PROJECT NO.: SM 301724-E

FEBRUARY 10, 2022

SUPPLEMENTAL PHASE TWO ENVIRONMENTAL SITE ASSESSMENT
PROPOSED HIGH RISE DEVELOPMENT
LOT 175, PORTAGE ROAD
NIAGARA FALLS, ONTARIO

PREPARED FOR:

RUDANCO INC.

Soil-Mat

BY

SOIL-MAT ENGINEERS & CONSULTANTS LTD.
130 LANCING DRIVE
HAMILTON, ONTARIO
L8W 3A1

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SOIL-MAT ENGINEERS & CONSULTANTS LTD.

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Hamilton: 130 Lancing Drive L8W 3A1 T: 905.318.7440 F: 905.318.7455
Milton: PO Box 40012 Derry Heights PO L9T 7W4 T: 800.243.1922

PROJECT NO.: SM 301724-E February 10, 2022

RUDANCO INC.
4728 Dorchester Road – Unit 11B, 2nd Floor
Niagara Falls, Ontario
L2E 7H9

Attention: Mr. Jeremia Rudan

SUPPLEMENTAL PHASE TWO ENVIRONMENTAL SITE ASSESSMENT
PROPOSED HIGH RISE DEVELOPMENT
LOT 175, PORTAGE ROAD
NIAGARA FALLS, ONTARIO

Dear Mr. Rudan,

Further to our previous Phase Two Environmental Site Assessment [ESA] in connection with the above noted property, SOIL-MAT ENGINEERS & CONSULTANTS LTD. [SOIL-MAT ENGINEERS] were retained by RUDANCO INC. to undertake Supplemental Phase Two ESA work on the above captioned property.

Our fieldwork, laboratory analytical testing and interpretation in connection with the assessment activities has been finalised and our comments and recommendations, based on our findings, are presented in the following paragraphs. The fieldwork was undertaken in general accordance with our proposal SM 301724-P, dated October 26, 2021.

The subject property is herein referred to as the 'Site' and/or the 'Phase Two Property'.

1.0 BACKGROUND INFORMATION

1.1 PREVIOUS INVESTIGATIONS

A Phase One ESA was previously prepared by SOIL-MAT ENGINEERS under our Project No.: SM 301724-E, dated July 7, 2021.

Upon completion of the Phase One ESA Report the following potentially contaminating activities [PCAs] were identified:

PCA Number	PCA Description
30	Importation of Fill Material of Unknown Quality
46	Rail Yards, Tracks and Spurs
18	Electricity Generation, Transformation and Power Stations
55	Transformer Manufacturing, Processing and Use

Areas of Potential Environmental Concern	Location of Areas of Potential Environmental Concern on Phase One Property	Potentially Contaminating Activity	Locations of PCA (on-site or off-site)	Contaminants of Potential Concern	Media Potentially Impacted (Groundwater, soil and/or sediment)
APEC #1	Throughout the Phase One Property	30. Importation of Fill Material of Unknown Quality	On-Site	Metals, As, Sb, Se, BHWS, CN, Electrical Conductivity, Cr (VI), Hg, SAR, PHCs, and BTEX.	Soil
APEC #2	Throughout the Phase One Property	18. Electricity Generation, Transformation and Power Stations	On-Site	Metals, PCBs, PHCs, VOCs, ABNs, and BTEX	Soil and groundwater
APEC #3	Throughout the Phase One Property	46. Rail Yards, Tracks and Spurs	On-Site	PAHs	Soil and groundwater
APEC #4	The southern portion of the Phase One Property	55. Transformer Manufacturing, Processing and Use	On-Site	Metals, PCBs, PHCs, VOCs, ABNs, and BTEX	Soil and groundwater
APEC #5	The southern limit of the Phase One Property.	18. Electricity Generation, Transformation and Power Stations	Off-Site	Metals, PCBs, PHCs, VOCs, ABNs, and BTEX	Soil and groundwater
		55. Transformer Manufacturing, Processing and Use	Off-Site	Metals, PCBs, PHCs, VOCs, ABNs, and BTEX	Soil and groundwater
APEC #6	The western limit of the Phase One Property.	46. Rail Yards, Tracks and Spurs	Off-Site	PAHs	Soil and groundwater
		18. Electricity Generation, Transformation and Power Stations	Off-Site	Metals, PCBs, PHCs, VOCs, ABNs, and BTEX	Soil and groundwater
		55. Transformer Manufacturing, Processing and Use	Off-Site	Metals, PCBs, PHCs, VOCs, ABNs, and BTEX	Soil and groundwater

To assess the areas of potential environmental concern, identified in our Phase One ESA, SOIL-MAT ENGINEERS conducted a Phase Two ESA for the above noted Site. The results of the initial Phase Two ESA investigation are detailed in our report of Project No. SM 301724-E, dated December 7, 2021, which noted the following:

> *'Based on SOIL-MAT ENGINEERS' field observations and the analytical test results received in its office,* SOIL-MAT ENGINEERS *offered the following:*

- *The Phase Two activities carried out by Soil-Mat Engineers revealed an exceedance for a select metal parameter in an isolated borehole location on the Phase Two Property. Specifically, an elevated level of Cadmium was reported in the soil medium between 2.3 to 2.9 metres below ground surface at our borehole location 'BH101';.*
- *The laboratory analytical test result for the remaining soil samples all reportedly meet the applicable site condition standards for the select tested contaminants of potential concern, and;*
- *The laboratory analytical test results for all of the submitted groundwater samples are reportedly below the applicable site condition standard for the select tested contaminants of potential concern.*

> *The samples secured for analytical testing are believed to be representative of the conditions at the sample locations only. If any significant changes are noted, i.e., odours, staining etc., Soil-Mat Engineers should be contacted to reassess the environmental characteristics of the Site.*

> *As noted in the preamble above, an isolated 'hotspot' of soil exhibiting an elevated level of Cadmium was identified at our borehole location 'BH101'. The elevated level of Cadmium was encountered between 2.3 to 2.9 metres below ground surface. It is noted that additional intrusive soil sampling is recommended to further delineate the lateral and vertical extent of the isolated 'hot spot' and/or demonstrate that the noted exceedance is anomalous in nature and not representative of the actual soil conditions at this location.'*

Based on the above, SOIL-MAT ENGINEERS was retained to undertake supplemental Phase Two ESA activities to further assess the areas of specific environmental concern.

It is noted that this Supplemental Phase Two ESA Report must be read in conjunction with SOIL-MAT ENGINEERS' July 2021 Phase One ESA Report and SOIL-MAT ENGINEERS' October 2021 Phase Two ESA Report.

1.2 VISUAL OBSERVATIONS OF THE SITE

The Phase Two Property is comprised of an irregular shaped parcel of land on the west side of Portage Road between Marineland Parkway and McLeod Road in the City of Niagara Falls, Ontario.

At the time of this Report, the Site was comprised primarily of areas of overgrown grass and low-lying weeds with some trees along the western perimeter of the Site. In addition, an asphaltic-concrete covered driveway and parking area and a small gravel covered area were observed in the middle portion of the Site.

The Site was bounded to the north by a vacant undeveloped parcel of land and McLeod Road, to the east by Portage Road, to the south by a hydro substation and to the west by a railway line.

2.0 METHODOLOGY

2.1 PHASE TWO ESA SCOPE OF WORK

The purpose of the Supplementary Phase Two activities was to secure representative soil samples from the same depth of the initial Table 2 RPI Cadmium exceedance to further assess this isolated exceedance. Specifically, as described under Ontario Regulation 153/04 [as amended], a property meets the applicable Site Condition Standard [SCS] if:

- The SCS is met at each sampling point from which a sample is secured, or;
- Two or more samples are secured from sample points, at the sample location, at the same depth and if the average of the sampling results meets the applicable SCSs.

In the event soil samples secured within the two-metre radius of isolated 'hotspot' do not meet Table 2 RPI Standards or can not be 'averaged down', a series of boreholes will be required to be advanced to secure representative soil samples from the same depth of the initial Table 2 RPI exceedance for Cadmium across the Site in order to delineate the lateral and vertical extent of soil exhibiting exceedances for Cadmium.

Based on the above, the following supplemental Phase Two activities were recommended and implemented for the Site:

1. Advance four [4] boreholes within a two-metre radius of the initial Table 2 RPI Cadmium exceedance, reported in borehole location 'BH101', including one deeper borehole, to further delineate the lateral and vertical extent of the isolated 'hot spot' and/or demonstrate that the noted exceedance is anomalous in nature and not representative of the actual soil conditions on the Site.
2. Advance five [5] boreholes across the Site in the event the initial Cadmium exceedance can not be 'averaged down' to further delineate lateral extent of the soil exhibiting levels of Cadmium.
3. Submit fourteen [14] 'worst-case' soil samples [including two duplicate samples], based on field observations, for Metals, secured from the same depth as the initial Table 2 RPI exceedance [2.3 – 2.9 metres] and an additional two deeper samples within one select borehole within a two-metre radius of 'BH101'.
4. Present our findings in a Supplemental Phase Two Environmental Site Assessment report.

2.2 PROCEDURE

The supplemental Phase Two ESA fieldwork programme was carried out on November 11, 2021. The physical advancement of the boreholes was undertaken by ELEMENTS GEO via a track-mounted drill rig under the direction of a representative of SOIL-MAT ENGINEERS.

A total of nine [9] sampled boreholes were advanced at the borehole locations illustrated on the enclosed Drawing No. 1, Appendix 'A', Borehole Location Plan. More specifically, the boreholes advanced within the two-metre radius of 'BH101' were labeled 'BH101-N', 'BH101-E', 'BH101-W and 'BH101-S' while the boreholes across the Site were labeled 'BH201' through 'BH205'.

All boreholes were advanced using solid stem auger equipment to a depth of approximately 2.9 metres below ground surface [m bgs] with the exception of 'BH101-S' which was advanced to a depth of 5.2 m bgs.

2.3 LABORATORY ANALYTICAL TESTING

All laboratory analytical work was performed by AGAT Laboratories [AGAT] in Mississauga, Ontario. AGAT is a member of the Canadian Association for Laboratory Accreditation [CALA] and meets the requirements of Section 47 of the Record of Site Condition [RSC] Regulation.

2.4 SOIL SAMPLES

The soil samples were examined in the field for visual and olfactory evidence of potential impacts such as unusual staining and/or odours, etc., and were sealed in sampling jars for submission to AGAT for analytical testing.

The soil samples that were picked up at our office by AGAT were sealed with no head space in pre-cleaned wide mouth, amber glass sample jars, as provided by the laboratory. The samples were stored and transported in a cooler and kept under ice packs to minimise potential volatilisation of select parameters. New disposable sampling gloves were used for the collection of each soil sample with care given to limit contact between the samples and gloves. Dedicated sample retrieval equipment, including a stainless steel trowel, was used to retrieve each sample and before depositing it directly it into the AGAT Laboratories sample jar.

The samples were picked up at our office by AGAT in coolers equipped with ice packs to help maintain a temperature range between the applicable 0^{o}C to 10^{o}C. As reported on the chain of custody for the soil samples, the samples were picked up at our office with an average temperature of 4.3^{o}C, and arrived at the AGAT Lab in Mississauga, Ontario with a final average temperature of 9.1^{o}C.

2.5 SAMPLE MANAGEMENT AND FIELD OBSERVATIONS

Professional care was exercised during the retrieval of each sample, the placement of each sample in the appropriate sample jar, the labeling of the field samples and associated chain of custody and in the delivery of the samples to the testing laboratory.

As our standard operating procedures include documenting unusual field observations, such as visual or olfactory evidence of a suspected impact, a deviation from SOIL-MAT ENGINEERS' field sampling and handling protocols or incident on the testing laboratories' side was documented either on our field borehole logs or in-house copy of the sample certificate of analysis.

There were no deviations recorded during this Phase Two ESA.

3.0 GEOLOGICAL SETTING

SOIL-MAT ENGINEERS' Phase Two ESA revealed the following Site stratigraphy:

- SAND AND GRAVEL FILL: Approximately 300 millimetres of sand and gravel fill was encountered at the surface of Borehole Nos.: 'BH101-N', 'BH101-E', 'BH101-S', 'BH101-W', 'BH201', 'BH202', and 'BH203'. The sand and gravel fill was generally noted to be in a compact to dense condition, predominately associated with gravel surfaced area just north of the asphalt paved parking areas.
- PAVEMENT STRUCTURE: Borehole Nos.: 'BH204' were advanced through the existing pavement structure which was noted to consist of approximately 50 millimetres of asphaltic concrete, overlying approximately 200 millimetres of compact granular base.
- TOPSOIL: A surficial veneer of topsoil approximately 150 millimetres in thickness was encountered at Borehole No.: 'BH205'. It is noted that the depth of topsoil may vary across the site and from the depths encountered at the borehole locations.
- CLAYEY SILT / SILTY CLAY: Native clayey silt/silty clay was encountered beneath the surficial topsoil, surficial fill material and pavement structure at all of the boreholes. The native cohesive soil is brown to reddish brown in colour, had a 'reworked' appearance in the upper levels within all boreholes, contained trace sand and gravel, and was generally firm to hard in consistency in the upper levels, becoming firm to soft with depth or when approaching the transition to grey.
- GROUNDWATER: The depth to the groundwater table is anticipated to be approximately 0.5 to 3.0 metres based on groundwater readings from the four [4] monitoring wells installed on the Site. Seasonal fluctuations to this level should be expected. Based on the ground water contours extrapolated from the recorded static ground water levels on the Site the ground water flow direction through the Site is to the west-northwest. In addition, the horizontal hydraulic gradient was estimated as 0.01024.

GROUNDWATER ELEVATIONS AND FLOW DIRECTIONS

All boreholes were recorded as being 'dry' upon the completion of the advancement of each borehole. It is noted that insufficient time would have passed for the static groundwater level to stabilize in the open boreholes. However, previous investigations on the Site suggest the depth to the groundwater table is anticipated to be approximately 0.5 to 3.0 m bgs. This was established based on groundwater level readings recorded from four [4] groundwater monitoring wells installed on the Site.

Static groundwater level recordings from our initial Phase Two ESA activities indicate groundwater flow direction is to the west-northwest.

4.0 ONTARIO REGULATION 153/04 [AS AMENDED] SITE CLASSIFICATION AND SELECTION CRITERIA

The following criteria was utilised to determine the appropriate site classification and Ontario Regulation 153/04 [as amended] soil and groundwater standards.

- Current land use: Industrial;
- Intended land use: Residential;
- Drinking Water Supply: Non-Potable Ground Water;
- On-site Soil Texture: Medium to Fine Grained Soils;
- Depth to Bedrock: Approximately 28.0 to 34.1 metres;
- pH of soils on the Site: Within the Applicable Generic Site Condition Standards Range;
- Surface Water Body: Not observed on-Site or within 30 metres of the Site.

Based on the above, the applicable site condition standards [SCSs] are the Table 3 SCSs for a Residential/Parkland/Institutional Use [RPI] property use in a non-potable groundwater condition from the Ministry of the Environment document "Soil, Ground Water and Sediment Standards for Use under Part XV.1 of the Environment Protection Act, (2011), hereinafter referred to as the 'Table 3 RPI Standards'. However, to avoid a possible 30 day upper tier municipality non-potable water notification delay the Qualified Person [QP] opted to compare all of the available soil and groundwater analytical test results to the Table 2 Standards for a residential / parkland / institutional [RPI] property use in a potable groundwater condition from the Ministry of the Environment document "Soil, Ground Water and Sediment Standards for Use under Part XV.1 of the Environmental Protection Act, (2011), hereinafter referred to as the 'Table 2 RPI Standards'.

5.0 PHASE TWO ESA ANALYTICAL TEST RESULTS

5.1 SOIL SAMPLES SELECTED FOR LABORATORY ANALYTICAL TESTING

In total, five [5] discrete soil samples, including one duplicate sample, were secured from the Site to further assess and delineate the area with soil exhibiting an elevated level of a select COPC. Specifically, the Metal parameter 'Cadmium', which was previously documented in 'BH101' at depth of 2.3 to 2.9 m bgs.

The secured soil samples were submitted to AGAT for laboratory analytical testing as described in the summary table below:

TABLE B: SUMMARY OF SOIL SAMPLE TEST RESULTS

Sample ID	Depth [m bgs]	Laboratory Analysis	Soil Description	Table 2 RPI Exceedances
TP101-N	2.3 – 2.9	Metals	Silty Clay / Clayey Silt	No exceedances reported
TP101-E	2.3 – 2.9	Metals	Silty Clay / Clayey Silt	No exceedances reported
TP101-S	2.3 – 2.9	Metals	Silty Clay / Clayey Silt	No exceedances reported
TP101-W	2.3 – 2.9	Metals	Silty Clay / Clayey Silt	No exceedances reported
DUP1 [TP101-S]	2.3 – 2.9	Metals	Silty Clay / Clayey Silt	No exceedances reported
Notes: Metals [Including As, Sb, Se].				

A summary of the specific areas of concern, based on the results of our initial Phase Two activities and the laboratory analytical test results from these supplemental Phase Two activities is presented below in Section 6.0 of this Report.

The AGAT Certificate of Analysis is included in Appendix 'B' for reference.

6.0 SUMMARY AND GENERAL COMMENTS

Based on SOIL-MAT ENGINEERS' field observations and the laboratory analytical test results received in its office, SOIL-MAT ENGINEERS offers the following:

SOIL SAMPLES – METALS IN THE VICINITY OF BOREHOLE NO.: 'BH101'

The supplemental Phase Two activities carried out by SOIL-MAT ENGINEERS, in the vicinity of Borehole No.: 'BH101', did not reveal additional elevated levels of select metal parameters.

As a result of the supplemental intrusive sampling, in the vicinity of our sample location 'BH101', the average value of the select metal parameter [including the original sample], are all below the applicable SCSs as outlined in the table below:

Parameter	BH101	BH101-N	BH101-E	BH101-S	BH101-W	**T2 SCS**	**Average**
Cadmium	1.7	<0.5	<0.5	<0.5	<0.5	**1.2**	**0.74**

In consideration of the laboratory analytical test results report during our initial Phase Two activities and these supplemental Phase Two activities, SOIL-MAT ENGINEERS offers the following:

- The elevated level of Cadmium, found in our initial Phase Two ESA investigation is not considered representative of the actual conditions at the sample location and may be considered anomalous;
- Given the laboratory analytical available [to date], the elevated level of Cadmium, is not considered a significant environmental concern at this time and additional intrusive soil sampling is not recommended.

The Phase Two Property, supplemental borehole locations and analytical test results are illustrated on Drawing Nos. 1, 2 and 3 in Appendix 'A'.

7.0 CONCLUSIONS

A description of the staff members associated with the completion of the Phase Two ESA activities is contained in Appendix 'C' of this Report. The ESA activities were supervised by Mr. Stephen R. Sears, B. Eng. Mgmt., P. Eng., QP_{ESA}, who is a Qualified Person for the undertaking of ESA activities.

Based on SOIL-MAT ENGINEERS' field observations and the laboratory analytical test results received in its office, SOIL-MAT ENGINEERS offered the following:

- The Supplemental Phase Two ESA activities did not reveal any additional elevated levels of the select contaminants of concern [COCs] in the secured soil samples.
- Based on the laboratory analytical test results, the elevated level of Cadmium, identified in our initial Phase Two activities, is not considered representative of the actual conditions at the sample location and as such may be considered anomalous;
- Given the laboratory analytical available [to date], the elevated level of Cadmium, is not considered a significant environmental concern at this time. As such, additional intrusive soil sampling is not recommended.

Given the findings of the supplemental Phase Two activities, it is the opinion of SOIL-MAT ENGINEERS that the Site is suitable for a residential development and that an RSC in support of a residential development can be filed for the Site.

The samples secured for analytical testing are believed to be representative of the conditions at the sample locations only. If any significant changes are noted, i.e., odours, staining etc., SOIL-MAT ENGINEERS should be contacted to reassess the environmental characteristics of the Site.

SOIL-MAT ENGINEERS & CONSULTANTS LTD. prepared this Report for the account of RUDANCO INC. The material in if reflects SOIL-MAT ENGINEERS' 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. SOIL-MAT ENGINEERS accepts no responsibility for damages, if any suffered by any third party as a result of decisions made or actions based on this report.

We trust this Report is satisfactory for your purposes. Please feel free to contact our Office if you have any questions, or we may be of further service to you.

Yours very truly,
SOIL-MAT ENGINEERS & CONSULTANTS LTD.

Billy Olds, B.Sc.
Environmental Technician

Keith Gleadall, B.A., EA Dipl.
Environmental Manager

Stephen R. Sears, B. Eng. Mgmt., P. Eng., QP_{ESA}
Senior Engineer

LICENSED PROFESSIONAL ENGINEER
FEB 10/22
S. R. SEARS
PROVINCE OF ONTARIO

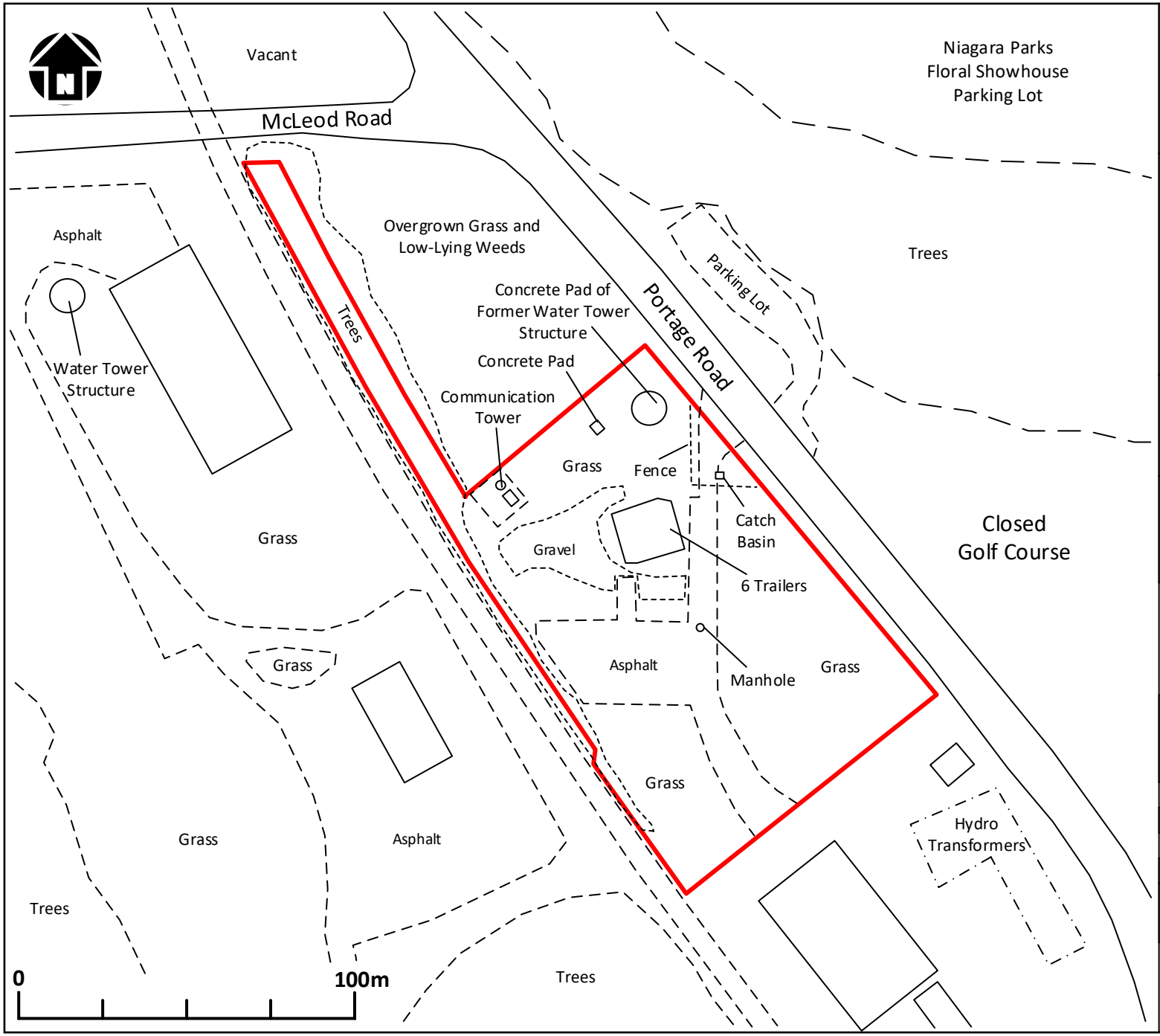
Distribution: RUDANCO INC. [1]

Enclosures:

Appendix 'A':	Drawing Nos. 1 - 3
Appendix 'B'	AGAT Soil Analytical Test Results;
Appendix 'C'	Qualifications of Assessors;
Appendix 'D'	Statement of Limitations.

Appendix ‘A’

1. Drawing No.: 1: Site Plan;
2. Drawing No.: 2: Supplemental Borehole Location Plan;
3. Drawing No.: 3: Analytical Data Summary [Soil] Metals;
4. Borehole Logs;



LEGEND

= Site Boundary

NOTES:

1. This map should be read in conjunction with Soil-Mat Engineers and Consultants Ltd. Report No.: SM 301724-E

2. Base map provided by:
© 2021 Google

Soil-Mat
Engineers & Consultants Ltd.

CLIENT

RUDANCO INC.

PROJECT TITLE

Phase One Environmental Site Assessment
Lot 175, Portage Road
Niagara Falls, Ontario

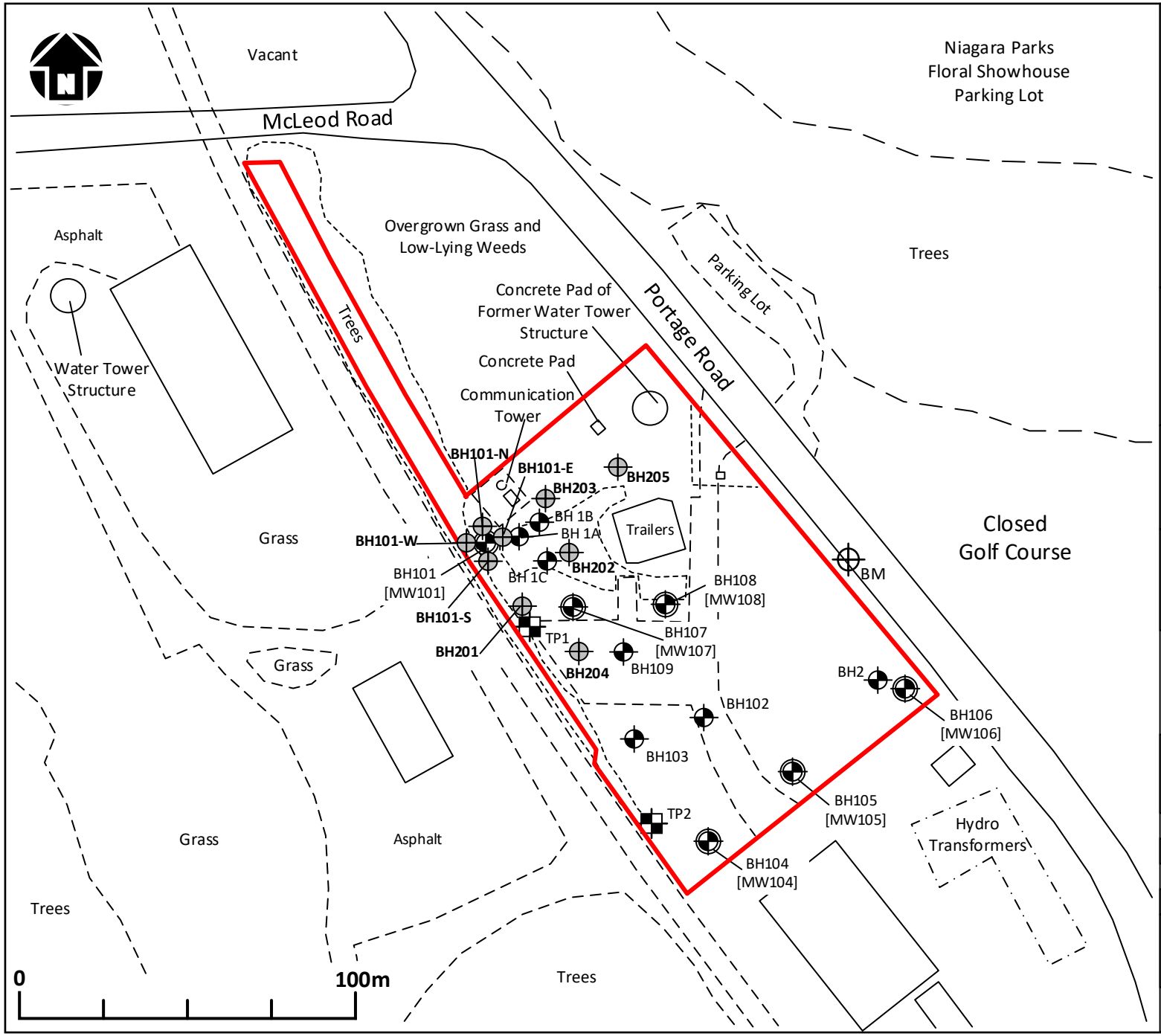
DRAWING TITLE

Site Plan

PROJECT No.	SM 301724-E
DATE	May 2021
CHECKED	PM
DRAWN	MT

FILE NAME
301724 Site Plan .vsd

DRAWING No. 1



LEGEND

- = Site Boundary
- BH# = Borehole Location
- BH# = Supplemental Borehole Location
- MW# = Monitoring Well Location
- TP# = Testpit Location
- BM = Benchmark (Top of Manhole. Temporary Elevation of 100.00 metres)

NOTES:

1. This map should be read in conjunction with Soil-Mat Engineers and Consultants Ltd. Report No.: SM 301724-E.

Soil-Mat
Engineers & Consultants Ltd.

CLIENT

RUDANCO INC.

PROJECT TITLE

Suppl. Phase Two Environmental Site Assessment
Lot 175, Portage Road
Niagara Falls, Ontario

DRAWING TITLE

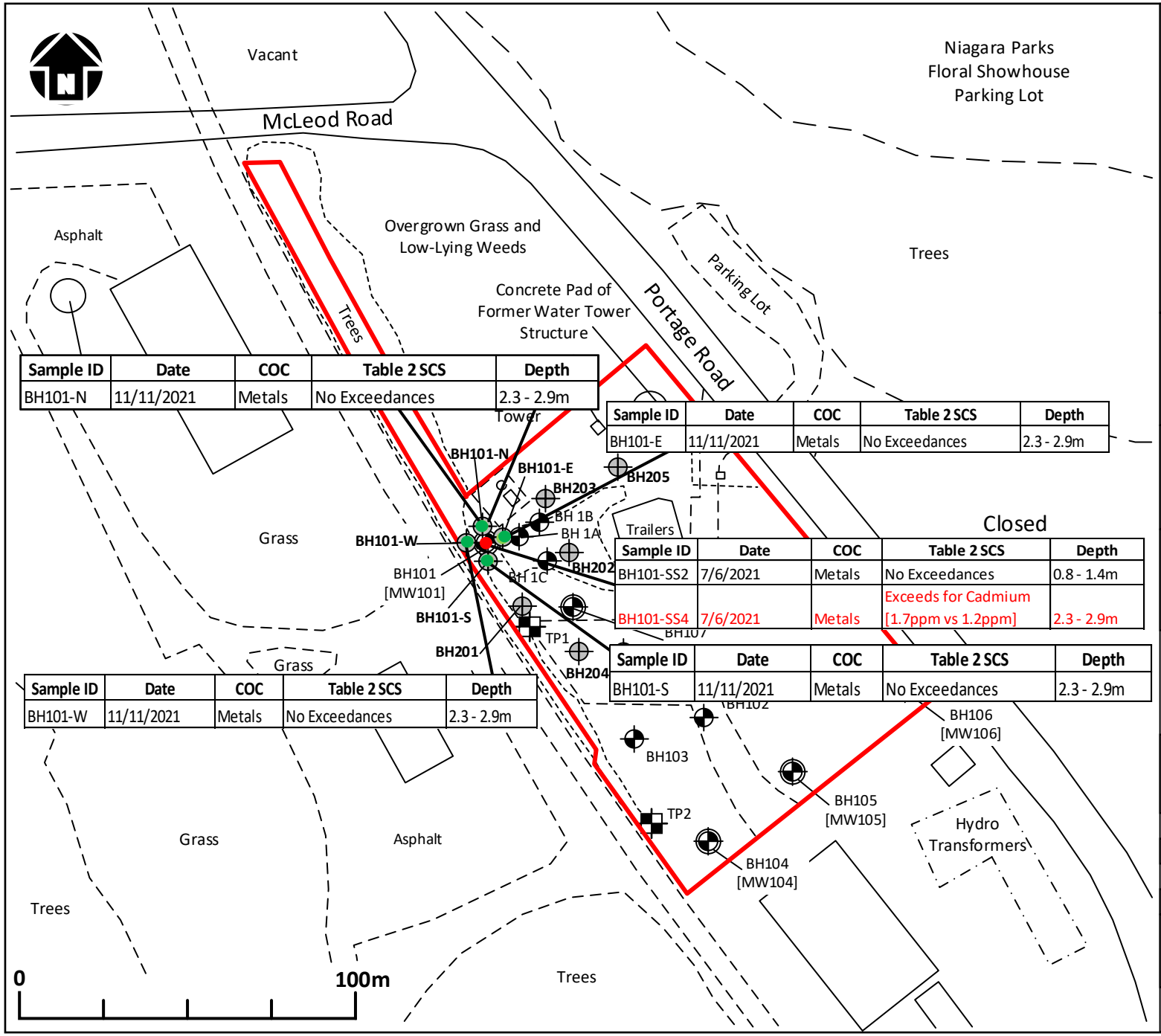
Borehole and Test Pit Location Plan

PROJECT No.	SM 301724-E
DATE	December 2021
CHECKED	KG
DRAWN	BO

FILE NAME

301724 Suppl. Ph Two Drawings.vsd

DRAWING No. 2



Sample ID	Date	COC	Table 2 SCS	Depth
BH101-N	11/11/2021	Metals	No Exceedances	2.3 - 2.9m

Sample ID	Date	COC	Table 2 SCS	Depth
BH101-E	11/11/2021	Metals	No Exceedances	2.3 - 2.9m

Sample ID	Date	COC	Table 2 SCS	Depth
BH101-SS2	7/6/2021	Metals	No Exceedances	0.8 - 1.4m
BH101-SS4	7/6/2021	Metals	Exceeds for Cadmium [1.7ppm vs 1.2ppm]	2.3 - 2.9m

Sample ID	Date	COC	Table 2 SCS	Depth
BH101-S	11/11/2021	Metals	No Exceedances	2.3 - 2.9m

Sample ID	Date	COC	Table 2 SCS	Depth
BH101-W	11/11/2021	Metals	No Exceedances	2.3 - 2.9m

LEGEND

- = Site Boundary
- = Borehole Location (BH#)
- = Supplemental Borehole Location (BH#)
- = Monitoring Well Location (MW#)
- = Testpit Location (TP#)
- = Soil Samples that *meet* Applicable Table 2 SCSs
- = Soil Samples that *exceed* Applicable Table 2 SCSs

NOTES:

1. This map should be read in conjunction with Soil-Mat Engineers and Consultants Ltd. Report No.: SM 301724-E.

Soil-Mat
Engineers & Consultants Ltd.

CLIENT

RUDANCO INC.

PROJECT TITLE

Suppl. Phase Two Environmental Site Assessment
Lot 175, Portage Road
Niagara Falls, Ontario

DRAWING TITLE

Analytical Data: Metals

PROJECT No.	SM 301724-E
DATE	December 2021
CHECKED	KG
DRAWN	BO

FILE NAME

301724 Suppl. Ph Two Drawings.vsd

DRAWING No. 3

Log of Borehole No. 101-N

Project No: SM 301724-G-E
Project: Phase Two ESA
Location: Niagara Falls, Ontario
Client: Rudanco Hospitality Corporation

Project Manager: Peter Markesic, B.Sc.
Borehole Location: See Drawing No.1
UTM Coordinates - N: 4770406
E: 656381

Depth (ft / m)	Elevation (m)	Description	Well Data	SAMPLE Type	SAMPLE Number	SAMPLE Blow Counts	SAMPLE Blows/300mm	SAMPLE Recovery	PP (kgf/cm2)	U.Wt.(kN/m3)
0 / 0	99.43	Ground Surface								
0 / 0	99.10	**Sand and Gravel Fill** Brown, loose.								
3 / 1		**Clayey Silt/Silty Clay** Reddish brown, trace sand and gravel, reworked in the upper levels, very stiff.								
9 / 2	96.60			SS	1	6,11,13,17	24			
10 / 3		End of Borehole								

Moisture Content w% (10 20 30 40)

Standard Penetration Test blows/300mm (20 40 60 80)

NOTES:

1. Borehole was advanced using solid stem auger equipment on November 11, 2021 to termination at a depth of 2.9 meters.

2. Borehole was recorded as open and 'dry' upon completion and backfilled as per Ontario Regulation 903.

3. Soil samples will be discarded after 3 months unless otherwise directed by our client.

Drill Method: Solid Stem Augers
Drill Date: November 11, 2021
Hole Size: 150 Millimeters
Drilling Contractor: Elements Geo Drilling

Soil-Mat Engineers & Consultants Ltd.
130 Lancing Drive, Hamilton, ON L8W 3A1
T: 905.318.7440 F: 905.318.7455
E: info@soil-mat.ca

Datum: Temporary Benchmark
Field Logged by: BO
Checked by: PM
Sheet: 1 of 1

Log of Borehole No. 101-W

Project No: SM 301724-G-E
Project: Phase Two ESA
Location: Niagara Falls, Ontario
Client: Rudanco Hospitality Corporation

Project Manager: Peter Markesic, B.Sc.
Borehole Location: See Drawing No.1
UTM Coordinates - N: 4770412
E: 656376

Depth (ft / m)	Elevation (m)	Symbol	Description	Well Data	SAMPLE Type	SAMPLE Number	SAMPLE Blow Counts	SAMPLE Blows/300mm	SAMPLE Recovery	PP (kgf/cm2)	U.Wt.(kN/m3)	Moisture Content w% (10 20 30 40) / Standard Penetration Test blows/300mm (20 40 60 80)
0 ft / 0 m	99.43		Ground Surface									
0 – 3 ft	99.10		**Sand and Gravel Fill** Brown, loose.									
3 – 9 ft			**Clayey Silt/Silty Clay** Reddish brown, trace sand and gravel, reworked in the upper levels, very stiff.		SS	1	6,7,9,13	16				
9 ft / 3 m	96.60		End of Borehole									

NOTES:

1. Borehole was advanced using solid stem auger equipment on November 11, 2021 to termination at a depth of 2.9 meters.

2. Borehole was recorded as open and 'dry' upon completion and backfilled as per Ontario Regulation 903.

3. Soil samples will be discarded after 3 months unless otherwise directed by our client.

Drill Method: Solid Stem Augers
Drill Date: November 11, 2021
Hole Size: 150 Millimeters
Drilling Contractor: Elements Geo Drilling

Soil-Mat Engineers & Consultants Ltd.
130 Lancing Drive, Hamilton, ON L8W 3A1
T: 905.318.7440 F: 905.318.7455
E: info@soil-mat.ca

Datum: Temporary Benchmark
Field Logged by: BO
Checked by: PM
Sheet: 1 of 1

Log of Borehole No. 101-E

Project No: SM 301724-G-E
Project: Phase Two ESA
Location: Niagara Falls, Ontario
Client: Rudanco Hospitality Corporation

Project Manager: Peter Markesic, B.Sc.
Borehole Location: See Drawing No.1
UTM Coordinates - N: 4770414
E: 656378

Depth (ft)	Depth (m)	Elevation (m)	Description	Well Data	SAMPLE Type	SAMPLE Number	SAMPLE Blow Counts	SAMPLE Blows/300mm	SAMPLE Recovery	PP (kgf/cm2)	U.Wt.(kN/m3)
		99.45	Ground Surface								
0	0	99.12	**Sand and Gravel Fill** Brown, loose.								
			Clayey Silt/Silty Clay Reddish brown, trace sand and gravel, reworked in the upper levels, very stiff.								
					SS	1	5,6,10,11	16			
9	3	96.60	End of Borehole								

Moisture Content w% (10 20 30 40)

Standard Penetration Test blows/300mm (20 40 60 80)

NOTES:

1. Borehole was advanced using solid stem auger equipment on November 11, 2021 to termination at a depth of 2.9 meters.

2. Borehole was recorded as open and 'dry' upon completion and backfilled as per Ontario Regulation 903.

3. Soil samples will be discarded after 3 months unless otherwise directed by our client.

Drill Method: Solid Stem Augers
Drill Date: November 11, 2021
Hole Size: 150 Millimeters
Drilling Contractor: Elements Geo Drilling

Soil-Mat Engineers & Consultants Ltd.
130 Lancing Drive, Hamilton, ON L8W 3A1
T: 905.318.7440 F: 905.318.7455
E: info@soil-mat.ca

Datum: Temporary Benchmark
Field Logged by: BO
Checked by: PM
Sheet: 1 of 1

Log of Borehole No. 101-S

Project No: SM 301724-G-E
Project: Phase Two ESA
Location: Niagara Falls, Ontario
Client: Rudanco Hospitality Corporation

Project Manager: Peter Markesic, B.Sc.
Borehole Location: See Drawing No.1
UTM Coordinates - N: 4770408
E: 656384

Depth (ft / m)	Elevation (m)	Description	Well Data	SAMPLE Type	SAMPLE Number	SAMPLE Blow Counts	SAMPLE Blows/300mm	SAMPLE Recovery	PP (kgf/cm2)	U.Wt.(kN/m3)
0 / 0	99.43	Ground Surface								
0 / 0	99.10	**Sand and Gravel Fill** Brown, loose.								
		Clayey Silt/Silty Clay Reddish brown, trace sand and gravel, reworked in the upper levels, very stiff.								
8 / 2				SS	1	5,7,11,12	18			
11 / 3				SS	2	5,9,12,18	21			
13 / 4				SS	3	5,8,10,11	18			
16 / 5	94.20			SS	4	6,8,10,12	18			
17 / 5		End of Borehole								

Moisture Content w% (10 20 30 40)

Standard Penetration Test blows/300mm (20 40 60 80)

NOTES:

1. Borehole was advanced using solid stem auger equipment on November 11, 2021 to termination at a depth of 5.2 meters.

2. Borehole was recorded as open and 'dry' upon completion and backfilled as per Ontario Regulation 903.

3. Soil samples will be discarded after 3 months unless otherwise directed by our client.

Drill Method: Solid Stem Augers
Drill Date: November 11, 2021
Hole Size: 150 Millimeters
Drilling Contractor: Elements Geo Drilling

Soil-Mat Engineers & Consultants Ltd.
130 Lancing Drive, Hamilton, ON L8W 3A1
T: 905.318.7440 F: 905.318.7455
E: info@soil-mat.ca

Datum: Temporary Benchmark
Field Logged by: BO
Checked by: PM
Sheet: 1 of 1

Log of Borehole No. 201

Project No: SM 301724-G-E
Project: Phase Two ESA
Location: Niagara Falls, Ontario
Client: Rudanco Hospitality Corporation

Project Manager: Peter Markesic, B.Sc.
Borehole Location: See Drawing No.1
UTM Coordinates - N: 4770385
E: 656394

Depth (ft / m)	Elevation (m)	Description	Well Data	SAMPLE Type	SAMPLE Number	SAMPLE Blow Counts	SAMPLE Blows/300mm	SAMPLE Recovery	PP (kgf/cm2)	U.Wt.(kN/m3)
0 / 0	99.50	Ground Surface								
0 / 0	99.20	**Sand and Gravel Fill** Brown, loose.								
3 / 1		**Clayey Silt/Silty Clay** Reddish brown, trace sand and gravel, reworked in the upper levels, very stiff.		SS	1	4,9,13,9	22			
9 / 3	96.60	End of Borehole								

Moisture Content w% (10 20 30 40)

Standard Penetration Test blows/300mm (20 40 60 80)

NOTES:

1. Borehole was advanced using solid stem auger equipment on November 11, 2021 to termination at a depth of 2.9 meters.

2. Borehole was recorded as open and 'dry' upon completion and backfilled as per Ontario Regulation 903.

3. Soil samples will be discarded after 3 months unless otherwise directed by our client.

Drill Method: Solid Stem Augers
Drill Date: November 11, 2021
Hole Size: 150 Millimeters
Drilling Contractor: Elements Geo Drilling

Soil-Mat Engineers & Consultants Ltd.
130 Lancing Drive, Hamilton, ON L8W 3A1
T: 905.318.7440 F: 905.318.7455
E: info@soil-mat.ca

Datum: Temporary Benchmark
Field Logged by: BO
Checked by: PM
Sheet: 1 of 1

Log of Borehole No. 202

Project No: SM 301724-G-E
Project: Phase Two ESA
Location: Niagara Falls, Ontario
Client: Rudanco Hospitality Corporation

Project Manager: Peter Markesic, B.Sc.
Borehole Location: See Drawing No.1
UTM Coordinates - N: 4770403
E: 656397

Depth (ft / m)	Elevation (m)	Symbol	Description	Well Data	SAMPLE Type	SAMPLE Number	SAMPLE Blow Counts	SAMPLE Blows/300mm	SAMPLE Recovery	PP (kgf/cm2)	U.Wt.(kN/m3)	Moisture Content w% (10 20 30 40) / Standard Penetration Test blows/300mm (20 40 60 80)
0 / 0	99.48		Ground Surface									
0 / 0	99.18		**Sand and Gravel Fill** Brown, loose.									
1 / 0			**Clayey Silt/Silty Clay** Reddish brown, trace sand and gravel, reworked in the upper levels, very stiff.									
9 / 3	96.60		End of Borehole		SS	1	11,12,12,19	24				

NOTES:

1. Borehole was advanced using solid stem auger equipment on November 11, 2021 to termination at a depth of 2.9 meters.

2. Borehole was recorded as open and 'dry' upon completion and backfilled as per Ontario Regulation 903.

3. Soil samples will be discarded after 3 months unless otherwise directed by our client.

Drill Method: Solid Stem Augers
Drill Date: November 11, 2021
Hole Size: 150 Millimeters
Drilling Contractor: Elements Geo Drilling

Soil-Mat Engineers & Consultants Ltd.
130 Lancing Drive, Hamilton, ON L8W 3A1
T: 905.318.7440 F: 905.318.7455
E: info@soil-mat.ca

Datum: Temporary Benchmark
Field Logged by: BO
Checked by: PM
Sheet: 1 of 1

Log of Borehole No. 203

Project No: SM 301724-G-E
Project: Phase Two ESA
Location: Niagara Falls, Ontario
Client: Rudanco Hospitality Corporation

Project Manager: Peter Markesic, B.Sc.
Borehole Location: See Drawing No.1
UTM Coordinates - N: 4770418
E: 656400

Depth (ft / m)	Elevation (m)	Description	Well Data	SAMPLE Type	SAMPLE Number	SAMPLE Blow Counts	SAMPLE Blows/300mm	SAMPLE Recovery	PP (kgf/cm2)	U.Wt.(kN/m3)
0 / 0	99.60	Ground Surface								
0 / 0	99.30	**Sand and Gravel Fill** Brown, loose.								
3 / 1		**Clayey Silt/Silty Clay** Reddish brown, trace sand and gravel, reworked in the upper levels, very stiff.								
9 / 3	96.70			SS	1	11,12,16,18	28			
9 / 3		End of Borehole								

Moisture Content w% (10 20 30 40)

Standard Penetration Test blows/300mm (20 40 60 80)

NOTES:

1. Borehole was advanced using solid stem auger equipment on November 11, 2021 to termination at a depth of 2.9 meters.

2. Borehole was recorded as open and 'dry' upon completion and backfilled as per Ontario Regulation 903.

3. Soil samples will be discarded after 3 months unless otherwise directed by our client.

Drill Method: Solid Stem Augers
Drill Date: November 11, 2021
Hole Size: 150 Millimeters
Drilling Contractor: Elements Geo Drilling

Soil-Mat Engineers & Consultants Ltd.
130 Lancing Drive, Hamilton, ON L8W 3A1
T: 905.318.7440 F: 905.318.7455
E: info@soil-mat.ca

Datum: Temporary Benchmark
Field Logged by: BO
Checked by: PM
Sheet: 1 of 1

Log of Borehole No. 204

Project No: SM 301724-G-E
Project: Phase Two ESA
Location: Niagara Falls, Ontario
Client: Rudanco Hospitality Corporation

Project Manager: Peter Markesic, B.Sc.
Borehole Location: See Drawing No.1
UTM Coordinates - N: 4770372
E: 656406

Depth (ft)	Depth (m)	Elevation (m)	Description	Well Data	SAMPLE Type	SAMPLE Number	SAMPLE Blow Counts	SAMPLE Blows/300mm	SAMPLE Recovery	PP (kgf/cm2)	U.Wt.(kN/m3)
		99.52	Ground Surface								
0	0	99.27	**Pavement Structure** Approximately 50 millimetres of asphaltic concrete over 200 millimetres of compact granular material.								
1			**Clayey Silt/Silty Clay** Reddish brown, trace sand and gravel, reworked in the upper levels, very stiff.								
2	1										
3											
4											
5											
6	2										
7											
8					SS	1	6,9,13,17	21			
9		96.60									
10	3		End of Borehole								
11											
12											
13	4										
14											
15											
16											
17	5										
18											
19											
20	6										
21											
22											
23	7										
24											
25											
26	8										
27											
28											
29											
30	9										
31											
32											
33											

Moisture Content w%
10 20 30 40

Standard Penetration Test blows/300mm
20 40 60 80

NOTES:

1. Borehole was advanced using solid stem auger equipment on November 11, 2021 to termination at a depth of 2.9 meters.

2. Borehole was recorded as open and 'dry' upon completion and backfilled as per Ontario Regulation 903.

3. Soil samples will be discarded after 3 months unless otherwise directed by our client.

Drill Method: Solid Stem Augers
Drill Date: November 11, 2021
Hole Size: 150 Millimeters
Drilling Contractor: Elements Geo Drilling

Soil-Mat Engineers & Consultants Ltd.
130 Lancing Drive, Hamilton, ON L8W 3A1
T: 905.318.7440 F: 905.318.7455
E: info@soil-mat.ca

Datum: Temporary Benchmark
Field Logged by: BO
Checked by: PM
Sheet: 1 of 1

Log of Borehole No. 205

Project No: SM 301724-G-E
Project: Phase Two ESA
Location: Niagara Falls, Ontario
Client: Rudanco Hospitality Corporation

Project Manager: Peter Markesic, B.Sc.
Borehole Location: See Drawing No.1
UTM Coordinates - N: 4770425
E: 656414

Depth (ft / m)	Elevation (m)	Description	Well Data	SAMPLE Type	SAMPLE Number	SAMPLE Blow Counts	SAMPLE Blows/300mm	SAMPLE Recovery	PP (kgf/cm2)	U.Wt.(kN/m3)	Moisture Content w% (10 20 30 40) / Standard Penetration Test blows/300mm (20 40 60 80)
0 ft / 0 m	99.77	Ground Surface									
0 – 9 ft / 0 – 3 m		**Topsoil** Approximately 150 millimetres of topsoil. **Clayey Silt/Silty Clay** Reddish brown, trace sand and gravel, reworked in the upper levels, very stiff.		SS	1	7,12,14,17	26				
9 ft / 3 m	96.90	End of Borehole									

NOTES:

1. Borehole was advanced using solid stem auger equipment on November 11, 2021 to termination at a depth of 2.9 meters.

2. Borehole was recorded as open and 'dry' upon completion and backfilled as per Ontario Regulation 903.

3. Soil samples will be discarded after 3 months unless otherwise directed by our client.

Drill Method: Solid Stem Augers
Drill Date: November 11, 2021
Hole Size: 150 Millimeters
Drilling Contractor: Elements Geo Drilling

Soil-Mat Engineers & Consultants Ltd.
130 Lancing Drive, Hamilton, ON L8W 3A1
T: 905.318.7440 F: 905.318.7455
E: info@soil-mat.ca

Datum: Temporary Benchmark
Field Logged by: BO
Checked by: PM
Sheet: 1 of 1

Appendix ‘B’

1. AGAT Certificate of Analysis – Soil

AGAT Laboratories

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

CLIENT NAME: SOIL MAT ENGINEERS & CONSULTANTS LT
130 LANCING DRIVE
HAMILTON, ON L8W3A1
(905) 318-7440

ATTENTION TO: Peter Markesic

PROJECT: 301724

AGAT WORK ORDER: 21H829029

SOIL ANALYSIS REVIEWED BY: Nivine Basily, Inorganics Report Writer

DATE REPORTED: Nov 17, 2021

PAGES (INCLUDING COVER): 5

VERSION*: 1

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

*Notes

Disclaimer:

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

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: 21H829029

PROJECT: 301724

CLIENT NAME: SOIL MAT ENGINEERS & CONSULTANTS LT

ATTENTION TO: Peter Markesic

SAMPLING SITE:

SAMPLED BY:

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

DATE RECEIVED: 2021-11-11 **DATE REPORTED: 2021-11-17**

		SAMPLE DESCRIPTION:		BH101-N SS1	BH101-E SS1	BH101-S SS1	BH101-W SS1	DUP1
		SAMPLE TYPE:		Soil	Soil	Soil	Soil	Soil
		DATE SAMPLED:		2021-11-11	2021-11-11	2021-11-11	2021-11-11	2021-11-11
Parameter	Unit	G / S	RDL	3198710	3198711	3198712	3198713	3198714
Antimony	µg/g	1.3	0.8	<0.8	<0.8	<0.8	<0.8	<0.8
Arsenic	µg/g	18	1	4	5	4	5	5
Barium	µg/g	220	2.0	96.7	123	91.6	143	150
Beryllium	µg/g	2.5	0.4	<0.4	0.5	<0.4	0.4	0.5
Boron	µg/g	36	5	9	12	10	12	11
Cadmium	µg/g	1.2	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Chromium	µg/g	70	5	16	22	15	20	21
Cobalt	µg/g	21	0.5	8.9	10.7	8.7	10.4	11.6
Copper	µg/g	92	1.0	12.7	16.2	13.1	15.0	16.8
Lead	µg/g	120	1	13	10	14	12	12
Molybdenum	µg/g	2	0.5	<0.5	0.6	0.5	0.6	0.6
Nickel	µg/g	82	1	18	23	17	20	23
Selenium	µg/g	1.5	0.8	<0.8	<0.8	<0.8	<0.8	<0.8
Silver	µg/g	0.5	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Thallium	µg/g	1	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Uranium	µg/g	2.5	0.50	0.52	0.59	0.56	0.62	0.60
Vanadium	µg/g	86	0.4	23.7	31.5	24.1	31.4	31.0
Zinc	µg/g	290	5	70	62	89	76	73

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 1: Full Depth Background Site Condition Standards - Soil - Residential/Parkland/Institutional/Industrial/Commercial/Community Property Use
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

Analysis performed at AGAT Toronto (unless marked by *)

Certified By:

AGAT Laboratories

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

Quality Assurance

CLIENT NAME: SOIL MAT ENGINEERS & CONSULTANTS LT

AGAT WORK ORDER: 21H829029

PROJECT: 301724

ATTENTION TO: Peter Markesic

SAMPLING SITE:

SAMPLED BY:

Soil Analysis

RPT Date: Nov 17, 2021			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) (Soil)															
Antimony	3197633		<0.8	<0.8	NA	< 0.8	122%	70%	130%	112%	80%	120%	71%	70%	130%
Arsenic	3197633		6	6	0.0%	< 1	121%	70%	130%	112%	80%	120%	112%	70%	130%
Barium	3197633		115	110	4.4%	< 2.0	118%	70%	130%	110%	80%	120%	109%	70%	130%
Beryllium	3197633		0.7	0.6	NA	< 0.4	76%	70%	130%	99%	80%	120%	84%	70%	130%
Boron	3197633		12	11	NA	< 5	78%	70%	130%	117%	80%	120%	97%	70%	130%
Cadmium	3197633		<0.5	<0.5	NA	< 0.5	111%	70%	130%	110%	80%	120%	110%	70%	130%
Chromium	3197633		30	28	6.9%	< 5	106%	70%	130%	109%	80%	120%	114%	70%	130%
Cobalt	3197633		11.7	11.2	4.4%	< 0.5	102%	70%	130%	106%	80%	120%	106%	70%	130%
Copper	3197633		36.5	34.4	5.9%	< 1.0	93%	70%	130%	107%	80%	120%	98%	70%	130%
Lead	3197633		17	16	6.1%	< 1	111%	70%	130%	107%	80%	120%	102%	70%	130%
Molybdenum	3197633		0.6	0.6	NA	< 0.5	105%	70%	130%	107%	80%	120%	107%	70%	130%
Nickel	3197633		26	24	8.0%	< 1	99%	70%	130%	106%	80%	120%	97%	70%	130%
Selenium	3197633		<0.8	<0.8	NA	< 0.8	129%	70%	130%	114%	80%	120%	114%	70%	130%
Silver	3197633		<0.5	<0.5	NA	< 0.5	102%	70%	130%	112%	80%	120%	102%	70%	130%
Thallium	3197633		<0.5	<0.5	NA	< 0.5	113%	70%	130%	103%	80%	120%	104%	70%	130%
Uranium	3197633		0.84	0.81	NA	< 0.50	119%	70%	130%	108%	80%	120%	112%	70%	130%
Vanadium	3197633		42.2	40.8	3.4%	< 0.4	111%	70%	130%	105%	80%	120%	110%	70%	130%
Zinc	3197633		118	113	4.3%	< 5	106%	70%	130%	110%	80%	120%	106%	70%	130%

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

Certified By:

AGAT Laboratories

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

Method Summary

CLIENT NAME: SOIL MAT ENGINEERS & CONSULTANTS LT

AGAT WORK ORDER: 21H829029

PROJECT: 301724

ATTENTION TO: Peter Markesic

SAMPLING SITE:

SAMPLED BY:

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Soil Analysis			
Antimony	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Arsenic	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Barium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Beryllium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Boron	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Cadmium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Chromium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Cobalt	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Copper	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Lead	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Molybdenum	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Nickel	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Selenium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Silver	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Thallium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Uranium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Vanadium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Zinc	MET 93 -6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS

AGAT Laboratories

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

Chain of Custody Record

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

Laboratory Use Only

Work Order #: 21H529029

Cooler Quantity: LG COOLER

Arrival Temperatures: 4.4 | 4.7 | 4.2
14.8 | 13.5 | 13.2

Custody Seal Intact: ☐ Yes ☐ No ☐ N/A

Notes: ICE PKS

Report Information:

Company: SOIL MAT
Contact: Peter Markesic
Address:
Phone: Fax:
Reports to be sent to:
1. Email: PMarkesic@Soilmat.ca
2. Email: bolds@soilmat.ca

Regulatory Requirements:

(Please check all applicable boxes)

☒ Regulation 153/04 — Table 1 (Indicate One) ☐ Ind/Com ☐ Res/Park ☐ Agriculture
Soil Texture (Check One) ☐ Coarse ☐ Fine

☐ Excess Soils R406 — 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

Turnaround Time (TAT) Required:

Regular TAT ☒ 5 to 7 Business Days

Rush TAT (Rush Surcharges Apply)

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

OR Date Required (Rush Surcharges May Apply):

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

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

Project Information:

Project: 301724
Site Location: Lot 175, Niagara Falls
Sampled By: BO
AGAT Quote #: PO:
Please note: If quotation number is not provided, client will be billed full price for analysis.

Invoice Information:

Bill To Same: Yes ☐ No ☐

Company:
Contact:
Address:
Email:

Sample Matrix Legend

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

Sample Identification	Date Sampled	Time Sampled	# of Containers	Sample Matrix	Comments/ Special Instructions	Field Filtered - Metals, Hg, CrVI, DOC Y/N	O. Reg 153: Metals & Inorganics	Metals - ☐ CrVI, ☐ Hg, ☐ HWSB	BTEX, F1-F4 PHCs Analyze F4G if required ☐ Yes ☐ No	O. Reg 153: PAHs	PCBs	VOC	O. Reg 558: Landfill Disposal Characterization TCLP: ☐ M&I ☐ VOCs ☐ ABNs ☐ B(a)P ☐ PCBs	O. Reg 406: Excess Soils SPLP Rainwater Leach SPLP: ☐ Metals ☐ VOCs ☐ SVOCs	Excess Soils Characterization Package pH, ICPMS Metals, BTEX, F1-F4	Salt - EC/SAR	Reg 153 Metals							Potentially Hazardous or High Concentration Y/N
BH101-N SS1	Nov 11/21	AM	1	SOIL													X							
BH101-E SS1	↓	AM	↓	↓													X							
BH101-S SS1		AM															X							
BH101-W SS1		AM															X							
DUP1		AM															X							
		AM																						
		AM																						
		AM																						
		AM																						
		AM																						
		AM																						
		AM																						

Samples Relinquished By (Print Name and Sign)	Date	Time	Samples Received By (Print Name and Sign)	Date	Time
Billy Bolds	Nov 11/21	2:45	DJ AC	Nov 11/21	2:45pm
DJ AC	Nov 11/21	7pm		11/11/21	4:10
Samples Relinquished By (Print Name and Sign):	Date	Time	Samples Received By (Print Name and Sign):	Date	Time

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Appendix ‘C’

1. Qualifications of Assessors

Keith Gleadall, B.A, EA Dipl.
Vice President [Senior Professional]

Mr. Gleadall has over fourteen years of experience in conducting Phase I, II and III Environmental Site Assessments and has successfully completed the requirements of the Associated Environmental Site Assessors of Canada and a Post Graduate Diploma in Environmental Site Assessment from Niagara College. Mr. Gleadall is responsible for undertaking numerous hydrogeological investigations, primarily within the City of Hamilton, associated with the development of residential and commercial subdivision projects, together with Phase I, II and III Environmental Site Assessments. Projects have included the decommissioning of underground and above ground fuel oil storage tanks, the implementation of in-situ and ex-situ remediation programmes, the decommissioning of a former dry cleaning facility and numerous 'dig and dump' remediation projects.

Appendix ‘D’

1. Statement of Limitations

COMPANY BACKGROUND

SOIL-MAT ENGINEERS & CONSULTANTS LTD. [SOIL-MAT ENGINEERS] is a Canadian Consulting Engineering firm owned by its senior staff. Over the past thirty years the principals of SOIL-MAT ENGINEERS have undertaken geotechnical investigations in all areas of Hamilton and surrounding area and are familiar with the distinct geology of the area and therefore well-versed with the various soil, bedrock and groundwater conditions. SOIL-MAT ENGINEERS has a staff of over twenty-five engineers and technical staff who specialize in geotechnical assignments, environmental assessments, hydrogeological investigations and construction quality control/assurance projects. The company commenced operation on June 15, 1992 and has undertaken over 5,000 projects since its inception. The firm and all professional staff are in good standing with Professional Engineers Ontario. The company has maintained a current Certificate of Authorisation since it was granted on April 28, 1992. The firm's office and laboratory facilities are located at 130 Lancing Drive in Hamilton, Ontario.

REPORT AUTHORS

Billy Olds, B.Sc.
Environmental Technician

Mr. Olds has over two years of experience in conducting Phase I ESA research and Phase II ESA fieldwork, including soil and groundwater sampling. Mr. Olds has also been a key member on a number of projects including the supervision and direction of traditional 'dig and dump' remediation projects.

Stephen R. Sears, B. Eng. Mgmt., P. Eng.
[Director/ Senior Professional]

Mr. Sears has over twenty-two years of experience in the geotechnical and geo-environmental fields. Mr. Sears holds current Consulting Engineer designations with the Professional Engineers Ontario and the Association of Professional Engineers and Geoscientists of Saskatchewan and has supervised the geotechnical investigations for numerous industrial, commercial and residential development projects in Southern Ontario, slope stability assignments associated with Hamilton Conservation Authority, Conservation Halton and Niagara Peninsula Conservation Authority requirements, and several high rise developments throughout Ontario. Mr. Sears has also been involved in geotechnical and hydrogeological investigations for industrial park developments in the Greater Toronto Area and Niagara Peninsula. Some of Mr. Sears' projects have included the decommissioning and reconstruction of underground and above ground fuel oil storage tanks in Ontario and Saskatchewan, the study of the containment structures at a number of Petroleum Storage Facilities in Ontario and and numerous 'dig and dump' remediation projects.

REPORT LIMITATIONS

Achieving the objectives that are stated in this report has required SOIL-MAT ENGINEERS to derive conclusions based upon the best and most recent information currently available to SOIL-MAT ENGINEERS. No investigative method can completely eliminate the possibility of obtaining partially imprecise information. SOIL-MAT ENGINEERS has expressed professional judgement in gathering and analysing the information obtained and in the formulation of its conclusions.

Information in this report was obtained from sources deemed to be reliable, however, no representation or warranty is made as to the accuracy of this information. To the best of SOIL-MAT ENGINEERS' knowledge, the information gathered from outside sources contained in this report on which SOIL-MAT ENGINEERS has formulated its opinions and conclusions, are both true and correct. SOIL-MAT ENGINEERS assumes no responsibility for any misrepresentation of facts gathered from outside sources.

This report was prepared to assess and document evidence of potential environmental contamination, and not to judge the acceptability of the risks associated with such environmental contamination. Much of the information gathered for this report is only accurate at the time of collection and a change in the Site conditions may alter the interpretation of SOIL-MAT ENGINEERS' findings. Furthermore, the reader should note that the Site reconnaissance described in this report was an environmental assessment of the Site, not a regulatory compliance or an environmental audit of the Site.

SOIL-MAT ENGINEERS & CONSULTANTS LTD. prepared this Report for the account of the RUDANCO INC. The material in it reflects SOIL-MAT ENGINEERS 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. SOIL-MAT ENGINEERS accepts no responsibility for damages, if any suffered by any third party as a result of decisions made or actions based on this report.