

nC10, nC16 and nC34 response factors are within 10% of their average.

C50 response factor is within 70% of nC10 + nC16 + nC34 average.

Linearity is within 15%.

Extraction and holding times were met for this sample.

Sediment parameter is comment only based on visual inspection of the sample prior to extraction and is not an accredited test.

Legend: 1 = no sediment present; 2 = sediment present; 3 = sediment present in trace amounts

Analysis performed at AGAT Toronto (unless marked by *)

Certified By:



Certificate of Analysis

AGAT WORK ORDER: 24H227781

PROJECT: NS2491-02

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

CLIENT NAME: NIAGARA SOIL SOLUTIONS LTD

SAMPLING SITE: 5578 George Street

ATTENTION TO: Jodie Glasier

SAMPLED BY: J. Toldi

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

DATE RECEIVED: 2024-12-03

DATE REPORTED: 2024-12-11

Parameter	Unit	SAMPLE DESCRIPTION:		BH/MW5	BH/MW6
		SAMPLE TYPE:		Water	Water
		DATE SAMPLED:		2024-12-02	2024-12-02
		G / S	RDL	6376672	6376676
Dichlorodifluoromethane	µg/L	4400	0.40	<0.40	<0.40
Vinyl Chloride	µg/L	0.5	0.17	<0.17	<0.17
Bromomethane	µg/L	5.6	0.20	<0.20	<0.20
Trichlorofluoromethane	µg/L	2500	0.40	<0.40	<0.40
Acetone	µg/L	130000	1.0	<1.0	<1.0
1,1-Dichloroethylene	µg/L	1.6	0.30	<0.30	<0.30
Methylene Chloride	µg/L	610	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	190	0.20	<0.20	<0.20
1,1-Dichloroethane	µg/L	320	0.30	<0.30	<0.30
Methyl Ethyl Ketone	µg/L	470000	1.0	<1.0	<1.0
cis- 1,2-Dichloroethylene	µg/L	1.6	0.20	<0.20	<0.20
Chloroform	µg/L	2.4	0.20	<0.20	<0.20
1,2-Dichloroethane	µg/L	1.6	0.20	<0.20	<0.20
1,1,1-Trichloroethane	µg/L	640	0.30	<0.30	<0.30
Carbon Tetrachloride	µg/L	0.79	0.20	<0.20	<0.20
Benzene	µg/L	44	0.20	<0.20	<0.20
1,2-Dichloropropane	µg/L	16	0.20	<0.20	<0.20
Trichloroethylene	µg/L	1.6	0.20	<0.20	<0.20
Bromodichloromethane	µg/L	85000	0.20	<0.20	<0.20
Methyl Isobutyl Ketone	µg/L	140000	1.0	<1.0	<1.0
1,1,2-Trichloroethane	µg/L	4.7	0.20	<0.20	<0.20
Toluene	µg/L	18000	0.20	<0.20	<0.20
Dibromochloromethane	µg/L	82000	0.10	<0.10	<0.10
Ethylene Dibromide	µg/L	0.25	0.10	<0.10	<0.10
Tetrachloroethylene	µg/L	1.6	0.20	<0.20	<0.20
1,1,1,2-Tetrachloroethane	µg/L	3.3	0.10	<0.10	<0.10
Chlorobenzene	µg/L	630	0.10	<0.10	<0.10
Ethylbenzene	µg/L	2300	0.10	<0.10	<0.10
m & p-Xylene	µg/L		0.20	<0.20	<0.20

Certified By:

N Popiwko



Certificate of Analysis

AGAT WORK ORDER: 24H227781

PROJECT: NS2491-02

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

CLIENT NAME: NIAGARA SOIL SOLUTIONS LTD

SAMPLING SITE: 5578 George Street

ATTENTION TO: Jodie Glasier

SAMPLED BY: J. Toldi

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

DATE RECEIVED: 2024-12-03

DATE REPORTED: 2024-12-11

		SAMPLE DESCRIPTION:		BH/MW5	BH/MW6
		SAMPLE TYPE:		Water	Water
		DATE SAMPLED:		2024-12-02	2024-12-02
Parameter	Unit	G / S	RDL	6376672	6376676
Bromoform	µg/L	380	0.10	<0.10	<0.10
Styrene	µg/L	1300	0.10	<0.10	<0.10
1,1,2,2-Tetrachloroethane	µg/L	3.2	0.10	<0.10	<0.10
o-Xylene	µg/L		0.10	<0.10	<0.10
1,3-Dichlorobenzene	µg/L	9600	0.10	<0.10	<0.10
1,4-Dichlorobenzene	µg/L	8	0.10	<0.10	<0.10
1,2-Dichlorobenzene	µg/L	4600	0.10	<0.10	<0.10
1,3-Dichloropropene	µg/L	5.2	0.30	<0.30	<0.30
Xylenes (Total)	µg/L	4200	0.20	<0.20	<0.20
n-Hexane	µg/L	51	0.20	<0.20	<0.20
Surrogate	Unit	Acceptable Limits			
Toluene-d8	% Recovery	50-140		102	96
4-Bromofluorobenzene	% Recovery	50-140		94	94

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 - Non-Potable Ground Water - All Types of Property Uses - 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.

6376672-6376676 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: 24H227781

PROJECT: NS2491-02

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

CLIENT NAME: NIAGARA SOIL SOLUTIONS LTD

SAMPLING SITE:5578 George Street

ATTENTION TO: Jodie Glasier

SAMPLED BY:J. Toldi

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

DATE RECEIVED: 2024-12-03

DATE REPORTED: 2024-12-11

Parameter	Unit	SAMPLE DESCRIPTION:		BH/MW5	BH/MW6
		SAMPLE TYPE:		Water	Water
		DATE SAMPLED:		2024-12-02	2024-12-02
		G / S	RDL	6376672	6376676
Dissolved Antimony	µg/L	20000	1.0	<1.0	<1.0
Dissolved Arsenic	µg/L	1900	1.0	<1.0	<1.0
Dissolved Barium	µg/L	29000	2.0	32.6	24.0
Dissolved Beryllium	µg/L	67	0.50	<0.50	<0.50
Dissolved Boron	µg/L	45000	10.0	127	86.3
Dissolved Cadmium	µg/L	2.7	0.20	<0.20	<0.20
Dissolved Chromium	µg/L	810	2.0	2.2	<2.0
Dissolved Cobalt	µg/L	66	0.50	0.57	<0.50
Dissolved Copper	µg/L	87	1.0	1.6	1.7
Dissolved Lead	µg/L	25	0.50	<0.50	<0.50
Dissolved Molybdenum	µg/L	9200	0.50	3.28	2.49
Dissolved Nickel	µg/L	490	1.0	3.8	4.0
Dissolved Selenium	µg/L	63	1.0	<1.0	1.9
Dissolved Silver	µg/L	1.5	0.20	<0.20	<0.20
Dissolved Thallium	µg/L	510	0.30	<0.30	<0.30
Dissolved Uranium	µg/L	420	0.50	22.5	19.2
Dissolved Vanadium	µg/L	250	0.40	<0.40	0.41
Dissolved Zinc	µg/L	1100	5.0	<5.0	<5.0
Mercury	µg/L	0.29	0.02	<0.02	<0.02
Chromium VI	µg/L	140	2.000	<2.000	<2.000
Cyanide, WAD	µg/L	66	2	<2	<2
Dissolved Sodium	µg/L	2300000	50	80000	79400
Chloride	µg/L	2300000	100	110000	101000
Electrical Conductivity	uS/cm	NA	2	1180	1300
pH	pH Units		NA	7.76	7.82

Certified By:





Certificate of Analysis

AGAT WORK ORDER: 24H227781

PROJECT: NS2491-02

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

CLIENT NAME: NIAGARA SOIL SOLUTIONS LTD

SAMPLING SITE: 5578 George Street

ATTENTION TO: Jodie Glasier

SAMPLED BY: J. Toldi

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

DATE RECEIVED: 2024-12-03

DATE REPORTED: 2024-12-11

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 - Non-Potable Ground Water - All Types of Property Uses - 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.

6376672-6376676 Metals analysis completed on a filtered sample.
pH is a recommended field analysis taken within 15 minutes of sample collection. Due to the potential for rapid change in sample equilibrium chemistry laboratory results may differ from field measured results

Analysis performed at AGAT Toronto (unless marked by *)

Certified By:



Mylene Bassly

Quality Assurance

CLIENT NAME: NIAGARA SOIL SOLUTIONS LTD

AGAT WORK ORDER: 24H227781

PROJECT: NS2491-02

ATTENTION TO: Jodie Glasier

SAMPLING SITE: 5578 George Street

SAMPLED BY: J. Toldi

Trace Organics Analysis

RPT Date: Dec 11, 2024			DUPLICATE			Method Blank	REFERENCE MATERIAL		METHOD BLANK SPIKE			MATRIX SPIKE			
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD		Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper

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

F1 (C6 to C10)	6376676	6376676	<25	<25	NA	< 25	84%	60%	140%	87%	60%	140%	78%	60%	140%
F2 (C10 to C16)	6378520		< 100	< 100	NA	< 100	118%	60%	140%	77%	60%	140%	81%	60%	140%
F3 (C16 to C34)	6378520		< 100	< 100	NA	< 100	126%	60%	140%	76%	60%	140%	91%	60%	140%
F4 (C34 to C50)	6378520		< 100	< 100	NA	< 100	82%	60%	140%	93%	60%	140%	90%	60%	140%

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

Naphthalene	6376672	6376672	<0.20	<0.20	NA	< 0.20	91%	50%	140%	89%	50%	140%	72%	50%	140%
Acenaphthylene	6376672	6376672	<0.20	<0.20	NA	< 0.20	94%	50%	140%	94%	50%	140%	92%	50%	140%
Acenaphthene	6376672	6376672	<0.20	<0.20	NA	< 0.20	92%	50%	140%	99%	50%	140%	98%	50%	140%
Fluorene	6376672	6376672	<0.20	<0.20	NA	< 0.20	97%	50%	140%	107%	50%	140%	115%	50%	140%
Phenanthrene	6376672	6376672	<0.10	<0.10	NA	< 0.10	101%	50%	140%	118%	50%	140%	117%	50%	140%
Anthracene	6376672	6376672	<0.10	<0.10	NA	< 0.10	79%	50%	140%	111%	50%	140%	108%	50%	140%
Fluoranthene	6376672	6376672	<0.20	<0.20	NA	< 0.20	107%	50%	140%	113%	50%	140%	104%	50%	140%
Pyrene	6376672	6376672	<0.20	<0.20	NA	< 0.20	107%	50%	140%	112%	50%	140%	104%	50%	140%
Benzo(a)anthracene	6376672	6376672	<0.20	<0.20	NA	< 0.20	100%	50%	140%	111%	50%	140%	115%	50%	140%
Chrysene	6376672	6376672	<0.10	<0.10	NA	< 0.10	103%	50%	140%	92%	50%	140%	89%	50%	140%
Benzo(b)fluoranthene	6376672	6376672	<0.10	<0.10	NA	< 0.10	99%	50%	140%	97%	50%	140%	82%	50%	140%
Benzo(k)fluoranthene	6376672	6376672	<0.10	<0.10	NA	< 0.10	103%	50%	140%	82%	50%	140%	98%	50%	140%
Benzo(a)pyrene	6376672	6376672	<0.01	<0.01	NA	< 0.01	94%	50%	140%	76%	50%	140%	80%	50%	140%
Indeno(1,2,3-cd)pyrene	6376672	6376672	<0.20	<0.20	NA	< 0.20	90%	50%	140%	85%	50%	140%	85%	50%	140%
Dibenz(a,h)anthracene	6376672	6376672	<0.20	<0.20	NA	< 0.20	91%	50%	140%	81%	50%	140%	73%	50%	140%
Benzo(g,h,i)perylene	6376672	6376672	<0.20	<0.20	NA	< 0.20	92%	50%	140%	76%	50%	140%	74%	50%	140%

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

Dichlorodifluoromethane	6376676	6376676	<0.40	<0.40	NA	< 0.40	65%	50%	140%	67%	50%	140%	87%	50%	140%
Vinyl Chloride	6376676	6376676	<0.17	<0.17	NA	< 0.17	73%	50%	140%	103%	50%	140%	82%	50%	140%
Bromomethane	6376676	6376676	<0.20	<0.20	NA	< 0.20	97%	50%	140%	90%	50%	140%	109%	50%	140%
Trichlorofluoromethane	6376676	6376676	<0.40	<0.40	NA	< 0.40	65%	50%	140%	120%	50%	140%	66%	50%	140%
Acetone	6376676	6376676	<1.0	<1.0	NA	< 1.0	60%	50%	140%	93%	50%	140%	113%	50%	140%
1,1-Dichloroethylene	6376676	6376676	<0.30	<0.30	NA	< 0.30	77%	50%	140%	94%	60%	130%	104%	50%	140%
Methylene Chloride	6376676	6376676	<0.30	<0.30	NA	< 0.30	79%	50%	140%	105%	60%	130%	93%	50%	140%
trans- 1,2-Dichloroethylene	6376676	6376676	<0.20	<0.20	NA	< 0.20	80%	50%	140%	94%	60%	130%	84%	50%	140%
Methyl tert-butyl ether	6376676	6376676	<0.20	<0.20	NA	< 0.20	81%	50%	140%	118%	60%	130%	81%	50%	140%
1,1-Dichloroethane	6376676	6376676	<0.30	<0.30	NA	< 0.30	80%	50%	140%	98%	60%	130%	99%	50%	140%
Methyl Ethyl Ketone	6376676	6376676	<1.0	<1.0	NA	< 1.0	91%	50%	140%	109%	50%	140%	86%	50%	140%
cis- 1,2-Dichloroethylene	6376676	6376676	<0.20	<0.20	NA	< 0.20	85%	50%	140%	101%	60%	130%	94%	50%	140%
Chloroform	6376676	6376676	<0.20	<0.20	NA	< 0.20	93%	50%	140%	104%	60%	130%	97%	50%	140%
1,2-Dichloroethane	6376676	6376676	<0.20	<0.20	NA	< 0.20	94%	50%	140%	107%	60%	130%	93%	50%	140%
1,1,1-Trichloroethane	6376676	6376676	<0.30	<0.30	NA	< 0.30	81%	50%	140%	86%	60%	130%	92%	50%	140%
Carbon Tetrachloride	6376676	6376676	<0.20	<0.20	NA	< 0.20	75%	50%	140%	69%	60%	130%	83%	50%	140%

Quality Assurance

CLIENT NAME: NIAGARA SOIL SOLUTIONS LTD

AGAT WORK ORDER: 24H227781

PROJECT: NS2491-02

ATTENTION TO: Jodie Glasier

SAMPLING SITE: 5578 George Street

SAMPLED BY: J. Toldi

Trace Organics Analysis (Continued)

RPT Date: Dec 11, 2024			DUPLICATE			Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD		Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
Benzene	6376676	6376676	<0.20	<0.20	NA	< 0.20	88%	50%	140%	100%	60%	130%	95%	50%	140%
1,2-Dichloropropane	6376676	6376676	<0.20	<0.20	NA	< 0.20	93%	50%	140%	102%	60%	130%	90%	50%	140%
Trichloroethylene	6376676	6376676	<0.20	<0.20	NA	< 0.20	90%	50%	140%	97%	60%	130%	93%	50%	140%
Bromodichloromethane	6376676	6376676	<0.20	<0.20	NA	< 0.20	89%	50%	140%	99%	60%	130%	88%	50%	140%
Methyl Isobutyl Ketone	6376676	6376676	<1.0	<1.0	NA	< 1.0	90%	50%	140%	109%	50%	140%	90%	50%	140%
1,1,2-Trichloroethane	6376676	6376676	<0.20	<0.20	NA	< 0.20	111%	50%	140%	120%	60%	130%	106%	50%	140%
Toluene	6376676	6376676	<0.20	<0.20	NA	< 0.20	103%	50%	140%	109%	60%	130%	104%	50%	140%
Dibromochloromethane	6376676	6376676	<0.10	<0.10	NA	< 0.10	103%	50%	140%	113%	60%	130%	89%	50%	140%
Ethylene Dibromide	6376676	6376676	<0.10	<0.10	NA	< 0.10	94%	50%	140%	110%	60%	130%	88%	50%	140%
Tetrachloroethylene	6376676	6376676	<0.20	<0.20	NA	< 0.20	105%	50%	140%	103%	60%	130%	103%	50%	140%
1,1,1,2-Tetrachloroethane	6376676	6376676	<0.10	<0.10	NA	< 0.10	94%	50%	140%	105%	60%	130%	88%	50%	140%
Chlorobenzene	6376676	6376676	<0.10	<0.10	NA	< 0.10	108%	50%	140%	105%	60%	130%	95%	50%	140%
Ethylbenzene	6376676	6376676	<0.10	<0.10	NA	< 0.10	104%	50%	140%	102%	60%	130%	99%	50%	140%
m & p-Xylene	6376676	6376676	<0.20	<0.20	NA	< 0.20	107%	50%	140%	107%	60%	130%	105%	50%	140%
Bromoform	6376676	6376676	<0.10	<0.10	NA	< 0.10	109%	50%	140%	118%	60%	130%	105%	50%	140%
Styrene	6376676	6376676	<0.10	<0.10	NA	< 0.10	106%	50%	140%	108%	60%	130%	100%	50%	140%
1,1,2,2-Tetrachloroethane	6376676	6376676	<0.10	<0.10	NA	< 0.10	101%	50%	140%	111%	60%	130%	87%	50%	140%
o-Xylene	6376676	6376676	<0.10	<0.10	NA	< 0.10	113%	50%	140%	111%	60%	130%	107%	50%	140%
1,3-Dichlorobenzene	6376676	6376676	<0.10	<0.10	NA	< 0.10	108%	50%	140%	113%	60%	130%	103%	50%	140%
1,4-Dichlorobenzene	6376676	6376676	<0.10	<0.10	NA	< 0.10	114%	50%	140%	111%	60%	130%	99%	50%	140%
1,2-Dichlorobenzene	6376676	6376676	<0.10	<0.10	NA	< 0.10	112%	50%	140%	110%	60%	130%	98%	50%	140%
n-Hexane	6376676	6376676	<0.20	<0.20	NA	< 0.20	116%	50%	140%	91%	60%	130%	84%	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: NIAGARA SOIL SOLUTIONS LTD

PROJECT: NS2491-02

SAMPLING SITE: 5578 George Street

AGAT WORK ORDER: 24H227781

ATTENTION TO: Jodie Glasier

SAMPLED BY: J. Toldi

Water Analysis

RPT Date: Dec 11, 2024			DUPLICATE			Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD		Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
O. Reg. 153(511) - Metals & Inorganics (Water)															
Dissolved Antimony	6367350		<1.0	<1.0	NA	< 1.0	99%	70%	130%	102%	80%	120%	99%	70%	130%
Dissolved Arsenic	6367350		<1.0	<1.0	NA	< 1.0	97%	70%	130%	104%	80%	120%	104%	70%	130%
Dissolved Barium	6367350		205	198	3.5%	< 2.0	94%	70%	130%	100%	80%	120%	100%	70%	130%
Dissolved Beryllium	6367350		<0.50	<0.50	NA	< 0.50	112%	70%	130%	115%	80%	120%	108%	70%	130%
Dissolved Boron	6367350		126	130	3.1%	< 10.0	99%	70%	130%	108%	80%	120%	99%	70%	130%
Dissolved Cadmium	6367350		<0.20	<0.20	NA	< 0.20	100%	70%	130%	101%	80%	120%	99%	70%	130%
Dissolved Chromium	6367350		<2.0	<2.0	NA	< 2.0	98%	70%	130%	106%	80%	120%	112%	70%	130%
Dissolved Cobalt	6367350		0.77	0.51	NA	< 0.50	100%	70%	130%	111%	80%	120%	107%	70%	130%
Dissolved Copper	6367350		<1.0	<1.0	NA	< 1.0	97%	70%	130%	105%	80%	120%	103%	70%	130%
Dissolved Lead	6367350		<0.50	<0.50	NA	< 0.50	98%	70%	130%	97%	80%	120%	91%	70%	130%
Dissolved Molybdenum	6367350		1.18	1.68	NA	< 0.50	100%	70%	130%	102%	80%	120%	99%	70%	130%
Dissolved Nickel	6367350		1.7	1.4	NA	< 1.0	97%	70%	130%	110%	80%	120%	108%	70%	130%
Dissolved Selenium	6367350		2.1	<1.0	NA	< 1.0	99%	70%	130%	101%	80%	120%	100%	70%	130%
Dissolved Silver	6367350		<0.20	<0.20	NA	< 0.20	90%	70%	130%	93%	80%	120%	90%	70%	130%
Dissolved Thallium	6367350		<0.30	<0.30	NA	< 0.30	92%	70%	130%	100%	80%	120%	101%	70%	130%
Dissolved Uranium	6367350		2.47	2.51	NA	< 0.50	83%	70%	130%	102%	80%	120%	100%	70%	130%
Dissolved Vanadium	6367350		0.45	0.49	NA	< 0.40	101%	70%	130%	116%	80%	120%	116%	70%	130%
Dissolved Zinc	6367350		13.4	<5.0	NA	< 5.0	101%	70%	130%	115%	80%	120%	129%	70%	130%
Mercury	6376783		<0.02	<0.02	NA	< 0.02	100%	70%	130%	102%	80%	120%	96%	70%	130%
Chromium VI	6376672	6376672	<2.000	<2.000	NA	< 2	100%	70%	130%	99%	80%	120%	126%	70%	130%
Cyanide, WAD	6383149		<2	<2	NA	< 2	105%	70%	130%	91%	80%	120%	108%	70%	130%
Dissolved Sodium	6367350		73500	70300	4.5%	< 50	114%	70%	130%	119%	80%	120%	96%	70%	130%
Chloride	6376297		175000	172000	1.7%	< 100	92%	70%	130%	98%	80%	120%	NA	70%	130%
Electrical Conductivity	6376672	6376672	1180	1180	0.0%	< 2	102%	90%	110%						
pH	6376672	6376672	7.76	7.83	0.9%	NA	100%	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:



Method Summary

CLIENT NAME: NIAGARA SOIL SOLUTIONS LTD

AGAT WORK ORDER: 24H227781

PROJECT: NS2491-02

ATTENTION TO: Jodie Glasier

SAMPLING SITE: 5578 George Street

SAMPLED BY: J. Toldi

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Trace Organics Analysis			
Naphthalene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Acenaphthylene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Acenaphthene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Fluorene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Phenanthrene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Anthracene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Fluoranthene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Pyrene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Benzo(a)anthracene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Chrysene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Benzo(b)fluoranthene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Benzo(k)fluoranthene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Benzo(a)pyrene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Indeno(1,2,3-cd)pyrene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Dibenz(a,h)anthracene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Benzo(g,h,i)perylene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
2-and 1-methyl Naphthalene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Naphthalene-d8	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Acridine-d9	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Terphenyl-d14	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Sediment			N/A
F1 (C6 to C10)	VOL-91-5010	modified from MOE PHC-E3421	(P&T)GC/FID
F1 (C6 to C10) minus BTEX	VOL-91-5010	modified from MOE PHC-E3421	P&T GC/FID
Toluene-d8	VOL-91- 5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
F2 (C10 to C16)	VOL-91-5010	modified from MOE PHC-E3421	GC/FID
F2 (C10 to C16) minus Naphthalene	VOL-91-5010	modified from MOE PHC-E3421	GC/FID
F3 (C16 to C34)	VOL-91-5010	modified from MOE PHC-E3421	GC/FID
F3 (C16 to C34) minus PAHs	VOL-91-5010	modified from MOE PHC-E3421	GC/FID
F4 (C34 to C50)	VOL-91-5010	modified from MOE PHC-E3421	GC/FID
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

Method Summary

CLIENT NAME: NIAGARA SOIL SOLUTIONS LTD

PROJECT: NS2491-02

SAMPLING SITE: 5578 George Street

AGAT WORK ORDER: 24H227781

ATTENTION TO: Jodie Glasier

SAMPLED BY: J. Toldi

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Vinyl Chloride	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Bromomethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Trichlorofluoromethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Acetone	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1-Dichloroethylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Methylene Chloride	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
trans- 1,2-Dichloroethylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Methyl tert-butyl ether	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1-Dichloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Methyl Ethyl Ketone	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
cis- 1,2-Dichloroethylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Chloroform	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,2-Dichloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1,1-Trichloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Carbon Tetrachloride	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Benzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,2-Dichloropropane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Trichloroethylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Bromodichloromethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Methyl Isobutyl Ketone	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1,2-Trichloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Toluene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Dibromochloromethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Ethylene Dibromide	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Tetrachloroethylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1,1,2-Tetrachloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
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

Method Summary

CLIENT NAME: NIAGARA SOIL SOLUTIONS LTD

AGAT WORK ORDER: 24H227781

PROJECT: NS2491-02

ATTENTION TO: Jodie Glasier

SAMPLING SITE: 5578 George Street

SAMPLED BY: J. Toldi

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
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: NIAGARA SOIL SOLUTIONS LTD

AGAT WORK ORDER: 24H227781

PROJECT: NS2491-02

ATTENTION TO: Jodie Glasier

SAMPLING SITE: 5578 George Street

SAMPLED BY: J. Toldi

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



Laboratories

Give feedback?

Scan here for a quick survey!



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

Laboratory Use Only

Work Order #:

24H 227781

Cooler Quantity:

16 COOLER

Arrival Temperatures:

4.31 4.24 4.1

Depot Temperatures:

3.9 13.8 4.2

Custody Seal Intact:

☐ Yes ☐ No ☐ N/A

Notes:

BAGGED 1CE

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: NSSL
Contact: Jodie Gleser
Address: 3300 Merrittville Highway, Unit 4
Thornhill, ON L2V 9Y6
Phone: 289-407-6341 Fax:
Reports to be sent to:
1. Email: Jgleser@nssl.com
2. Email:

Regulatory Requirements:

(Please check all applicable boxes)

☒ Regulation 153/04

☐ Regulation 406

☐ Sewer Use

☐ Sanitary ☐ Storm

Table 3 Indicate One

☐ Ind/Com

☒ Res/Park

☐ Agriculture

Table Indicate One

☐ Ind/Com

☐ Res/Park

☐ Agriculture

Soil Texture (Check One)

☐ Coarse

☒ Fine

☐ Regulation 558

☐ CCME

☐ Prov. Water Quality Objectives (PWQO)

☐ Other

Indicate One

Project Information:

Project: N52491-02
Site Location: 5578 George Street
Sampled By: J. Toldi
AGAT Quote #: 1033659EB 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 (RSC)?

☒ Yes ☐ No

Report Guideline on Certificate of Analysis

☒ Yes ☐ No

Legal Sample ☐

Sample Matrix Legend

GW Ground Water SD Sediment
O Oil SW Surface Water
P Paint R Rock/Shale
S Soil

Field Filtered - Metals, Hg, CrVI, DOC,

O. Reg 153

Metals & Inorganics

Metals - ☐ CrVI, ☐ Hg, ☐ HWSB

BTEX, F1-F4 PHCs

VOC

PAHs

PCBs: Aroclors ☐

Regulation 406 Characterization Package
pH, Metals, BTEX, F1-F4

EC, SAR

Regulation 406 SLP Rainwater Leach
msSLP: ☐ Metals ☐ VOCs ☐ SVOCs ☐ OC

Landfill Disposal Characterization TCLP:

TCLP: ☐ Metals ☐ VOCs ☐ ABNs ☐ BTEX ☐ PCBs

Corrosivity: ☐ Moisture ☐ Sulphide

Potentially Hazardous or High Concentration (Y/N)

Sample Identification	Date Sampled	Time Sampled	# of Containers	Sample Matrix	Comments/ Special Instructions	Y / N	Metals & Inorganics	Metals - ☐ CrVI, ☐ Hg, ☐ HWSB	BTEX, F1-F4 PHCs	VOC	PAHs	PCBs: Aroclors ☐	Regulation 406 Characterization Package pH, Metals, BTEX, F1-F4	EC, SAR	Regulation 406 SLP Rainwater Leach msSLP: ☐ Metals ☐ VOCs ☐ SVOCs ☐ OC	Landfill Disposal Characterization TCLP: TCLP: ☐ Metals ☐ VOCs ☐ ABNs ☐ BTEX ☐ PCBs	Corrosivity: ☐ Moisture ☐ Sulphide	Potentially Hazardous or High Concentration (Y/N)
1. BH/MW5	12/02/24	AM	13	GW			X	X	X	X	X							
2. BH/MW6	↓	AM	↓	↓			X	X	X	X	X							
3.		AM																
4.		AM																
5.		AM																
6.		AM																
7.		AM																
8.		AM																
9.		AM																
10.		AM																
11.		AM																

Samples Relinquished By (Print Name and Sign): <u>AKU</u>	Date: <u>12/02/24</u>	Time: <u></u>	Samples Received By (Print Name and Sign): <u>DMC B3m</u>	Date: <u>Dec 3/24</u>	Time: <u>3am</u>
Samples Relinquished By (Print Name and Sign): <u>DMC</u>	Date: <u>Dec 3/24</u>	Time: <u>3pm</u>	Samples Received By (Print Name and Sign): <u>DMC</u>	Date: <u>Dec 3</u>	Time: <u>3:47</u>
Samples Relinquished By (Print Name and Sign): <u></u>	Date: <u></u>	Time: <u></u>	Samples Received By (Print Name and Sign): <u></u>	Date: <u></u>	Time: <u></u>

Page 1 of 1

N: T-161698

APPENDIX D

GRAIN SIZE ANALYSIS

Project No.: NT24236

November 25, 2024

Niagara Soils Solutions Ltd.
3300 Merrittville Highway, Unit 5
Thorold, Ontario
L2V 4Y6

Attention: Ms. Jodie Glasier, President

**RE: Laboratory Analysis for Soil Texture Classification
Niagara Soils Solutions Ltd. Project No. NS2491-02
5578 George Street, Niagara Falls, Ontario**

Dear Ms. Glasier:

As requested, Niagara Testing and Inspection Ltd. [NTIL] was retained to perform laboratory analysis on soil samples for soil texture classification [i.e., fine/medium or coarse grain soil determination] as defined in Ontario Regulation 153/04 [as amended].

On Thursday October 31st, 2024, three [3] soil samples were delivered by Niagara Soils Solutions Ltd. to NTIL soils laboratory for 75-micron [μm] [#200] single-sieve grain size analysis. Results for the analysis are summarized in the table below.

<i>Sample I.D.</i>	<i>Percent Passing 75 μm [#200] Sieve</i>	<i>Percent Retained on 75 μm [#200] Sieve</i>	<i>Soil Texture</i>
BH/MW 2-5	78.5 %	21.5 %	Fine/Medium Grained
BH/MW 3-3	84.9 %	15.1 %	Fine/Medium Grained
HA 2	77.8 %	22.2 %	Fine/Medium Grained

We trust that this information is satisfactory for your purposes. Should you have any queries please do not hesitate to contact the undersigned.

Regards:

Niagara Testing and Inspection Ltd.

Prepared by:



Dwayne Neill, P.Eng.
Project Engineer



Distribution:

Jodie Glasier – jglasier@nssl.ca