Phase Two Environmental Site Assessment
7701 Lundy's Lane, Niagara Falls, ON

Project Location:

7701 Lundy's Lane,
Niagara Falls, ON
L2H 1H3

Prepared For:

Gatta Homes Inc.
P O BOX 870
Niagara on the Lake, ON
LOS 1J0

NIAGARA SOILS SOLUTIONS LTD.

Prepared By:

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Date: November 22, 2023
NSSL File No.: NS23108-02

EXECUTIVE SUMMARY

Niagara Soils Solutions Ltd. (NSSL) was retained by Gatta Homes Inc. c/o Mr. Cyrus Gatta to conduct a Phase Two Environmental Site Assessment [ESA] of the property located at 7701 Lundy's Lane, in the City of Niagara Falls, ON [herein referred to as the "Phase Two Property" or the "Site"]. The Phase Two ESA was completed following a recommendation made by the finding of the Phase One ESA report that documented a historic underground storage tank onsite relating to previous commercial use as a service station. The site plans include conversion of the existing commercial motel into affordable housing units.

The primary findings of this Phase Two ESA are summarized as follows:

- Eight boreholes were advanced at the Site via track mounted drill rig.
- Boreholes were drilled to a maximum depth of 6.71 m bgs.
- Three environmental monitoring wells were installed at the site into three of the boreholes.
- Ten select soil samples were submitted for laboratory analysis of target parameters Metals by Inductively Coupled Mass Spectrometry (ICP-MS), Hydride forming Metals Arsenic (As), Antimony (Sb), Selenium (Se), Petroleum Hydrocarbons (PHCs) F1-F4, Benzene, Toluene, Ethylbenzene and Xylene (BTEX), Volatile Organic Compounds (VOCs), Polycyclic Aromatic Hydrocarbons (PAHs) and Inorganics: Sodium Adsorption Ratio (SAR)/Electrical Conductivity (EC), Free Cyanide (CN-), Chromium VI (Cr VI), Hot Water Boron Soluble (HWB-S), Mercury (Hg).
- Three groundwater samples were submitted for laboratory analysis of target parameters Metals, Hydride Forming Metals- Arsenic (As), Antimony (Sb), Selenium (Se), PHCs F1-F4, BTEX, VOCs, PAHs and Inorganics: EC, CN-, Cr VI, Sodium (Na), Hg, Chlorine (Cl).
- All tested soil and groundwater results met applicable Table 3 Residential/Parkland/Institutional criteria for all target contaminants.

Therefore, based upon the Phase Two ESA study, current soil and groundwater conditions at the site satisfy applicable Table 3 Residential Site Condition standards. NSSL recommends removal of the Underground Storage Tank followed by verification soil sampling of the tank nest. Once confirmatory sampling is complete the documents for filing a Record of Site Condition with the Ministry of the Environment, Conservation and Parks can be prepared.

NOTE: This executive summary provides a brief overview of the study findings. It is not intended to be substituted for the complete report, nor does it detail specific issues discussed within the report. This summary is not to be adopted in lieu of reading the complete report.

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1.0 INTRODUCTION

Niagara Soils Solutions Ltd. (NSSL) was retained by Gatta Homes Inc. c/o Mr. Cyrus Gatta to conduct a Phase Two Environmental Site Assessment [ESA] of the property located at 7701 Lundy's Lane, in the City of Niagara Falls, ON [herein referred to as the "Phase Two Property" or the "Site"]. The Phase Two ESA was completed following a recommendation made by the finding of the Phase One ESA report that documented a historic underground storage tank onsite relating to previous commercial use as a service station. The site plans include conversion of the existing commercial motel into affordable housing units.

1.1 Site Description

The Phase Two ESA Property is an irregularly-shaped parcel, occupying approximately 0.70 hectares, and currently utilized for commercial purposes as Rockwell Resort and Little Wedding Chapel. The Site is located at the intersection of Lundy's Lane (to the south) and Beaverdams Road (to the east). The northern property boundary is bordered by an open grassy land with sparse trees in front of established residential dwellings. The west side of the Site is occupied by a commercial building (Travelodge Hotel). Historically, the Site was owned by private individuals, the Regional Municipal of Niagara, and various corporate organizations dating from 1802 to 2018. The current owner of the Phase Two property is recorded as 10743186 Corporation, which has owned the property since May 15, 2018. The municipal and legal descriptions of the Site included in the Phase One ESA are stated as; PT TWP LT 133 STAMFORD AS IN RO336724 & RO372665; PT TWP LT 133 STAMFORD PT 1 & 2, 59R4604, PT TWP LT 133 STAMFORD PT 1, 59R4311; NIAGARA. The Property Identification Number (PIN) is 64305-0471 (LT).

1.2 Past Investigations

Phase One Environmental Site Assessment, Niagara Soils Solutions Ltd. [2023]

A Phase One Environmental Site Assessment was completed by Niagara Soils Solutions Ltd. in October 2023. The Phase One ESA identified four potentially contaminating activities (PCAs) that resulted in two on-site areas of potential environmental concerns (APECs) as per below.

Table 1: Phase One & Two ESA Areas of Potential Environmental Concern

Area of potential environmental concern[1]	Location of the area of potential environmental concern on phase one property	Potentially contaminating activity[2]	Location of PCA (on-site or off-site)	Contaminants of potential concern[3]	Media potentially impacted (Groundwater, soil, and/or sediment)
APEC-1	East/southeastern portion of Phase One Property	#28. Gasoline and Associated Products Storage in Fixed Tanks	On-site	Metals, PHCs, BTEX, PAHs, VOCs	Soil and Groundwater

Area of potential environmental concern[1]	Location of the area of potential environmental concern on phase one property	Potentially contaminating activity[2]	Location of PCA (on-site or off-site)	Contaminants of potential concern[3]	Media potentially impacted (Groundwater, soil, and/or sediment)
APEC-2	Eastern portion of Phase One Property	#30. Importation of Fill Material of Unknown Quality	On-site	Metals, PHCs, BTEX, PAHs, pH/SAR/EC	Soil

1.3 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 SCS applicable to the Phase Two ESA property has been evaluated based upon the following rationale:

Table 2: Site Compared to Table 3 Residential/Parkland/Institutional Land Use

Property Use	The property use for the site will be residential therefore Residential/ Parkland/Institutional land use criteria applies.
Grain Size	As per the Niagara Testing and Inspection report available in Appendix C, the grain size was determined to be coarse-grained. Therefore, coarse-grained texture was utilized.
Water Wells	Domestic water wells were not identified within 250 metres (m) of the Phase Two Property. The site is supplied with municipal services. Therefore, non-potable criteria was applied.
Within 30 m of a Waterbody	In accordance with O. Reg. 153/04, the Study Site does not include parcels / lots of land that are within 30 m of a waterbody.
Depth to Bedrock	More than 2.0 m of soil was encountered within boreholes across the site.
pH	Soil pH values were reported between 7.29 to 7.42 in the native soil samples.
Environmentally Sensitive Area	The Phase Two Property is not classified as an environmentally sensitive area under O. Reg. 153/04 as amended.
Area of Natural Significance	The Phase Two Property is not considered as an Area of Natural Significance under O. Reg. 153/04 as amended, as the Site 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.

Therefore, based on the above, the soil and groundwater results were compared to Ministry of the Environment, Conservation and Parks 2011 Table 3 Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition, for Residential/Parkland/Institutional land use, for coarse grained soils.

2.0 BACKGROUND INFORMATION

2.1 Physical Setting

The ground surface of the Site is relatively flat lying, with an elevation of 194.83 m above sea level (masl). The elevation of the Study Area was noted as decreasing from south-southeast. Groundwater depths at the Phase Two Property ranged between 3.15 and 3.25 m bgs. Surface water drainage was directed towards the catchment basins located onsite and south/southeast of the Site at Lundy's Lane and Beaverdams Road. The groundwater flow direction was inferred to be south-southeast based on the topography of the Study Area. A review of the Ministry of Northern Development and Mines, "Quaternary Geology of Southern Ontario", Map 2496, reveals that the Site is situated within Late Wisconsinan characterized by Glaciolacustrine nearshore and deltaic sand and silt. Map 2544, showing the "Bedrock Geology of Southern Ontario", reveals that the Study Area is underlain by Sandstone, shale, dolostone, and siltstone, which belong to the Lockport Formation in the Middle and Lower Silurian.

The majority of the Phase Two Property landcover is impermeable compact gravel and asphaltic concrete cover. Field observations documents stratigraphy as brown Silt Fill over native Silt with a trace of gravel moving from firm to loose with depth.

3.0 SCOPE OF INVESTIGATION

3.1 Overview of Site Investigation

The Phase Two ESA investigation at the Site consisted of the following components:

- Underground service locates were completed using Ontario One Call and a private locating service.
- GPR scan was conducted to verify the presence of any tanks within the suspected UST area.
- Eight boreholes were advanced at the Site via track mounted drill rig.
- Boreholes were drilled to a maximum depth of 6.71 m bgs.
- Three environmental monitoring wells were installed at the site into three of the boreholes.
- Soil samples were obtained from each borehole location on-site and submitted to Paracel Laboratories Ltd. for target contaminants of concern.
- Groundwater samples from each monitoring well were collected and submitted to AGAT Laboratories Ltd. for analysis.
- A topographic survey was completed for each borehole location.
- The Phase Two ESA was completed in accordance with the requirements of O. Reg. 153/04 as amended.

3.2 Media Investigated

Soil and groundwater media were assessed as part of this Phase Two investigation.

3.3 Deviation from Sampling and Analysis Plan

There were no deviations from NSSL's sampling and analysis plan.

3.4 Impediments

There were no physical impediments or denial of access during the Preliminary Phase Two ESA. The borehole drilling locations were blocked off ahead of time to prevent any cars from entering or parking within the proposed work area.

4.0 INVESTIGATION METHOD

4.1 General

The Phase Two ESA was carried out in accordance with the Sampling and Analysis Plan, and in accordance with NSSL's Standard Operating Procedures (SOPs). The Phase Two ESA consisted of advancing eight boreholes across the Site to a maximum depth of 6.71 m bgs. All boreholes were found to terminate in native soils. Three of the boreholes were converted to monitoring wells to a maximum depth of 6.71 m bgs.

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 investigation, underground service locates were obtained for the Site through Ontario One Call. Additionally, a private underground service locating company, Ontario Utility Locating, identified all on-site underground services including hydro, gas, water, sewer, and communications. A GPR scan was conducted on October 17th, 2023, to verify the presence of any underground storage tank (UST) as identified in the Phase One ESA conducted by NSSL.

4.3 Drilling

Eight boreholes were advanced across the Site by Davis Drilling Ltd. CME-55 track-mounted drill on October 31st, 2023. The locations of the boreholes are depicted in Figure 5.

4.4 Soil Sampling

A total of 52 soil samples were collected from boreholes BH1 to BH8 during field activities. Recovered soil samples were immediately logged for soil type, moisture, colour, texture and visual evidence of impacts. The samples were then divided into two representative portions: one portion for possible laboratory analysis and one portion for soil headspace combustive gas screening. The samples for laboratory analyses were immediately placed into laboratory supplied sample jars and stored in a cooler with ice. Samples to be used for screening were placed in a sealed bag.

Soil samples intended for analysis of VOCs and F1 fractions of PHCs were collected using a laboratory-supplied soil core sampler, placed into the vials containing methanol for preservation purposes, and sealed using Teflon lined septa lids. All soil samples were placed in clean coolers containing ice prior to and during transportation to the subcontracting laboratory (Paracel Laboratories). The samples were transported and submitted to Paracel Laboratories following Chain of Custody (COC) protocols.

4.5 Field Screening Measurements

All soil samples were screened using RKI Instruments, Eagle Potable Multi-gas detector operated in the VOC detection mode. The instrument measures combustible gases in the atmosphere. The monitor has a range of 0 ppm to 50,000 ppm and an accuracy of ± 5%. The instrument is calibrated to hexane standards for both ppm and LEL prior to each use and in accordance with the calibration procedures outlined in the instruction manual for the instrument. The instrument is calibrated or tuned up by the supplier, Pine Environmental, on an annual or as needed basis. Samples, based on depth, were bagged from each borehole with the soil vapour measurements recorded. Borehole logs are provided in Appendix A with the measured readings.

4.6 Ground Water: Monitoring Well Installation

Three environmental monitoring wells (MW1, MW2 and MW3) were installed into boreholes (BH1, BH2 and BH3) on October 31st, 2023. The monitoring wells were constructed to MECP recognized industry standards and consisted of a 2-inch diameter slotted PVC screen surrounded by a silica sand pack, attached beneath a solid 2-inch diameter PVC riser, surrounded by bentonite grout to ensure a seal between the ground surface and the water table. The wells were fitted with a flush mount metal protective casing. A Waterra manual lift pump was installed into each well to allow purging and development and subsequent groundwater sample collection. The monitoring well locations are shown in Figure 5, with field logs located in Appendix A.

4.7 Ground Water: Field Measurement of Water Quality Parameters

Groundwater monitoring wells were considered to have stabilized from installation date on November 6th, 2023. 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. The water level measuring device was cleaned after each measurement using Alconox™ soap solution wash/scrub, followed by a distilled water rinse and a methanol rinse, to prevent cross-contamination between observation wells. Well purging continued until approximately 3 to 5 total well volumes were removed, and monitoring indicated the condition in the purged well had stabilized, and no further improvement was required.

4.8 Ground Water: Sampling

The wells were purged on November 6th, 2023. Purging is completed for well development purposes and to safeguard against any potential impact from drilling operations. Purged water was contained and stored on-site for future disposal. The groundwater sampling activities were carried out using dedicated low-density polyethylene tubing and a low-flow pump. Groundwater samples were collected into laboratory-supplied containers, prepared with preservatives for the analysis being conducted. Disposable latex gloves were worn at each sample location. Once obtained, the groundwater samples were immediately placed into coolers packed with ice pending delivery to the analytical laboratory.

4.9 Analytical Testing

The soil and groundwater sample analyses were completed by Paracel Laboratories., York Road, Niagara-on-the-Lake, ON. Paracel 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.

4.10 Residue Management Procedures

Soil cuttings and purge and wash water from equipment cleaning were contained and stored on-site in soil disposal drums for future off-site disposal pending laboratory analysis.

4.11 Elevation Surveying

The elevation of the existing ground surface at each borehole location was referenced to a Site benchmark, described as the top of the catch basin located to the east of the property in the parking lot [assigned Elevation – 100 meters by Niagara Soils Solution Ltd.]. The topographic contours of the Site are found in Figure 6.

4.12 Quality Assurance and Quality Control Measures

All activities completed as part of this Preliminary Phase Two ESA were conducted as per applicable regulatory requirements.

5.0 REVIEW AND EVALUATION

5.1 Geology

The soil stratigraphy for the study site generally consisted of a thin layer of asphaltic concrete and compact granular material underlain by an upper layer of fill material – Silt, trace gravel, dry to loose between ground surface about 0.15 to 1.52 m bgs. Native silt was noted from 1.52 to 6.71 m bgs to borehole termination. This was evident in all boreholes but was most visible in BH5 and BH6. Bedrock was not encountered at termination of all the boreholes.

5.2 Ground Water: Elevations and Flow Direction

Prior to groundwater sampling activities, the depth of the groundwater within each monitoring well was measured to determine if the groundwater could be considered to have stabilized and that the wells were developed sufficiently for representative groundwater samples. Findings are reported below.

Table 3: Monitoring Wells Elevation and Screen Intervals

Monitoring Well ID	Well Elevation [TBM in metres]	Screen Interval [metres bgs]	Event 1		Event 2	
			Ground-water Level [metres bgs]	Ground-water Elevation [metres]	Ground-water Level [metres bgs]	Ground-water Elevation [metres]
BH/MW-1	100.23	1.52 – 4.57	3.20	97.03	3.14	97.09
BH/MW-2	100.18		3.20	96.98	3.25	96.93
BH/MW-3	100.13	3.05 - 6.71	3.15	96.98	3.18	96.95

BM = benchmark, m bgs = metres below ground surface

5.3 Estimated Hydraulic Gradient and Conductivity

Based on the water level measurements, groundwater was interpreted as flowing in a southwestern direction. See Figure 7 for the groundwater contour map. The average groundwater gradient was calculated as 0.004.

Table 4: Monitoring Wells Estimated Hydraulic Gradient

Monitoring Well	Water Level Difference (m)	Monitoring Well Distance (m)	Hydraulic Gradient
MW1 – MW2	0.11	13	0.008
MW3 – MW2	0.07	24	0.003
MW3 – MW1	0.04	20	0.002

The K values for the hydraulic conductivity of the soils were estimated based on the results obtained from grain size analyses of selected soil sample and interpreted recovery rates per soil type.

Table 5: Monitoring Wells Conductivity

Monitoring Well	Screen Depth (mbgs)	Soil Type	Conductivity (cm/s)
MW1	1.52 – 4.57	Silt	1 x (10^{-5} - 10^{-7})

5.4 Soil Texture

Grain size analysis was performed by NTIL as part of the Phase Two ESA and indicated that 4.1 % (BH4-5), 76.0 % (BH5-1) and 11.6 % (BH8-4) of the soil matrix passed the No. 200 sieve resulting in a fine medium and coarse soil texture. Coarse soil texture was utilized in the Phase Two assessment. Coarse-grained soil is classified as soil that contains more than 50 percent by mass of particles that are 75 micrometres or smaller in mean diameter. NTIL's reported results are located in Appendix C.

Table 6: Soil Texture Results

Sample ID	Sample Depth (m bgs)	Soil Type	% Passing
BH4-5	3.05 – 3.66	Fine/Medium	4.1%
BH5-1	0.15 – 0.61	Coarse	76.0%
BH8-4	2.29 – 2.90	Fine/Medium	11.6%

5.5 Soil: Field Screening

Head space vapour screening was conducted for all retrieved soil samples using a combustible gas detector [RKI Eagle] in methane elimination mode, calibrated with hexane and having a minimum detection level of ± 5%. Soil vapour measurements were recorded to be 0 ppm to a maximum value of 25 ppm at BH's 1 and 2.

5.6 Soil Quality

Soil sampling was conducted on October 31st, 2023. Ten representative soil samples were obtained from within the fill and native material at the site and submitted to Paracel Laboratories for analysis of Metals by Inductively Coupled Mass Spectrometry (ICP-MS), Hydride forming Metals Arsenic (As), Antimony (Sb), Selenium (Se), Petroleum Hydrocarbons (PHCs) F1-F4, Benzene, Toluene, Ethylbenzene and Xylene (BTEX), Volatile Organic Compounds (VOCs), Polycyclic Aromatic Hydrocarbons (PAHs) and Inorganics: Sodium Adsorption Ratio (SAR)/Electrical Conductivity (EC), Free Cyanide (CN-), Chromium VI (Cr VI), Hot Water Boron Soluble (HWB-S), Mercury (Hg). A summary of the soil results is presented below and depicted on Figure 8, with full laboratory reports provided in Appendix B.

pH

The pH of all sampled borehole soils were found to be between 7.29 and 7.42. These pH values are within the limits for use, above 5 and below 9, for the generic criteria in O. Reg. 153/04, as amended.

Metals and Inorganics, PHCs, BTEX, PAHs PAHs

The soil test results met applicable O. Reg 153/04, Table 3: Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition for Residential/Parkland/Institutional property use, for coarse textured soils.

VOCs

The soil test results for VOCs were non-detect.

5.7 Ground Water Quality

Groundwater samples from the three monitoring wells (BH/MW1 to BH/MW3) were submitted to AGAT Laboratories Ltd. for analysis of dissolved Metals, Hydride Forming Metals- Arsenic (As), Antimony (Sb), Selenium (Se), PHCs F1-F4, BTEX, VOCs, PAHs and Inorganics: EC, CN-, Cr VI, Sodium (Na), Hg, Chlorine (Cl). The sample results for BH-1/MW-1 and BH-3/MW-3 were returned meeting applicable Table 3 standards for all target contaminant groups.

The groundwater sample from BH-2/MW-2 was returned with a PHC F2 results of 378 ug/g versus applicable 100 ug/g limit. Comments from the lab indicated the result may be attributed to sediment interference in the sample. To verify the groundwater condition within the well accurately, NSSL returned to the site, re-purged the well and allowed for the groundwater to recover prior to re-sampling. Subsequent laboratory results for BH-2/MW-2 were non-detect for PHCs (F1-F4) and VOCs and met Table 3 criteria for Metals. Complete groundwater laboratory test results are provided in Appendix D.

5.5 Quality Assurance and Quality Control Results

All soil and groundwater samples submitted as part of this Phase Two ESA investigation were handled in accordance with Paracel and AGAT's laboratory analytical protocols regarding holding time, preservation method, storage requirements, and container type. A Certificate of Analysis has been received for each sample submitted for analysis, and all Certificates of Analysis are appended to this report. The quality of the field data collected during this Phase Two ESA is considered to be sufficient to meet the overall objective of this is study.

6.0 CONCLUSIONS

NSSL was retained by Gatta Homes Inc. c/o Mr. Cyrus Gatta to conduct a Phase Two Environmental Site Assessment (ESA) of the occupied motel located at 7701 Lundy's Lane, Niagara Falls, Ontario. The primary findings of this Phase Two ESA are summarized as follows:

- Eight boreholes were advanced at the Site via track mounted drill rig.
- Boreholes were drilled to a maximum depth of 6.71 m bgs.
- Three environmental monitoring wells were installed at the site into three of the boreholes.
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- All tested soil and groundwater results met applicable Table 3 Residential/Parkland/Institutional criteria for all target contaminants.

Therefore, based upon the Phase Two ESA study, current soil and groundwater conditions at the site satisfy applicable Table 3 Residential Site Condition standards. NSSL recommends removal of the Underground Storage Tank followed by verification soil sampling of the tank nest. Once confirmatory sampling is complete the documents for filing a Record of Site Condition with the Ministry of the Environment, Conservation and Parks can be prepared.

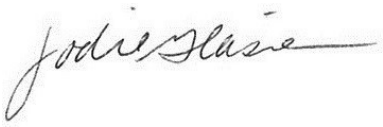
6.1 Limitations and Use of the Report

Niagara Soils Solutions Ltd. [NSSL] prepared this Report for Gatta Homes Inc. c/o Mr. Cyrus Gatta and is intended to provide a Phase Two Environmental Site Assessment of 7701 Lundy's Lane, 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
President & Senior Project Manager

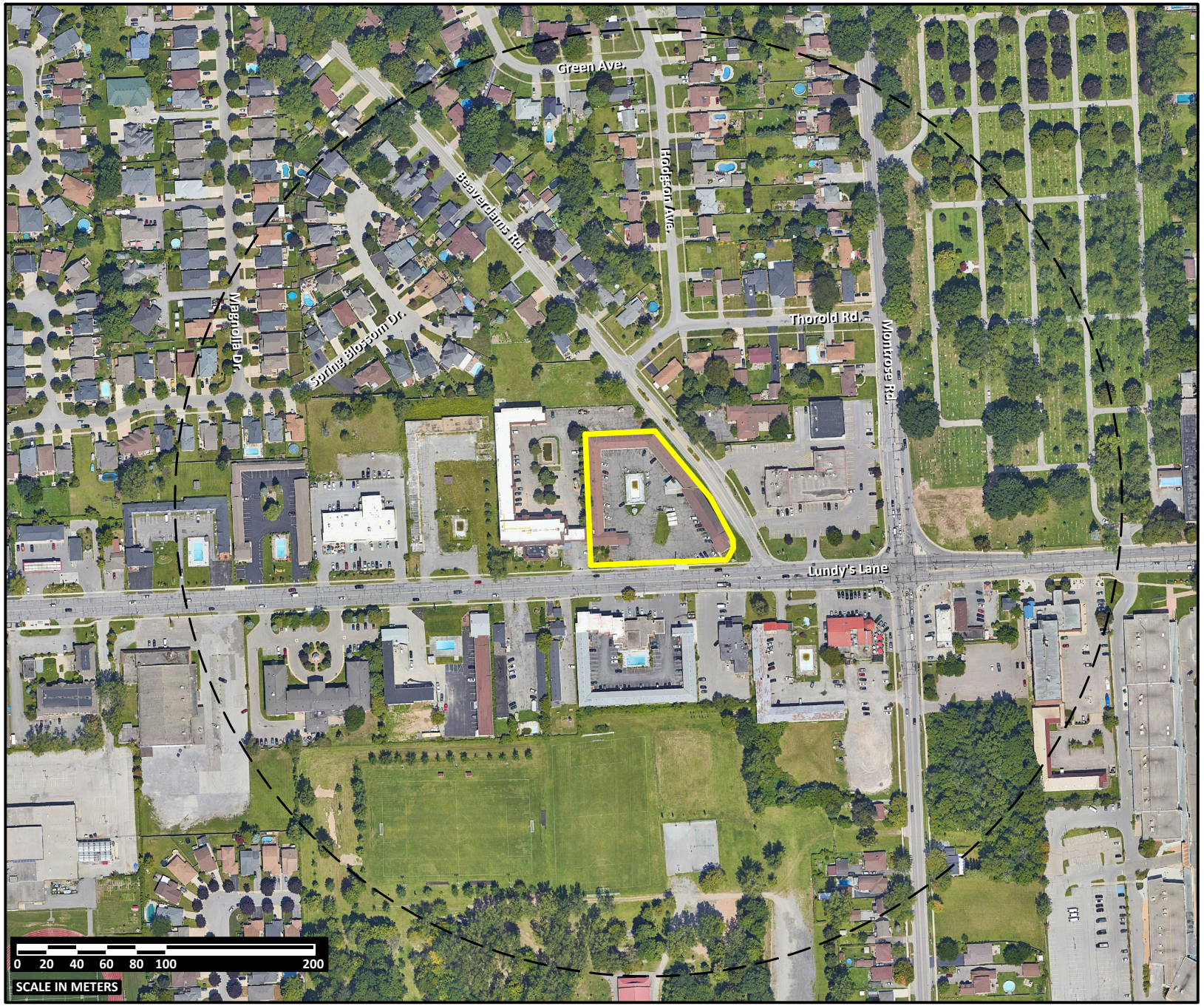
Philip Adene, P. Geo, QP_{ESA}
Professional Geoscientist

7.0 REFERENCES

The following resources were utilized as references:

- Ontario Division of Mines' "Paleozoic Geology of Southern Ontario".
- Ministry of Natural Resources' Quaternary Geology
- 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



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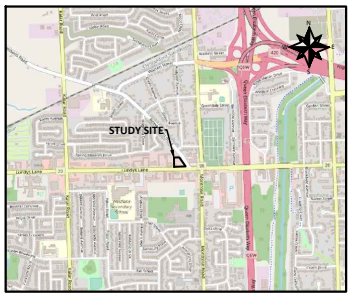


LEGEND:

Site Layout & Features:

Phase Two Property Boundary

Phase Two Study Area

NOTES:

1. For Illustration Purposes only, All Locations are Approximate.

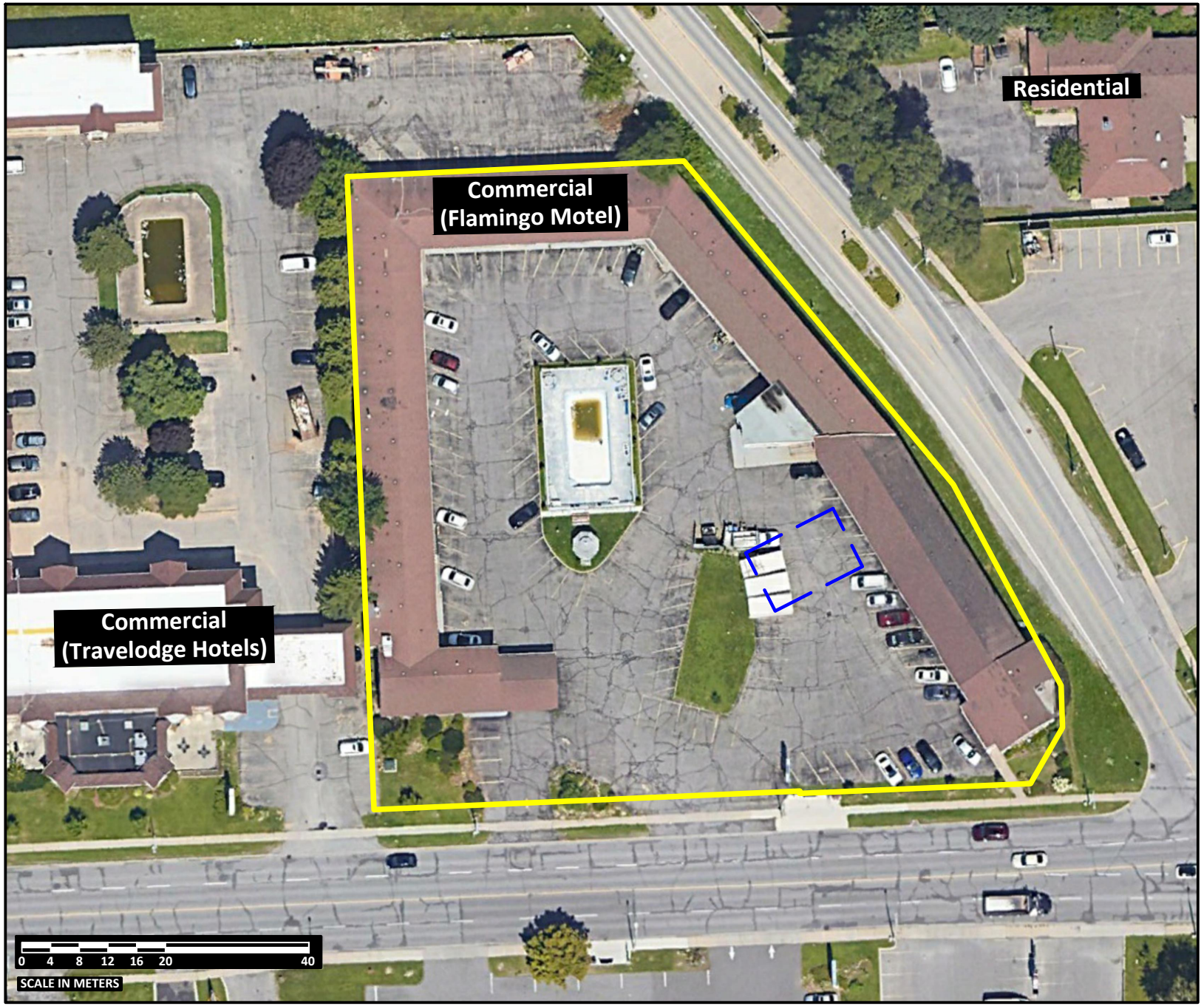
REFERENCES:

KEYMAP REFERENCE:
Imagery Provided by © OpenStreetMap
https://www.openstreetmap.org/

BASEMAP REFERENCE:
Imagery Provided by Google Earth, (04/2022)
https://earth.google.com/

N W E S

DATUM: WGS 84	**PROJECT:** PHASE TWO ENVIRONMENTAL SITE ASSESSMENT	**PROJECT NO:** NS23108-02	**NIAGARA SOILS SOLUTIONS LTD.** 3300 Merrittville Hwy, Unit 4 Thorold, Ontario, L2V 4Y6	**DR. BY:** ZAH	**TITLE:** SITE LOCATION PLAN
PROJECTION: UTM 17T		**DATE:** Nov-2023		**CHK. BY:** JT	
SCALE: AS SHOWN	**ADDRESS:** 7701 Lundy's Lane, Niagara Falls, ON, L2H 1H3		**CLIENT:** Gatta Homes	**APP. BY:** JG	**CAD:** Projects/-02 PHASE TWO ESA's/NS23108-02/Figures/AUTOCAD/NS23108-02.DWG



LEGEND:

Site Layout & Features:

Phase Two Property Boundary

Historic Building

NOTES:

1. For Illustration Purposes only, All Locations are Approximate.

REFERENCES:

BASEMAP REFERENCE:
Imagery Provided by Google Earth, (04/2022)
https://earth.google.com/

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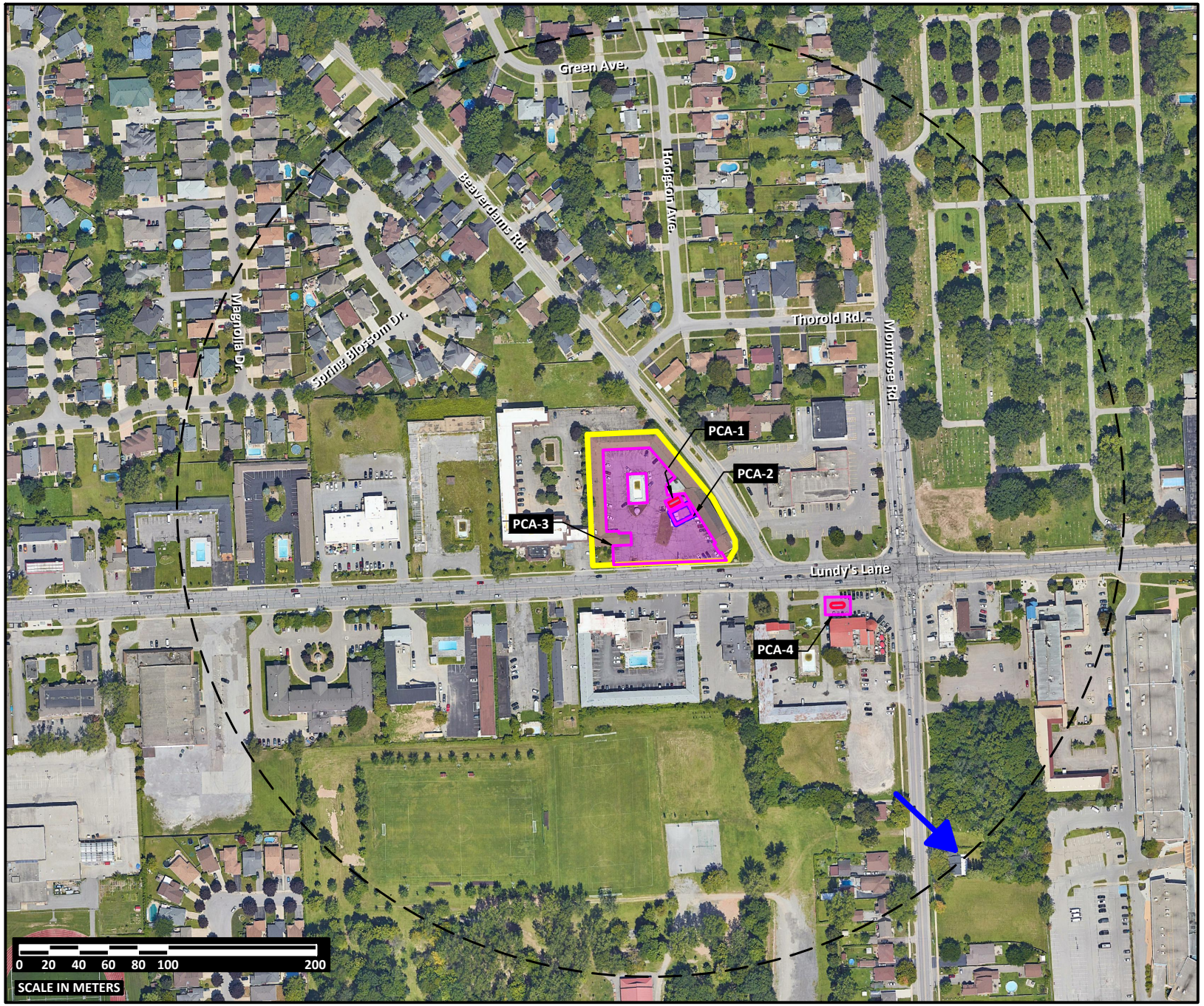
DATUM: WGS 84	**PROJECT:** PHASE TWO ENVIRONMENTAL SITE ASSESSMENT	**PROJECT NO:** NS23108-02	**NIAGARA SOILS SOLUTIONS LTD.** 3300 Merrittville Hwy, Unit 4 Thorold, Ontario, L2V 4Y6	**DR. BY:** ZAH	**TITLE:** SITE LAYOUT & FEATURES
PROJECTION: UTM 17T		**DATE:** Nov-2023		**CHK. BY:** JT	
SCALE: AS SHOWN	**ADDRESS:** 7701 Lundy's Lane, Niagara Falls, ON, L2H 1H3		**CLIENT:** Gatta Homes	**APP. BY:** JG	**CAD:** Projects/-02 PHASE TWO ESA's/NS23108-02/Figures/AUTOCAD/NS23108-02.DWG



LEGEND:

Site Layout & Features:

- Phase Two Property Boundary
- Historic Building

Potentially Contaminating Activities [PCA]:

- PCA Area
- Underground Storage Tanks [UST]

Ground-water:

- Inferred Groud-Water Flow Direction

NOTES:

1. For Illustration Purposes only, All Locations are Approximate.

PCA TABLE:

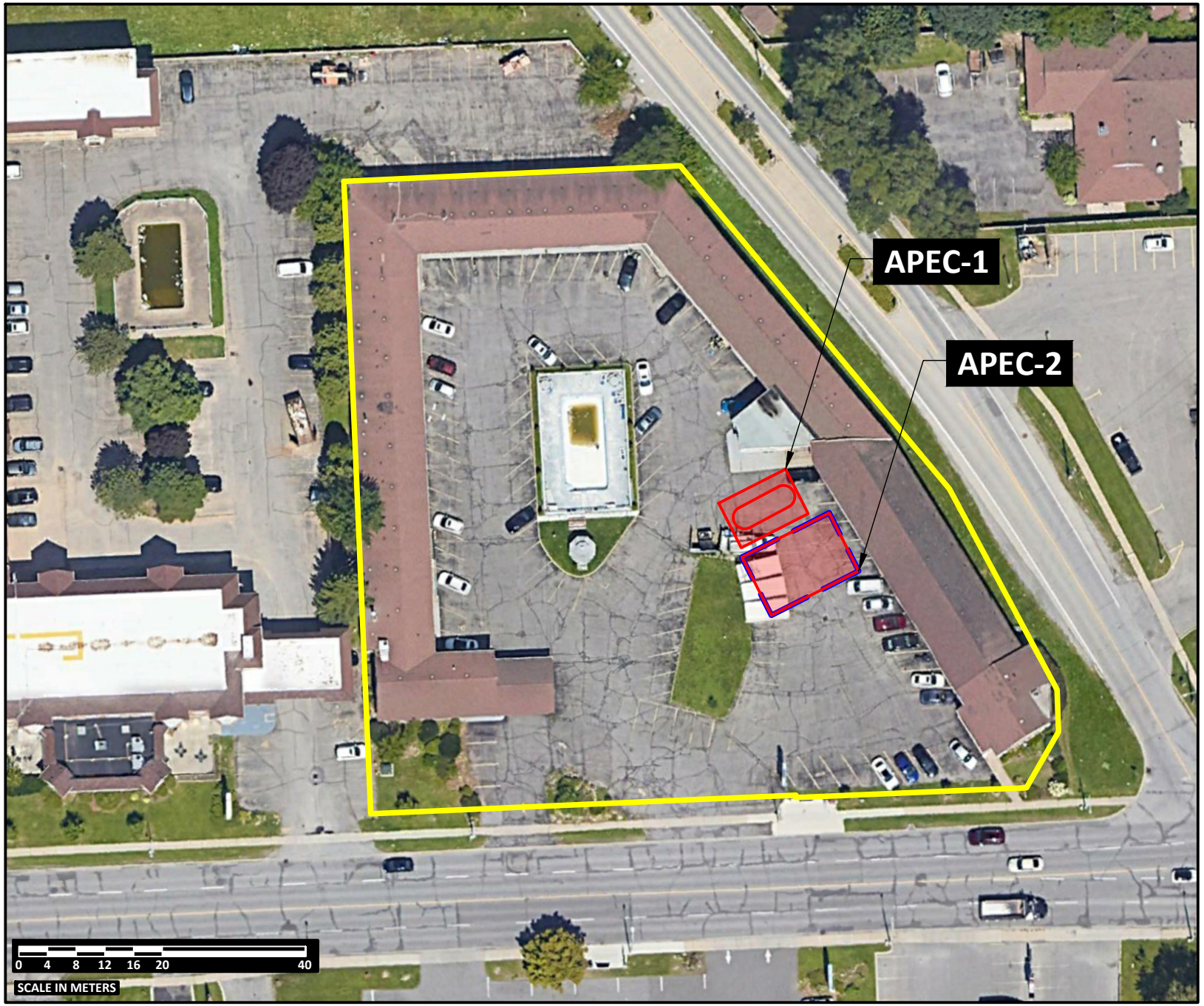
NO.	Act. ID	Address	Description
1.	#28	7701 Lundy's Lane	Gasoline and Associated Products Storage in Fixed Tanks.
2.	#30	7701 Lundy's Lane	Importation of Fill Material of Unknown Quality.
3.	#Oth.	7701 Lundy's Lane	De-Icing Activities.
4.	#28	7600 Lundy's Lane	Gasoline and Associated Products Storage in Fixed Tanks.

REFERENCES:

BASEMAP REFERENCE:
Imagery Provided by Google Earth, (04/2022)
https://earth.google.com/

N W E S

DATUM: WGS 84	**PROJECT:** PHASE TWO ENVIRONMENTAL SITE ASSESSMENT	**PROJECT NO:** NS23108-02	**NIAGARA SOILS SOLUTIONS LTD.** 3300 Merrittville Hwy, Unit 4 Thorold, Ontario, L2V 4Y6	**DR. BY:** ZAH	**TITLE:** POTENTIALLY CONTAMINATING ACTIVITIES
PROJECTION: UTM 17T		**DATE:** Nov-2023		**CHK. BY:** JT	
SCALE: AS SHOWN	**ADDRESS:** 7701 Lundy's Lane, Niagara Falls, ON, L2H 1H3		**CLIENT:** Gatta Homes	**APP. BY:** JG	**CAD:** Projects/-02 PHASE TWO ESA's/NS23108-02/Figures/AUTOCAD/NS23108-02.DWG



LEGEND:

Site Layout & Features:

- Phase Two Property Boundary
- Historic Building

Areas of Potentially Environmental Concern [APEC]:

- APEC Area
- Underground Storage Tank [UST]

NOTES:

1. For Illustration Purposes only, All Locations are Approximate.

APEC TABLE:

NO.	Act. ID	Address	Description
1.	#28	7701 Lundy's Lane	Gasoline and Associated Products Storage in Fixed Tanks.
2.	#30	7701 Lundy's Lane	Importation of Fill Material of Unknown Quality.

REFERENCES:

BASEMAP REFERENCE:
Imagery Provided by Google Earth, (04/2022)
https://earth.google.com/

N W E S

DATUM: WGS 84	**PROJECT:** PHASE TWO ENVIRONMENTAL SITE ASSESSMENT	**PROJECT NO:** NS23108-02	**NIAGARA SOILS SOLUTIONS LTD.** 3300 Merrittville Hwy, Unit 4 Thorold, Ontario, L2V 4Y6	**DR. BY:** ZAH	**TITLE:** AREAS OF POTENTIALLY ENVIRONMENTAL CONCERN
PROJECTION: UTM 17T		**DATE:** Nov-2023		**CHK. BY:** JT	
SCALE: AS SHOWN	**ADDRESS:** 7701 Lundy's Lane, Niagara Falls, ON, L2H 1H3		**CLIENT:** Gatta Homes	**APP. BY:** JG	**CAD:** Projects/-02 PHASE TWO ESA's/NS23108-02/Figures/AUTOCAD/NS23108-02.DWG

LEGEND:

Site Layout & Features:

Phase Two Property Boundary

Areas of Potentially Environmental Concern [APEC]:

APEC Area

Sampling:

BH/MW-XX — Borehole/Monitoring Well Location

BH-XX — Borehole Location

NOTES:

1. For Illustration Purposes only, All Locations are Approximate.

BOREHOLES TABLE:

Borehole ID	Borehole Depth (m)	Sample Range (m bgs)
BH-1	6.71	BH 1-5 [3.05 - 3.65] BH 1-7 [6.10 - 6.70]
BH-2	6.71	BH 2-3 [1.55 - 2.15]
BH-3	6.71	BH 3-3 [1.55 - 2.15] BH 3-6 [4.60 - 5.20]
BH-4	6.71	BH 4-4 [2.30 - 2.90]
BH-5	3.66	BH 5-2 [0.75 - 1.35]
BH-6	3.66	BH 6-1 [0.00 - 0.60]
BH-7	6.71	BH 7-5 [3.05 - 3.65]
BH-8	6.71	BH 8-3 [1.55 - 2.15]

MONITORING WELLS TABLE:

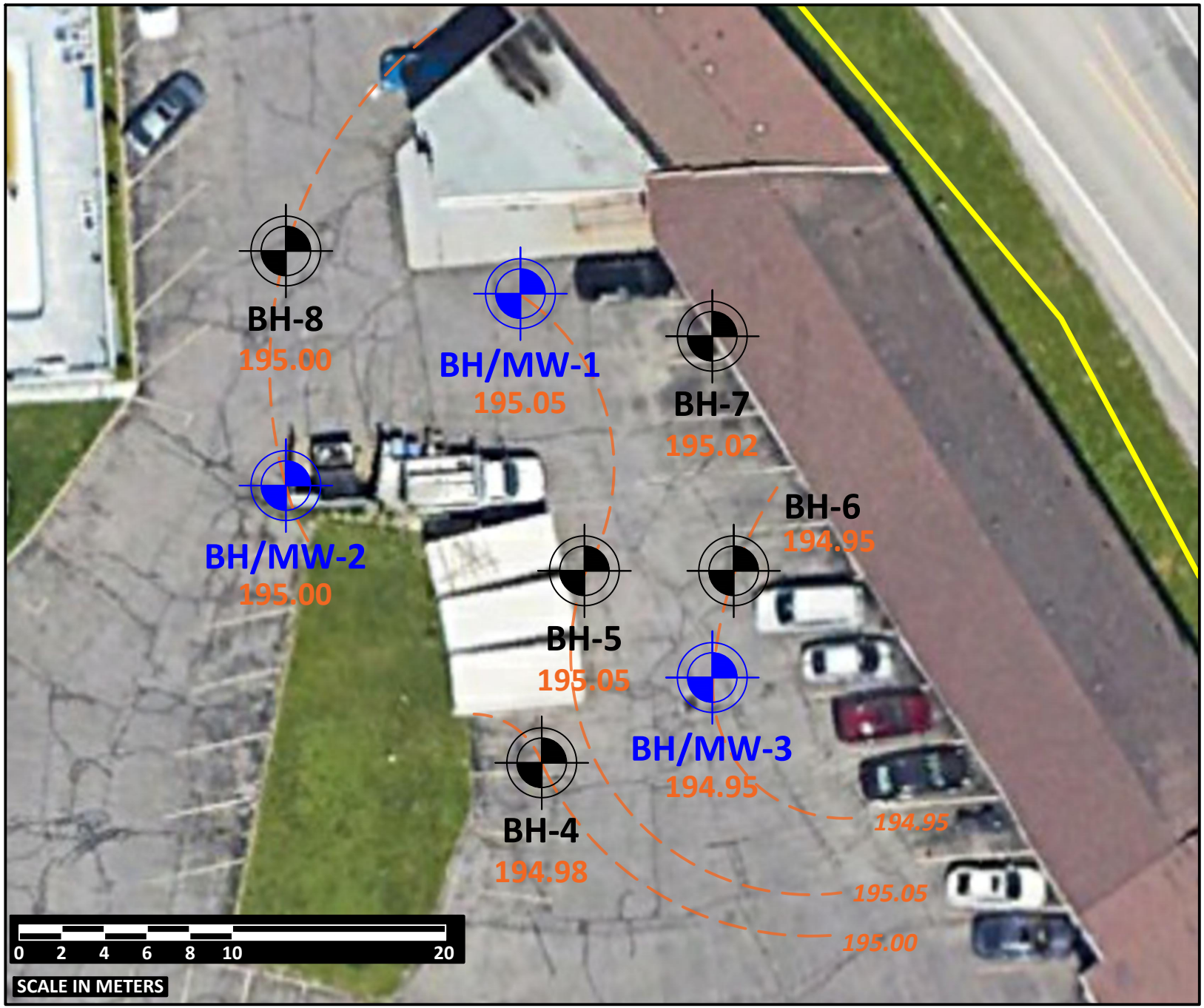
Monitoring Well ID	Monitoring Well Depth (m)	Screen Range (m bgs)
MW-1	6.71	1.52 - 4.57
MW-2	6.71	1.52 - 4.57
MW-3	6.71	3.05 - 6.10

REFERENCES:

BASEMAP REFERENCE:
Imagery Provided by Google Earth, (04/2022)
https://earth.google.com/

N W E S

DATUM: WGS 84	**PROJECT:** PHASE TWO ENVIRONMENTAL SITE ASSESSMENT	**PROJECT NO:** NS23108-02	**NIAGARA SOILS SOLUTIONS LTD.** 3300 Merrittville Hwy, Unit 4 Thorold, Ontario, L2V 4Y6	**DR. BY:** ZAH	**TITLE:** BOREHOLES & MONITORING WELLS LOCATIONS
PROJECTION: UTM 17T		**DATE:** Nov-2023		**CHK. BY:** JT	
SCALE: AS SHOWN	**ADDRESS:** 7701 Lundy's Lane, Niagara Falls, ON, L2H 1H3		**CLIENT:** Gatta Homes	**APP. BY:** JG	**CAD:** Projects/-02 PHASE TWO ESA's/NS23108-02/Figures/AUTOCAD/NS23108-02.DWG



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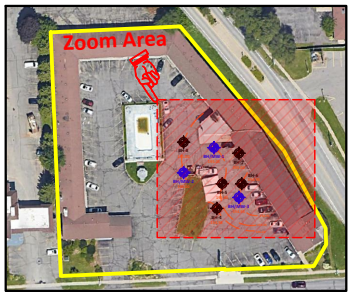


LEGEND:

Site Layout & Features:

Phase Two Property Boundary

Sampling:

Borehole/Monitoring Well Location (BH/MW-XX)

Borehole Location (BH-XX)

Topography:

Elevation Contour (XX.X m)

NOTES:

1. For Illustration Purposes only, All Locations are Approximate.

ELEVATION TABLE:

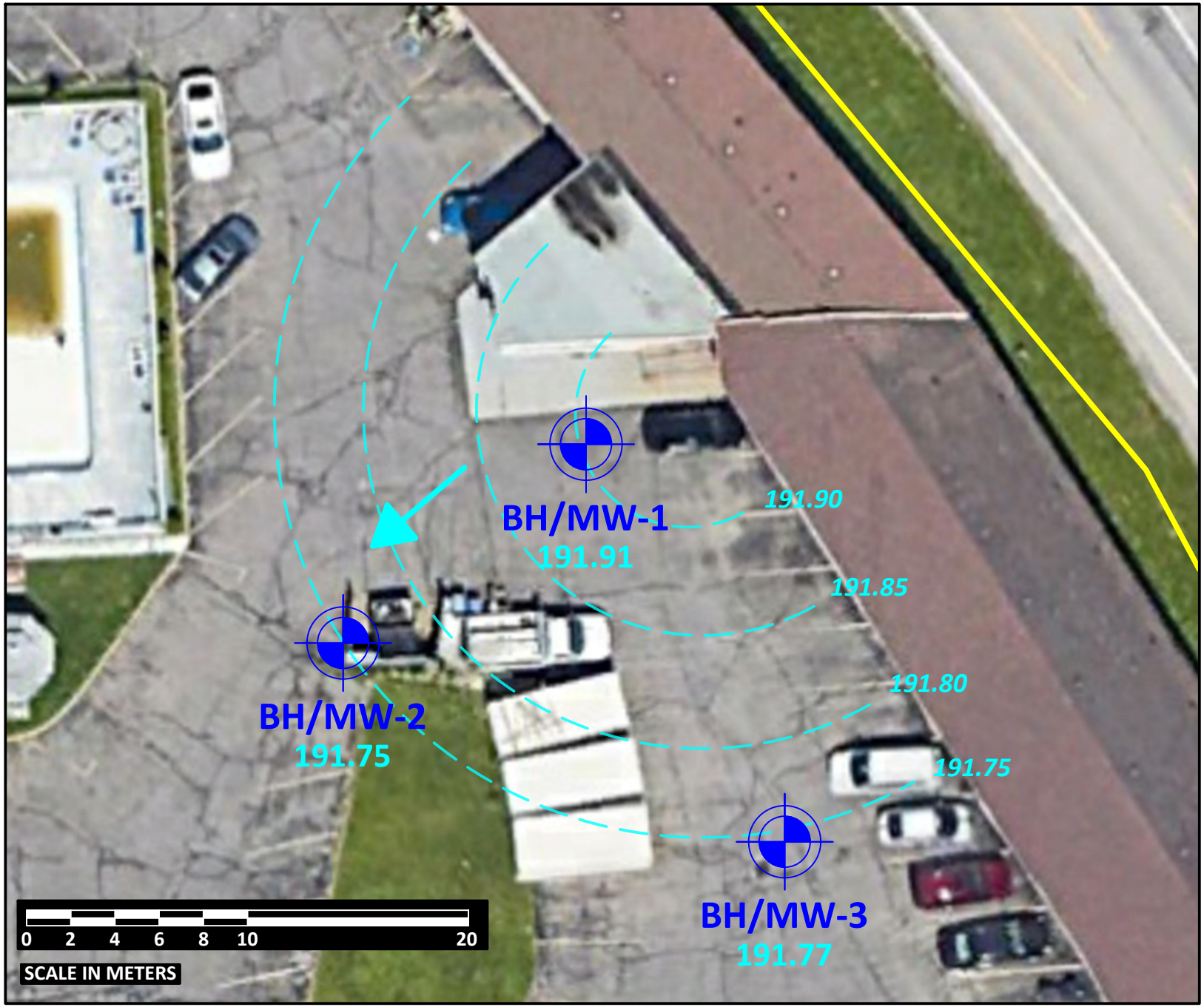
Borehole ID	Benchmark Elev. (m)	Geodetic Elev. (m)
BH-1	100.23	195.05
BH-2	100.18	195.00
BH-3	100.13	194.95
BH-4	100.15	194.98
BH-5	100.23	195.05
BH-6	100.13	194.95
BH-7	100.20	195.02
BH-8	100.18	195.00

REFERENCES:

BASEMAP REFERENCE:
Imagery Provided by Google Earth, (04/2022)
https://earth.google.com/

N W E S

DATUM: WGS 84	**PROJECT:** PHASE TWO ENVIRONMENTAL SITE ASSESSMENT	**PROJECT NO:** NS23108-02	**NIAGARA SOILS SOLUTIONS LTD.** 3300 Merrittville Hwy, Unit 4 Thorold, Ontario, L2V 4Y6	**DR. BY:** ZAH	**TITLE:** TOPOGRAPHIC CONTOUR
PROJECTION: UTM 17T		**DATE:** Nov-2023		**CHK. BY:** JT	
SCALE: AS SHOWN	**ADDRESS:** 7701 Lundy's Lane, Niagara Falls, ON, L2H 1H3		**CLIENT:** Gatta Homes	**APP. BY:** JG	**CAD:** Projects/-02 PHASE TWO ESA's/NS23108-02/Figures/AUTOCAD/NS23108-02.DWG



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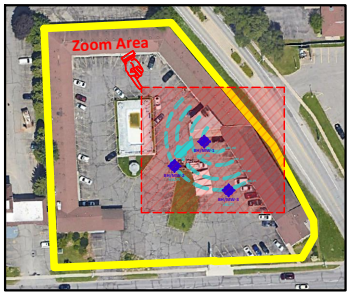


LEGEND:

Site Layout & Features:

Phase Two Property Boundary

Sampling:

MW-XX — Monitoring Well Location

Ground-Water:

XX.XX m — Ground-Water Elevation Contour

Inferred Groud-Water Flow Direction

NOTES:

1. For Illustration Purposes only, All Locations are Approximate.

GW. ELEVATION TABLE:

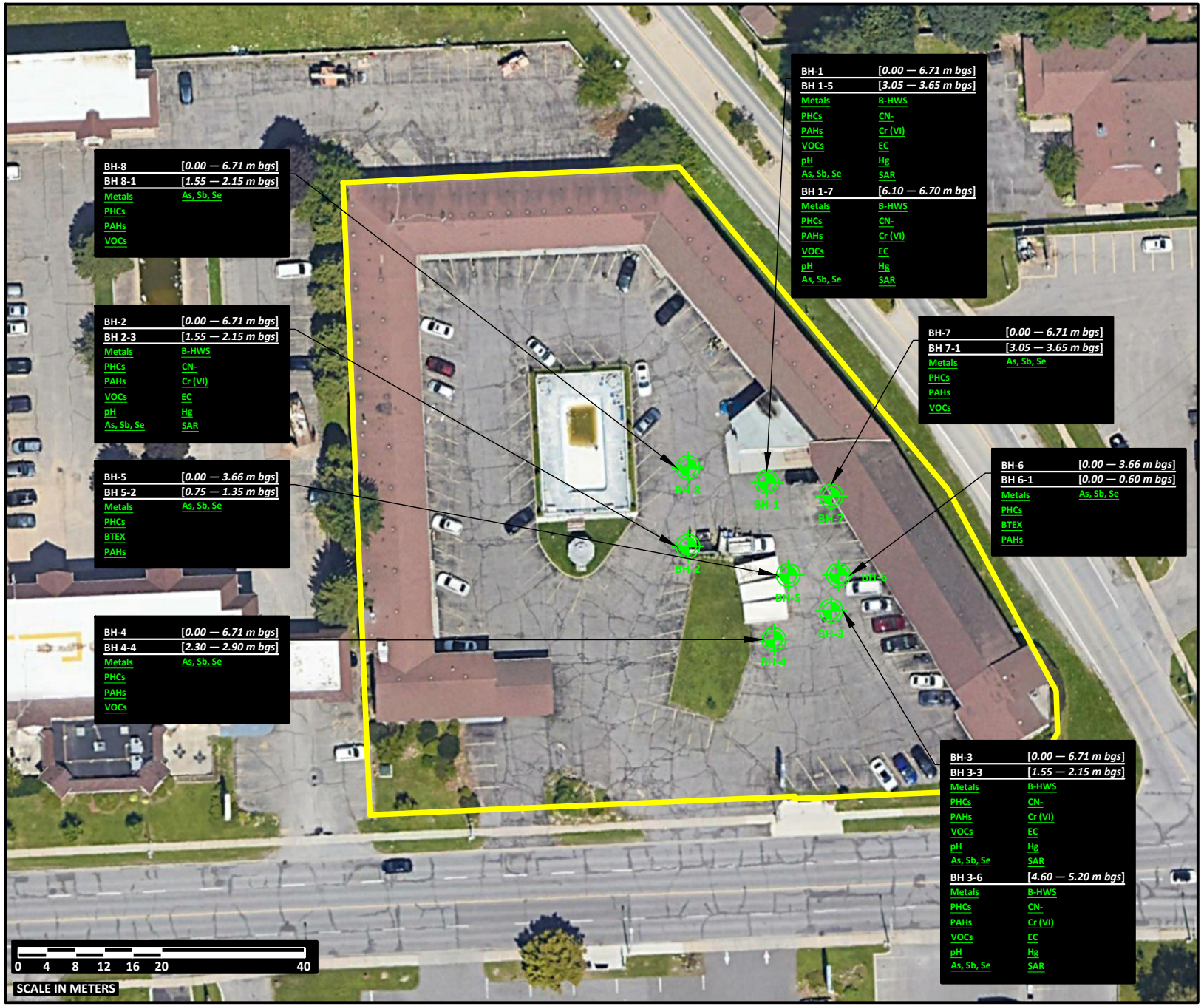
Monitoring Well ID	GW Depth. (m bgs)	GW Geodetic Elev. (m)
MW-1	3.14	191.91
MW-2	3.25	191.77
MW-3	3.18	191.75

REFERENCES:

BASEMAP REFERENCE:
Imagery Provided by Google Earth, (04/2022)
https://earth.google.com/

N W E S

DATUM: WGS 84	**PROJECT:** PHASE TWO ENVIRONMENTAL SITE ASSESSMENT	**PROJECT NO:** NS23108-02	**NIAGARA SOILS SOLUTIONS LTD.** 3300 Merrittville Hwy, Unit 4 Thorold, Ontario, L2V 4Y6	**DR. BY:** ZAH	**TITLE:** GROUND-WATER CONTOUR
PROJECTION: UTM 17T		**DATE:** Nov-2023		**CHK. BY:** JT	
SCALE: AS SHOWN	**ADDRESS:** 7701 Lundy's Lane, Niagara Falls, ON, L2H 1H3		**CLIENT:** Gatta Homes	**APP. BY:** JG	**CAD:** Projects/-02 PHASE TWO ESA's/NS23108-02/Figures/AUTOCAD/NS23108-02.DWG



LEGEND:

Site Layout & Features:

Phase Two Property Boundary

Sampling:

BH-XX — Borehole Location

Results:

Parameter — Results Meets Criteria

Parameter — Results Exceed Criteria

NOTES:

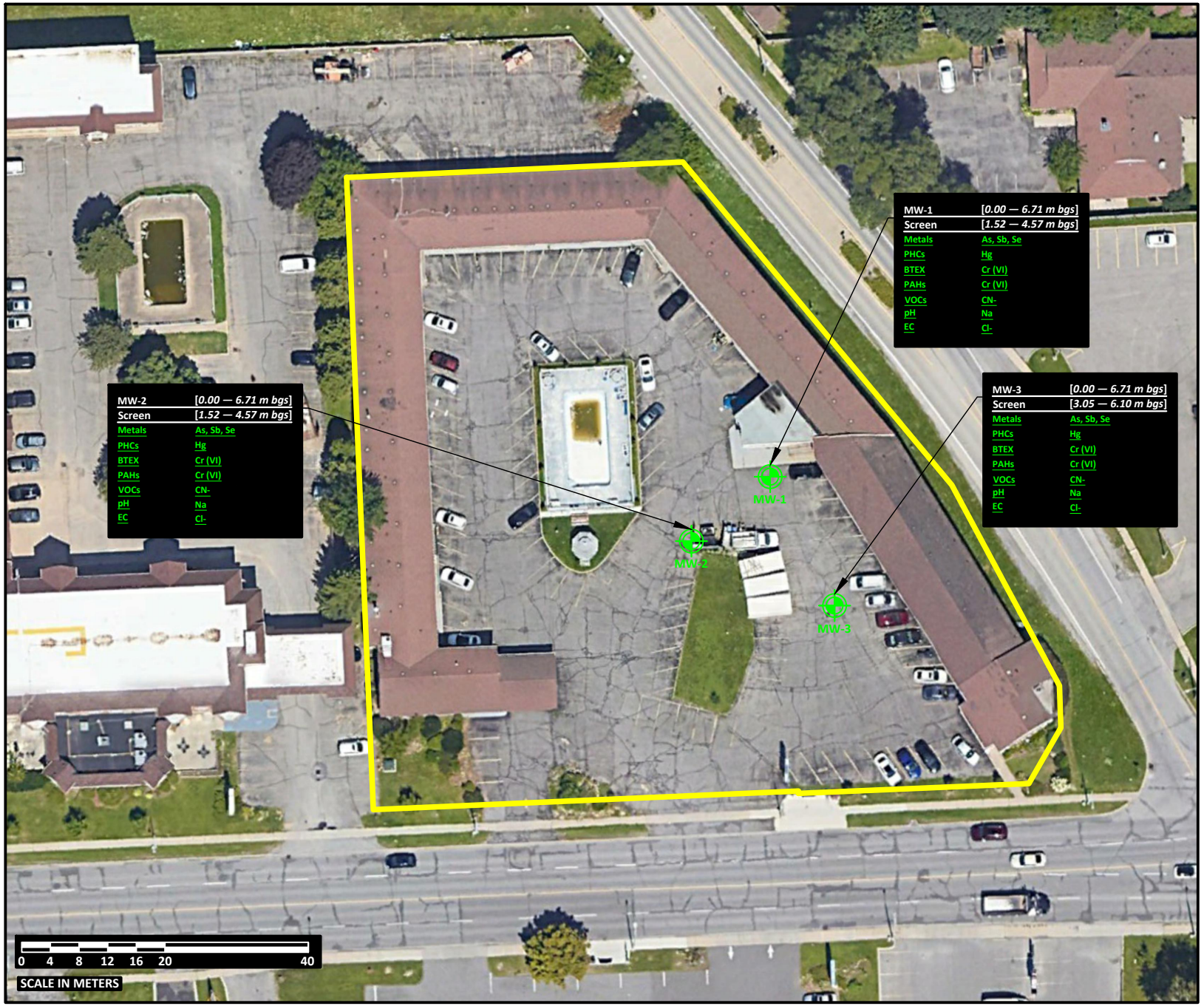
1. For Illustration Purposes only, All Locations are Approximate.
2. Results are compared to **O. Reg. 153/04 - Table 3: "***Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition for Residential/Parkland/Institutional Property Use***".**

REFERENCES:

BASEMAP REFERENCE:
Imagery Provided by Google Earth, (04/2022)
https://earth.google.com/

N W E S

DATUM: WGS 84	**PROJECT:** PHASE TWO ENVIRONMENTAL SITE ASSESSMENT	**PROJECT NO:** NS23108-02	**NIAGARA SOILS SOLUTIONS LTD.** 3300 Merrittville Hwy, Unit 4 Thorold, Ontario, L2V 4Y6	**DR. BY:** ZAH	**TITLE:** SOIL TEST RESULTS
PROJECTION: UTM 17T		**DATE:** Nov-2023		**CHK. BY:** JT	
SCALE: AS SHOWN	**ADDRESS:** 7701 Lundy's Lane, Niagara Falls, ON, L2H 1H3	**CLIENT:** Gatta Homes		**APP. BY:** JG	**CAD:** Projects/-02 PHASE TWO ESA's/NS23108-02/Figures/AUTOCAD/NS23108-02.DWG



LEGEND:

Site Layout & Features:

Phase Two Property Boundary

Sampling:

MW-XX — Monitoring Well Location

Results:

Parameter — Results Meets Criteria

Parameter — Results Exceed Criteria

NOTES:

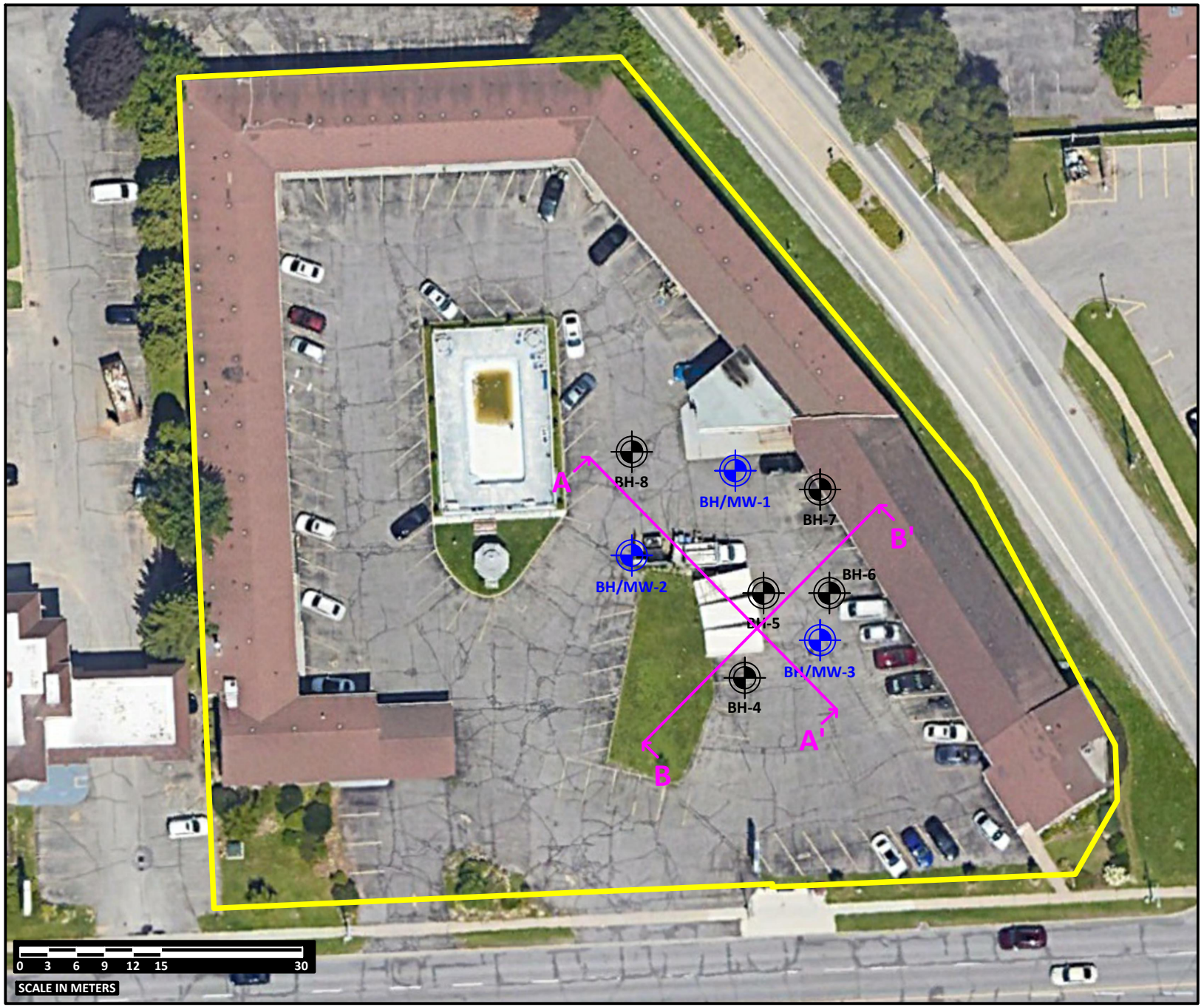
1. For Illustration Purposes only, All Locations are Approximate.
2. Results are compared to **O. Reg. 153/04 - Table 3:** "*Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition for Residential/Parkland/Institutional Property Use*".

REFERENCES:

BASEMAP REFERENCE:
Imagery Provided by Google Earth, (04/2022)
https://earth.google.com/

N W E S

DATUM: WGS 84	**PROJECT:** PHASE TWO ENVIRONMENTAL SITE ASSESSMENT	**PROJECT NO:** NS23108-02	**NIAGARA SOILS SOLUTIONS LTD.** 3300 Merrittville Hwy, Unit 4 Thorold, Ontario, L2V 4Y6	**DR. BY:** ZAH	**TITLE:** GROUND-WATER TEST RESULTS
PROJECTION: UTM 17T		**DATE:** Nov-2023		**CHK. BY:** JT	
SCALE: AS SHOWN	**ADDRESS:** 7701 Lundy's Lane, Niagara Falls, ON, L2H 1H3		**CLIENT:** Gatta Homes	**APP. BY:** JG	**CAD:** Projects/-02 PHASE TWO ESA's/NS23108-02/Figures/AUTOCAD/NS23108-02.DWG



LEGEND:

Site Layout & Features:

Phase Two Property Boundary

Sampling:

BH/MW-XX — Borehole/Monitoring Well Location

BH-XX — Borehole Location

Cross Sections:

Cross Section

NOTES:

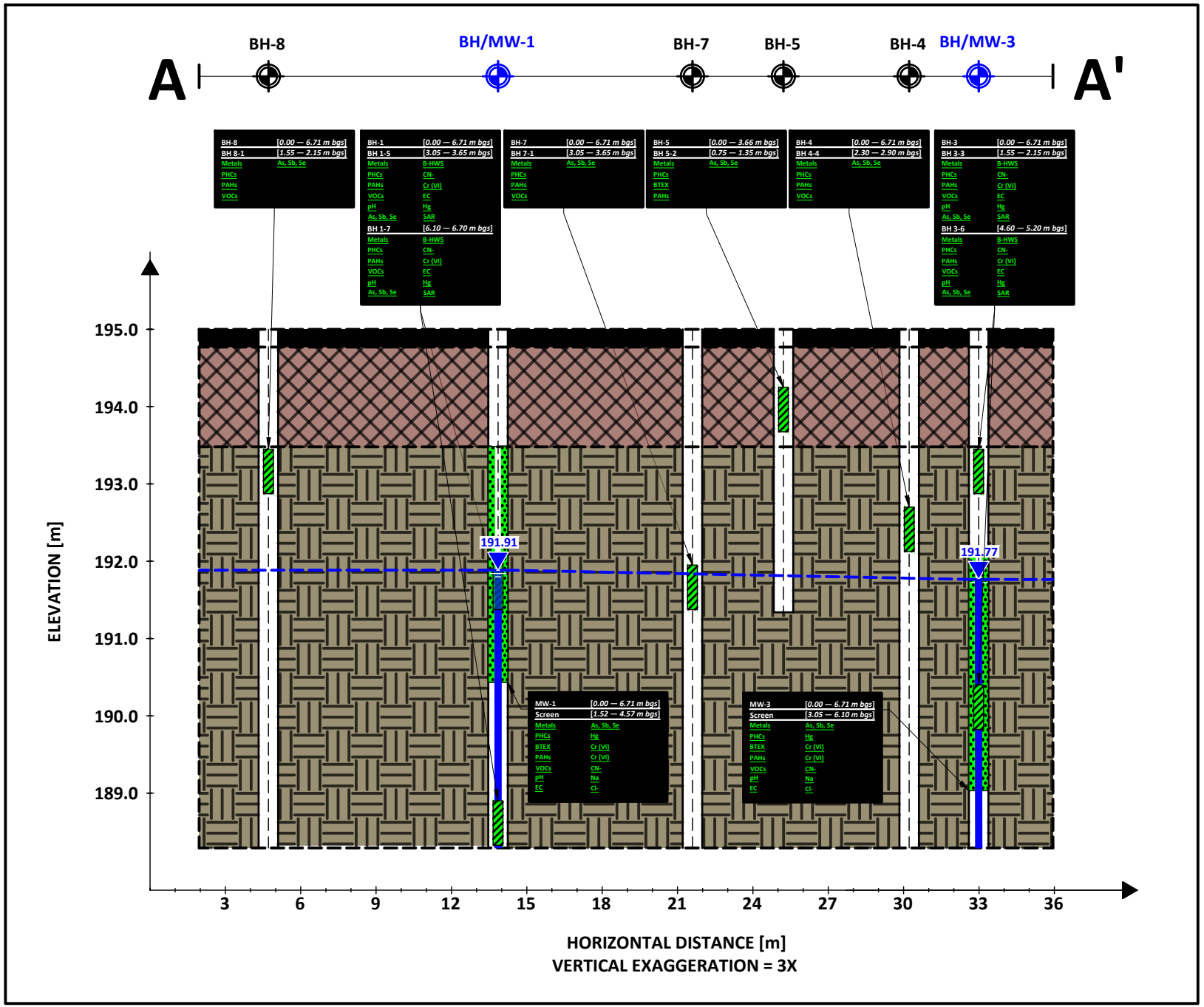
1. For Illustration Purposes only, All Locations are Approximate.

REFERENCES:

BASEMAP REFERENCE:
Imagery Provided by Google Earth, (04/2022)
https://earth.google.com/

N W E S

DATUM: WGS 84	**PROJECT:** PHASE TWO ENVIRONMENTAL SITE ASSESSMENT	**PROJECT NO:** NS23108-02	**NIAGARA SOILS SOLUTIONS LTD.** 3300 Merrittville Hwy, Unit 4 Thorold, Ontario, L2V 4Y6	**DR. BY:** ZAH	**TITLE:** CROSS SECTIONS: A-A' & B-B' PLAN VIEW
PROJECTION: UTM 17T		**DATE:** Nov-2023		**CHK. BY:** JT	
SCALE: AS SHOWN	**ADDRESS:** 7701 Lundy's Lane, Niagara Falls, ON, L2H 1H3		**CLIENT:** Gatta Homes	**APP. BY:** JG	**CAD:** Projects/-02 PHASE TWO ESA's/NS23108-02/Figures/AUTOCAD/NS23108-02.DWG



LEGEND:

Sampling:

- Borehole
- Borehole/Monitoring Well
- Ground-Water Level
- Soil Sample Location
- Screen Location
- Results Meet Criteria
- Results Exceed Criteria

Stratigraphy:

- Asphaltic Concrete
- Brown Silt Fill
- Brown Native Silt

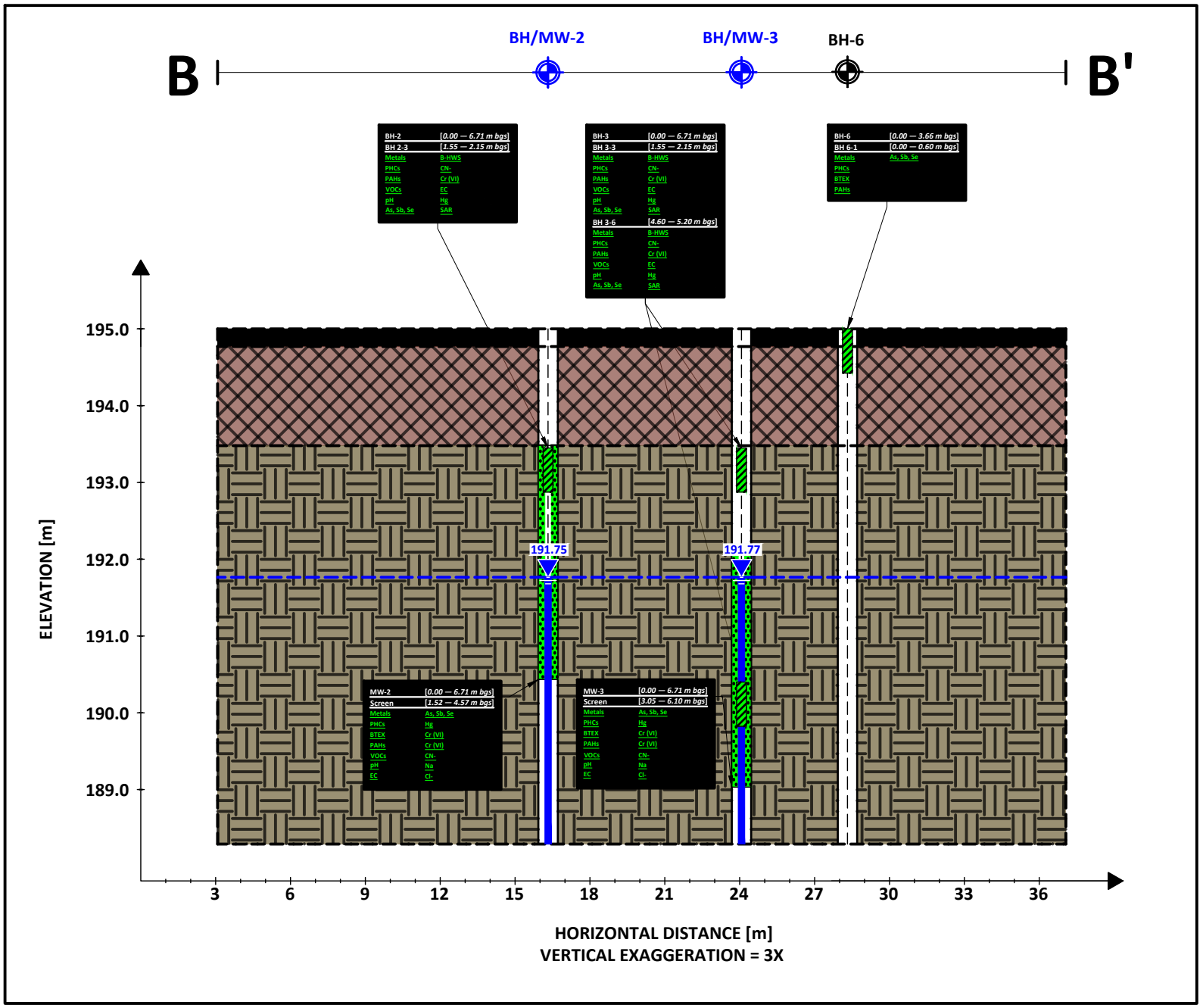
NOTES:

1. For Illustration Purposes only, All Locations are Approximate.
2. Results are compared to **O. Reg. 153/04 - Table 3: "***Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition Soil - Coarse Textured Soils***".**

REFERENCES:

BASEMAP REFERENCE:
Imagery Provided by Google Earth, (04/2022)
https://earth.google.com/

DATUM: WGS 84	PROJECT: PHASE TWO ENVIRONMENTAL SITE ASSESSMENT	PROJECT NO: NS23108-02	NIAGARA SOILS SOLUTIONS LTD. 3300 Merrittville Hwy, Unit 4 Thorold, Ontario, L2V 4Y6	DR. BY: ZAH	TITLE: CROSS SECTION A-A'	
PROJECTION: N/A		DATE: Nov-2023		CHK. BY: JT		
SCALE: NTS	ADDRESS: 7701 Lundy's Lane, Niagara Falls, ON, L2H 1H3		CLIENT: Gatta Homes	APP. BY: JG	CAD: Projects/-02 PHASE TWO ESA's/NS23108-02/Figures/AUTOCAD/NS23108-02.DWG	11-A



LEGEND:

Sampling:

- Borehole
- Borehole/Monitoring Well
- Ground-Water Level
- Soil Sample Location
- Screen Location
- Results Meet Criteria
- Results Exceed Criteria

Stratigraphy:

- Asphaltic Concrete
- Brown Silt Fill
- Brown Native Silt

NOTES:

1. For Illustration Purposes only, All Locations are Approximate.
2. Results are compared to **O. Reg. 153/04 - Table 3:** "*Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition Soil - Coarse Textured Soils*".

REFERENCES:

BASEMAP REFERENCE:
Imagery Provided by Google Earth, (04/2022)
https://earth.google.com/

DATUM: WGS 84	PROJECT: PHASE TWO ENVIRONMENTAL SITE ASSESSMENT	PROJECT NO: NS23108-02	NIAGARA SOILS SOLUTIONS LTD. 3300 Merrittville Hwy, Unit 4 Thorold, Ontario, L2V 4Y6	DR. BY: ZAH	TITLE: CROSS SECTION B-B'		
PROJECTION: UTM 17T		DATE: Nov-2023		CHK. BY: JT			
SCALE: AS SHOWN	ADDRESS: 7701 Lundy's Lane, Niagara Falls, ON, L2H 1H3		CLIENT: Gatta Homes	APP. BY: JG	CAD: Projects/-02 PHASE TWO ESA's/NS23108-02/Figures/AUTOCAD/NS23108-02.DWG		11-B

APPENDIX A

BOREHOLE LOGS

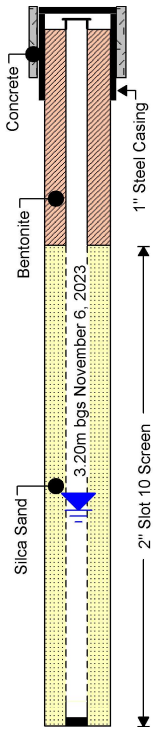
RECORD OF BOREHOLE: BH/MW-1

PROJECT NO.: NS23108-02
PROJECT: Phase Two ESA
LOCATION: 7701 Lundys Lane, Niagara Falls, ON
CLIENT: Gatta Homes

DRILLING COMPANY: Davis Drilling Ltd.
DRILLING METHOD: 150 mm O.D. Solid Stem Auger
DRILL RIG: Track Mount CME-55
BOREHOLE COORDINATE (UTM): 652591 E, 4772461 N

SHEET 1 of 1
DATE STARTED: October 31, 2023
DATE COMPLETED: October 31, 2023
DATUM: 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	COV (ppm / %LEL)	LAB ANALYSIS		
	Ground Surface					ft m	100.23					
	Asphaltic Concrete 75 mm					0.0 0.0	0.00					
	Silt Fill Brown Trace Gravel Dry to Loose	SS	1	5, 5, 4, 4		1.0		9	0			
		SS	2	3, 3, 4, 6		2.0 3.0 4.0 1.0		7	0			
	Silt Native Brown Trace Gravel Dry to Loose Firm to Hard					5.0	98.71 1.52					
		SS	3	3, 3, 3, 4		6.0 2.0		10	0			
		SS	4	3, 3, 5, 11		7.0 8.0 9.0		8	0			
		SS	5	3, 7, 15, 18		10.0 3.0 11.0 12.0		22	0	Soil: Metals & Inorganics, PHCs/VOCs, PAHs		
						13.0 4.0 14.0						
		SS	6	20, 36, 50, 50		15.0 16.0 5.0		86	0			
						17.0 18.0 19.0 6.0						
		SS	7	18, 29, 38, 48		20.0 21.0		67	25	Soil: Metals & Inorganics, PHCs/VOCs, PAHs		
	End of Borehole					22.0	93.52 6.71					
						23.0 7.0 24.0 25.0						



Groundwater Level Upon Completion:
Secondary Groundwater Level:

INITIAL WATER LEVEL: 3.20
SECONDARY WATER LEVEL: 3.14
BOREHOLE CAVE UPON COMPLETION: Open

INITIAL WATER LEVEL DATE: November 6, 2023
SECONDARY WATER LEVEL DATE: November 6, 2023

LOGGED: JT
COMPILED: JG
CHECKED: DN

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 through understanding of all potential conditions present and require interpretative assistance from a qualified Professional Engineer/Geoscientist.

RECORD OF BOREHOLE: BH/MW-2

PROJECT NO.: NS23108-02
PROJECT: Phase Two ESA
LOCATION: 7701 Lundys Lane, Niagara Falls, ON
CLIENT: Gatta Homes

DRILLING COMPANY: Davis Drilling Ltd.
DRILLING METHOD: 150 mm O.D. Solid Stem Auger
DRILL RIG: Track Mount CME-55
BOREHOLE COORDINATE (UTM): 652580 E, 4772452 N

SHEET 1 of 1
DATE STARTED: October 31, 2023
DATE COMPLETED: October 31, 2023
DATUM: 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	COV (ppm / %LEL)	LAB ANALYSIS		
	Ground Surface					ft m	100.18					
	Asphaltic Concrete 75 mm					0.0 0.0	0.00					
	Silt Fill Brown Trace Gravel Dry to Loose	SS	1	4, 5, 5, 6		1.0		10	0			
		SS	2	3, 4, 4, 5		2.0 3.0 4.0 1.0		8	0			
	Silt Native Brown Trace Gravel Dry to Loose Firm to Hard	SS	3	3, 4, 6, 6		5.0 6.0 2.0	98.66 1.52	10	0	Soil: Metals & Inorganics, PHCs/VOCs, PAHs		
		SS	4	2, 5, 7, 11		7.0 8.0 9.0		10	0			
		SS	5	9, 21, 30, 25		10.0 11.0 3.0		21	0			
		SS	6	17, 36, 50, 50		12.0 13.0 14.0 4.0 15.0 16.0		86	0			
		SS	7	8, 17, 21, 22		17.0 18.0 19.0 5.0 20.0 21.0		38	25			
	End of Borehole					22.0 23.0 6.0 24.0 25.0	93.47 6.71					

WELL INSTALLATION: Concrete; Bentonite; Silca Sand; 1" Steel Casing; 2" Slot 10 Screen; 3.20m bgs November 6, 2023

Groundwater Level Upon Completion:
Secondary Groundwater Level:

INITIAL WATER LEVEL: 3.20m bgs
SECONDARY WATER LEVEL: 3.25m bgs
BOREHOLE CAVE UPON COMPLETION: Open

INITIAL WATER LEVEL DATE: November 6, 2023
SECONDARY WATER LEVEL DATE: November 6, 2023

LOGGED: JT
COMPILED: JG
CHECKED: DN

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 through understanding of all potential conditions present and require interpretative assistance from a qualified Professional Engineer/Geoscientist.

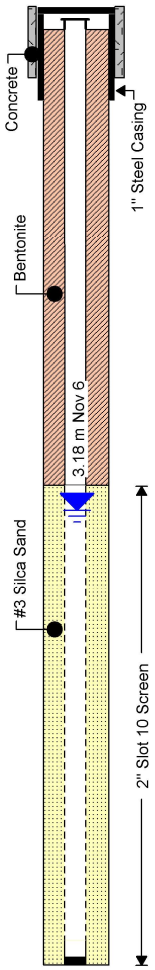
RECORD OF BOREHOLE: BH/MW-3

PROJECT NO.: NS23108-02
PROJECT: Phase Two ESA
LOCATION: 7701 Lundys Lane, Niagara Falls, ON
CLIENT: Gatta Homes

DRILLING COMPANY: Davis Drilling Ltd.
DRILLING METHOD: 150 mm O.D. Solid Stem Auger
DRILL RIG: Track Mount CME-55
BOREHOLE COORDINATE (UTM): 652600 E, 4772443 N

SHEET 1 of 1
DATE STARTED: October 31, 2023
DATE COMPLETED: October 31, 2023
DATUM: 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	COV (ppm / %LEL)	LAB ANALYSIS		
	Ground Surface					ft m	100.13					
	Asphaltic Concrete 75 mm					0.0 0.0	0.00					
	Silt Fill Brown Trace Gravel Dry to Loose	SS	1	6, 6, 3, 3		1.0		9	0			
		SS	2	3, 3, 4, 3		2.0 3.0 1.0 4.0		7	0			
						5.0	98.61					
	Silt Native Brown Trace Gravel Dry to Loose Firm to Hard	SS	3	2, 3, 6, 9		6.0	1.52	9	0	Soil: Metals & Inorganics, PHCs/VOCs, PAHs		
		SS	4	6, 13, 20, 18		7.0 2.0 8.0		33	0			
		SS	5	12, 21, 22, 23		9.0 10.0 3.0 11.0		43	0			
		SS	6	16, 36, 50, 50		12.0 13.0 4.0 14.0 15.0 16.0 5.0		86	0	Soil: Metals & Inorganics, PHCs/VOCs, PAHs		
		SS	7	13, 20, 24, 32		17.0 18.0 19.0 6.0 20.0 21.0		44	0			
	End of Borehole					22.0	93.42					
						23.0 7.0 24.0 25.0	6.71					



Groundwater Level Upon Completion:
Secondary Groundwater Level:

INITIAL WATER LEVEL: 3.15
SECONDARY WATER LEVEL: 3.18
BOREHOLE CAVE UPON COMPLETION: Open

INITIAL WATER LEVEL DATE: November 6, 2023
SECONDARY WATER LEVEL DATE: November 6, 2023

LOGGED: JT
COMPILED: JG
CHECKED: DN

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 through understanding of all potential conditions present and require interpretative assistance from a qualified Professional Engineer/Geoscientist.

RECORD OF BOREHOLE: BH-4

PROJECT NO.: NS23108-02
PROJECT: Phase Two ESA
LOCATION: 7701 Lundys Lane, Niagara Falls, ON
CLIENT: Gatta Homes

DRILLING COMPANY: Davis Drilling Ltd.
DRILLING METHOD: 150 mm O.D. Solid Stem Auger
DRILL RIG: Track Mount CME-55
BOREHOLE COORDINATE (UTM): 652592 E, 4772439 N

SHEET 1 of 1
DATE STARTED: October 31, 2023
DATE COMPLETED: October 31, 2023
DATUM: Benchmark

SOIL PROFILE		SAMPLES				DEPTH SCALE ft / m	ELEVATION (m / mbgs)	FIELD TESTING		LAB TESTING		
LITHOLOGY PLOT	DESCRIPTION	TYPE	NUMBER	SPT 'N' VALUE	RECOVERY (%)			SPT (N) 25 50 75 100	COV (ppm / %LEL)	LAB ANALYSIS	WELL INSTALLATION	COMMENTS
	Ground Surface					ft m	100.15					
	Asphaltic Concrete 75 mm					0.0 0.0	0.00					
	Silt Fill Brown Trace Gravel Dry to Loose	SS	1	5, 4, 1, 1		1.0		5	0			
		SS	2	2, 18, 50, 50		2.0 3.0 1.0 4.0		68	0			
						5.0	98.63					
							1.52					
	Silt Native Brown Trace Gravel Dry to Loose Firm to Hard	SS	3	4, 8, 7, 15		6.0		15	0			
		SS	4	5, 10, 15, 18		7.0 2.0 8.0 9.0		25	0	Soil: Metals, PHCs/VOCs, PAHs		
		SS	5	9, 8, 12, 12		10.0 11.0 3.0 12.0		20	0			
						13.0 4.0 14.0						
		SS	6	3, 10, 19, 28		15.0 16.0 5.0 17.0		29	0			
						18.0 19.0 6.0						
		SS	7	29, 37, 50, 50		20.0 21.0		87	0			
	End of Borehole					22.0	93.44					
						23.0 7.0 24.0	6.71					
						25.0						

Groundwater Level Upon Completion:
Secondary Groundwater Level:

INITIAL WATER LEVEL: Dry
SECONDARY WATER LEVEL: N/A
BOREHOLE CAVE UPON COMPLETION: Open

INITIAL WATER LEVEL DATE: October 31, 2023
SECONDARY WATER LEVEL DATE: N/A

LOGGED: JT
COMPILED: JG
CHECKED: DN

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 through understanding of all potential conditions present and require interpretative assistance from a qualified Professional Engineer/Geoscientist.

RECORD OF BOREHOLE: BH-5

PROJECT NO.: NS23108-02
PROJECT: Phase Two ESA
LOCATION: 7701 Lundys Lane, Niagara Falls, ON
CLIENT: Gatta Homes

DRILLING COMPANY: Davis Drilling Ltd.
DRILLING METHOD: 150 mm O.D. Solid Stem Auger
DRILL RIG: Track Mount CME-55
BOREHOLE COORDINATE (UTM): 652594 E, 4772448 N

SHEET 1 of 1
DATE STARTED: October 31, 2023
DATE COMPLETED: October 31, 2023
DATUM: 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	COV (ppm / %LEL)	LAB ANALYSIS		
	Ground Surface					ft m	100.23					
	Asphaltic Concrete 75 mm					0.0 0.0	0.00					
	Silt Fill Brown Trace Gravel Dry to Loose	SS	1	6, 4, 4, 3		1.0 2.0		8	0			
		SS	2	3, 3, 2, 1		3.0 1.0 4.0		5	0	Soil: Metals, PHCs/BTEX, PAHs		
	Silt Native Brown Trace Gravel Dry to Loose Firm to Hard					5.0	98.71 1.52					
		SS	3	1, 2, 2, 5		6.0 7.0		4	0			
		SS	4	8, 16, 26, 37		8.0 9.0 2.0		42	0			
		SS	5	20, 22, 18, 19		10.0 3.0 11.0		40	0			
	End of Borehole					12.0	96.57 3.66					
						13.0 4.0 14.0						
						15.0 16.0 5.0						
						17.0 18.0						
						19.0 6.0 20.0						
						21.0 22.0						
						23.0 7.0 24.0						
						25.0						

Groundwater Level Upon Completion:
Secondary Groundwater Level:

INITIAL WATER LEVEL: Dry
SECONDARY WATER LEVEL: N/A
BOREHOLE CAVE UPON COMPLETION: Open

INITIAL WATER LEVEL DATE: October 31, 2023
SECONDARY WATER LEVEL DATE: N/A

LOGGED: JT
COMPILED: JG
CHECKED: DN

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 through understanding of all potential conditions present and require interpretative assistance from a qualified Professional Engineer/Geoscientist.

RECORD OF BOREHOLE: BH-6

PROJECT NO.: NS23108-02
PROJECT: Phase Two ESA
LOCATION: 7701 Lundys Lane, Niagara Falls, ON
CLIENT: Gatta Homes

DRILLING COMPANY: Davis Drilling Ltd.
DRILLING METHOD: 150 mm O.D. Solid Stem Auger
DRILL RIG: Track Mount CME-55
BOREHOLE COORDINATE (UTM): 652594 E, 4772448 N

SHEET 1 of 1
DATE STARTED: October 31, 2023
DATE COMPLETED: October 31, 2023
DATUM: Benchmark

SOIL PROFILE		SAMPLES				DEPTH SCALE ft / m	ELEVATION (m / mbgs)	FIELD TESTING		LAB TESTING		
LITHOLOGY PLOT	DESCRIPTION	TYPE	NUMBER	SPT 'N' VALUE	RECOVERY (%)			SPT (N) 25 50 75 100	COV (ppm / %LEL)	LAB ANALYSIS	WELL INSTALLATION	COMMENTS
	Ground Surface					ft m	100.13					
	Asphaltic Concrete 75 mm					0.0 0.0	0.00					
	Silt Fill Brown Trace Gravel Dry to Loose	SS	1	6, 8, 7, 8		1.0		15	0	Soil: Metals, PHCs/BTEX, PAHs		
		SS	2	2, 3, 4, 6		2.0 3.0 4.0 1.0		7	0			
	Silt Native Brown Trace Gravel Dry to Loose Firm to Hard					5.0	98.61 1.52					
		SS	3	5, 4, 5, 10		6.0 7.0		9	0			
		SS	4	8, 20, 30, 40		8.0 9.0 2.0		50	0			
		SS	5	30, 48, 50, 50		10.0 11.0		98	0			
	End of Borehole					12.0	96.47 3.66					
						13.0 14.0 4.0						
						15.0 16.0 17.0 5.0						
						18.0 19.0 20.0 6.0						
						21.0 22.0 23.0 7.0						
						24.0 25.0						

Groundwater Level Upon Completion:
Secondary Groundwater Level:

INITIAL WATER LEVEL: Dry
SECONDARY WATER LEVEL: N/A
BOREHOLE CAVE UPON COMPLETION: Open

INITIAL WATER LEVEL DATE: October 31, 2023
SECONDARY WATER LEVEL DATE: N/A

LOGGED: JT
COMPILED: JG
CHECKED: DN

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 through understanding of all potential conditions present and require interpretative assistance from a qualified Professional Engineer/Geoscientist.

RECORD OF BOREHOLE: BH-7

PROJECT NO.: NS23108-02
PROJECT: Phase Two ESA
LOCATION: 7701 Lundys Lane, Niagara Falls, ON
CLIENT: Gatta Homes

DRILLING COMPANY: Davis Drilling Ltd.
DRILLING METHOD: 150 mm O.D. Solid Stem Auger
DRILL RIG: Track Mount CME-55
BOREHOLE COORDINATE (UTM): 652600 E, 4772459 N

SHEET 1 of 1
DATE STARTED: October 31, 2023
DATE COMPLETED: October 31, 2023
DATUM: Benchmark

LITHOLOGY PLOT	DESCRIPTION	TYPE	NUMBER	SPT 'N' VALUE	RECOVERY (%)	DEPTH SCALE ft / m	ELEVATION (m / mbgs)	FIELD TESTING: SPT (N)	COV (ppm / %LEL)	LAB ANALYSIS	WELL INSTALLATION	COMMENTS
	Ground Surface					0.0 ft / 0.0 m	100.20					
	Asphaltic Concrete 75 mm						0.00					
	Silt Fill Brown Trace Gravel Dry to Loose	SS	1	6, 6, 5, 5		2.0 ft		11	0			
		SS	2	3, 4, 4, 4		4.0 ft / 1.0 m		8	0			
							98.68					
	Silt Native Brown Trace Gravel Dry to Loose Firm to Hard						1.52					
		SS	3	2, 9, 10, 12		6.0 ft		15	0			
		SS	4	14, 21, 23, 25		8.0 ft		44	0			
		SS	5	23, 29, 38, 50		11.0 ft / 3.0 m		57	0	Soil: Metals, PHCs/VOCs, PAHs		
		SS	6	16, 28, 30, 44		16.0 ft / 5.0 m		58	0			
		SS	7	21, 31, 40, 50		21.0 ft / 6.0 m		71	0			
							93.49					
	End of Borehole					22.0 ft / 7.0 m	6.71					
						25.0 ft						

Groundwater Level Upon Completion:
Secondary Groundwater Level:

INITIAL WATER LEVEL: Dry
SECONDARY WATER LEVEL: N/A
BOREHOLE CAVE UPON COMPLETION: Open

INITIAL WATER LEVEL DATE: October 31, 2023
SECONDARY WATER LEVEL DATE: N/A

LOGGED: JT
COMPILED: JG
CHECKED: DN

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 through understanding of all potential conditions present and require interpretative assistance from a qualified Professional Engineer/Geoscientist.

RECORD OF BOREHOLE: BH-8

PROJECT NO.: NS23108-02
PROJECT: Phase Two ESA
LOCATION: 7701 Lundys Lane, Niagara Falls, ON
CLIENT: Gatta Homes

DRILLING COMPANY: Davis Drilling Ltd.
DRILLING METHOD: 150 mm O.D. Solid Stem Auger
DRILL RIG: Track Mount CME-55
BOREHOLE COORDINATE (UTM): 652580 E, 4772463 N

SHEET 1 of 1
DATE STARTED: October 31, 2023
DATE COMPLETED: October 31, 2023
DATUM: Benchmark

SOIL PROFILE		SAMPLES						FIELD TESTING		LAB TESTING		
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	WELL INSTALLATION	COMMENTS
	Ground Surface					ft m	100.18					
	Asphaltic Concrete 75 mm					0.0 0.0	0.00					
	Silt Fill Brown Trace Gravel Dry to Loose	SS	1	4, 3, 4, 1		1.0		7	0			
		SS	2	3, 5, 5, 4		2.0 3.0 4.0 1.0		10	0			
	Silt Native Brown Trace Gravel Dry to Loose Firm to Hard					5.0	98.66 1.52					
		SS	3	3, 3, 3, 3		6.0 2.0		6	0	Soil: Metals, PHCs/VOCs, PAHs		
		SS	4	6, 6, 6, 7		7.0 8.0 9.0		12	0			
		SS	5	8, 16, 12, 28		10.0 3.0 11.0		28	0			
		SS	6	17, 24, 28, 32		12.0 13.0 4.0 14.0 15.0 16.0 5.0		52	0			
		SS	7	14, 21, 28, 22		17.0 18.0 19.0 6.0 20.0 21.0		49	0			
	End of Borehole					22.0	93.47 6.71					
						23.0 7.0 24.0 25.0						

Groundwater Level Upon Completion:
Secondary Groundwater Level:

INITIAL WATER LEVEL: Dry
SECONDARY WATER LEVEL: N/A
BOREHOLE CAVE UPON COMPLETION: Open

INITIAL WATER LEVEL DATE: October 31, 2023
SECONDARY WATER LEVEL DATE: N/A

NIAGARA SOILS SOLUTIONS LTD.

LOGGED: JT
COMPILED: JG
CHECKED: DN

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

APPENDIX B

CERTIFICATES OF ANALYSIS –SOIL

PARACEL LABORATORIES LTD.
TRUSTED.
RESPONSIVE.
RELIABLE.

351 Nash Road North, unit 9B
Hamilton, ON L8H 7P4
1-800-749-1947
www.paracellabs.com

Certificate of Analysis

Niagara Soils Solutions Ltd.
3300 Merrittville Highway
Thorold, ON L2V 4Y6
Attn: Jodie Glasier

Client PO:
Project: NS23108-02
Custody:

Report Date: 22-Nov-2023
Order Date: 1-Nov-2023

Revised Report

Order #: 2344316

This Certificate of Analysis contains analytical data applicable to the following samples as submitted:

Paracel ID	Client ID
2344316-01	BH/MW1-5
2344316-02	BH/MW1-7
2344316-03	BH/MW2-3
2344316-04	BH/MW3-3
2344316-05	BH/MW3-6
2344316-06	BH4-4
2344316-07	BH5-2
2344316-08	BH6-1
2344316-09	BH7-5
2344316-10	BH8-3

Approved By:

Milan Ralitsch, PhD
Senior Technical Manager

Analysis Summary Table

Analysis	Method Reference/Description	Extraction Date	Analysis Date
Boron, available	MOE (HWE), EPA 200.8 - ICP-MS	3-Nov-23	3-Nov-23
BTEX by P&T GC-MS	EPA 8260 - P&T GC-MS	2-Nov-23	3-Nov-23
Chromium, hexavalent - soil	MOE E3056 - Extraction, colourimetric	2-Nov-23	3-Nov-23
Conductivity	MOE E3138 - probe @25 °C, water ext	3-Nov-23	3-Nov-23
Cyanide, free	MOE E3015 - Auto Colour, water extraction	3-Nov-23	3-Nov-23
Mercury by CVAA	EPA 7471B - CVAA, digestion	3-Nov-23	3-Nov-23
PHC F1	CWS Tier 1 - P&T GC-FID	2-Nov-23	3-Nov-23
PHCs F2 to F4	CWS Tier 1 - GC-FID, extraction	2-Nov-23	3-Nov-23
REG 153: Metals by ICP/MS, soil	EPA 6020 - Digestion - ICP-MS	3-Nov-23	3-Nov-23
REG 153: PAHs by GC-MS	EPA 8270 - GC-MS, extraction	2-Nov-23	3-Nov-23
REG 153: pH, soil	EPA 150.1 - pH probe @ 25 °C, CaCl buffered ext.	2-Nov-23	3-Nov-23
REG 153: VOCs by P&T GC-MS	EPA 8260 - P&T GC-MS	2-Nov-23	3-Nov-23
SAR	Calculated	3-Nov-23	6-Nov-23
Solids, %	CWS Tier 1 - Gravimetric	6-Nov-23	7-Nov-23

Summary of Criteria Exceedances

(If this page is blank then there are no exceedances)

Only those criteria that a sample exceeds will be highlighted in red

Regulatory Comparison:

Paracel Laboratories has provided regulatory guidelines on this report for informational purposes only and makes no representations or warranties that the data is accurate or reflects the current regulatory values. The user is advised to consult with the appropriate official regulations to evaluate compliance. Sample results that are highlighted have exceeded the selected regulatory limit. Calculated uncertainty estimations have not been applied for determining regulatory exceedances.

Sample	Analyte	MDL / Units	Result	Reg 153/04 -T3 Res/Park, coarse	Reg 153/04 -T3 Res/Park, fine

Certificate of Analysis

Report Date: 22-Nov-2023

Client: **Niagara Soils Solutions Ltd.**

Order Date: 1-Nov-2023

Client PO:

Project Description: NS23108-02

	Client ID:	BH/MW1-5	BH/MW1-7	BH/MW2-3	BH/MW3-3	Criteria:	
	Sample Date:	31-Oct-23 09:00	31-Oct-23 09:00	31-Oct-23 09:00	31-Oct-23 09:00	Reg 153/04 -T3 Res/Park, coarse	Reg 153/04 -T3 Res/Park, fine
	Sample ID:	2344316-01	2344316-02	2344316-03	2344316-04		
	Matrix:	Soil	Soil	Soil	Soil		
	MDL/Units						
Physical Characteristics							
% Solids	0.1 % by Wt.	88.5	83.0	81.4	84.8	-	-
General Inorganics							
SAR	0.01 N/A	0.43	2.06	3.35	1.18	5 N/A	5 N/A
Conductivity	5 uS/cm	198	347	380	448	0.7 mS/cm	0.7 mS/cm
Cyanide, free	0.03 ug/g	<0.03	<0.03	<0.03	<0.03	0.051 ug/g	0.051 ug/g
pH	0.05 pH Units	7.37	7.39	7.42	7.29	5.00 - 9.00 pH Units	5.00 - 9.00 pH Units
Metals							
Antimony	1.0 ug/g	<1.0	<1.0	<1.0	<1.0	7.5 ug/g	7.5 ug/g
Arsenic	1.0 ug/g	3.9	2.3	2.1	4.4	18 ug/g	18 ug/g
Barium	1.0 ug/g	88.8	51.1	19.3	95.7	390 ug/g	390 ug/g
Beryllium	0.5 ug/g	0.6	<0.5	<0.5	0.6	4 ug/g	5 ug/g
Boron	5.0 ug/g	5.6	<5.0	<5.0	5.6	120 ug/g	120 ug/g
Boron, available	0.5 ug/g	<0.5	<0.5	<0.5	<0.5	1.5 ug/g	1.5 ug/g
Cadmium	0.5 ug/g	<0.5	<0.5	<0.5	<0.5	1.2 ug/g	1.2 ug/g
Chromium (VI)	0.2 ug/g	<0.2	<0.2	<0.2	<0.2	8 ug/g	10 ug/g
Chromium	5.0 ug/g	18.0	8.1	6.8	19.6	160 ug/g	160 ug/g
Cobalt	1.0 ug/g	9.1	3.7	3.2	8.9	22 ug/g	22 ug/g
Copper	5.0 ug/g	17.2	5.7	11.5	18.2	140 ug/g	180 ug/g
Lead	1.0 ug/g	7.1	3.4	3.3	7.3	120 ug/g	120 ug/g
Mercury	0.1 ug/g	<0.1	<0.1	<0.1	<0.1	0.27 ug/g	1.8 ug/g
Molybdenum	1.0 ug/g	<1.0	<1.0	<1.0	<1.0	6.9 ug/g	6.9 ug/g
Nickel	5.0 ug/g	15.2	<5.0	<5.0	12.0	100 ug/g	130 ug/g
Selenium	1.0 ug/g	<1.0	1.1	<1.0	<1.0	2.4 ug/g	2.4 ug/g
Silver	0.3 ug/g	<0.3	<0.3	<0.3	<0.3	20 ug/g	25 ug/g
Thallium	1.0 ug/g	<1.0	<1.0	<1.0	<1.0	1 ug/g	1 ug/g

Certificate of Analysis

Report Date: 22-Nov-2023

Client: **Niagara Soils Solutions Ltd.**

Order Date: 1-Nov-2023

Client PO:

Project Description: NS23108-02

	Client ID:	BH/MW1-5	BH/MW1-7	BH/MW2-3	BH/MW3-3	Criteria:	
	Sample Date:	31-Oct-23 09:00	31-Oct-23 09:00	31-Oct-23 09:00	31-Oct-23 09:00	Reg 153/04 -T3 Res/Park, coarse	Reg 153/04 -T3 Res/Park, fine
	Sample ID:	2344316-01	2344316-02	2344316-03	2344316-04		
	Matrix:	Soil	Soil	Soil	Soil		
	MDL/Units						
Metals							
Uranium	1.0 ug/g	<1.0	<1.0	<1.0	<1.0	23 ug/g	23 ug/g
Vanadium	10.0 ug/g	24.9	12.9	16.4	26.6	86 ug/g	86 ug/g
Zinc	20.0 ug/g	44.1	<20.0	20.0	42.5	340 ug/g	340 ug/g
Volatiles							
Acetone	0.50 ug/g	<0.50	<0.50	<0.50	<0.50	16 ug/g	28 ug/g
Benzene	0.02 ug/g	<0.02	<0.02	<0.02	<0.02	0.21 ug/g	0.17 ug/g
Bromodichloromethane	0.05 ug/g	<0.05	<0.05	<0.05	<0.05	13 ug/g	13 ug/g
Bromoform	0.05 ug/g	<0.05	<0.05	<0.05	<0.05	0.27 ug/g	0.26 ug/g
Bromomethane	0.05 ug/g	<0.05	<0.05	<0.05	<0.05	0.05 ug/g	0.05 ug/g
Carbon Tetrachloride	0.05 ug/g	<0.05	<0.05	<0.05	<0.05	0.05 ug/g	0.12 ug/g
Chlorobenzene	0.05 ug/g	<0.05	<0.05	<0.05	<0.05	2.4 ug/g	2.7 ug/g
Chloroform	0.05 ug/g	<0.05	<0.05	<0.05	<0.05	0.05 ug/g	0.18 ug/g
Dibromochloromethane	0.05 ug/g	<0.05	<0.05	<0.05	<0.05	9.4 ug/g	9.4 ug/g
Dichlorodifluoromethane	0.05 ug/g	<0.05	<0.05	<0.05	<0.05	16 ug/g	25 ug/g
1,2-Dichlorobenzene	0.05 ug/g	<0.05	<0.05	<0.05	<0.05	3.4 ug/g	4.3 ug/g
1,3-Dichlorobenzene	0.05 ug/g	<0.05	<0.05	<0.05	<0.05	4.8 ug/g	6 ug/g
1,4-Dichlorobenzene	0.05 ug/g	<0.05	<0.05	<0.05	<0.05	0.083 ug/g	0.097 ug/g
1,1-Dichloroethane	0.05 ug/g	<0.05	<0.05	<0.05	<0.05	3.5 ug/g	11 ug/g
1,2-Dichloroethane	0.05 ug/g	<0.05	<0.05	<0.05	<0.05	0.05 ug/g	0.05 ug/g
1,1-Dichloroethylene	0.05 ug/g	<0.05	<0.05	<0.05	<0.05	0.05 ug/g	0.05 ug/g
cis-1,2-Dichloroethylene	0.05 ug/g	<0.05	<0.05	<0.05	<0.05	3.4 ug/g	30 ug/g
trans-1,2-Dichloroethylene	0.05 ug/g	<0.05	<0.05	<0.05	<0.05	0.084 ug/g	0.75 ug/g
1,2-Dichloropropane	0.05 ug/g	<0.05	<0.05	<0.05	<0.05	0.05 ug/g	0.085 ug/g
cis-1,3-Dichloropropylene	0.05 ug/g	<0.05	<0.05	<0.05	<0.05	-	-
trans-1,3-Dichloropropylene	0.05 ug/g	<0.05	<0.05	<0.05	<0.05	-	-

	Client ID:	BH/MW1-5	BH/MW1-7	BH/MW2-3	BH/MW3-3	Criteria:	
	Sample Date:	31-Oct-23 09:00	31-Oct-23 09:00	31-Oct-23 09:00	31-Oct-23 09:00	Reg 153/04 -T3 Res/Park, coarse	Reg 153/04 -T3 Res/Park, fine
	Sample ID:	2344316-01	2344316-02	2344316-03	2344316-04		
	Matrix:	Soil	Soil	Soil	Soil		
	MDL/Units						
Volatiles							
1,3-Dichloropropene, total	0.05 ug/g	<0.05	<0.05	<0.05	<0.05	0.05 ug/g	0.083 ug/g
Ethylbenzene	0.05 ug/g	<0.05	<0.05	<0.05	<0.05	2 ug/g	15 ug/g
Ethylene dibromide (dibromoethane,	0.05 ug/g	<0.05	<0.05	<0.05	<0.05	0.05 ug/g	0.05 ug/g
Hexane	0.05 ug/g	<0.05	<0.05	<0.05	<0.05	2.8 ug/g	34 ug/g
Methyl Ethyl Ketone (2-Butanone)	0.50 ug/g	<0.50	<0.50	<0.50	<0.50	16 ug/g	44 ug/g
Methyl Isobutyl Ketone	0.50 ug/g	<0.50	<0.50	<0.50	<0.50	1.7 ug/g	4.3 ug/g
Methyl tert-butyl ether	0.05 ug/g	<0.05	<0.05	<0.05	<0.05	0.75 ug/g	1.4 ug/g
Methylene Chloride	0.05 ug/g	<0.05	<0.05	<0.05	<0.05	0.1 ug/g	0.96 ug/g
Styrene	0.05 ug/g	<0.05	<0.05	<0.05	<0.05	0.7 ug/g	2.2 ug/g
1,1,1,2-Tetrachloroethane	0.05 ug/g	<0.05	<0.05	<0.05	<0.05	0.058 ug/g	0.05 ug/g
1,1,2,2-Tetrachloroethane	0.05 ug/g	<0.05	<0.05	<0.05	<0.05	0.05 ug/g	0.05 ug/g
Tetrachloroethylene	0.05 ug/g	<0.05	<0.05	<0.05	<0.05	0.28 ug/g	2.3 ug/g
Toluene	0.05 ug/g	<0.05	<0.05	<0.05	<0.05	2.3 ug/g	6 ug/g
1,1,1-Trichloroethane	0.05 ug/g	<0.05	<0.05	<0.05	<0.05	0.38 ug/g	3.4 ug/g
1,1,2-Trichloroethane	0.05 ug/g	<0.05	<0.05	<0.05	<0.05	0.05 ug/g	0.05 ug/g
Trichloroethylene	0.05 ug/g	<0.05	<0.05	<0.05	<0.05	0.061 ug/g	0.52 ug/g
Trichlorofluoromethane	0.05 ug/g	<0.05	<0.05	<0.05	<0.05	4 ug/g	5.8 ug/g
Vinyl chloride	0.02 ug/g	<0.02	<0.02	<0.02	<0.02	0.02 ug/g	0.022 ug/g
m,p-Xylenes	0.05 ug/g	<0.05	<0.05	<0.05	<0.05	-	-
o-Xylene	0.05 ug/g	<0.05	<0.05	<0.05	<0.05	-	-
Xylenes, total	0.05 ug/g	<0.05	<0.05	<0.05	<0.05	3.1 ug/g	25 ug/g
4-Bromofluorobenzene	Surrogate	83.1%	84.3%	82.8%	82.8%	-	-
Dibromofluoromethane	Surrogate	77.7%	78.3%	77.3%	77.5%	-	-
Toluene-d8	Surrogate	107%	107%	107%	106%	-	-
Hydrocarbons							

Certificate of Analysis

Report Date: 22-Nov-2023

Client: **Niagara Soils Solutions Ltd.**

Order Date: 1-Nov-2023

Client PO:

Project Description: NS23108-02

	Client ID:	BH/MW1-5	BH/MW1-7	BH/MW2-3	BH/MW3-3	Criteria:	
	Sample Date:	31-Oct-23 09:00	31-Oct-23 09:00	31-Oct-23 09:00	31-Oct-23 09:00	Reg 153/04 -T3 Res/Park, coarse	Reg 153/04 -T3 Res/Park, fine
	Sample ID:	2344316-01	2344316-02	2344316-03	2344316-04		
	Matrix:	Soil	Soil	Soil	Soil		
	MDL/Units						
Hydrocarbons							
F1 PHCs (C6-C10)	7 ug/g	<7	<7	<7	<7	55 ug/g	65 ug/g
F2 PHCs (C10-C16)	4 ug/g	<4	<4	<4	<4	98 ug/g	150 ug/g
F3 PHCs (C16-C34)	8 ug/g	57	53	43	39	300 ug/g	1300 ug/g
F4 PHCs (C34-C50)	6 ug/g	<6	<6	<6	<6	2800 ug/g	5600 ug/g
Semi-Volatiles							
Acenaphthene	0.02 ug/g	<0.02	<0.02	<0.02	<0.02	7.9 ug/g	58 ug/g
Acenaphthylene	0.02 ug/g	<0.02	<0.02	<0.02	<0.02	0.15 ug/g	0.17 ug/g
Anthracene	0.02 ug/g	<0.02	<0.02	<0.02	<0.02	0.67 ug/g	0.74 ug/g
Benzo [a] anthracene	0.02 ug/g	<0.02	<0.02	<0.02	<0.02	0.5 ug/g	0.63 ug/g
Benzo [a] pyrene	0.02 ug/g	<0.02	<0.02	<0.02	<0.02	0.3 ug/g	0.3 ug/g
Benzo [b] fluoranthene	0.02 ug/g	<0.02	<0.02	<0.02	<0.02	0.78 ug/g	0.78 ug/g
Benzo [g,h,i] perylene	0.02 ug/g	<0.02	<0.02	<0.02	<0.02	6.6 ug/g	7.8 ug/g
Benzo [k] fluoranthene	0.02 ug/g	<0.02	<0.02	<0.02	<0.02	0.78 ug/g	0.78 ug/g
Chrysene	0.02 ug/g	<0.02	<0.02	<0.02	<0.02	7 ug/g	7.8 ug/g
Dibenzo [a,h] anthracene	0.02 ug/g	<0.02	<0.02	<0.02	<0.02	0.1 ug/g	0.1 ug/g
Fluoranthene	0.02 ug/g	<0.02	<0.02	<0.02	<0.02	0.69 ug/g	0.69 ug/g
Fluorene	0.02 ug/g	<0.02	<0.02	<0.02	<0.02	62 ug/g	69 ug/g
Indeno [1,2,3-cd] pyrene	0.02 ug/g	<0.02	<0.02	<0.02	<0.02	0.38 ug/g	0.48 ug/g
1-Methylnaphthalene	0.02 ug/g	<0.02	<0.02	<0.02	<0.02	0.99 ug/g	3.4 ug/g
2-Methylnaphthalene	0.02 ug/g	<0.02	<0.02	<0.02	<0.02	0.99 ug/g	3.4 ug/g
Methylnaphthalene (1&2)	0.03 ug/g	<0.03	<0.03	<0.03	<0.03	0.99 ug/g	3.4 ug/g
Naphthalene	0.01 ug/g	<0.01	<0.01	<0.01	<0.01	0.6 ug/g	0.75 ug/g
Phenanthrene	0.02 ug/g	<0.02	<0.02	<0.02	<0.02	6.2 ug/g	7.8 ug/g
Pyrene	0.02 ug/g	<0.02	<0.02	<0.02	<0.02	78 ug/g	78 ug/g
2-Fluorobiphenyl	Surrogate	70.2%	46.4% [2]	69.1%	63.5%	-	-

	Client ID:	BH/MW1-5	BH/MW1-7	BH/MW2-3	BH/MW3-3	Criteria:	
	Sample Date:	31-Oct-23 09:00	31-Oct-23 09:00	31-Oct-23 09:00	31-Oct-23 09:00	Reg 153/04 -T3 Res/Park, coarse	Reg 153/04 -T3 Res/Park, fine
	Sample ID:	2344316-01	2344316-02	2344316-03	2344316-04		
	Matrix:	Soil	Soil	Soil	Soil		
	MDL/Units						
Semi-Volatiles							
Terphenyl-d14	Surrogate	87.2%	72.8%	73.5%	81.0%	-	-

Certificate of Analysis

Report Date: 22-Nov-2023

Client: **Niagara Soils Solutions Ltd.**

Order Date: 1-Nov-2023

Client PO:

Project Description: NS23108-02

	Client ID:	BH/MW3-6	BH4-4	BH5-2	BH6-1	Criteria:	
	Sample Date:	31-Oct-23 09:00	31-Oct-23 09:00	31-Oct-23 09:00	31-Oct-23 09:00	Reg 153/04 -T3 Res/Park, coarse	Reg 153/04 -T3 Res/Park, fine
	Sample ID:	2344316-05	2344316-06	2344316-07	2344316-08		
	Matrix:	Soil	Soil	Soil	Soil		
	MDL/Units						
Physical Characteristics							
% Solids	0.1 % by Wt.	85.0	81.2	90.1	82.6	-	-
General Inorganics							
SAR	0.01 N/A	0.37	-	-	-	5 N/A	5 N/A
Conductivity	5 uS/cm	164	-	-	-	0.7 mS/cm	0.7 mS/cm
Cyanide, free	0.03 ug/g	<0.03	-	-	-	0.051 ug/g	0.051 ug/g
pH	0.05 pH Units	7.34	-	-	-	5.00 - 9.00 pH Units	5.00 - 9.00 pH Units
Metals							
Antimony	1.0 ug/g	<1.0	<1.0	<1.0	<1.0	7.5 ug/g	7.5 ug/g
Arsenic	1.0 ug/g	1.9	4.2	4.7	4.0	18 ug/g	18 ug/g
Barium	1.0 ug/g	33.1	117	54.0	81.9	390 ug/g	390 ug/g
Beryllium	0.5 ug/g	<0.5	0.7	<0.5	0.6	4 ug/g	5 ug/g
Boron	5.0 ug/g	<5.0	8.3	<5.0	<5.0	120 ug/g	120 ug/g
Boron, available	0.5 ug/g	<0.5	-	-	-	1.5 ug/g	1.5 ug/g
Cadmium	0.5 ug/g	<0.5	<0.5	<0.5	<0.5	1.2 ug/g	1.2 ug/g
Chromium (VI)	0.2 ug/g	<0.2	-	-	-	8 ug/g	10 ug/g
Chromium	5.0 ug/g	8.7	21.3	10.4	18.0	160 ug/g	160 ug/g
Cobalt	1.0 ug/g	4.6	9.1	4.9	6.9	22 ug/g	22 ug/g
Copper	5.0 ug/g	6.6	16.9	13.5	17.3	140 ug/g	180 ug/g
Lead	1.0 ug/g	3.1	8.1	87.1	7.7	120 ug/g	120 ug/g
Mercury	0.1 ug/g	<0.1	-	-	-	0.27 ug/g	1.8 ug/g
Molybdenum	1.0 ug/g	<1.0	<1.0	<1.0	<1.0	6.9 ug/g	6.9 ug/g
Nickel	5.0 ug/g	<5.0	15.3	<5.0	8.7	100 ug/g	130 ug/g
Selenium	1.0 ug/g	<1.0	<1.0	<1.0	<1.0	2.4 ug/g	2.4 ug/g
Silver	0.3 ug/g	<0.3	<0.3	<0.3	<0.3	20 ug/g	25 ug/g
Thallium	1.0 ug/g	<1.0	<1.0	<1.0	<1.0	1 ug/g	1 ug/g

	Client ID:	BH/MW3-6	BH4-4	BH5-2	BH6-1	Criteria:	
	Sample Date:	31-Oct-23 09:00	31-Oct-23 09:00	31-Oct-23 09:00	31-Oct-23 09:00	Reg 153/04 -T3 Res/Park, coarse	Reg 153/04 -T3 Res/Park, fine
	Sample ID:	2344316-05	2344316-06	2344316-07	2344316-08		
	Matrix:	Soil	Soil	Soil	Soil		
	MDL/Units						
Metals							
Uranium	1.0 ug/g	<1.0	<1.0	<1.0	<1.0	23 ug/g	23 ug/g
Vanadium	10.0 ug/g	13.9	28.4	18.9	26.7	86 ug/g	86 ug/g
Zinc	20.0 ug/g	21.0	50.4	58.2	37.9	340 ug/g	340 ug/g
Volatiles							
Acetone	0.50 ug/g	<0.50	<0.50	-	-	16 ug/g	28 ug/g
Benzene	0.02 ug/g	<0.02	<0.02	-	-	0.21 ug/g	0.17 ug/g
Bromodichloromethane	0.05 ug/g	<0.05	<0.05	-	-	13 ug/g	13 ug/g
Bromoform	0.05 ug/g	<0.05	<0.05	-	-	0.27 ug/g	0.26 ug/g
Bromomethane	0.05 ug/g	<0.05	<0.05	-	-	0.05 ug/g	0.05 ug/g
Carbon Tetrachloride	0.05 ug/g	<0.05	<0.05	-	-	0.05 ug/g	0.12 ug/g
Chlorobenzene	0.05 ug/g	<0.05	<0.05	-	-	2.4 ug/g	2.7 ug/g
Chloroform	0.05 ug/g	<0.05	<0.05	-	-	0.05 ug/g	0.18 ug/g
Dibromochloromethane	0.05 ug/g	<0.05	<0.05	-	-	9.4 ug/g	9.4 ug/g
Dichlorodifluoromethane	0.05 ug/g	<0.05	<0.05	-	-	16 ug/g	25 ug/g
1,2-Dichlorobenzene	0.05 ug/g	<0.05	<0.05	-	-	3.4 ug/g	4.3 ug/g
1,3-Dichlorobenzene	0.05 ug/g	<0.05	<0.05	-	-	4.8 ug/g	6 ug/g
1,4-Dichlorobenzene	0.05 ug/g	<0.05	<0.05	-	-	0.083 ug/g	0.097 ug/g
1,1-Dichloroethane	0.05 ug/g	<0.05	<0.05	-	-	3.5 ug/g	11 ug/g
1,2-Dichloroethane	0.05 ug/g	<0.05	<0.05	-	-	0.05 ug/g	0.05 ug/g
1,1-Dichloroethylene	0.05 ug/g	<0.05	<0.05	-	-	0.05 ug/g	0.05 ug/g
cis-1,2-Dichloroethylene	0.05 ug/g	<0.05	<0.05	-	-	3.4 ug/g	30 ug/g
trans-1,2-Dichloroethylene	0.05 ug/g	<0.05	<0.05	-	-	0.084 ug/g	0.75 ug/g
1,2-Dichloropropane	0.05 ug/g	<0.05	<0.05	-	-	0.05 ug/g	0.085 ug/g
cis-1,3-Dichloropropylene	0.05 ug/g	<0.05	<0.05	-	-	-	-
trans-1,3-Dichloropropylene	0.05 ug/g	<0.05	<0.05	-	-	-	-

	Client ID:	BH/MW3-6	BH4-4	BH5-2	BH6-1	Criteria:	
	Sample Date:	31-Oct-23 09:00	31-Oct-23 09:00	31-Oct-23 09:00	31-Oct-23 09:00	Reg 153/04 -T3 Res/Park, coarse	Reg 153/04 -T3 Res/Park, fine
	Sample ID:	2344316-05	2344316-06	2344316-07	2344316-08		
	Matrix:	Soil	Soil	Soil	Soil		
	MDL/Units						
Volatiles							
1,3-Dichloropropene, total	0.05 ug/g	<0.05	<0.05	-	-	0.05 ug/g	0.083 ug/g
Ethylene dibromide (dibromoethane,	0.05 ug/g	<0.05	<0.05	-	-	0.05 ug/g	0.05 ug/g
Ethylbenzene	0.05 ug/g	<0.05	<0.05	-	-	2 ug/g	15 ug/g
Hexane	0.05 ug/g	<0.05	<0.05	-	-	2.8 ug/g	34 ug/g
Methyl Ethyl Ketone (2-Butanone)	0.50 ug/g	<0.50	<0.50	-	-	16 ug/g	44 ug/g
Methyl Isobutyl Ketone	0.50 ug/g	<0.50	<0.50	-	-	1.7 ug/g	4.3 ug/g
Methyl tert-butyl ether	0.05 ug/g	<0.05	<0.05	-	-	0.75 ug/g	1.4 ug/g
Methylene Chloride	0.05 ug/g	<0.05	<0.05	-	-	0.1 ug/g	0.96 ug/g
Styrene	0.05 ug/g	<0.05	<0.05	-	-	0.7 ug/g	2.2 ug/g
1,1,1,2-Tetrachloroethane	0.05 ug/g	<0.05	<0.05	-	-	0.058 ug/g	0.05 ug/g
1,1,2,2-Tetrachloroethane	0.05 ug/g	<0.05	<0.05	-	-	0.05 ug/g	0.05 ug/g
Tetrachloroethylene	0.05 ug/g	<0.05	<0.05	-	-	0.28 ug/g	2.3 ug/g
Toluene	0.05 ug/g	<0.05	<0.05	-	-	2.3 ug/g	6 ug/g
1,1,1-Trichloroethane	0.05 ug/g	<0.05	<0.05	-	-	0.38 ug/g	3.4 ug/g
1,1,2-Trichloroethane	0.05 ug/g	<0.05	<0.05	-	-	0.05 ug/g	0.05 ug/g
Trichloroethylene	0.05 ug/g	<0.05	<0.05	-	-	0.061 ug/g	0.52 ug/g
Trichlorofluoromethane	0.05 ug/g	<0.05	<0.05	-	-	4 ug/g	5.8 ug/g
Vinyl chloride	0.02 ug/g	<0.02	<0.02	-	-	0.02 ug/g	0.022 ug/g
m,p-Xylenes	0.05 ug/g	<0.05	<0.05	-	-	-	-
o-Xylene	0.05 ug/g	<0.05	<0.05	-	-	-	-
Xylenes, total	0.05 ug/g	<0.05	<0.05	-	-	3.1 ug/g	25 ug/g
4-Bromofluorobenzene	Surrogate	84.0%	82.8%	-	-	-	-
Toluene-d8	Surrogate	106%	106%	-	-	-	-
Dibromofluoromethane	Surrogate	77.6%	78.1%	-	-	-	-
Benzene	0.02 ug/g	-	-	<0.02	<0.02	0.21 ug/g	0.17 ug/g

	Client ID:	BH/MW3-6	BH4-4	BH5-2	BH6-1	Criteria:	
	Sample Date:	31-Oct-23 09:00	31-Oct-23 09:00	31-Oct-23 09:00	31-Oct-23 09:00	Reg 153/04 -T3 Res/Park, coarse	Reg 153/04 -T3 Res/Park, fine
	Sample ID:	2344316-05	2344316-06	2344316-07	2344316-08		
	Matrix:	Soil	Soil	Soil	Soil		
	MDL/Units						
Volatiles							
Ethylbenzene	0.05 ug/g	-	-	<0.05	<0.05	2 ug/g	15 ug/g
Toluene	0.05 ug/g	-	-	<0.05	<0.05	2.3 ug/g	6 ug/g
m,p-Xylenes	0.05 ug/g	-	-	<0.05	<0.05	-	-
o-Xylene	0.05 ug/g	-	-	<0.05	<0.05	-	-
Xylenes, total	0.05 ug/g	-	-	<0.05	<0.05	3.1 ug/g	25 ug/g
Toluene-d8	Surrogate	-	-	106%	105%	-	-
Hydrocarbons							
F1 PHCs (C6-C10)	7 ug/g	<7	<7	<7	<7	55 ug/g	65 ug/g
F2 PHCs (C10-C16)	4 ug/g	<4	<4	<4	<4	98 ug/g	150 ug/g
F3 PHCs (C16-C34)	8 ug/g	48	45	251	77	300 ug/g	1300 ug/g
F4 PHCs (C34-C50)	6 ug/g	<6	<6	306	268	2800 ug/g	5600 ug/g
Semi-Volatiles							
Acenaphthene	0.02 ug/g	<0.02	<0.02	<0.02	<0.02	7.9 ug/g	58 ug/g
Acenaphthylene	0.02 ug/g	<0.02	<0.02	<0.02	<0.02	0.15 ug/g	0.17 ug/g
Anthracene	0.02 ug/g	<0.02	<0.02	<0.02	<0.02	0.67 ug/g	0.74 ug/g
Benzo [a] anthracene	0.02 ug/g	<0.02	<0.02	0.03	<0.02	0.5 ug/g	0.63 ug/g
Benzo [a] pyrene	0.02 ug/g	<0.02	<0.02	0.03	<0.02	0.3 ug/g	0.3 ug/g
Benzo [b] fluoranthene	0.02 ug/g	<0.02	<0.02	0.03	<0.02	0.78 ug/g	0.78 ug/g
Benzo [g,h,i] perylene	0.02 ug/g	<0.02	<0.02	0.06	<0.02	6.6 ug/g	7.8 ug/g
Benzo [k] fluoranthene	0.02 ug/g	<0.02	<0.02	<0.02	<0.02	0.78 ug/g	0.78 ug/g
Chrysene	0.02 ug/g	<0.02	<0.02	0.03	<0.02	7 ug/g	7.8 ug/g
Dibenzo [a,h] anthracene	0.02 ug/g	<0.02	<0.02	<0.02	<0.02	0.1 ug/g	0.1 ug/g
Fluoranthene	0.02 ug/g	<0.02	<0.02	0.06	<0.02	0.69 ug/g	0.69 ug/g
Fluorene	0.02 ug/g	<0.02	<0.02	<0.02	<0.02	62 ug/g	69 ug/g
Indeno [1,2,3-cd] pyrene	0.02 ug/g	<0.02	<0.02	<0.02	<0.02	0.38 ug/g	0.48 ug/g

Certificate of Analysis

Report Date: 22-Nov-2023

Client: **Niagara Soils Solutions Ltd.**

Order Date: 1-Nov-2023

Client PO:

Project Description: NS23108-02

	Client ID:	BH/MW3-6	BH4-4	BH5-2	BH6-1	Criteria:	
	Sample Date:	31-Oct-23 09:00	31-Oct-23 09:00	31-Oct-23 09:00	31-Oct-23 09:00	Reg 153/04 -T3 Res/Park, coarse	Reg 153/04 -T3 Res/Park, fine
	Sample ID:	2344316-05	2344316-06	2344316-07	2344316-08		
	Matrix:	Soil	Soil	Soil	Soil		
	MDL/Units						
Semi-Volatiles							
1-Methylnaphthalene	0.02 ug/g	<0.02	<0.02	<0.02	<0.02	0.99 ug/g	3.4 ug/g
2-Methylnaphthalene	0.02 ug/g	<0.02	<0.02	<0.02	<0.02	0.99 ug/g	3.4 ug/g
Methylnaphthalene (1&2)	0.03 ug/g	<0.03	<0.03	<0.03	<0.03	0.99 ug/g	3.4 ug/g
Naphthalene	0.01 ug/g	<0.01	<0.01	<0.01	<0.01	0.6 ug/g	0.75 ug/g
Phenanthrene	0.02 ug/g	<0.02	<0.02	0.05	<0.02	6.2 ug/g	7.8 ug/g
Pyrene	0.02 ug/g	<0.02	<0.02	0.05	<0.02	78 ug/g	78 ug/g
2-Fluorobiphenyl	Surrogate	63.6%	68.1%	67.9%	64.6%	-	-
Terphenyl-d14	Surrogate	65.9%	79.5%	75.5%	74.5%	-	-

	Client ID:	BH7-5	BH8-3			Criteria:	
	Sample Date:	31-Oct-23 09:00	31-Oct-23 09:00			Reg 153/04 -T3 Res/Park, coarse	Reg 153/04 -T3 Res/Park, fine
	Sample ID:	2344316-09	2344316-10				
	Matrix:	Soil	Soil				
	MDL/Units						
Physical Characteristics							
% Solids	0.1 % by Wt.	83.4	81.5	-	-	-	-
Metals							
Antimony	1.0 ug/g	<1.0	<1.0	-	-	7.5 ug/g	7.5 ug/g
Arsenic	1.0 ug/g	2.0	3.6	-	-	18 ug/g	18 ug/g
Barium	1.0 ug/g	28.9	54.0	-	-	390 ug/g	390 ug/g
Beryllium	0.5 ug/g	<0.5	0.5	-	-	4 ug/g	5 ug/g
Boron	5.0 ug/g	<5.0	<5.0	-	-	120 ug/g	120 ug/g
Cadmium	0.5 ug/g	<0.5	<0.5	-	-	1.2 ug/g	1.2 ug/g
Chromium	5.0 ug/g	8.0	15.2	-	-	160 ug/g	160 ug/g
Cobalt	1.0 ug/g	4.2	7.8	-	-	22 ug/g	22 ug/g
Copper	5.0 ug/g	6.4	15.2	-	-	140 ug/g	180 ug/g
Lead	1.0 ug/g	2.9	6.1	-	-	120 ug/g	120 ug/g
Molybdenum	1.0 ug/g	<1.0	<1.0	-	-	6.9 ug/g	6.9 ug/g
Nickel	5.0 ug/g	<5.0	10.4	-	-	100 ug/g	130 ug/g
Selenium	1.0 ug/g	<1.0	<1.0	-	-	2.4 ug/g	2.4 ug/g
Silver	0.3 ug/g	<0.3	<0.3	-	-	20 ug/g	25 ug/g
Thallium	1.0 ug/g	<1.0	<1.0	-	-	1 ug/g	1 ug/g
Uranium	1.0 ug/g	<1.0	<1.0	-	-	23 ug/g	23 ug/g
Vanadium	10.0 ug/g	13.4	24.0	-	-	86 ug/g	86 ug/g
Zinc	20.0 ug/g	<20.0	36.9	-	-	340 ug/g	340 ug/g
Volatiles							
Acetone	0.50 ug/g	<0.50	<0.50	-	-	16 ug/g	28 ug/g
Benzene	0.02 ug/g	<0.02	<0.02	-	-	0.21 ug/g	0.17 ug/g
Bromodichloromethane	0.05 ug/g	<0.05	<0.05	-	-	13 ug/g	13 ug/g
Bromoform	0.05 ug/g	<0.05	<0.05	-	-	0.27 ug/g	0.26 ug/g

	Client ID:	BH7-5	BH8-3			Criteria:	
	Sample Date:	31-Oct-23 09:00	31-Oct-23 09:00			Reg 153/04 -T3 Res/Park, coarse	Reg 153/04 -T3 Res/Park, fine
	Sample ID:	2344316-09	2344316-10				
	Matrix:	Soil	Soil				
	MDL/Units						
Volatiles							
Bromomethane	0.05 ug/g	<0.05	<0.05	-	-	0.05 ug/g	0.05 ug/g
Carbon Tetrachloride	0.05 ug/g	<0.05	<0.05	-	-	0.05 ug/g	0.12 ug/g
Chlorobenzene	0.05 ug/g	<0.05	<0.05	-	-	2.4 ug/g	2.7 ug/g
Chloroform	0.05 ug/g	<0.05	<0.05	-	-	0.05 ug/g	0.18 ug/g
Dibromochloromethane	0.05 ug/g	<0.05	<0.05	-	-	9.4 ug/g	9.4 ug/g
Dichlorodifluoromethane	0.05 ug/g	<0.05	<0.05	-	-	16 ug/g	25 ug/g
1,2-Dichlorobenzene	0.05 ug/g	<0.05	<0.05	-	-	3.4 ug/g	4.3 ug/g
1,3-Dichlorobenzene	0.05 ug/g	<0.05	<0.05	-	-	4.8 ug/g	6 ug/g
1,4-Dichlorobenzene	0.05 ug/g	<0.05	<0.05	-	-	0.083 ug/g	0.097 ug/g
1,1-Dichloroethane	0.05 ug/g	<0.05	<0.05	-	-	3.5 ug/g	11 ug/g
1,2-Dichloroethane	0.05 ug/g	<0.05	<0.05	-	-	0.05 ug/g	0.05 ug/g
1,1-Dichloroethylene	0.05 ug/g	<0.05	<0.05	-	-	0.05 ug/g	0.05 ug/g
cis-1,2-Dichloroethylene	0.05 ug/g	<0.05	<0.05	-	-	3.4 ug/g	30 ug/g
trans-1,2-Dichloroethylene	0.05 ug/g	<0.05	<0.05	-	-	0.084 ug/g	0.75 ug/g
1,2-Dichloropropane	0.05 ug/g	<0.05	<0.05	-	-	0.05 ug/g	0.085 ug/g
cis-1,3-Dichloropropylene	0.05 ug/g	<0.05	<0.05	-	-	-	-
trans-1,3-Dichloropropylene	0.05 ug/g	<0.05	<0.05	-	-	-	-
1,3-Dichloropropene, total	0.05 ug/g	<0.05	<0.05	-	-	0.05 ug/g	0.083 ug/g
Ethylbenzene	0.05 ug/g	<0.05	<0.05	-	-	2 ug/g	15 ug/g
Ethylene dibromide (dibromoethane,	0.05 ug/g	<0.05	<0.05	-	-	0.05 ug/g	0.05 ug/g
Hexane	0.05 ug/g	<0.05	<0.05	-	-	2.8 ug/g	34 ug/g
Methyl Ethyl Ketone (2-Butanone)	0.50 ug/g	<0.50	<0.50	-	-	16 ug/g	44 ug/g
Methyl Isobutyl Ketone	0.50 ug/g	<0.50	<0.50	-	-	1.7 ug/g	4.3 ug/g
Methyl tert-butyl ether	0.05 ug/g	<0.05	<0.05	-	-	0.75 ug/g	1.4 ug/g
Methylene Chloride	0.05 ug/g	<0.05	<0.05	-	-	0.1 ug/g	0.96 ug/g

Certificate of Analysis

Report Date: 22-Nov-2023

Client: **Niagara Soils Solutions Ltd.**

Order Date: 1-Nov-2023

Client PO:

Project Description: NS23108-02

	Client ID:	BH7-5	BH8-3			Criteria:	
	Sample Date:	31-Oct-23 09:00	31-Oct-23 09:00			Reg 153/04 -T3 Res/Park, coarse	Reg 153/04 -T3 Res/Park, fine
	Sample ID:	2344316-09	2344316-10				
	Matrix:	Soil	Soil				
	MDL/Units						
Volatiles							
Styrene	0.05 ug/g	<0.05	<0.05	-	-	0.7 ug/g	2.2 ug/g
1,1,1,2-Tetrachloroethane	0.05 ug/g	<0.05	<0.05	-	-	0.058 ug/g	0.05 ug/g
1,1,2,2-Tetrachloroethane	0.05 ug/g	<0.05	<0.05	-	-	0.05 ug/g	0.05 ug/g
Tetrachloroethylene	0.05 ug/g	<0.05	<0.05	-	-	0.28 ug/g	2.3 ug/g
Toluene	0.05 ug/g	<0.05	<0.05	-	-	2.3 ug/g	6 ug/g
1,1,1-Trichloroethane	0.05 ug/g	<0.05	<0.05	-	-	0.38 ug/g	3.4 ug/g
1,1,2-Trichloroethane	0.05 ug/g	<0.05	<0.05	-	-	0.05 ug/g	0.05 ug/g
Trichloroethylene	0.05 ug/g	<0.05	<0.05	-	-	0.061 ug/g	0.52 ug/g
Trichlorofluoromethane	0.05 ug/g	<0.05	<0.05	-	-	4 ug/g	5.8 ug/g
Vinyl chloride	0.02 ug/g	<0.02	<0.02	-	-	0.02 ug/g	0.022 ug/g
m,p-Xylenes	0.05 ug/g	<0.05	<0.05	-	-	-	-
o-Xylene	0.05 ug/g	<0.05	<0.05	-	-	-	-
Xylenes, total	0.05 ug/g	<0.05	<0.05	-	-	3.1 ug/g	25 ug/g
4-Bromofluorobenzene	Surrogate	82.5%	82.5%	-	-	-	-
Toluene-d8	Surrogate	106%	106%	-	-	-	-
Dibromofluoromethane	Surrogate	78.3%	77.9%	-	-	-	-
Hydrocarbons							
F1 PHCs (C6-C10)	7 ug/g	<7	<7	-	-	55 ug/g	65 ug/g
F2 PHCs (C10-C16)	4 ug/g	<4	<4	-	-	98 ug/g	150 ug/g
F3 PHCs (C16-C34)	8 ug/g	<8	<8	-	-	300 ug/g	1300 ug/g
F4 PHCs (C34-C50)	6 ug/g	<6	<6	-	-	2800 ug/g	5600 ug/g
Semi-Volatiles							
Acenaphthene	0.02 ug/g	<0.02	<0.02	-	-	7.9 ug/g	58 ug/g
Acenaphthylene	0.02 ug/g	<0.02	<0.02	-	-	0.15 ug/g	0.17 ug/g
Anthracene	0.02 ug/g	<0.02	<0.02	-	-	0.67 ug/g	0.74 ug/g

	Client ID:	BH7-5	BH8-3			Criteria:	
	Sample Date:	31-Oct-23 09:00	31-Oct-23 09:00			Reg 153/04 -T3 Res/Park, coarse	Reg 153/04 -T3 Res/Park, fine
	Sample ID:	2344316-09	2344316-10				
	Matrix:	Soil	Soil				
	MDL/Units						
Semi-Volatiles							
Benzo [a] anthracene	0.02 ug/g	<0.02	<0.02	-	-	0.5 ug/g	0.63 ug/g
Benzo [a] pyrene	0.02 ug/g	<0.02	<0.02	-	-	0.3 ug/g	0.3 ug/g
Benzo [b] fluoranthene	0.02 ug/g	<0.02	<0.02	-	-	0.78 ug/g	0.78 ug/g
Benzo [g,h,i] perylene	0.02 ug/g	<0.02	<0.02	-	-	6.6 ug/g	7.8 ug/g
Benzo [k] fluoranthene	0.02 ug/g	<0.02	<0.02	-	-	0.78 ug/g	0.78 ug/g
Chrysene	0.02 ug/g	<0.02	<0.02	-	-	7 ug/g	7.8 ug/g
Dibenzo [a,h] anthracene	0.02 ug/g	<0.02	<0.02	-	-	0.1 ug/g	0.1 ug/g
Fluoranthene	0.02 ug/g	<0.02	<0.02	-	-	0.69 ug/g	0.69 ug/g
Fluorene	0.02 ug/g	<0.02	<0.02	-	-	62 ug/g	69 ug/g
Indeno [1,2,3-cd] pyrene	0.02 ug/g	<0.02	<0.02	-	-	0.38 ug/g	0.48 ug/g
1-Methylnaphthalene	0.02 ug/g	<0.02	<0.02	-	-	0.99 ug/g	3.4 ug/g
2-Methylnaphthalene	0.02 ug/g	<0.02	<0.02	-	-	0.99 ug/g	3.4 ug/g
Methylnaphthalene (1&2)	0.03 ug/g	<0.03	<0.03	-	-	0.99 ug/g	3.4 ug/g
Naphthalene	0.01 ug/g	<0.01	<0.01	-	-	0.6 ug/g	0.75 ug/g
Phenanthrene	0.02 ug/g	<0.02	<0.02	-	-	6.2 ug/g	7.8 ug/g
Pyrene	0.02 ug/g	<0.02	<0.02	-	-	78 ug/g	78 ug/g
2-Fluorobiphenyl	Surrogate	65.6%	66.6%	-	-	-	-
Terphenyl-d14	Surrogate	49.7% [2]	77.1%	-	-	-	-

Method Quality Control: Blank

Analyte	Result	Reporting Limit	Units	%REC	%REC Limit	RPD	RPD Limit	Notes
General Inorganics								
SAR	ND	0.01	N/A					
Conductivity	ND	5	uS/cm					
Cyanide, free	ND	0.03	ug/g					
Hydrocarbons								
F1 PHCs (C6-C10)	ND	7	ug/g					
F2 PHCs (C10-C16)	ND	4	ug/g					
F3 PHCs (C16-C34)	ND	8	ug/g					
F4 PHCs (C34-C50)	ND	6	ug/g					
Metals								
Antimony	ND	1.0	ug/g					
Arsenic	ND	1.0	ug/g					
Barium	ND	1.0	ug/g					
Beryllium	ND	0.5	ug/g					
Boron, available	ND	0.5	ug/g					
Boron	ND	5.0	ug/g					
Cadmium	ND	0.5	ug/g					
Chromium (VI)	ND	0.2	ug/g					
Chromium	ND	5.0	ug/g					
Cobalt	ND	1.0	ug/g					
Copper	ND	5.0	ug/g					
Lead	ND	1.0	ug/g					
Mercury	ND	0.1	ug/g					
Molybdenum	ND	1.0	ug/g					
Nickel	ND	5.0	ug/g					
Selenium	ND	1.0	ug/g					
Silver	ND	0.3	ug/g					
Thallium	ND	1.0	ug/g					
Uranium	ND	1.0	ug/g					
Vanadium	ND	10.0	ug/g					
Zinc	ND	20.0	ug/g					
Semi-Volatiles								
Acenaphthene	ND	0.02	ug/g					

Method Quality Control: Blank

Analyte	Result	Reporting Limit	Units	%REC	%REC Limit	RPD	RPD Limit	Notes
Acenaphthylene	ND	0.02	ug/g					
Anthracene	ND	0.02	ug/g					
Benzo [a] anthracene	ND	0.02	ug/g					
Benzo [a] pyrene	ND	0.02	ug/g					
Benzo [b] fluoranthene	ND	0.02	ug/g					
Benzo [g,h,i] perylene	ND	0.02	ug/g					
Benzo [k] fluoranthene	ND	0.02	ug/g					
Chrysene	ND	0.02	ug/g					
Dibenzo [a,h] anthracene	ND	0.02	ug/g					
Fluoranthene	ND	0.02	ug/g					
Fluorene	ND	0.02	ug/g					
Indeno [1,2,3-cd] pyrene	ND	0.02	ug/g					
1-Methylnaphthalene	ND	0.02	ug/g					
2-Methylnaphthalene	ND	0.02	ug/g					
Methylnaphthalene (1&2)	ND	0.03	ug/g					
Naphthalene	ND	0.01	ug/g					
Phenanthrene	ND	0.02	ug/g					
Pyrene	ND	0.02	ug/g					
Surrogate: 2-Fluorobiphenyl	*0.444*		*%*	*88.7*	*50-140*			
Surrogate: Terphenyl-d14	*0.476*		*%*	*95.2*	*50-140*			
Volatiles								
Acetone	ND	0.50	ug/g					
Benzene	ND	0.02	ug/g					
Bromodichloromethane	ND	0.05	ug/g					
Bromoform	ND	0.05	ug/g					
Bromomethane	ND	0.05	ug/g					
Carbon Tetrachloride	ND	0.05	ug/g					
Chlorobenzene	ND	0.05	ug/g					
Chloroform	ND	0.05	ug/g					
Dibromochloromethane	ND	0.05	ug/g					
Dichlorodifluoromethane	ND	0.05	ug/g					
1,2-Dichlorobenzene	ND	0.05	ug/g					

Method Quality Control: Blank

Analyte	Result	Reporting Limit	Units	%REC	%REC Limit	RPD	RPD Limit	Notes
1,3-Dichlorobenzene	ND	0.05	ug/g					
1,4-Dichlorobenzene	ND	0.05	ug/g					
1,1-Dichloroethane	ND	0.05	ug/g					
1,2-Dichloroethane	ND	0.05	ug/g					
1,1-Dichloroethylene	ND	0.05	ug/g					
cis-1,2-Dichloroethylene	ND	0.05	ug/g					
trans-1,2-Dichloroethylene	ND	0.05	ug/g					
1,2-Dichloropropane	ND	0.05	ug/g					
cis-1,3-Dichloropropylene	ND	0.05	ug/g					
trans-1,3-Dichloropropylene	ND	0.05	ug/g					
1,3-Dichloropropene, total	ND	0.05	ug/g					
Ethylbenzene	ND	0.05	ug/g					
Ethylene dibromide (dibromoethane, 1,2-)	ND	0.05	ug/g					
Hexane	ND	0.05	ug/g					
Methyl Ethyl Ketone (2-Butanone)	ND	0.50	ug/g					
Methyl Isobutyl Ketone	ND	0.50	ug/g					
Methyl tert-butyl ether	ND	0.05	ug/g					
Methylene Chloride	ND	0.05	ug/g					
Styrene	ND	0.05	ug/g					
1,1,1,2-Tetrachloroethane	ND	0.05	ug/g					
1,1,2,2-Tetrachloroethane	ND	0.05	ug/g					
Tetrachloroethylene	ND	0.05	ug/g					
Toluene	ND	0.05	ug/g					
1,1,1-Trichloroethane	ND	0.05	ug/g					
1,1,2-Trichloroethane	ND	0.05	ug/g					
Trichloroethylene	ND	0.05	ug/g					
Trichlorofluoromethane	ND	0.05	ug/g					
Vinyl chloride	ND	0.02	ug/g					
m,p-Xylenes	ND	0.05	ug/g					
o-Xylene	ND	0.05	ug/g					
Xylenes, total	ND	0.05	ug/g					
Surrogate: 4-Bromofluorobenzene	*7.00*		*%*	*86.8*	*50-140*			

Method Quality Control: Blank

Analyte	Result	Reporting Limit	Units	%REC	%REC Limit	RPD	RPD Limit	Notes
Surrogate: Dibromofluoromethane	*7.19*		*%*	*89.4*	*50-140*			
Surrogate: Toluene-d8	*8.34*		*%*	*104*	*50-140*			
Benzene	ND	0.02	ug/g					
Ethylbenzene	ND	0.05	ug/g					
Toluene	ND	0.05	ug/g					
m,p-Xylenes	ND	0.05	ug/g					
o-Xylene	ND	0.05	ug/g					
Xylenes, total	ND	0.05	ug/g					
Surrogate: Toluene-d8	*8.34*		*%*	*104*	*50-140*			

Method Quality Control: Duplicate

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
General Inorganics									
SAR	2.80	0.01	N/A	2.74			2.2	30	
Conductivity	514	5	uS/cm	514			0.1	5	
Cyanide, free	ND	0.03	ug/g	ND			NC	35	
pH	7.92	0.05	pH Units	7.89			0.4	10	
Hydrocarbons									
F1 PHCs (C6-C10)	ND	7	ug/g	ND			NC	40	
F2 PHCs (C10-C16)	ND	4	ug/g	ND			NC	30	
F3 PHCs (C16-C34)	98	8	ug/g	ND			NC	30	
F4 PHCs (C34-C50)	ND	6	ug/g	ND			NC	30	
Metals									
Antimony	ND	1.0	ug/g	ND			NC	30	
Arsenic	5.1	1.0	ug/g	6.0			15.9	30	
Barium	40.1	1.0	ug/g	39.0			3.0	30	
Beryllium	ND	0.5	ug/g	ND			NC	30	
Boron, available	0.55	0.5	ug/g	0.55			0.6	35	
Boron	ND	5.0	ug/g	ND			NC	30	
Cadmium	ND	0.5	ug/g	ND			NC	30	
Chromium (VI)	ND	0.2	ug/g	ND			NC	35	
Chromium	9.7	5.0	ug/g	10.0			2.5	30	
Cobalt	3.6	1.0	ug/g	3.9			7.9	30	
Copper	19.2	5.0	ug/g	14.2			29.5	30	
Lead	8.0	1.0	ug/g	7.2			10.1	30	
Mercury	ND	0.1	ug/g	ND			NC	30	
Molybdenum	1.6	1.0	ug/g	1.7			4.5	30	
Nickel	ND	5.0	ug/g	ND			NC	30	
Selenium	ND	1.0	ug/g	ND			NC	30	
Silver	ND	0.3	ug/g	ND			NC	30	
Thallium	ND	1.0	ug/g	ND			NC	30	
Uranium	ND	1.0	ug/g	ND			NC	30	
Vanadium	16.7	10.0	ug/g	17.5			4.9	30	

Method Quality Control: Duplicate

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
Zinc	39.1	20.0	ug/g	41.4			5.7	30	
Physical Characteristics									
% Solids	81.6	0.1	% by Wt.	83.2			1.9	25	
Semi-Volatiles									
Acenaphthene	ND	0.02	ug/g	ND			NC	40	
Acenaphthylene	ND	0.02	ug/g	ND			NC	40	
Anthracene	ND	0.02	ug/g	ND			NC	40	
Benzo [a] anthracene	ND	0.02	ug/g	ND			NC	40	
Benzo [a] pyrene	ND	0.02	ug/g	ND			NC	40	
Benzo [b] fluoranthene	ND	0.02	ug/g	ND			NC	40	
Benzo [g,h,i] perylene	ND	0.02	ug/g	ND			NC	40	
Benzo [k] fluoranthene	ND	0.02	ug/g	ND			NC	40	
Chrysene	ND	0.02	ug/g	ND			NC	40	
Dibenzo [a,h] anthracene	ND	0.02	ug/g	ND			NC	40	
Fluoranthene	ND	0.02	ug/g	ND			NC	40	
Fluorene	ND	0.02	ug/g	ND			NC	40	
Indeno [1,2,3-cd] pyrene	ND	0.02	ug/g	ND			NC	40	
1-Methylnaphthalene	ND	0.02	ug/g	ND			NC	40	
2-Methylnaphthalene	ND	0.02	ug/g	ND			NC	40	
Naphthalene	ND	0.01	ug/g	ND			NC	40	
Phenanthrene	ND	0.02	ug/g	ND			NC	40	
Pyrene	ND	0.02	ug/g	ND			NC	40	
Surrogate: 2-Fluorobiphenyl	*0.409*		*%*		*70.3*	*50-140*			
Surrogate: Terphenyl-d14	*0.442*		*%*		*76.0*	*50-140*			
Volatiles									
Acetone	ND	0.50	ug/g	ND			NC	50	
Benzene	ND	0.02	ug/g	ND			NC	50	
Bromodichloromethane	ND	0.05	ug/g	ND			NC	50	
Bromoform	ND	0.05	ug/g	ND			NC	50	
Bromomethane	ND	0.05	ug/g	ND			NC	50	
Carbon Tetrachloride	ND	0.05	ug/g	ND			NC	50	

Method Quality Control: Duplicate

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
Chlorobenzene	ND	0.05	ug/g	ND			NC	50	
Chloroform	ND	0.05	ug/g	ND			NC	50	
Dibromochloromethane	ND	0.05	ug/g	ND			NC	50	
Dichlorodifluoromethane	ND	0.05	ug/g	ND			NC	50	
1,2-Dichlorobenzene	ND	0.05	ug/g	ND			NC	50	
1,3-Dichlorobenzene	ND	0.05	ug/g	ND			NC	50	
1,4-Dichlorobenzene	ND	0.05	ug/g	ND			NC	50	
1,1-Dichloroethane	ND	0.05	ug/g	ND			NC	50	
1,2-Dichloroethane	ND	0.05	ug/g	ND			NC	50	
1,1-Dichloroethylene	ND	0.05	ug/g	ND			NC	50	
cis-1,2-Dichloroethylene	ND	0.05	ug/g	ND			NC	50	
trans-1,2-Dichloroethylene	ND	0.05	ug/g	ND			NC	50	
1,2-Dichloropropane	ND	0.05	ug/g	ND			NC	50	
cis-1,3-Dichloropropylene	ND	0.05	ug/g	ND			NC	50	
trans-1,3-Dichloropropylene	ND	0.05	ug/g	ND			NC	50	
Ethylbenzene	ND	0.05	ug/g	ND			NC	50	
Ethylene dibromide (dibromoethane, 1,2-)	ND	0.05	ug/g	ND			NC	50	
Hexane	ND	0.05	ug/g	ND			NC	50	
Methyl Ethyl Ketone (2-Butanone)	ND	0.50	ug/g	ND			NC	50	
Methyl Isobutyl Ketone	ND	0.50	ug/g	ND			NC	50	
Methyl tert-butyl ether	ND	0.05	ug/g	ND			NC	50	
Methylene Chloride	ND	0.05	ug/g	ND			NC	50	
Styrene	ND	0.05	ug/g	ND			NC	50	
1,1,1,2-Tetrachloroethane	ND	0.05	ug/g	ND			NC	50	
1,1,2,2-Tetrachloroethane	ND	0.05	ug/g	ND			NC	50	
Tetrachloroethylene	ND	0.05	ug/g	ND			NC	50	
Toluene	ND	0.05	ug/g	ND			NC	50	
1,1,1-Trichloroethane	ND	0.05	ug/g	ND			NC	50	
1,1,2-Trichloroethane	ND	0.05	ug/g	ND			NC	50	
Trichloroethylene	ND	0.05	ug/g	ND			NC	50	
Trichlorofluoromethane	ND	0.05	ug/g	ND			NC	50	

Method Quality Control: Duplicate

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
Vinyl chloride	ND	0.02	ug/g	ND			NC	50	
m,p-Xylenes	ND	0.05	ug/g	ND			NC	50	
o-Xylene	ND	0.05	ug/g	ND			NC	50	
Surrogate: 4-Bromofluorobenzene	*5.95*		*%*		*85.4*	*50-140*			
Surrogate: Dibromofluoromethane	*5.95*		*%*		*85.8*	*50-140*			
Surrogate: Toluene-d8	*7.31*		*%*		*105*	*50-140*			
Benzene	ND	0.02	ug/g	ND			NC	50	
Ethylbenzene	ND	0.05	ug/g	ND			NC	50	
Toluene	ND	0.05	ug/g	ND			NC	50	
m,p-Xylenes	ND	0.05	ug/g	ND			NC	50	
o-Xylene	ND	0.05	ug/g	ND			NC	50	
Surrogate: Toluene-d8	*7.31*		*%*		*105*	*50-140*			

Method Quality Control: Spike

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
General Inorganics									
Cyanide, free	0.306	0.03	ug/g	ND	88.3	70-130			
Hydrocarbons									
F1 PHCs (C6-C10)	64	7	ug/g	ND	89.8	80-120			
F2 PHCs (C10-C16)	120	4	ug/g	ND	118	60-140			
F3 PHCs (C16-C34)	281	8	ug/g	ND	123	60-140			
F4 PHCs (C34-C50)	206	6	ug/g	ND	125	60-140			
Metals									
Antimony	49.9	1.0	ug/g	ND	99.2	70-130			
Arsenic	56.0	1.0	ug/g	2.4	107	70-130			
Barium	70.4	1.0	ug/g	15.6	110	70-130			
Beryllium	49.5	0.5	ug/g	ND	98.7	70-130			
Boron, available	4.95	0.5	ug/g	0.55	88.1	70-122			
Boron	49.2	5.0	ug/g	ND	95.3	70-130			
Cadmium	53.4	0.5	ug/g	ND	107	70-130			
Chromium (VI)	5.6	0.2	ug/g	ND	96.0	70-130			
Chromium	58.6	5.0	ug/g	ND	109	70-130			
Cobalt	52.3	1.0	ug/g	1.6	101	70-130			
Copper	55.3	5.0	ug/g	5.7	99.1	70-130			
Lead	56.8	1.0	ug/g	2.9	108	70-130			
Mercury	1.38	0.1	ug/g	ND	92.3	70-130			
Molybdenum	54.7	1.0	ug/g	ND	108	70-130			
Nickel	52.5	5.0	ug/g	ND	102	70-130			
Selenium	55.6	1.0	ug/g	ND	111	70-130			
Silver	44.9	0.3	ug/g	ND	89.7	70-130			
Thallium	53.7	1.0	ug/g	ND	107	70-130			
Uranium	56.6	1.0	ug/g	ND	113	70-130			
Vanadium	60.3	10.0	ug/g	ND	107	70-130			
Zinc	69.4	20.0	ug/g	ND	106	70-130			
Semi-Volatiles									
Acenaphthene	0.401	0.02	ug/g	ND	68.9	50-140			

Method Quality Control: Spike

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
Acenaphthylene	0.430	0.02	ug/g	ND	73.9	50-140			
Anthracene	0.387	0.02	ug/g	ND	66.5	50-140			
Benzo [a] anthracene	0.425	0.02	ug/g	ND	73.1	50-140			
Benzo [a] pyrene	0.394	0.02	ug/g	ND	67.7	50-140			
Benzo [b] fluoranthene	0.407	0.02	ug/g	ND	70.0	50-140			
Benzo [g,h,i] perylene	0.415	0.02	ug/g	ND	71.4	50-140			
Benzo [k] fluoranthene	0.406	0.02	ug/g	ND	69.9	50-140			
Chrysene	0.423	0.02	ug/g	ND	72.7	50-140			
Dibenzo [a,h] anthracene	0.436	0.02	ug/g	ND	75.0	50-140			
Fluoranthene	0.491	0.02	ug/g	ND	84.4	50-140			
Fluorene	0.458	0.02	ug/g	ND	78.8	50-140			
Indeno [1,2,3-cd] pyrene	0.444	0.02	ug/g	ND	76.4	50-140			
1-Methylnaphthalene	0.485	0.02	ug/g	ND	83.4	50-140			
2-Methylnaphthalene	0.458	0.02	ug/g	ND	78.7	50-140			
Naphthalene	0.414	0.01	ug/g	ND	71.1	50-140			
Phenanthrene	0.414	0.02	ug/g	ND	71.2	50-140			
Pyrene	0.398	0.02	ug/g	ND	68.5	50-140			
Surrogate: 2-Fluorobiphenyl	*0.412*		*%*		*70.9*	*50-140*			
Surrogate: Terphenyl-d14	*0.413*		*%*		*71.1*	*50-140*			
Volatiles									
Acetone	8.84	0.50	ug/g	ND	88.4	50-140			
Benzene	3.83	0.02	ug/g	ND	95.3	60-130			
Bromodichloromethane	3.76	0.05	ug/g	ND	93.5	60-130			
Bromoform	3.94	0.05	ug/g	ND	97.6	60-130			
Bromomethane	4.12	0.05	ug/g	ND	103	50-140			
Carbon Tetrachloride	3.79	0.05	ug/g	ND	94.4	60-130			
Chlorobenzene	3.94	0.05	ug/g	ND	97.5	60-130			
Chloroform	4.30	0.05	ug/g	ND	107	60-130			
Dibromochloromethane	3.77	0.05	ug/g	ND	93.3	60-130			
Dichlorodifluoromethane	6.10	0.05	ug/g	ND	152	50-140			QS-02
1,2-Dichlorobenzene	3.82	0.05	ug/g	ND	95.0	60-130			

Method Quality Control: Spike

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
1,3-Dichlorobenzene	3.87	0.05	ug/g	ND	95.8	60-130			
1,4-Dichlorobenzene	3.77	0.05	ug/g	ND	93.3	60-130			
1,1-Dichloroethane	3.91	0.05	ug/g	ND	97.2	60-130			
1,2-Dichloroethane	3.85	0.05	ug/g	ND	95.3	60-130			
1,1-Dichloroethylene	3.92	0.05	ug/g	ND	97.6	60-130			
cis-1,2-Dichloroethylene	3.76	0.05	ug/g	ND	94.0	60-130			
trans-1,2-Dichloroethylene	3.69	0.05	ug/g	ND	91.8	60-130			
1,2-Dichloropropane	3.85	0.05	ug/g	ND	95.2	60-130			
cis-1,3-Dichloropropylene	3.76	0.05	ug/g	ND	93.6	60-130			
trans-1,3-Dichloropropylene	4.00	0.05	ug/g	ND	99.6	60-130			
Ethylbenzene	3.84	0.05	ug/g	ND	95.4	60-130			
Ethylene dibromide (dibromoethane, 1,2-)	3.78	0.05	ug/g	ND	94.0	60-130			
Hexane	4.08	0.05	ug/g	ND	102	60-130			
Methyl Ethyl Ketone (2-Butanone)	9.25	0.50	ug/g	ND	92.5	50-140			
Methyl Isobutyl Ketone	10.7	0.50	ug/g	ND	107	50-140			
Methyl tert-butyl ether	9.03	0.05	ug/g	ND	90.3	50-140			
Methylene Chloride	3.98	0.05	ug/g	ND	99.0	60-130			
Styrene	3.80	0.05	ug/g	ND	94.6	60-130			
1,1,1,2-Tetrachloroethane	3.75	0.05	ug/g	ND	93.4	60-130			
1,1,2,2-Tetrachloroethane	3.20	0.05	ug/g	ND	79.6	60-130			
Tetrachloroethylene	3.88	0.05	ug/g	ND	96.4	60-130			
Toluene	4.00	0.05	ug/g	ND	100	60-130			
1,1,1-Trichloroethane	3.77	0.05	ug/g	ND	93.8	60-130			
1,1,2-Trichloroethane	3.91	0.05	ug/g	ND	97.3	60-130			
Trichloroethylene	4.24	0.05	ug/g	ND	105	60-130			
Trichlorofluoromethane	4.15	0.05	ug/g	ND	103	50-140			
Vinyl chloride	4.05	0.02	ug/g	ND	101	50-140			
m,p-Xylenes	7.68	0.05	ug/g	ND	95.7	60-130			
o-Xylene	3.92	0.05	ug/g	ND	97.4	60-130			
Surrogate: 4-Bromofluorobenzene	*8.03*		*%*		*99.5*	*50-140*			
Surrogate: Dibromofluoromethane	*8.83*		*%*		*110*	*50-140*			

Method Quality Control: Spike

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
Surrogate: Toluene-d8	*8.06*		*%*		*100*	*50-140*			
Benzene	3.83	0.02	ug/g	ND	95.3	60-130			
Ethylbenzene	3.84	0.05	ug/g	ND	95.4	60-130			
Toluene	4.00	0.05	ug/g	ND	100	60-130			
m,p-Xylenes	7.68	0.05	ug/g	ND	95.7	60-130			
o-Xylene	3.92	0.05	ug/g	ND	97.4	60-130			
Surrogate: Toluene-d8	*8.06*		*%*		*100*	*50-140*			

Qualifier Notes:

Sample Qualifiers :

2: Surrogate recovery outside of control limits. The data was accepted based on valid recovery of the remaining surrogate.

QC Qualifiers:

QS-02 Spike level outside of control limits. Analysis batch accepted based on other QC included in the batch.

Sample Data Revisions:

None

Certificate of Analysis

Report Date: 22-Nov-2023

Client: **Niagara Soils Solutions Ltd.**

Order Date: 1-Nov-2023

Client PO:

Project Description: NS23108-02

Work Order Revisions / Comments:

REVISION 1 - This report includes an updated regulation as per the client.

Other Report Notes:

n/a: not applicable

ND: Not Detected

MDL: Method Detection Limit

Source Result: Data used as source for matrix and duplicate samples

%REC: Percent recovery.

RPD: Relative percent difference.

NC: Not Calculated

Soil results are reported on a dry weight basis unlesss otherwise noted.

Where %Solids is reported, moisture loss includes the loss of volatile hydrocarbons.

CCME PHC additional information:

- The method for the analysis of PHCs complies with the Reference Method for the CWS PHC and is validated for use in the laboratory. All prescribed quality criteria identified in the method has been met.

- F1 range corrected for BTEX.

- F2 to F3 ranges corrected for appropriate PAHs where available.

- The gravimetric heavy hydrocarbons (F4G) are not to be added to C6 to C50 hydrocarbons.

- In the case where F4 and F4G are both reported, the greater of the two results is to be used for comparison to CWS PHC criteria.

- When reported, data for F4G has been processed using a silica gel cleanup.

PARACEL LABORATORIES LTD. | TRUSTED. RESPONSIVE. RELIABLE.

Paracel ID: 2344316

Chain Of Custody
(Lab Use Only)

Client Name: NSSL	Project Ref: NS23/05-02
Contact Name: Jodie Glasius	Quote #: 23-030
Address: 3300 Merritville Highway, Unit 4, Thorold, ON L2V 4Y6	PO #:
Telephone: 289-407-6341	E-mail: Jglasius@nssl.ca

Page 1 of 1

Turnaround Time
☐ 1 day ☐ 3 day
☐ 2 day ☒ Regular
Date Required: ____

☒ REG 153/04 ☐ REG 406/19

Other Regulation
☐ Table 1 ☐ Res/Park ☐ Med/Fine
☒ Table 2 ☐ Ind/Comm ☐ Coarse
☐ Table 3 ☐ Agri/Other
☐ Table ____
For RSC: ☒ Yes ☐ No
☐ REG 558 ☐ PWQO
☐ CCME ☐ MISA
☐ SU - Sani ☐ SU - Storm
Mun: ____
☐ Other:

Matrix Type: S (Soil/Sed.) GW (Ground Water) SW (Surface Water) SS (Storm/Sanitary Sewer) P (Paint) A (Air) O (Other)

Required Analysis

	Sample ID/Location Name	Matrix	Air Volume	# of Containers	Sample Taken Date	Sample Taken Time	Metals and Inorganics	PAH	PHC/VOC	Metals ICP/MS	PHC/BTEX							
1	BH/MW1-5	S		3	10/31/23		X	X	X									
2	BH/MW1-7			3			X	X	X									
3	BH/MW2-3			3			X	X	X									
4	BH/MW3-3			5			X	X	X									
5	BH/MW3-6			4			X	X	X									
6	BH4-4			5				X	X	X								
7	BH5-2			5				X		X	X							
8	BH6-1			5				X		X	X							
9	BH7-5			3				X	X	X								
10	BH8-3	V		3	V			X	X	X								

Comments:

Method of Delivery: WALKIN

Relinquished By (Sign):	Received By Driver/Depot: BHOMENICK	Received at Lab: C-PLY	Verified By: C-PLY
Relinquished By (Print): Jacob Told.	Date/Time: 1 NOV 23	Date/Time: 11/02/23 8:20	Date/Time: 11/02/23 9:00
Date/Time: 11/01/23	Temperature: 18 °C	Temperature: 6.3	pH Verified: ☐ By: —

APPENDIX C

GRAIN SIZE ANALYSIS

Project No.: NT23233 November 7, 2023

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

Attention: Ms. Jodie Glasier, Vice President

RE: Laboratory Analysis for Soil Texture Classification
Niagara Soils Solutions Ltd. Project No. NS23108-02
7701 Lundy's Lane, 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 Wednesday November 1st, 2023, 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.

Sample I.D.	*Percent Passing 75 µm [#200] Sieve*	*Percent Retained on 75 µm [#200] Sieve*	*Soil Texture*
BH 4-5	95.9 %	4.1 %	Fine/Medium Grained
BH 5-1	24.0 %	76.0 %	Coarse Grained
BH 8-4	88.4 %	11.6 %	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

APPENDIX D

CERTIFICATES OF ANALYSIS - GROUNDWATER

AGAT Laboratories

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
3300 MERRITTVILLE HIGHWAY
THOROLD, ON L2V 4Y6
289-407-6341

ATTENTION TO: Jodie Glasier

PROJECT: NS23108-02

AGAT WORK ORDER: 23T090294

TRACE ORGANICS REVIEWED BY: Neli Popnikolova, Senior Chemist

WATER ANALYSIS REVIEWED BY: Nivine Basily, Inorganic Team Lead

DATE REPORTED: Nov 22, 2023

PAGES (INCLUDING COVER): 18

VERSION*: 1

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

Notes

Disclaimer:

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

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

Certificate of Analysis

AGAT WORK ORDER: 23T090294

PROJECT: NS23108-02

CLIENT NAME: NIAGARA SOIL SOLUTIONS LTD

ATTENTION TO: Jodie Glasier

SAMPLING SITE:7701 Lundys Lane

SAMPLED BY:J. Toldi

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

DATE RECEIVED: 2023-11-07

DATE REPORTED: 2023-11-22

		SAMPLE DESCRIPTION:		BH/MW1	BH/MW2	BH/MW3
		SAMPLE TYPE:		Water	Water	Water
		DATE SAMPLED:		2023-11-06	2023-11-06	2023-11-06
Parameter	Unit	G / S	RDL	5436555	5436558	5436559
Naphthalene	µg/L	1400	0.20	<0.20	<0.20	<0.20
Acenaphthylene	µg/L	1.8	0.20	<0.20	<0.20	<0.20
Acenaphthene	µg/L	600	0.20	<0.20	<0.20	<0.20
Fluorene	µg/L	400	0.20	<0.20	<0.20	<0.20
Phenanthrene	µg/L	580	0.10	<0.10	<0.10	<0.10
Anthracene	µg/L	2.4	0.10	<0.10	<0.10	<0.10
Fluoranthene	µg/L	130	0.20	<0.20	<0.20	<0.20
Pyrene	µg/L	68	0.20	<0.20	<0.20	<0.20
Benzo(a)anthracene	µg/L	4.7	0.20	<0.20	<0.20	<0.20
Chrysene	µg/L	1	0.10	<0.10	<0.10	<0.10
Benzo(b)fluoranthene	µg/L	0.75	0.10	<0.10	<0.10	<0.10
Benzo(k)fluoranthene	µg/L	0.4	0.10	<0.10	<0.10	<0.10
Benzo(a)pyrene	µg/L	0.81	0.01	<0.01	<0.01	<0.01
Indeno(1,2,3-cd)pyrene	µg/L	0.2	0.20	<0.20	<0.20	<0.20
Dibenz(a,h)anthracene	µg/L	0.52	0.20	<0.20	<0.20	<0.20
Benzo(g,h,i)perylene	µg/L	0.2	0.20	<0.20	<0.20	<0.20
2-and 1-methyl Naphthalene	µg/L	1800	0.20	<0.20	<0.20	<0.20
Sediment				3	3	3
Surrogate	**Unit**	**Acceptable Limits**				
Naphthalene-d8	%	50-140		110	63	99
Acridine-d9	%	50-140		105	68	79
Terphenyl-d14	%	50-140		102	72	86

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 3: Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition - 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.

5436555-5436559 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: N Popnikolof

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Certificate of Analysis

AGAT WORK ORDER: 23T090294

PROJECT: NS23108-02

CLIENT NAME: NIAGARA SOIL SOLUTIONS LTD

ATTENTION TO: Jodie Glasier

SAMPLING SITE:7701 Lundys Lane

SAMPLED BY:J. Toldi

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

DATE RECEIVED: 2023-11-07

DATE REPORTED: 2023-11-22

		SAMPLE DESCRIPTION:		BH/MW1	BH/MW2	BH/MW3
		SAMPLE TYPE:		Water	Water	Water
		DATE SAMPLED:		2023-11-06	2023-11-06	2023-11-06
Parameter	**Unit**	**G / S**	**RDL**	**5436555**	**5436558**	**5436559**
F1 (C6 to C10)	µg/L	750	25	<25	<25	<25
F1 (C6 to C10) minus BTEX	µg/L	750	25	<25	<25	<25
F2 (C10 to C16)	µg/L	150	100	<100	378	<100
F2 (C10 to C16) minus Naphthalene	µg/L		100	<100	378	<100
F3 (C16 to C34)	µg/L	500	100	<100	<100	<100
F3 (C16 to C34) minus PAHs	µg/L		100	<100	<100	<100
F4 (C34 to C50)	µg/L	500	100	<100	<100	<100
Gravimetric Heavy Hydrocarbons	µg/L		500	NA	NA	NA
Sediment				3	3	3
Surrogate	**Unit**	**Acceptable Limits**				
Toluene-d8	%	50-140		99	102	98
Terphenyl	% Recovery	60-140		72	73	68

Certified By: N Popowich

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AGAT WORK ORDER: 23T090294

PROJECT: NS23108-02

CLIENT NAME: NIAGARA SOIL SOLUTIONS LTD

ATTENTION TO: Jodie Glasier

SAMPLING SITE:7701 Lundys Lane

SAMPLED BY:J. Toldi

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

DATE RECEIVED: 2023-11-07 **DATE REPORTED: 2023-11-22**

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.

5436555 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

5436558 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.
The F2 result is due to the presence of one large individual unidentified compound.

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

5436559 The C6-C10 fraction is calculated using toluene response factor.

Certified By: N Popowich

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Certificate of Analysis

AGAT WORK ORDER: 23T090294

PROJECT: NS23108-02

CLIENT NAME: NIAGARA SOIL SOLUTIONS LTD

ATTENTION TO: Jodie Glasier

SAMPLING SITE:7701 Lundys Lane

SAMPLED BY:J. Toldi

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

DATE RECEIVED: 2023-11-07

DATE REPORTED: 2023-11-22

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: N Popowich

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AGAT WORK ORDER: 23T090294

PROJECT: NS23108-02

CLIENT NAME: NIAGARA SOIL SOLUTIONS LTD

ATTENTION TO: Jodie Glasier

SAMPLING SITE:7701 Lundys Lane

SAMPLED BY:J. Toldi

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

DATE RECEIVED: 2023-11-07

DATE REPORTED: 2023-11-22

		SAMPLE DESCRIPTION:		BH/MW1	BH/MW2	BH/MW3
		SAMPLE TYPE:		Water	Water	Water
		DATE SAMPLED:		2023-11-06	2023-11-06	2023-11-06
Parameter	Unit	G / S	RDL	5436555	5436558	5436559
Dichlorodifluoromethane	µg/L	4400	0.40	<0.40	<0.40	<0.40
Vinyl Chloride	µg/L	0.5	0.17	<0.17	<0.17	<0.17
Bromomethane	µg/L	5.6	0.20	<0.20	<0.20	<0.20
Trichlorofluoromethane	µg/L	2500	0.40	<0.40	<0.40	<0.40
Acetone	µg/L	130000	1.0	<1.0	<1.0	<1.0
1,1-Dichloroethylene	µg/L	1.6	0.30	<0.30	<0.30	<0.30
Methylene Chloride	µg/L	610	0.30	<0.30	<0.30	<0.30
trans- 1,2-Dichloroethylene	µg/L	1.6	0.20	<0.20	<0.20	<0.20
Methyl tert-butyl ether	µg/L	190	0.20	<0.20	<0.20	<0.20
1,1-Dichloroethane	µg/L	320	0.30	<0.30	<0.30	<0.30
Methyl Ethyl Ketone	µg/L	470000	1.0	<1.0	<1.0	<1.0
cis- 1,2-Dichloroethylene	µg/L	1.6	0.20	<0.20	<0.20	<0.20
Chloroform	µg/L	2.4	0.20	<0.20	1.52	<0.20
1,2-Dichloroethane	µg/L	1.6	0.20	<0.20	<0.20	<0.20
1,1,1-Trichloroethane	µg/L	640	0.30	<0.30	<0.30	<0.30
Carbon Tetrachloride	µg/L	0.79	0.20	<0.20	<0.20	<0.20
Benzene	µg/L	44	0.20	<0.20	0.46	<0.20
1,2-Dichloropropane	µg/L	16	0.20	<0.20	<0.20	<0.20
Trichloroethylene	µg/L	1.6	0.20	<0.20	<0.20	<0.20
Bromodichloromethane	µg/L	85000	0.20	<0.20	<0.20	<0.20
Methyl Isobutyl Ketone	µg/L	140000	1.0	<1.0	<1.0	<1.0
1,1,2-Trichloroethane	µg/L	4.7	0.20	<0.20	<0.20	<0.20
Toluene	µg/L	18000	0.20	<0.20	0.48	<0.20
Dibromochloromethane	µg/L	82000	0.10	<0.10	<0.10	<0.10
Ethylene Dibromide	µg/L	0.25	0.10	<0.10	<0.10	<0.10
Tetrachloroethylene	µg/L	1.6	0.20	<0.20	<0.20	<0.20
1,1,1,2-Tetrachloroethane	µg/L	3.3	0.10	<0.10	<0.10	<0.10
Chlorobenzene	µg/L	630	0.10	<0.10	<0.10	<0.10
Ethylbenzene	µg/L	2300	0.10	<0.10	<0.10	<0.10
m & p-Xylene	µg/L		0.20	<0.20	<0.20	<0.20

Certified By: N Popnikolof

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Certificate of Analysis

AGAT WORK ORDER: 23T090294

PROJECT: NS23108-02

CLIENT NAME: NIAGARA SOIL SOLUTIONS LTD

ATTENTION TO: Jodie Glasier

SAMPLING SITE:7701 Lundys Lane

SAMPLED BY:J. Toldi

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

DATE RECEIVED: 2023-11-07

DATE REPORTED: 2023-11-22

		SAMPLE DESCRIPTION:		BH/MW1	BH/MW2	BH/MW3
		SAMPLE TYPE:		Water	Water	Water
		DATE SAMPLED:		2023-11-06	2023-11-06	2023-11-06
Parameter	**Unit**	**G / S**	**RDL**	**5436555**	**5436558**	**5436559**
Bromoform	µg/L	380	0.10	<0.10	<0.10	<0.10
Styrene	µg/L	1300	0.10	<0.10	<0.10	<0.10
1,1,2,2-Tetrachloroethane	µg/L	3.2	0.10	<0.10	<0.10	<0.10
o-Xylene	µg/L		0.10	<0.10	<0.10	<0.10
1,3-Dichlorobenzene	µg/L	9600	0.10	<0.10	<0.10	<0.10
1,4-Dichlorobenzene	µg/L	8	0.10	<0.10	<0.10	<0.10
1,2-Dichlorobenzene	µg/L	4600	0.10	<0.10	<0.10	<0.10
1,3-Dichloropropene	µg/L	5.2	0.30	<0.30	<0.30	<0.30
Xylenes (Total)	µg/L	4200	0.20	<0.20	<0.20	<0.20
n-Hexane	µg/L	51	0.20	<0.20	<0.20	<0.20
Surrogate	**Unit**	**Acceptable Limits**				
Toluene-d8	% Recovery	50-140		99	102	98
4-Bromofluorobenzene	% Recovery	50-140		111	115	110

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.

5436555-5436559 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: N Popowkolof

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AGAT WORK ORDER: 23T090294

PROJECT: NS23108-02

CLIENT NAME: NIAGARA SOIL SOLUTIONS LTD

ATTENTION TO: Jodie Glasier

SAMPLING SITE:7701 Lundys Lane

SAMPLED BY:J. Toldi

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

DATE RECEIVED: 2023-11-07

DATE REPORTED: 2023-11-22

		SAMPLE DESCRIPTION:		BH/MW1		BH/MW2	BH/MW3
		SAMPLE TYPE:		Water		Water	Water
		DATE SAMPLED:		2023-11-06		2023-11-06	2023-11-06
Parameter	Unit	G / S	RDL	5436555	RDL	5436558	5436559
Dissolved Antimony	µg/L	20000	1.0	<1.0	1.0	<1.0	<1.0
Dissolved Arsenic	µg/L	1900	1.0	<1.0	1.0	<1.0	<1.0
Dissolved Barium	µg/L	29000	2.0	243	2.0	143	99.0
Dissolved Beryllium	µg/L	67	0.50	<0.50	0.50	<0.50	<0.50
Dissolved Boron	µg/L	45000	10.0	16.6	10.0	85.9	171
Dissolved Cadmium	µg/L	2.7	0.20	<0.20	0.20	0.50	<0.20
Dissolved Chromium	µg/L	810	2.0	2.3	2.0	<2.0	<2.0
Dissolved Cobalt	µg/L	66	5.0	<5.0	0.50	48.7	7.79
Dissolved Copper	µg/L	87	1.0	2.2	1.0	1.1	1.4
Dissolved Lead	µg/L	25	0.50	1.09	0.50	1.51	1.79
Dissolved Molybdenum	µg/L	9200	0.50	<0.50	0.50	3.10	2.07
Dissolved Nickel	µg/L	490	1.0	2.4	1.0	35.0	5.5
Dissolved Selenium	µg/L	63	1.0	3.3	1.0	3.3	2.2
Dissolved Silver	µg/L	1.5	0.20	<0.20	0.20	<0.20	<0.20
Dissolved Thallium	µg/L	510	0.30	<0.30	0.30	<0.30	0.57
Dissolved Uranium	µg/L	420	0.50	0.53	0.50	4.42	4.07
Dissolved Vanadium	µg/L	250	0.40	1.02	0.40	0.46	0.68
Dissolved Zinc	µg/L	1100	5.0	<5.0	5.0	22.6	9.9
Mercury	µg/L	0.29	0.02	<0.02	0.02	<0.02	<0.02
Chromium VI	µg/L	140	2.000	<2.000	2.000	<2.000	<2.000
Cyanide, WAD	µg/L	66	2	<2	2	<2	<2
Dissolved Sodium	µg/L	2300000	500	936000	50	102000	39600
Chloride	µg/L	2300000	122	2020000	100	415000	116000
Electrical Conductivity	uS/cm	NA	2	6160	2	1780	1110
pH	pH Units		NA	7.62	NA	7.36	7.64

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AGAT WORK ORDER: 23T090294

PROJECT: NS23108-02

CLIENT NAME: NIAGARA SOIL SOLUTIONS LTD

ATTENTION TO: Jodie Glasier

SAMPLING SITE:7701 Lundys Lane

SAMPLED BY:J. Toldi

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

DATE RECEIVED: 2023-11-07 **DATE REPORTED: 2023-11-22**

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.

5436555-5436559 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

Dilution required, RDL has been increased accordingly.

Analysis performed at AGAT Toronto (unless marked by *)

Certified By:

AGAT Laboratories

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Exceedance Summary

AGAT WORK ORDER: 23T090294

PROJECT: NS23108-02

CLIENT NAME: NIAGARA SOIL SOLUTIONS LTD

ATTENTION TO: Jodie Glasier

SAMPLEID	SAMPLE TITLE	GUIDELINE	ANALYSIS PACKAGE	PARAMETER	UNIT	GUIDEVALUE	RESULT
5436558	BH/MW2	ON T3 NPGW CT	O. Reg. 153(511) - PHCs F1 - F4 (with PAHs and VOC) (Water)	F2 (C10 to C16)	µg/L	150	378

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Quality Assurance

CLIENT NAME: NIAGARA SOIL SOLUTIONS LTD
AGAT WORK ORDER: 23T090294
PROJECT: NS23108-02
ATTENTION TO: Jodie Glasier
SAMPLING SITE:7701 Lundys Lane
SAMPLED BY:J. Toldi

Trace Organics Analysis

RPT Date: Nov 22, 2023

PARAMETER	Batch	Sample Id	DUPLICATE			Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
			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)	5436254		<25	<25	NA	< 25	83%	60%	140%	100%	60%	140%	92%	60%	140%
F2 (C10 to C16)	5436555		NA	NA	NA	< 100	75%	60%	140%	74%	60%	140%	78%	60%	140%
F3 (C16 to C34)	5436555		NA	NA	NA	< 100	82%	60%	140%	75%	60%	140%	89%	60%	140%
F4 (C34 to C50)	5436555		NA	NA	NA	< 100	85%	60%	140%	100%	60%	140%	95%	60%	140%
O. Reg. 153(511) - VOCs (with PHC) (Water)															
Dichlorodifluoromethane	5436254		<0.40	<0.40	NA	< 0.40	119%	50%	140%	101%	50%	140%	102%	50%	140%
Vinyl Chloride	5436254		<0.17	<0.17	NA	< 0.17	113%	50%	140%	102%	50%	140%	100%	50%	140%
Bromomethane	5436254		<0.20	<0.20	NA	< 0.20	100%	50%	140%	89%	50%	140%	95%	50%	140%
Trichlorofluoromethane	5436254		<0.40	<0.40	NA	< 0.40	98%	50%	140%	84%	50%	140%	83%	50%	140%
Acetone	5436254		<1.0	<1.0	NA	< 1.0	82%	50%	140%	88%	50%	140%	107%	50%	140%
1,1-Dichloroethylene	5436254		<0.30	<0.30	NA	< 0.30	84%	50%	140%	91%	60%	130%	86%	50%	140%
Methylene Chloride	5436254		<0.30	<0.30	NA	< 0.30	76%	50%	140%	104%	60%	130%	113%	50%	140%
trans- 1,2-Dichloroethylene	5436254		<0.20	<0.20	NA	< 0.20	84%	50%	140%	106%	60%	130%	94%	50%	140%
Methyl tert-butyl ether	5436254		<0.20	<0.20	NA	< 0.20	99%	50%	140%	90%	60%	130%	84%	50%	140%
1,1-Dichloroethane	5436254		<0.30	<0.30	NA	< 0.30	100%	50%	140%	118%	60%	130%	112%	50%	140%
Methyl Ethyl Ketone	5436254		<1.0	<1.0	NA	< 1.0	85%	50%	140%	92%	50%	140%	120%	50%	140%
cis- 1,2-Dichloroethylene	5436254		<0.20	<0.20	NA	< 0.20	103%	50%	140%	115%	60%	130%	107%	50%	140%
Chloroform	5436254		<0.20	<0.20	NA	< 0.20	102%	50%	140%	113%	60%	130%	110%	50%	140%
1,2-Dichloroethane	5436254		<0.20	<0.20	NA	< 0.20	72%	50%	140%	77%	60%	130%	83%	50%	140%
1,1,1-Trichloroethane	5436254		<0.30	<0.30	NA	< 0.30	80%	50%	140%	86%	60%	130%	72%	50%	140%
Carbon Tetrachloride	5436254		<0.20	<0.20	NA	< 0.20	80%	50%	140%	90%	60%	130%	76%	50%	140%
Benzene	5436254		0.69	0.74	NA	< 0.20	106%	50%	140%	117%	60%	130%	117%	50%	140%
1,2-Dichloropropane	5436254		<0.20	<0.20	NA	< 0.20	115%	50%	140%	110%	60%	130%	117%	50%	140%
Trichloroethylene	5436555		2.30	2.20	4.4%	< 0.20	74%	50%	140%	77%	60%	130%	104%	50%	140%
Bromodichloromethane	5436254		<0.20	<0.20	NA	< 0.20	94%	50%	140%	103%	60%	130%	98%	50%	140%
Methyl Isobutyl Ketone	5436254		<1.0	<1.0	NA	< 1.0	94%	50%	140%	96%	50%	140%	102%	50%	140%
1,1,2-Trichloroethane	5436254		<0.20	<0.20	NA	< 0.20	109%	50%	140%	96%	60%	130%	104%	50%	140%
Toluene	5436254		0.70	0.69	NA	< 0.20	101%	50%	140%	88%	60%	130%	94%	50%	140%
Dibromochloromethane	5436254		<0.10	<0.10	NA	< 0.10	105%	50%	140%	94%	60%	130%	106%	50%	140%
Ethylene Dibromide	5436254		<0.10	<0.10	NA	< 0.10	112%	50%	140%	94%	60%	130%	108%	50%	140%
Tetrachloroethylene	5436254		<0.20	<0.20	NA	< 0.20	80%	50%	140%	71%	60%	130%	76%	50%	140%
1,1,1,2-Tetrachloroethane	5436254		<0.10	<0.10	NA	< 0.10	91%	50%	140%	81%	60%	130%	86%	50%	140%
Chlorobenzene	5436254		<0.10	<0.10	NA	< 0.10	95%	50%	140%	79%	60%	130%	88%	50%	140%
Ethylbenzene	5436254		<0.10	<0.10	NA	< 0.10	111%	50%	140%	113%	60%	130%	104%	50%	140%
m & p-Xylene	5436254		<0.20	<0.20	NA	< 0.20	94%	50%	140%	112%	60%	130%	115%	50%	140%
Bromoform	5436254		<0.10	<0.10	NA	< 0.10	105%	50%	140%	91%	60%	130%	113%	50%	140%
Styrene	5436254		<0.10	<0.10	NA	< 0.10	105%	50%	140%	104%	60%	130%	100%	50%	140%
1,1,2,2-Tetrachloroethane	5436254		<0.10	<0.10	NA	< 0.10	114%	50%	140%	96%	60%	130%	73%	50%	140%
o-Xylene	5436254		<0.10	<0.10	NA	< 0.10	103%	50%	140%	106%	60%	130%	111%	50%	140%

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Quality Assurance

CLIENT NAME: NIAGARA SOIL SOLUTIONS LTD
AGAT WORK ORDER: 23T090294
PROJECT: NS23108-02
ATTENTION TO: Jodie Glasier
SAMPLING SITE:7701 Lundys Lane
SAMPLED BY:J. Toldi

Trace Organics Analysis (Continued)

RPT Date: Nov 22, 2023			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	5436254		<0.10	<0.10	NA	< 0.10	101%	50%	140%	85%	60%	130%	104%	50%	140%
1,4-Dichlorobenzene	5436254		<0.10	<0.10	NA	< 0.10	103%	50%	140%	85%	60%	130%	104%	50%	140%
1,2-Dichlorobenzene	5436254		<0.10	<0.10	NA	< 0.10	101%	50%	140%	82%	60%	130%	102%	50%	140%
n-Hexane	5436254		1.14	1.24	8.4%	< 0.20	108%	50%	140%	114%	60%	130%	114%	50%	140%
O. Reg. 153(511) - PAHs (Water)															
Naphthalene	5425964		<0.20	<0.20	NA	< 0.20	107%	50%	140%	84%	50%	140%	83%	50%	140%
Acenaphthylene	5425964		<0.20	<0.20	NA	< 0.20	108%	50%	140%	90%	50%	140%	84%	50%	140%
Acenaphthene	5425964		<0.20	<0.20	NA	< 0.20	120%	50%	140%	87%	50%	140%	108%	50%	140%
Fluorene	5425964		<0.20	<0.20	NA	< 0.20	113%	50%	140%	86%	50%	140%	94%	50%	140%
Phenanthrene	5425964		<0.10	<0.10	NA	< 0.10	108%	50%	140%	93%	50%	140%	97%	50%	140%
Anthracene	5425964		<0.10	<0.10	NA	< 0.10	112%	50%	140%	93%	50%	140%	108%	50%	140%
Fluoranthene	5425964		<0.20	<0.20	NA	< 0.20	114%	50%	140%	93%	50%	140%	98%	50%	140%
Pyrene	5425964		<0.20	<0.20	NA	< 0.20	115%	50%	140%	91%	50%	140%	104%	50%	140%
Benzo(a)anthracene	5425964		<0.20	<0.20	NA	< 0.20	82%	50%	140%	70%	50%	140%	94%	50%	140%
Chrysene	5425964		<0.10	<0.10	NA	< 0.10	112%	50%	140%	81%	50%	140%	112%	50%	140%
Benzo(b)fluoranthene	5425964		<0.10	<0.10	NA	< 0.10	64%	50%	140%	89%	50%	140%	85%	50%	140%
Benzo(k)fluoranthene	5425964		<0.10	<0.10	NA	< 0.10	96%	50%	140%	99%	50%	140%	114%	50%	140%
Benzo(a)pyrene	5425964		<0.01	<0.01	NA	< 0.01	83%	50%	140%	71%	50%	140%	77%	50%	140%
Indeno(1,2,3-cd)pyrene	5425964		<0.20	<0.20	NA	< 0.20	69%	50%	140%	91%	50%	140%	74%	50%	140%
Dibenz(a,h)anthracene	5425964		<0.20	<0.20	NA	< 0.20	110%	50%	140%	82%	50%	140%	94%	50%	140%
Benzo(g,h,i)perylene	5425964		<0.20	<0.20	NA	< 0.20	76%	50%	140%	85%	50%	140%	78%	50%	140%

Comments: When the average of the sample and duplicate results is less than 5x the RDL, the Relative Percent Difference (RPD) will be indicated as Not Applicable (NA).

Certified By: N Popnikolof

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Quality Assurance

CLIENT NAME: NIAGARA SOIL SOLUTIONS LTD
AGAT WORK ORDER: 23T090294
PROJECT: NS23108-02
ATTENTION TO: Jodie Glasier
SAMPLING SITE:7701 Lundys Lane
SAMPLED BY:J. Toldi

Water Analysis

RPT Date: Nov 22, 2023			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
O. Reg. 153(511) - Metals & Inorganics (Water)															
Dissolved Antimony	5435770		1.3	<1.0	NA	< 1.0	98%	70%	130%	101%	80%	120%	105%	70%	130%
Dissolved Arsenic	5435770		1.3	<1.0	NA	< 1.0	97%	70%	130%	96%	80%	120%	107%	70%	130%
Dissolved Barium	5435770		164	158	3.7%	< 2.0	98%	70%	130%	102%	80%	120%	101%	70%	130%
Dissolved Beryllium	5435770		<0.50	<0.50	NA	< 0.50	85%	70%	130%	103%	80%	120%	98%	70%	130%
Dissolved Boron	5435770		93.1	90.5	2.8%	< 10.0	102%	70%	130%	119%	80%	120%	108%	70%	130%
Dissolved Cadmium	5435770		<0.20	<0.20	NA	< 0.20	100%	70%	130%	104%	80%	120%	104%	70%	130%
Dissolved Chromium	5435770		2.9	<2.0	NA	< 2.0	100%	70%	130%	97%	80%	120%	108%	70%	130%
Dissolved Cobalt	5435770		1.05	<0.50	NA	< 0.50	98%	70%	130%	92%	80%	120%	102%	70%	130%
Dissolved Copper	5435770		4.1	1.4	NA	< 1.0	101%	70%	130%	105%	80%	120%	97%	70%	130%
Dissolved Lead	5435770		0.78	1.82	NA	< 0.50	94%	70%	130%	99%	80%	120%	99%	70%	130%
Dissolved Molybdenum	5435770		18.3	15.8	14.7%	< 0.50	102%	70%	130%	105%	80%	120%	103%	70%	130%
Dissolved Nickel	5435770		2.8	<1.0	NA	< 1.0	103%	70%	130%	98%	80%	120%	106%	70%	130%
Dissolved Selenium	5435770		2.5	<1.0	NA	< 1.0	101%	70%	130%	101%	80%	120%	105%	70%	130%
Dissolved Silver	5435770		<0.20	<0.20	NA	< 0.20	101%	70%	130%	92%	80%	120%	94%	70%	130%
Dissolved Thallium	5435770		<0.30	0.32	NA	< 0.30	98%	70%	130%	104%	80%	120%	101%	70%	130%
Dissolved Uranium	5435770		3.19	<0.50	NA	< 0.50	92%	70%	130%	103%	80%	120%	100%	70%	130%
Dissolved Vanadium	5435770		2.32	1.06	NA	< 0.40	102%	70%	130%	92%	80%	120%	115%	70%	130%
Dissolved Zinc	5435770		<5.0	<5.0	NA	< 5.0	98%	70%	130%	100%	80%	120%	95%	70%	130%
Mercury	5433725		<0.02	<0.02	NA	< 0.02	103%	70%	130%	100%	80%	120%	97%	70%	130%
Chromium VI	5436555	5436555	<2.000	<2.000	NA	< 2	99%	70%	130%	103%	80%	120%	113%	70%	130%
Cyanide, WAD	5433725		<2	<2	NA	< 2	92%	70%	130%	107%	80%	120%	104%	70%	130%
Dissolved Sodium	5435770		NA	NA	0.0%	< 50	96%	70%	130%	105%	80%	120%	91%	70%	130%
Chloride	5439078		382000	395000	3.3%	< 100	99%	70%	130%	104%	80%	120%	NA	70%	130%

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:

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Method Summary

CLIENT NAME: NIAGARA SOIL SOLUTIONS LTD

AGAT WORK ORDER: 23T090294

PROJECT: NS23108-02

ATTENTION TO: Jodie Glasier

SAMPLING SITE:7701 Lundys Lane

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

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Method Summary

CLIENT NAME: NIAGARA SOIL SOLUTIONS LTD

AGAT WORK ORDER: 23T090294

PROJECT: NS23108-02

ATTENTION TO: Jodie Glasier

SAMPLING SITE:7701 Lundys Lane

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

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Method Summary

CLIENT NAME: NIAGARA SOIL SOLUTIONS LTD

AGAT WORK ORDER: 23T090294

PROJECT: NS23108-02

ATTENTION TO: Jodie Glasier

SAMPLING SITE:7701 Lundys Lane

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

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Method Summary

CLIENT NAME: NIAGARA SOIL SOLUTIONS LTD

AGAT WORK ORDER: 23T090294

PROJECT: NS23108-02

ATTENTION TO: Jodie Glasier

SAMPLING SITE:7701 Lundys Lane

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

AGAT Laboratories

Have feedback? Scan here for a quick survey!

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

Chain of Custody Record

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

Report Information:

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

Project Information:

Project: N523108-02
Site Location: 701 Lundys Lane
Sampled By: J. Toldi
AGAT Quote #: 163961EB 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:

Regulatory Requirements:

(Please check all applicable boxes)

☒ Regulation 153/04 — Table 2 (Indicate One) — ☐ Ind/Com ☐ Res/Park ☐ Agriculture — Soil Texture (Check One) ☐ Coarse ☐ Fine
☐ Regulation 406 — Table (Indicate One) — ☐ 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?** ☐ Yes ☐ No

Report Guideline on *Certificate of Analysis* ☒ Yes ☐ No

Sample Matrix Legend

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

Laboratory Use Only

Work Order #: 23T090794
Cooler Quantity: 1 LARGE
Arrival Temperatures: 9.2 | 9.0 | 9.4
RC 4.9 | 4.4 | 4.6
Custody Seal Intact: ☐ Yes ☐ No ☐ N/A
Notes: on 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): November 10th 2023

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

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

Sample Identification	Date Sampled	Time Sampled	# of Containers	Sample Matrix	Comments/ Special Instructions	Field Filtered - Metals, Hg, CrVI, DOC (Y/N)	O. Reg 153: Metals & Inorganics	Metals - ☐ CrVI, ☐ Hg, ☐ HWSB	BTEX, F1-F4 PHCs	VOC	PAHs	PCBs	PCBs: Aroclors ☐	O. Reg 558: Landfill Disposal Characterization TCLP: ☐ M&I ☐ VOCs ☐ ABNs ☐ B(a)P ☐ PCBs	O. Reg 406: Regulation 406 SPLP Rainwater Leach SPLP: ☐ Metals ☐ VOCs ☐ SVOCs	Regulation 406 Characterization Package pH, ICPMS Metals, BTEX, F1-F4	Corrosivity: ☐ Moisture ☐ Sulphide	Potentially Hazardous or High Concentration (Y/N)
1. BH/MW1	11/06/23	AM/PM	13	S			X		X	X	X							
2. BH/MW2	↓	AM/PM	13	S			X		X	X	X							
3. BH/MW3	↓	AM/PM	13	S			X		X	X	X							
4.		AM/PM																
5.		AM/PM																
6.		AM/PM																
7.		AM/PM																
8.		AM/PM																
9.		AM/PM																
10.		AM/PM																
11.		AM/PM																

Samples Relinquished By (Print Name and Sign): Jacob Toldi	Date 11/07/23	Time	Samples Received By (Print Name and Sign):	Date 11/07/23	Time 8am
Samples Relinquished By (Print Name and Sign): Chris	Date 11/07/23	Time 3pm	Samples Received By (Print Name and Sign):	Date NOV 7	Time 4:35
Samples Relinquished By (Print Name and Sign):	Date	Time	Samples Received By (Print Name and Sign):	Date	Time

Page 1 of 1
N°: T-143700

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

Document ID: DIV-78-1611.022

AGAT Laboratories

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

ATTENTION TO: Jodie Glasier

PROJECT: NS23108-02

AGAT WORK ORDER: 23H095178

TRACE ORGANICS REVIEWED BY: Pinkal Patel, Report Reviewer

WATER ANALYSIS REVIEWED BY: Nivine Basily, Inorganic Team Lead

DATE REPORTED: Nov 22, 2023

PAGES (INCLUDING COVER): 12

VERSION*: 1

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

Notes

Disclaimer:

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

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Certificate of Analysis

AGAT WORK ORDER: 23H095178

PROJECT: NS23108-02

CLIENT NAME: NIAGARA SOIL SOLUTIONS LTD

ATTENTION TO: Jodie Glasier

SAMPLING SITE:7701 LUNDRYS LANE, NIAGARA FALLS

SAMPLED BY:J. TOLDI

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

DATE RECEIVED: 2023-11-20 **DATE REPORTED: 2023-11-22**

		SAMPLE DESCRIPTION:		BH/MW2
		SAMPLE TYPE:		Water
		DATE SAMPLED:		2023-11-20
Parameter	Unit	G / S	RDL	5476084
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
F3 (C16 to C34)	µg/L	500	100	<100
F4 (C34 to C50)	µg/L	500	100	<100
Gravimetric Heavy Hydrocarbons	µg/L		500	NA
Sediment				1
Surrogate	**Unit**	**Acceptable Limits**		
Toluene-d8	%	50-140		101
Terphenyl	% Recovery	60-140		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 - 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.

5476084 The C6-C10 fraction is calculated using Toluene response factor.
Xylenes total is a calculated parameter. The calculated value is the sum of m&p-Xylene and o-Xylene.
C6–C10 (F1 minus BTEX) is a calculated parameter. The calculated value is F1 minus BTEX.
The calculated parameters are non-accredited. The parameters that are components of the calculation are accredited.
The C10 - C16, C16 - C34, and C34 - C50 fractions are calculated using the average response factor for n-C10, n-C16, and nC34.
Gravimetric Heavy Hydrocarbons are not included in the Total C16 - C50 and are only determined if the chromatogram of the C34 - C50 Hydrocarbons indicated that hydrocarbons >C50 are present.
The chromatogram has returned to baseline by the retention time of nC50.
Total C6-C50 results are corrected for BTEX contribution.
This method complies with the Reference Method for the CWS PHC and is validated for use in the laboratory.
nC6 and nC10 response factors are within 30% of Toluene response factor.
nC10, nC16 and nC34 response factors are within 10% of their average.
C50 response factor is within 70% of nC10 + nC16 nC34 average.
Linearity is within 15%.
Extraction and holding times were met for this sample.
Fractions 1-4 are quantified with the contribution of PAHs. Under Ontario Regulation 153/04, results are considered valid without determining the PAH contribution if not requested by the client.
NA = Not Applicable

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

Analysis performed at AGAT Toronto (unless marked by *)

Certified By:

AGAT Laboratories

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Certificate of Analysis

AGAT WORK ORDER: 23H095178

PROJECT: NS23108-02

CLIENT NAME: NIAGARA SOIL SOLUTIONS LTD

ATTENTION TO: Jodie Glasier

SAMPLING SITE:7701 LUNDRYS LANE, NIAGARA FALLS

SAMPLED BY:J. TOLDI

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

DATE RECEIVED: 2023-11-20

DATE REPORTED: 2023-11-22

		SAMPLE DESCRIPTION:		BH/MW2
		SAMPLE TYPE:		Water
		DATE SAMPLED:		2023-11-20
Parameter	Unit	G / S	RDL	5476084
Dichlorodifluoromethane	µg/L	4400	0.40	<0.40
Vinyl Chloride	µg/L	0.5	0.17	<0.17
Bromomethane	µg/L	5.6	0.20	<0.20
Trichlorofluoromethane	µg/L	2500	0.40	<0.40
Acetone	µg/L	130000	1.0	<1.0
1,1-Dichloroethylene	µg/L	1.6	0.30	<0.30
Methylene Chloride	µg/L	610	0.30	<0.30
trans- 1,2-Dichloroethylene	µg/L	1.6	0.20	<0.20
Methyl tert-butyl ether	µg/L	190	0.20	<0.20
1,1-Dichloroethane	µg/L	320	0.30	<0.30
Methyl Ethyl Ketone	µg/L	470000	1.0	<1.0
cis- 1,2-Dichloroethylene	µg/L	1.6	0.20	<0.20
Chloroform	µg/L	2.4	0.20	<0.20
1,2-Dichloroethane	µg/L	1.6	0.20	<0.20
1,1,1-Trichloroethane	µg/L	640	0.30	<0.30
Carbon Tetrachloride	µg/L	0.79	0.20	<0.20
Benzene	µg/L	44	0.20	<0.20
1,2-Dichloropropane	µg/L	16	0.20	<0.20
Trichloroethylene	µg/L	1.6	0.20	<0.20
Bromodichloromethane	µg/L	85000	0.20	<0.20
Methyl Isobutyl Ketone	µg/L	140000	1.0	<1.0
1,1,2-Trichloroethane	µg/L	4.7	0.20	<0.20
Toluene	µg/L	18000	0.20	<0.20
Dibromochloromethane	µg/L	82000	0.10	<0.10
Ethylene Dibromide	µg/L	0.25	0.10	<0.10
Tetrachloroethylene	µg/L	1.6	0.20	<0.20
1,1,1,2-Tetrachloroethane	µg/L	3.3	0.10	<0.10
Chlorobenzene	µg/L	630	0.10	<0.10
Ethylbenzene	µg/L	2300	0.10	<0.10
m & p-Xylene	µg/L		0.20	<0.20

Certified By: Pinkal Patel

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Certificate of Analysis

AGAT WORK ORDER: 23H095178

PROJECT: NS23108-02

CLIENT NAME: NIAGARA SOIL SOLUTIONS LTD

ATTENTION TO: Jodie Glasier

SAMPLING SITE:7701 LUNDRYS LANE, NIAGARA FALLS

SAMPLED BY:J. TOLDI

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

DATE RECEIVED: 2023-11-20 **DATE REPORTED: 2023-11-22**

		SAMPLE DESCRIPTION:		BH/MW2
		SAMPLE TYPE:		Water
		DATE SAMPLED:		2023-11-20
Parameter	**Unit**	**G / S**	**RDL**	**5476084**
Bromoform	µg/L	380	0.10	<0.10
Styrene	µg/L	1300	0.10	<0.10
1,1,2,2-Tetrachloroethane	µg/L	3.2	0.10	<0.10
o-Xylene	µg/L		0.10	<0.10
1,3-Dichlorobenzene	µg/L	9600	0.10	<0.10
1,4-Dichlorobenzene	µg/L	8	0.10	<0.10
1,2-Dichlorobenzene	µg/L	4600	0.10	<0.10
1,3-Dichloropropene	µg/L	5.2	0.30	<0.30
Xylenes (Total)	µg/L	4200	0.20	<0.20
n-Hexane	µg/L	51	0.20	<0.20
Surrogate	**Unit**	**Acceptable Limits**		
Toluene-d8	% Recovery	50-140		101
4-Bromofluorobenzene	% Recovery	50-140		111

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 3: Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition - 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.

5476084 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: Pinkal Patel

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Certificate of Analysis

AGAT WORK ORDER: 23H095178

PROJECT: NS23108-02

CLIENT NAME: NIAGARA SOIL SOLUTIONS LTD

ATTENTION TO: Jodie Glasier

SAMPLING SITE:7701 LUNDRYS LANE, NIAGARA FALLS

SAMPLED BY:J. TOLDI

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

DATE RECEIVED: 2023-11-20

DATE REPORTED: 2023-11-22

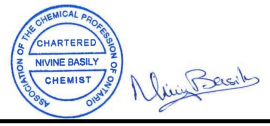
		SAMPLE DESCRIPTION:		BH/MW2
		SAMPLE TYPE:		Water
		DATE SAMPLED:		2023-11-20
Parameter	Unit	G / S	RDL	5476084
Dissolved Antimony	µg/L	20000	1.0	<1.0
Dissolved Arsenic	µg/L	1900	1.0	<1.0
Dissolved Barium	µg/L	29000	2.0	135
Dissolved Beryllium	µg/L	67	0.50	<0.50
Dissolved Boron	µg/L	45000	10.0	85.2
Dissolved Cadmium	µg/L	2.7	0.20	0.20
Dissolved Chromium	µg/L	810	2.0	<2.0
Dissolved Cobalt	µg/L	66	0.50	12.8
Dissolved Copper	µg/L	87	1.0	2.0
Dissolved Lead	µg/L	25	0.50	<0.50
Dissolved Molybdenum	µg/L	9200	0.50	1.89
Dissolved Nickel	µg/L	490	1.0	9.1
Dissolved Selenium	µg/L	63	1.0	<1.0
Dissolved Silver	µg/L	1.5	0.20	<0.20
Dissolved Thallium	µg/L	510	0.30	<0.30
Dissolved Uranium	µg/L	420	0.50	4.02
Dissolved Vanadium	µg/L	250	0.40	1.01
Dissolved Zinc	µg/L	1100	5.0	10.6

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.

5476084 Metals analysis completed on a filtered sample.

Analysis performed at AGAT Toronto (unless marked by *)

Certified By:



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Quality Assurance

CLIENT NAME: NIAGARA SOIL SOLUTIONS LTD
AGAT WORK ORDER: 23H095178
PROJECT: NS23108-02
ATTENTION TO: Jodie Glasier
SAMPLING SITE:7701 LUNDRYS LANE, NIAGARA FALLS
SAMPLED BY:J. TOLDI

Trace Organics Analysis

RPT Date: Nov 22, 2023			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
O. Reg. 153(511) - PHCs F1 - F4 (with VOC) (Water)															
F1 (C6 to C10)	5471106		<25	<25	NA	< 25	116%	60%	140%	108%	60%	140%	101%	60%	140%
F2 (C10 to C16)	5468463		< 100	< 100	NA	< 100	118%	60%	140%	68%	60%	140%	75%	60%	140%
F3 (C16 to C34)	5468463		< 100	< 100	NA	< 100	116%	60%	140%	68%	60%	140%	77%	60%	140%
F4 (C34 to C50)	5468463		< 100	< 100	NA	< 100	67%	60%	140%	100%	60%	140%	69%	60%	140%
O. Reg. 153(511) - VOCs (with PHC) (Water)															
Dichlorodifluoromethane	5471106		<0.40	<0.40	NA	< 0.40	71%	50%	140%	89%	50%	140%	107%	50%	140%
Vinyl Chloride	5471106		<0.17	<0.17	NA	< 0.17	100%	50%	140%	96%	50%	140%	100%	50%	140%
Bromomethane	5471106		<0.20	<0.20	NA	< 0.20	102%	50%	140%	78%	50%	140%	92%	50%	140%
Trichlorofluoromethane	5471106		<0.40	<0.40	NA	< 0.40	105%	50%	140%	102%	50%	140%	104%	50%	140%
Acetone	5471106		<1.0	<1.0	NA	< 1.0	104%	50%	140%	85%	50%	140%	114%	50%	140%
1,1-Dichloroethylene	5471106		<0.30	<0.30	NA	< 0.30	99%	50%	140%	91%	60%	130%	92%	50%	140%
Methylene Chloride	5471106		<0.30	<0.30	NA	< 0.30	95%	50%	140%	95%	60%	130%	112%	50%	140%
trans- 1,2-Dichloroethylene	5471106		<0.20	<0.20	NA	< 0.20	113%	50%	140%	103%	60%	130%	97%	50%	140%
Methyl tert-butyl ether	5471106		<0.20	<0.20	NA	< 0.20	115%	50%	140%	99%	60%	130%	90%	50%	140%
1,1-Dichloroethane	5471106		<0.30	<0.30	NA	< 0.30	101%	50%	140%	119%	60%	130%	115%	50%	140%
Methyl Ethyl Ketone	5471106		<1.0	<1.0	NA	< 1.0	101%	50%	140%	108%	50%	140%	95%	50%	140%
cis- 1,2-Dichloroethylene	5471106		<0.20	<0.20	NA	< 0.20	96%	50%	140%	103%	60%	130%	110%	50%	140%
Chloroform	5471106		<0.20	<0.20	NA	< 0.20	114%	50%	140%	99%	60%	130%	103%	50%	140%
1,2-Dichloroethane	5471106		<0.20	<0.20	NA	< 0.20	93%	50%	140%	83%	60%	130%	85%	50%	140%
1,1,1-Trichloroethane	5471106		<0.30	<0.30	NA	< 0.30	111%	50%	140%	100%	60%	130%	100%	50%	140%
Carbon Tetrachloride	5471106		<0.20	<0.20	NA	< 0.20	118%	50%	140%	85%	60%	130%	94%	50%	140%
Benzene	5471106		<0.20	<0.20	NA	< 0.20	109%	50%	140%	117%	60%	130%	114%	50%	140%
1,2-Dichloropropane	5471106		<0.20	<0.20	NA	< 0.20	103%	50%	140%	99%	60%	130%	97%	50%	140%
Trichloroethylene	5471106		<0.20	<0.20	NA	< 0.20	88%	50%	140%	80%	60%	130%	75%	50%	140%
Bromodichloromethane	5471106		<0.20	<0.20	NA	< 0.20	100%	50%	140%	94%	60%	130%	102%	50%	140%
Methyl Isobutyl Ketone	5471106		<1.0	<1.0	NA	< 1.0	99%	50%	140%	108%	50%	140%	84%	50%	140%
1,1,2-Trichloroethane	5471106		<0.20	<0.20	NA	< 0.20	97%	50%	140%	97%	60%	130%	90%	50%	140%
Toluene	5471106		<0.20	<0.20	NA	< 0.20	92%	50%	140%	103%	60%	130%	85%	50%	140%
Dibromochloromethane	5471106		<0.10	<0.10	NA	< 0.10	109%	50%	140%	114%	60%	130%	101%	50%	140%
Ethylene Dibromide	5471106		<0.10	<0.10	NA	< 0.10	92%	50%	140%	110%	60%	130%	96%	50%	140%
Tetrachloroethylene	5471106		<0.20	<0.20	NA	< 0.20	103%	50%	140%	89%	60%	130%	93%	50%	140%
1,1,1,2-Tetrachloroethane	5471106		<0.10	<0.10	NA	< 0.10	84%	50%	140%	86%	60%	130%	87%	50%	140%
Chlorobenzene	5471106		<0.10	<0.10	NA	< 0.10	114%	50%	140%	93%	60%	130%	79%	50%	140%
Ethylbenzene	5471106		<0.10	<0.10	NA	< 0.10	115%	50%	140%	100%	60%	130%	112%	50%	140%
m & p-Xylene	5471106		<0.20	<0.20	NA	< 0.20	112%	50%	140%	111%	60%	130%	105%	50%	140%
Bromoform	5471106		<0.10	<0.10	NA	< 0.10	90%	50%	140%	113%	60%	130%	106%	50%	140%
Styrene	5471106		<0.10	<0.10	NA	< 0.10	97%	50%	140%	100%	60%	130%	108%	50%	140%
1,1,2,2-Tetrachloroethane	5471106		<0.10	<0.10	NA	< 0.10	96%	50%	140%	99%	60%	130%	93%	50%	140%
o-Xylene	5471106		<0.10	<0.10	NA	< 0.10	105%	50%	140%	115%	60%	130%	99%	50%	140%

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Quality Assurance

CLIENT NAME: NIAGARA SOIL SOLUTIONS LTD

AGAT WORK ORDER: 23H095178

PROJECT: NS23108-02

ATTENTION TO: Jodie Glasier

SAMPLING SITE:7701 LUNDRYS LANE, NIAGARA FALLS

SAMPLED BY:J. TOLDI

Trace Organics Analysis (Continued)

RPT Date: Nov 22, 2023			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	5471106		<0.10	<0.10	NA	< 0.10	100%	50%	140%	81%	60%	130%	74%	50%	140%
1,4-Dichlorobenzene	5471106		<0.10	<0.10	NA	< 0.10	100%	50%	140%	82%	60%	130%	75%	50%	140%
1,2-Dichlorobenzene	5471106		<0.10	<0.10	NA	< 0.10	100%	50%	140%	82%	60%	130%	73%	50%	140%
n-Hexane	5471106		<0.20	<0.20	NA	< 0.20	90%	50%	140%	89%	60%	130%	100%	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:

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Quality Assurance

CLIENT NAME: NIAGARA SOIL SOLUTIONS LTD
AGAT WORK ORDER: 23H095178
PROJECT: NS23108-02
ATTENTION TO: Jodie Glasier
SAMPLING SITE:7701 LUNDRYS LANE, NIAGARA FALLS
SAMPLED BY:J. TOLDI

Water Analysis

RPT Date: Nov 22, 2023			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
O. Reg. 153(511) - Metals (Including Hydrides) (Water)															
Dissolved Antimony	5476084	5476084	<1.0	<1.0	NA	< 1.0	100%	70%	130%	100%	80%	120%	96%	70%	130%
Dissolved Arsenic	5476084	5476084	<1.0	<1.0	NA	< 1.0	104%	70%	130%	112%	80%	120%	113%	70%	130%
Dissolved Barium	5476084	5476084	135	132	2.2%	< 2.0	102%	70%	130%	100%	80%	120%	105%	70%	130%
Dissolved Beryllium	5476084	5476084	<0.50	<0.50	NA	< 0.50	97%	70%	130%	108%	80%	120%	102%	70%	130%
Dissolved Boron	5476084	5476084	85.2	84.6	0.7%	< 10.0	96%	70%	130%	102%	80%	120%	98%	70%	130%
Dissolved Cadmium	5476084	5476084	0.20	0.28	NA	< 0.20	101%	70%	130%	101%	80%	120%	111%	70%	130%
Dissolved Chromium	5476084	5476084	<2.0	<2.0	NA	< 2.0	99%	70%	130%	100%	80%	120%	104%	70%	130%
Dissolved Cobalt	5476084	5476084	12.8	12.7	0.8%	< 0.50	99%	70%	130%	99%	80%	120%	100%	70%	130%
Dissolved Copper	5476084	5476084	2.0	2.3	NA	< 1.0	100%	70%	130%	100%	80%	120%	93%	70%	130%
Dissolved Lead	5476084	5476084	<0.50	<0.50	NA	< 0.50	93%	70%	130%	91%	80%	120%	85%	70%	130%
Dissolved Molybdenum	5476084	5476084	1.89	1.87	NA	< 0.50	101%	70%	130%	102%	80%	120%	107%	70%	130%
Dissolved Nickel	5476084	5476084	9.1	9.1	0.0%	< 1.0	102%	70%	130%	98%	80%	120%	97%	70%	130%
Dissolved Selenium	5476084	5476084	<1.0	2.2	NA	< 1.0	102%	70%	130%	110%	80%	120%	110%	70%	130%
Dissolved Silver	5476084	5476084	<0.20	<0.20	NA	< 0.20	100%	70%	130%	101%	80%	120%	103%	70%	130%
Dissolved Thallium	5476084	5476084	<0.30	<0.30	NA	< 0.30	99%	70%	130%	98%	80%	120%	92%	70%	130%
Dissolved Uranium	5476084	5476084	4.02	4.11	2.2%	< 0.50	101%	70%	130%	120%	80%	120%	120%	70%	130%
Dissolved Vanadium	5476084	5476084	1.01	1.07	NA	< 0.40	101%	70%	130%	104%	80%	120%	110%	70%	130%
Dissolved Zinc	5476084	5476084	10.6	8.9	NA	< 5.0	98%	70%	130%	100%	80%	120%	96%	70%	130%

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

Certified By:

AGAT Laboratories

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Method Summary

CLIENT NAME: NIAGARA SOIL SOLUTIONS LTD | **AGAT WORK ORDER: 23H095178**

PROJECT: NS23108-02 | **ATTENTION TO: Jodie Glasier**

SAMPLING SITE:7701 LUNDRYS LANE, NIAGARA FALLS | **SAMPLED BY:J. TOLDI**

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Trace Organics Analysis			
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
F3 (C16 to C34)	VOL-91-5010	modified from MOE PHC-E3421	GC/FID
F4 (C34 to C50)	VOL-91-5010	modified from MOE PHC-E3421	GC/FID
Gravimetric Heavy Hydrocarbons	VOL-91-5010	modified from MOE PHC-E3421	BALANCE
Terphenyl	VOL-91-5010	modified from MOE PHC-E3421	GC/FID
Sediment			N/A
Dichlorodifluoromethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Vinyl Chloride	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Bromomethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Trichlorofluoromethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Acetone	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1-Dichloroethylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Methylene Chloride	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
trans- 1,2-Dichloroethylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Methyl tert-butyl ether	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1-Dichloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Methyl Ethyl Ketone	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
cis- 1,2-Dichloroethylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Chloroform	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,2-Dichloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1,1-Trichloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Carbon Tetrachloride	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Benzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,2-Dichloropropane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Trichloroethylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Bromodichloromethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Methyl Isobutyl Ketone	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1,2-Trichloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS

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Method Summary

CLIENT NAME: NIAGARA SOIL SOLUTIONS LTD

AGAT WORK ORDER: 23H095178

PROJECT: NS23108-02

ATTENTION TO: Jodie Glasier

SAMPLING SITE:7701 LUNDRYS LANE, NIAGARA FALLS

SAMPLED BY:J. TOLDI

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Toluene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Dibromochloromethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Ethylene Dibromide	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Tetrachloroethylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1,1,2-Tetrachloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Chlorobenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Ethylbenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
m & p-Xylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Bromoform	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Styrene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1,2,2-Tetrachloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
o-Xylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,3-Dichlorobenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,4-Dichlorobenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,2-Dichlorobenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,3-Dichloropropene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Xylenes (Total)	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
n-Hexane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Toluene-d8	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
4-Bromofluorobenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS

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Method Summary

CLIENT NAME: NIAGARA SOIL SOLUTIONS LTD | **AGAT WORK ORDER: 23H095178**

PROJECT: NS23108-02 | **ATTENTION TO: Jodie Glasier**

SAMPLING SITE:7701 LUNDRYS LANE, NIAGARA FALLS | **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

AGAT Laboratories

Have feedback? Scan here for a quick survey!

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webearth.agatlabs.com

Chain of Custody Record

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

Report Information:

Company: NSSL
Contact: Jodie Glasier
Address: 3300 Merritville 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: NS23108-02
Site Location: 7701 Lundys Lane, Niagara Falls, ON
Sampled By: J. Toldi
AGAT Quote #: 763961EB 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:

Regulatory Requirements:

(Please check all applicable boxes)

☒ Regulation 153/04
Table 2 (Indicate One)
☐ Ind/Com
☒ Res/Park
☐ Agriculture
Soil Texture (Check One)
☒ Coarse
☐ Fine

☐ Regulation 406
Table (Indicate One)

☐ 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?** ☒ Yes ☐ No

Report Guideline on *Certificate of Analysis* ☒ Yes ☐ No

Sample Matrix Legend

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

Laboratory Use Only

Work Order #: 23H095178
Cooler Quantity: 1 (red)
Arrival Temperatures: 15.3 | 15.8 | 14.1 | 8.5 | 7.9 | 7.5
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): November 21st, 2023

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

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

Sample Identification	Date Sampled	Time Sampled	# of Containers	Sample Matrix	Comments/ Special Instructions	Field Filtered - Metals, Hg, CrVI, DOC Y / N	O. Reg 153: Metals & Inorganics	O. Reg 153: Metals - ☐ CrVI, ☐ Hg, ☐ HWSB	O. Reg 153: BTEX, F1-F4 PHCs	O. Reg 153: VOC / PHC	O. Reg 153: PAHs	O. Reg 153: PCBs	O. Reg 153: PCBs: Aroclors ☐	O. Reg 558: Landfill Disposal Characterization TCLP: TCLP: ☐ M&I ☐ VOCs ☐ ABNs ☐ B(a)P ☐ PCBs	O. Reg 406: Regulation 406 SPLP Rainwater Leach SPLP: ☐ Metals ☐ VOCs ☐ SVOCs	O. Reg 406: Regulation 406 Characterization Package pH, ICPMS Metals, BTEX, F1-F4	Corrosivity: ☐ Moisture ☐ Sulphide	Potentially Hazardous or High Concentration (Y/N)
1. BH / MW2	11/20/23	AM PM	6	GW				X		X								
2.		AM PM																
3.		AM PM																
4.		AM PM																
5.		AM PM																
6.		AM PM																
7.		AM PM																
8.		AM PM																
9.		AM PM																
10.		AM PM																
11.		AM PM																

Samples Relinquished By (Print Name and Sign):	Date	Time	Samples Received By (Print Name and Sign):	Date	Time
Jacob Toldi	11/20/23			23-11-20	3:20pm.
			GWYNETH GO	11/20/23	16:33

Page 1 of 1

N°: T-148227

Pink Copy - Client I Yellow Copy - AGAT I White Copy - AGAT

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Date Issued: Mar 30, 2023