RAMPEN HOLDINGS INC.

PHASE TWO ENVIRONMENTAL SITE ASSESSMENT

1086 BURNHAMTHORPE ROAD EAST, OAKVILLE

Project No. 171-01330-00

APRIL 2017





24 April 2017

Rampen Holdings Inc. 6625 Kitmat Road, Suite 58 Mississauga Ontario L5N 6J1

Dear Mr. Tom Baskerville

Subject:

Phase Two Environmental Site Assessment

1086 Burnhamthorpe Road East, Oakville, Ontario

Project No.: 171-01330-00

We are pleased to present our Phase Two Environmental Site Assessment report for the above-noted property. This Phase Two Environmental Site Assessment was completed in accordance with Ontario Regulation 153/04, as amended. As such, this report may be used to support a Record of Site Condition application for the property. The report describes the interpreted environmental conditions at the property and provides conclusions for your consideration.

Thank you for the opportunity to be of service on this project. We trust that this report will be satisfactory for your current needs. If you have any questions or require further information, please contact our office at your convenience.

Yours truly, WSP Canada Inc.

Rodney Obdeyn, P.Eng., QPesa

Principal Engineer

File No.: 171-01330-00

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1 EXECUTIVE SUMMARY

WSP Canada Inc. (WSP) was retained by Rampen Holdings Inc. to conduct a Phase Two Environmental Site Assessment (ESA) of the property which comprises part of the municipal address of 1086 Burhamthorpe Road East, Oakville in Ontario (hereafter referred to as the "Phase Two Property" or "Site"). The Phase Two Property is owned by Rampen Holdings Inc. It is understood that this Phase Two ESA was requested in order to support the filling of an RSC prior to redevelopment of the Site and the proposed land conveyance along the southeast portion of the Site to the Town of Oakville.

The Site is located southeast of Burhamthorpe Road East in a mixed commercial and residential area in the City of Oakville, Ontario, approximately 1.2 km east of Trafalgar Road and 300 meters southeast of Burhamthorpe Road East. A Site location map is provided as Drawing 1. The Phase One Property is currently vacant and devoid of any structures and buildings. The Site has a total area of approximately 15.3 ha (37.75acres).

A recent Phase One ESA was conducted by WSP in March 2017 which identified the Site as having been historically utilized for agricultural purposes. Additionally, it was determined that portions of the Site had been previously rented for corn and soybean cultivation. As such, an Area of Potential Environmental Concern (APEC) was identified on the Site due to the historic agricultural land cultivation. Potential Contaminants of Concern (PCOCs) based on the APEC identified on site include OC pesticides.

Based on the Phase One ESA completed by WSP at the Site, the Phase Two Property is considered to have an APEC due to the following potentially contaminating activities:

Table 1-1 PCA Summary

PCAS DESCRIPTION

PCA No. 40

Pesticides (including herbicides, fungicides and anti-fouling agents) manufacturing, processing, bulk storage and large-scale application <u>Phase One Property and Study Area</u> – The Site has historically been utilized for agricultural purposes with a portion of the Site having been rented out for corn and soybean cultivation. Herbicides and pesticide may have potentially been used for agricultural purposes across the Phase One Property. This PCAs is considered to be contributing to **APEC 1.**

N/S - not specified in Table 2, Schedule D, of O.Reg. 153/04

During the Phase Two ESA, a total of four (4) hand dug test pits (GS1-040317 to GS4-040317) were advanced across the Site to a depth of approximately 0.3 to 0.5 metres below ground surface (mbgs) on April 3, 2016 by WSP personnel.

Based on the Phase Two ESA, WSP presents the following findings:

- 1. Topsoil was encountered in all test pits advanced during this investigation from surface to the termination of the test pit at each location.
- The soil analytical results were compared to the Ministry of Environment and Climate Change (MOECC) Table 1 Full Depth Background Site Condition Standards for residential/parkland/ institutional/industrial/commercial/institutional land use.

3. Four (4) soil samples (plus one field duplicate) were analyzed for OC pesticides. The results of the laboratory analyses indicated that all samples analyzed met the MOECC Table 1 SCS.

Based on the findings of this Phase Two ESA, WSP presents the following conclusions and recommendations:

- All soil analysed met the applicable site condition standards and as such no further investigation is warranted at this time.
- → A Record of Site Condition can be filed for the property, if required, based on the findings of this Phase Two ESA.

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2 INTRODUCTION

WSP Canada Inc. (WSP) was retained by Rampen Holdings Inc. to conduct a Phase Two Environmental Site Assessment (ESA) of the property located as part of the municipal address of 1086 Burnhamthorpe Road East, in Oakville, Ontario (hereafter referred to as the "Phase Two Property" or "Site").

The Phase Two ESA was conducted in general compliance with O. Reg. 153/04 (as amended). It is understood that this Phase Two ESA was requested in order to support the filling of an RSC as part of the proposed residential site development and land conveyance to the City of Oakville.

2.1 SITE DESCRIPTION

The Site is located southeast of Burnhamthorpe Road East in a mixed commercial and residential area in the City of Oakville, Ontario, approximately 1.2 km east of Trafalgar Road and 300 meters southeast of Burnhamthorpe Road East. A Site location map is provided as Drawing 1. The Phase One Property is currently vacant and devoid of any structures and buildings with a total area of approximately 15.3 ha (37.75acres). Property information for the Site is provided in the table below.

Table 2-1 Property Information

CRITERION	DESCRIPTION
Municipal Address	1086 Burnhamthorpe Road East, Oakville, Ontario
Property Identification Numbers (PINs)	24930-0017
Legal Description	Part of Lot 10 Concession 1, North of Dundas Street Town of Oakville Regional Municipality of Halton

A Plan of Survey, completed by J.H Gelbloom Surveying Limited was provided for the Site. The Plan of Survey is included as Appendix A.

2.2 PROPERTY OWNERSHIP

Property ownership information for the Site is provided in the following table.

Table 2-2 Property Ownership Information

CRITERION	DESCRIPTION
Current Site Owner	Rampen Holdings Inc.
Owner's Representative	Mr. Tom Baskerville Rampen Holdings Inc. 6625 Kitimat Road, Suite 58 Email: tbaskerville@corcorp.ca

2.3 CURRENT AND PROPOSED FUTURE USES

The Site is currently a vacant agricultural field that comprises a portion of 1086 Burnhamthorpe Road and is proposed for site redevelopment in connection with a residential subdivision. Additionally, the southeast portion of the Site is a wood lot that is proposed to be conveyed to the Town of Oakville.

2.4 APPLICABLE SITE CONDITION STANDARD

Analytical results were compared to Table 1 Full Depth Background Site Condition Standards (SCSs) for Residential/Parkland/Institutional/Commercial/Industrial/Institutational (RPIICC) land use as set out in the MOECC publication *Soil, Groundwater and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act* (April 15, 2011), hereinafter referred to as the "MOECC Table 1 SCS". This evaluation standard for the Site was selected for comparison purposes based on the following:

- → The Site is located within 30 m of a body of water
- → Potable water may be derived from potable groundwater for properties within the Phase Two Study Area.

The Site is considered an "environmentally sensitive" site, as defined by O. Reg. 153/04 as a review of the Natural Heritage Areas database conducted as part of the Phase One ESA identified the southeastern portion of the Phase One Property as a Wetland area and Provincially Significant Earth Sciences area.

Soils encountered during this investigation consisted of topsoil material. Grain size analysis was not conducted during this investigation. As such the more stringent standards for coarse grained material were utilized.

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3 BACKGROUND INFORMATION

3.1 PHYSICAL SETTING

A summary of the Site's physical attributes is included in the following table:

Table 3-1 Summary of Physical Setting

CRITERIA	DESCRIPTION
i. Water Bodies and Areas of Natural	Joshua Creek, is located approximately 30 m east of the Phase One Property and runs in a west to east direction.
Significance	The Natural Heritage Areas database lists areas of natural significance including provincial parks, conservation reserves, areas of natural and scientific interest, wetlands environmentally significant areas, habitats of a threatened or endangered species, and wilderness areas. A review of this database identified the southeastern portion of the Phase One Property as a Wetland area and Provincially Significant Earth Sciences area.
ii. Topography, Hydrology, Geology	The Phase One Property is relatively flat with an elevation of approximately 180 metres above sea level. The topography in the vicinity of the Phase One Property slopes to the east. The inferred shallow groundwater flow direction of the Phase One Study Area is to the east towards Joshua Creek. The groundwater flow direction on the Phase One Property can only be confirmed through groundwater monitoring.
	The Site is situated within a till moraines physiographic region. The surficial geology in the vicinity of Site is "clay to silt-textured till" derived from glaciolacustrine deposits of shale. The underlying bedrock within the area generally consists of shale, limestone, dolostone, and siltstone of the Queenston Formation. The bedrock in the vicinity of the Site is anticipated at depths approximately 60 mbgs, based on the available well records.

3.2 PAST ASSESSMENTS AND INVESTIGATIONS

A recent Phase One ESA was conducted by WSP in March 2017 which identified the Site as having been historically utilized for agricultural purposes. Additionally, it was determined that portions of the Site had been previously rented for corn and soybean cultivation. As such, an Area of Potential Environmental Concern (APECs) was identified on the Site due to the historic agricultural land cultivation. Potential Contaminants of Concern (PCOCs) based on the APEC identified on site include OC pesticides.

4 SCOPE OF THE INVESTIGATION

4.1 OVERVIEW OF SITE INVESTIGATION

The primary objectives of the Phase Two ESA are as follows:

- → Investigate subsurface soil conditions in relation to the potentially contaminating activities and areas of environmental concern as identified as part of this Phase Two ESA.
- → Compare soil results to the applicable MOECC Table 1 SCS.

The Phase Two ESA was carried out in general accordance with O. Reg. 153/04, as amended. The Site investigation activities were limited to visible and accessible locations of the site. Subsurface investigations, testing, sampling, and laboratory analyses were completed based on available historical findings, site access, and current site observations.

4.1.1 SAMPLING AND ANALYSIS PLAN

A total of four (4) hand dug test pits were advanced to an approximate depth of 0.3 metres below ground surface (mbgs) on 03 April 2017 by WSP Personnel. Soil samples were submitted for analysis of OC pesticides parameters. See Appendix C for the Sampling and Analysis Plan for this Site assessment.

Per O. Reg. 153/04 Schedule E. Condition 3(5), WSP developed Standard Operating Procedures (SOPs) used in the field investigation as listed in the following table.

Fieldwork for this Phase Two ESA was undertaken following the SOPs. Deviations from the Sampling and Analysis Plan and SOPs, if any, are detailed in Section 2.6.

Table 4-1 List of Standard Operating Procedures Used in Field Investigation

CATEGORY	SOP
Soil Sampling	Field Soil Grab Sampling
Soil Field Testing	Odour Identification Screening of aesthetic impacts
Quality Assurance/Quality Control (QA/QC) Program	Quality Assurance (QA) Quality Control (QC)

4.2 MEDIA INVESTIGATED

A summary of the media investigated at the Site during the Phase Two ESA is provided in the table below.

Table 4-2 Media Investigated During Phase Two ESA

ENVIRONMENTAL CONCERN	MEDIA INVESTIGATED
APEC-1: On-Site - Pesticides (including herbicides, fungicides and anti-fouling agents) manufacturing, processing, bulk storage and large-scale application A portion of the site was historically rented out for corn and soybean cultivation	Soil OC Pesticides

4.3 PHASE ONE CONCEPTUAL SITE MODEL

A Phase One Conceptual Site Model (CSM) was presented in the Phase One ESA report (WSP April 2017) and is presented in this report as Drawing 2. The Phase One CSM identified potentially contaminating activities and areas of potential environmental concern for the Site, as described in Section 2.2

4.4 DEVIATIONS FROM SAMPLING AND ANALYSIS PLAN

There were no deviations from the sampling and analysis plan.

4.5 IMPEDIMENTS

No impediments were encountered during this investigation.

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5 INVESTIGATION METHOD

5.1 GENERAL

This section provides a brief description of all methods employed in undertaking this Phase Two ESA. Where the method differs from the associated SOPs, a detailed description of the method used and a rationale for the change in method is provided in the appropriate subsection below.

5.2 PHASE TWO ESA-TEST PIT INVESTIGATION

WSP staff inspected the Site and identified the preferred test pit locations based on the areas of environmental concern identified by the Phase One ESA. The sample locations are shown on the sample location plan in Drawing 1. On April 3rd 2017, four (4) samples (GS1-040317 – GS3-040316) and one (1) QA/QC sample were collected from the test pits advanced on-site.

5.3 SOIL

5.3.1 SOIL SAMPLING

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

Four (4) soil samples with one (1) field duplicate sample were submitted to AGAT Laboratories in Mississauga, Ontario. The soil samples submitted for chemical analysis are summarized in the following table:

Table 5-1 Summary of Soil Samples Submitted for Soil Quality Analysis

SAMPLE ID	DEPTH (MBGS)	SOIL TYPE	LABORATORY ANALYSES
GS1-040317	0.3	Topsoil	OC Pesticides
GS2-040317	0.4	Topsoil	OC Pesticides
GS3-040317	0.4	Topsoil	OC Pesticides
GS4-040317	0.5	Topsoil	OC Pesticides
QA/QC	0.3	Topsoil	OC Pesticides

5.3.2 FIELD SCREENING MEASUREMENTS

Soil samples were observed for staining and/or odours during excavation activities. No visual or olfactory impacts were observed during this investigation.

5.4 GROUNDWATER

Groundwater was not sampled as part of this investigation, as groundwater was not identified as a potentially impacted media during the Phase One ESA.

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5.5 SEDIMENT SAMPLING

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

5.6 ANALYTICAL TESTING

Soil was submitted to AGAT Laboratories in Mississauga, Ontario for chemical analysis for the above listed parameters. AGAT Laboratories is certified by the Canadian Association for Laboratory Accreditation (CALA).

5.7 RESIDUE MANAGEMENT PROCEDURES

Test pits advanced during this investigation were backfilled with soil cuttings upon completion of the sampling activities.

5.8 QUALITY ASSURANCE AND QUALITY CONTROL MEASURES

The project-specific QA/QC measures are described in the table below.

Table 5-2 QA/QC Measures

QA/QC MEASURE	DESCRIPTION
 i. Sample containers, preservation, labelling, handling and custody for samples submitted for laboratory analysis, including any deviations from the SAP. 	Soil samples from the boreholes were collected in 250 mL glass jars without preservative for analysis of all parameters at the sample locations. Sample containers were labelled with a unique sample identification, the project number and the sampling date. A laboratory-supplied chain of custody was completed. One (1) copy was sent with the samples to the laboratory, and one (1) copy was retained for the project file.
ii. Equipment cleaning procedures during sampling	Nitrile gloves were replaced after each sample was collected to reduce the potential for cross-contamination of the samples. Field equipment was cleaned with soap and water and was rinsed with distilled water between samples.
iii. Field QC measures	Blind field duplicate sample of soil was collected and submitted for laboratory analysis as part of this investigation.
 iv. Deviations from the procedures set out in the QA/QC program set out in the SAP. 	None.

As part of the quality assurance/quality control (QA/QC) program for the project, one (1) field-prepared duplicate was collected and submitted for the same chemical analyses as the original samples.

The field duplicate sample was assessed as part of the QA/QC program through a comparison of the analytical results of the original sample to the field duplicate sample. Field duplicates measure the cumulative effects of both field and laboratory precision and hence provide an indication of overall precision. Therefore, field duplicates may have greater variability than laboratory duplicates which measure only laboratory precision. It is also expected that non-aqueous matrices will have a greater variance than aqueous matrices due to the heterogeneity of most non-aqueous samples (such as soil/sediment samples). Field duplicates were evaluated based on the relative percent difference (RPD) in parameter concentrations.

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The RPD was calculated in accordance with the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act as amended July 1, 2011 (i.e., 2011 Protocol). The calculated RPD was assessed against the recommended performance criteria outlined in the 2011 Protocol where the measured concentration was greater than 5 times the method detection limit (MDL).

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

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6 REVIEW AND EVALUATION

6.1 GEOLOGY

Topsoil was encountered in all test pits advanced during this investigation from surface to the termination of the test pit at each location.

6.2 HYDROGEOLOGY

Groundwater monitoring wells were not installed as part of this investigation as such hydrogeology of the Site was not analysed.

6.3 RESULTS OF ANALYSIS

6.3.1 SOIL

6.3.1.1 COARSE GRAINED SOIL TEXTURE

The more conservative coarse grained soil standards were utilized during this investigation in the absence of grain size analyses.

6.3.1.2 FIELD SCREENING

Soil samples were observed for staining and/or odours test pit activities and sample collection. No visual or olfactory impacts were observed during this investigation.

6.3.1.3 SOIL QUALITY

The soil analysis results from the present investigation are presented in the Laboratory Certificates of Analysis provided in Appendix C.

6.3.1.4 OC PESTICIDES

Four (4) soil samples (plus one (1) QA/QC field duplicate) were analyzed for OC pesticides. The results of the laboratory analyses indicated that all samples analyzed contained concentrations of the tested parameters within the MOECC Table 1 SCS.

6.4 GROUNDWATER QUALITY

Groundwater was not sampled as part of this investigation, as groundwater was not identified as a potentially impacted media during the Phase One ESA.

6.5 SEDIMENT QUALITY

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

6.6 QUALITY ASSURANCE AND QUALITY CONTROL RESULTS

Proper field protocols for sample collection and handling were followed by all WSP personnel to ensure sample integrity was maintained. All field equipment was decontaminated before and between sample collection and clean nitrile gloves were used for each sample to eliminate the potential for cross

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contamination of samples. All soil and groundwater samples were collected directly into laboratory-supplied containers, preserved as required, and stored and shipped in ice-filled coolers. Proper chain of custody procedures were followed by WSP and the laboratory during sample transfer.

The RPDs for the analyzed parameters in duplicate samples (where the RPD could be calculated) were within the 2011 Protocol performance criteria. As such, it is WSP's opinion that the laboratory analytical data is reliable and reproducible.

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

With respect to subsection 47(3) of O. Reg. 153/04, all certificates of analysis of analytical reports received pursuant to clause 47(2)(b) of the regulation comply with subsection 47(3), a certificate of analysis of analytical report has been received for each sample submitted for analysis, and all certificates of analysis or analytical reports received have been included in full in Appendix C to the Phase Two Environmental Site Assessment report.

6.7 PHASE TWO CONCEPTUAL SITE MODEL

Through analysis and interpretation of the field data gathered during this Phase Two ESA, a Phase Two Conceptual Site Model was developed.

Based on a review of the Site prior to this Phase Two ESA, it was concluded that one APEC associated with past and/or present activities/operations exists at the Site. The table of areas of potential environmental concern, prepared in accordance with clause 16(2)(a), Schedule D, O. Reg. 153/04, is presented below.

Table 6-1 Summary of Areas of Potential Environmental Concern Identified in Phase Two ESA

AREA OF POTENTIAL ENVIRONMENTAL CONCERN	LOCATION OF POTENTIAL ENVIRONMENTAL CONCERN ON PHAS TWO PROPERTY	POTENTIALLY CONTAMINATING ACTIVITY E	LOCATION OF PCA (ON-SITE OR OFF-SITE)	CONTAMINANTS OF POTENTIAL CONCERN	MEDIA POTENTIALLY IMPACTED (GROUND WATER, SOIL AND/OR SEDIMENT)
APEC-1	Entire Phase One Property	PCA No. 40	On-site	Pesticides	Soil
		Pesticides (including herbicides, fungicides and anti-fouling agents) manufacturing, processing, bulk storage and large- scale application			

The following table provides a summary discussion of the interpreted field data that is incorporated into the Phase Two CSM.

Table 6-2 Summary of Phase Two Conceptual Site Model

CRITERIA	DISCUSSION	
 i. a description and assessment of, 	A. The review of the Site prior to this Phase Two ESA identified PCAs that contributed to the identification of APECs as described in Table 4-3.	

CRITERIA

DISCUSSION

- A. areas where potentially contaminating activity has occurred,
- B. areas of potential environmental concern, and
- any subsurface structures and utilities on, in or under the phase two property that may affect contaminant distribution and transport,
- In summary, on-Site PCAs which may be contributing to on-Site APECs were:
- 40. Pesticides (including herbicides, fungicides and anti-fouling agents) manufacturing, processing, bulk storage and largescale application – The Site has historically been utilized for agricultural purposes with a portion of the Site having been rented out for corn and soybean cultivation. Pesticides may have potentially been used for agricultural purposes across the Phase One Property.
- B. The on-Site APECs that were interpreted from the occurrence of the PCAs were:
 - APEC 1 Entire Site
- C. Underground utilities have the potential to affect contaminant distribution and transport. The majority of utilities servicing the north adjoining property (water, sewer) are believed to enter the Phase One Property from Burnhamthorpe Road East to the north. No underground utilities are anticipated to be under the Phase One Property.
- ii. a description of and, as appropriate, figures illustrating, the physical setting of the phase two property and any areas under it including.
 - A. stratigraphy from ground surface to the deepest aquifer or aquitard investigated,
 - B. hydrogeological characteristics, including aquifers, aquitards and, in each hydrostratigraphic unit where one or more contaminants is present at concentrations above the applicable site condition standards, lateral and vertical gradients.
 - C. approximate depth to bedrock,
 - D. approximate depth to water table,
 - E. any respect in which section 41 or 43.1 of the regulation applies to the property,
 - areas where soil has been brought from another property and placed on, in or under

- D. Surficial geology across the majority of the site is described as "clay to silt-textured till" derived from glaciolacustrine deposits of shale. The underlying bedrock within the area generally consists of shale, limestone, dolostone, and siltstone of the Queenston Formation. The bedrock in the vicinity of the Site is anticipated at depths approximately 60 mbgs, based on the available well records. Topsoil was encountered in all test pits advanced during this investigation from surface to the termination of the test pit at each location.
- E. Groundwater was not sampled as part of this investigation, as groundwater was not identified as a potentially impacted media during the Phase One ESA.
- F. The bedrock was not encountered during this investigation.
- G. Groundwater was not investigated as part of this investigation.
- H. Section 41 is found to apply to the Site as areas of natural significance are located on and/or adjacent to the Phase One Property. As such the Full Depth Background Site Condition Standards were utilised during this investigation. Section 43.1 does not apply to the Site.
- I. Soil was not brought from another property and placed on, in, or under the Site, as part of this Phase Two ESA.
- J. The Site is proposed for residential redevelopment and a portion of the Site is also proposed for conveyance to the Town of Oakville.

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CRITERIA

DISCUSSION

the phase two property, and

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

- iii. where a contaminant is present on, in or under the phase two property at a concentration greater than the applicable site condition standard, identification of,
 - A. each area where a contaminant is present on, in or under the phase two property at a concentration greater than the applicable site condition standard.
 - B. the contaminants associated with each of the areas referred to in subparagraph A,
 - C. each medium in which a contaminant associated with an area referred to in subparagraph is present,
 - D. a description and assessment of what is known about each of the areas referred to in subparagraph A,
 - E. the distribution, in each of the areas referred to in subparagraph A, of each contaminant present in the area at a concentration greater than the applicable site condition standard, for each medium in which the contaminant is present, together with Drawings showing the distribution,

No contamination was identified at the Site.

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CRITERIA

DISCUSSION

- F. anything known about the reason for the discharge of the contaminants present on, in or under the phase two property at a concentration greater than the applicable site condition standard into the natural environment,
- G. anything known about migration of the contaminants present on, in or under the phase two property at a concentration greater than the applicable site condition standard away from any area of potential environmental concern, including the identification of any preferential pathways,
- H. climatic or meteorological conditions that may have influenced distribution and migration of the contaminants, such as temporal fluctuations in groundwater levels, and
- I. if applicable, information concerning soil vapour intrusion of the contaminants into buildings including,
 - relevant construction features of a building, such as a basement or crawl space,
 - 2. building heating, ventilating and air conditioning design and operation, and
 - 3. subsurface utilities,

CRITERIA

DISCUSSION

- iv. where contaminants on, in or under the phase two property are present at concentrations greater than the applicable site condition standard, one or more cross-sections showing,
 - A. the lateral and vertical distribution of a contaminant in each area where the contaminants is present at concentrations greater than the applicable site condition standard in soil, groundwater and sediment,
 - B. approximate depth to water table in each area referred to in subparagraph A,
 - C. stratigraphy from ground surface to the deepest aquifer or aquitard investigated, and
 - D. any subsurface structures and utilities that may affect contaminant distribution and transport in each area referred to in subparagraph A

No contamination was identified at the Site.

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7 CONCLUSIONS

Based on the findings and analytical results of the Phase Two ESA, the following conclusions are presented:

- 1. Topsoil was encountered in all test pits advanced during this investigation from surface to the termination of the test pit at each location.
- 2. The soil results were compared to 2011 MOECC Table 1 Full Depth Background Site Condition Standards (SCS) for residential/parkland/institutional/commercial/industrial/institutional land use.
- 3. Four (4) soil samples (plus one (1) field duplicate) were analyzed for OC Pesticides. The results of the laboratory analyses indicated that all samples analyzed met the MOECC Table 1 SCS.

Based on the findings of this Phase Two ESA, WSP presents the following conclusions and recommendations:

- All soil analysed met the applicable site condition standards and as such no further work is warranted at this time.
 - → A Record of Site Condition can be filed for the property, if required, based on the findings of this Phase Two ESA.

7.1 QUALIFIER

This assignment is limited to the completion of a Phase Two ESA and analysis of potential contamination at the selected borehole locations. This report is prepared for Rampen Holdings Inc.'s sole use in the evaluation of the property at 1086 Burnhamthorpe Road East, Ontario.

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

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

QUALIFICATIONS OF THE ASSESSORS 7.2

This report was prepared by Mr. Jerry Ntakrah, M.Sc., who is currently an Environmental Project Officer in the Toronto, Ontario office of WSP Canada Inc. He has experience in conducting Phase One and Two ESAs on numerous residential, commercial, and industrial properties.

This report was reviewed by Mr. Rodney Obdeyn, P.Eng. a Senior Environmental Engineer in the Toronto, Ontario office of WSP Canada Inc. Rodney has obtained a Bachelor's Degree in Engineering, and is a recognized Professional Engineer in Ontario since 1990. Rodney has conducted and managed hundreds of environmental investigations including Phase One ESAs, Phase Two ESAs, and various site remediation projects across Ontario.

SIGNATURES 7.3

WSP carried out this Phase Two ESA and confirms the findings and conclusions presented in this report.

Report prepared by WSP Canada Inc.

Jerry Ntakrah

Environmental Project Officer

Makul

Reviewed by

Rodney Obdeyn, P.Eng., QPE

Principal Engineer

WSP

File No.: 171-01330-00

R.T. OBDEYN

PORTNOE OF ONTRANS

24 April 2017

8 REFERENCES

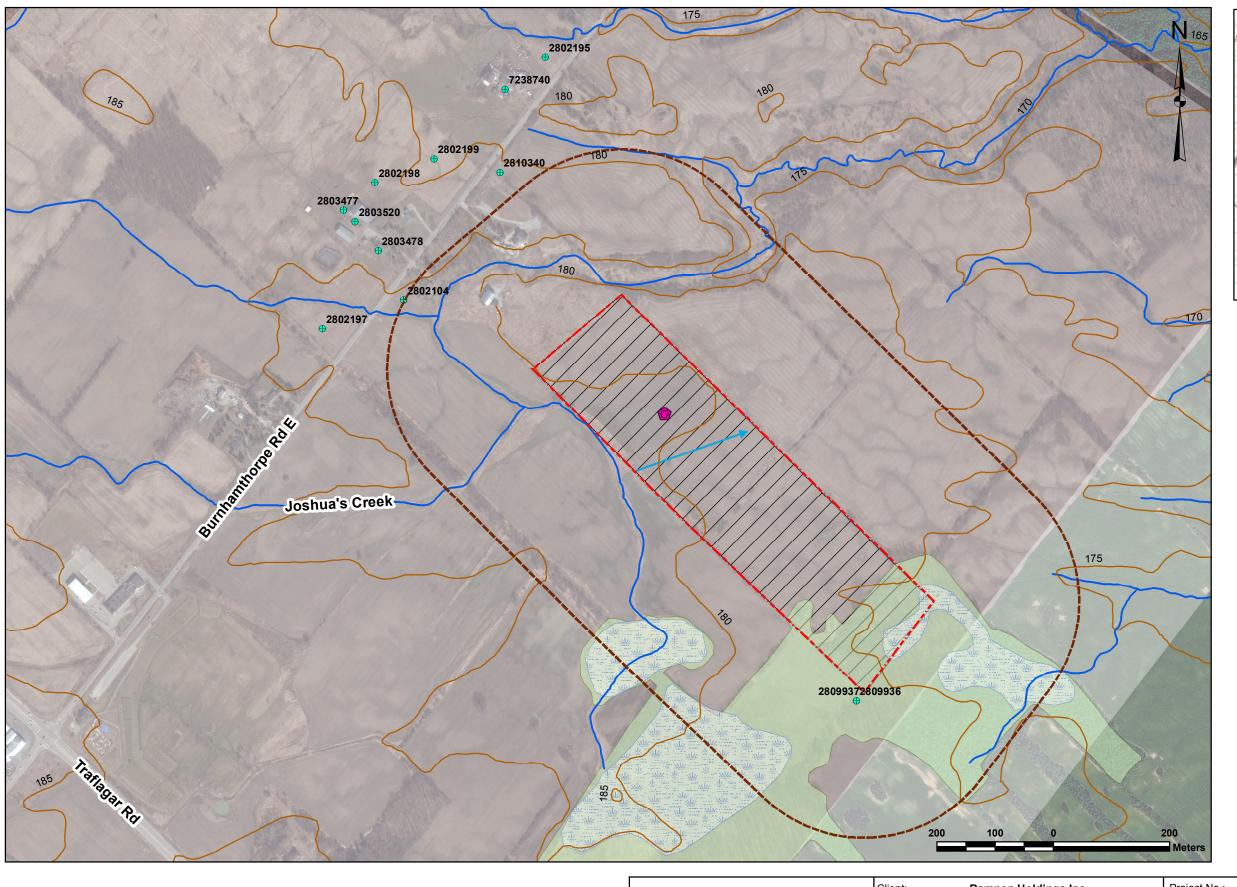
Environmental Protection Act, R.R.O 1990, Regulation 153/04, Records of Site Condition, as amended by Ontario Regulation 269/11.

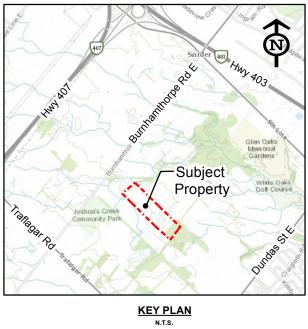
Ministry of the Environment (MOE). 2011. Soil, Groundwater and Sediment Standards for Use under Part XV.1 of the Environmental Protection Act, dated April 15

Phase One Environmental Assessment (ESA) 1086 Burnhamthorpe Road East, Oakville Ontario, WSP, March 2, 2017

.

Drawings





Legend:

250m Study Area

Phase One Property

MOECC Water Well

Topographic Contours Line

Tributary / River

→ Inferred Groundwater Flow Direction

Wetland

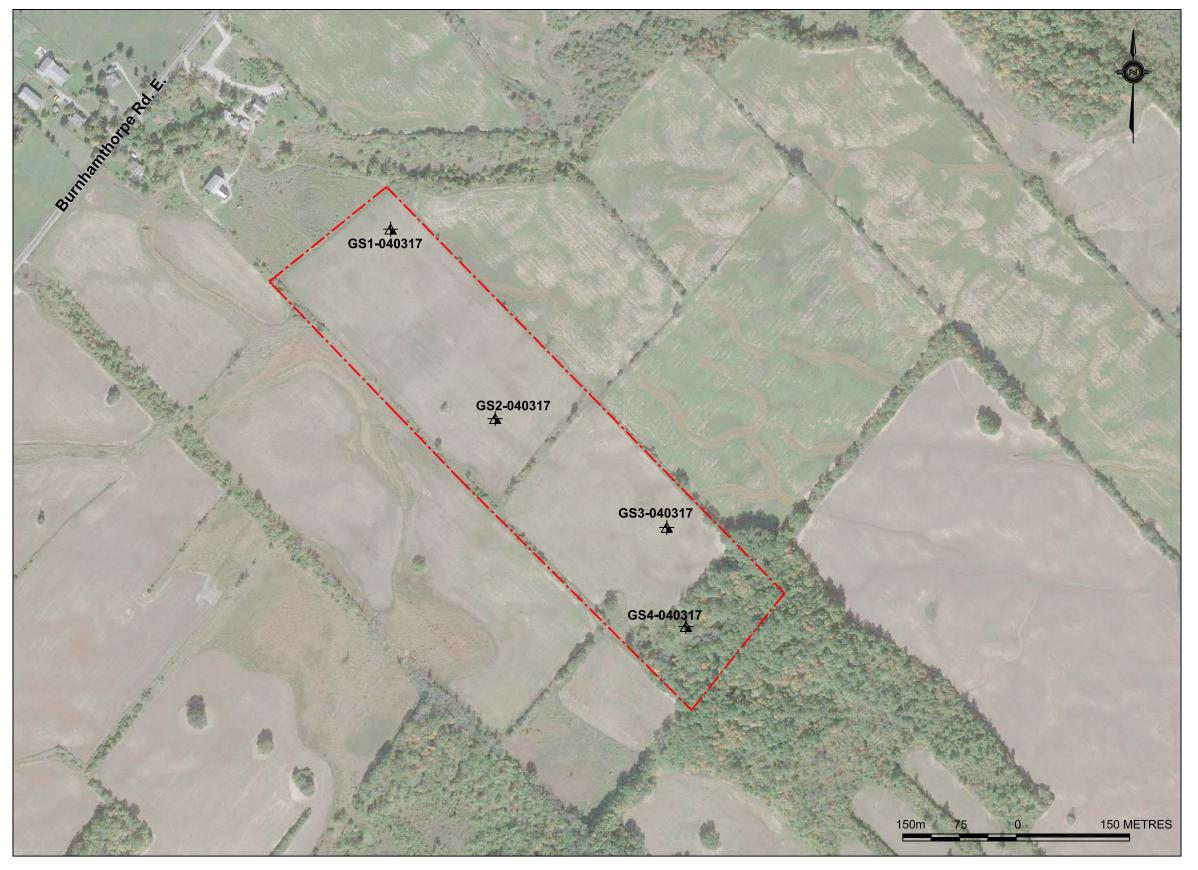
Provincially Significant Earth Science

PCA No. N/S-Pesticides (Including Herbicides, Fungicides and Anti-fouling Agents) Manufacturing, Processing, Bulk Storage and Large-scale Application

∠ APEC-1

-WSP
51 CONSTELLATION COURT TORONTO, ONTARIO CANADA M9W 1K4 TEL.: 416-798-0065 FAX: 416-798-0518 WWW.WSPGROUP.CA

Client:	Rampen	Holdings Inc.	Project No.:	171-01330-00	Drawing No.:	1
Drawn:	LWS	Aproved: MB	Discipline:	ENVIRO	ONMENTAL	
Date:	March 2017	Scale: 1:6500	Title:	Phase One Cond	ceptual Site Model	
Orginal Size:	Tabloid	Rev: N/A	Project:	Phase One Environ 1086 Burnhamthorpe F		





Key Plan

Legend:

Investigation Area

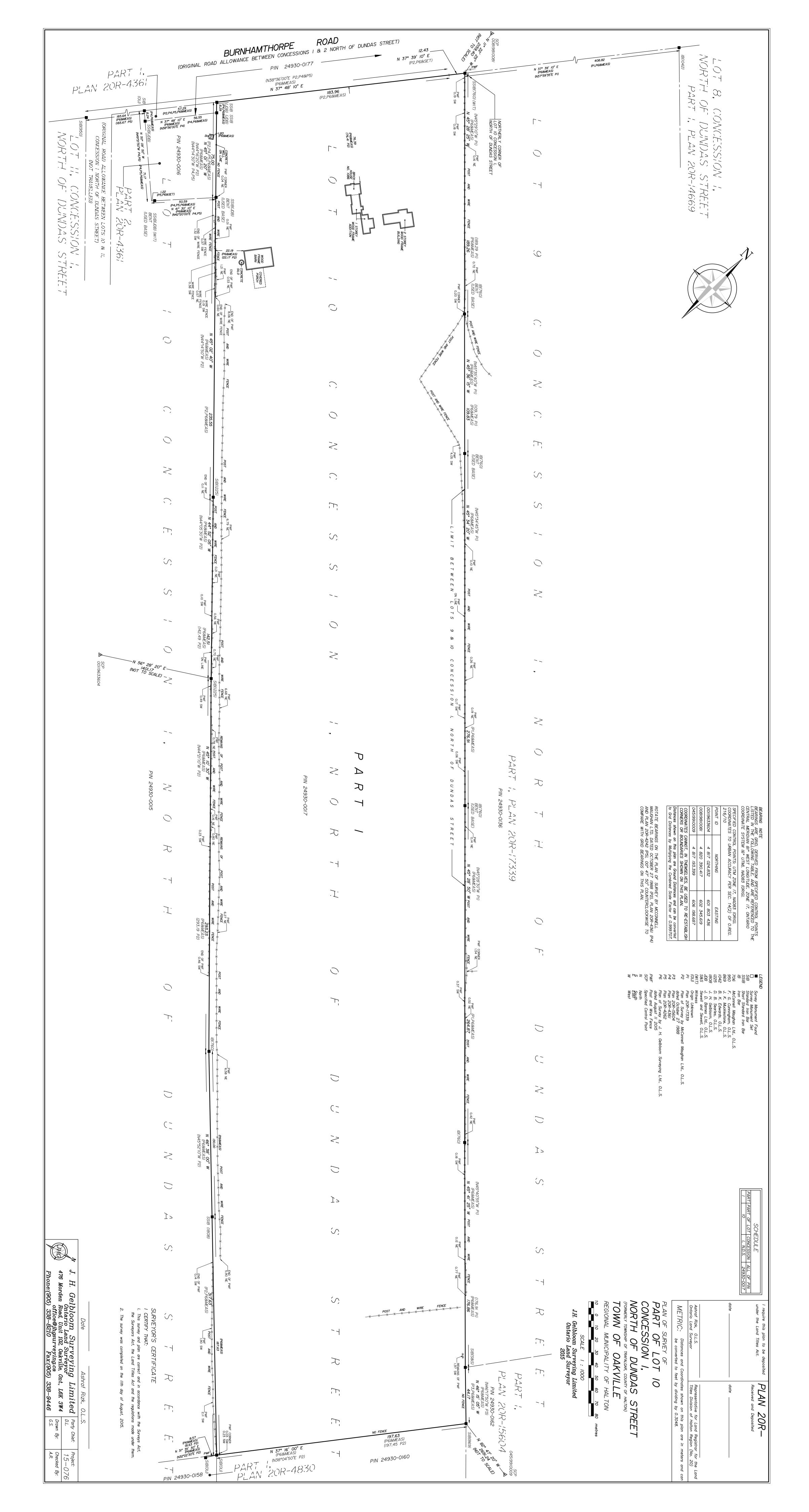
★ Grab Sample Location (2017 WSP)



Client:	Rampen H	loldings Inc.	Project No.:	171-01330-00	171-01330-00 Drawing No.: 2				
Drawn:	LWS	Approved: MB	Discipline:	EN'	VIRONMENT				
Date:	April 2017	Scale: As Show	n Title:	Grab Sam	ple Location Plan				
Original Size:	Tabloid	Rev: N/A	Project:	Phase Two Environmental Site Assessment 1086 Burnhamthorpe Road East, Oakville, Ontario					

Appendix A

SURVEY PLAN



Appendix B

SAMPLING AND ANALYSIS PLAN

File No.: 171-01330-00 24 April 2017

APPENDIX A1 SAMPLING AND ANALYSIS PLAN

WSP was retained by Rampen Holdings Inc. to conduct a Phase Two Environmental Site Assessment (ESA) for a portion of the land municipally identified as 1086 Burnhamthorpe Road East, Oakville (the Site). The purpose of the proposed Phase Two ESA program is to assess the current subsurface environmental conditions in support of a potential property transaction of the Site.

The Phase Two ESA will involve intrusive investigation in the areas determined in the Site visit to be areas of potential environmental concern, and will be completed in general accordance with O.Reg 153/04 (as amended). Based on the findings of the field and laboratory analyses, a Phase Two ESA report will be prepared.

The Site Investigation Program will be completed as follows:

- → A Health and Safety Plan will be prepared and all work will be executed safely
- → Four (4) test pits will be advanced on the Phase Two Property, to an approximate maximum depth of 0.5 mbgs using hand digging methods the location of the test pits will be selected to investigate any areas of potential environmental concern identified during the Site visit.
- → Based on visual/olfactory observations, worst-case/representative soil samples from the boreholes will be submitted for laboratory testing of relevant parameters of concern.
- → Soil samples will be submitted for chemical analysis by a CALA laboratory in accordance with the Ontario Ministry of the Environment standards and requirements of O.Reg. 153/04 under the Environmental Protection Act.

The proposed analytical program is outlined below (proposed program subject to change as a result of site observations/findings). All soil and groundwater sampling will be carried out in accordance with WSP's Standard Operating Procedures (SOPs).

Soils:

- → Four (4) soil samples for OC Pesticides
- → One (1) soil samples for QA/QC purposes (duplicates)

Following receipt of all of the results, a report in general accordance with O.Reg. 153/04 (as amended) will be prepared.

It is noted that if the Phase Two ESA reveals parameter concentrations greater than the applicable standards set out in *Ontario Regulation 153/04*, then additional work (i.e., supplemental delineation, additional drilling, sampling, analysis, and/or site remediation activities) will be deemed necessary prior to RSC filing, should an RSC be required. The costs for any additional work, if necessary, are beyond the current scope of work.

FINALISED SAMPLING & ANALYSIS PLAN

The finalized sampling and analysis plan (SAP) was created based on the APECs identified prior to the Phase Two ESA. The SAP was compiled to collect data to provide information on soil quality in each APEC.

24 April 2017

File No.: 171-01330-00

Drawing 1 outlines the CSM and Drawing 2 outlines the test pit and grab sample locations. Table 4-1 provides the proposed and implemented SAP, which includes the specific requirements for sampling and analysis for the areas to be investigated.

Additional delineation may be required following the implementation of this SAP to meet the requirements of O. Reg. 153/04 which requires delineation of all areas where concentrations are above the applicable SCS such as in the following conditions:

→ Unexpected contamination not previously discovered, or not related to identified APECs, will need to be further delineated to identify source(s).

Appendix C

CERTIFICATES OF ANALYSIS



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

CLIENT NAME: WSP CANADA INC.

51 CONSTELLATION COURT TORONTO, ON M9W1K4

(416) 798-0065

ATTENTION TO: Jerry Ntakrah

PROJECT: 171-01330-00

AGAT WORK ORDER: 17T201927

TRACE ORGANICS REVIEWED BY: Oksana Gushyla, Trace Organics Lab Supervisor

DATE REPORTED: Apr 06, 2017

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

All samples will be disposed of within 30 days following analysis. Please contact the lab if you require additional sample storage time.

AGAT Laboratories (V1)

*NOTEC

Page 1 of 5

Member of: Association of Professional Engineers and Geoscientists of Alberta (APEGA)

Western Enviro-Agricultural Laboratory Association (WEALA) Environmental Services Association of Alberta (ESAA) AGAT Laboratories is accredited to ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA) and/or Standards Council of Canada (SCC) for specific tests listed on the scope of accreditation. AGAT Laboratories (Mississauga) is also accredited by the Canadian Association for Laboratory Accreditation Inc. (CALA) for specific drinking water tests. Accreditations are location and parameter specific. A complete listing of parameters for each location is available from www.cala.ca and/or www.scc.ca. The tests in this report may not necessarily be included in the scope of accreditation.



CLIENT NAME: WSP CANADA INC.

SAMPLING SITE:

Certificate of Analysis

AGAT WORK ORDER: 17T201927

PROJECT: 171-01330-00

ATTENTION TO: Jerry Ntakrah

SAMPLED BY:

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

Herbicides (Soil)

				11018101400	(0011)			
DATE RECEIVED: 2017-04-03								DATE REPORTED: 2017-04-06
		SAMPLE DESCRIPTION:	GS1 - 040317	GS2 - 040317	GS3 - 040317	GS4 - 040317	QA/QC - 1	
		SAMPLE TYPE:	Soil	Soil	Soil	Soil	Soil	
		DATE SAMPLED:	2017-04-03	2017-04-03	2017-04-03	2017-04-03	2017-04-03	
Parameter	Unit	G/S RDL	8292132	8292135	8292136	8292137	8292138	
2,4-D	ug/g	0.10	<0.10	<0.10	<0.10	<0.10	<0.10	
2,4,5-T	ug/g	0.10	<0.10	<0.10	<0.10	<0.10	<0.10	
2,4,5-TP (Silvex)	ug/g	0.10	<0.10	<0.10	<0.10	<0.10	<0.10	
Dicamba	ug/g	0.10	<0.10	<0.10	<0.10	<0.10	<0.10	
Dichlorprop	ug/g	0.10	<0.10	<0.10	<0.10	<0.10	<0.10	
Dinoseb	ug/g	0.10	<0.10	<0.10	<0.10	<0.10	<0.10	
Picloram	ug/g	0.10	<0.10	<0.10	<0.10	<0.10	<0.10	
Diclofop-methyl	ug/g	0.10	<0.10	<0.10	<0.10	<0.10	<0.10	
Surrogate	Unit	Acceptable Limits						
DCAA	%	50-130	54	76	54	58	64	

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

Certified By:





Certificate of Analysis

AGAT WORK ORDER: 17T201927

PROJECT: 171-01330-00

ATTENTION TO: Jerry Ntakrah

SAMPLED BY:

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

CLIENT NAME: WSP CANADA INC.
SAMPLING SITE:

O. Reg. 153(511) - OC Pesticides (Soil)

DATE RECEIVED: 2017-04-03									DATE REPORTED: 2017-04-06
		SAMPLE DESC	CRIPTION:	GS1 - 040317	GS2 - 040317	GS3 - 040317	GS4 - 040317	QA/QC - 1	
		SAME	PLE TYPE:	Soil	Soil	Soil	Soil	Soil	
		DATE S	SAMPLED:	2017-04-03	2017-04-03	2017-04-03	2017-04-03	2017-04-03	
Parameter	Unit	G/S	RDL	8292132	8292135	8292136	8292137	8292138	
Hexachloroethane	μg/g	0.01	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	
Gamma-Hexachlorocyclohexane	μg/g	0.01	0.005	< 0.005	< 0.005	< 0.005	<0.005	< 0.005	
Heptachlor	μg/g	0.05	0.005	<0.005	< 0.005	< 0.005	<0.005	<0.005	
Aldrin	μg/g	0.05	0.005	< 0.005	< 0.005	< 0.005	<0.005	< 0.005	
Heptachlor Epoxide	μg/g	0.05	0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	
Endosulfan	μg/g	0.04	0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	
Chlordane	μg/g	0.05	0.007	< 0.007	< 0.007	< 0.007	< 0.007	< 0.007	
DDE	μg/g	0.05	0.007	< 0.007	< 0.007	< 0.007	< 0.007	< 0.007	
DDD	μg/g	0.05	0.007	< 0.007	< 0.007	< 0.007	< 0.007	< 0.007	
DDT	μg/g	1.4	0.007	< 0.007	< 0.007	< 0.007	< 0.007	< 0.007	
Dieldrin	μg/g	0.05	0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	
Endrin	μg/g	0.04	0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	
Methoxychlor	μg/g	0.05	0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	
Hexachlorobenzene	μg/g	0.01	0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	
Hexachlorobutadiene	μg/g	0.01	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	
Moisture Content	%		0.1	24.4	24.4	22.2	27.0	19.4	
Surrogate	Unit	Acceptab	le Limits						
TCMX	%	50-1	40	70	72	56	56	56	
Decachlorobiphenyl	%	60-1	30	70	102	68	70	72	

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

8292132-8292138 Results are based on the dry weight of the soil.

Note: DDT applies to the total of op'DDT and pp'DDT, DDD applies to the total of op'DDD and DDE applies to the total of op'DDE. Endosulfan applies to the total of Endosulfan I

and Endosulfan II.

Chlordane applies to the total of Alpha-Chlordane and Gamma-Chlordane.

Certified By:

Juz



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Quality Assurance

CLIENT NAME: WSP CANADA INC.

AGAT WORK ORDER: 17T201927 PROJECT: 171-01330-00 **ATTENTION TO: Jerry Ntakrah**

SAMPLING SITE: SAMPLED BY:

Trace Organics Analysis																
RPT Date: Apr 06, 2017			C	UPLICAT	E		REFERE	NCE MA	ATERIAL METHOD BLANK SPIKE			MAT	MATRIX SPIKE			
PARAMETER	Batch	Sample	Dup #1	Dup #2	RPD	Method Blank	Measured		asured Lir		Recovery	Lie	ptable nits	Recovery		ptable nits
		la la					Value	Lower	Upper]	Lower	Upper		Lower	Upper	
Herbicides (Soil)																
2,4-D	8292138	8292138	< 0.10	< 0.10	NA	< 0.10	107%	50%	130%	106%	50%	130%	95%	50%	130%	
2,4,5-T	8292138	8292138	< 0.10	< 0.10	NA	< 0.10	112%	50%	130%	105%	50%	130%	76%	50%	130%	
2,4,5-TP (Silvex)	8292138	8292138	< 0.10	< 0.10	NA	< 0.10	92%	50%	130%	110%	50%	130%	74%	50%	130%	
Dicamba	8292138	8292138	< 0.10	< 0.10	NA	< 0.10	92%	50%	130%	91%	50%	130%	76%	50%	130%	
Dichlorprop	8292138	8292138	< 0.10	< 0.10	NA	< 0.10	116%	50%	130%	100%	50%	130%	95%	50%	130%	
Dinoseb	8292138	8292138	< 0.10	< 0.10	NA	< 0.10	112%	50%	130%	87%	50%	130%	75%	50%	130%	
Picloram	8292138	8292138	< 0.10	< 0.10	NA	< 0.10	116%	50%	130%	80%	50%	130%	50%	50%	130%	
Diclofop-methyl	8292138	8292138	< 0.10	< 0.10	NA	< 0.10	81%	50%	130%	82%	50%	130%	82%	50%	130%	
O. Reg. 153(511) - OC Pesticides	(Soil)															
Hexachloroethane	8292138	8292138	< 0.01	< 0.01	NA	< 0.01	82%	50%	140%	96%	50%	140%	64%	50%	140%	
Gamma-Hexachlorocyclohexane	8292138	8292138	< 0.005	< 0.005	NA	< 0.005	92%	50%	140%	78%	50%	140%	66%	50%	140%	
Heptachlor	8292138	8292138	< 0.005	< 0.005	NA	< 0.005	80%	50%	140%	90%	50%	140%	80%	50%	140%	
Aldrin	8292138	8292138	< 0.005	< 0.005	NA	< 0.005	109%	50%	140%	94%	50%	140%	68%	50%	140%	
Heptachlor Epoxide	8292138	8292138	< 0.005	< 0.005	NA	< 0.005	90%	50%	140%	96%	50%	140%	82%	50%	140%	
Endosulfan	8292138	8292138	< 0.005	< 0.005	NA	< 0.005	89%	50%	140%	88%	50%	140%	69%	50%	140%	
Chlordane	8292138	8292138	< 0.007	< 0.007	NA	< 0.007	87%	50%	140%	91%	50%	140%	78%	50%	140%	
DDE	8292138	8292138	< 0.007	< 0.007	NA	< 0.007	88%	50%	140%	98%	50%	140%	78%	50%	140%	
DDD	8292138	8292138	< 0.007	< 0.007	NA	< 0.007	94%	50%	140%	94%	50%	140%	84%	50%	140%	
DDT	8292138	8292138	< 0.007	< 0.007	NA	< 0.007	88%	50%	140%	87%	50%	140%	78%	50%	140%	
Dieldrin	8292138	8292138	< 0.005	< 0.005	NA	< 0.005	84%	50%	140%	90%	50%	140%	80%	50%	140%	
Endrin	8292138	8292138	< 0.005	< 0.005	NA	< 0.005	84%	50%	140%	76%	50%	140%	82%	50%	140%	
Methoxychlor	8292138	8292138	< 0.005	< 0.005	NA	< 0.005	76%	50%	140%	82%	50%	140%	96%	50%	140%	
Hexachlorobenzene	8292138	8292138	< 0.005	< 0.005	NA	< 0.005	92%	50%	140%	100%	50%	140%	92%	50%	140%	
Hexachlorobutadiene	8292138	8292138	< 0.01	< 0.01	NA	< 0.01	93%	50%	140%	100%	50%	140%	68%	50%	140%	

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

Certified By:

AGAT QUALITY ASSURANCE REPORT (V1)

Page 4 of 5

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

Method Summary

CLIENT NAME: WSP CANADA INC.

AGAT WORK ORDER: 17T201927
PROJECT: 171-01330-00

ATTENTION TO: Jerry Ntakrah

SAMPLING SITE: SAMPLED BY:

SAMPLING SITE:		SAMPLED BT:	
PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Trace Organics Analysis			
2,4-D	ORG-91-5110	EPA SW-846 8151A	GC/ECD
2,4,5-T	ORG-91-5110	EPA SW-846 8151A	GC/ECD
2,4,5-TP (Silvex)	ORG-91-5110	EPA SW-846 8151A	GC/ECD
Dicamba	ORG-91-5110	EPA SW-846 8151A	GC/ECD
Dichlorprop	ORG-91-5110	EPA SW-846 8151A	GC/ECD
Dinoseb	ORG-91-5110	EPA SW-846 8151A	GC/ECD
Picloram	ORG-91-5110	EPA SW-846 8151A	GC/ECD
Diclofop-methyl	ORG-91-5110	EPA SW-846 8151A	GC/ECD
DCAA	ORG-91-5110	EPA SW-846 8151	GC/ECD
Hexachloroethane	ORG-91-5113	EPA SW-846 3541,3620 & 8081	GC/ECD
Gamma-Hexachlorocyclohexane	ORG-91-5113	EPA SW-846 3541,3620 & 8081	GC/ECD
Heptachlor	ORG-91-5113	EPA SW-846 3541,3620 & 8081	GC/ECD
Aldrin	ORG-91-5113	EPA SW-846 3541,3620 & 8081	GC/ECD
Heptachlor Epoxide	ORG-91-5113	EPA SW-846 3541,3620 & 8081	GC/ECD
Endosulfan	ORG-91-5113	EPA SW-846 3541,3620 & 8081	GC/ECD
Chlordane	ORG-91-5113	EPA SW-846 3541,3620 & 8081	GC/ECD
DDE	ORG-91-5113	EPA SW-846 3541,3620 & 8081	GC/ECD
DDD	ORG-91-5113	EPA SW-846 3541,3620 & 8081	GC/ECD
DDT	ORG-91-5113	EPA SW-846 3541,3620 & 8081	GC/ECD
Dieldrin	ORG-91-5113	EPA SW-846 3541,3620 & 8081	GC/ECD
Endrin	ORG-91-5113	EPA SW-846 3541,3620 & 8081	GC/ECD
Methoxychlor	ORG-91-5113	EPA SW-846 3541,3620 & 8081	GC/ECD
Hexachlorobenzene	ORG-91-5113	EPA SW-846 3541,3620 & 8081	GC/ECD
Hexachlorobutadiene	ORG-91-5113	EPA SW-846 3541,3620 & 8081	GC/ECD
TCMX	ORG-91-5112	EPA SW-846 3541,3620 & 8081	GC/ECD
Decachlorobiphenyl	ORG-91-5113	EPA SW-846 3541,3620 & 8081	GC/ECD
Moisture Content		MOE E3139	BALANCE