



Record of Site Condition
Under Part XV.1 of the Environment Protection Act

Summary

Record of Site Condition Number	220346
Date Filed to Environmental Site Registry	2015/12/04
Certification Date	2015/04/09
Current Property Use	Industrial
Intended Property Use	Residential
Certificate of Property Use Number	6646-9W3RTZ
Applicable Site Condition Standards**	Full Depth Generic Site Conditions Standard, with Potable Ground Water, Coarse Textured Soil, for Residential property use, with RA
Property Municipal Address	139 MORRIS STREET, GUELPH, ON, N1E 5M5

Notice to Readers Concerning Due Diligence

This record of site condition has been filed in the Environmental Site Registry to which the public has access and which contains a notice advising users of the Environmental Site Registry who have dealings with any property to consider conducting their own due diligence with respect to the environmental condition of the property, in addition to reviewing information in the Environmental Site Registry.

Contents of this Record of Site Condition

This record of site condition consists (RSC) of this document which is available to be printed directly from the Environmental Site Registry as well as all supporting documentation indicated in this RSC to have been submitted in electronic format to the Ministry of the Environment and Climate Change.

PART 1: PROPERTY OWNERSHIP, PROPERTY INFORMATION AND OWNER'S CERTIFICATIONS

Information about the owner who is submitting or authorizing the submission of the RSC

Owner Name	139 MORRIS STREET LTD.
Authorized Person	WOLF VON TEICHMAN
Mailing Address	178 ST. GEORGE STREET, TORONTO ONTARIO, CANADA
Postal Code	M5R 2M7
Phone	(416) 968-7070
Fax	(416) 968-1876
Email Address	wvt@178sg.ca

RSC Property Location Information

Municipal Address(es)	139 MORRIS STREET, GUELPH, ON N1E 5M5
Municipality	Guelph
Legal Description	See Attached Lawyer's Letter
Assessment Roll Number(s)	230801000721500
Property Identifier Number(s)	71341-0012 (LT)

RSC Property Geographical References

Coordinate System	UTM
Datum	NAD 83
Zone	17
Easting	562,026.78
Northing	4,821,860.02

RSC Property Use Information

The following types of property uses are defined by the Regulation: Agricultural or other use, Commercial use, Community use, Industrial use, Institutional use, Parkland use, and Residential use.

Current Property Use	Industrial
Intended Property Use	Residential
Certificate of Property Use has been issued under section 168.6 of the EPA	Yes
Certificate of Property Use Number	6646-9W3RTZ

Please See the Signed Statements of Property Owner, or Agent, or Receiver at the End of this RSC

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PART 2: LIST OF REPORTS, SUMMARY OF SITE CONDITIONS AND QUALIFIED PERSON'S STATEMENTS AND CERTIFICATIONS

Qualified Person's Information

Name	LINDSAY SHEPHERD
Type of Licence Under Professional Engineers Act	Licence
Licence Number	100148664
QP Employer Name	GHD LIMITED
Mailing Address	651 COLBY DRIVE, WATERLOO ONTARIO, N2V 1C2 CANADA
Phone	(519) 884-0510
Fax	(519) 884-0525
Email Address	Lindsay.Shepherd@ghd.com

Municipal Information

Local or Single-Tier Municipality	Guelph
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Ministry of the Environment and Climate Change District Office

District Office	Guelph District Office
District Office Address	1 Stone Road W., Guelph ON N1G 4Y2

Phase One Environmental Site Assessment Report

Document used as the phase one environmental site assessment report and updates in submitting the RSC for filing

The date the last work on all of the records review, interviews and site reconnaissance components of the phase one environmental site assessment was done (refer to clause 28(1)(a) of O. Reg. 153/04)	(YYYY/MM/DD) 2015-04-15
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Type of Report	Report Title	Date of Report (YYYY/MM/DD)	Author of Report	Name of Consulting Company
P1 ESA	Phase One Environmental Site Assessment, 139 Morris St, Factory Lot and Lots 21 to 30, Plan 322, Guelph, Ontario	2013-06-21	Lindsay Shepherd	CRA LIMITED
P1 ESA Update	Phase One Environmental Site Assessment Update, 139 Morris Street, Guelph, Ontario	2015-09-21	Lindsay Shepherd	GHD LIMITED

Reports and Other Documents Related to the Phase One Environmental Site Assessment

Reports and other documents relied upon in certifying the information set out in section 10 of Schedule A or otherwise used in conducting the phase one environmental site assessment

Report Title	Date of Report (YYYY/MM/DD)	Author of Report	Name of Consulting Company
Phase I Environmental Site Assessment, Lots 21 to 30, Plan 322, Factory Site RP 61R2664, Part 1, 139 Morris Street, City of Guelph, Ontario	2010-08-01	J. Broad	V.A. Wood (Guelph) Incorporated

Phase Two Environmental Site Assessment Report

Document used as the phase two environmental site assessment report and updates in submitting the RSC for filing

The date the last work on all of the planning of the site investigation and conducting the site investigation components of the phase two environmental site assessment was done (refer to clause 33.5(1)(a) of O. Reg. 153/04)	(YYYY/MM/DD) 2015-04-09
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Type of Report	Report Title	Date of Report (YYYY/MM/DD)	Author of Report	Name of Consulting Company
P2 ESA	Phase Two Environmental Site Assessment, 139 Morris Street, Guelph, Ontario	2015-09-28	Lindsay Shepherd	GHD LIMITED

Reports and Other Documents Related to the Phase Two Environmental Site Assessment

Reports and other documents relied upon in making any certifications in the RSC for the purposes of Part IV of Schedule A or otherwise used in conducting the phase two environmental site assessment

Report Title	Date of Report (YYYY/MM/DD)	Author of Report	Name of Consulting Company
Phase II Environmental Site Assessment, 139 Morris Street, City of Guelph, Ontario	2011-07-01	J. Broad	V.A. Wood (Guelph) Incorporated

Environmental Condition

Section 41 applies?	No
Section 43.1 applies?	No

Site Condition Information

Certification date (YYYY/MM/DD)	2015/04/09
Total area of RSC property (in hectares)	1.35000
Number of any previously filed RSC that applies to any part of the RSC property	
Number of any previously filed Transition Notice that applies to any part of the RSC property	
Soil Texture	Coarse
Assessment/Restoration Approach	Full Depth Generic
Site investigation includes the investigation, sampling and analysis of ground water?	Yes
Is there soil present that is sufficient to investigate, sample and analyze soil on, in or under the property in accordance with s. 6, Schedule E of O.Reg. 153/04?	Yes
Site investigation includes the investigation, sampling and analysis of soil on, in or under the property which is used in the RSC?	Yes
Name of the laboratory used to analyze any samples collected of soil, ground water or sediment	ALS ENVIRONMENTAL
Ground water condition (potable, non-potable)	Potable
Applicable Site Condition Standard	TABLE 2

Risk Assessment Information

A risk assessment has been prepared and accepted by the Director in support of this RSC?	Yes
Risk assessment identification number	1356-9CZR5R
Risk assessment was a site specific risk assessment completed and approved in accordance with the Cleanup Guideline 1996?	No

Table 1 – Maximum Contaminant Concentrations Compared to Applicable Site Condition Standards

Measured Concentration for Contaminants in Soil

Contaminant Name	Maximum Concentration	Applicable Site Condition Standard	Unit of Measure
1 Chromium VI	3.21	8	µg/g
2 Sodium Adsorption Ratio	4.49	5	
3 Acetone	< 1	16	µg/g
4 Bromomethane	< 0.05	0.05	µg/g
5 Carbon Tetrachloride	< 0.05	0.05	µg/g
6 Chlorobenzene	< 0.1	2.4	µg/g
7 Chloroform	< 0.05	0.05	µg/g
8 Dichlorobenzene, 1,2-	< 0.1	1.2	µg/g
9 Dichlorobenzene, 1,3-	< 0.05	4.8	µg/g
10 Dichlorobenzene, 1,4-	< 0.05	0.083	µg/g
11 Dichlorodifluoromethane	< 0.1	16	µg/g
12 Dichloroethane, 1,1-	< 0.1	0.47	µg/g
13 Dichloroethane, 1,2-	< 0.05	0.05	µg/g
14 Dichloroethylene, 1,1-	< 0.05	0.05	µg/g
15 Dichloroethylene, 1,2-cis-	< 0.1	1.9	µg/g
16 Dichloroethylene, 1,2-trans-	< 0.05	0.084	µg/g
17 Dichloropropane, 1,2-	< 0.05	0.05	µg/g
18 Dichloropropene, 1,3-	< 0.05	0.05	µg/g
19 Ethylene dibromide	< 0.05	0.05	µg/g
20 Hexane (n)	0.699	2.8	µg/g
21 Methyl Ethyl Ketone	< 1	16	µg/g
22 Methyl Isobutyl Ketone	< 1	1.7	µg/g
23 Methyl tert-Butyl Ether (MTBE)	< 0.1	0.75	µg/g
24 Styrene	< 0.1	0.7	µg/g
25 Tetrachloroethane, 1,1,1,2-	< 0.05	0.058	µg/g
26 Tetrachloroethane, 1,1,2,2-	< 0.05	0.05	µg/g
27 Trichloroethane, 1,1,1-	< 0.1	0.38	µg/g
28 Trichloroethane, 1,1,2-	< 0.05	0.05	µg/g
29 Trichlorofluoromethane	< 0.1	4	µg/g
30 Vinyl Chloride	< 0.02	0.02	µg/g
31 Bromodichloromethane	< 0.1	1.5	µg/g
32 Bromoform	< 0.1	0.27	µg/g
33 Dibromochloromethane	< 0.1	2.3	µg/g
34 Petroleum Hydrocarbons F1****	13.5	55	µg/g
35 Polychlorinated Biphenyls	0.17	0.35	µg/g

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Table 1 – Maximum Contaminant Concentrations Compared to Applicable Site Condition Standards
Measured Concentration for Contaminants in Soil

Continued from previous page....

Contaminant Name	Maximum Concentration		Applicable Site Condition Standard	Unit of Measure
36 Fluorene		33.9	62	µg/g
37 Beryllium		2.35	4	µg/g
38 Silver		9.42	20	µg/g
39 Thallium		0.53	1	µg/g
40 Uranium		1.1	23	µg/g
41 Benzene	<	0.04	0.21	µg/g
42 Ethylbenzene	<	0.1	1.1	µg/g
43 Xylene Mixture		0.53	3.1	µg/g

Table 1 – Maximum Contaminant Concentrations Compared to Applicable Site Condition Standards (Continued)

Ground Water

Contaminant Name	Maximum Concentration	Applicable Site Condition Standard	Unit of Measure
1 Chloride	481,000	790000	µg/L
2 Chromium VI	13	25	µg/L
3 Mercury	< 0.1	0.29	µg/L
4 Acetone	< 30	2700	µg/L
5 Bromomethane	< 0.5	0.89	µg/L
6 Carbon Tetrachloride	< 0.2	0.79	µg/L
7 Chlorobenzene	< 0.5	30	µg/L
8 Chloroform	< 1	2.4	µg/L
9 Dichlorobenzene, 1,2-	< 0.5	3	µg/L
10 Dichlorobenzene, 1,3-	< 0.5	59	µg/L
11 Dichlorobenzene, 1,4-	< 0.5	1	µg/L
12 Dichlorodifluoromethane	< 2	590	µg/L
13 Dichloroethane, 1,1-	< 0.5	5	µg/L
14 Dichloroethane, 1,2-	< 0.5	1.6	µg/L
15 Dichloroethylene, 1,1-	< 0.5	1.6	µg/L
16 Dichloroethylene, 1,2-trans-	0.61	1.6	µg/L
17 Dichloropropane, 1,2-	< 0.5	5	µg/L
18 Dichloropropene, 1,3-	< 0.5	0.5	µg/L
19 Ethylene dibromide	< 0.2	0.2	µg/L
20 Hexane (n)	< 0.5	51	µg/L
21 Methyl Ethyl Ketone	< 20	1800	µg/L
22 Methyl Isobutyl Ketone	< 20	640	µg/L
23 Methyl tert-Butyl Ether (MTBE)	< 2	15	µg/L
24 Methylene Chloride	< 5	50	µg/L
25 Styrene	< 0.5	5.4	µg/L
26 Tetrachloroethane, 1,1,1,2-	< 0.5	1.1	µg/L
27 Tetrachloroethane, 1,1,1,2,2-	< 0.5	1	µg/L
28 Trichloroethane, 1,1,1-	< 0.5	200	µg/L
29 Trichloroethane, 1,1,2-	0.58	4.7	µg/L
30 Trichlorofluoromethane	< 5	150	µg/L
31 Vinyl Chloride	< 0.5	0.5	µg/L
32 Bromodichloromethane	< 2	16	µg/L
33 Bromoform	< 5	25	µg/L
34 Dibromochloromethane	< 2	25	µg/L
35 Petroleum Hydrocarbons F1****	< 100	750	µg/L

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Table 1 – Maximum Contaminant Concentrations Compared to Applicable Site Condition Standards (Continued)

Ground Water

Continued from previous page....

Contaminant Name	Maximum Concentration		Applicable Site Condition Standard	Unit of Measure
	<			
36 Petroleum Hydrocarbons F2	<	100	150	µg/L
37 Petroleum Hydrocarbons F3		420	500	µg/L
38 Petroleum Hydrocarbons F4		270	500	µg/L
39 Polychlorinated Biphenyls	<	0.4	3	µg/L
40 Acenaphthene		0.527	4.1	µg/L
41 Acenaphthylene		0.042	1	µg/L
42 Anthracene		0.387	2.4	µg/L
43 Benz[a]anthracene		0.05	1	µg/L
44 Benzo[a]pyrene	<	0.01	0.01	µg/L
45 Benzo[b]fluoranthene	<	0.02	0.1	µg/L
46 Benzo[ghi]perylene	<	0.02	0.2	µg/L
47 Benzo[k]fluoranthene	<	0.02	0.1	µg/L
48 Chrysene		0.07	0.1	µg/L
49 Dibenz[a h]anthracene	<	0.02	0.2	µg/L
50 Fluoranthene		0.064	0.41	µg/L
51 Fluorene		0.967	120	µg/L
52 Indeno[1 2 3-cd]pyrene	<	0.02	0.2	µg/L
53 Methlynaphthalene, 2-(1-) ***		0.09	3.2	µg/L
54 Naphthalene		0.213	11	µg/L
55 Phenanthrene		0.06	1	µg/L
56 Pyrene		0.488	4.1	µg/L
57 Antimony	<	5	6	µg/L
58 Arsenic		13.4	25	µg/L
59 Barium		108	1000	µg/L
60 Beryllium	<	0.5	4	µg/L
61 Cadmium	<	0.9	2.7	µg/L
62 Chromium Total		12.9	50	µg/L
63 Cobalt		1.32	3.8	µg/L
64 Copper	<	10	87	µg/L
65 Lead	<	5	10	µg/L
66 Molybdenum		23	70	µg/L
67 Nickel	<	10	100	µg/L
68 Silver	<	1	1.5	µg/L
69 Thallium		0.34	2	µg/L
70 Uranium	<	10	20	µg/L

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Table 1 – Maximum Contaminant Concentrations Compared to Applicable Site Condition Standards (Continued)

Ground Water

Continued from previous page....

Contaminant Name	Maximum Concentration		Applicable Site Condition Standard	Unit of Measure
71 Zinc		393	1100	µg/L
72 Benzene	<	0.5	5	µg/L
73 Ethylbenzene	<	0.5	2.4	µg/L
74 Toluene		1.56	24	µg/L
75 Xylene Mixture	<	0.71	300	µg/L

See the attached “Table 2. Maximum Contaminant Concentrations Compared to Standards Specified in a Risk Assessment” for standards specified in a risk assessment and comparison to maximum concentrations measured on, in or under the RSC property.

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Remedial Action and Mitigation

Remediated Soils

Estimated quantities of the soil, if any, originating at and remaining on the RSC property that have been remediated, at a location either on or off the property, to reduce the concentration of contaminants in the soil. Indicate the remediation process or processes used and the estimated amount of soil remediated by each identified process.

Soil Remediation Process	Estimated Quantity of Soil (in-ground volume in m ³)
None	0.0

Description of Remediation

Description of any action taken to reduce the concentration of contaminants (including soil removals) on, in or under the RSC property.

None

Soil or Sediment Removed and Not Returned

Estimated quantities of soil or sediment, if any, removed from and not returned to the RSC property.

Estimated Quantity of Soil (in-ground volume in m ³)	0.0
Estimated Quantity of Sediment (in-ground volume in m ³)	0.0

Soil Brought to the Property

Estimated quantity of the soil, if any, being brought from another property to and deposited at the RSC property, not including any soil that may have originated at but been remediated off the RSC property and that is identified in section 28 of Schedule A.

Estimated Quantity of Soil Brought to the Property (in-ground volume in m ³)	0.0
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Ground Water Control or Treatment Measures

Ground water control or treatment measures that were required for the RSC property prior to the certification date for the purpose of submitting the RSC for filing.

None

Ground water control or treatment measures that are required for the RSC property after the certification date.

None

Estimated volume of ground water, if any, removed from and not returned to the RSC property.

Estimated Volume of Ground Water (in litres)	0.0
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Other Activities Including Risk Management Measures

Constructed works that prior to the certification date for the purpose of submitting the RSC for filing, were required to control or otherwise mitigate the release or movement of known existing contaminants at the RSC property.

None

Constructed works that after the certification date, are required to control or otherwise mitigate the release or movement of known existing contaminants at the RSC property.

- Prior to first use, hard cap and fill cap barriers shall be installed over the entirety of the Property, or portion(s) of the Property under development or redevelopment, in accordance with Section 7.3.1 and Appendix L and Figure L.1: Typical Soil Cover Details of the RA. Areas of the Property that are not in use or not under development or redevelopment do not require hard cap and fill cap barriers as long as exposure to the COCs is prevented by a fence barrier.
- Refrain from constructing any enclosed buildings on, in or under the Property unless the building(s) includes a storage garage or the building(s) includes a vapour mitigation system.

Monitoring or Maintenance

Soil Management Measures

Soil monitoring requirements or any requirements for care, maintenance or replacement or any monitoring or control works for known existing contaminants, if any, on the RSC property, after the certification date.

- An inspection and maintenance program shall be implemented to ensure the continuing integrity of the hard cap and fill cap barriers as long as the COCs are present on the Property or portion(s) of the Property.
- An inspection, monitoring and maintenance program specified in Section 7.5 and Appendix M of the RA shall be implemented to ensure the continued integrity of the building floor slab and vapour mitigation system for as long as the COCs are present on the Property.
- The Property specific soil and groundwater management plan shall be developed and implemented during all intrusive activities potentially in contact with or exposing COCs identified in on-Site soils and groundwater on the Property.
- A Property specific Health and Safety Plan should be developed for the Property and implemented during all planned intrusive activities potentially in contact with or exposing COCs identified on the Property or portion(s) of the Property.
- The planting of fruit or vegetables for consumption on the Property, unless in above ground containers such that they are isolated from the subsurface conditions, is prohibited

Ground Water Management Measures

Ground water monitoring requirements or requirements for care, maintenance or replacement of any monitoring or control works or known existing contaminants, if any, on the RSC property, after the certification date.

- An inspection, monitoring and maintenance program specified in Section 7.5 and Appendix M of the RA shall be implemented to ensure the continued integrity of the building floor slab and vapour mitigation system for as long as the COCs are present on the Property.
- Groundwater monitoring shall consist of the measurement of groundwater levels and the collection of groundwater samples from the groundwater monitoring network (MW4, MW16-13, MW19-13, MW20-13, MW21-13, MW25A-13, MW25B-13, MW24-16, MW26-13 and MW27B-13 or suitable replacement(s)) for a minimum of two years until written approval to reduce or discontinue the groundwater sampling program from the Director is received by the Owner.
- The Property specific soil and groundwater management plan shall be developed and implemented during all intrusive activities potentially in contact with or exposing COCs identified in on-Site soils and groundwater on the Property.
- A property specific Health and Safety Plan should be developed for the Property and implemented during all planned intrusive activities potentially in contact with or exposing COCs identified on the Property or portion(s) of the Property.
- Refrain from using the groundwater beneath the Property as a potable water supply.

Remediated or Removed Soil, Sediment or Ground Water From Near Property Boundary

Has any soil, sediment or ground water at the RSC property that is or was located within 3 metres of the RSC property boundary been remediated or removed for the purpose of remediation?	No
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Qualified Person's Statements and Certifications

As the qualified person, I certify that:

A phase one environmental site assessment of the RSC property, which includes the evaluation of the information gathered from a records review, site reconnaissance, interviews, a report and any updates required, has been conducted in accordance with the regulation by or under the supervision of a qualified person as required by the regulation.

A phase two environmental site assessment of the RSC property, which includes the evaluation of the information gathered from planning and conducting a site investigation, a report, and any updates required, has been conducted in accordance with the regulation by or under the supervision of a qualified person as required by the regulation.

The information represents the site conditions at the sampling points at the time of sampling only and the conditions between and beyond the sampling points may vary.

As of 2015/04/09, in my opinion, based on the phase one environmental site assessment and the phase two environmental site assessment, and any confirmatory sampling, there is no evidence of any contaminants in the soil, ground water or sediment on, in or under the RSC property that would interfere with the type of property use to which the RSC property will be put, as specified in the RSC.

Ground water sampling has been conducted in accordance with the regulation by or under the supervision of a qualified person as required by the regulation.

As of 2015/04/09, in my opinion, based on the phase one and phase two environmental site assessments and any confirmatory sampling, the RSC property meets the applicable full depth generic site condition standards prescribed by section 36 of the regulation for all contaminants prescribed by the regulation in relation to the type of property use for which this RSC is filed, except for those contaminants (if any) specified in this RSC at Table 2, Maximum Contaminant Concentrations Compared to Standards Specified in a Risk Assessment.

As of 2015/04/09, the maximum known concentration of each contaminant in soil, sediment and ground water at the RSC property for which sampling and analysis has been performed is specified in this RSC at Table 1, Maximum Contaminant Concentrations Compared to Applicable Site Condition Standards.

In relation to any contaminant excepted from the certification mentioned above as specified in the RSC at Table 2, Maximum Contaminant Concentrations Compared to Standards Specified in a Risk Assessment, or in relation to any other contaminant that in my opinion is likely to cause an adverse effect:

A risk assessment was prepared for the contaminant with respect to the property for which the phase two environmental site assessment was conducted.

The Director has accepted the risk assessment under clause 168.5 (1) (a) of the Act.

As of 2015/04/09, the property for which the phase two environmental site assessment was conducted meets the standards specified in the risk assessment for the contaminant.

I am a qualified person and have the qualifications required by section 5 of the regulation.

I have in place an insurance policy that satisfies the requirements of section 7 of the regulation.

I acknowledge that the RSC will be submitted for filing in the Environmental Site Registry, that records of site condition that are filed in the Registry are available for examination by the public and that the Registry contains a notice advising users of the Registry who have dealings with any property to consider conducting their own due diligence with respect to the environmental condition of the property, in addition to reviewing information in the Registry.

The opinions expressed in this RSC are engineering or scientific opinions made in accordance with generally accepted principles and practices as recognized by members of the environmental engineering or science profession or discipline practising at the same time and in the same or similar location.

I do not hold and have not held and my employer GHD LIMITED does not hold and has not held a direct or indirect interest in the RSC property or any property which includes the RSC property and was the subject of a phase one or two environmental site assessment or risk assessment upon which this record of site condition is based

To the best of my knowledge, the certifications and statements in this part of the RSC are true as of 2015/04/09.

By signing this RSC, I make no express or implied warranties or guarantees.

By checking the boxes above, and entering my membership/licence number in this submission, I, LINDSAY SHEPHERD, a qualified person as defined in section 5 of O. Reg. 153/04 am, on 2015/11/23:

- a) signing this record of site condition submission as a qualified person; and
- b) making all certifications required as a qualified person for this record of site condition.

I Agree

Additional Documentation Provided by Property Owner or Agent


The following documents have been submitted to the Ministry of the Environment and Climate Change as part of the record of site condition

Certificate of Status or equivalent for the owner
Lawyer's letter consisting of a legal description of the property
Copy of any deed(s), transfer(s) or other document(s) by which the RSC property was acquired
A Current plan of Survey
Property Specific Standards
Area(s) of Potential Environmental Concern
Table of Current and Past Uses of the Phase One Property
Phase 2 Conceptual Site Model
Owner or agent certification statements

As an owner:

1. I acknowledge that the RSC will be submitted for filing in the Environmental Site Registry, that records of site condition that are filed in the Registry are available for examination by the public and that the Registry contains a notice advising users of the Registry who have dealings with any property to consider conducting their own due diligence with respect to the environmental condition of the property, in addition to reviewing information in the Registry.
2. I have conducted reasonable inquiries to obtain all information relevant to this RSC, including information from the other current owners of the RSC property named in this part of the RSC and I have obtained all information relevant to this RSC of which I am aware.
3. I have disclosed all information referred to in paragraph 2 to any qualified person named in this RSC.
4. To my knowledge, the statements made in this part of the RSC are true as of December 3, 2015.
5. I have ensured that access to the entire property, including the phase one property, any phase two property and the RSC property, has been afforded to the qualified person and to persons supervised by the qualified person, for purposes of conducting the site reconnaissance.

Name of Owner: 139 Morris Street Ltd.

Signature: 

Date Signed: 3/12/15

Name of Person Signing: Wolf von Teichman

I, Wolf von Teichman, am authorized to and hereby do bind 139 Morris Street Ltd.

Request ID: 018396668
Demande n° :
Transaction ID: 59639904
Transaction n° :
Category ID: CT
Catégorie :

Province of Ontario
Province de l'Ontario
Ministry of Government Services
Ministère des Services gouvernementaux

Date Report Produced: 2015/12/03
Document produit le :
Time Report Produced: 14:39:21
Imprimé à :

CERTIFICATE OF STATUS ATTESTATION DU STATUT JURIDIQUE

This is to certify that according to the records of the Ministry of Government Services

D'après les dossiers du Ministère des Services gouvernementaux, nous attestons que la société

139 MORRIS STREET LTD.

Ontario Corporation Number

Numéro matricule de la société (Ontario)

001535581

is a corporation incorporated, amalgamated or continued under the laws of the Province of Ontario.

est une société constituée, prorogée ou née d'une fusion aux termes des lois de la Province de l'Ontario.

The corporation came into existence on

La société a été fondée le

JULY 19 JUILLET, 2002

and has not been dissolved.

et n'est pas dissoute.

Dated

Fait le

DECEMBER 03 DÉCEMBRE, 2015



Director
Directeur

TIKAL'S PROFESSIONAL CORPORATION

TELEPHONE: (416) 968-7070

FAX: (416) 968-1876

E-MAIL: wvt@178sg.ca

178 ST. GEORGE STREET
TORONTO, CANADA
M5R 2M7

SENT BY E-MAIL and REGULAR MAIL

October 1, 2013

Brownfields Filing and Review
Environmental Assessment and Approval Branch
Ontario Ministry of the Environment
2 St. Clair Avenue West, Floor 12A
Toronto, ON M4V 1L5

RE: Record of site condition for lands owned by 139 Morris Street Ltd.

Dear Sirs:

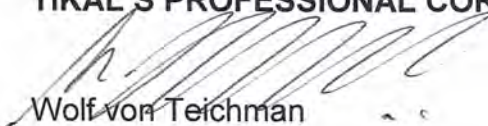
We act as solicitor for the above-captioned corporation. This is to confirm the legal description and other relevant information for the lands owned by the corporation subject to the RSC as follows:

1. Legal Description: Factory Site and Lots 21-30 inclusive, Plan 322 designated as Part 1 – Plan 61-R-2664 Pin # 71341-0012.
2. Civil Address: 139 Morris Street, Guelph, Ontario
3. Assessment Roll No: 23 08 010 007 21500
4. Nature of owner's interest: Fee Simple Ownership

If you have any further questions or concerns, please contact the undersigned.

Yours very truly,

TIKAL'S PROFESSIONAL CORPORATION



Wolf von Teichman

WvT/ks/Morris/Morris Authorization letter October 1, 2013



Transfer/Deed of Land

Do Process Software Ltd. • (416) 322-6111

2A

Form 1 - Land Registration Reform Act

FOR OFFICE USE ONLY

Number/Numéro WL 12090
Certificate of Receipt
Certificat de réception

1633... NOV 22 2002

WELLINGTON
NO. 61
QUELPH

Donna Ball
Land Registrar / Registrateur

New Property Identifiers

Additional:
See
Schedule

Executions

CLB

Additional:
See
Schedule

(1) Registry Land Titles (2) Page 1 of 2 pages

(3) Property Identifier(s) 71341-0012(LT) Block Property Additional: See Schedule

(4) Consideration
TWO----- Dollars \$ 2.00

(5) Description This is a: Property Division Property Consolidation
The Factory Lot and Lots 21, 22, 23, 24, 25, 26, 27, 28, 29 and 30, Plan 322, City of Guelph, County of Wellington designated as Part 1 on Reference Plan 61R-2664

(6) This Document Contains (a) Redescription New Easement Plan/Sketch (b) Schedule for: Description Additional Parties Other

(7) Interest/Estate Transferred Fee Simple

(8) Transferor(s) The transferor hereby transfers the land to the transferee ~~and does not intend to reserve any interest in the land.~~

Name(s) WEHLAU PROPERTIES LTD. Signature(s) *[Signature]* Date of Signature Y M D 2002 11 13
Per: Wolf von Teichman
I have authority to bind the Corporation. Title: President

(9) Spouse(s) of Transferor(s) I hereby consent to this transaction Name(s) Signature(s) Date of Signature Y M D

(10) Transferor(s) Address for Service c/o 178 St. George Street, Toronto, Ontario M5R 2M7

(11) Transferee(s) 139 MORRIS STREET LTD. Date of Birth Y M D

(12) Transferee(s) Address for Service c/o 178 St. George Street, Toronto, Ontario M5R 2M7

(13) Transferor(s) The transferor verifies that to the best of the transferor's knowledge and belief, this transfer does not contravene section 50 of the Planning Act. Date of Signature Y M D
Signature _____ Signature _____
Solicitor for Transferor(s) I have explained the effect of section 50 of the Planning Act to the transferor and I have made inquiries of the transferor to determine that this transfer does not contravene that section and based on the information supplied by the transferor, to the best of my knowledge and belief, this transfer does not contravene that section. I am an Ontario solicitor in good standing. Date of Signature Y M D
Name and Address of Solicitor _____ Signature _____

(14) Solicitor for Transferee(s) I have investigated the title to this land and to abutting land where relevant and I am satisfied that the title records reveal no contravention as set out in subclause 50 (22) (c) (ii) of the Planning Act and that to the best of my knowledge and belief this transfer does not contravene section 50 of the Planning Act. I act independently of the solicitor for the transferor(s) and I am an Ontario solicitor in good standing. Date of Signature Y M D
Name and Address of Solicitor _____ Signature _____

(15) Assessment Roll Number of Property
City: 23 Mun: 08 Map: 010 Sub: 007 Par: 21500

(16) Municipal Address of Property
139 Morris Street
Guelph, Ontario

(17) Document Prepared by:
Wolf von Teichman
Tikal and Associates
178 St. George Street
Toronto, Ontario.
M5R 2N2

Fees and Tax	
Registration Fee	<u>20</u>
Land Transfer Tax	
Total	<u>20</u>

FOR OFFICE USE ONLY

Affidavit of Residence and of Value of the Consideration Form 1 - Land Transfer Tax Act

Refer to all instructions on reverse side. IN THE MATTER OF THE CONVEYANCE OF (insert brief description of land) The Factory Lot and Lots 21, 22, 23, 24, 25, 26, 27, 28, 29 and 30, Plan 322., City of Guelph, County of Wellington, designated as Part 1 on Reference Plan 61R-2664

BY (print names of all transferors in full) Wehlau Properties Ltd.

TO (see instruction 1 and print names of all transferees in full) 139 Morris Street Ltd.

I, (see instruction 2 and print name(s) in full) Wolf von Teichman

MAKE OATH AND SAY THAT:

- 1. I am (place a clear mark within the square opposite that one of the following paragraphs that describes the capacity of the deponent(s)): (see instruction 2)
(a) A person in trust for whom the land conveyed in the above-described conveyance is being conveyed;
(b) A trustee named in the above-described conveyance to whom the land is being conveyed;
(c) A transferee named in the above-described conveyance;
[X] (d) The authorized agent or solicitor acting in this transaction for (insert name(s) of principal(s)) 139 Morris Street Ltd.

- (e) The President, Vice-President, Manager, Secretary, Director or Treasurer authorized to act for (insert name(s) of corporation(s))
(f) A transferee described in paragraph () (insert only one of paragraph (a), (b) or (c) above, as applicable) and am making this affidavit on my own behalf and on behalf of (insert name of spouse) who is my spouse described in paragraph () (insert only one of paragraph (a), (b) or (c) above, as applicable) and as such, I have personal knowledge of the facts herein deposed to.

- 2. (To be completed where the value of the consideration for the conveyance exceeds \$400,000). I have read and considered the definition of "single family residence" set out in clause 1(1)(a) of the Act. The land conveyed in the above-described conveyance
[] contains at least one and not more than two single family residences.
[] does not contain a single family residence.
[] contains more than two single family residences. (see instruction 3)

- 3. I have read and considered the definitions of "non-resident corporation" and "non-resident person" set out respectively in clauses 1(1)(f) and (g) of the Act and each of the following persons to whom or in trust for whom the land is being conveyed in the above-described conveyance is a "non-resident corporation" or a "non-resident person" as set out in the Act. (see instructions 4 and 5) None

4. THE TOTAL CONSIDERATION FOR THIS TRANSACTION IS ALLOCATED AS FOLLOWS:
(a) Money paid or to be paid in cash \$ 2.00
(b) Mortgages (i) Assumed (show principal and interest to be credited against purchase price) \$ Nil
(ii) Given back to vendor \$ Nil
(c) Property transferred in exchange (detail below) \$ Nil
(d) Securities transferred to the value of (detail below) \$ Nil
(e) Liens, legacies, annuities and maintenance charges to which transfer is subject \$ Nil
(f) Other valuable consideration subject to land transfer tax (detail below) \$ Nil
(g) VALUE OF LAND, BUILDING, FIXTURES AND GOODWILL SUBJECT TO LAND TRANSFER TAX (Total of (a) to (f)) \$ 2.00 \$ 2.00
(h) VALUE OF ALL CHATTELS - items of tangible personal property (Retail Sales Tax is payable on the value of all chattels unless exempt under the provisions of the "Retail Sales Tax Act", R.S.O. 1980, c.454, as amended) \$ Nil
(i) Other consideration for transaction not included in (g) or (h) above \$ Nil
(j) TOTAL CONSIDERATION \$ 2.00

All Blanks Must Be Filled In. Insert "Nil" Where Applicable

5. If consideration is nominal, describe relationship between transferor and transferee and state purpose of conveyance. (see instruction 6) transfer from trustee for beneficial owner to trustee

6. If the consideration is nominal, is the land subject to any encumbrance? n/a

7. Other remarks and explanations, if necessary. Transfer from trustee for beneficial owner to beneficial owner.

Sworn before me at the City of Toronto in the Province of Ontario this 13th day of November

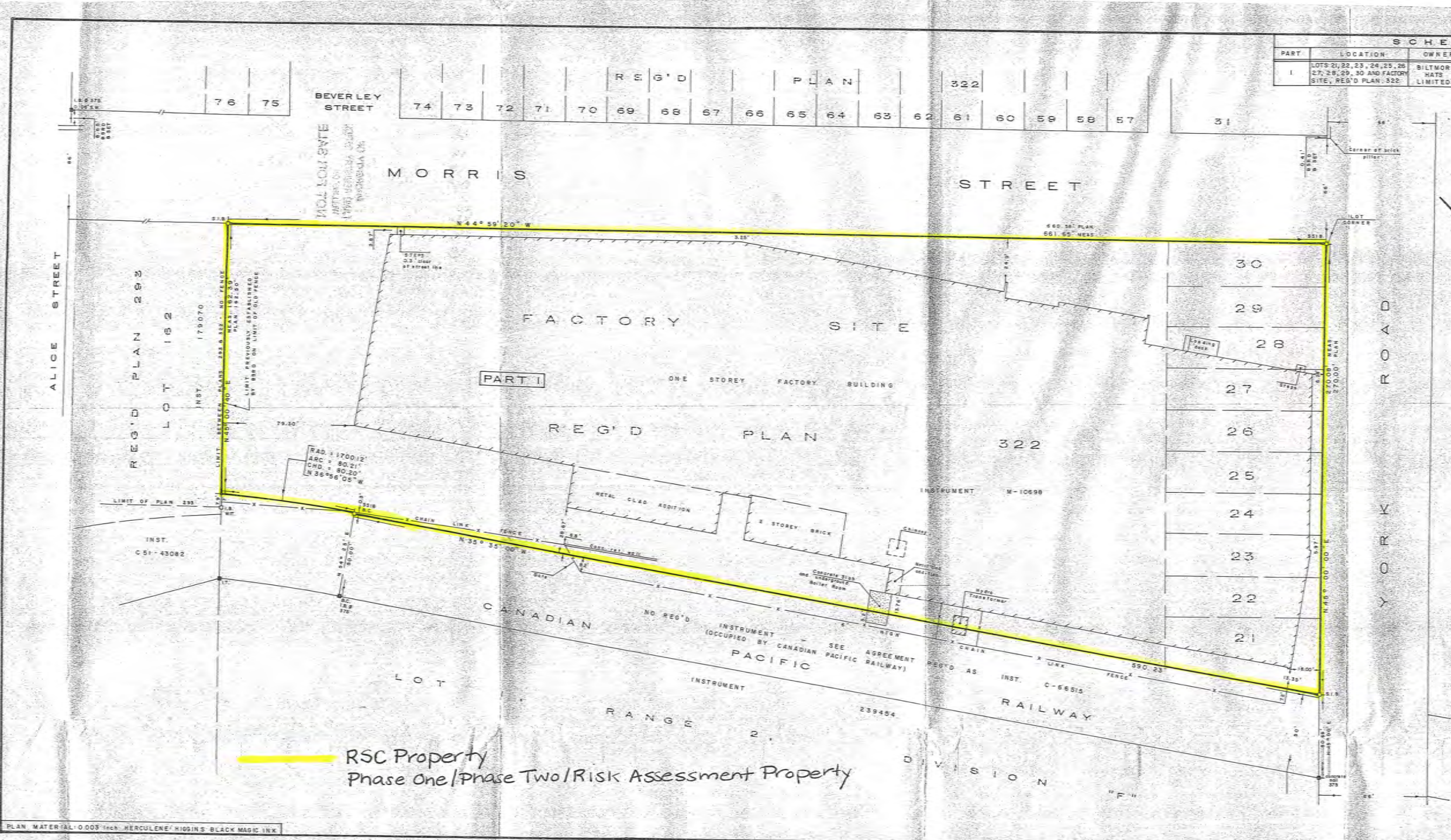
CHARLES KYLE JOLLIFFE, a Commissioner, etc. City of Toronto, for Tikal and Associates, Barristers and Solicitors. Expires July 28, 2004.

Signature of Wolf von Teichman

Property Information Record
A. Describe nature of instrument: Transfer/Deed of Land
B. (i) Address of property being conveyed (if available) 139 Morris Street, Guelph, Ontario
(ii) Assessment Roll No. (if available) 23 08 010 007 21500
C. Mailing address(es) for future Notices of Assessment under the Assessment Act for property being conveyed (see instruction 7) c/o 178 St. George Street, Toronto Ontario M5R 2M7
D. (i) Registration number for last conveyance of property being conveyed (if available) R0585183
(ii) Legal description of property conveyed: Same as in D.(i) above. Yes [X] No [] Not known []
E. Name(s) and address(es) of each transferee's solicitor Wolf von Teichman, Tikal and Associates 178 St. George Street, Toronto, Ontario, M5R 2N2

For Land Registry Office Use Only
Registration No.
Registration Date
Land Registry Office No.

School Tax Support (Voluntary Election) See reverse for explanation
(a) Are all individual transferees Roman Catholic? Yes [] No []
(b) If Yes, do all individual transferees wish to be Roman Catholic Separate School Supporters? Yes [] No []
(c) Do all individual transferees have French Language Education Rights? Yes [] No []
(d) If Yes, do all individual transferees wish to support the French Language School Board (where established)? Yes [] No []
NOTE: As to (c) and (d) the land being transferred will be assigned to the French Public School Board or Sector unless otherwise directed in (a) and (b).



SCHEDULE				
PART	LOCATION	OWNER	INST.	AREA
1	LOTS 21, 22, 23, 24, 25, 26, 27, 28, 29, 30 AND FACTORY SITE, REG'D PLAN 322	BILTMORE MATS LIMITED	M-10698	3.271 Acs.

1 REQUIRE THIS PLAN TO BE DEPOSITED UNDER THE REGISTRY ACT.

PLAN: 61 R-2664

RECEIVED AND DEPOSITED

DATE: JULY 5, 1982 DATE: August 9, 1982

L. Van Harten
L. VAN HARTEN

[Signature]
LAND REGISTRAR FOR THE REGISTRY DIVISION OF WELLINGTON SOUTH NO. 61.

CAUTION: THIS PLAN IS NOT A PLAN OF SUBDIVISION WITHIN THE MEANING OF THE PLANNING ACT.

PLAN OF SURVEY
OF ALL OF
LOTS 21, 22, 23, 24
25, 26, 27, 28, 29, 30
and FACTORY SITE
REGISTERED PLAN 322
CITY OF GUELPH
COUNTY OF WELLINGTON

SCALE: 1 Inch = 30 Feet
L.VAN HARTEN, O.L.S. - 1982

SURVEYOR'S CERTIFICATE:

I CERTIFY THAT:

- THIS SURVEY AND PLAN ARE CORRECT AND IN ACCORDANCE WITH THE SURVEYS ACT AND THE REGISTRY ACT AND THE REGULATIONS MADE THEREUNDER.
- THE SURVEY WAS COMPLETED ON THE 5th DAY OF JULY, 1982.

DATE: JULY 6, 1982

L. Van Harten
L. VAN HARTEN
ONTARIO LAND SURVEYOR

NOTE: BEARINGS ARE ASSUMED ASTRONOMIC DERIVED FROM THE NORTHWEST LIMIT OF YORK ROAD HAVING A COURSE OF $N 45^{\circ} 00' E$ AS SHOWN ON REGISTERED PLAN 322.

- SURVEY MONUMENT SET
- SURVEY MONUMENT FOUND
- S.I.B. 1" x 2" x 48" STANDARD IRON BAR
- SSIS 1" x 1" x 24" SHORT STANDARD IRON BAR
- I.B. 5/8" x 5/8" x 24" IRON BAR
- I.S. 8 ROUND IRON BAR
- 375.97 BSRO BLACK, SHOEMAKER ET AL. O.L.S.'s

M.F. VAN HARTEN LIMITED
ONTARIO LAND SURVEYORS

423 WOOLWICH STREET
GUELPH - ONTARIO
PHONE: 821-2763

PROJECT NO.
82-5777

61 R-2664

Table 2: Maximum Contaminant Concentrations Compared to Standards Specified in a Risk Assessment

Risk Assessment Number: RA1354-13

Table 2: Maximum Contaminant Concentrations Compared to Standards Specified in a Risk Assessment				
Risk Assessment Number	1354-13			
Applicable Site Condition Standard	Table 2			
Measured Concentration for Contaminants in Soil				
Contaminant	Measurement type	Measured Concentration	Standard Specified in Risk Assessment	Unit of Measurement
Methylene Chloride	Measured	0.877		1.1 ug/g
Tetrachloroethylene	Measured	2.08		2.5 ug/g
Toluene	Measured	5.01		6 ug/g
Trichloroethylene	Measured	66.7		80 ug/g
Acenaphthene	Measured	24.7		29 ug/g
Acenaphthylene	Measured	18.3		22 ug/g
Anthracene	Measured	55.3		66 ug/g
Benzo[a]anthracene	Measured	77.5		93 ug/g
Benzo[a]pyrene	Measured	63.2		76 ug/g
Benzo[b]fluoranthene	Measured	77		92 ug/g
Benzo[g,h,i]perylene	Measured	34.4		41 ug/g
Benzo[k]fluoranthene	Measured	25.5		31 ug/g
Chrysene	Measured	74.7		90 ug/g
Dibenzo[a,h]anthracene	Measured	10		12 ug/g
Fluoranthene	Measured	198		238 ug/g
Indeno[1,2,3-cd]pyrene	Measured	40.5		49 ug/g
Methylnaphthalene, 2-(1-)	Measured	29.3		35 ug/g
Naphthalene	Measured	42.3		51 ug/g
Phenanthrene	Measured	219		263 ug/g
Pyrene	Measured	159		191 ug/g
Antimony	Measured	34.7		42 ug/g
Arsenic	Measured	102		122 ug/g
Barium	Measured	3890		4668 ug/g
Boron (Hot Water Soluble)	Measured	4.14		5 ug/g
Boron (total)	Measured	664		797 ug/g
Cadmium	Measured	29.7		36 ug/g
Chromium Total	Measured	290		348 ug/g
Cobalt	Measured	36.4		44 ug/g
Copper	Measured	2150		2580 ug/g
Cyanide (CN-)	Measured	0.086		0.1 ug/g
Lead	Measured	4430		5316 ug/g
Mercury	Measured	46.1		55 ug/g
Molybdenum	Measured	28.5		34 ug/g
Nickel	Measured	337		404 ug/g
Selenium	Measured	3.3		4 ug/g
Vanadium	Measured	1570		1884 ug/g
Zinc	Measured	10300		12360 ug/g
Petroleum Hydrocarbons F2 (>C10-C16)	Measured	1820		2184 ug/g
Petroleum Hydrocarbons F3 (>C16-C34)	Measured	5650		6780 ug/g
Petroleum Hydrocarbons F4 (>C34-C50)	Measured	5620		6744 ug/g
Electrical Conductivity (mS/cm)	Measured	0.87		1 mS/cm

Table 2: Maximum Contaminant Concentrations Compared to Standards Specified in a Risk Assessment

Risk Assessment Number: RA1354-13

Measured Concentration for Contaminants in Ground Water				
Contaminant	Measurement type	Measured Concentration	Standard Specified in Risk Assessment	Unit of Measurement
Dichloroethylene, 1,2-cis-	Measured	6.95	8.3	ug/L
Tetrachloroethylene	Measured	68	82	ug/L
Trichloroethylene	Measured	105	126	ug/L
Vinyl Chloride	< MDL Value of	0.5	0.6	ug/L
Boron (total)	Measured	10100	12120	ug/L
Selenium	Measured	13.1	16	ug/L
Sodium	Measured	661000	793200	ug/L
Vanadium	Measured	143	172	ug/L
Measured Concentration for Contaminants in Sediment				
Contaminant	Measurement type	Measured Concentration	Standard Specified in Risk Assessment	Unit of Measurement
<none>				

**TABLE OF AREAS OF POTENTIAL ENVIRONMENTAL CONCERN
(Refer to clause 16(2)(a), Schedule D, O. Reg. 153/04)**

<i>Area of Potential Environmental Concern¹</i>	<i>Location of Area of Potential Environmental Concern on Phase One Property</i>	<i>Potentially Contaminating Activity²</i>	<i>Location of PCA (on-site or off-site)</i>	<i>Contaminants of Potential Concern³</i>	<i>Media Potentially Impacted (Ground water, soil and/or sediment)</i>
APEC #1 Off-Site Gasoline Aboveground Storage Tanks	Northern property boundary	28. Gasoline and Associated Products Storage in Fixed Tanks	Off-Site	PHCs, BTEX, lead	Groundwater
APEC #2 Off-Site Metal Fabrication	Western property boundary	34. Metal Fabrication	Off-Site	PHCs, Metals	Groundwater
APEC #3 Historic On-Site Transformer	Western portion of Property near former transformer pad and southeastern portion of Property	55. Transformer Manufacturing, Processing and Use	On-Site	PCBs and PHCs	Soil and/or groundwater
APEC #4 Historic On-Site Underground Storage Tanks	Western portion of Site	28. Gasoline and Associated Products Storage in Fixed Tanks	On-Site	PHCs, BTEX,	Soil and/or groundwater
APEC #5 Historical On-Site Metal Fabrication	Central Portion of Site	34. Metal Fabrication	On-Site	VOCs, Metals, PHCs	Soil and /or groundwater
APEC #6 Off-Site Fiberglass and Plastics Manufacturing	Southern Property Boundary	43. Plastics (Including Fiberglass) Manufacturing and Processing	Off-Site	VOCs, Metals, PAHs, PHCs	Groundwater
APEC #7 Historic Off-Site Chemical Manufacturing	Northern and Western Property Boundary	8. Chemical Manufacturing, Processing and Bulk Storage	Off-Site	VOCs, PAHs, PHCs, OCs	Groundwater

<i>Area of Potential Environmental Concern¹</i>	<i>Location of Area of Potential Environmental Concern on Phase One Property</i>	<i>Potentially Contaminating Activity²</i>	<i>Location of PCA (on-site or off-site)</i>	<i>Contaminants of Potential Concern³</i>	<i>Media Potentially Impacted (Ground water, soil and/or sediment)</i>
APEC #8 Off-Site Railway Corridor	Western Property Boundary	46. Rail Yards, Tracks, and Spurs	Off-Site	BTEX, PAHs, PHCs, Metals	Groundwater
APEC #9 Off-Site Gasoline Underground Storage Tanks	Southern Property Boundary	28. Gasoline and Associated Products Storage in Fixed Tanks	Off-Site	PHCs, BTEX, lead	Groundwater
APEC #10 On-Site Potential Importation of Fill Material of Unknown Quality	Throughout Property Where Demolition Occurred	30. Importation of Fill Material of Unknown Quality	On-Site	VOCs, PAHs, Metals, PHCs	Soil
APEC #11 Historical On-Site Textile Manufacturing	Central Portion of Property	54. Textile Manufacturing and Processing	On-Site	VOCs, PAHs, Metals, PHCs	Soil and /or groundwater

Notes:

- 1 Area of Potential Environmental Concern means the area on, in or under a phase one property where one or more contaminants are potentially present, as determined through the phase one environmental site assessment, including through,
 - (a) identification of past or present uses on, in or under the phase one property, and
 - (b) identification of potentially contaminating activity.
- 2 Potentially Contaminating Activity means a use or activity set out in Column A of Table 2 of Schedule D that is occurring or has occurred in a phase one study area
- 3 When completing this column, identify all contaminants of potential concern using the Method Groups as identified in the "Protocol for in the Assessment of Properties under Part XV.1 of the Environmental Protection Act, March 9, 2004, amended as of July 1, 2011, as specified below:

ABNs	PCBs	Metals	Electrical Conductivity	SAR	Cl	OCs
CPs	PAHs	As, Sb, Se	Cr (VI)	High pH	CN ⁻	PHCs
1,4-Dioxane	THMs	Na	Hg	low pH	BTEX	
Dioxins/Furans, PCDDs/PCDFs	VOCs	B-HWS	Methyl Mercury		Ca, Mg	

TABLE OF CURRENT AND PAST USES OF THE PHASE ONE PROPERTY

(Refer to clause 16(2)(b), Schedule D, O.Reg. 153/04)

Year	Name of Owner	Description of Property Use	Property Use¹	Other Observations from Aerial Photographs, Fire Insurance Plans, etc.
Prior to late 1907	James W. Lyon	Vacant	Agricultural or Other Use	Based on information obtained through the title search, the Site was undeveloped prior to 1907.
1907 - 1932	Standard Fitting and Valve Company/ Canadian Metal Products Limited	Manufacturing metal valves and fittings	Industrial	The Site was first developed in 1907 with an industrial building. Adjacent lands began to be developed for industrial and residential use.
1932 - 1988	Lancashire Felt Company of Canada/ Biltmore Hats Limited	Manufacturing of fur hats	Industrial	The Site building was expanded in 1957 and the 1960s.
1988 - 2012	139 Morris Street Ltd.	Manufacturing of fur hats, tenants manufactured fishing line, brake components, and wire	Industrial	Sections of the Site building were rented out to tenants including ABS On Time Logistics, FM Wire, and Northern Sport Fishing Co.
2012 - Current	139 Morris Street Ltd.	Vacant lot	Industrial	Site is currently not being used. The building has been demolished

Notes:

1 - for each owner, specify one of the following types of property use (as defined in O.Reg. 153/04) that applies:

- Agriculture or other use
- Commercial use
- Community use
- Industrial use
- Institutional use
- Parkland use
- Residential use

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Section 1.0 Introduction

The following is the Phase Two Conceptual Site Model (CSM), prepared in accordance with the Ministry of the Environment (MOE) Ontario Regulation (O. Reg.) 153/04, for 139 Morris Street in Guelph, Ontario (Property or Site). The Property is legally described as the Factory Lot and Lots 21-30, Plan 322, City of Guelph, County of Wellington. A Site location map and current Site Plan are provided as Figure 1 and Figure 2. It should be noted that all figure references included herein correspond to the Phase Two ESA report. All figures referenced throughout the CSM are attached for reference.

The Site is located in an area of the City of Guelph that has been developed for mixed residential, commercial, and industrial land use since the late 1800s and early 1900s. The Site is currently vacant, primarily sand, gravel, and debris (brick and cinder block) covered lot. The Site is approximately 1.35 hectares (3.34 acres) in size, which formerly held an 8,925-square-metre building. The building and all associated utilities were demolished in late 2012/early 2013 and all building materials and utility lines have been removed from the Property. The Site was originally developed for industrial purposes in 1907 by Standard Fitting and Valve Company. Since 1907, various occupants and owners have utilized the Property for an assortment of industrial and commercial uses. Ownership of the Property was transferred to Lancashire Felt Company of Canada/Biltmore Hats Ltd. in 1932 until in 1988 the Property was sold to 139 Morris Street Holdings Ltd. During the 1932 to 1988 period, the Site was used for hat manufacturing operations and the on-Site building was expanded in 1957 and again in the 1960s. Upon purchase of the Property in 1988, 139 Morris Street Holdings Ltd. continued to rent out portions of the on-Site building to various tenants until 2012 when the building was demolished. Tenants included ABS On Time Logistics, FM Wire, Northern Sport Fishing Co., and Biltmore Hats Ltd. Between 1988 and 2012, the Property was used for manufacturing fishing line, brake components, and electrical wire; however, the primary use of the Property continued to be for the manufacturing of hats.

The anticipated future land use of the Site is residential and as such 139 Morris Street Ltd. is preparing a Record of Site Condition (RSC) to support the redevelopment and rezoning of the Site. This CSM has been created in support of that RSC.

A Phase I ESA was previously completed for the Site by V.A. Wood [Guelph] Inc. (V.A. Wood) in August 2010. V.A. Wood's Phase I ESA was not completed to the standards laid out in O. Reg. 153/04, as amended, and as such CRA completed an updated Phase One ESA in June 2013, adhering to O. Reg. 153/04, as amended.

V.A. Wood also completed a Phase II ESA at the Site, the results of which are summarized in a report dated July 2011. The sampling and analytical protocols used during the Phase II ESA

adhered to the requirements of O. Reg. 153/04, as amended, and as such the analytical results have been included and discussed in the Phase Two ESA report and CSM.

CRA completed a focused Phase II Environmental Site Investigation (ESI) in January 2013 to investigate data gaps identified in V.A. Wood's Phase II ESA and to determine the extent to which further efforts would be required in order to meet criteria for filing an RSC for redevelopment to residential land use as stipulated in O. Reg. 153/04, as amended. The focused Phase II ESI activities were conducted in accordance with O. Reg. 153/04, as amended.

CRA completed an updated Phase One ESA of the Site in June 2013. The Phase One ESA described potentially contaminating activities (PCAs), areas of potential environmental concern (APECs), and areas of actual or potential environmental impairment at the Site.

A Sampling and Analysis Plan (Appendix A of the Phase Two ESA) was prepared for the Site, stipulating the protocols to be followed during the Phase Two ESA.

Section 2.0 Areas of Potential Environmental Concern (APEC) and Potentially Contaminating Activities (PCA)

Based on the results of the Phase One ESA (CRA, 2013), including the Site inspection, information provided by Site representatives and regulatory agencies, documents reviewed, the review of Site history, and receipt and review of information from the MOE, CRA identified the following APECs to be associated with the Site.

- i) **Off-Site Gasoline Aboveground Storage Tanks:** A former Imperial Oil Limited bulk gasoline storage facility was located approximately 100 metres (m) to the north of the Site, which included the operation of gasoline aboveground storage tanks (ASTs). Gasoline ASTs are identified in O. Reg. 153/04 as a PCA (Gasoline and Associated Products Storage in Fixed Tanks). Based on the proximity to the Site, and the direction of groundwater flow in the vicinity of the Site, the gasoline ASTs were identified as a PCA with the potential to be contributing to an APEC on the Site.
- ii) **Off-Site Metal Fabrication:** Fire Insurance Plans identified a former electrical appliance manufacturing facility including a machine shop and foundry on the property west of the Site. Metal Fabrication is identified in O. Reg. 153/04 as a PCA (Metal Fabrication). Based on the proximity to the Site, the former electrical appliance manufacturing facility and associated foundry located adjacent to the west of the Site was identified as a PCA with the potential to be contributing to an APEC on the Site.
- iii) **Historic On-Site Transformer:** The 1969 Fire Insurance Plan identified three, former, oil-cooled transformers located adjacent to the southwest corner of the former building

and a fourth, former, oil-cooled transformer was identified located adjacent to the southeast corner of the former building. Facility personnel stated that to the best of their knowledge, a former transformer was decommissioned approximately 15 years ago and it did not contain polychlorinated biphenyls (PCBs). MOE records indicate that a transformer at the Site did contain PCBs and was drained with the PCB containing oil removed from the Site in 1999. No records indicate which historical transformer contained PCBs or whether the remaining historical transformers were ever tested for PCBs. There are no records available pertaining to the decommissioning of the remaining transformers and at the time of CRA's Site inspection, no transformers were observed at the Site. There have been no reported spills or releases from the transformers. As required by O. Reg. 153/04, the presence of a transformer is identified as a PCA (Transformer Manufacturing, Processing, and Use) and is included as an APEC. Figure 2 shows the approximate location of all historical transformers.

- iv) **Historic On-Site Underground Storage Tanks:** During the preparation of the Phase One ESA, CRA reviewed Fire Insurance Plans for the Site and noted that the 1976 Inspection Report indicated that a fuel oil UST was present exterior to the former building along the western side of the Property. During the on-Site interview, Site personnel indicated that fuel oil USTs were never present at the Site but two USTs were present in the area where the 1976 FIP indicated the fuel oil UST was located. Site personnel indicated that both USTs were former rail cars that had been rolled onto the Site from the adjacent Canadian Pacific Railway spur line. CRA's review of remaining historical documentation including environmental database records and agency records from the MOE and Technical Standards and Safety Authority (TSSA) did not identify the presence of any USTs at the Site. Two USTs have been removed from the Site during decommissioning and demolition activities. Mr. Owen Wilfong of G.R. Wilfong and Son Limited, the licensed contractor that removed the USTs, confirmed that one of the USTs appeared to be a repurposed rail car and the second appeared to be a custom tank. The rail car UST contained an unknown liquid and assorted debris (bricks and gravel). The liquid was removed from the cavities and disposed of off Site. Both USTs were subsequently removed during the work. The known historical presence of the USTs and unknown nature of the liquid and use is defined in O. Reg. 153/04 as a PCA (Gasoline and Associated Products Storage in Fixed Tanks). The historical USTs have been identified as a potential source of environmental impairment, and have been included as APEC 4 in the Phase One ESA. Figure 2 shows the approximate location of all historical USTs.
- v) **Historical On-Site Metal Fabrication:** The Site was originally developed and used by the Standard Valve and Fitting Company of Canada. Little information was available regarding the historical operations as they relate to metal product manufacturing. The operation of a metal fabrication facility is defined in O. Reg. 153/04 as a PCA (Metal Fabrication). The historical property use is identified as a potential source of environmental impairment, and has been included as an APEC. Since the former

- building has been demolished and CRA does not have records of the specific location of former production and manufacturing activities, the historical on-Site metal fabrication APEC has been shown on Figure 2 as extending to the edge of the footprint of the former building. The sampling locations to investigate this APEC have been spatially spread out throughout the footprint of the former building to account for this.
- vi) **Off-Site Fiberglass and Plastics Manufacturing:** Based on visual observations made during the Site inspection, and a review of available historical data, the Owens Corning Canada and NGF Canada Ltd. properties, located approximately 10 m south of the Site at 247 York Road and 255 York Road, respectively, were identified as manufacturers of fiberglass and plastics products. Fiberglass and plastics manufacturing is identified in O. Reg. 153/04 as a PCA (Plastics (Including Fiberglass) Manufacturing and Processing). Based on the proximity of these facilities to the Site, the properties were identified as potential off-Site sources of environmental impairment to the Site and have been included as an APEC.
- vii) **Historic Off-Site Chemical Manufacturing:** Based on visual observations made during the Site inspection, and a review of available historical data, the Crompton Company/Uniroyal Chemical/Chemtura Canada property located approximately 100 m northwest of the Site at 120 Huron Road, was identified as a manufacturer of chemical products. Chemical manufacturing, processing and bulk storage is identified in O. Reg. 153/04 as a PCA. Based on the proximity of this facility to the Site, the property was identified as a potential off-Site source of environmental impairment to the Site and has been deemed an APEC.
- viii) **Off-Site Railway Corridor:** Based on visual observations made during the Site inspection the Canadian Pacific Railway spur line is located directly to the west of the Site. Rail yards, tracks, and spurs are identified in O. Reg. 153/04 as a PCA. Based on the proximity of this railway to the Site, the property was identified as a potential off-Site source of environmental impairment to the Site and has been deemed an APEC.
- ix) **Off-Site Gasoline Underground Storage Tanks:** Based on a review of available historical data, two USTs were identified to be present on the Owens Corning property and City of Guelph property to the south of the Site. Records indicate that both USTs were used for private gasoline storage. Records indicate that the UST on the Owens Corning property was abandoned in place and that the USTs on the City of Guelph property are active as of June 2011. The current and historical presence of the USTs is defined in O. Reg. 153/04 as a PCA (Gasoline and Associated Products Storage in Fixed Tanks). The two off-Site USTs have been identified as a potential source of environmental impairment and have been deemed an APEC.
- x) **On-Site Potential Importation of Fill Material of Unknown Quality:** The Site building was recently demolished in 2012 and CRA observed the Property to be level and covered with gravel/stones of varying sizes at the time of the Site inspection. Given the

age of the Property, little information was available regarding the development of the Site. The importation of fill material of unknown quality is defined in O. Reg. 153/04 as a PCA. Given the potential for fill material to have been imported and the lack of information regarding the source and quality, importation of fill material is identified as a potential source of environmental impairment, and an APEC. Since the potential importation of fill material has been identified across the entire Site and little information is available regarding the development of the Site, Figure 2 shows this APEC extending to the property boundaries. The sampling locations to investigate this APEC have been spatially spread out across the Site to account for this.

- xi) **Historical On-Site Textile Manufacturing:** The Site was used by the Lancashire Felt Company of Canada and Biltmore Hats Ltd. for the manufacturing and processing of fur hats from 1932 to 2012. The manufacturing and processing of fur hats is defined in O. Reg. 153/04 as a PCA (Textile Manufacturing and Processing). The historical property use is identified as a potential source of environmental impairment, and has been included as an APEC in this report. Since the former building has been demolished and CRA does not have records of the specific location of former production and manufacturing activities within the building, the historical on-Site textile fabrication APEC has been shown on Figure 2 as extending to the edge of the footprint of the former building. The sampling locations to investigate this APEC have been spatially spread out throughout the footprint of the former building to account for this.

The locations of the above-noted APECs are presented on Figure 2.

Section 3.0 Physical Setting

3.1 Topography and Drainage

The Site is relatively flat and the majority of the Property is elevated approximately 1 m higher than the surrounding land. A retaining wall is present to the north and northwest and the remaining western Property boundary slopes down steeply to the adjacent Canadian Pacific rail line. The southern Property boundary slopes down steeply to the sidewalk and York Road. The eastern Property boundary has a gentler slope down towards Morris Street. Local topography generally slopes towards the Eramosa River, south of the Site. Regional topography generally slopes toward the south.

The elevation of the Site is approximately 315 m above mean sea level (AMSL)¹. A review of available geological maps for the region indicates that the Site is located in an area

¹ Toporama – Topographic Maps (2012), www.atlas.nrcan.gc.ca.

characterized as outwash gravel², with bedrock present at approximately 296 mAMSL)³. Previous field investigations indicate that ground surface, at the Site, is found between approximately 315 to 317 mAMSL while bedrock is encountered at 309 to 312 mAMSL.

Over the course of the Phase Two ESA, storm water was observed to collect and pond in localized low topographical areas across the Site or to flow off Site onto the adjacent rail line or roadways. Pondered storm water was observed to slowly infiltrate and/or evaporate. Precipitation that fell along the northeastern corner of the Property and eastern Property boundary was observed to flow onto Morris Street. Precipitation falling along the southern extents of the Property and the southwestern corner was observed to flow onto York Street.

3.2 Regional Geology and Hydrogeology

The bedrock stratigraphy and hydrogeology of the Guelph Region is described in "*Preliminary Revisions to the Early Silurian Stratigraphy of Niagara Escarpment: Integration of Sequence Stratigraphy, Sedimentology and Hydrogeology to Delineate Hydrogeologic Units*" (Brunton, 2008)⁴. This publication presented a proposed revision to the stratigraphic nomenclature and identified hydrogeologic units in the Guelph Region. Attachment A provides a cross-section of the Guelph Region stratigraphy and hydrogeology.

The regional stratigraphic units and the equivalent hydrogeological units are described in the following table.

Formation	Member	Lithology	Hydrostratigraphy
Guelph		Dolostone (crinoidal grainstone and wackestone)	Unconfined bedrock aquifer (Guelph HGU)
Eramosa	Reformatory Quarry	Coarsely crystalline dolostone	Regional Aquitard
	Vinemount	Calcareous shale	
Goat Island	Ancaster	Crystalline dolostone	Lower transmissivity zone
	Niagara Falls	Crinoidal grainstone	
Gasport	Gothic Hill	Dolostone (crinoidal grainstone-packstone)	Main confined bedrock aquifer (Gasport HGU)

The principal aquifer in the Guelph region is the Gasport hydrogeologic unit (HGU). This HGU is made of dolostone with significant reef mound complexes. This major aquifer is overlain in

² Ontario Department of Mines, "*Pleistocene Geology Map*", Map 2153, Guelph Area, Scale 1:63,360.

³ Ministry of Natural Resources Ontario Geological Survey 1979, Map P. 2224, *Bedrock Topography*, Guelph Area, Scale 1:50,000.

⁴ Brunton, F.R. (2008) *Preliminary Revisions to the Early Silurian Stratigraphy of Niagara Escarpment: Integration of Sequence Stratigraphy, Sedimentology and Hydrogeology to Delineate Hydrogeologic Units*, Queen's Printer for Ontario.

some places by the lower transmissivity Goat Island Formation. The major regional aquitard consisting of the calcareous shale beds of the Vinemount Member of the Eramosa Formation overlies the Goat Island Formation or directly overlies the Gasport HGU. The Vinemount, where present, has an average thickness of 10 m.

The City of Guelph relies heavily on the Gasport HGU for its municipal water supply. Fourteen of the City's wells are completed in the Gasport HGU. The municipal wells closest to the Site are located in what is termed the Southwest Quadrant and are the Membro, University Avenue, Water Street, and Dean Avenue wells. It is also noted that chlorinated volatile organic compounds (CVOCs) have been detected in the Membro and University Avenue wells since approximately 1994. The current concentration of trichloroethene (TCE) in the Membro well is approximately 2.5 micrograms per litre ($\mu\text{g/L}$).⁵ While this concentration is half the maximum allowable concentration (MAC), it is well above the MOE Table 2 standards. The specific source(s) of the CVOCs in the Gasport HGU is unknown, but there appears to be low-levels of CVOCs distributed in the Gasport HGU throughout the City of Guelph.

3.3 Site Geology

The geologic sequence observed at the Site is presented below:

<i>Unit</i>	<i>Description</i>	<i>Thickness (m)</i>	<i>Elevation (mAMSL)</i>
Fill Materials	Sand, gravel, silt, with cobbles, fine to coarse grained, well graded; often containing zones of black staining and debris (including slag, glass, ash, plastic, brick, wood)	0.10 m to 3.96 m (average of 1.68 m)	317.91 mAMSL to 312.79 mAMSL
Native Overburden	Primarily sand and gravel, with varying degrees of silt and cobbles, dense, coarse grained, brown	0.00 m to 6.40 m (average of 3.13 m)	316.90 mAMSL to 314.73 mAMSL
Guelph Formation	Dolostone (Grainstones and Wackestones), light grey to pale brown, vuggy, fractured	0.00 m to 3.36 m (average of 0.13 m)	314.73 mAMSL to 308.97 mAMSL
Reformatory Member Eramosa Formation	Dolostone, grey, transitional Phase from the Guelph Formation and the underlying Vinemount Member	2.92 m to 4.93 m (average of 4.12 m)	310.86 mAMSL to 304.04 mAMSL
Vinemount Member Eramosa Formation –	Shaley Dolostone, dark grey to black, largely competent, strong petroliferous odour – Regional Aquitard	> 5.49 m at Site	307.01 mAMSL to <304.04 mAMSL

⁵ AquaResources (2010) Draft Water Quality Threats Assessment Report, March 2010.

Three geologic cross-sections have been prepared. The cross-section locations are shown on Figure 4. The cross-sections are presented on, Figures 5, 6, and 7. As shown on Figures 5, 6, and 7 and described above, the stratigraphy across the Site consists of a fill material consisting of varying quantities of sand, gravel, silt, and cobbles. This fill material was observed to contain varying amounts of debris including brick, cinder blocks, wood, plastic, and metallic objects. The thickness of the fill materials was variable across the Site; however, the total depth of the fill was observed, in general, to increase along the western Property boundary in particular in the vicinity of monitoring well nest MW25A/B-13. The native overburden consists of glacial outwash till made up of primarily dense sand and gravel with varying quantities of silt and cobbles and occasionally clayey zones. The thickness of the native overburden ranged from 0 to 6.4 m.

The bedrock units investigated at the Site consisted of the Guelph and Eramosa Formations. The bedrock surface was observed to be shallowest in the northeastern corner of the Site and sloped towards the southern extents of the Property. The Guelph Formation was found to be thin (< 3.36 m) and was absent along the southernmost portion of the Property. Both the Reformatory Quarry and Eramosa Members of the Eramosa Formation were encountered at the Site, confirming that the Regional Aquitard is present. The full thickness of the Vinemount was not determined but it was greater than 5 m (the average thickness in the region is approximately 10 m).

3.4 Site Hydrogeology

For the purposes of investigating groundwater flow, the geologic units described above were grouped into two main hydrogeologic units: the overburden/shallow bedrock unit and the intermediate bedrock unit. However, the hydrogeologic units are interconnected as no competent aquitards were observed separating the hydrogeologic units.

CRA collected depth to groundwater measurements from existing monitoring wells on February 20, 2013, March 19, 2013, and August 1, 2013. In addition to depth to groundwater levels, non-aqueous phase liquid (NAPL) screening was completed at each monitoring well on February 20, 2013 and August 1, 2013. CRA did not detect light or dense NAPL (LNAPL and DNAPL, respectively) in any of the overburden/shallow bedrock or intermediate bedrock monitoring wells.

Overburden/Shallow Bedrock Unit

The interpreted groundwater elevation contours in the overburden/shallow bedrock, based on water level measurements collected on August 1, 2013 are presented on Figure 8a. The depth to groundwater on Site ranged from 4.46 m below ground surface (BGS) (monitoring well

MW13-13 on March 19, 2013) to 6.23 m BGS (monitoring well MW27B-13 on August 1, 2013). The groundwater flow direction was southeasterly, towards York Road and the Eramosa River (~300 m southeast). The August 1, 2013 groundwater elevations ranged from 312.40 mAMSL to 310.11 mAMSL at monitoring wells MW13-13 and MW19-13, respectively.

Seasonal variations were noted in the overburden/shallow bedrock unit over the period of water level monitoring. A notable variability in groundwater elevations is present when comparing water levels from 2013. With the exception of monitoring well MW17-13, groundwater elevations in each well were observed to rise between 36 centimetres (cm) (MW18-13) and 90 cm (MW13-13) for an average change of 50 cm when comparing elevations recorded in February to March 2013. With the exception of monitoring wells MW17-13 and MW20-13, water levels dropped between 21 cm (MW13-13) and 1.0 m (MW19-13) for an average decrease of 48 cm when comparing elevations recorded in March to August 2013. This variability is likely the result of the spring freshet increasing the volume of infiltration into the overburden/shallow bedrock aquifer.

Water levels in monitoring well MW17-13 decreased from February to March 2013 by 31 cm and decreased further by 4 cm between March and August 2013 while an increase of 7 cm is observed in MW20-13 between March and August 2013.

Utilizing the depth to groundwater measurements taken on August 1, 2013 at monitoring wells MW13-13 and MW27B-13, the horizontal hydraulic gradient can be calculated as follows:

$$i_h = \frac{(h_2 - h_1)}{L}$$

Where:

- i_h = horizontal hydraulic gradient (unitless or m/m)
- $(h_2 - h_1)$ = difference in hydraulic head with the groundwater flow path (m) using August 1, 2013 groundwater elevation data
- L = horizontal distance between wells (m)

The horizontal hydraulic gradient for the overburden/shallow bedrock groundwater unit is approximately 0.010 m/m.

Intermediate Bedrock Unit

The interpreted groundwater elevation contours in the intermediate bedrock, based on water level measurements collected on August 1, 2013 are presented on Figure 8b. The groundwater flow direction was generally consistent with the slope of the overburden/shallow bedrock interface and is directed to the southeast and York Road/Eramosa River. Monitoring well

MW41-15 was installed in April 2015, therefore the water level measurements used to interpret the August 1, 2013 groundwater contours did not include monitoring well MW41-15.

The depth to groundwater in the intermediate bedrock on-Site monitoring wells ranged from 4.84 m BGS (MW28-13) to 6.30 m BGS (MW27A-13) during the August 1, 2013 monitoring event (5.77 and 7.23 m below top of riser (BTOR) respectively). Groundwater elevations ranged from 311.37 mAMSL at monitoring well MW23A-13 and 310.55 mAMSL at monitoring well MW27A-13. Using the August 1, 2013 water level measurements collected from monitoring wells MW23A-13 and MW25A-13, the horizontal hydraulic gradient of 0.003 m/m is calculated for the intermediate bedrock unit.

To determine vertical hydraulic gradients between nested overburden/shallow bedrock and intermediate bedrock units the following equation was used:

$$i_v = \frac{(h_2 - h_1)}{(z_2 - z_1)}$$

Where:

- i_v = vertical hydraulic gradient (unitless)
- $(h_2 - h_1)$ = difference in hydraulic head with the groundwater flow path (m) using groundwater elevation data
- $(z_2 - z_1)$ = vertical distance between the mid-point of the well screens (m)

Slight downward vertical hydraulic gradients were calculated for the nested monitoring wells MW23A/B-13 and MW27A/B-13 (0.09 m/m and 0.03 m/m, respectively) using the August 1, 2013 data. This is due to the fact that the Eramosa Formation, in which these monitoring wells are completed in, is underlain by the very permeable Gasport Formation (a major regional confined bedrock aquifer).

3.5 Applicability of Sections 41 and 43.1 of the Regulation

Based on the following available information, the Site is not considered to be environmentally sensitive as defined in Sections 41 and 43.1 of O. Reg. 153/04:

- *Environmental Sensitivity* - As part of the Phase One ESA (CRA, 2013), CRA reviewed the database of Areas of Natural or Scientific Interest (ANSI) within an approximate 1-kilometre (km) radius of the Site, and no records were identified. The Guelph Interstadial Site ANSI was identified to be located approximately 1 km to the northeast of the Site.
- *Environmental Sensitivity* - Based on the results of V.A. Wood's Phase II ESA and the focused Phase II ESI, the soil pH is within the acceptable ranges of 5 to 9 standard units (s.u.) for

surface soil and 5 to 11 s.u. for subsurface soil. Therefore, the Site is not environmentally sensitive.

- *Water Body* – There are no water bodies or water courses located on the Site and the Site is not located within 30 m of a water body. The nearest watercourse to the Site is the Eramosa River, which is located approximately 300 m south of the Site.
- *Shallow soil* – Based on the combined results of the intrusive investigations, greater than 2 m of overburden soil exists across the Site.
- *Property Use* - The proposed future land use is residential.
- *Potable Groundwater* - The Site is located in Guelph, Ontario, where groundwater is used for potable purposes.
- *Restoration depth* - For comparative purposes, CRA compared the data to full depth MOE standards.
- *Soil Texture* – Based on the results of the Focused Phase II ESA investigation and grain size analyses, the soil texture is considered coarse-grained.

3.6 Area Where Soil has Been Brought from Another Property

As described in the Phase One ESA (CRA, 2013), CRA observed disturbed soils across the Property, intermingled with large stones and gravel. The Site building had recently been demolished and the footprint of the former building appeared to be flat and elevated above the surrounding topography. Site personnel were not aware of any historical fill placement or the presence of fill material on the Site related to the building demolition. CRA was not provided with any written information regarding the demolition activities.

The potential importation of fill material to the Site with no documentation of the quality is identified in O. Reg. 153/04 as a PCA (Importation of Fill Material of Unknown Quality) and has been included as an APEC (APEC 10) within the Phase One and Two ESA reports.

3.7 Proposed Buildings and Structures

The Site is currently vacant and unused. 139 Morris Street Holdings Ltd. has proposed to redevelop the Site for residential property use. Three, two-storey townhouse complexes and one, three-storey apartment building have been proposed for the development.

Section 4.0 Nature and Extent of Impacts

4.1 Phase Two ESA Investigation

To characterize the nature and extent of impacts to soil, groundwater, and soil vapour CRA completed the following Phase Two ESA investigation activities:

- Advancement of 25 soil borings
- Completion of 1 surficial soil sample (i.e., 0 to 0.3 mBGS)
- Installation of 1 overburden groundwater monitoring well
- Installation of 13 overburden/shallow bedrock monitoring wells
- Installation of 5 intermediate bedrock monitoring wells
- Installation of 9 shallow soil vapour probes within the overburden soils
- Collection of field screening measurements
- Groundwater level monitoring including NAPL screening
- QA/QC measures
- Elevation surveying
- Collection of 68 soil samples (including 6 field duplicates) for laboratory analysis of COCs including: VOCs; BTEX; semi-volatile organic compounds (SVOCs); polycyclic aromatic hydrocarbons (PAHs); petroleum hydrocarbons fractions F1 to F4 (PHCs F1 to F4); metals ; PCBs; pH; and/or grain size analysis
- Collection of 2 soil samples for waste characterization purposes for laboratory analysis of toxicity characteristic leachate procedure (TCLP) VOCs, PAHs, metals, cyanide, fluoride, and ignitability
- Collection of 1 composite groundwater sample for waste characterization purposes for laboratory analysis of VOCs and metals
- Collection of 23 groundwater samples (including four field duplicates) from the overburden and bedrock monitoring wells for laboratory analysis of the following COCs: VOCs; sVOC including, PAHs, PCBs, and pesticides; PHCs; and metals
- Collection of 11 soil vapour samples (including a trip blank and field duplicate) for laboratory analysis of the following COCs: VOCs and PHCs
- Collection of 2 soil vapour samples for laboratory analysis of mercury
- Re-sampling of 1 groundwater sample from intermediate bedrock well MW28-13 for PAH analysis
- Re-sampling of 6 of the soil vapour probes for confirmatory analysis of VOCs and PHCs. Sampling event included collection of a blind field duplicate and field blank

Throughout V.A. Wood's 2011 Phase II ESA a total of 21 soil samples were collected and analyzed for COCs including VOCs, PAHs, metals, PHCs, PCBs, and a limited number of general chemistry parameters (moisture, pH, conductivity, and SAR). Groundwater samples collected by V.A. Wood included analysis for VOCs, PAHs, metals, PHCs, PCBs, and select general chemistry parameters. A total of five groundwater samples were collected in 2011.

The Site plan depicting each of the above sample locations along with the historic V.A. Wood locations are shown on Figure 3.

CRA evaluated the soil and groundwater quality based on a comparison of the soil and groundwater analytical data to MOE's Generic Site Condition Standards provided in the MOE document entitled "Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act", dated April 15, 2011. The City of Guelph utilizes groundwater from the local aquifer units and therefore soil and groundwater analytical data must be compared to the MOE's Full Depth Generic Site Condition Standards in Potable Groundwater Condition with coarse grained soil texture (MOE Table 2 Standards) for residential property use as provided in the MOE Standards.

As there are no MOE standards available for soil vapour, the soil vapour analytical data has been compared to soil vapour screening criteria based on the MOE's Health Based Indoor Air Criteria (residential) presented in MOE's Tier II Generic Risk Assessment Model, divided by the MOE default soil vapour attenuation factor of 0.02.

4.2 Areas of Impact

The following subsections identify the COCs detected in soil, groundwater, and soil vapour on Site. Table 1 presents the COCs identified in each soil matrix and the APEC associated with each of the COCs.

The Phase One ESA identified the historic use of the property to the northwest of the Site by Chemtura Canada/Uniroyal Chemical/Crompton Company as an APEC. The property, located 100 m northwest of the Site, was used for the manufacture of various chemical products, which may have included pesticides. Thus, based on the proximity of the facility to the Site, the northwestern corner of the Site was identified as an APEC (APEC 7) in the Phase One ESA prepared for the Site. A groundwater sample collected from monitoring well MW8, located in the northwestern corner of the Site, was analyzed for potential pesticides that would have originated from the neighboring property and did not contain pesticides at a concentration greater than the MOE Table 2 Standards. Additionally, one soil sample and a second groundwater sample were collected from the north and west portions of the Site for pesticide analysis. Pesticides in groundwater were detected at concentrations below the analytical

detection limit and the MOE Table 2 Standards. The pesticide concentrations in the soil sample collected were all below the analytical detection limits; however, some of the detection limits were above the MOE Table 2 Standards. Given that pesticides were never used or stored at the Site, and the sampling was conducted to address off-Site concerns, they are not considered to be Site related. As pesticides were not detected in soil or groundwater and deemed non-Site related COCs, they were not retained for further assessment in the Phase Two ESA for soil or groundwater.

Based on historic data collected by V.A. Wood during the Phase II ESA a number of PAHs exceeded the MOE Table 2 Standards. As the monitoring wells installed by V.A. Wood, with the exception of MW8, were destroyed during demolition activities, CRA could not resample and confirm the exceedances at all of the locations. As such, CRA installed monitoring wells at locations where V.A. Woods identified exceedances to confirm the results and at locations to delineate the extent of impacts identified by V.A. Woods, as appropriate. PAHs were not detected at concentrations greater than the MOE Table 2 Standards in any of the groundwater samples collected by CRA in 2013, including the groundwater sample collected from MW8, where the groundwater sample collected by V.A. Wood contained exceedances of PAHs. CRA has concluded that this discrepancy is attributed to differing sampling methodologies (low-flow versus inertial sampling). V.A. Woods used inertial sampling techniques and CRA used low-flow sampling techniques. The low-flow sampling methodology used by CRA generally provides more accurate results when sampling and analyzing for volatile and semi-volatile compounds as it allows for the collection of groundwater samples with lower sediment content. As a result, the PAH concentrations included in the V.A. Woods Phase II ESA have been discounted and CRA is relying on the more recent groundwater sampling results for PAHs.

As noted above, CRA installed monitoring wells at locations where V.A. Woods identified exceedances to confirm the results and at locations to delineate the extent of impacts identified by V.A. Woods. CRA installed monitoring wells within a few metres of V.A. Woods monitoring wells MW4, MW6, and MW12. Monitoring well MW23A-13 was installed as a replacement for V.A. Woods monitoring well MW7. Monitoring well MW23A-13 is located approximately 15 m from the former location of monitoring well MW7. V.A. Woods monitoring well MW8 was not destroyed and was re-sampled by CRA to confirm the exceedances detected in the groundwater sample collected by V.A. Woods. Groundwater samples collected using inertial sampling techniques from all of the former V.A. Woods monitoring wells contained PAHs at concentrations greater than the MOE Table 2 Standards across the Site. Groundwater samples collected by CRA in 2013 using low-flow sampling techniques did not contain PAHs at concentrations greater than the MOE Table 2 Standards anywhere at the Site, including replacement monitoring wells for those destroyed during demolition activities and V.A. Woods monitoring well MW8. As it was determined that historical elevated PAH concentrations detected in groundwater samples collected throughout the Site were attributed to the sampling

technique, it was not considered necessary to install a replacement monitoring well in the immediate vicinity of former monitoring well MW7. Instead, the replacement monitoring well was installed in a location where it would serve to also delineate known metals impacts from monitoring wells MW7 and MW13-13. Furthermore, monitoring wells MW23A-13, MW13-13, and MW8 are all installed around former monitoring well MW7 at distances of approximately 15 m south, 15 m north and 30 m west, respectively. Groundwater samples collected in 2013 from all three monitoring wells did not contain PAHs at concentrations greater than the MOE Table 2 Standards, which further supports the conclusion that there are no PAH impacts in groundwater in the vicinity of former monitoring well MW7.

One groundwater sample collected from monitoring well MW28-13 on August 1, 2013 contained benzo(a)pyrene at a concentration slightly greater than the MOE Table 2 Standard. Monitoring well MW28-13 is an intermediate bedrock well installed in the vicinity of overburden/shallow bedrock monitoring well MW19-13 as shown on Figure 3. As mentioned above, no other recent groundwater samples collected across the Site contained benzo(a)pyrene at detectable concentrations including the groundwater sample collected from monitoring well MW19-13, located within 5 m of monitoring well MW28-13. On August 21, 2013, monitoring well MW28-13 was re-sampled and the laboratory analytical results indicated that benzo(a)pyrene was not detected. Since benzo(a)pyrene was not detected in any other groundwater samples collected from the Site including no detections in the overburden/shallow bedrock aquifer and the analytical results from the most recent groundwater sample collected from MW28-13 did not contain detectable concentrations of benzo(a)pyrene, the August 1, 2013 sample results were discounted and CRA is relying on the more recent groundwater results from monitoring well MW28-13.

4.2.1 Soil Impacts

Throughout each of the intrusive investigations numerous parameters were detected at concentrations greater than their respective MOE Table 2 Standards. The following provides a discussion of the parameters detected in excess of their respective MOE Table 2 Standards during both the V.A. Wood and CRA field activities. In several instances, COCs were present in the deepest soil sample collected at a sample location, from within the native till unit. At these locations, no deeper soil sample can be collected as bedrock is present beneath the native till unit as described in Section 3.3. These instances are described in the Sections below.

The following identifies the COCs present in soil. Figures 9a through 9h provide a summary of the horizontal extent of the COCs detected in soil. Figures 12a through 12y provide a summary of the vertical extent of the COCs detected in soil.

VOCs

- Methylene chloride
- Tetrachloroethylene
- Trichloroethylene
- Toluene

Exceedances of chlorinated VOCs are found along the mid-western portion of the Site with the highest concentrations detected in the vicinity of monitoring well MW25A/B-13 and borehole BH36-13. Chlorinated VOCs found in excess of the MOE Table 2 Standards include tetrachloroethylene (PCE), trichloroethylene (TCE) and methylene chloride at maximum concentrations of 2.08 µg/g (BH36-13), 66.7 µg/g (MW25A/B-13), and 0.877 µg/g (BH36-13) respectively.

PCE was detected in the fill and native till soil samples collected from borehole BH36-13 and in the fill material soil sample collected from monitoring well MW20-13 at concentrations greater than the MOE Table 2 Standards. Borehole BH36-13 and monitoring well MW20-13 are centrally located on the Site. Fill and native till soil samples collected from surrounding sampling locations MW17-13, BH-9, BH37-13, MW-12, MW25-13, MW-6, and BH35-13 did not contain PCE at concentrations greater than the MOE Table 2 Standard. The PCE soil impacts are therefore present in only the central portion of the Site and extend vertically into the native till within the location shown on Figures 9b, 12b, 12j, and 12r.

TCE was detected in the fill material soil samples collected from boreholes BH36-13 and BH-9 and from monitoring wells MW25-13, MW20-13, and MW-6 at concentrations greater than the MOE Table 2 Standard. Fill and native till soil samples collected from surrounding sample locations MW17-13, MW24-13, MW18-13, BH37-13, MW21-13, and BH35-13 did not contain concentrations of TCE greater than the MOE Table 2 Standard. Deeper, native till soil samples collected from borehole BH36-13, and monitoring wells MW-12, and MW-6 did not contain TCE at concentrations greater than the MOE Table 2 Standard. Therefore the TCE impact is present in the central portion of the Site within the fill soil and upper portions of the native till soil as shown on Figures 9b, 12b, 12j, and 12r.

Methylene chloride was detected in soil at a concentration greater than the MOE Table 2 Standard at borehole BH36-13, borehole BH37-13, monitoring well MW22-13, and borehole BH33-13 in a combination of fill and native till soils. The methylene chloride impacts are shown to be present within the majority of the building footprint at the Site and extend vertically to the bedrock interface at these locations, with the exception of at monitoring well MW22-13, as shown on Figures 9b, 12b, 12j, and 12r.

The methylene chloride, PCE and TCE exceedances are attributed to the former presence of historical USTs (APEC 4), historic releases and/or spills of degreasers used in historic metal fabrication (APEC 5) or dry cleaning products used in the historic textile manufacturing (APEC 11).

Toluene was detected at a concentration greater than the MOE Table 2 Standard in the fill soil sample collected from monitoring well MW25-13. The deeper fill soil sample collected at this location did not contain toluene at a concentration greater than the MOE Table 2 Standard. Soil samples collected from surrounding sample locations MW-6, MW20-13, and MW21-13 did not contain toluene at concentrations greater than the MOE Table 2 Standards. Therefore the toluene impacts are present only in the west-central portion of the Site and are confined to the fill soils as shown on Figures 9b, 12b, 12j, and 12r. The toluene concentration is attributed to the former presence of historical USTs (APEC 4).

sVOCs

• 1+2-Methylnaphthalene	• 1-Methylnaphthalene
• 2-Methylnaphthalene	• Acenaphthylene
• Anthracene	• Benzo(a)pyrene
• Benzo(a)anthracene	• Benzo(g,h,i)perylene
• Benzo(b)fluoranthene	• Dibenz(a,h)anthracene
• Benzo(k)fluoranthene	• Chrysene
• Flouranthene	• Indeno(1,2,3-cd)pyrene
• Naphthalene	• Phenanthrene
• Pyrene	

The SVOCs detected at concentrations greater than their respective MOE Table 2 Standards are limited to PAH compounds. The majority of these exceedances are located along the western Property boundary. PAHs were detected at concentrations greater than the MOE Table 2 Standards in fill material soil samples collected from sample locations BH34-13, MW25-13, BH33-13, MW23-13, BH32-13, SS1-13, and MW22-13. Fill soil samples collected from borehole BH36-13 and monitoring well MW28-13 did not contain PAHs at concentrations greater than the MOE Table 2 Standards indicating that the PAH impacts are not present in the southeastern portion of the Site. The highest concentrations of PAHs detected in soil samples were found at borehole BH33-13 located in the central portion of the northern half of the Site. The source of the PAH concentrations present along the western Property boundary are attributed to the adjacent rail line located west of the Site (APEC 8) and potentially the importation of fill materials of unknown quality (APEC 10). The horizontal extent of PAH impacts in soil is presented on Figure 9c.

PAHs were not detected at concentrations greater than the MOE Table 2 Standards in any native subsurface soils indicating that the PAH impacts are confined to the fill and upper portions of the native till material. The vertical extent of soil PAH impacts are presented on Figures 12c, 12k, and 12s.

Pesticides

Pesticides were not detected at concentrations greater than the MOE Table 2 Standards in any soil samples collected for pesticide analysis as shown on Figures 9d, 12d, 12l, and 12t.

PHCs

- F2
- F3
- F4

PHC F2 through F4 were detected at concentrations greater than the MOE Table 2 Standards in soil samples collected from the fill material at the Site. PHC F3 was detected at a concentration greater than the MOE Table 2 Standard in the soil sample collected from boreholes BH-2 (355 µg/g) and BH29-13 (1,040 µg/g), located in the northern corner of the Site. The deeper soil samples collected from borehole BH29-13, and adjacent borehole BH14-13 did not contain PHC F3 at concentrations greater than the MOE Table 2 Standard. Soil samples collected from fill soils at surrounding sample locations MW22-13 and BH30-13 did not contain PHC F3 at concentrations greater than the MOE Table 2 Standard. Therefore the PHC F3 impacts in the northern portion of the Site are confined to the fill unit and upper portion of the native till unit in the northeast corner as shown on Figures 9e, 12e, 12m, and 12u. The presence of PHC F3 in this area is attributed to the presence of the historical imperial oil bulk gasoline storage facility located to the north (upgradient) of the Site (APEC 1).

PHC F2, F3, and F4 were detected at concentrations greater than the MOE Table 2 Standards in several soil samples collected along the western Property boundary, specifically in the vicinity of monitoring wells MW6 and MW25A/B-13. PHC F2 was detected in the fill soil samples collected from BH36-13 and MW-6 at concentrations greater than the MOE Table 2 Standards. The deeper native till soil samples collected from these locations did not contain PHC F2 at concentrations greater than the MOE Table 2 Standards. PHC F3 was detected in the fill soil samples collected from BH36-13, MW25-13, and BH34-13 at concentrations greater than the MOE Table 2 Standard. The deeper native till soil samples at these locations did not contain PHC F3 at concentrations greater than the MOE Table 2 Standards. PHC F4 was detected in fill soil samples collected from MW25-13 and BH34-13 at concentrations greater than the MOE Table 2 Standards. The deeper native till soil samples collected from these and adjacent sample locations did not contain PHC F4 at concentrations greater than the MOE Table 2 Standards.

Soil samples collected from surrounding monitoring locations MW17-13, BH-9, MW20-13, MW21-13, MW26-13, and BH35-13 did not contain PHC F2, F3, or F4 at concentrations greater than the MOE Table 2 Standards indicating that the PHC impacts are present in the central and western portion of the Property and confined to the fill unit and upper portion of the native till unit as shown on Figures 9e, 12e, 12m, and 12u. The presence of PHCs in this area is suspected to be related to the former presence of the historical USTs (APEC 4) and historical metal fabrication within the former footprint of the building (APEC 5), in the area of borehole BH36-13.

PCBs

PCBs were not detected at concentrations greater than the MOE Table 2 Standards in any soil samples collected for PCB analysis as shown on Figures 9f, 12f, 12n, and 12v.

Metals

• Antimony	• Arsenic
• Barium	• Boron
• Boron (Hot Water Extractable)	• Cadmium
• Chromium	• Copper
• Cyanide	• Lead
• Mercury	• Molybdenum
• Nickel	• Selenium
• Vanadium	• Zinc

The majority of the soil samples collected across the Site and analyzed for metals contained various metal parameters at concentrations greater than the MOE Table 2 Standards. The frequency of metal parameters found in excess of their respective MOE Table 2 Standards within the fill and underlying native soils indicate that the source of the impacts is likely Site-wide as shown on Figure 9g. It is probable that the metal impacts are related to APEC 10 and the potential importation of unknown fill materials encountered in the surficial soils.

Soil samples were collected from several locations from just above the bedrock/overburden interface including boreholes BH14-13, BH30-13, BH33-13, and monitoring wells MW13-13 and MW23-13. Overburden soil samples collected from these locations just above the bedrock contained metals COCs at concentrations greater than MOE Table 2 Standards. Since these soil samples were collected at the deepest possible point, no further vertical delineation is possible as the bedrock cannot be sampled for laboratory analysis. It should be noted that only cadmium, lead, arsenic and zinc were detected at concentrations greater than the MOE Table 2 Standards in the native till soil samples collected at the Site and that some of the metal exceedances may also be, at least in part, due to natural conditions as elevated metals are prevalent in soil originating from the Guelph area. However, to be conservative, all Site soils

are characterized as impacted with metals and the Risk Management Measures developed for the Site are protective of this characterization. The extent of metals impacts in soil at the Site is shown on Figures 9g, 12g, 12o, and 12w.

General Chemistry Parameters

- Electrical Conductivity

A single exceedance of the MOE Table 2 Standard for electrical conductivity was detected in the sample collected, within the fill material (0.3 – 0.6 m BGS) at BH1. No deeper soil sample was collected at this location for analysis of electrical conductivity. However, the soil samples collected from monitoring well MW-7, at a depth of 1.5 – 1.8 m BGS and from borehole BH-11, at a depth of 0.3 – 0.6 m BGS, located to the southwest, exhibited electrical conductivities below the MOE Table 2 Standard. Therefore the exceedance of electrical conductivity is confined to the surficial fill material and extends from the vicinity of borehole BH-1 south to borehole BH-11 and monitoring well MW-7 where electrical conductivity was below the MOE Table 2 Standard as shown on Figures 9h, 12h, 12p, 12x, and 12y. As electrical conductivity is not a point source related COC, it is the QPs opinion that electrical conductivity has been sufficiently investigated in the fill and native till materials on Site.

4.2.2 Groundwater Impacts

The following summarizes the COCs detected in each hydrogeologic unit at the Site. Figures 10a through 10h provide a summary of the horizontal extent of the COCs detected in groundwater samples collected from the Site. Figures 13a through 13x show the vertical extent of the COCs (listed below) detected in groundwater samples collected from the Site.

<i>Metals (dissolved)</i>	<i>VOCs</i>
• Boron	• Cis-1,2-Dichloroethylene
• Sodium	• TCE
• Selenium	• PCE
• Vanadium	

Overburden/Shallow Bedrock Unit

VOCs, PAHs, metals, PHCs, and PCBs were detected at concentrations less than the MOE Table 2 Standards in the groundwater samples collected from the overburden/shallow bedrock hydrogeologic unit, with the following exceptions:

1. TCE was detected at concentrations greater than the MOE Table 2 Standard in the groundwater samples collected from monitoring wells MW18-13, MW-6, MW25B-13, MW20-13, MW-12, MW21-13, MW27B-13, MW26-13, MW19-13, and MW4. TCE

- concentrations ranged from 1.68 µg/L (MW19-13) to 105 µg/L (MW20-13). TCE impacts in the overburden/shallow bedrock hydrogeologic unit are present across the southern half of the Site as shown on Figure 10b. The presence of TCE in the overburden aquifer unit at these locations is attributed to the historical manufacturing operations conducted on Site (APECs 5 and 11) and the presence of historical USTs (APEC 4).
2. PCE was also detected at concentrations greater than the MOE Table 2 Standards in the groundwater samples collected from monitoring wells MW26-13, MW20-13, MW21-13, and MW25B-13. PCE concentrations ranged from 2.51 µg/L (MW26-13) to 68 µg/L (MW20-13). PCE impacts in the overburden/shallow bedrock hydrogeologic unit are present in the southeast portion of the Site as shown on Figure 10b. The presence of PCE in the overburden/shallow bedrock hydrogeologic unit at these locations is attributed to the historical manufacturing operations conducted on Site (APECs 5 and 11) and the presence of historical USTs (APEC 4).
 3. Cis-1,2-dichloroethylene (cis-1,2-DCE) was also detected at concentrations greater than the MOE Table 2 Standards in the groundwater samples collected from monitoring wells MW26-13, MW20-13, and MW21-13. Cis-1,2-DCE concentrations ranged from 2.04 µg/L (MW26-13) to 6.95 µg/L (MW21-13). Cis-1,2-DCE impacts in the overburden/shallow bedrock hydrogeologic unit are present in the southeast portion of the Site as shown on Figure 10b. The presence of cis-1,2-DCE in the overburden/shallow bedrock hydrogeologic unit at these locations is attributed to the historical manufacturing operations conducted on Site (APECs 5 and 11) and the presence of historical USTs (APEC 4).
 4. Boron was detected at a concentration greater than the MOE Table 2 Standard in the groundwater sample collected from monitoring well MW16-13 at a concentration of 10,100 µg/L. Boron impacts in the overburden/shallow bedrock hydrogeologic unit are isolated to monitoring well MW16-13, located within the central portion of the Site as shown on Figure 10g. The presence of boron in the overburden/shallow bedrock hydrogeologic unit at this location is attributed to the potential importation of fill materials of unknown quality (APEC 10). Boron was not detected in adjacent monitoring wells installed in the overburden/shallow bedrock hydrogeologic unit or in the intermediate bedrock aquifer unit at concentrations greater than the MOE Table 2 Standards.
 5. Selenium was detected at a concentration greater than the MOE Table 2 Standard in the groundwater sample collected from monitoring well MW6. Selenium impacts in the overburden/shallow bedrock hydrogeologic unit are isolated to monitoring well MW6 located within the central western portion of the Site as shown on Figure 10g. The presence of selenium impacts in the overburden/shallow bedrock hydrogeologic unit at this location is attributed to the potential importation of fill materials of unknown quality (APEC 10). Selenium was not detected in adjacent monitoring wells installed in

- the overburden/shallow bedrock hydrogeologic unit or in the intermediate bedrock aquifer unit at concentrations greater than the MOE Table 2 Standards.
6. Vanadium was detected at concentrations greater than the MOE Table 2 Standard in the groundwater samples collected from monitoring wells MW-6 and MW25B-13. Vanadium impacts in the overburden/shallow bedrock hydrogeologic unit are present in the central western portion of the Site as shown on Figure 10g. The presence of vanadium impacts in the overburden/shallow bedrock hydrogeologic unit at these locations is attributed to the potential importation of fill materials of unknown quality (APEC 10). Vanadium was not detected in adjacent monitoring wells installed in the overburden/shallow bedrock hydrogeologic unit at concentrations greater than the MOE Table 2 Standards.
 7. Sodium was detected at a concentration greater than the MOE Table 2 Standard in the groundwater sample collected from monitoring well MW21-13. Sodium impacts in the overburden/shallow bedrock hydrogeologic unit are isolated to monitoring well MW21-13 located within the southwestern portion of the Site as shown on Figure 10g. The presence of sodium at this location is attributed to a potential off-Site source as no on-Site historic activities were identified that would contribute to sodium impacts in the shallow bedrock aquifer unit (sodium impacts were not noted in the surface or subsurface soils). Sodium was not detected in adjacent monitoring wells installed in the overburden/shallow bedrock hydrogeologic unit or in the intermediate bedrock aquifer unit at concentrations greater than the MOE Table 2 Standards.

It should be noted that some of the elevated metals concentrations may also be, at least in part, attributed to natural conditions.

Intermediate Bedrock Unit

VOCs, PAHs, metals, PHCs and PCBs were detected at concentrations less than the MOE Table 2 Standards in the groundwater samples collected from the intermediate bedrock aquifer unit, with the following exceptions:

1. TCE and vanadium were detected at concentrations greater than the MOE Table 2 Standards in the groundwater samples collected from monitoring well MW25A-13. TCE and vanadium were not detected in any other intermediate bedrock groundwater monitoring wells installed at the Site, indicating that the intermediate bedrock aquifer impacts are confined to the central western portion of the Site. The presence of TCE and vanadium in the intermediate bedrock unit is attributed to vertical migration of the contaminants from the overburden/shallow bedrock unit noted above.

Benzo(a)pyrene was detected at a concentration (0.033 µg/L) slightly greater than the MOE Table 2 Standard (0.01 µg/L) in the groundwater sample collected from monitoring well MW28-13 on August 1, 2013. As benzo(a)pyrene was not detected in any other groundwater samples collected by CRA, specifically in monitoring well MW19-13 located within 5 m of monitoring well MW28-13, in order to confirm this exceedance, CRA redeveloped and resampled the intermediate bedrock well for PAH analysis on August 21, 2013. The analytical results of the second sample showed all concentrations were below the laboratory detection limits. Since benzo(a)pyrene was not detected in any other groundwater samples collected from the Site including no detections in the overburden/shallow bedrock unit and the analytical results from the most recent groundwater sample collected from monitoring well MW28-13 did not contain detectable concentrations of benzo(a)pyrene, the August 1, 2013 sample results were discounted and CRA relied on the more recent groundwater results from monitoring well MW28-13.

The vertical extent of the groundwater impacts discussed above is presented on Figures 13a through 13x. As presented on Figures 13a through 13x the majority of the impacts present in groundwater on Site are contained within the overburden/shallow bedrock unit. It is noted that TCE and vanadium were detected in the groundwater sample collected from the intermediate bedrock unit monitoring well MW25A-13 at concentrations greater than the MOE Table 2 Standards and that the intermediate bedrock unit is the deepest formation investigated at the Site. Investigation of the deeper bedrock (identified as the Goat Island or Gasport Formations) to achieve full vertical delineation would require penetration of the low-permeability Regional Aquitard (i.e., Vinemount member of the Eramosa Formation).

The table below provides details on the depth of monitoring wells completed within the bedrock at the Site and elevations of the various bedrock formations.

Location	Thickness of Guelph Formation (m)	Thickness of Eramosa Formation (Reformatory Quarry Member) (m)	Thickness of Eramosa Formation (Vinemount Member) (m)	Bottom of Monitoring Well (m AMSL)
MW23A-13	1.21	5.49	>2.74	302.63
MW24-13	>3.05	-	-	307.42
MW25A-13	3.36	4.93	>3.45	299.98
MW26-13	>3.96	-	-	307.50
MW27A-13	0.00	3.12	>5.90	300.81
MW28-13	0.60	2.45	>7.33	299.49

As shown in the table above, monitoring well MW25A-13 is completed within the Vinemount Member of the Eramosa Formation, which averages 10 m in thickness within the Guelph Region

(Brunton, 2008). Therefore the installation of a deeper monitoring well would require coring through the Regional Aquitard. Since the City of Guelph uses the permeable zone of the underlying Gasport Formation as a potable water supply, advancing core holes through the Regional Aquitard presents a potential threat to the City's water supply. In addition, TCE has been detected in nearby municipal wells completed in the Gasport Formation since 1994. The current concentration of TCE in the City's Membro well is approximately 2.5 µg/L. This concentration, while below the ODWS MAC, is well above the MOE Table 2 Standard (AquaResources, March 2010). The fact that wide-spread, low concentrations of TCE already exists within the Gasport Formation near the Site, makes additional vertical delineation work impossible.

Vanadium was detected at a concentration of 6.71 µg/L in the groundwater sample collected from MW25A-13, which slightly exceeds the MOE Table 2 Standard of 6.2 µg/L.

It is the QP's opinion that drilling into the underlying Gasport Formation for the purposes of vertical delineation is not beneficial and is not necessary to understand contaminant distribution on Site. There is existing TCE impacts within the Gasport Formation that may mask Site impacts, there is an additional risk of potentially worsening the impact by drilling through the Regional Aquitard, and the vanadium concentration is only marginally above the MOE Table 2 Standard.

The remaining COCs detected in groundwater samples collected from the overburden/shallow bedrock hydrogeologic unit at concentrations greater than the MOE Table 2 Standards were not detected in groundwater samples collected from the intermediate bedrock hydrogeologic unit at concentrations greater than the MOE Table 2 Standards. Therefore the PCE, cis-1,2-DCE, selenium, sodium, and boron impacts are confined to the overburden/shallow bedrock hydrogeologic unit as shown on Figures 13a through 13x.

CRA did not observe LNAPL or DNAPL in any of the on-Site groundwater monitoring wells.

4.2.3 Sediment Quality

No water bodies are present at the Site; therefore, no sediment samples were collected.

4.2.4 Soil Vapour Impacts

As there are no MOE standards available for soil vapour, the soil vapour analytical data were compared to soil vapour screening criteria, which were based on the MOE Health Based Indoor Air Criteria (residential) presented in MOE's Tier II Generic Risk Assessment Model, divided by the MOE default soil vapour attenuation factor of 0.02.

The following parameters were identified as potential COCs in soil vapour due to their presence at elevated concentrations in soil and/or groundwater at the Site:

- PCE
- TCE
- cis-1,2-DCE
- Methylene Chloride (Dichloromethane)
- Mercury (vapour)
- Toluene

The results from the soil vapour sampling event identified exceedances of PCE and TCE consistently across the Site and exceedances of 1,1,2-trichloroethane (1,1,2-TCA), 1,2-dichloroethane (1,2-DCA), benzene, and chloroform sporadically across the Site. Soil and groundwater data did not identify 1,1,2-TCA, 1,2-DCA, benzene, or chloroform as COCs. Thus, these parameters have been eliminated as a COC in soil vapour. The cause of the exceedances may have been related to sampling or laboratory methods.

A second sampling event was completed to confirm the results of the original sampling event. PCE and TCE impacts within soil vapour were wide-spread across the Site during both sampling events. The results of the second soil vapour sampling event showed relatively similar results with the exception of the PCE concentrations detected at soil vapour probes SVP6-13 and SVP1S/D-13, where concentrations of PCE increased to levels above the calculated standards. The PCE concentration detected at soil vapour probe SVP4-13 decreased to levels below the standard. The maximum PCE concentrations of 32,700 and 25,400 $\mu\text{g}/\text{m}^3$ (duplicate result) were detected at soil vapour probe SVP2D-13 during the September 23, 2013 sampling event. The maximum TCE concentrations of 56,000 and 47,600 $\mu\text{g}/\text{m}^3$ (duplicate result) were also detected at soil vapour probe SVP2D-13 during the September 23, 2013 sampling event. The results correspond well with the maximum detections of chlorinated VOCs within soil and groundwater at the Site.

Concentrations of cis-1,2-DCE, methylene chloride, and toluene were below the calculated criteria. Mercury analysis indicated concentrations below the laboratory detection limits at all locations where mercury analysis was completed.

The lateral extent of the COCs (PCE and TCE) that were found above the soil vapour assessment criteria described above are presented on Figure 11. The vertical extent of the soil vapour impacts (PCE and TCE concentrations above the assessment criteria) are shown on cross-section Figures 14a through 14c.

4.3 Potential Migration Pathways

As described in the Phase One ESA (CRA, 2013), CRA identified several APECs, located throughout the Site.

The Phase Two ESA results indicate that the impacts to soil, groundwater, and soil vapour quality are wide spread and largely related to the potential importation of fill materials of unknown quality (APEC 10), the historical on-Site metal fabrication (APEC 5), the historical presence of USTs (APEC 4), the historic textile manufacture (APEC 11), and potentially the rail line located along the western Property boundary (APEC 8).

CRA has identified soil to groundwater, groundwater transport, and both soil and groundwater to indoor air as modes for potential migration of COCs.

4.4 Contaminant Distribution

4.4.1 Climatic and Meteorological Conditions

Climatic or meteorological conditions at the Site, particularly the fluctuation of the overburden groundwater table, may have historically influenced distribution and migration of the contaminants.

4.4.2 Building Demolition

The demolition of the former on-Site structures (including all underground utilities) are likely to have influenced the distribution of the contaminants identified above. While little documentation was kept/provided in regards to the demolition, Site visits and the soil encountered throughout the Phase Two ESA indicate that the Site has been regraded. This regrading is likely to have redistributed some COCs across the Property.

Site personnel have confirmed that all structures and utilities were removed during the 2012 demolition activities. CRA did not encounter any utilities during the intrusive investigations completed on Site. CRA reviewed the 1998 Fire Insurance Plan (FIP) and noted three former water supply lines entering the Site from Morris Street and entering the former building. CRA also reviewed City of Guelph drawings of the Morris Street Reconstruction to identify the location of sanitary sewer connections, storm sewer connections, gas connections, and water main connections to the Site. The approximate locations of these former utility service lines are shown on Figure 2. The locations of former utility trenches may have historically influenced distribution and migration of the contaminants. However, based on the quantity of monitoring wells installed across the Site with respect to the size of the Site, the nature of the fill and overburden material present on Site, and the location of the monitoring wells with respect to

the former utility lines, the potential contaminant distribution associated with the historic utility lines has been adequately investigated and is understood.

Based on grain size analyses completed of overburden soil at the Site, including the fill material and native till, all overburden soil has been classified as coarse-textured. By backfilling the decommissioned utility trenches with on-Site materials, the former trenches were filled with coarse-textured soil. However, since all adjacent overburden material is also classified as coarse-textured, backfilling the former utility trenches with coarse-textured soil did not result in the generation of a preferential pathway for contaminants.

CRA reviewed the 1998 Fire Insurance Plan (FIP) and noted three former water supply lines entering the Site from Morris Street and entering the former building. CRA also reviewed City of Guelph drawings of the Morris Street Reconstruction to identify the location of sanitary sewer connections, storm sewer connections, gas connections, and water main connections to the Site. The approximate locations of these former utility service lines are shown on Figure 2.

The locations of former utility trenches shown on Figure 2 represent potential historical preferential pathways for contaminant transport, primarily via groundwater flow. Analytical results from groundwater samples collected from monitoring wells MW22-13, MW17-13, and MW24-13 installed along the eastern Property boundary and hydrogeologically upgradient of the former utility trenches did not contain contaminants at concentrations greater than MOE Table 2 Standards. As the groundwater in the vicinity of monitoring wells installed along the eastern Property boundary do not show evidence of impact, it is the QP's opinion that the presence of former utility trenches, including all utility lines north of monitoring well MW24-13, would not have resulted in preferential contaminant migration.

The horizontal extent of impacts in groundwater has been delineated on Site and is presented on Figure 10. As shown, COCs are present in groundwater at concentration greater than the MOE Table 2 Standards, with the highest concentrations present in the central-western portion of the Property in the vicinity of monitoring wells MW6, MW16-13, MW20-13, and MW21-13. Groundwater impacts at the Site extend south and southeast, consistent with the direction of groundwater flow in the shallow overburden aquifer. Former utility lines were located between monitoring well MW24-13, where no contaminants were detected in groundwater at concentrations greater than MOE Table 2 Standards, and monitoring wells MW19-13 and MW4, where TCE was detected at concentrations greater than MOE Table 2 Standards. The concentration of TCE detected in groundwater in the vicinity of monitoring well MW18-13, which is upgradient to the former utility trenches, is 3.34 µg/L and the concentration of TCE detected in groundwater in the vicinity of downgradient monitoring wells MW19-13 and MW4 is 1.85 µg/L and 1.87 µg/L, respectively. Since the concentrations of COCs in groundwater in the vicinity of upgradient and downgradient monitoring wells is similar, former utility trenches

did not likely result in significant changes to the distribution of contaminants at the Site. Furthermore, the horizontal extent of impact in groundwater at the Site has been sufficiently delineated through installation of several monitoring wells around the perimeter of the Site and through the center of the former building. Based on the quantity of monitoring wells installed across the Site with respect to the size of the Site, the nature of the fill and overburden material present on Site, and the location of the monitoring wells with respect to the former utility lines, the QP is satisfied that the potential contamination associated with the historic utility lines has been adequately investigated and is understood.

Overburden soil from the Site was used to backfill former utility trenches during decommissioning activities. This could result in the redistribution of COCs at the Site if contaminated soil was used to backfill the former utility trenches. However, since COCs have been identified to be present in soil throughout the Site at concentrations greater than MOE Table 2 Standards, and based on the quantity of soil samples collected across the Site and the location of the boreholes in relation to the former utility lines, the QP is satisfied that the potential contamination associated with the historic utility lines has been adequately investigated and is understood with respect to soil impacts.

4.5 Vapour Intrusion

In the Phase Two ESA, CRA evaluated the soil and groundwater quality by comparing the analytical data to the MOE Table 2 Standards, which are protective of indoor air. CRA also evaluated the potential for vapour intrusion into the proposed buildings through worst-case soil vapour concentrations and soil vapour representative of locations where future buildings will be constructed. As mentioned above, VOC compounds PCE and TCE will present a potential risk to receptors from the groundwater and soil to indoor air exposure pathway.

Section 5.0 Human and Ecological Conceptual Site Models (CSMs)

The CSMs for potential human and ecological exposure pathways at the 139 Morris Street Property are presented on Figures 15 (Human), Figure 16 (Ecological – Terrestrial), and Figure 17 (Ecological – Aquatic). These CSM figures identify the following:

- Contaminant release mechanisms
- Transport pathways
- Human and ecological receptor locations
- Receptor exposure points
- Routes of exposure

A description of the human and ecological receptors, receptor exposure points, and the potential exposure routes are presented below. CRA prepared these CSMs to reflect the Site conditions the redevelopment of the Property for residential land use.

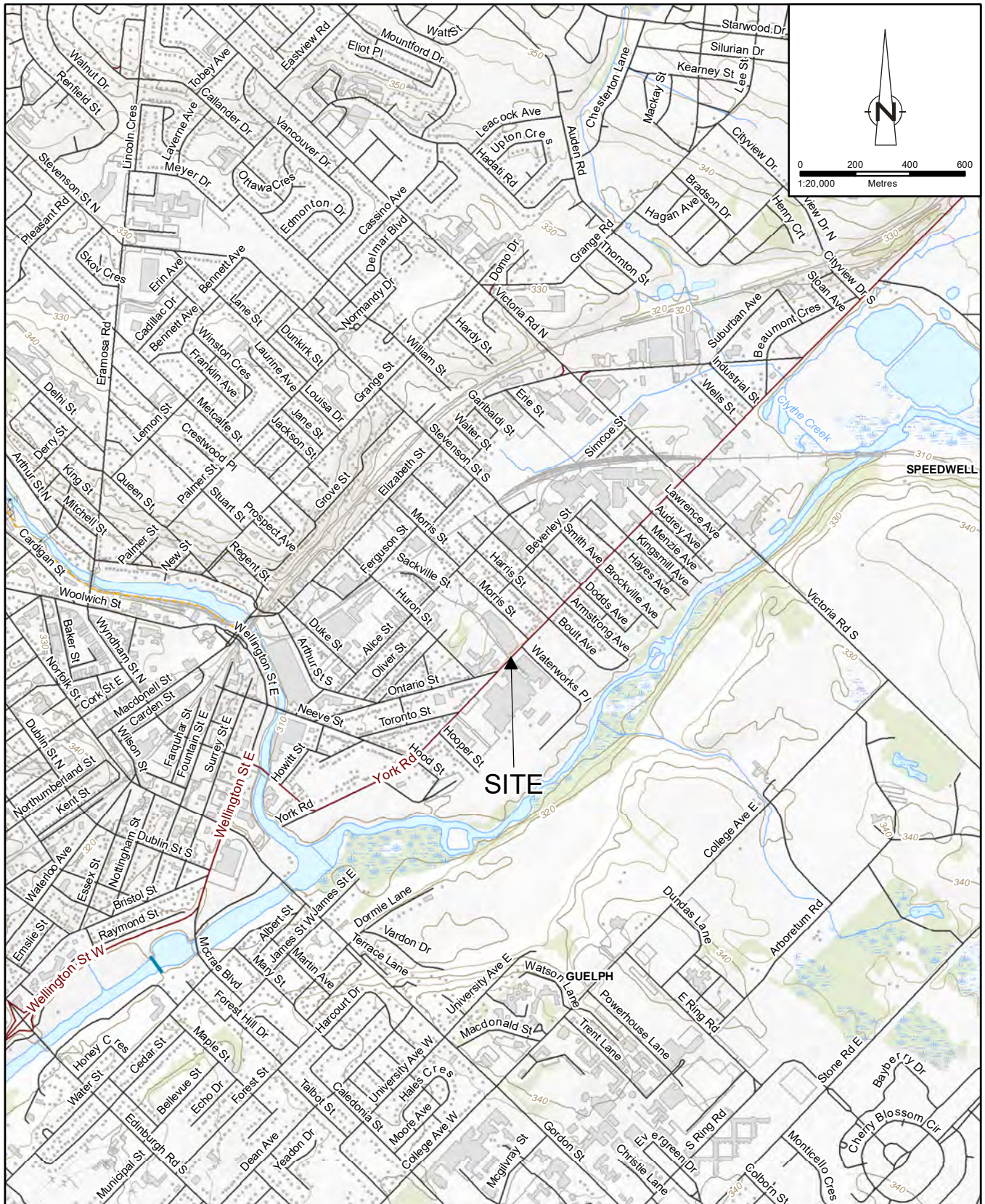
A CSM for potential human exposure pathways at the Site, assuming no Risk Management Measures (RMMs) are implemented is presented on Figure 15. The CSM identifies all potentially complete exposure pathways given the Site conditions. CRA identified COCs in soil and groundwater; as a result complete exposure pathways to groundwater have been identified. The proposed future land use for the Site is residential. The buildings to be constructed on the Site will consist of three, two-storey townhouse complexes and one, three-storey apartment building for residential purposes. Thus, the identified receptors include residents and construction/utility workers.

The ecological CSM was developed based on the potential routes of exposure posed by the presence of COCs in groundwater, and also the environmental setting of the Site. The pathways evaluated in the Ecological Risk Assessment (ERA) are presented below.

Figure 16 presents an ecological CSM for the terrestrial receptors that may be exposed to the COCs present in Site soil and groundwater. For soil, the potential terrestrial ecological receptors consist of terrestrial vegetation, such as trees and grasses and terrestrial invertebrates, such as earthworms. Terrestrial wildlife receptors, such as mammals and birds, are also potential terrestrial ecological receptors. It is expected that the terrestrial ecological receptors present at the Site would be exposed to soil through direct contact (dermal contact and ingestion) and uptake (prey ingestion).

For groundwater, the potential terrestrial ecological receptors consist of terrestrial deep-rooted vegetation and burrowing mammals. Due to the depth of groundwater at the Site (greater than 3 mBGS), it is unlikely that most tree roots would extend to the depth of groundwater at the Site. Therefore, terrestrial deep-rooted vegetation (trees) exposure to groundwater was considered an incomplete exposure pathway. Although inhalation of groundwater vapours by burrowing mammals is considered to be a potential exposure pathway, there is significant uncertainty regarding this exposure pathway due to a lack of scientifically defensible exposure assumptions and toxicity information. Furthermore, this exposure pathway is not required under O. Reg. 153/04, as amended.

Figure 17 presents an Ecological CSM for the aquatic receptors that may be exposed to COCs in groundwater discharging to surface water. The potential aquatic receptors consist of aquatic vegetation, benthic invertebrates, fish, amphibians, and aquatic mammals and birds that may uptake constituents directly from surface water or bioaccumulate constituents from the ingestion of prey items.



Source: MNR NRVIS, 2013. Produced by CRA under licence from Ontario Ministry of Natural Resources, © Queen's Printer 2013;
 Coordinate System: NAD 1983 UTM Zone 17N

figure 1

SITE LOCATION MAP
PHASE TWO ENVIRONMENTAL SITE ASSESSMENT
139 MORRIS STREET HOLDINGS LTD.
139 Morris Street, Guelph, Ontario



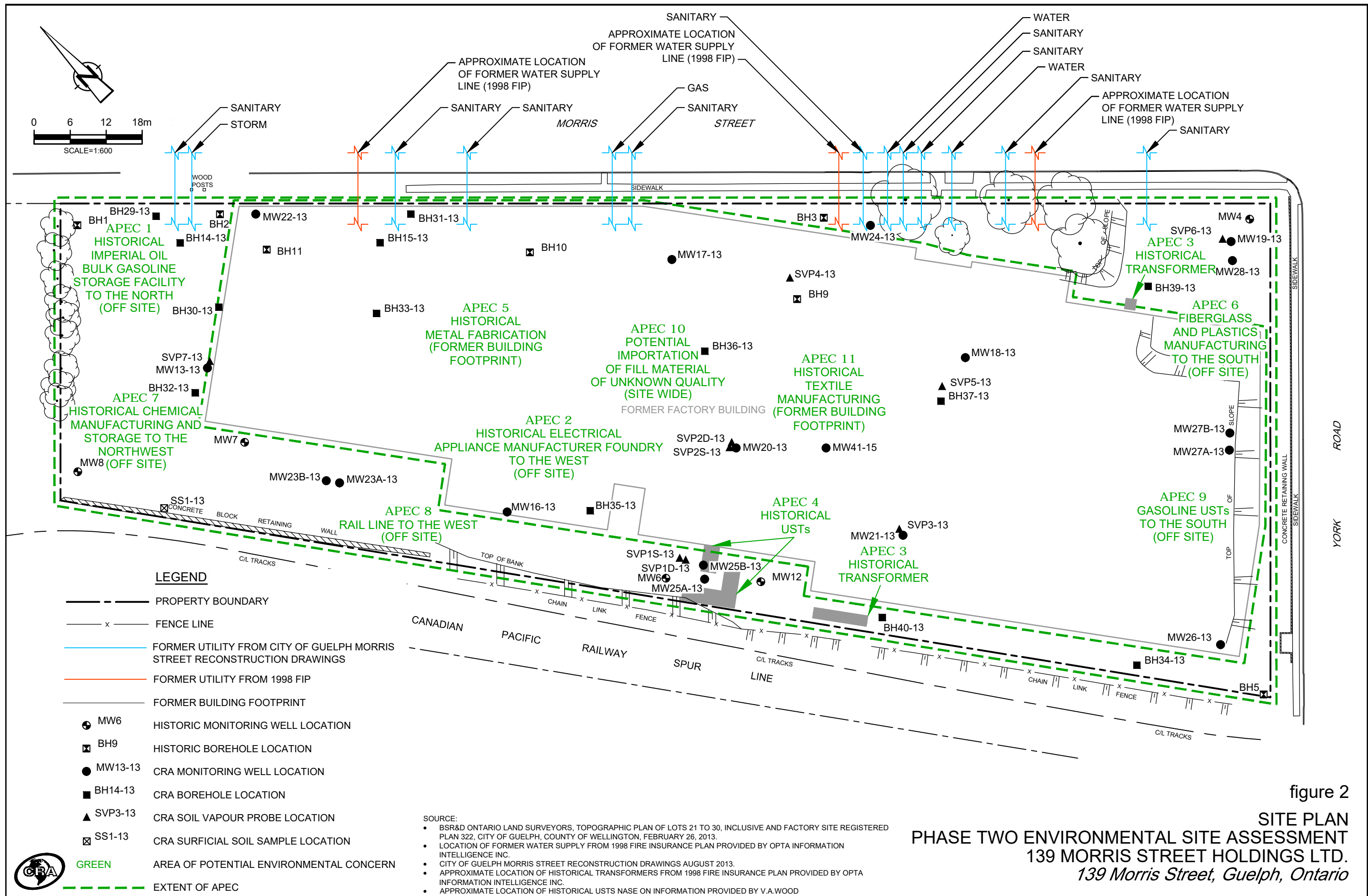


figure 2
 SITE PLAN
 PHASE TWO ENVIRONMENTAL SITE ASSESSMENT
 139 MORRIS STREET HOLDINGS LTD.
 139 Morris Street, Guelph, Ontario

SOURCE:

- BSR&D ONTARIO LAND SURVEYORS, TOPOGRAPHIC PLAN OF LOTS 21 TO 30, INCLUSIVE AND FACTORY SITE REGISTERED PLAN 322, CITY OF GUELPH, COUNTY OF WELLINGTON, FEBRUARY 26, 2013.
- LOCATION OF FORMER WATER SUPPLY FROM 1998 FIRE INSURANCE PLAN PROVIDED BY OPTA INFORMATION INTELLIGENCE INC.
- CITY OF GUELPH MORRIS STREET RECONSTRUCTION DRAWINGS AUGUST 2013.
- APPROXIMATE LOCATION OF HISTORICAL TRANSFORMERS FROM 1998 FIRE INSURANCE PLAN PROVIDED BY OPTA INFORMATION INTELLIGENCE INC.
- APPROXIMATE LOCATION OF HISTORICAL USTs BASED ON INFORMATION PROVIDED BY V.A. WOOD

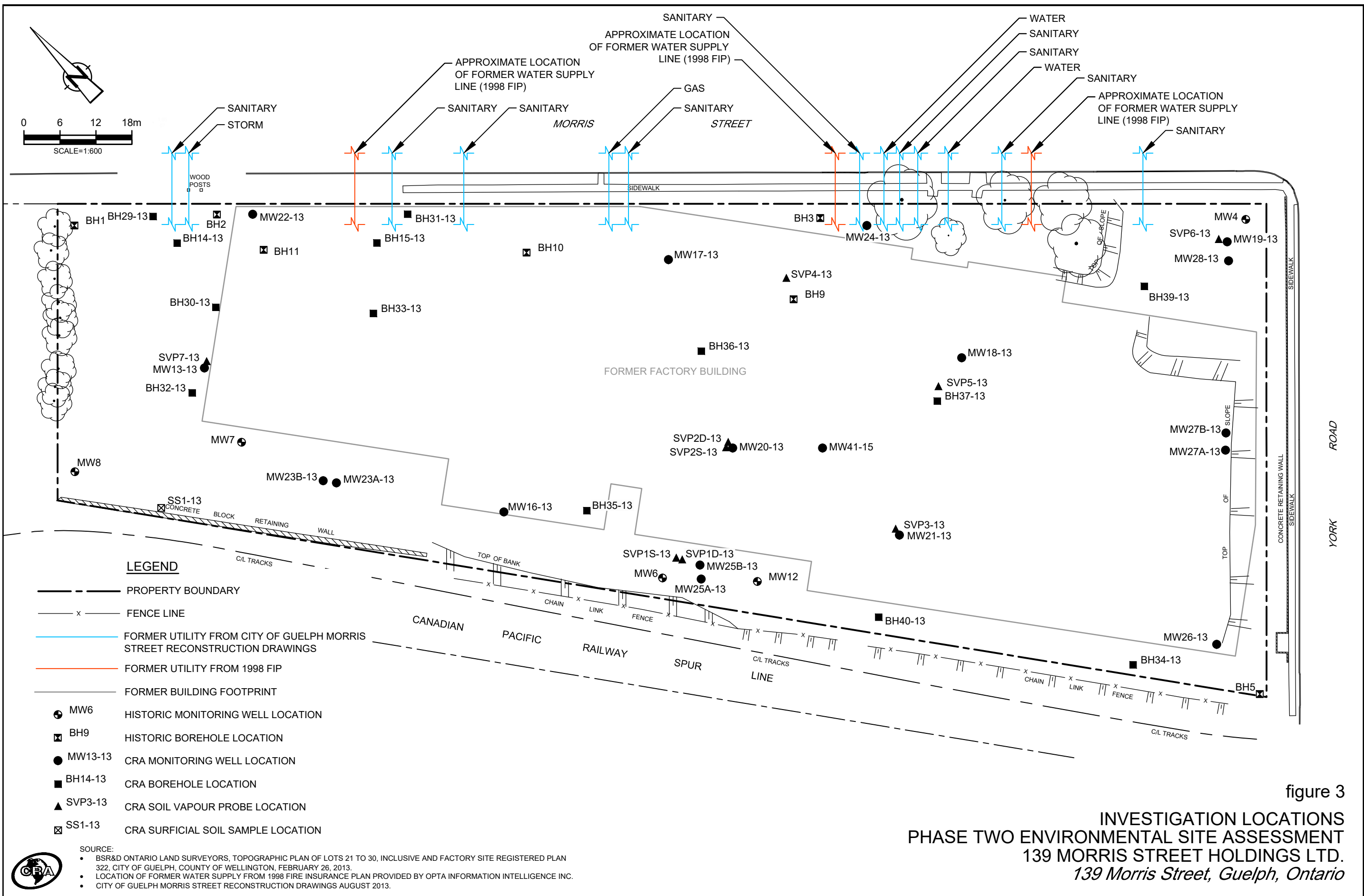


figure 3
 INVESTIGATION LOCATIONS
 PHASE TWO ENVIRONMENTAL SITE ASSESSMENT
 139 MORRIS STREET HOLDINGS LTD.
 139 Morris Street, Guelph, Ontario

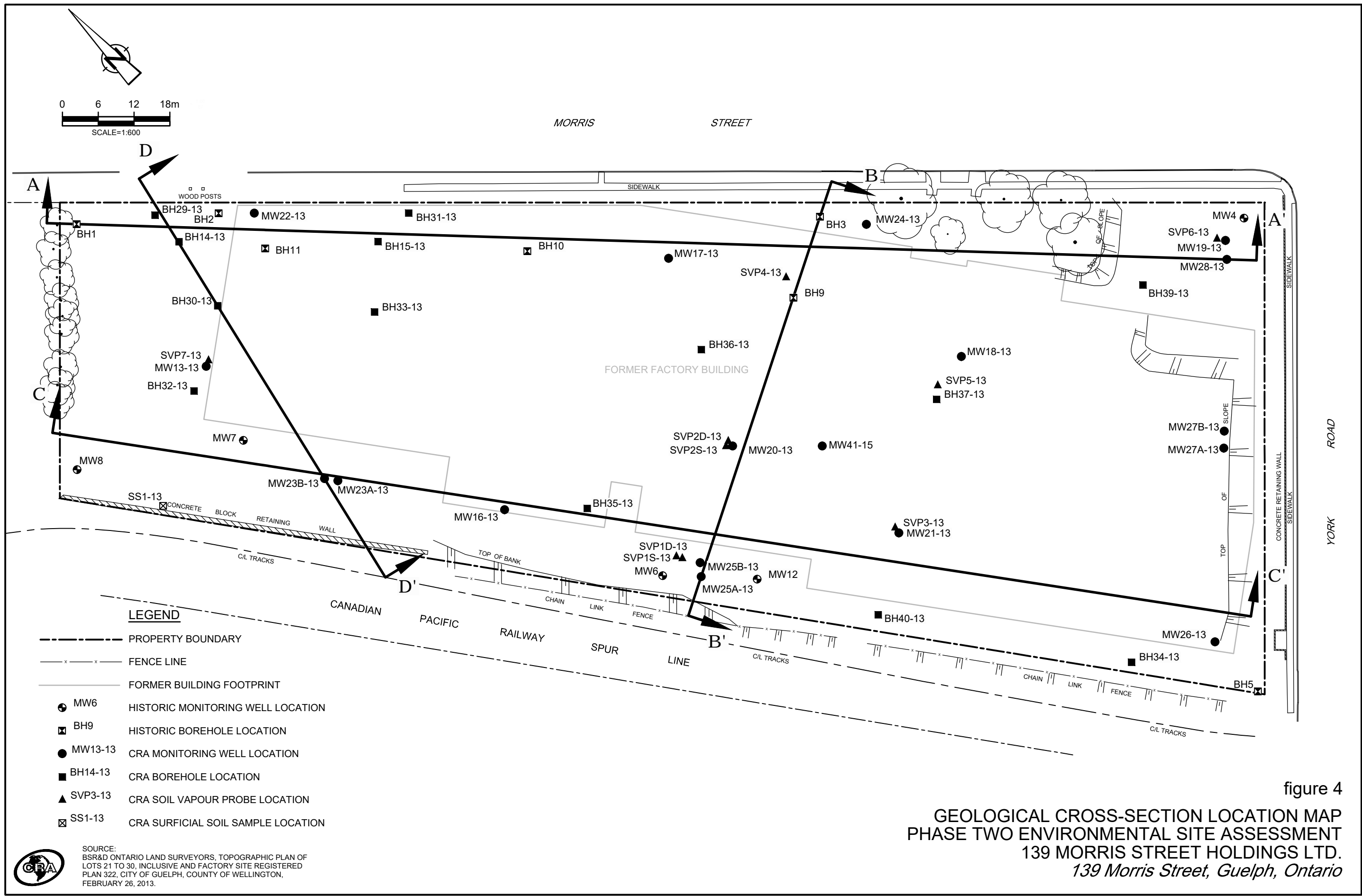


figure 4
GEOLOGICAL CROSS-SECTION LOCATION MAP
PHASE TWO ENVIRONMENTAL SITE ASSESSMENT
139 MORRIS STREET HOLDINGS LTD.
139 Morris Street, Guelph, Ontario

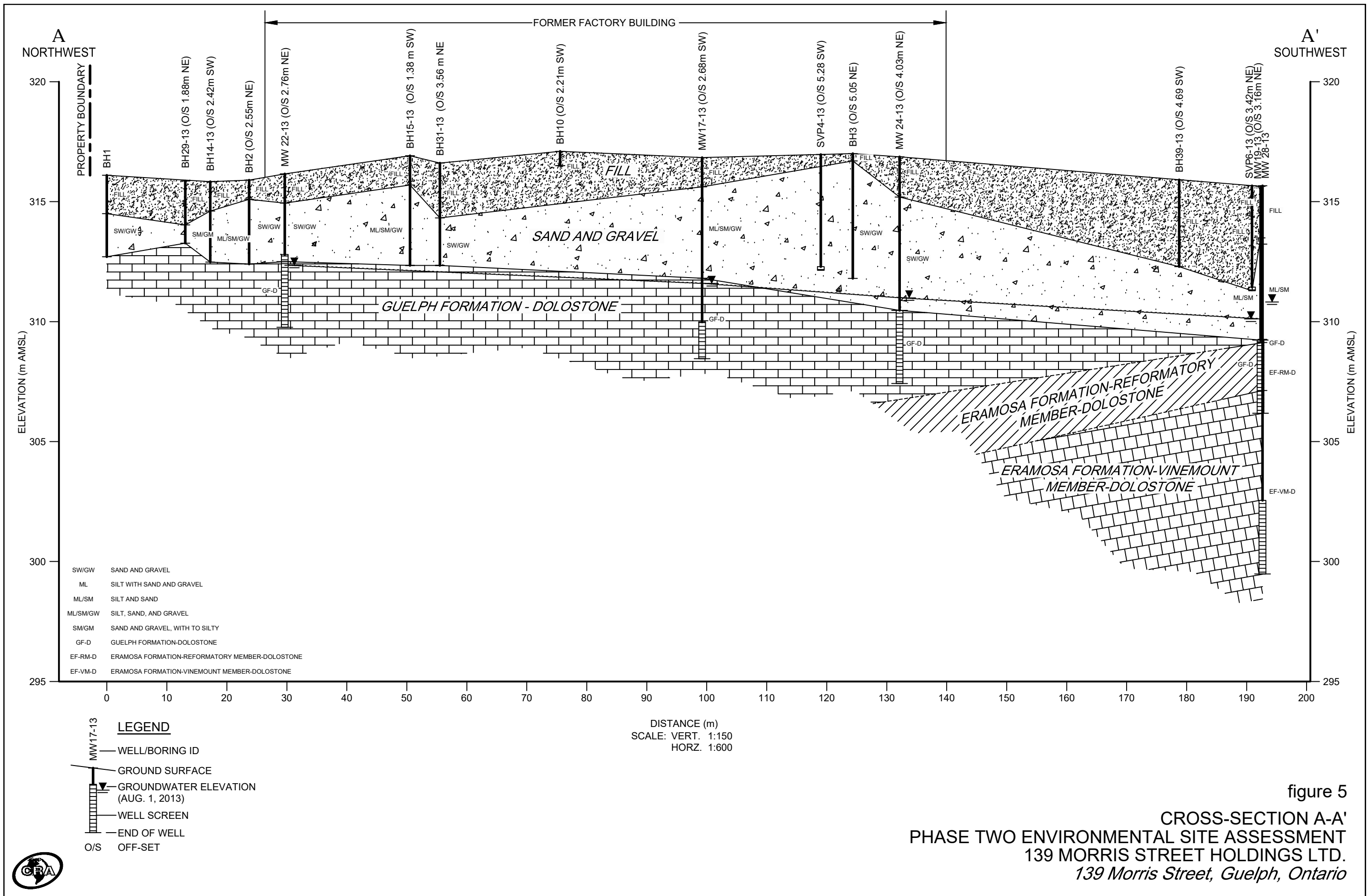


figure 5
CROSS-SECTION A-A'
 PHASE TWO ENVIRONMENTAL SITE ASSESSMENT
 139 MORRIS STREET HOLDINGS LTD.
 139 Morris Street, Guelph, Ontario



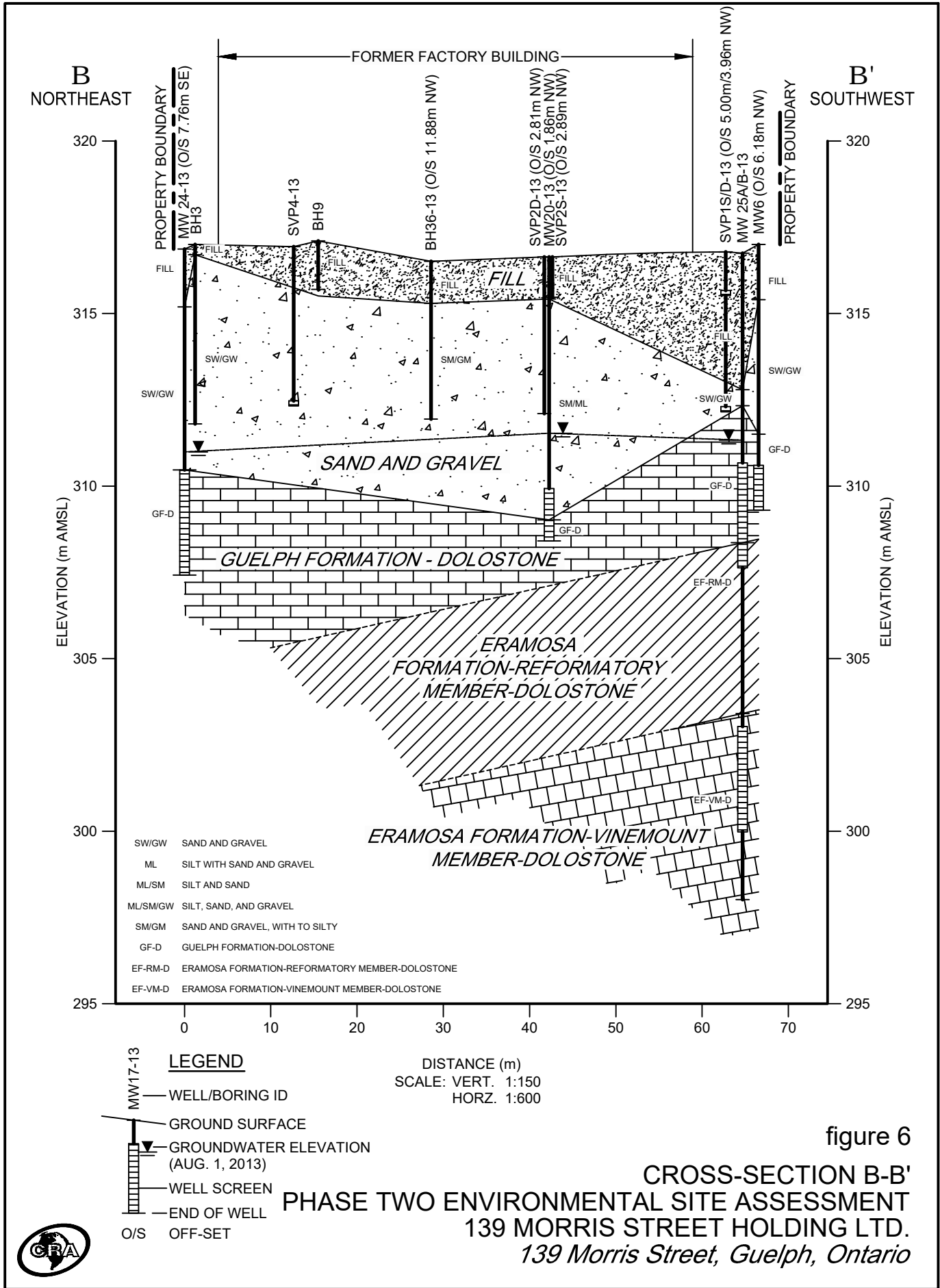


figure 6

CROSS-SECTION B-B'
PHASE TWO ENVIRONMENTAL SITE ASSESSMENT
139 MORRIS STREET HOLDING LTD.
139 Morris Street, Guelph, Ontario



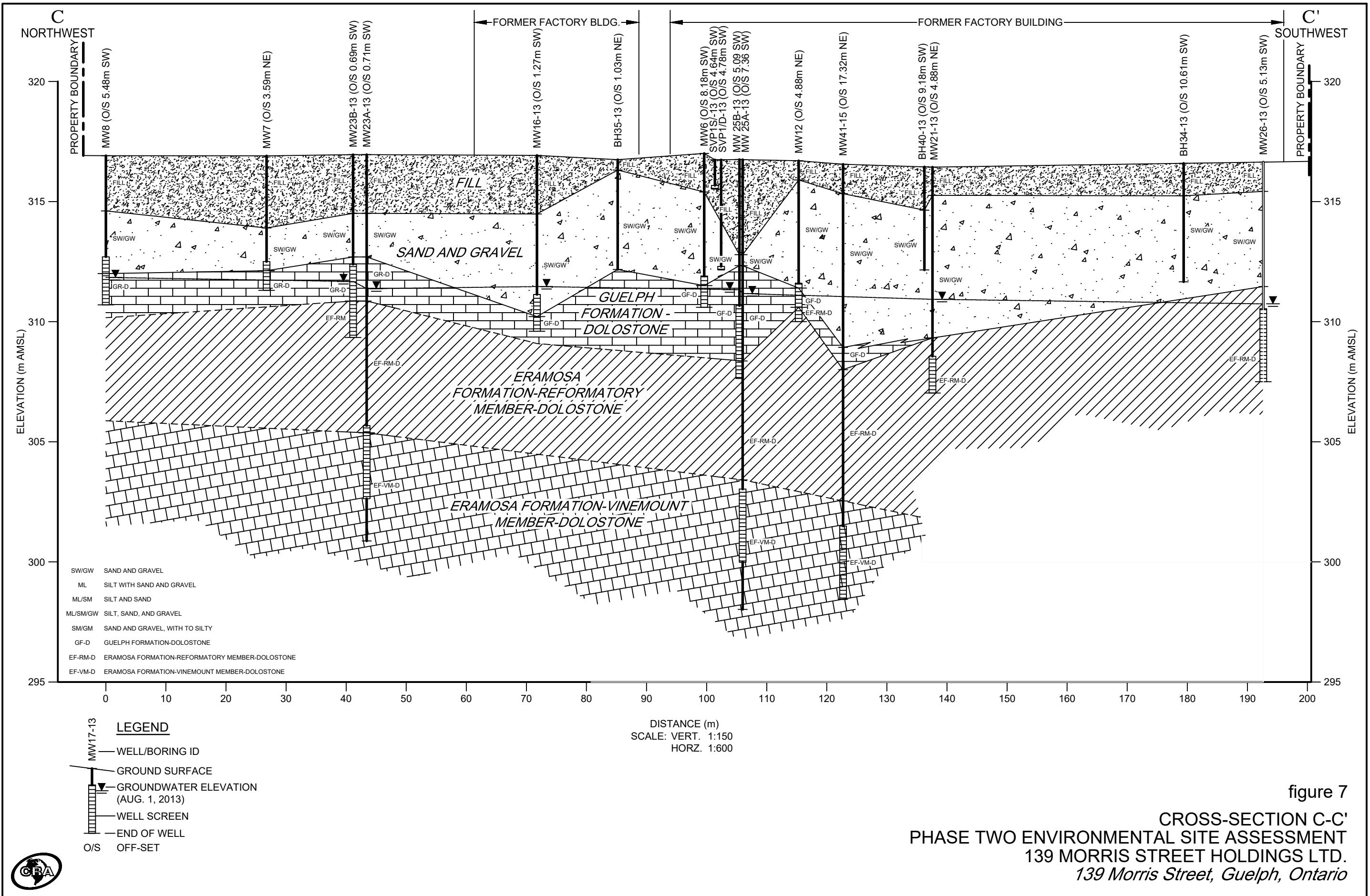
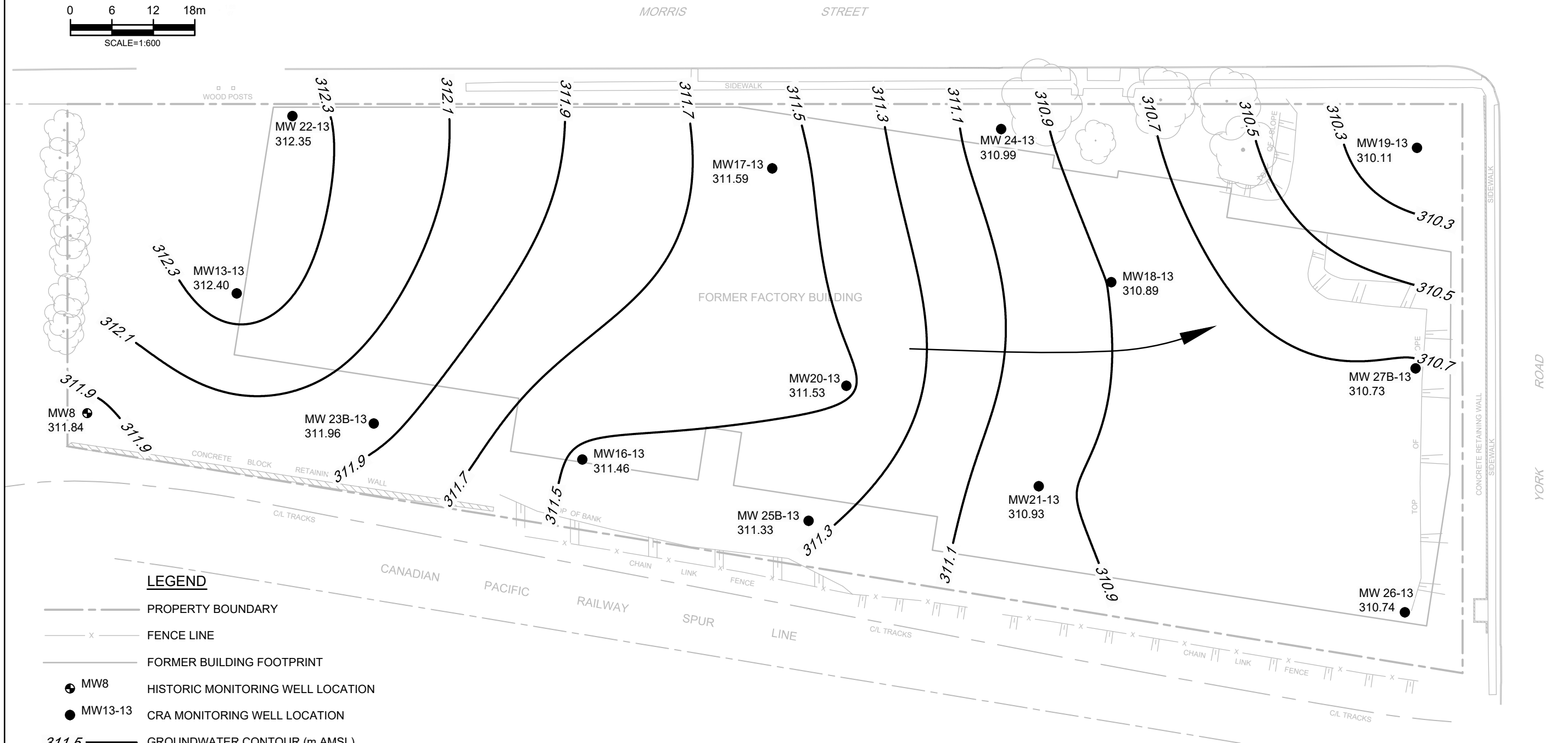
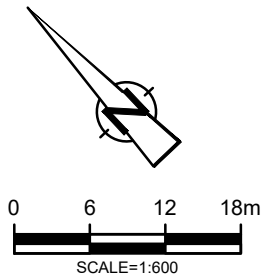


figure 7
 CROSS-SECTION C-C'
 PHASE TWO ENVIRONMENTAL SITE ASSESSMENT
 139 MORRIS STREET HOLDINGS LTD.
 139 Morris Street, Guelph, Ontario



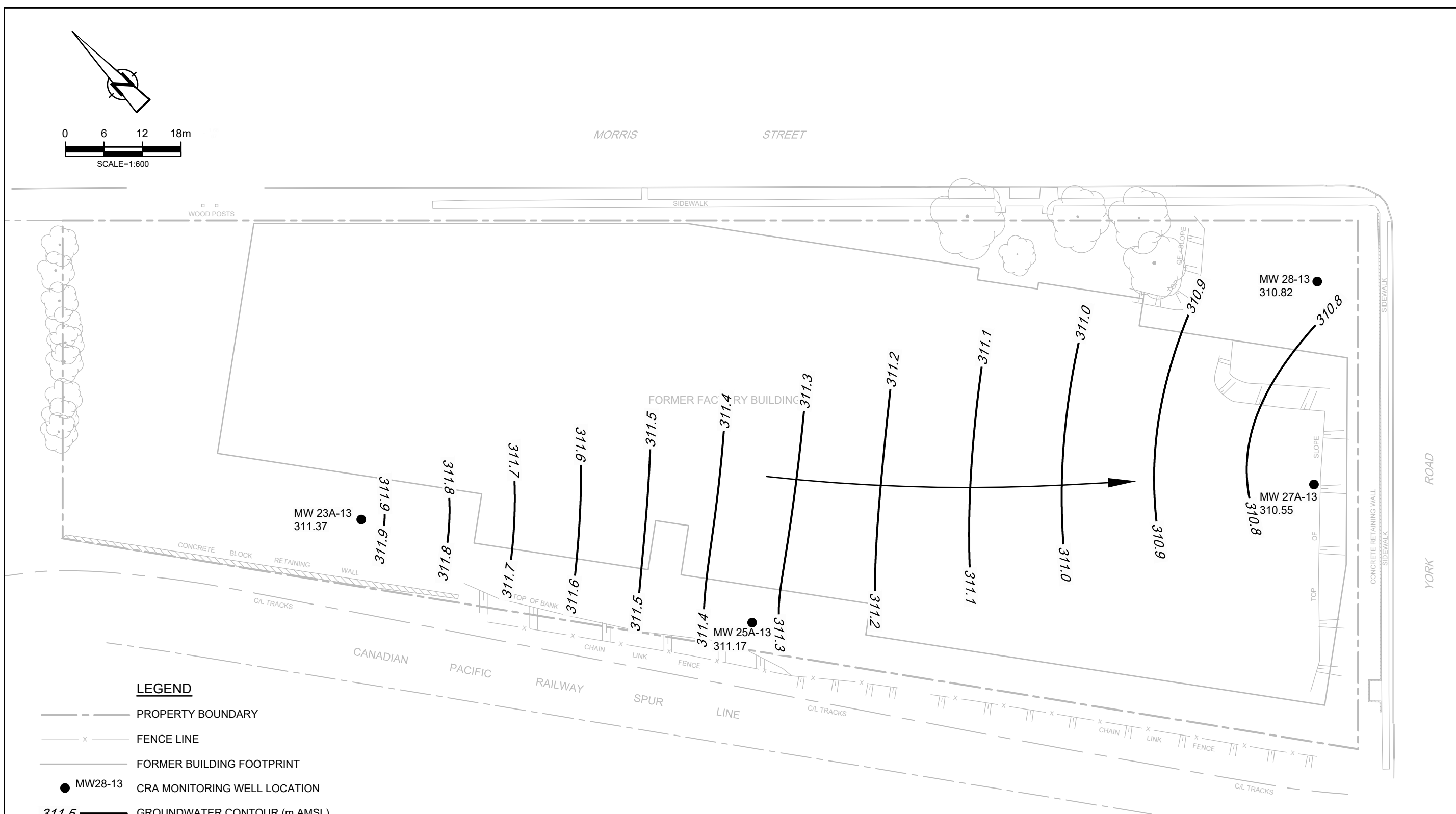
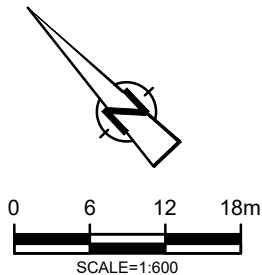


LEGEND

- PROPERTY BOUNDARY
- FENCE LINE
- FORMER BUILDING FOOTPRINT
- MW8 HISTORIC MONITORING WELL LOCATION
- MW13-13 CRA MONITORING WELL LOCATION
- 311.5 GROUNDWATER CONTOUR (m AMSL)
- 311.46 GROUNDWATER ELEVATION (m AMSL)
- INTERPRETED GROUNDWATER FLOW DIRECTION

figure 8a
OVERBURDEN/SHALLOW BEDROCK GROUNDWATER ELEVATION CONTOURS
 AUGUST 1, 2013
 PHASE TWO ENVIRONMENTAL SITE ASSESSMENT
 139 MORRIS STREET HOLDINGS LTD.
 139 Morris Street, Guelph, Ontario

SOURCE:
 BSR&D ONTARIO LAND SURVEYORS, TOPOGRAPHIC PLAN OF
 LOTS 21 TO 30, INCLUSIVE AND FACTORY SITE REGISTERED
 PLAN 322, CITY OF GUELPH, COUNTY OF WELLINGTON,
 FEBRUARY 26, 2013.

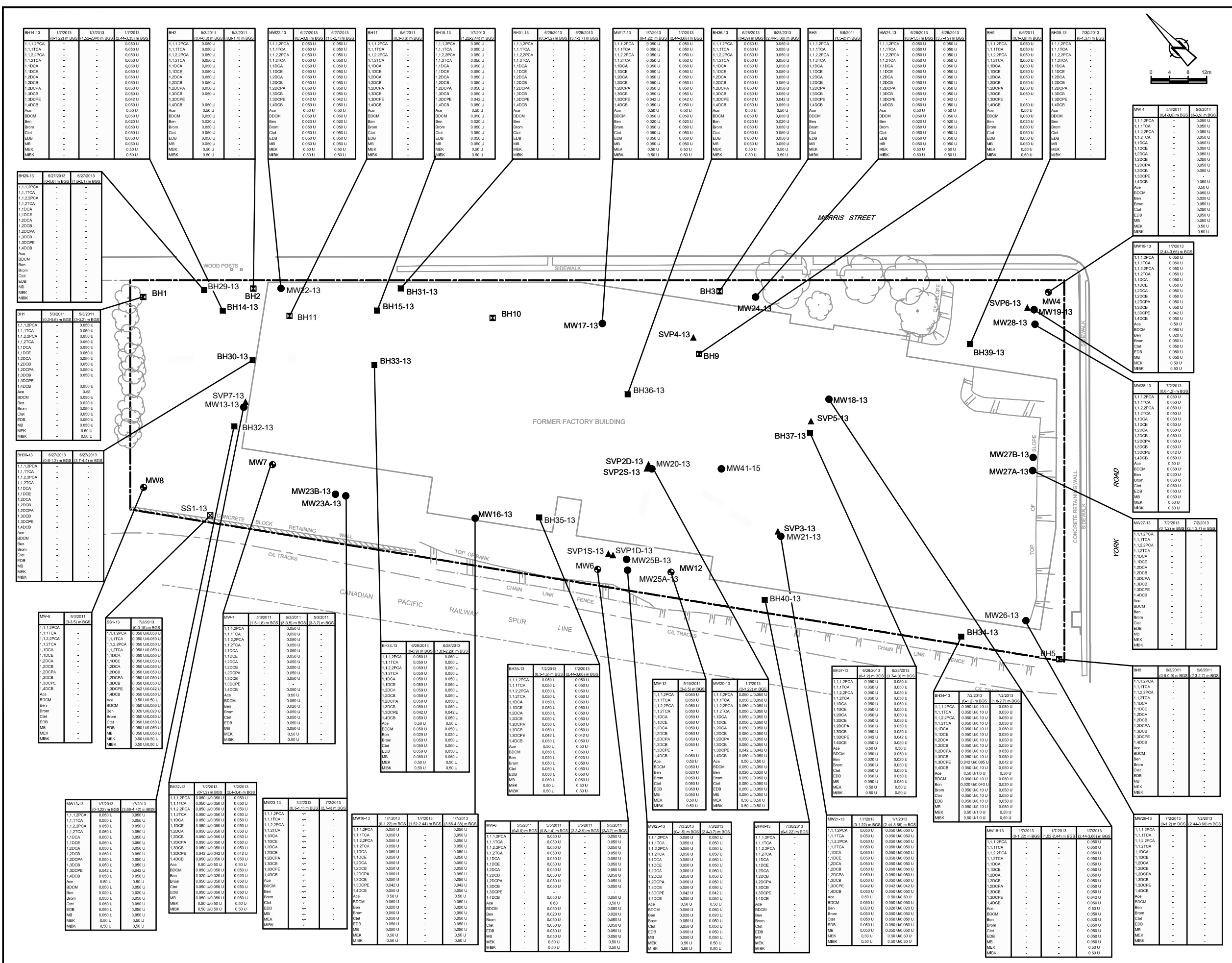


LEGEND

- PROPERTY BOUNDARY
- x — FENCE LINE
- FORMER BUILDING FOOTPRINT
- MW28-13 CRA MONITORING WELL LOCATION
- 311.5 — GROUNDWATER CONTOUR (m AMSL)
- 311.17 GROUNDWATER ELEVATION (m AMSL) (AUGUST 1, 2013)
- ← INTERPRETED GROUNDWATER FLOW DIRECTION

figure 8b
INTERMEDIATE BEDROCK GROUNDWATER ELEVATION CONTOURS
AUGUST 1, 2013
PHASE TWO ENVIRONMENTAL SITE ASSESSMENT
139 MORRIS STREET HOLDINGS LTD.
139 Morris Street, Guelph, Ontario

SOURCE:
 BSR&D ONTARIO LAND SURVEYORS, TOPOGRAPHIC PLAN OF
 LOTS 21 TO 30, INCLUSIVE AND FACTORY SITE REGISTERED
 PLAN 322, CITY OF GUELPH, COUNTY OF WELLINGTON,
 FEBRUARY 26, 2013.



LEGEND

- PROPERTY BOUNDARY
- FENCE LINE
- FORMER BUILDING FOOTPRINT
- MW8 HISTORIC MONITORING WELL LOCATION
- BH5 HISTORIC BOREHOLE LOCATION
- MW13-13 CRA MONITORING WELL LOCATION
- BH32-13 CRA BOREHOLE LOCATION
- ▲ SS1-13 CRA SURFICIAL SOIL SAMPLE LOCATION
- ▲ SVP7-13 CRA SOIL VAPOUR SAMPLE LOCATION

ug/g MICROGRAMS PER GRAM

m BGS METERS BELOW GROUND SURFACE

4.914.2 RESULT/DUPLICATE RESULT

EXCEEDANCE OF THE MOE TABLE 2 STANDARD

J ESTIMATED CONCENTRATION

U DETECTION LIMIT

MW-4	5/3/2011	5/3/2011
MC	0.050 U	0.050 U
PCE	0.050 U	0.050 U
T	0.20 U	0.050 U
TCE	0.050 U	0.050 U

MOE TABLE 2 STANDARDS

Chemical Name	Residential	MOE Table 2 Standard
1,1,1,2-Tetrachloroethane	1.1,1,2PCCA	0.050
1,1,1-Trichloroethane	1,1,1TCA	0.050
1,1,2,2-Tetrachloroethane	1,1,2,2PCCA	0.050
1,1,2,2-Trichloroethane	1,1,2,2TCA	0.050
1,1-Dichloroethane	1,1DCA	0.050
1,2-Dichlorobenzene	1,2DCB	0.050
1,3-Dichlorobenzene	1,3DCB	0.050
1,4-Dichlorobenzene	1,4DCB	0.050
1,2-Dichloropropane	1,2DCP	0.050
1,3-Dichloropropane	1,3DCP	0.050
1,4-Dichloropropane	1,4DCP	0.050
Acetic Acid	Ace	0.050
Benzene	Ben	0.050
Bromobenzene	Brom	0.050
Chlorobenzene	Chl	0.050
Dibromochloropropane (DBCP)	EdB	0.050
Endrin	EdB	0.050
Heptachlor Epoxide	EdB	0.050
Methoxychlor	EdB	0.050
Methyl Chloroform (Methylene Chloride)	MEK	0.050
Methylene Chloride	MEK	0.050
Methyl Ethyl Ketone	MEK	0.050
Methyl Isobutyl Ketone	MEK	0.050
Monochlorobenzene	MEK	0.050
Methyl Methoxy Ketone	MEK	0.050
Methyl N-Butyl Ketone	MEK	0.050
Methyl Propyl Ketone	MEK	0.050
Methyl Tertiary Butyl Ether	MEK	0.050
Nonyl Alcohol	MEK	0.050
o-Cresol	MEK	0.050
p-Cresol	MEK	0.050
Styrene	MEK	0.050
Toluene	MEK	0.050
Xylene (m,p)	MEK	0.050

NOTE: FULL DEPTH GENERIC SITE CONDITION STANDARDS IN A POTABLE GROUNDWATER CONDITION, RESIDENTIAL/PARKLAND INSTITUTIONAL PROPERTY USE, COARSE GRAINED SOIL (MOE, 2011).

SCALE VERIFICATION

THIS BAR MEASURES 50mm ON ORIGINAL. ADJUST SCALE ACCORDINGLY.

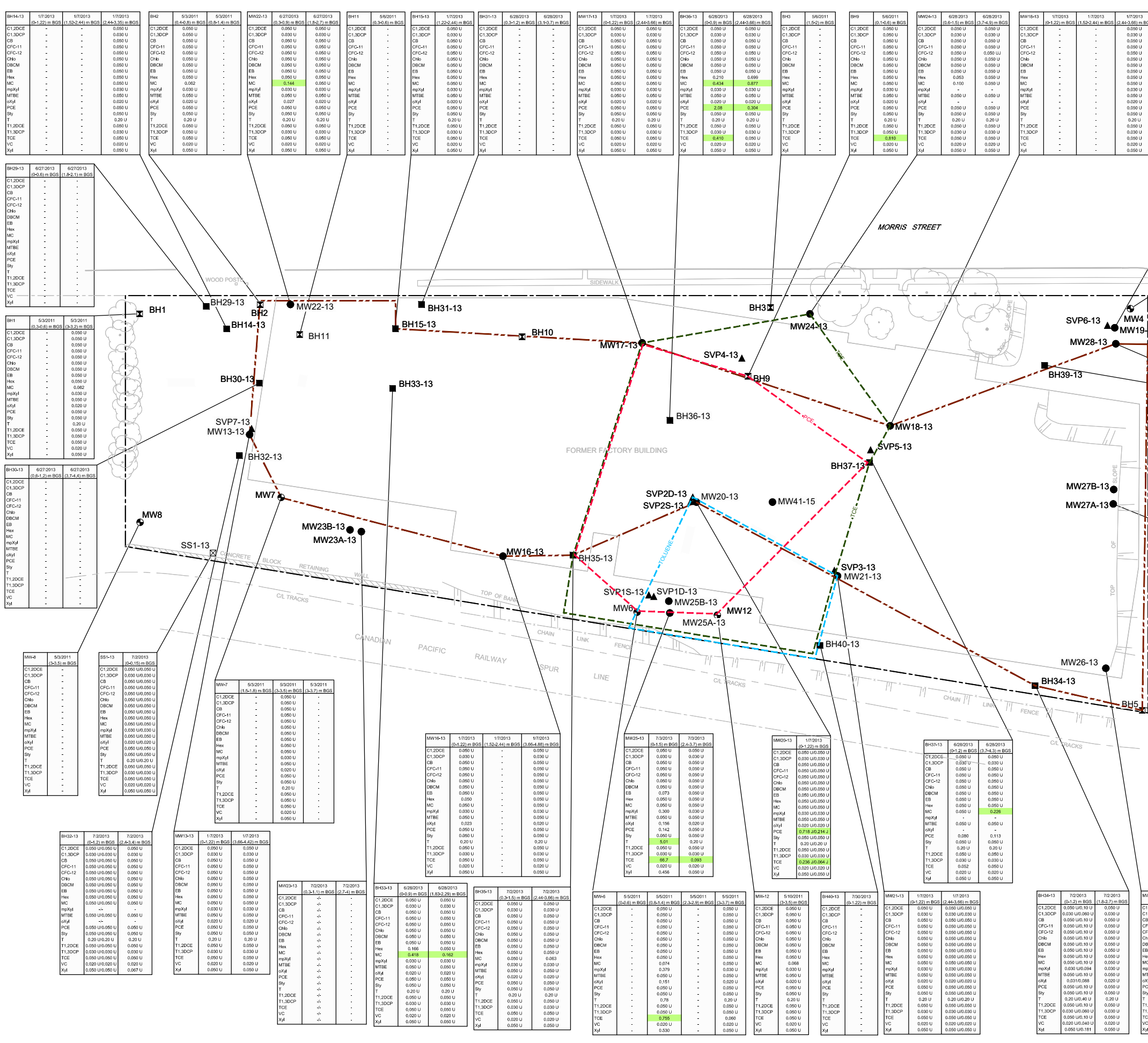
139 MORRIS STREET HOLDINGS LTD.
GUELPH, ONTARIO
PHASE TWO ENVIRONMENTAL SITE ASSESSMENT

HORIZONTAL EXTENT OF
SOIL VOC IMPACTS

CONESTOGA-ROVERS & ASSOCIATES

Source Reference: BSRM ONTARIO LAND SURVEYORS, TOPOGRAPHIC PLAN OF LOTS 21 TO 26, INCLUDING AN ADJACENT FACTORY SITE REGISTERED PLAN 322, CITY OF GUELPH, COUNTY OF WELLINGTON, FEBRUARY 26, 2013

Project Manager:	Reviewed By:	Date:
L. SHEPHERD	A. MOLENHUIS	FEBRUARY 2015
Scale:	Project No.:	Report No.:
AS SHOWN	78674-06	003



LEGEND

- PROPERTY BOUNDARY
- FENCE LINE
- FORMER BUILDING FOOTPRINT
- MW8 HISTORIC MONITORING WELL LOCATION
- BH5 HISTORIC BOREHOLE LOCATION
- MW13-13 CRA MONITORING WELL LOCATION
- BH13-13 CRA BOREHOLE LOCATION
- SS1-13 CRA SURFICIAL SOIL SAMPLE LOCATION
- SVP7-13 CRA SOIL VAPOUR SAMPLE LOCATION
- ug/g MICROGRAMS PER GRAM
- m BGS METERS BELOW GROUND SURFACE
- 4.914.2 RESULT/DUPLICATE RESULT
- EXCEEDANCE OF THE MOE TABLE 2 STANDARD
- J ESTIMATED CONCENTRATION
- U DETECTION LIMIT

MOE TABLE 2 STANDARDS

Chemical Name	Abbreviation	Moe Table 2 Standard
Chlorobenzene	CB	2.4
Chloroethane (Ethylchloride)	CE	0.05
1,1,1-Trichloroethane	T1,1,1TCE	1.0
1,1,2-Trichloroethane	T1,1,2TCE	0.05
1,1,1,2-Tetrachloroethane	T1,1,1,2TCE	0.05
1,1,2,2-Tetrachloroethane	T1,1,2,2TCE	0.05
1,1,1,2,2-Pentachloroethane	P1,1,1,2,2TCE	0.05
1,1,1,2,2,2-Hexachloroethane	H1,1,1,2,2,2TCE	0.05
1,1,1,2,2,2-Pentachloroethane (PCE-12)	PCE-12	0.05
1,1,1,2,2,2-Hexachloroethane (PCE-11)	PCE-11	0.05
1,1,1,2,2,2-Hexachloroethane (PCE-10)	PCE-10	0.05
1,1,1,2,2,2-Hexachloroethane (PCE-9)	PCE-9	0.05
1,1,1,2,2,2-Hexachloroethane (PCE-8)	PCE-8	0.05
1,1,1,2,2,2-Hexachloroethane (PCE-7)	PCE-7	0.05
1,1,1,2,2,2-Hexachloroethane (PCE-6)	PCE-6	0.05
1,1,1,2,2,2-Hexachloroethane (PCE-5)	PCE-5	0.05
1,1,1,2,2,2-Hexachloroethane (PCE-4)	PCE-4	0.05
1,1,1,2,2,2-Hexachloroethane (PCE-3)	PCE-3	0.05
1,1,1,2,2,2-Hexachloroethane (PCE-2)	PCE-2	0.05
1,1,1,2,2,2-Hexachloroethane (PCE-1)	PCE-1	0.05
1,1,1,2,2,2-Hexachloroethane (PCE-0)	PCE-0	0.05
1,1,1,2,2,2-Hexachloroethane (PCE-11)	PCE-11	0.05
1,1,1,2,2,2-Hexachloroethane (PCE-12)	PCE-12	0.05
1,1,1,2,2,2-Hexachloroethane (PCE-13)	PCE-13	0.05
1,1,1,2,2,2-Hexachloroethane (PCE-14)	PCE-14	0.05
1,1,1,2,2,2-Hexachloroethane (PCE-15)	PCE-15	0.05
1,1,1,2,2,2-Hexachloroethane (PCE-16)	PCE-16	0.05
1,1,1,2,2,2-Hexachloroethane (PCE-17)	PCE-17	0.05
1,1,1,2,2,2-Hexachloroethane (PCE-18)	PCE-18	0.05
1,1,1,2,2,2-Hexachloroethane (PCE-19)	PCE-19	0.05
1,1,1,2,2,2-Hexachloroethane (PCE-20)	PCE-20	0.05
1,1,1,2,2,2-Hexachloroethane (PCE-21)	PCE-21	0.05
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1,1,1,2,2,2-Hexachloroethane (PCE-23)	PCE-23	0.05
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1,1,1,2,2,2-Hexachloroethane (PCE-26)	PCE-26	0.05
1,1,1,2,2,2-Hexachloroethane (PCE-27)	PCE-27	0.05
1,1,1,2,2,2-Hexachloroethane (PCE-28)	PCE-28	0.05
1,1,1,2,2,2-Hexachloroethane (PCE-29)	PCE-29	0.05
1,1,1,2,2,2-Hexachloroethane (PCE-30)	PCE-30	0.05
1,1,1,2,2,2-Hexachloroethane (PCE-31)	PCE-31	0.05
1,1,1,2,2,2-Hexachloroethane (PCE-32)	PCE-32	0.05
1,1,1,2,2,2-Hexachloroethane (PCE-33)	PCE-33	0.05
1,1,1,2,2,2-Hexachloroethane (PCE-34)	PCE-34	0.05
1,1,1,2,2,2-Hexachloroethane (PCE-35)	PCE-35	0.05
1,1,1,2,2,2-Hexachloroethane (PCE-36)	PCE-36	0.05
1,1,1,2,2,2-Hexachloroethane (PCE-37)	PCE-37	0.05
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1,1,1,2,2,2-Hexachloroethane (PCE-39)	PCE-39	0.05
1,1,1,2,2,2-Hexachloroethane (PCE-40)	PCE-40	0.05
1,1,1,2,2,2-Hexachloroethane (PCE-41)	PCE-41	0.05
1,1,1,2,2,2-Hexachloroethane (PCE-42)	PCE-42	0.05
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1,1,1,2,2,2-Hexachloroethane (PCE-48)	PCE-48	0.05
1,1,1,2,2,2-Hexachloroethane (PCE-49)	PCE-49	0.05
1,1,1,2,2,2-Hexachloroethane (PCE-50)	PCE-50	0.05

NOTE: TABLE 2: FULL DEPTH GENERIC SITE CONDITION STANDARDS IN A POTABLE GROUNDWATER CONDITION, RESIDENTIAL/PARKLAND INSTITUTIONAL PROPERTY USE, COARSE GRAINED SOIL, (MOE, 2011).

SCALE VERIFICATION

THIS BAR MEASURES 50mm ON ORIGINAL. ADJUST SCALE ACCORDINGLY.

139 MORRIS STREET HOLDINGS LTD. GUELPH, ONTARIO

PHASE TWO ENVIRONMENTAL SITE ASSESSMENT

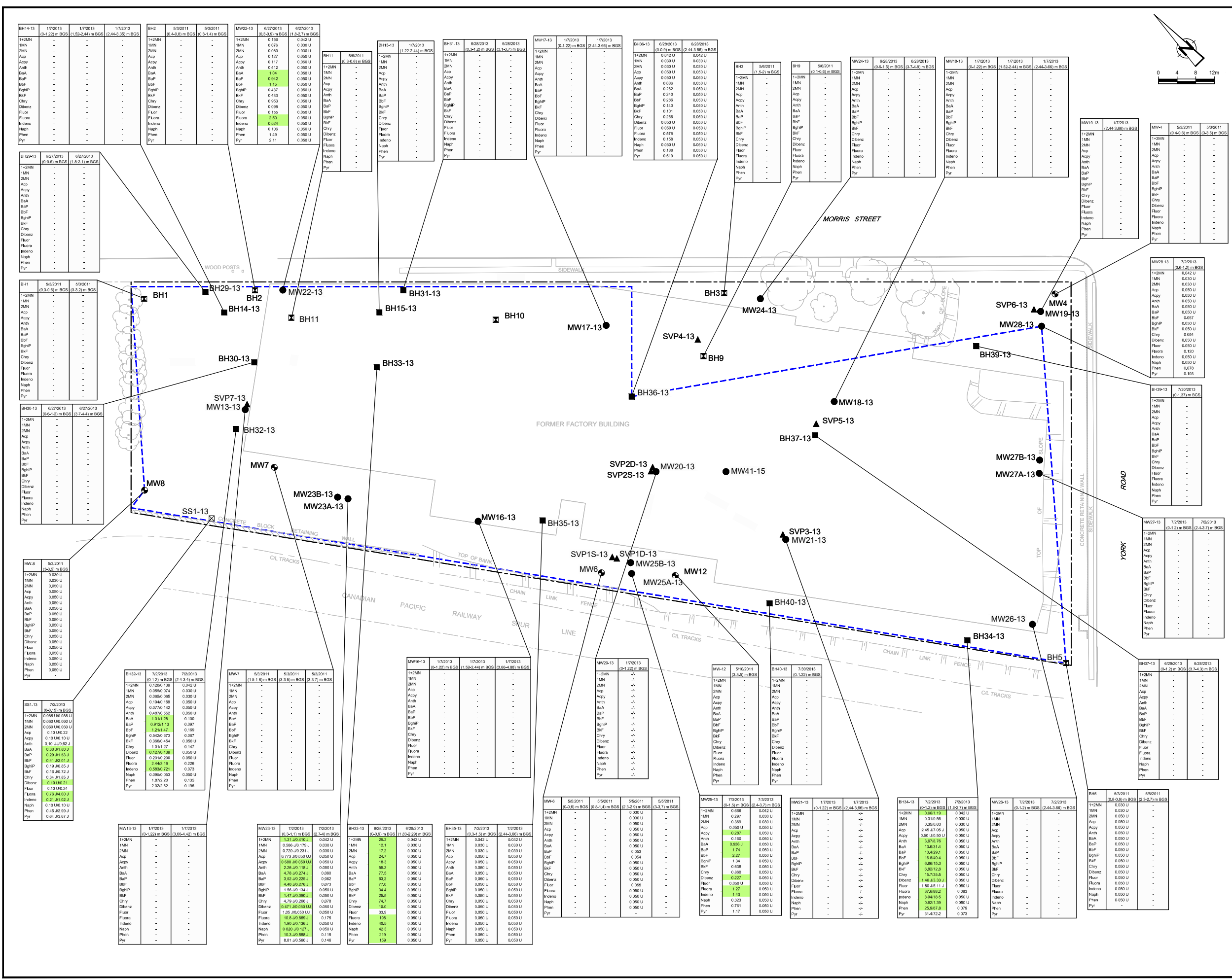
HORIZONTAL EXTENT OF SOIL VOC IMPACTS CONTINUED

CONESTOGA-ROVERS & ASSOCIATES

Source Reference: BSRM ONTARIO LAND SURVEYORS, TOPOGRAPHIC PLAN OF LOTS 21 TO 26, INCLUDING AN INDUSTRY SITE REGISTERED PLAN 322, CITY OF GUELPH, COUNTY OF WELLINGTON, FEBRUARY 26, 2013.

Project Manager: L. SHEPHERD
Reviewed By: A. MOLENHUIS
Date: FEBRUARY 2015

Scale: AS SHOWN
Project No.: 78674-06
Report No.: 003
Figure No.: 9b



LEGEND

- PROPERTY BOUNDARY
- FENCE LINE
- FORMER BUILDING FOOTPRINT
- MW8 HISTORIC MONITORING WELL LOCATION
- BH5 HISTORIC BOREHOLE LOCATION
- MW13-13 CRA MONITORING WELL LOCATION
- BH32-13 CRA BOREHOLE LOCATION
- SS1-13 CRA SURFICIAL SOIL SAMPLE LOCATION
- ▲ SVP7-13 CRA SOIL VAPOUR SAMPLE LOCATION

ug/g MICROGRAMS PER GRAM
m BGS METERS BELOW GROUND SURFACE

4.914.2 RESULT/DUPLICATE RESULT
EXCEEDANCE OF THE MOE TABLE 2 STANDARD
J ESTIMATED CONCENTRATION
U DETECTION LIMIT

MOE TABLE 2 STANDARDS

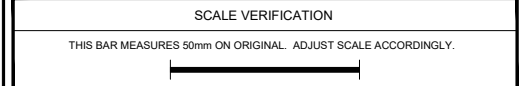
Chemical Name	Abbreviation	Moe Table 2 Standard
1,2-Dichloroethane	1,2-DCE	0.09
1,1-Dichloroethene	1,1-DCE	0.09
1,2-Dibromoethane	1,2-DBE	0.09
1,1-Dibromoethene	1,1-DBE	0.09
Acrylonitrile	Acry	1.9
Acrylonitrile Oxide	Acry	0.15
Benzo(a)anthracene	BaA	0.5
Benzo(a)pyrene	BaP	0.3
Benzo(b)fluoranthene	BbF	0.16
Benzo(k)fluoranthene	BkF	0.16
Benzo(e)pyrene	BeP	0.16
Chrysene	Chry	7
Fluorene	Fluor	0.1
Fluoranthene	Fluor	0.1
Indeno(1,2,3-cd)pyrene	Inde	0.16
Naphthalene	Naph	0.5
Phenanthrene	Phen	0.2
Pyrene	Pyr	7.8

MOE TABLE 2 STANDARDS

Sample Location	Sample Date	Sample Depth	Parameter	Result (ug/g)
MW-4	5/3/2011	(3-3.5) m BGS	MC	0.050 U
			PCE	0.050 U
			T	0.20 U
			TCE	0.050 U

NOTE: FULL DEPTH GENERIC SITE CONDITION STANDARDS IN A POTABLE GROUNDWATER CONDITION, RESIDENTIAL/PARKLAND INSTITUTIONAL PROPERTY USE, COARSE GRAINED SOIL (MOE, 2011).

--- EXTENT OF PAH IMPACTS



139 MORRIS STREET HOLDINGS LTD.
GUELPH, ONTARIO

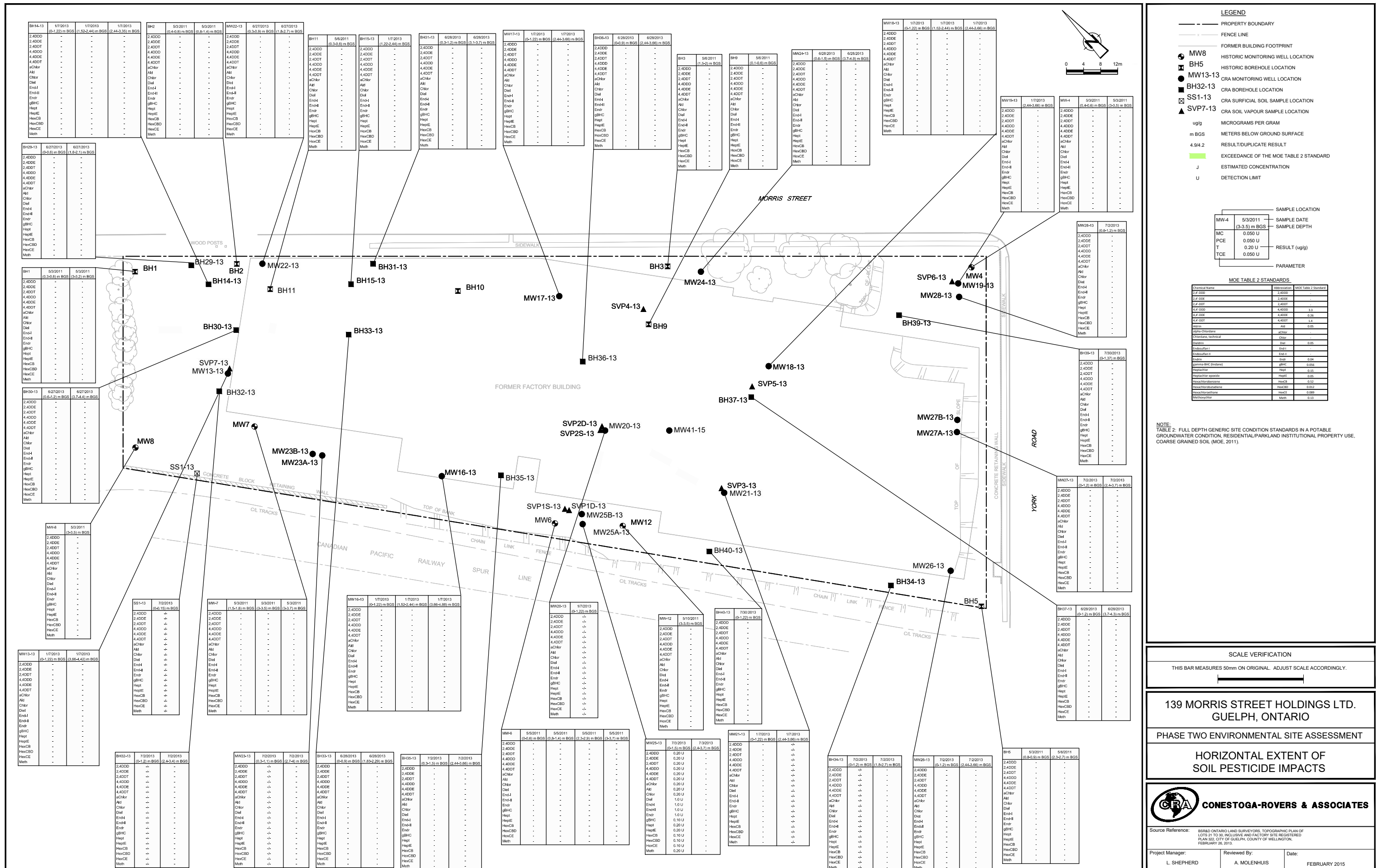
PHASE TWO ENVIRONMENTAL SITE ASSESSMENT

HORIZONTAL EXTENT OF SOIL PAH IMPACTS

CRA CONESTOGA-ROVERS & ASSOCIATES

Source Reference: BSRAD ONTARIO LAND SURVEYORS, TOPOGRAPHIC PLAN OF LOTS 21 TO 26, INCLUDING AND FACTORY SITE REGISTERED PLAN 322, CITY OF GUELPH, COUNTY OF WELLINGTON, FEBRUARY 26, 2015

Project Manager: L. SHEPHERD	Reviewed By: A. MOLENHUIS	Date: FEBRUARY 2015
Scale: AS SHOWN	Project N°: 78674-06	Report N°: 003
		Drawing N°: figure 9c



LEGEND

- PROPERTY BOUNDARY
- FENCE LINE
- FORMER BUILDING FOOTPRINT
- MW8 HISTORIC MONITORING WELL LOCATION
- ⊗ BH5 HISTORIC BOREHOLE LOCATION
- MW13-13 CRA MONITORING WELL LOCATION
- ⊗ BH32-13 CRA BOREHOLE LOCATION
- SS1-13 CRA SURFICIAL SOIL SAMPLE LOCATION
- ▲ SVP7-13 CRA SOIL VAPOUR SAMPLE LOCATION

ug/g MICROGRAMS PER GRAM
m BGS METERS BELOW GROUND SURFACE

4.9x.2 RESULT/DUPLICATE RESULT
EXCEEDANCE OF THE MOE TABLE 2 STANDARD

J ESTIMATED CONCENTRATION
U DETECTION LIMIT

PARAMETER	MW-4 (3-3.5) m BGS	5/3/2011 SAMPLE DATE	7/2/2013 SAMPLE DATE	7/2/2013 SAMPLE DEPTH
MC	0.050 U			
PCE	0.050 U			
T	0.20 U			
TCE	0.050 U			

MOE TABLE 2 STANDARDS

Chemical Name	Abbreviation	MOE Table 2 Standard
2,4-D	2,4DD	2.4000
2,4-DE	2,4DE	2.4000
2,4-DOT	2,4DOT	2.4000
4,4-D	4,4DD	4.4000
4,4-DE	4,4DE	4.4000
4,4-DOT	4,4DOT	4.4000
Endrin	Endr	0.25
Endrin-Hydroxide	EndrH	0.05
Dieldrin	Diel	0.05
Dieldrin-Hydroxide	DielH	0.05
Endosulfan I	EndS	0.05
Endosulfan II	EndSH	0.05
Endosulfan S	EndSS	0.05
Heptachlor Epoxide	HeptE	0.05
Heptachlor Epoxide Hydroxide	HeptEH	0.05
Heptachlor Epoxide Hydroxide Chloride	HeptECH	0.05
Heptachlor Epoxide Hydroxide Chloride Chloride	HeptECHCl	0.05
Heptachlor Epoxide Hydroxide Chloride Hydroxide	HeptECHClH	0.05
Heptachlor Epoxide Hydroxide Chloride Hydroxide Chloride	HeptECHClHCl	0.05
Heptachlor Epoxide Hydroxide Chloride Hydroxide Chloride Hydroxide	HeptECHClHClH	0.05
Heptachlor Epoxide Hydroxide Chloride Hydroxide Chloride Hydroxide Chloride	HeptECHClHClHCl	0.05
Heptachlor Epoxide Hydroxide Chloride Hydroxide Chloride Hydroxide Chloride Hydroxide	HeptECHClHClHClH	0.05
Heptachlor Epoxide Hydroxide Chloride Hydroxide Chloride Hydroxide Chloride Hydroxide Chloride	HeptECHClHClHClHCl	0.05
Heptachlor Epoxide Hydroxide Chloride Hydroxide Chloride Hydroxide Chloride Hydroxide Chloride Hydroxide	HeptECHClHClHClHClH	0.05
Heptachlor Epoxide Hydroxide Chloride Hydroxide Chloride Hydroxide Chloride Hydroxide Chloride Hydroxide Chloride	HeptECHClHClHClHClHCl	0.05
Heptachlor Epoxide Hydroxide Chloride Hydroxide Chloride Hydroxide Chloride Hydroxide Chloride Hydroxide Chloride Hydroxide	HeptECHClHClHClHClHClH	0.05
Heptachlor Epoxide Hydroxide Chloride Hydroxide Chloride Hydroxide Chloride Hydroxide Chloride Hydroxide Chloride Hydroxide Chloride	HeptECHClHClHClHClHClHCl	0.05
Heptachlor Epoxide Hydroxide Chloride Hydroxide Chloride Hydroxide Chloride Hydroxide Chloride Hydroxide Chloride Hydroxide Chloride Hydroxide	HeptECHClHClHClHClHClHClH	0.05
Heptachlor Epoxide Hydroxide Chloride Hydroxide Chloride Hydroxide Chloride Hydroxide Chloride Hydroxide Chloride Hydroxide Chloride Hydroxide Chloride	HeptECHClHClHClHClHClHClHCl	0.05

NOTE:
TABLE 2: FULL DEPTH GENERIC SITE CONDITION STANDARDS IN A POTABLE GROUNDWATER CONDITION, RESIDENTIAL/PARKLAND INSTITUTIONAL PROPERTY USE, COARSE GRAINED SOIL. (MOE, 2011).

SCALE VERIFICATION

THIS BAR MEASURES 50mm ON ORIGINAL. ADJUST SCALE ACCORDINGLY.

139 MORRIS STREET HOLDINGS LTD. GUELPH, ONTARIO

PHASE TWO ENVIRONMENTAL SITE ASSESSMENT

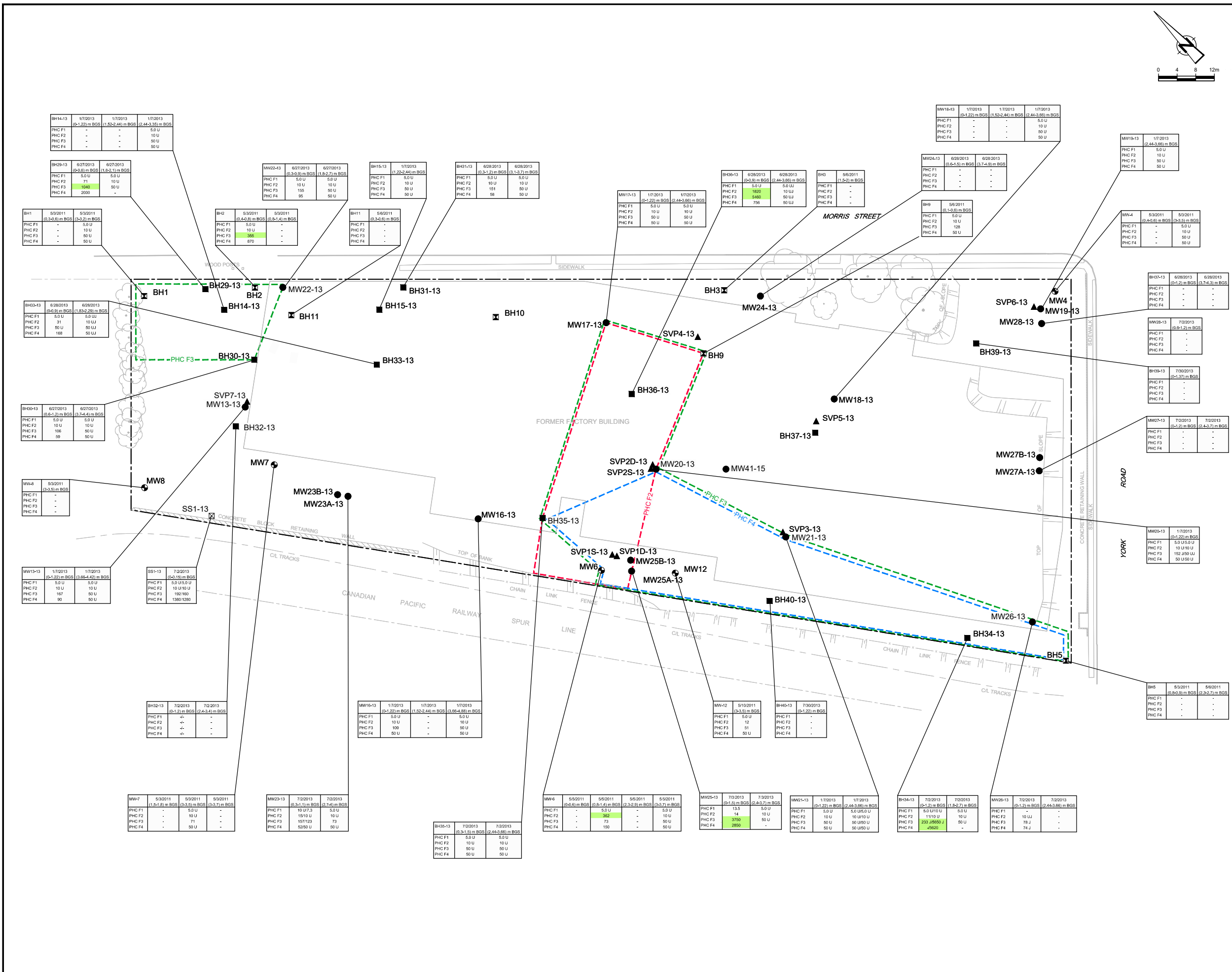
HORIZONTAL EXTENT OF SOIL PESTICIDE IMPACTS



Source Reference: BRS&D ONTARIO LAND SURVEYORS, TOPOGRAPHIC PLAN OF LOTS 21, 10, 26, INCLUDING AN INDUSTRY SITE REGISTERED PLAN 522, CITY OF GUELPH, COUNTY OF WELLINGTON, FEBRUARY 08, 2013

Project Manager: L. SHEPHERD Reviewed By: A. MOLENHUIS Date: FEBRUARY 2015

Scale: AS SHOWN Project No: 78674-06 Report No: 003 Drawing No: figure 9d



LEGEND

- PROPERTY BOUNDARY
- FENCE LINE
- FORMER BUILDING FOOTPRINT
- MW8 HISTORIC MONITORING WELL LOCATION
- BH5 HISTORIC BOREHOLE LOCATION
- MW13-13 CRA MONITORING WELL LOCATION
- BH32-13 CRA BOREHOLE LOCATION
- SS1-13 CRA SURFICIAL SOIL SAMPLE LOCATION
- SVP7-13 CRA SOIL VAPOUR SAMPLE LOCATION
- ug/g MICROGRAMS PER GRAM
- m BGS METERS BELOW GROUND SURFACE
- 4.9/4.2 RESULT/DUPLICATE RESULT
- EXCEEDANCE OF THE MOE TABLE 2 STANDARD
- J ESTIMATED CONCENTRATION
- U DETECTION LIMIT

MOE TABLE 2 STANDARDS

Chemical Name	Abbreviation	Moe Table 2 Standard
Petroleum Hydrocarbon F2 (C6-C10)	PHC F2	55
Petroleum Hydrocarbon F3 (C10-C14)	PHC F3	50
Petroleum Hydrocarbon F4 (C14-C20)	PHC F4	200

NOTE:
TABLE 2: FULL DEPTH GENERIC SITE CONDITION STANDARDS IN A POTABLE GROUNDWATER CONDITION, RESIDENTIAL/PARKLAND INSTITUTIONAL PROPERTY USE, COARSE GRAINED SOIL (MOE, 2011).

SCALE VERIFICATION

THIS BAR MEASURES 50m ON ORIGINAL. ADJUST SCALE ACCORDINGLY.

139 MORRIS STREET HOLDINGS LTD. GUELPH, ONTARIO

PHASE TWO ENVIRONMENTAL SITE ASSESSMENT

HORIZONTAL EXTENT OF SOIL PHC IMPACTS

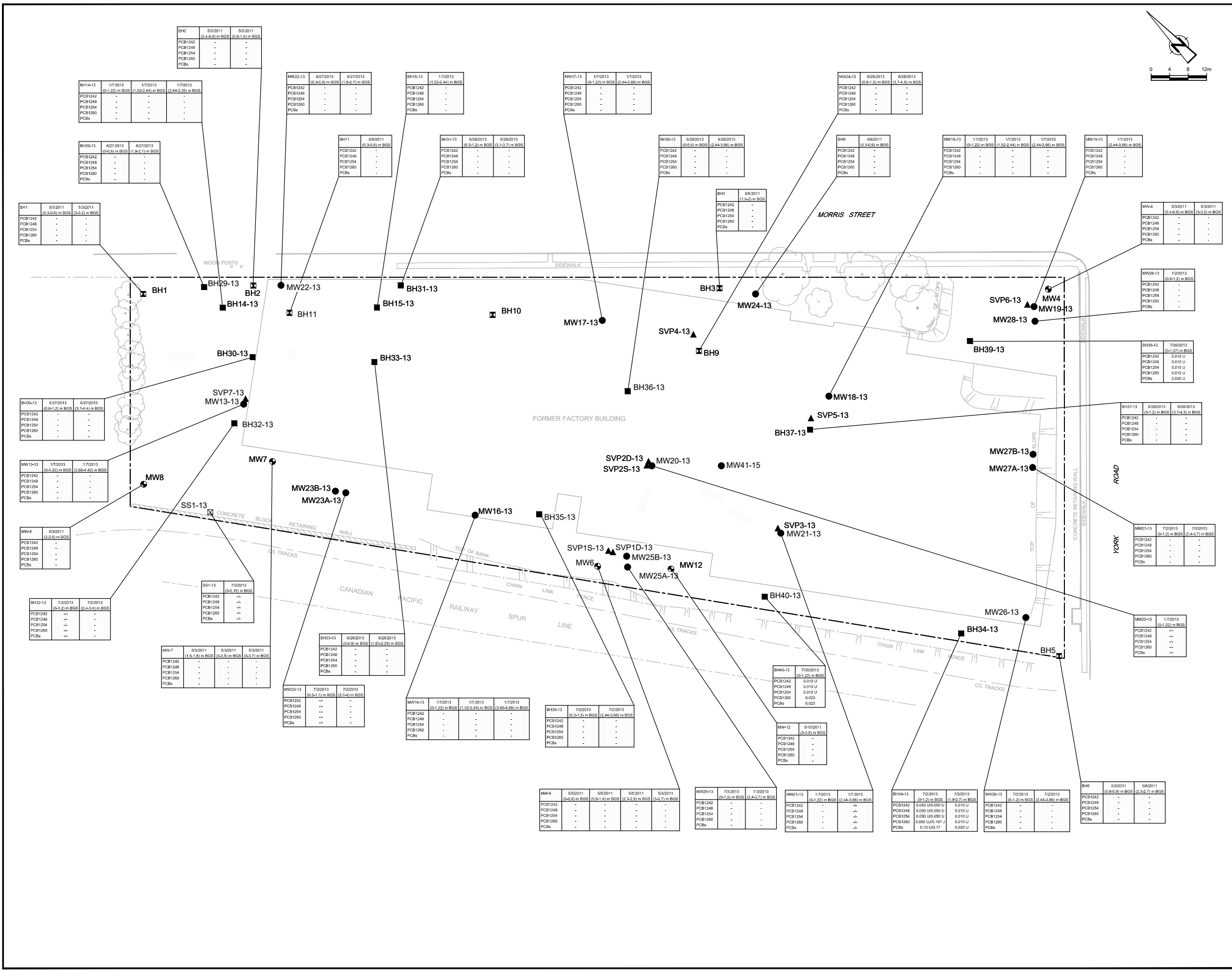
CRA CONESTOGA-ROVERS & ASSOCIATES

Source Reference: BSRAD ONTARIO LAND SURVEYORS, TOPOGRAPHIC PLAN OF LOTS 21 TO 26, INCLUDING AND FACTORY SITE REGISTERED PLAN 32, CITY OF GUELPH, COUNTY OF WELLINGTON, FEBRUARY 26, 2013

Project Manager: L. SHEPHERD
Reviewed By: A. MOLENHUIS
Date: FEBRUARY 2015

Scale: AS SHOWN
Project N#: 78674-06
Report N#: 003
Drawing N#: figure 9e

87674-06(003)GN-WA026 APR 15/2015



- LEGEND**
- PROPERTY BOUNDARY
 - FENCE LINE
 - FORMER BUILDING FOOTPRINT
 - MW8 HISTORIC MONITORING WELL LOCATION
 - ⊠ BH5 HISTORIC BOREHOLE LOCATION
 - MW13-13 CRA MONITORING WELL LOCATION
 - ⊠ BH32-13 CRA BOREHOLE LOCATION
 - ⊠ SS1-13 CRA SURFICIAL SOIL SAMPLE LOCATION
 - ▲ SVP-13 CRA SOIL VAPOUR SAMPLE LOCATION
 - ug/g MICROGRAMS PER GRAM
 - m BGS METERS BELOW GROUND SURFACE
 - 4.9/4.2 RESULT/DUPLICATE RESULT
 - EXCEEDANCE OF THE MOE TABLE 2 STANDARD
 - J ESTIMATED CONCENTRATION
 - U DETECTION LIMIT

SAMPLE LOCATION

MW-4	5/3/2011	3-3.5 m BGS	SAMPLE DATE
MC	0.050 U		SAMPLE DEPTH
PCE	0.050 U		RESULT (ug/g)
T	0.20 U		
TCE	0.050 U		

PARAMETER

MOE TABLE 2 STANDARDS

Chemical Name	Abbreviation	MOE Table 2 Standard
Arochlor 1242 (PCB 1242)	PCB1242	0.010 U
Arochlor 1248 (PCB 1248)	PCB1248	0.010 U
Arochlor 1254 (PCB 1254)	PCB1254	0.010 U
Arochlor 1260 (PCB 1260)	PCB1260	0.010 U
Total PCBs	PCBs	0.05

NOTE:
TABLE 2: FULL DEPTH GENERIC SITE CONDITION STANDARDS IN A POTABLE GROUNDWATER CONDITION, RESIDENTIAL/PARKLAND INSTITUTIONAL PROPERTY USE, COARSE GRAINED SOIL (MOE, 2011).

SCALE VERIFICATION
THIS BAR MEASURES 50mm ON ORIGINAL. ADJUST SCALE ACCORDINGLY.

**139 MORRIS STREET HOLDINGS LTD.
GUELPH, ONTARIO**

PHASE TWO ENVIRONMENTAL SITE ASSESSMENT

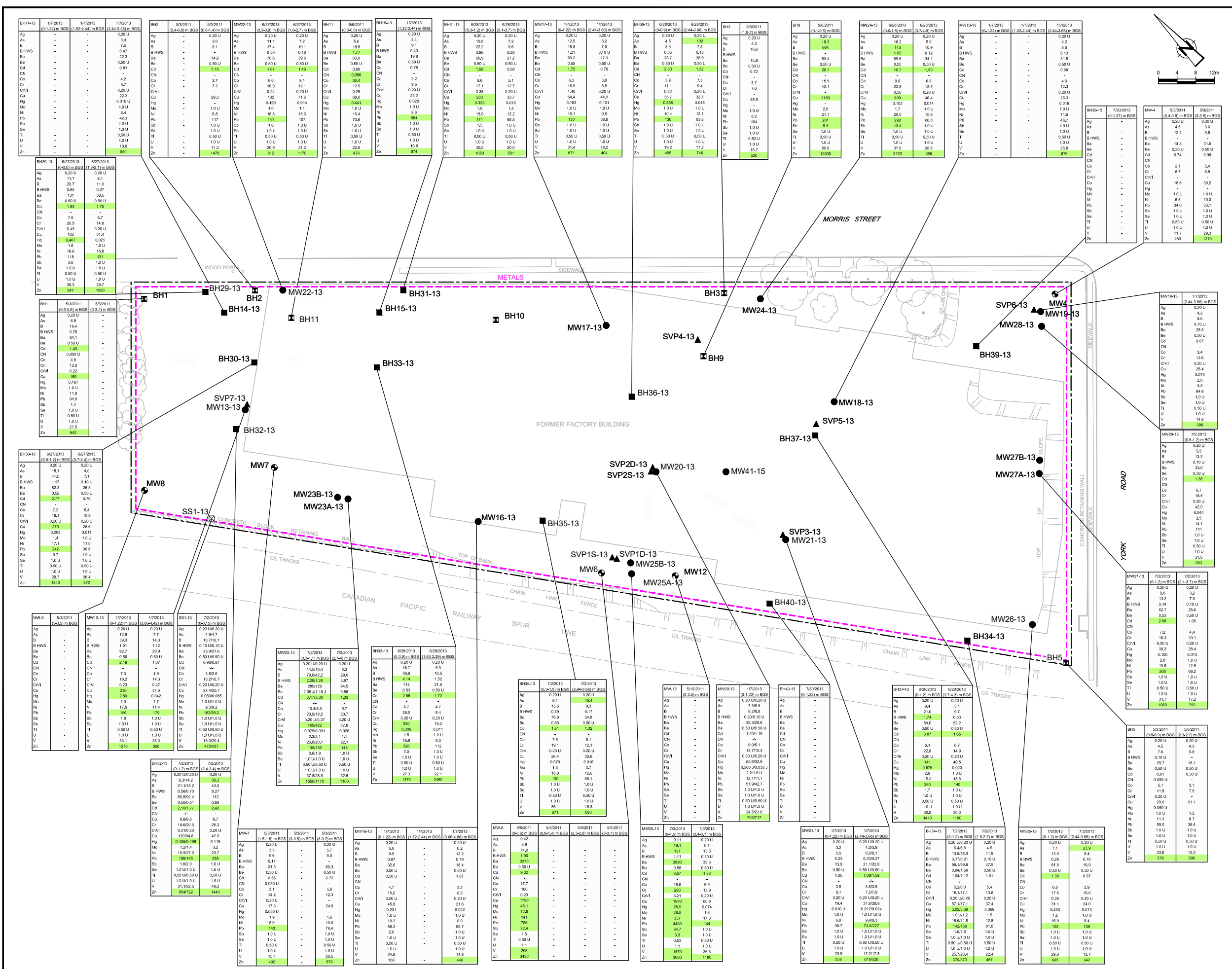
**HORIZONTAL EXTENT OF
SOIL PCB IMPACTS**

CRA CONESTOGA-ROVERS & ASSOCIATES

Source Reference: BSRAD ONTARIO LAND SURVEYORS, TOPOGRAPHIC PLAN OF LOTS 21 TO 26, INCLUDING AND FACTORY SITE REGISTERED PLAN 322, CITY OF GUELPH, COUNTY OF WELLINGTON, FEBRUARY 26, 2013

Project Manager: L. SHEPHERD	Reviewed By: A. MOLENHUIS	Date: FEBRUARY 2015
Scale: AS SHOWN	Project N°: 78674-06	Report N°: 003
		Drawing N°: figure 9f

78674-06(003)GN-WA027 APR 15/2015



LEGEND

- PROPERTY BOUNDARY
- FENCE LINE
- FORMER BUILDING FOOTPRINT
- MW8 HISTORIC MONITORING WELL LOCATION
- BH5 HISTORIC BOREHOLE LOCATION
- MW13-13 CRA MONITORING WELL LOCATION
- BH32-13 CRA BOREHOLE LOCATION
- SS1-13 CRA SURFICIAL SOIL SAMPLE LOCATION
- SVP7-13 CRA SOIL VAPOUR SAMPLE LOCATION

ug/g MICROGRAMS PER GRAM
m BGS METERS BELOW GROUND SURFACE
4.914.2 RESULT/DUPLICATE RESULT
EXCEEDANCE OF THE MOE TABLE 2 STANDARD
J ESTIMATED CONCENTRATION
U DETECTION LIMIT

MOE TABLE 2 STANDARDS

Chemical Name	Abbreviation	Moe Table 2 Standard
Antimony	Sb	7.5
As	As	4.0
Ba	Ba	18
Beryllium	Be	0.001
Bismuth	Bi	4
Bohrium	Bh	120
Boron	B	3.4
Bromine (hot water extractable)	BHWS	1.5
Cadmium	Cd	1.2
Chromium	Cr	180
Chromium VI (hexavalent)	CrVI	8
Cobalt	Co	32
Copper	Cu	140
Cyanide	CN	0.05
Lead	Pb	120
Manganese	Mn	0.27
Molybdenum	Mo	6.5
Nickel	Ni	100
Polonium	Po	2.4
Silver	Ag	20
Thallium	Tl	1
Vanadium	V	23
Zinc	Zn	31.0

MOE TABLE 2 STANDARDS

Chemical Name	Abbreviation	Moe Table 2 Standard
Antimony	Sb	7.5
As	As	4.0
Ba	Ba	18
Beryllium	Be	0.001
Bismuth	Bi	4
Bohrium	Bh	120
Boron	B	3.4
Bromine (hot water extractable)	BHWS	1.5
Cadmium	Cd	1.2
Chromium	Cr	180
Chromium VI (hexavalent)	CrVI	8
Cobalt	Co	32
Copper	Cu	140
Cyanide	CN	0.05
Lead	Pb	120
Manganese	Mn	0.27
Molybdenum	Mo	6.5
Nickel	Ni	100
Polonium	Po	2.4
Silver	Ag	20
Thallium	Tl	1
Vanadium	V	23
Zinc	Zn	31.0

NOTE: TABLE 2: FULL DEPTH GENERIC SITE CONDITION STANDARDS IN A POTABLE GROUNDWATER CONDITION, RESIDENTIAL/PARKLAND INSTITUTIONAL PROPERTY USE, COARSE GRAINED SOIL (MOE, 2011).

--- EXTENT OF METALS IMPACTS

SCALE VERIFICATION
THIS BAR MEASURES 50mm ON ORIGINAL. ADJUST SCALE ACCORDINGLY.

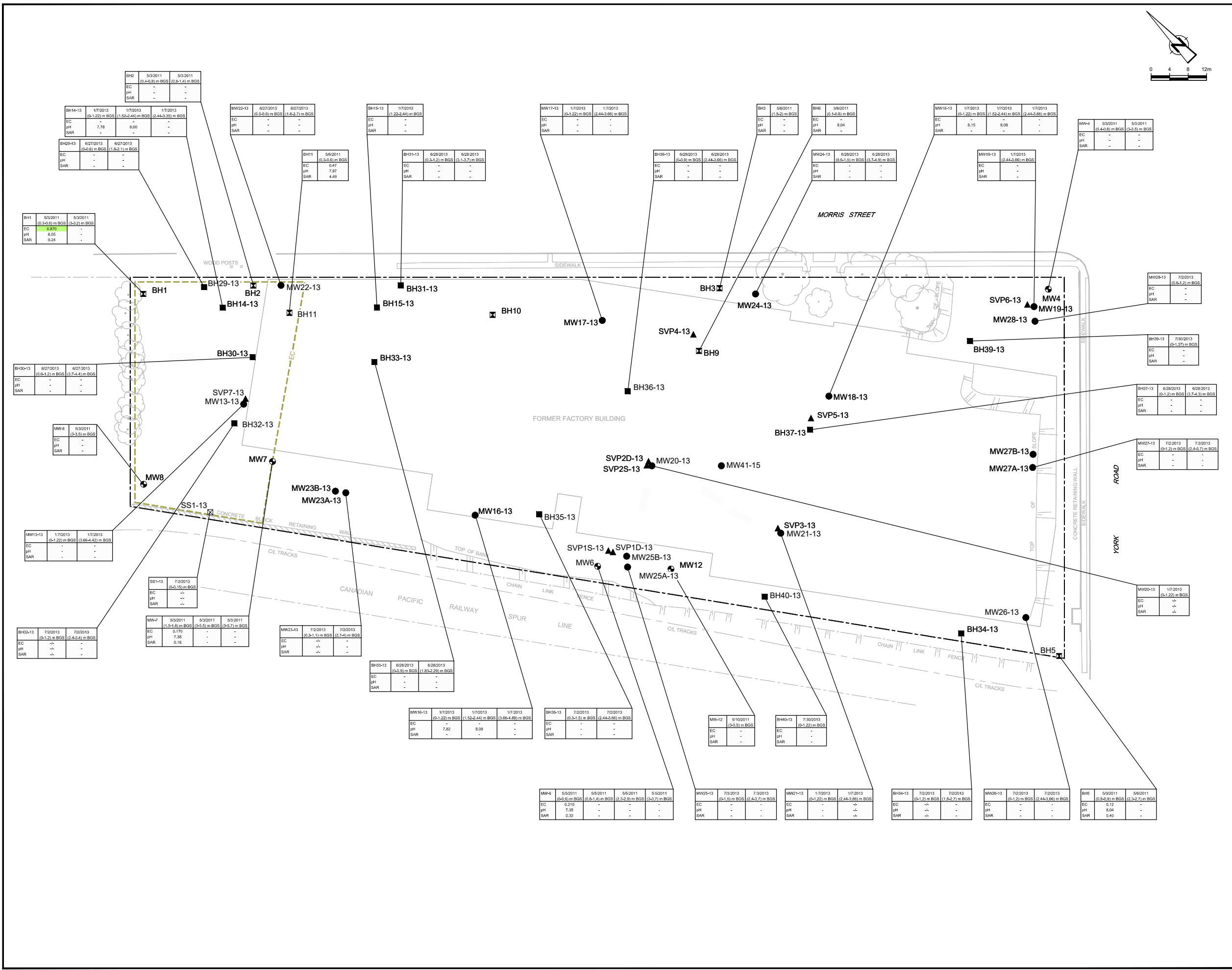
139 MORRIS STREET HOLDINGS LTD.
GUELPH, ONTARIO
PHASE TWO ENVIRONMENTAL SITE ASSESSMENT

HORIZONTAL EXTENT OF SOIL METALS IMPACTS

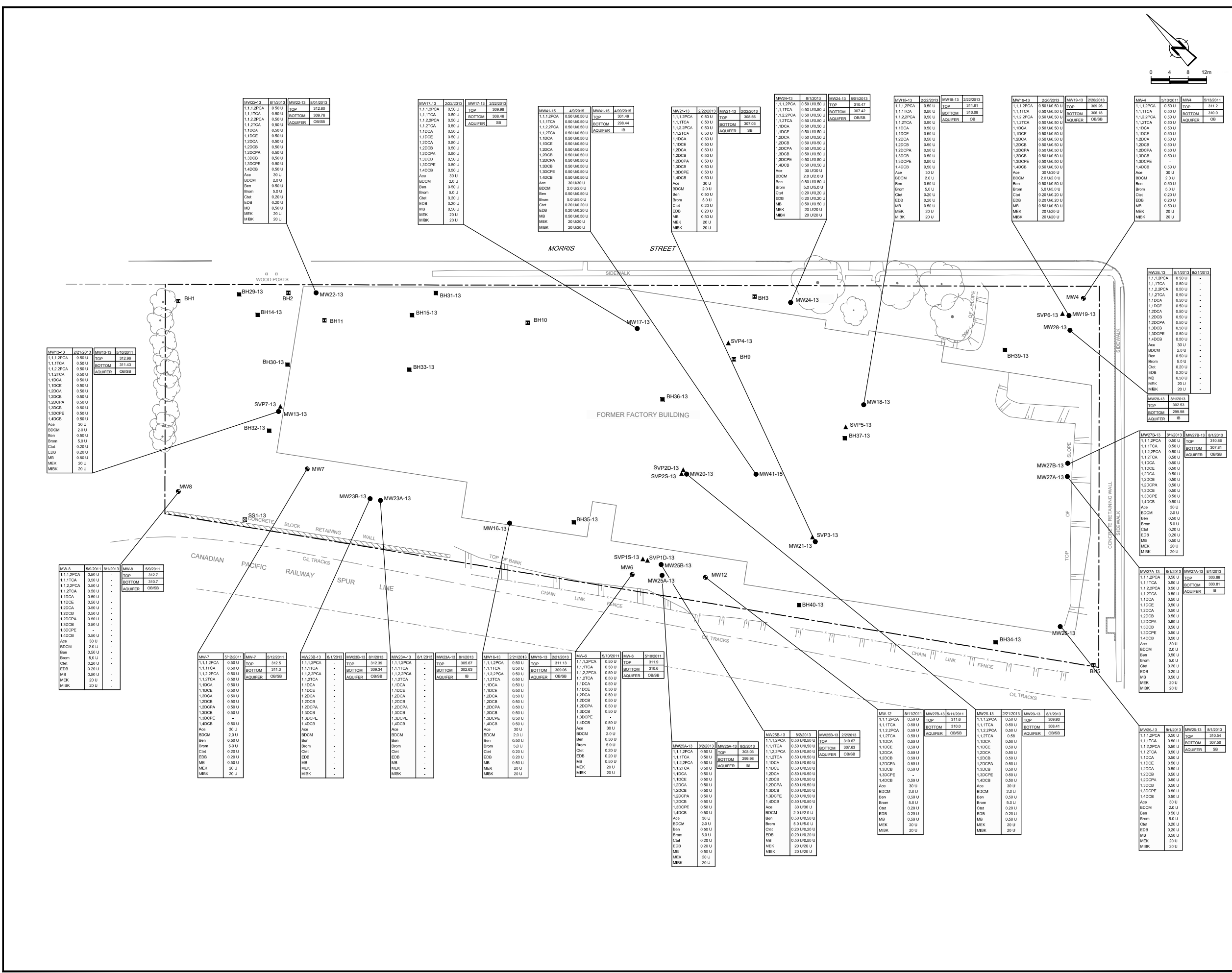


Source Reference: BSRAD ONTARIO LAND SURVEYORS, TOPOGRAPHIC PLAN OF LOTS 21 TO 26, INCLUDING AN INDUSTRY SITE REGISTERED PLAN 322, CITY OF GUELPH, COUNTY OF WELLINGTON, FEBRUARY 26, 2015

Project Manager: L. SHEPHERD	Reviewed By: A. MOLENHUIS	Date: FEBRUARY 2015
Scale: AS SHOWN	Project N°: 78674-06	Report N°: 003
		Drawing N°: figure 9g



Sample Location	Sample Date	Sample Depth	Parameter	Result (ug/g)
MW-4	5/3/2011	(3-3.5) m BGS	MC	0.050 U
			PCE	0.050 U
			T	0.20 U
			TCE	0.050 U



MOE TABLE 2 STANDARDS

Chemical Name	Abbreviation	MOE Table 2 Standard
1,1,1-Trichloroethane	1,1,1-TCA	2.5
1,1,2-Trichloroethane	1,1,2-TCA	200
1,1,2,2-Tetrachloroethane	1,1,2,2-TCFA	1
1,1,2-Trichloroethane	1,1,2-TCFA	5
1,1-Dichloroethane	1,1-DCE	1.6
1,2-Dichloroethane (Ethylene dibromide)	EDB	0.2
1,2-Dichloroethane	1,2-DCE	3
1,2-Dichloroethane	1,2-DCEA	1.6
1,2-Dichloropropane	1,2-DCPA	5
1,3-Dichlorobenzene	1,3-DCB	59
1,3-Dichloropropane	1,3-DCE	0.5
1,4-Dichlorobenzene	1,4-DCB	1
2,6-Dichloro (Methyl ethyl ketone) (MEK)	MEK	1800
1,1,1-Trichloroethane	1,1,1-TCA	2.5
1,1,2-Trichloroethane	1,1,2-TCA	200
1,1,2,2-Tetrachloroethane	1,1,2,2-TCFA	1
1,1,2-Trichloroethane	1,1,2-TCFA	5
1,1-Dichloroethane	1,1-DCE	1.6
1,2-Dichloroethane (Ethylene dibromide)	EDB	0.2
1,2-Dichloroethane	1,2-DCE	3
1,2-Dichloroethane	1,2-DCEA	1.6
1,2-Dichloropropane	1,2-DCPA	5
1,3-Dichlorobenzene	1,3-DCB	59
1,3-Dichloropropane	1,3-DCE	0.5
1,4-Dichlorobenzene	1,4-DCB	1
2,6-Dichloro (Methyl ethyl ketone) (MEK)	MEK	1800

NOTE: TABLE 2: FULL DEPTH GENERIC SITE CONDITION STANDARDS IN A POTABLE GROUNDWATER CONDITION, RESIDENTIAL/PARKLAND INSTITUTIONAL PROPERTY USE, COARSE GRAINED SOIL (MOE, 2011).

SCALE VERIFICATION
THIS BAR MEASURES 50mm ON ORIGINAL. ADJUST SCALE ACCORDINGLY.

139 MORRIS STREET HOLDINGS LTD. GUELPH, ONTARIO

PHASE TWO ENVIRONMENTAL SITE ASSESSMENT

HORIZONTAL EXTENT OF GROUNDWATER VOC IMPACTS

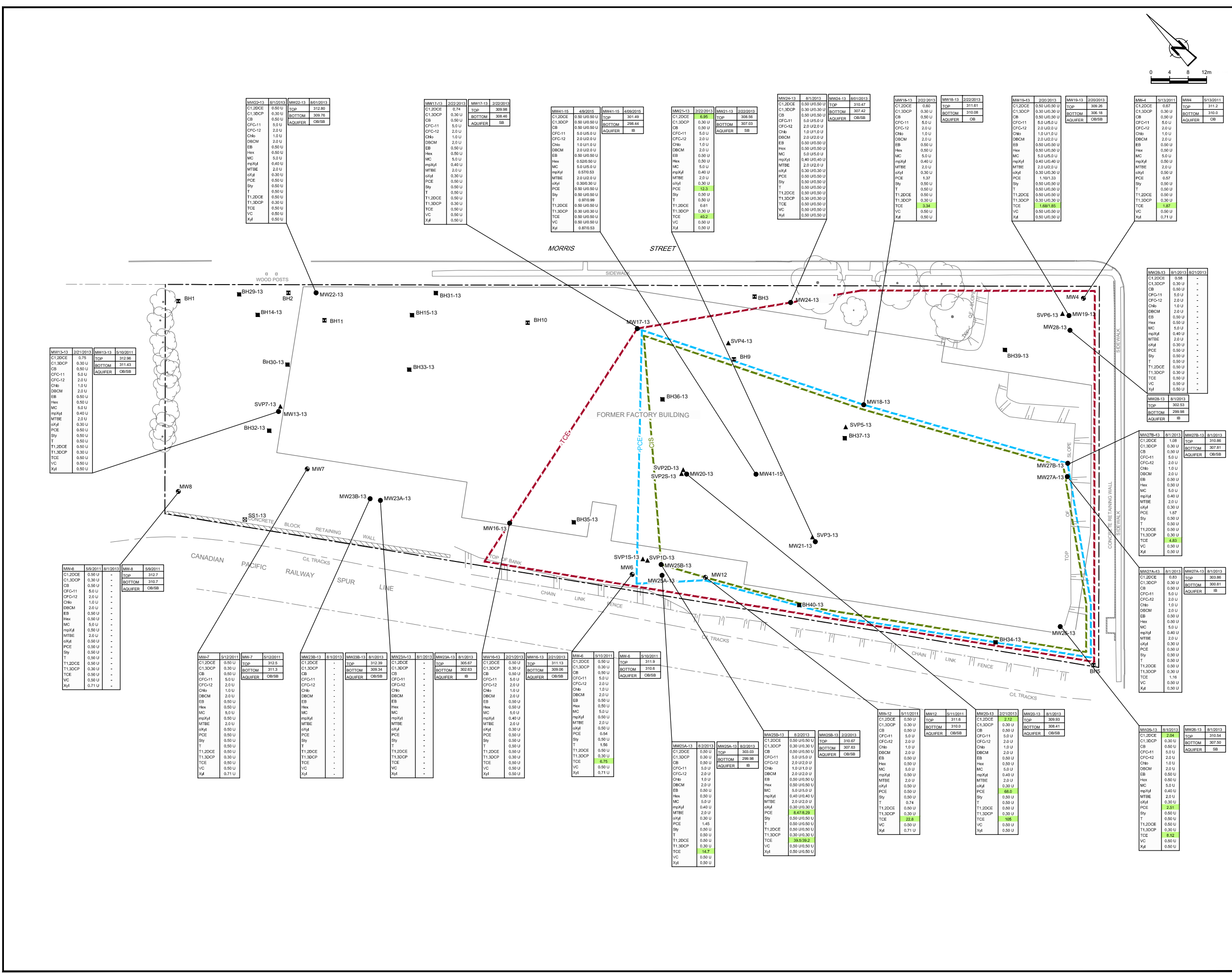
CONESTOGA-ROVERS & ASSOCIATES

Source Reference: BSRAD ONTARIO LAND SURVEYORS, TOPOGRAPHIC PLAN OF LOTS 21 TO 26, INCLUDING AND FACTORY SITE REGISTERED PLAN 322, CITY OF GUELPH, COUNTY OF WELLINGTON, FEBRUARY 06, 2015

Project Manager: L. SHEPHERD
Reviewed By: A. MOLENHUIS
Date: FEBRUARY 2015

Scale: AS SHOWN
Project N^o: 78674-06
Report N^o: 003
Drawing N^o: figure 10a

8764-06(003)GN-WA030 APR 15/2015



LEGEND

- PROPERTY BOUNDARY
- FENCE LINE
- FORMER BUILDING FOOTPRINT
- HISTORIC MONITORING WELL LOCATION
- HISTORIC BOREHOLE LOCATION
- CRA MONITORING WELL LOCATION
- CRA BOREHOLE LOCATION
- CRA SOIL VAPOUR PROBE LOCATION
- CRA SURFICIAL SOIL SAMPLE LOCATION
- μg/L MICROGRAMS PER LITRE
- 4.942 RESULT/DUPLICATE RESULT
- U EXCEEDANCE OF THE MOE TABLE 2 STANDARD
- DETECTION LIMIT

SAMPLE LOCATION

MW20-13 8/1/2013 2/12/2013
 SS-1,2-Dichloroethene 2.12
 Tetrachloroethene 105
 RESULT (μg/L)

SAMPLE LOCATION

MW22-13 8/1/2013 3/12/2011
 TOP 312.80
 BOTTOM 309.76
 AQUIFER OBS/SB
 ABOVE SEA LEVEL
 BOTTOM OF WELL SCREEN IN METERS
 ABOVE SEA LEVEL

OB - OVERBURDEN
 SB - SHALLOW BEDROCK
 IB - INTERMEDIATE BEDROCK

MOE TABLE 2 STANDARDS

Chemical Name	Abbreviation	MOE Table 2 Standard
Chlorobenzene	CB	30
Chloroform (Trichloroethane)	Chb	2.4
cis-1,2-Dichloroethane	CL2DCE	1.6
cis-1,3-Dichloropropene	CL3DCP	25
Dibromochloroethane	DBCM	2.0
Dichlorodifluoroethane (CFC-113)	CFC-12	500
Dichlorobenzene	EB	2.4
Hexane	Hex	50
Methyl Ethyl Ketone	MEK	15
Methylene chloride	MC	50
Naphthalene	Naph	5.0
Styrene	Sty	5.4
Tetrachloroethene	TCE	1.6
Toluene	T	24
trans-1,2-Dichloroethene	TL2DCE	1.6
trans-1,3-Dichloropropene	TL3DCP	1.6
Trichloroethene	TCE	1.6
Trichloroethylene (PCE-11)	VC	0.5
Vinyl chloride	VC	0.5
Xylenes (Total)	Xyl	300

NOTE:
 TABLE 2: FULL DEPTH GENERIC SITE CONDITION STANDARDS IN A POTABLE GROUNDWATER CONDITION, RESIDENTIAL/PARKLAND INSTITUTIONAL PROPERTY USE, COARSE GRAINED SOIL (MOE, 2011).

SCALE VERIFICATION

THIS BAR MEASURES 50mm ON ORIGINAL. ADJUST SCALE ACCORDINGLY.

**139 MORRIS STREET HOLDINGS LTD.
 GUELPH, ONTARIO**

PHASE TWO ENVIRONMENTAL SITE ASSESSMENT

**HORIZONTAL EXTENT OF GROUNDWATER
 VOC IMPACTS CONTINUED**

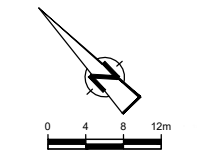
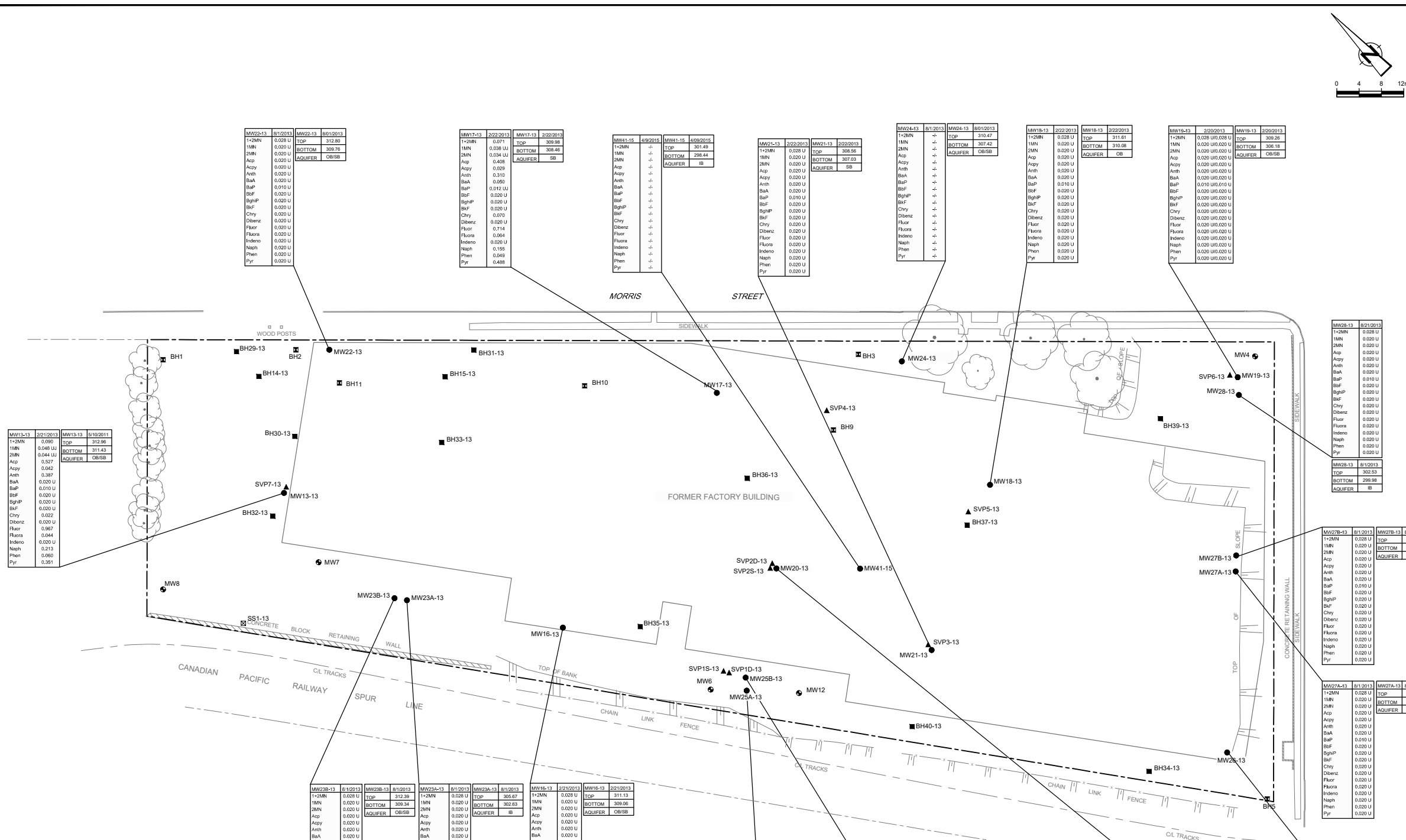
CONESTOGA-ROVERS & ASSOCIATES

Source Reference: BSRAD ONTARIO LAND SURVEYORS, TOPOGRAPHIC PLAN OF LOTS 21 TO 26, INCLUDING AND FACTORY SITE REGISTERED PLAN 322, CITY OF GUELPH, COUNTY OF WELLINGTON, FEBRUARY 08, 2015

Project Manager:	Reviewed By:	Date:
L. SHEPHERD	A. MOLENHUIS	FEBRUARY 2015
Scale:	Project N°:	Report N°:
AS SHOWN	78674-06	003

Drawing N°:
figure 10b

8764-06(003)GN-WA031 APR 15/2015



LEGEND

- PROPERTY BOUNDARY
- FENCE LINE
- - - FORMER BUILDING FOOTPRINT
- HISTORIC MONITORING WELL LOCATION
- HISTORIC BOREHOLE LOCATION
- CRA MONITORING WELL LOCATION
- CRA BOREHOLE LOCATION
- ▲ CRA SOIL VAPOUR PROBE LOCATION
- CRA SURFICIAL SOIL SAMPLE LOCATION
- ▲ MICROGRAMS PER LITRE
- RESULT/DUPLICATE RESULT
- EXCEEDANCE OF THE MOE TABLE 2 STANDARD
- DETECTION LIMIT

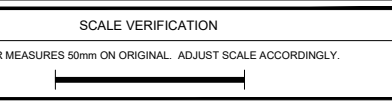
SAMPLE LOCATION

MW20-13	8/1/2013	2-12	RESULT (µg/L)
Sp. 1,2-Dichloroethene			
Trichloroethene			105
			PARAMETER

MOE TABLE 2 STANDARDS

Chemical Name	Abbreviation	MCE Table 2 Standard
1,2-Methoxyethane	1,2ME	3.2
1-Methylpiperazine	1MP	3.2
2-Methylpiperazine	2MP	3.2
Acetylbenzene	AcB	4.5
Acrylonitrile	AcN	1
Anthracene	Anth	2.4
Benzofuran	BaF	0.5
Benzofuran, 2,3-epoxide	BaFep	0.5
Benzofuran, 2,3-epoxide, 2,3-diol	BaFepd	0.5
Chrysene	Chry	0.5
Dibenzofuran	DiBaF	0.2
Fluoranthene	Fluor	0.45
Fluorene	Fluor	1.29
Indeno 1,2,3-cd-pyrene	Indeno	0.2
Naphthalene	Naph	11
Phenanthrene	Phen	1
Pyrene	Pyr	4.1

NOTE: TABLE 2: FULL DEPTH GENERIC SITE CONDITION STANDARDS IN A POTABLE GROUNDWATER CONDITION, RESIDENTIAL/PARKLAND INSTITUTIONAL PROPERTY USE, COARSE GRAINED SOIL (MCE, 2011).

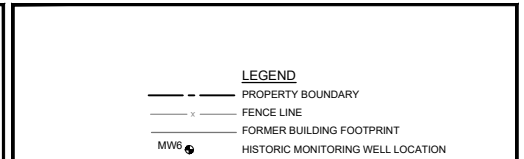
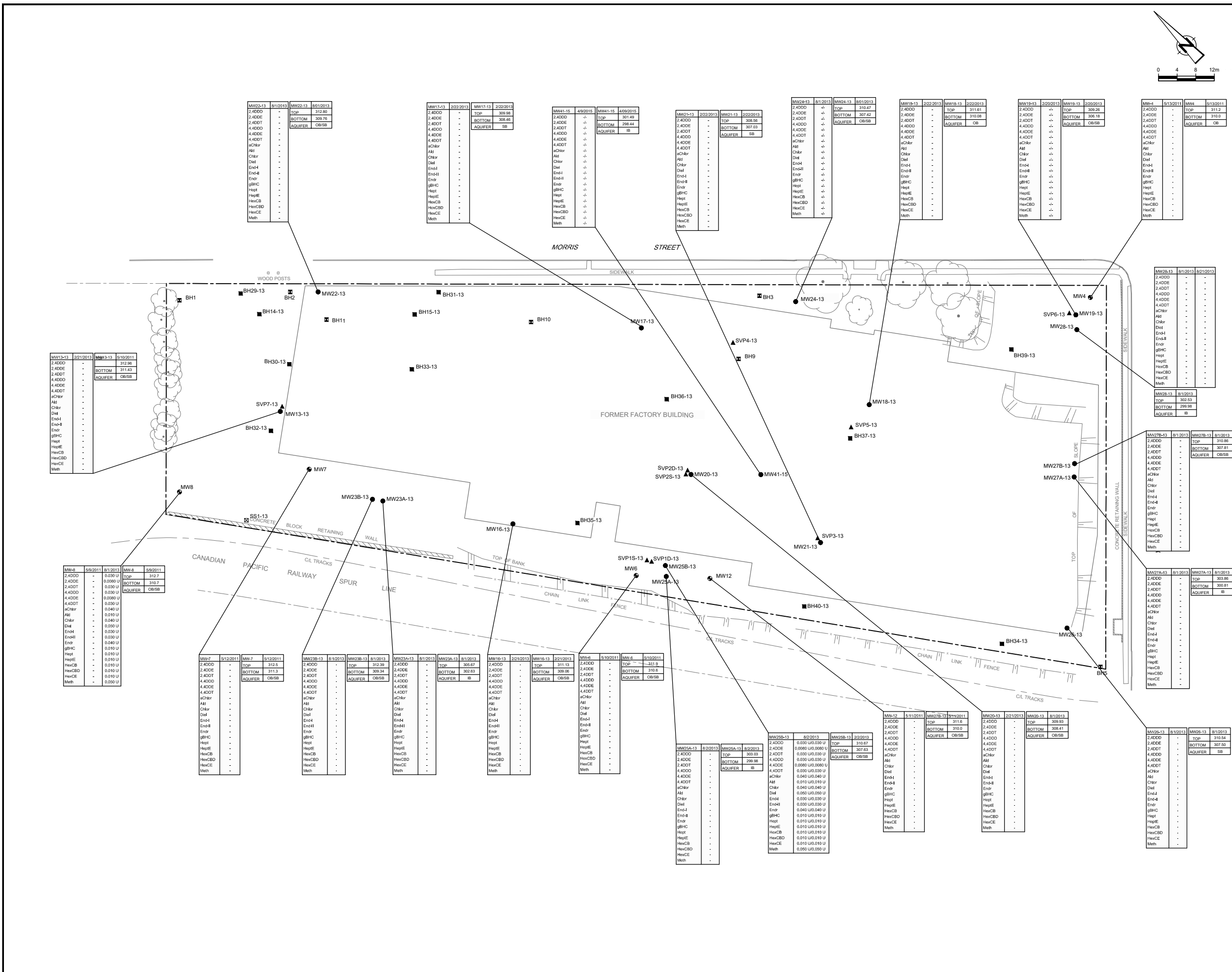


139 MORRIS STREET HOLDINGS LTD.
GUELPH, ONTARIO
PHASE TWO ENVIRONMENTAL SITE ASSESSMENT
HORIZONTAL EXTENT OF GROUNDWATER PAH IMPACTS



Source Reference: BSRAD ONTARIO LAND SURVEYORS, TOPOGRAPHIC PLAN OF LOTS 21 TO 26, INCLUDING AND FACTORY SITE REGISTERED PLAN 32, CITY OF GUELPH, COUNTY OF WELLINGTON, FEBRUARY 06, 2015

Project Manager:	Reviewed By:	Date:
L. SHEPHERD	A. MOLENHUIS	FEBRUARY 2015
Scale:	Project N°:	Report N°:
AS SHOWN	78674-06	003
		Drawing N°:
		figure 10c



LEGEND

- PROPERTY BOUNDARY
- - - FENCE LINE
- - - FORMER BUILDING FOOTPRINT
- HISTORIC MONITORING WELL LOCATION
- HISTORIC BOREHOLE LOCATION
- CRA MONITORING WELL LOCATION
- CRA BOREHOLE LOCATION
- ▲ CRA SOIL VAPOUR PROBE LOCATION
- CRA SURFICIAL SOIL SAMPLE LOCATION
- μg/L MICROGRAMS PER LITRE
- RESULT/DUPLICATE RESULT
- EXCEEDANCE OF THE MOE TABLE 2 STANDARD
- u DETECTION LIMIT

SAMPLE LOCATION

MW20-13	2/12/2013	2.12	105
Top	312.86	312.86	105
Bottom	307.76	307.76	105
Aquifer	OB/SB		

SAMPLE DATE
2/12/2013

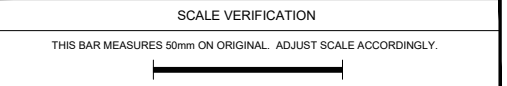
RESULT (μg/L)
105

PARAMETER
Top of well screen in meters above sea level
Bottom of well screen in meters above sea level
OB - OVERBURDEN
SB - SHALLOW BEDROCK
IB - INTERMEDIATE BEDROCK

MOE TABLE 2 STANDARDS

Chemical Name	Abbreviation	MOE Table 2 Standard
2,4-DDE	2,4DDE	-
2,4-DDT	2,4DDT	-
4,4-DDE	4,4DDE	10
4,4-DDT	4,4DDT	2.8
Aldrin	Alr	0.35
alpha-Chlordane	αChl	0.35
Chlordane technical	Chl	7
Dieldrin	Dld	0.35
Endosulfan I	End-I	1.5
Endosulfan II	End-II	1.5
Endrin	End	0.45
gamma-BHC (lindane)	γBHC	1.2
Heptachlor	Hept	1.5
Heptachlor epoxide	HeptE	0.45
Hexachlorobenzene	HexCB	1
Hexachlorobutadiene	HexCBD	0.04
Hexachlorocyclopentadiene	HexCCD	1.1
Methoxychlor	Meth	0.5

NOTE:
TABLE 2: FULL DEPTH GENERIC SITE CONDITION STANDARDS IN A POTABLE GROUNDWATER CONDITION, RESIDENTIAL/PARKLAND INSTITUTIONAL PROPERTY USE, COARSE GRAINED SOIL (MOE, 2011).



**139 MORRIS STREET HOLDINGS LTD.
GUELPH, ONTARIO**

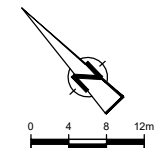
PHASE TWO ENVIRONMENTAL SITE ASSESSMENT

**HORIZONTAL EXTENT OF GROUNDWATER
PESTICIDE IMPACTS**

CRA CONESTOGA-ROVERS & ASSOCIATES

Source Reference: BSRAD ONTARIO LAND SURVEYORS, TOPOGRAPHIC PLAN OF LOTS 21 TO 26, INCLUDING AND FACTORY SITE REGISTERED PLAN 322, CITY OF GUELPH, COUNTY OF WELLINGTON, FEBRUARY 06, 2013

Project Manager: L. SHEPHERD	Reviewed By: A. MOLENHUIS	Date: FEBRUARY 2015
Scale: AS SHOWN	Project N°: 78674-06	Report N°: 003
		Drawing N°: figure 10d



LEGEND

- PROPERTY BOUNDARY
- - - FENCE LINE
- - - FORMER BUILDING FOOTPRINT
- HISTORIC MONITORING WELL LOCATION
- HISTORIC BOREHOLE LOCATION
- MW13-13 CRA MONITORING WELL LOCATION
- BH14-13 CRA BOREHOLE LOCATION
- ▲ SVP3-13 CRA SOIL VAPOUR PROBE LOCATION
- SS1-13 CRA SURFICIAL SOIL SAMPLE LOCATION
- μg/L MICROGRAMS PER LITRE
- 4.942 RESULT/DUPLICATE RESULT
- u EXCEEDANCE OF THE MOE TABLE 2 STANDARD
- DETECTION LIMIT

SAMPLE LOCATION

MW20-13	2/21/2013	2-12	RESULT (μg/L)
Ph-1,2-Dichlorobenzene			
Trichlorobenzene			105

PARAMETER

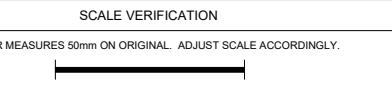
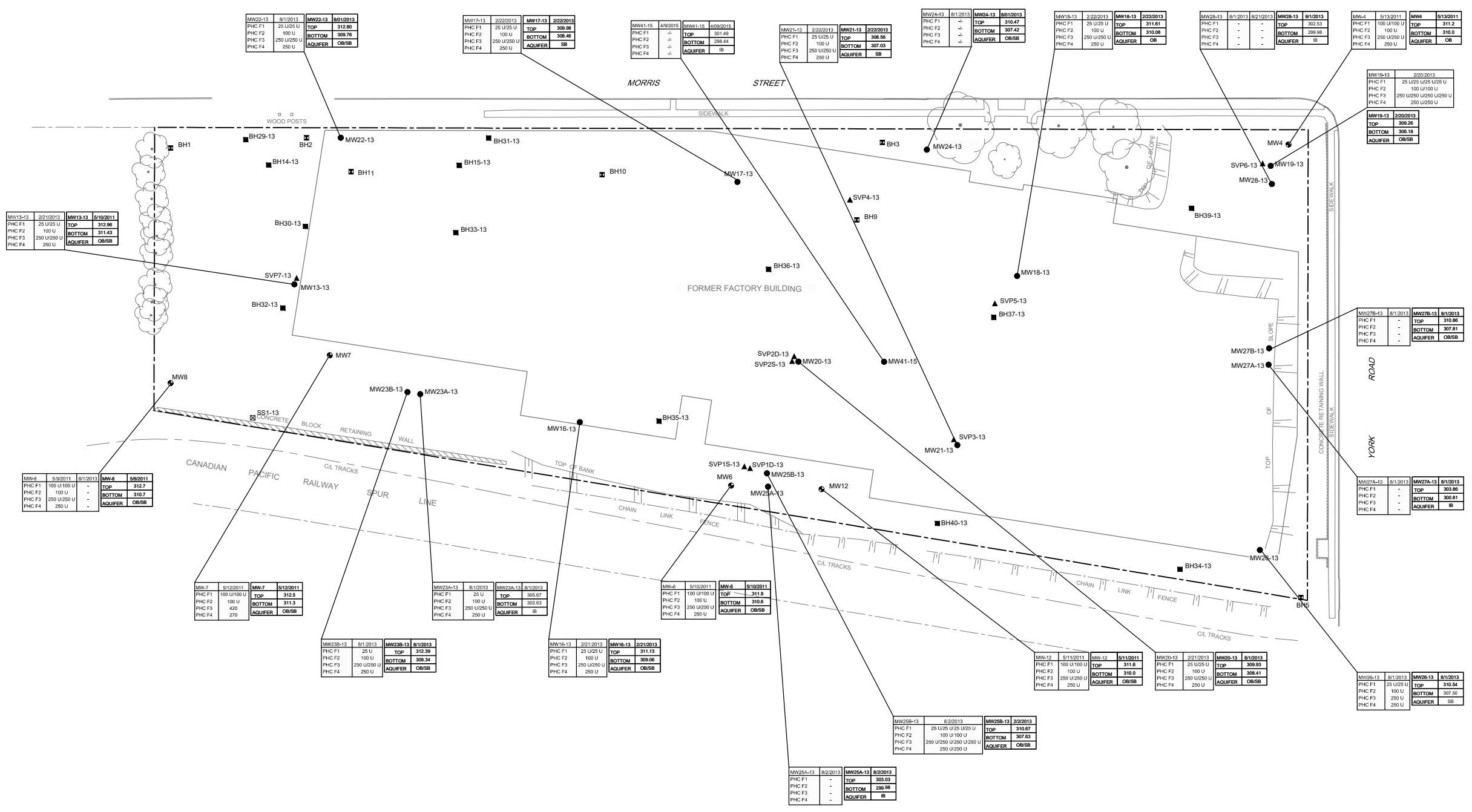
SAMPLE LOCATION

MW22-13	8/1/2013	312.86	TOP OF WELL SCREEN IN METERS ABOVE SEA LEVEL
		309.76	BOTTOM OF WELL SCREEN IN METERS ABOVE SEA LEVEL
		OB/SB	OB - OVERBURDEN
			SB - SHALLOW BEDROCK
			IB - INTERMEDIATE BEDROCK

MOE TABLE 2 STANDARDS

Chemical Name	Abbreviation	MOE Table 2 Standard
Petroleum hydrocarbons F1 (C2-C10)	PHC F1	750
Petroleum hydrocarbons F2 (C10-C16)	PHC F2	150
Petroleum hydrocarbons F3 (C16-C34)	PHC F3	500
Petroleum hydrocarbons F4 (C34-C50)	PHC F4	500

NOTE:
 TABLE 2: FULL DEPTH GENERIC SITE CONDITION STANDARDS IN A POTABLE GROUNDWATER CONDITION, RESIDENTIAL/PARKLAND INSTITUTIONAL PROPERTY USE, COARSE GRAINED SOIL (MOE, 2011).



**139 MORRIS STREET HOLDINGS LTD.
 GUELPH, ONTARIO**

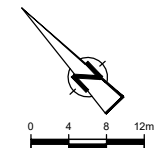
PHASE TWO ENVIRONMENTAL SITE ASSESSMENT

**HORIZONTAL EXTENT OF GROUNDWATER
 PHC IMPACTS**

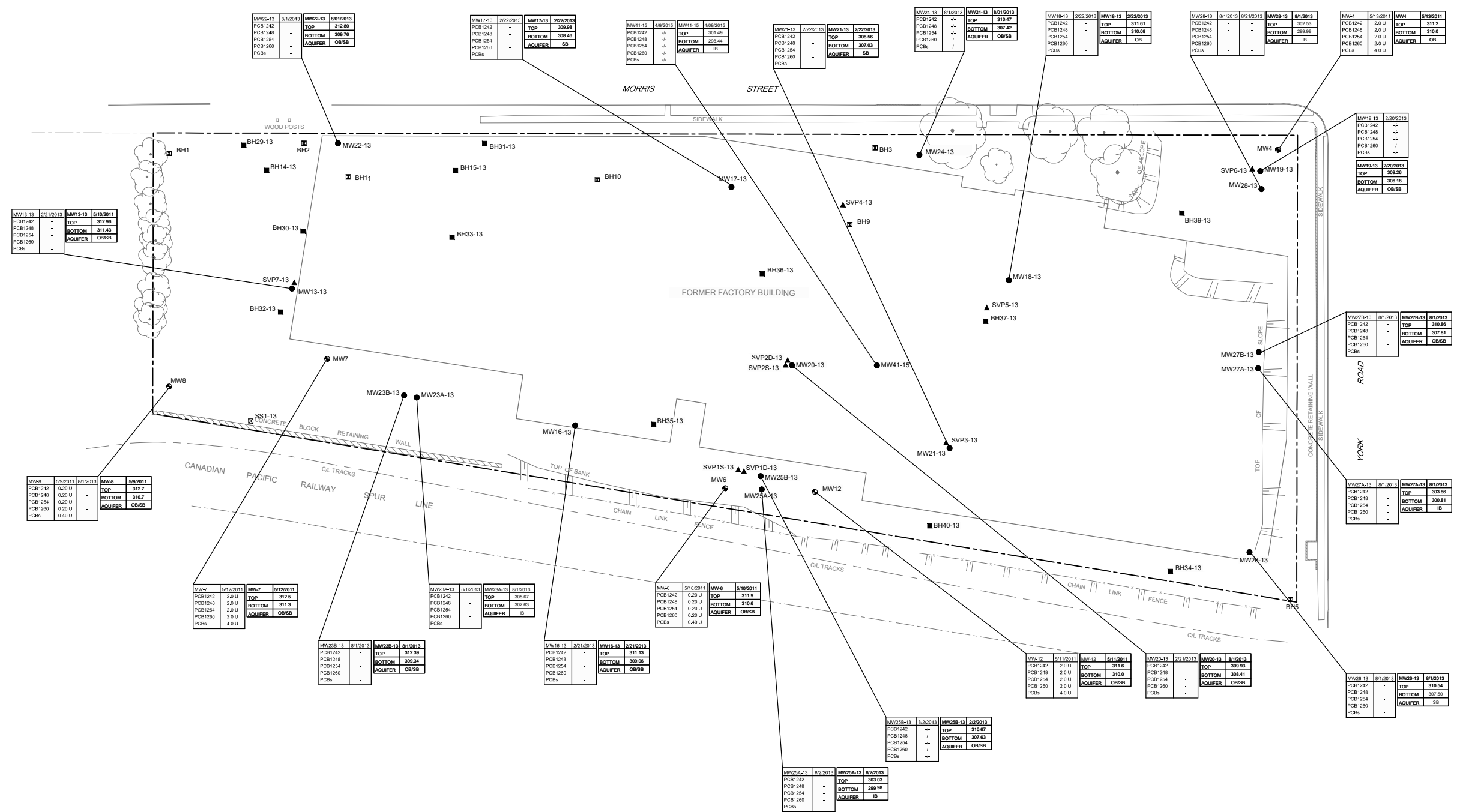
CRA CONESTOGA-ROVERS & ASSOCIATES

Source Reference: BSRAD ONTARIO LAND SURVEYORS, TOPOGRAPHIC PLAN OF LOTS 21 TO 36, INCLUDING AND FACTORY SITE REGISTERED PLAN 322, CITY OF GUELPH, COUNTY OF WELLINGTON, FEBRUARY 06, 2013

Project Manager: L. SHEPHERD	Reviewed By: A. MOLENHUIS	Date: FEBRUARY 2015
Scale: AS SHOWN	Project N°: 78674-06	Report N°: 003
		Drawing N°: figure 10e



- LEGEND**
- PROPERTY BOUNDARY
 - - - FENCE LINE
 - - - FORMER BUILDING FOOTPRINT
 - HISTORIC MONITORING WELL LOCATION
 - ⊠ HISTORIC BOREHOLE LOCATION
 - MW13-13 CRA MONITORING WELL LOCATION
 - ⊠ BH14-13 CRA BOREHOLE LOCATION
 - ▲ SVP3-13 CRA SOIL VAPOUR PROBE LOCATION
 - ⊠ SS1-13 CRA SURFICIAL SOIL SAMPLE LOCATION
 - μg/L MICROGRAMS PER LITRE
 - 4.942 RESULT/DUPLICATE RESULT
 - u EXCEEDANCE OF THE MOE TABLE 2 STANDARD
 - DETECTION LIMIT



SAMPLE LOCATION

MW20-13	2/21/2013	2.12	RESULT (μg/L)
		105	PARAMETER

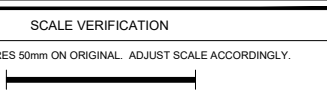
SAMPLE LOCATION

MW22-13	8/1/2013	312.80	TOP OF WELL SCREEN IN METERS ABOVE SEA LEVEL
MW22-13	8/1/2013	308.45	BOTTOM OF WELL SCREEN IN METERS ABOVE SEA LEVEL
MW22-13	8/1/2013	OB	OB - OVERBURDEN
MW22-13	8/1/2013	SB	SB - SHALLOW BEDROCK
MW22-13	8/1/2013	IB	IB - INTERMEDIATE BEDROCK

MOE TABLE 2 STANDARDS

Chemical Name	Abbreviation	MOE Table 2 Standard
Arochlor 1248 (PCB-1248)	PCB1248	3
Arochlor 1254 (PCB-1254)	PCB1254	3
Arochlor 1260 (PCB-1260)	PCB1260	3
Total PCBs	PCBs	3

NOTE:
TABLE 2: FULL DEPTH GENERIC SITE CONDITION STANDARDS IN A POTABLE GROUNDWATER CONDITION, RESIDENTIAL/PARKLAND INSTITUTIONAL PROPERTY USE, COARSE GRAINED SOIL (MOE, 2011).



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GUELPH, ONTARIO**

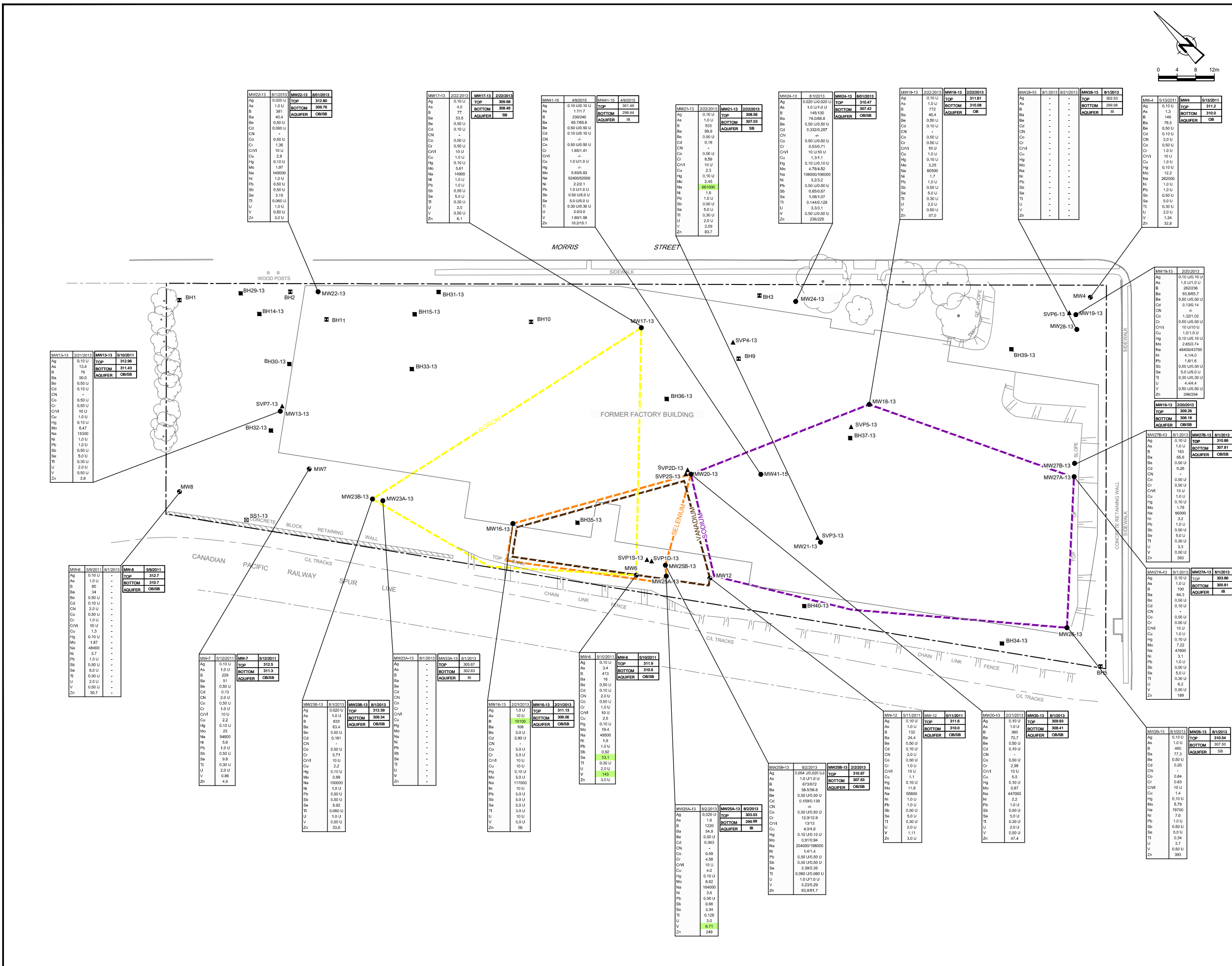
PHASE TWO ENVIRONMENTAL SITE ASSESSMENT

**HORIZONTAL EXTENT OF GROUNDWATER
PCB IMPACTS**



Source Reference: BSR&D ONTARIO LAND SURVEYORS, TOPOGRAPHIC PLAN OF LOTS 21 TO 26, INCLUDING AND FACTORY SITE REGISTERED PLAN 322, CITY OF GUELPH, COUNTY OF WELLINGTON, FEBRUARY 06, 2013

Project Manager: L. SHEPHERD	Reviewed By: A. MOLENHUIS	Date: FEBRUARY 2015
Scale: AS SHOWN	Project N°: 78674-06	Report N°: 003
		Drawing N°: figure 10f



LEGEND

- PROPERTY BOUNDARY
- FENCE LINE
- FORMER BUILDING FOOTPRINT
- HISTORIC MONITORING WELL LOCATION
- CRA BOREHOLE LOCATION
- CRA MONITORING WELL LOCATION
- CRA SOIL VAPOUR PROBE LOCATION
- CRA SURFICIAL SOIL SAMPLE LOCATION
- MICROGRAMS PER LITRE
- RESULT/DUPLICATE RESULT
- EXCEEDANCE OF THE MOE TABLE 2 STANDARD
- DETECTION LIMIT

MOE TABLE 2 STANDARDS

Chemical Name	Abbreviation	MCE Table 2 Standard
Arsenic	As	5
Barium	Ba	1000
Beryllium	Be	4
Boron	B	5000
Boron (hot water extractable)	B HWS	-
Cadmium	Cd	2.7
Chromium	Cr	50
Chromium VI (hexavalent)	CrVI	25
Cobalt	Co	3.8
Copper	Cu	87
Lead	Pb	55
Mercury	Hg	0.29
Molybdenum	Mo	100
Nickel	Ni	100
Selenium	Se	10
Silver	Ag	1.5
Sodium	Na	40000
Thallium	Tl	20
Uranium	U	25
Vanadium	V	6.2
Zinc	Zn	1000

MOE TABLE 2 STANDARDS

NOTE: FULL DEPTH GENERIC SITE CONDITION STANDARDS IN A POTABLE GROUNDWATER CONDITION, RESIDENTIAL/PARKLAND INSTITUTIONAL PROPERTY USE, COARSE GRAINED SOIL (MOE, 2011).

EXTENT OF BORON IMPACTS (Yellow dashed line)

EXTENT OF SELENIUM IMPACTS (Orange dashed line)

EXTENT OF VANADIUM IMPACTS (Purple dashed line)

EXTENT OF SODIUM IMPACTS (Green dashed line)

SCALE VERIFICATION

THIS BAR MEASURES 50mm ON ORIGINAL. ADJUST SCALE ACCORDINGLY.

139 MORRIS STREET HOLDINGS LTD. GUELPH, ONTARIO

PHASE TWO ENVIRONMENTAL SITE ASSESSMENT

HORIZONTAL EXTENT OF GROUNDWATER METALS IMPACTS

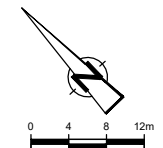
CRA CONESTOGA-ROVERS & ASSOCIATES

Source Reference: BSRAD ONTARIO LAND SURVEYORS, TOPOGRAPHIC PLAN OF LOTS 21 TO 26, INCLUDING AND FACTORY SITE REGISTERED PLAN 322, CITY OF GUELPH, COUNTY OF WELLINGTON, FEBRUARY 06, 2015.

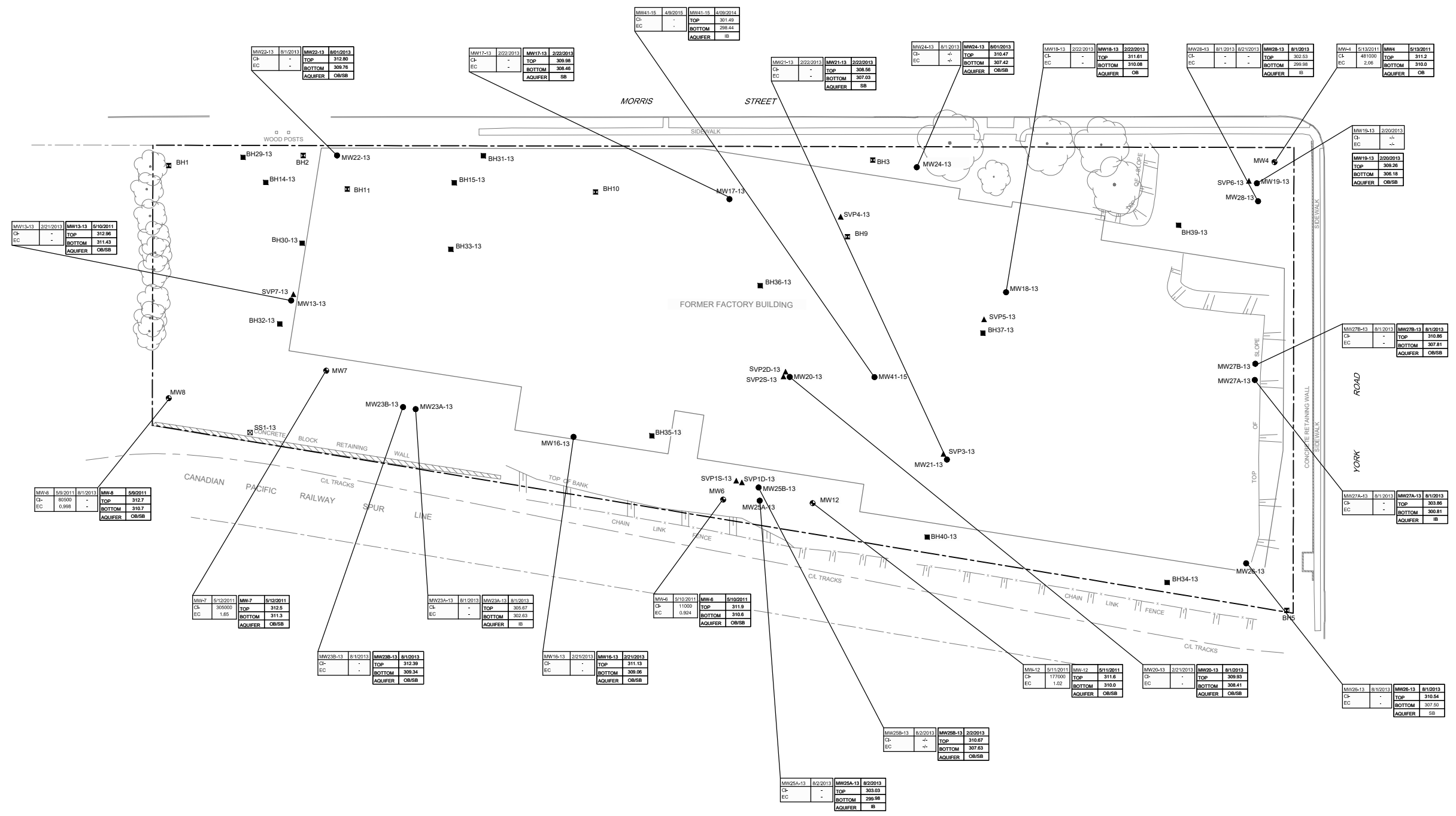
Project Manager: L. SHEPHERD | Reviewed By: A. MOLENHUIS | Date: FEBRUARY 2015

Scale: AS SHOWN | Project N#: 78674-06 | Report N#: 003 | Drawing N#: figure 10g

8674-06(003)GN-WA036 APR 15/2015



- LEGEND**
- PROPERTY BOUNDARY
 - - - FENCE LINE
 - - - FORMER BUILDING FOOTPRINT
 - HISTORIC MONITORING WELL LOCATION
 - HISTORIC BOREHOLE LOCATION
 - CRA MONITORING WELL LOCATION
 - CRA BOREHOLE LOCATION
 - ▲ CRA SOIL VAPOUR PROBE LOCATION
 - ▲ CRA SURFICIAL SOIL SAMPLE LOCATION
 - μg/L MICROGRAMS PER LITRE
 - 4.942 RESULT/DUPLICATE RESULT
 - u EXCEEDANCE OF THE MOE TABLE 2 STANDARD
 - u DETECTION LIMIT



SAMPLE LOCATION

MW20-13	2/21/2013	2/21/2013	2/21/2013
Sample Date	Sample Date	Sample Date	Sample Date
Top of Well Screen	2.12	2.12	2.12
Bottom of Well Screen	310.0	310.0	310.0
Parameter	105		

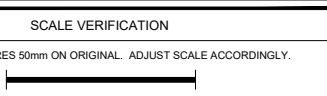
SAMPLE LOCATION

MW22-13	8/1/2013	8/1/2013	8/1/2013
Sample Date	Sample Date	Sample Date	Sample Date
Top of Well Screen	312.80	312.80	312.80
Bottom of Well Screen	308.44	308.44	308.44
Parameter	OB/SB		

MOE TABLE 2 STANDARDS

Chemical Name	Abbreviation	MOE Table 2 Standard
Conductivity	EC	-
pH	pH	-
Chloride	Cl	790000

NOTE:
TABLE 2: FULL DEPTH GENERIC SITE CONDITION STANDARDS IN A POTABLE GROUNDWATER CONDITION, RESIDENTIAL/PARKLAND INSTITUTIONAL PROPERTY USE, COARSE GRAINED SOIL (MOE, 2011).



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GUELPH, ONTARIO**

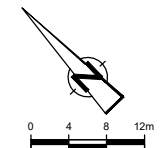
PHASE TWO ENVIRONMENTAL SITE ASSESSMENT

**HORIZONTAL EXTENT OF GROUNDWATER
GENERAL CHEMISTRY IMPACTS**



Source Reference: BSRAD ONTARIO LAND SURVEYORS, TOPOGRAPHIC PLAN OF LOTS 21 TO 26, INCLUDING AND FACTORY SITE REGISTERED PLAN 322, CITY OF GUELPH, COUNTY OF WELLINGTON, FEBRUARY 06, 2013

Project Manager: L. SHEPHERD	Reviewed By: A. MOLENHUIS	Date: FEBRUARY 2015
Scale: AS SHOWN	Project N°: 78674-06	Report N°: 003
		Drawing N°: figure 10h



LEGEND

- PROPERTY BOUNDARY
- FENCE LINE
- FORMER BUILDING FOOTPRINT
- MW8 HISTORIC MONITORING WELL LOCATION
- ⊗ BH5 HISTORIC BOREHOLE LOCATION
- MW13-13 CRA MONITORING WELL LOCATION
- BH32-13 CRA BOREHOLE LOCATION
- ⊗ SS1-13 CRA SURFICIAL SOIL SAMPLE LOCATION
- ▲ SVP7-13 CRA SOIL VAPOUR SAMPLE LOCATION
- ug/m3 MICROGRAMS PER CUBIC METRE
- NE NO EXCEEDANCES
- EXCEEDANCES OF SOIL VAPOUR CRITERIA

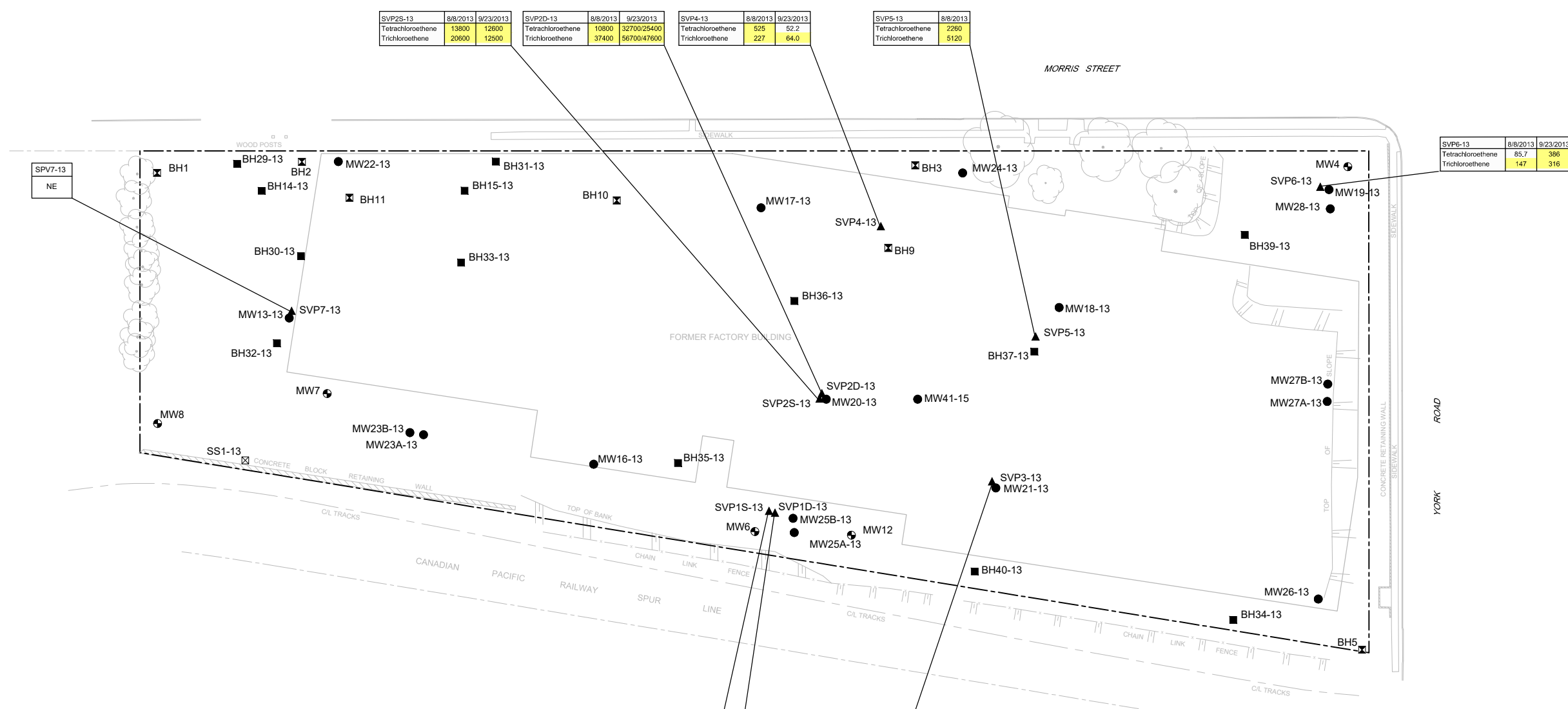
SAMPLE LOCATION

SVP5-13	8/8/2013	SAMPLE DATE
Tetrachloroethene	2260	RESULT (ug/m3)
Trichloroethene	5120	PARAMETER

SOIL VAPOUR STANDARDS *

Parameters	Soil Gas(ug/m3)
Tetrachloroethene	214
Trichloroethene	14

* SOIL VAPOUR CRITERIA BASED ON THE HEALTH BASED INDOOR AIR CRITERIA (RESIDENTIAL) PRESENTED IN MCC'S TER MODIFIED GENERIC RISK ASSESSMENT MODEL DIVIDED BY AN ATTENUATION FACTOR OF 6.02.



SVP2S-13	8/8/2013	9/23/2013
Tetrachloroethene	13800	12600
Trichloroethene	20600	12500

SVP2D-13	8/8/2013	9/23/2013
Tetrachloroethene	10800	32700/25400
Trichloroethene	37400	56700/47600

SVP4-13	8/8/2013	9/23/2013
Tetrachloroethene	525	52.2
Trichloroethene	227	64.0

SVP5-13	8/8/2013
Tetrachloroethene	2260
Trichloroethene	5120

SVP6-13	8/8/2013	9/23/2013
Tetrachloroethene	85.7	386
Trichloroethene	147	316

SVP1S-13	8/8/2013	9/23/2013
Tetrachloroethene	43.2	648
Trichloroethene	4110	2330

SVP1D-13	8/8/2013	9/23/2013
Tetrachloroethene	41.8	600
Trichloroethene	6190	6410

SVP3-13	8/8/2013
Tetrachloroethene	233/238
Trichloroethene	1990/2120

SCALE VERIFICATION

THIS BAR MEASURES 50mm ON ORIGINAL. ADJUST SCALE ACCORDINGLY.

139 MORRIS STREET HOLDINGS LTD.
GUELPH, ONTARIO

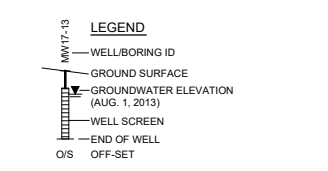
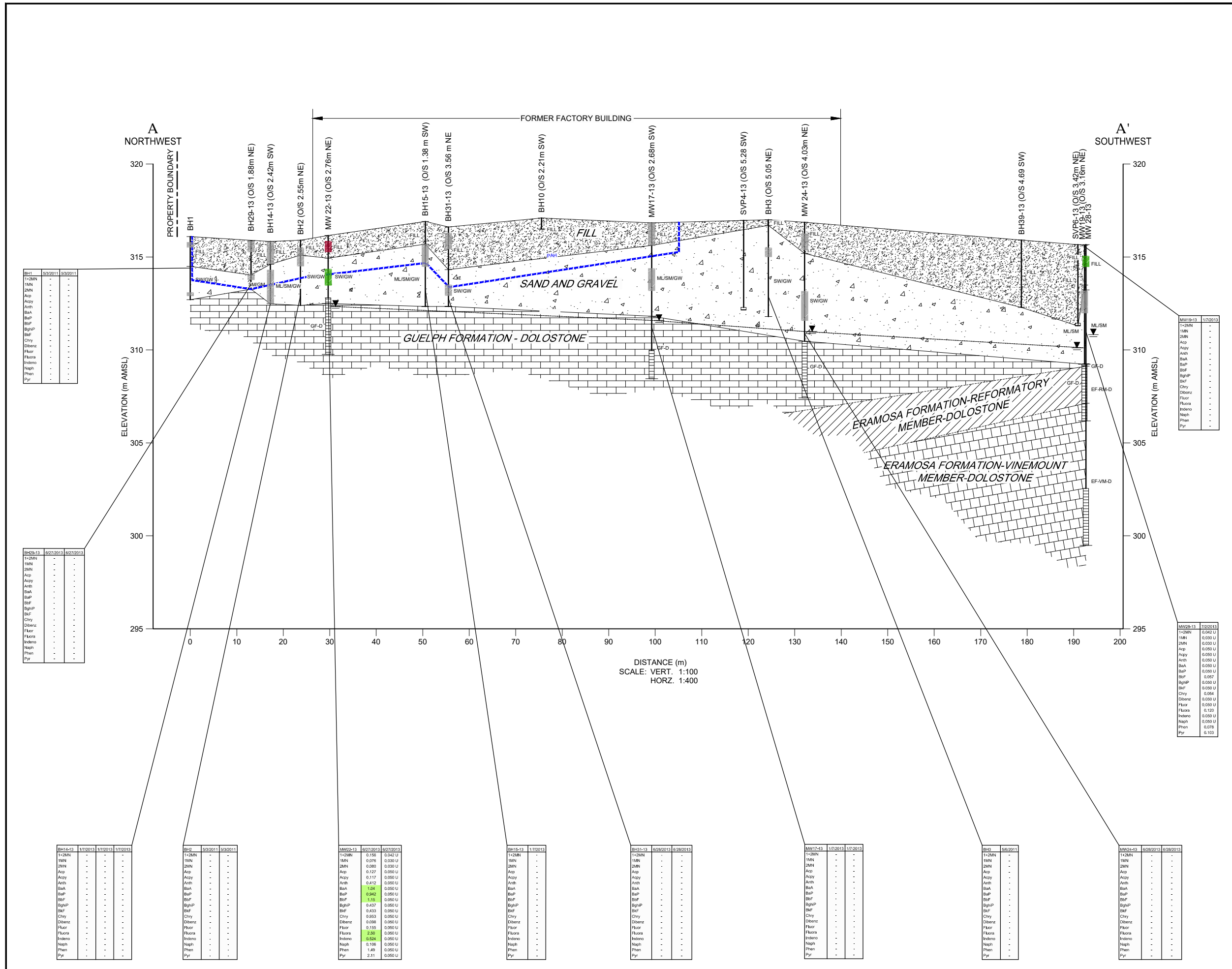
PHASE TWO ENVIRONMENTAL SITE ASSESSMENT

SOIL GAS SAMPLE
EXCEEDANCE SUMMARY

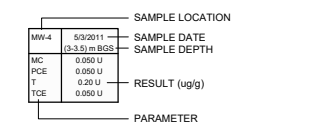


Source Reference: BSRAD ONTARIO LAND SURVEYORS, TOPOGRAPHIC PLAN OF LOTS 21 TO 26 INCLUDING AND FACTORY SITE REGISTERED PLAN 322, CITY OF GUELPH, COUNTY OF WELLINGTON, FEBRUARY 26, 2013

Project Manager:	Reviewed By:	Date:
L. SHEPHERD	A. MOLENHUIS	AUGUST 2013
Scale:	Project N°:	Report N°:
AS SHOWN	78674-06	003
		figure 11



ug/g MICROGRAMS PER GRAM
 m BGS METERS BELOW GROUND SURFACE
 4.9/4.2 RESULT/DUPLICATE RESULT
 EXCEEDANCE OF THE MOE TABLE 2 STANDARD
 J ESTIMATED CONCENTRATION
 U DETECTION LIMIT
 SOIL SAMPLE INTERVAL - NOT ANALYZED
 SOIL SAMPLE INTERVAL - IMPACTED
 SOIL SAMPLE INTERVAL - CLEAN

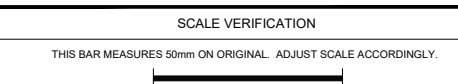


MOE TABLE 2 STANDARDS

Chemical Name	Abbreviation	MOE Table 2 Standard
1,2-Dichloroethane	1,2DCE	0.09
1-Methylpiperazine	1MP	0.99
2-Methylpiperazine	2MP	0.99
Acetophenone	AcP	7.9
Acetylphenylene	AcPh	0.5
Anthracene	Anth	0.67
Benzofluoranthene	BaF	0.5
Benzofluoranthene	BaF	0.5
Benzofluoranthene	BaF	0.78
Benzofluoranthene	BaF	0.78
Benzofluoranthene	BaF	0.78
Chrysene	Chr	7
Dibenzofluoranthene	DibF	0.1
Fluoranthene	Flu	0.69
Fluoranthene	Flu	0.2
Fluoranthene	Flu	0.38
Indeno(1,2,3-cd)pyrene	IndP	0.6
Naphthalene	Naph	0.6
Phenanthrene	Phen	0.2
Pyrene	Pyr	16

NOTE: TABLE 2: FULL DEPTH GENERIC SITE CONDITION STANDARDS IN A POTABLE GROUNDWATER CONDITION, RESIDENTIAL/PARKLAND INSTITUTIONAL PROPERTY USE, COARSE GRAINED SOIL (MOE, 2011).

--- EXTENT OF PAH IMPACTS



139 MORRIS STREET HOLDINGS LTD.
 GUELPH, ONTARIO
 PHASE TWO ENVIRONMENTAL SITE ASSESSMENT
 VERTICAL EXTENT OF SOIL PAH IMPACTS
 GEOLOGIC CROSS-SECTION A-A'



Source Reference:

Project Manager: L. SHEPHERD	Reviewed By: A. MOLENHUIS	Date: FEBRUARY 2015
Scale: AS SHOWN	Project No.: 78674-06	Report No.: 003
		Drawing No.: figure 12c

BH1	9/3/2011	9/3/2011
1,2MN	-	-
1MN	-	-
2MN	-	-
Asp	-	-
AcPh	-	-
Anth	-	-
BaA	-	-
BaF	-	-
BbF	-	-
BbP	-	-
BaP	-	-
Chr	-	-
Dibenz	-	-
Fluor	-	-
Fluora	-	-
Indeno	-	-
Naph	-	-
Phen	-	-
Pyr	-	-

BH14-13	6/27/2013	6/27/2013
1,2MN	-	-
1MN	-	-
2MN	-	-
Asp	-	-
AcPh	-	-
Anth	-	-
BaA	-	-
BaF	-	-
BbF	-	-
BbP	-	-
BaP	-	-
Chr	-	-
Dibenz	-	-
Fluor	-	-
Fluora	-	-
Indeno	-	-
Naph	-	-
Phen	-	-
Pyr	-	-

BH14-13	1/7/2013	1/7/2013	1/7/2013
1,2MN	-	-	-
1MN	-	-	-
2MN	-	-	-
Asp	-	-	-
AcPh	-	-	-
Anth	-	-	-
BaA	-	-	-
BaF	-	-	-
BbF	-	-	-
BbP	-	-	-
BaP	-	-	-
Chr	-	-	-
Dibenz	-	-	-
Fluor	-	-	-
Fluora	-	-	-
Indeno	-	-	-
Naph	-	-	-
Phen	-	-	-
Pyr	-	-	-

BH2	9/3/2011	9/3/2011
1,2MN	-	-
1MN	-	-
2MN	-	-
Asp	-	-
AcPh	-	-
Anth	-	-
BaA	-	-
BaF	-	-
BbF	-	-
BbP	-	-
BaP	-	-
Chr	-	-
Dibenz	-	-
Fluor	-	-
Fluora	-	-
Indeno	-	-
Naph	-	-
Phen	-	-
Pyr	-	-

MW22-13	6/27/2013	6/27/2013
1,2MN	0.156	0.042 U
1MN	0.076	0.030 U
2MN	0.080	0.030 U
Asp	0.127	0.050 U
AcPh	0.117	0.050 U
Anth	0.412	0.050 U
BaA	1.24	0.050 U
BaF	0.942	0.050 U
BbF	1.15	0.050 U
BbP	0.437	0.050 U
BaP	0.433	0.050 U
Chr	0.953	0.050 U
Dibenz	0.098	0.050 U
Fluor	0.155	0.050 U
Fluora	2.50	0.050 U
Indeno	0.924	0.050 U
Naph	0.106	0.050 U
Phen	1.49	0.050 U
Pyr	2.11	0.050 U

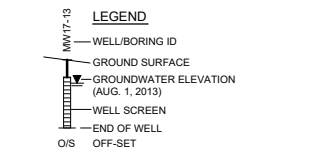
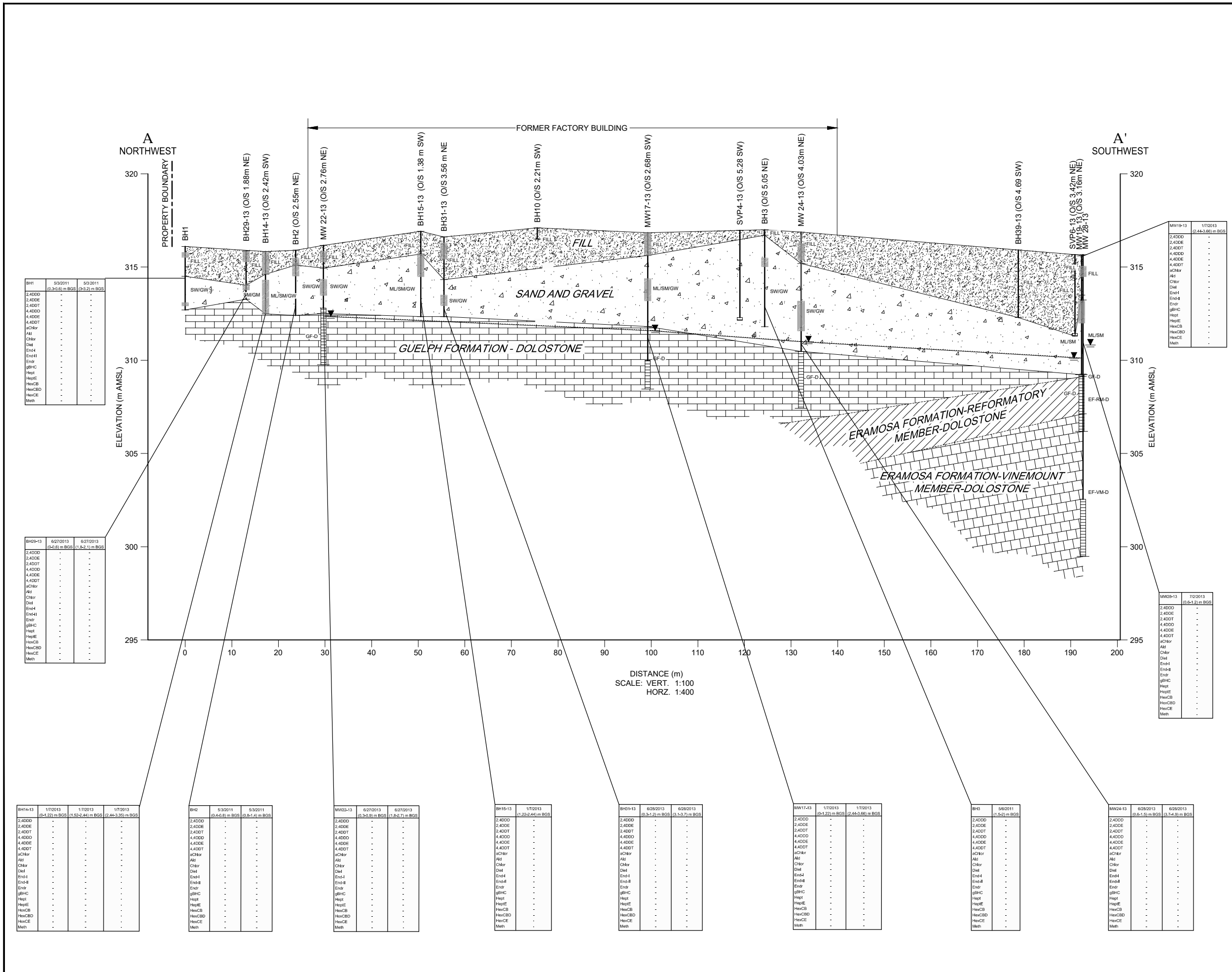
BH15-13	1/7/2013
1,2MN	-
1MN	-
2MN	-
Asp	-
AcPh	-
Anth	-
BaA	-
BaF	-
BbF	-
BbP	-
BaP	-
Chr	-
Dibenz	-
Fluor	-
Fluora	-
Indeno	-
Naph	-
Phen	-
Pyr	-

BH31-13	6/28/2013	6/28/2013
1,2MN	-	-
1MN	-	-
2MN	-	-
Asp	-	-
AcPh	-	-
Anth	-	-
BaA	-	-
BaF	-	-
BbF	-	-
BbP	-	-
BaP	-	-
Chr	-	-
Dibenz	-	-
Fluor	-	-
Fluora	-	-
Indeno	-	-
Naph	-	-
Phen	-	-
Pyr	-	-

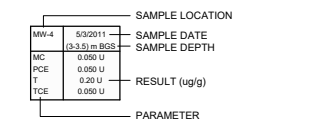
MW17-13	1/7/2013	1/7/2013
1,2MN	-	-
1MN	-	-
2MN	-	-
Asp	-	-
AcPh	-	-
Anth	-	-
BaA	-	-
BaF	-	-
BbF	-	-
BbP	-	-
BaP	-	-
Chr	-	-
Dibenz	-	-
Fluor	-	-
Fluora	-	-
Indeno	-	-
Naph	-	-
Phen	-	-
Pyr	-	-

BH3	5/8/2011
1,2MN	-
1MN	-
2MN	-
Asp	-
AcPh	-
Anth	-
BaA	-
BaF	-
BbF	-
BbP	-
BaP	-
Chr	-
Dibenz	-
Fluor	-
Fluora	-
Indeno	-
Naph	-
Phen	-
Pyr	-

MW24-13	6/28/2013	6/28/2013
1,2MN	-	-
1MN	-	-
2MN	-	-
Asp	-	-
AcPh	-	-
Anth	-	-
BaA	-	-
BaF	-	-
BbF	-	-
BbP	-	-
BaP	-	-
Chr	-	-
Dibenz	-	-
Fluor	-	-
Fluora	-	-
Indeno	-	-
Naph	-	-
Phen	-	-
Pyr	-	-



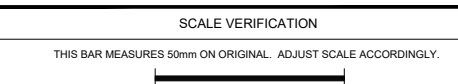
- ug/g MICROGRAMS PER GRAM
- m BGS METERS BELOW GROUND SURFACE
- 4.914.2 RESULT/DUPLICATE RESULT
- EXCEEDANCE OF THE MOE TABLE 2 STANDARD
- J ESTIMATED CONCENTRATION
- U DETECTION LIMIT
- SOIL SAMPLE INTERVAL - NOT ANALYZED
- SOIL SAMPLE INTERVAL - IMPACTED
- SOIL SAMPLE INTERVAL - CLEAN



MOE TABLE 2 STANDARDS

Chemical Name	Abbreviation	MOE Table 2 Standard
2,4-D	2,4D	0.05
2,4-DE	2,4DE	0.05
2,4-DDT	2,4DDT	0.05
4,4-DDE	4,4DDE	0.05
4,4-DDT	4,4DDT	0.05
α-Chlor	αChlor	0.05
β-Chlor	βChlor	0.05
Endo-I	End-I	0.05
Endo-II	End-II	0.05
Endo-III	End-III	0.05
Heptachlor	Hept	0.05
Heptachlor epoxide	HeptE	0.05
Heptachlor sulfoxide	HeptS	0.05
Heptachlor sulfone	HeptSO	0.05
Methoxychlor	Meth	0.05

NOTE: TABLE 2: FULL DEPTH GENERIC SITE CONDITION STANDARDS IN A POTABLE GROUNDWATER CONDITION, RESIDENTIAL/PARKLAND INSTITUTIONAL PROPERTY USE, COARSE GRAINED SOIL (MCE, 2011).



**139 MORRIS STREET HOLDINGS LTD.
GUELPH, ONTARIO**

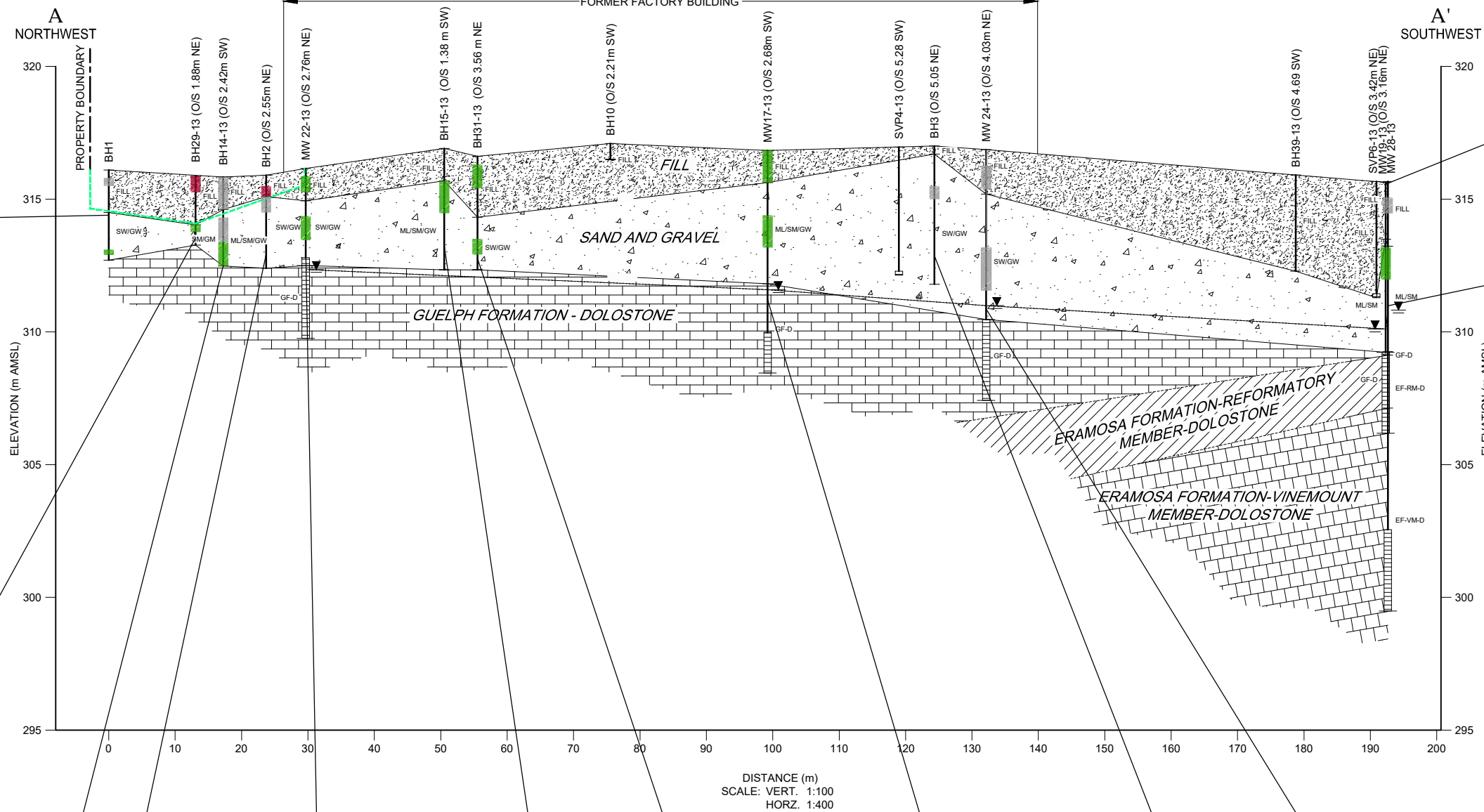
PHASE TWO ENVIRONMENTAL SITE ASSESSMENT

**VERTICAL EXTENT OF SOIL PESTICIDE IMPACTS
GEOLOGIC CROSS-SECTION A-A'**



Source Reference:

Project Manager: L. SHEPHERD	Reviewed By: A. MOLENHUIS	Date: FEBRUARY 2015
Scale: AS SHOWN	Project N ^o : 78674-06	Report N ^o : 003
		Drawing N ^o : figure 12d



BH1	5/3/2011 (0.3-0.6) m BGS	5/3/2011 (0.3-0.7) m BGS
PHC F1	-	5.0 U
PHC F2	-	10 U
PHC F3	-	50 U
PHC F4	-	50 U

BH29-13	6/27/2013 (0.4-0.6) m BGS	6/27/2013 (1.8-2.1) m BGS
PHC F1	5.0 U	5.0 U
PHC F2	71	10 U
PHC F3	1040	50 U
PHC F4	2000	-

BH14-13	1/7/2013 (0.1-2.0) m BGS	1/7/2013 (1.5-2.44) m BGS	1/7/2013 (2.44-3.35) m BGS
PHC F1	-	-	5.0 U
PHC F2	-	-	10 U
PHC F3	-	-	50 U
PHC F4	-	-	50 U

BH2	5/3/2011 (0.4-0.8) m BGS	5/3/2011 (0.8-1.4) m BGS
PHC F1	5.0 U	-
PHC F2	10 U	-
PHC F3	355	-
PHC F4	870	-

MW22-13	6/27/2013 (0.3-0.9) m BGS	6/27/2013 (1.8-2.7) m BGS
PHC F1	5.0 U	5.0 U
PHC F2	10 U	10 U
PHC F3	155	50 U
PHC F4	95	50 U

BH15-13	1/7/2013 (1.22-2.44) m BGS
PHC F1	5.0 U
PHC F2	10 U
PHC F3	50 U
PHC F4	50 U

BH31-13	6/28/2013 (0.3-1.2) m BGS	6/28/2013 (3.1-3.7) m BGS
PHC F1	5.0 U	5.0 U
PHC F2	10 U	10 U
PHC F3	151	50 U
PHC F4	98	50 U

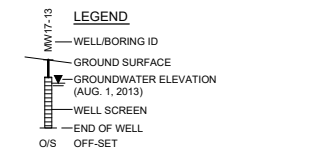
MW17-13	1/7/2013 (0.1-2.2) m BGS	1/7/2013 (2.44-3.66) m BGS
PHC F1	5.0 U	5.0 U
PHC F2	10 U	10 U
PHC F3	50 U	50 U
PHC F4	50 U	50 U

BH3	5/6/2011 (1.5-2) m BGS
PHC F1	-
PHC F2	-
PHC F3	-
PHC F4	-

MW24-13	6/28/2013 (0.6-1.5) m BGS	6/28/2013 (3.7-4.9) m BGS
PHC F1	-	-
PHC F2	-	-
PHC F3	-	-
PHC F4	-	-

MW19-13	1/7/2013 (2.44-3.66) m BGS
PHC F1	5.0 U
PHC F2	10 U
PHC F3	50 U
PHC F4	50 U

MW28-13	7/2/2013 (0.6-1.2) m BGS
PHC F1	-
PHC F2	-
PHC F3	-
PHC F4	-



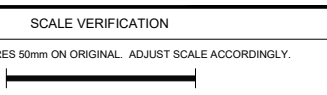
- ug/g MICROGRAMS PER GRAM
- m BGS METERS BELOW GROUND SURFACE
- 4.9/4.2 RESULT/DUPLICATE RESULT
- EXCEEDANCE OF THE MOE TABLE 2 STANDARD
- J ESTIMATED CONCENTRATION
- U DETECTION LIMIT
- SOIL SAMPLE INTERVAL - NOT ANALYZED
- SOIL SAMPLE INTERVAL - IMPACTED
- SOIL SAMPLE INTERVAL - CLEAN

MW4	5/3/2011 (3.3-5) m BGS
MC	0.050 U
PCE	0.20 U
TCE	0.050 U

MOE TABLE 2 STANDARDS	Abbreviation	MOE Table 2 Standard
Petroleum hydrocarbons F1 (C6-C10)	PHC F1	50
Petroleum hydrocarbons F2 (C10-C16)	PHC F2	10
Petroleum hydrocarbons F3 (C16-C34)	PHC F3	500
Petroleum hydrocarbons F4 (C34-C50)	PHC F4	2000

NOTE: TABLE 2: FULL DEPTH GENERIC SITE CONDITION STANDARDS IN A POTABLE GROUNDWATER CONDITION, RESIDENTIAL/PARKLAND INSTITUTIONAL PROPERTY USE, COARSE GRAINED SOIL (MOE, 2011).

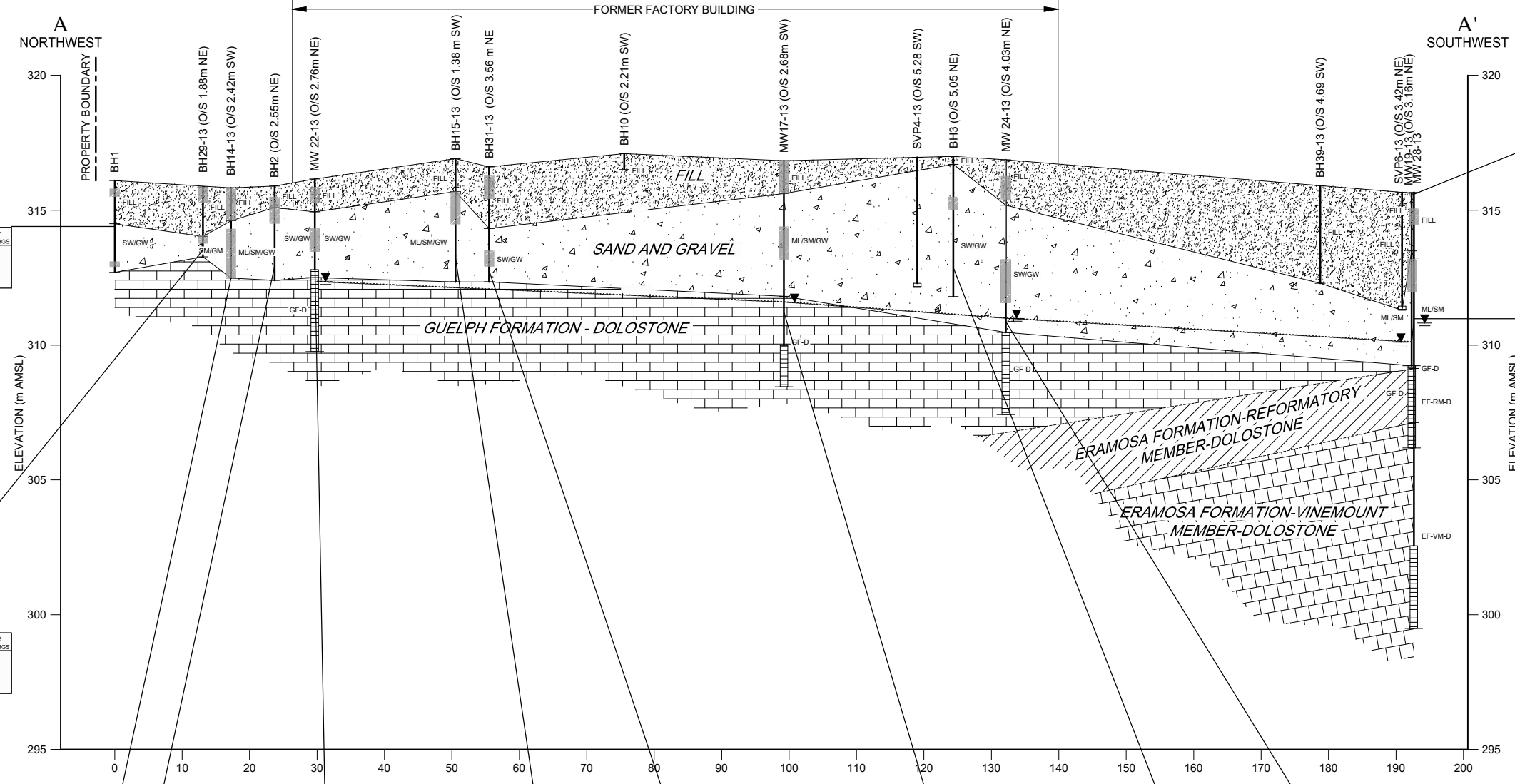
EXTENT OF PHC IMPACTS



139 MORRIS STREET HOLDINGS LTD.
GUELPH, ONTARIO
PHASE TWO ENVIRONMENTAL SITE ASSESSMENT
VERTICAL EXTENT OF SOIL PHC IMPACTS
GEOLOGIC CROSS-SECTION A-A'



Project Manager: L. SHEPHERD	Reviewed By: A. MOLENHUIS	Date: FEBRUARY 2015
Scale: AS SHOWN	Project N°: 78674-06	Report N°: 003
		Drawing N°: figure 12e



BH1	9/3/2011	5/9/2011
PCB1242	(0.3-0.6) m BGS	(0.3-2) m BGS
PCB1248	-	-
PCB1254	-	-
PCB1260	-	-
PCBs	-	-

BH29-13	6/27/2013	6/27/2013
PCB1242	(0-0.8) m BGS	(1.8-2.1) m BGS
PCB1248	-	-
PCB1254	-	-
PCB1260	-	-
PCBs	-	-

BH14-13	1/7/2013	1/7/2013	1/7/2013
PCB1242	(0-1.22) m BGS	(1.52-2.44) m BGS	(2.44-3.30) m BGS
PCB1248	-	-	-
PCB1254	-	-	-
PCB1260	-	-	-
PCBs	-	-	-

BH2	5/9/2011	5/9/2011
PCB1242	(0.4-0.8) m BGS	(0.8-1.4) m BGS
PCB1248	-	-
PCB1254	-	-
PCB1260	-	-
PCBs	-	-

MW22-13	6/27/2013	6/27/2013
PCB1242	(0.3-0.9) m BGS	(1.8-2.7) m BGS
PCB1248	-	-
PCB1254	-	-
PCB1260	-	-
PCBs	-	-

BH15-13	1/7/2013
PCB1242	(1.22-2.44) m BGS
PCB1248	-
PCB1254	-
PCB1260	-
PCBs	-

BH31-13	6/28/2013	6/28/2013
PCB1242	(0.3-1.7) m BGS	(1.5-7) m BGS
PCB1248	-	-
PCB1254	-	-
PCB1260	-	-
PCBs	-	-

MW17-13	1/7/2013	1/7/2013
PCB1242	(0-1.22) m BGS	(2.44-3.66) m BGS
PCB1248	-	-
PCB1254	-	-
PCB1260	-	-
PCBs	-	-

BH3	5/6/2011
PCB1242	(1.5-2) m BGS
PCB1248	-
PCB1254	-
PCB1260	-
PCBs	-

MW28-13	6/28/2013	6/28/2013
PCB1242	(0.6-1.5) m BGS	(1.7-9) m BGS
PCB1248	-	-
PCB1254	-	-
PCB1260	-	-
PCBs	-	-

LEGEND

- WELL/BORING ID
- GROUND SURFACE
- GROUNDWATER ELEVATION (AUG. 1, 2013)
- WELL SCREEN
- END OF WELL
- OFF-SET

ug/g MICROGRAMS PER GRAM
 m BGS METERS BELOW GROUND SURFACE
 4.9/4.2 RESULT/DUPLICATE RESULT

EXCEEDANCE OF THE MOE TABLE 2 STANDARD
 J ESTIMATED CONCENTRATION
 U DETECTION LIMIT

SOIL SAMPLE INTERVAL - NOT ANALYZED
 SOIL SAMPLE INTERVAL - IMPACTED
 SOIL SAMPLE INTERVAL - CLEAN

SAMPLE LOCATION

MW-4 5/9/2011
 (0.3-1.5) m BGS

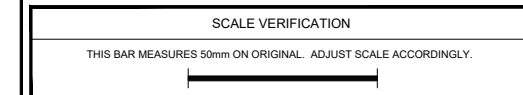
MC 0.050 U
 PC 0.050 U
 TC 0.20 U
 TCE 0.050 U

RESULT (ug/g)
 PARAMETER

MOE TABLE 2 STANDARDS

Chemical Name	Abbreviation	MOE Table 2 Standard
Arochlor 1242 (PCB 1242)	PCB1242	-
Arochlor 1248 (PCB 1248)	PCB1248	-
Arochlor 1254 (PCB 1254)	PCB1254	-
Arochlor 1260 (PCB 1260)	PCB1260	-
Total PCBs	PCBs	0.35

NOTE:
 TABLE 2: FULL DEPTH GENERIC SITE CONDITION STANDARDS IN A POTABLE GROUNDWATER CONDITION, RESIDENTIAL/PARKLAND INSTITUTIONAL PROPERTY USE, COARSE GRAINED SOIL (MOE, 2011).



139 MORRIS STREET HOLDINGS LTD.
GUELPH, ONTARIO

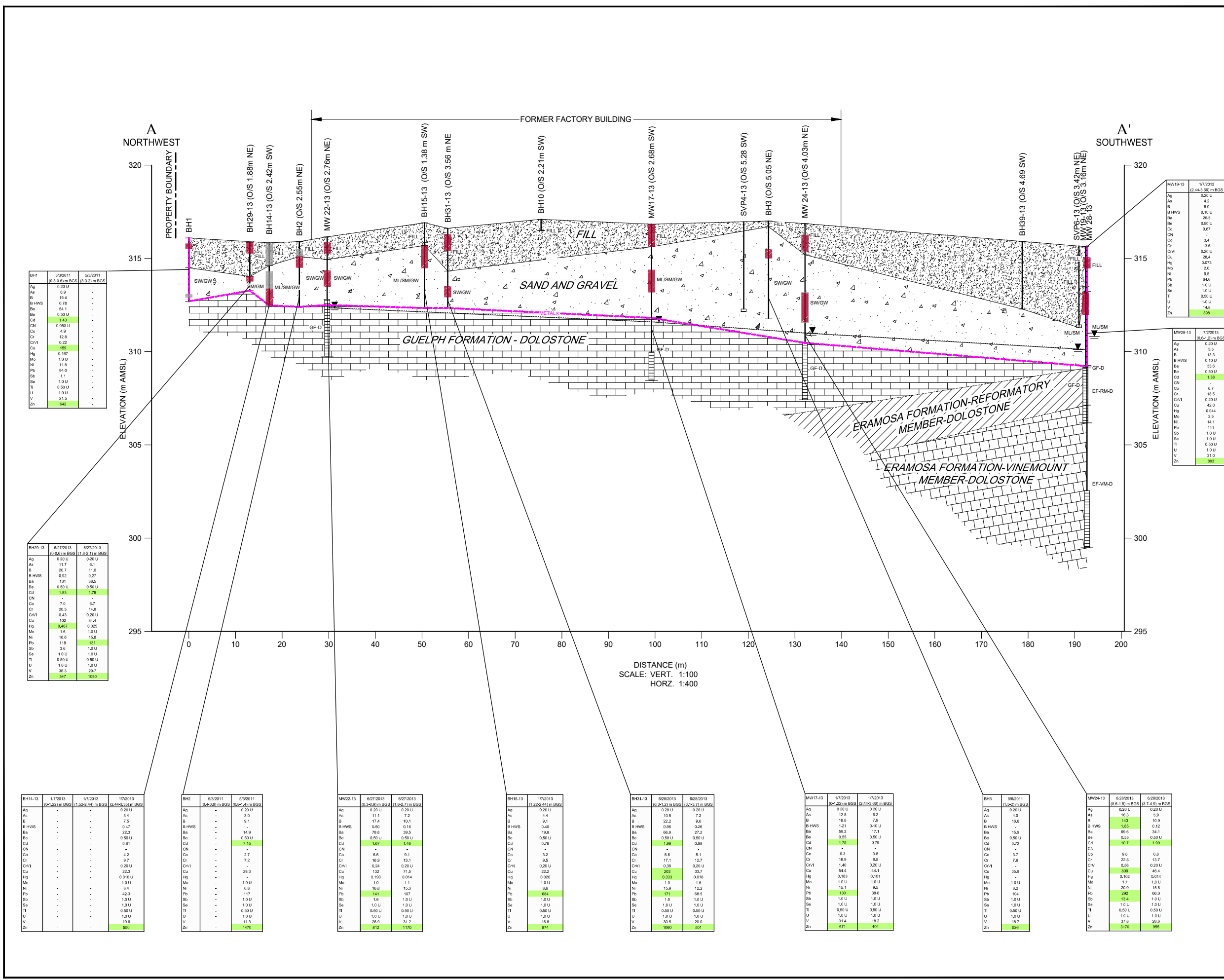
PHASE TWO ENVIRONMENTAL SITE ASSESSMENT

VERTICAL EXTENT OF SOIL PCB IMPACTS
GEOLOGIC CROSS-SECTION A-A'



Source Reference:

Project Manager: L. SHEPHERD	Reviewed By: A. MOLENHUIS	Date: FEBRUARY 2015
Scale: AS SHOWN	Project N ^o : 78674-06	Report N ^o : 003
		Drawing N ^o : figure 12f



LEGEND

- WELL/BORING ID
- GROUND SURFACE
- GROUNDWATER ELEVATION (AUG. 1, 2013)
- WELL SCREEN
- END OF WELL
- OFF-SET

ug/g MICROGRAMS PER GRAM
m BGS METERS BELOW GROUND SURFACE

4.9/4.2 RESULT/ DUPLICATE RESULT

EXCEEDANCE OF THE MOE TABLE 2 STANDARD

J ESTIMATED CONCENTRATION

U DETECTION LIMIT

SOIL SAMPLE INTERVAL - NOT ANALYZED

SOIL SAMPLE INTERVAL - IMPACTED

SOIL SAMPLE INTERVAL - CLEAN

MOE TABLE 2 STANDARDS

Chemical Name	Abbreviation	MOE Table 2 Standard
Arsenic	As	7.5
Barium	Ba	390
Boron	B	4
Boron (hot water extracted)	B HWS	120
Cadmium	Cd	1.2
Chromium	Cr	100
Chromium VI (hexavalent)	CrVI	8
Cobalt	Co	22
Copper	Cu	140
Cyanide	CN	0.053
Lead	Pb	120
Mercury	Hg	0.27
Manganese	Mn	5.5
Nickel	Ni	100
Selenium	Se	2.4
Silver	Ag	20
Thallium	Tl	1
Uranium	U	23
Vanadium	V	80
Zinc	Zn	340

NOTE:
TABLE 2: FULL DEPTH GENERIC SITE CONDITION STANDARDS IN A POTABLE GROUNDWATER CONDITION, RESIDENTIAL/PARKLAND INSTITUTIONAL PROPERTY USE, COARSE GRAINED SOIL (MOE, 2011).

EXTENT OF METALS IMPACTS

SCALE VERIFICATION
THIS BAR MEASURES 50mm ON ORIGINAL. ADJUST SCALE ACCORDINGLY.

139 MORRIS STREET HOLDINGS LTD. GUELPH, ONTARIO

PHASE TWO ENVIRONMENTAL SITE ASSESSMENT

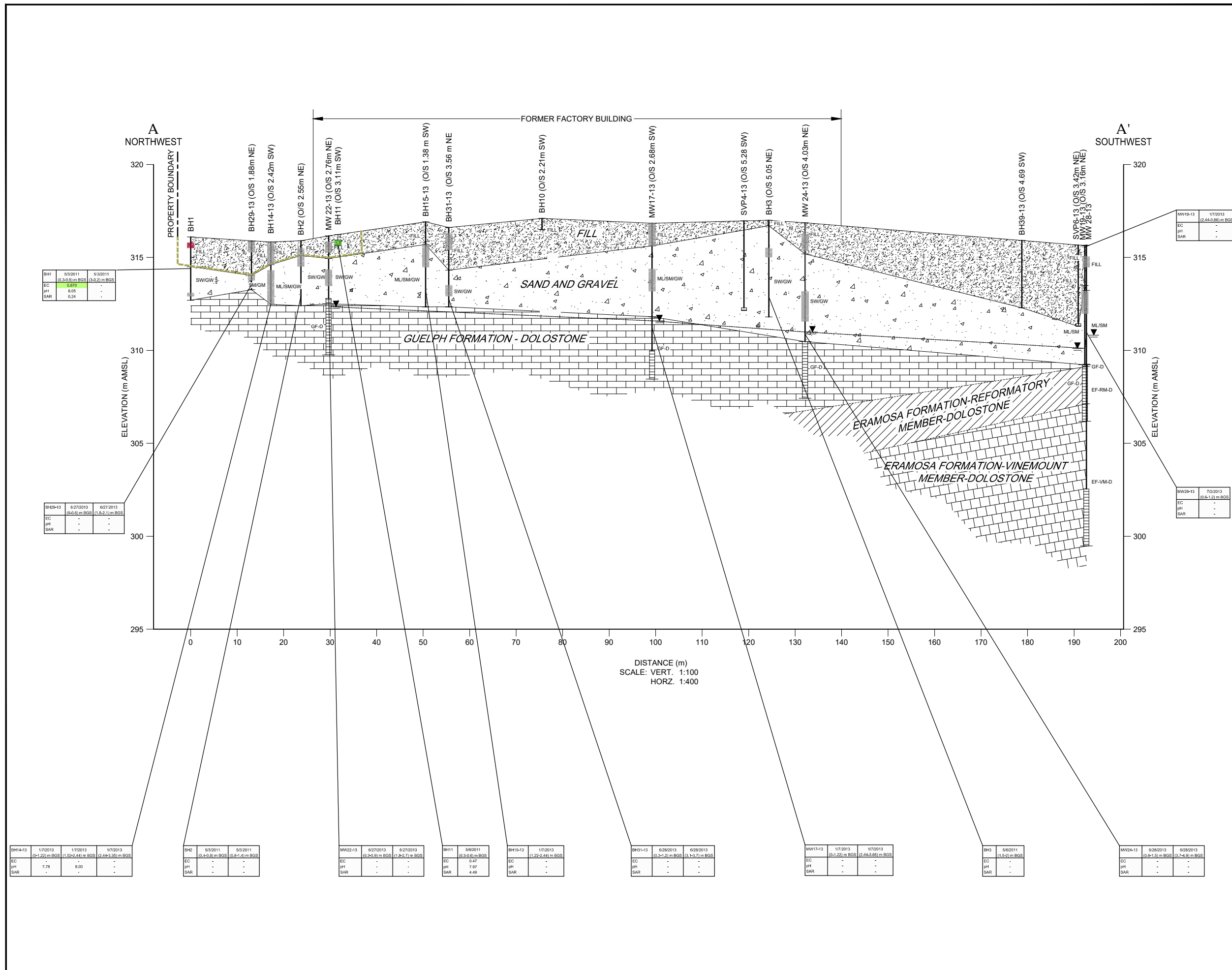
VERTICAL EXTENT OF SOIL METALS IMPACTS GEOLOGIC CROSS-SECTION A-A'

CRA CONESTOGA-ROVERS & ASSOCIATES

Source Reference:

Project Manager: L. SHEPHERD	Reviewed By: A. MOLENHUIS	Date: FEBRUARY 2015
Scale: AS SHOWN	Project N ^o : 78674-06	Report N ^o : 003 Drawing N ^o : figure 12g

78674-06(03)GN-WA044 FEB 23/2015



LEGEND

- WELL/BORING ID
- GROUND SURFACE
- GROUNDWATER ELEVATION (AUG. 1, 2013)
- WELL SCREEN
- END OF WELL
- OFF-SET

ug/g MICROGRAMS PER GRAM
 m BGS METERS BELOW GROUND SURFACE
 4.9/4.2 RESULT/DUPLICATE RESULT
 EXCEEDANCE OF THE MOE TABLE 2 STANDARD
 J ESTIMATED CONCENTRATION
 U DETECTION LIMIT
 SOIL SAMPLE INTERVAL - NOT ANALYZED
 SOIL SAMPLE INTERVAL - IMPACTED
 SOIL SAMPLE INTERVAL - CLEAN

SAMPLE LOCATION

MW4	5/3/2011	
MC	(1.3-1.5) m BGS	
PCE	0.050 U	
T	0.050 U	
TCE	0.20 U	
	0.050 U	

PARAMETER

MOE TABLE 2 STANDARDS

Chemical Name	Abbreviation	MOE Table 2 Standard
Conductivity	EC	0.2
pH, 100	pH	5.2
Sodium adsorption ratio (SAR)	SAR	5

- NOTES:**
- TABLE 2: FULL DEPTH GENERIC SITE CONDITION STANDARDS IN A POTABLE GROUNDWATER CONDITION, RESIDENTIAL/PARKLAND INSTITUTIONAL PROPERTY USE, COARSE GRAINED SOIL (MOE, 2011).
 - VERTICAL DELINEATION OF EC IS BASED ON RESULTS FROM MONITORING WELL MW7

----- EXTENT OF ELECTRICAL CONDUCTIVITY IMPACTS

SCALE VERIFICATION
 THIS BAR MEASURES 50mm ON ORIGINAL. ADJUST SCALE ACCORDINGLY.

**139 MORRIS STREET HOLDINGS LTD.
 GUELPH, ONTARIO**

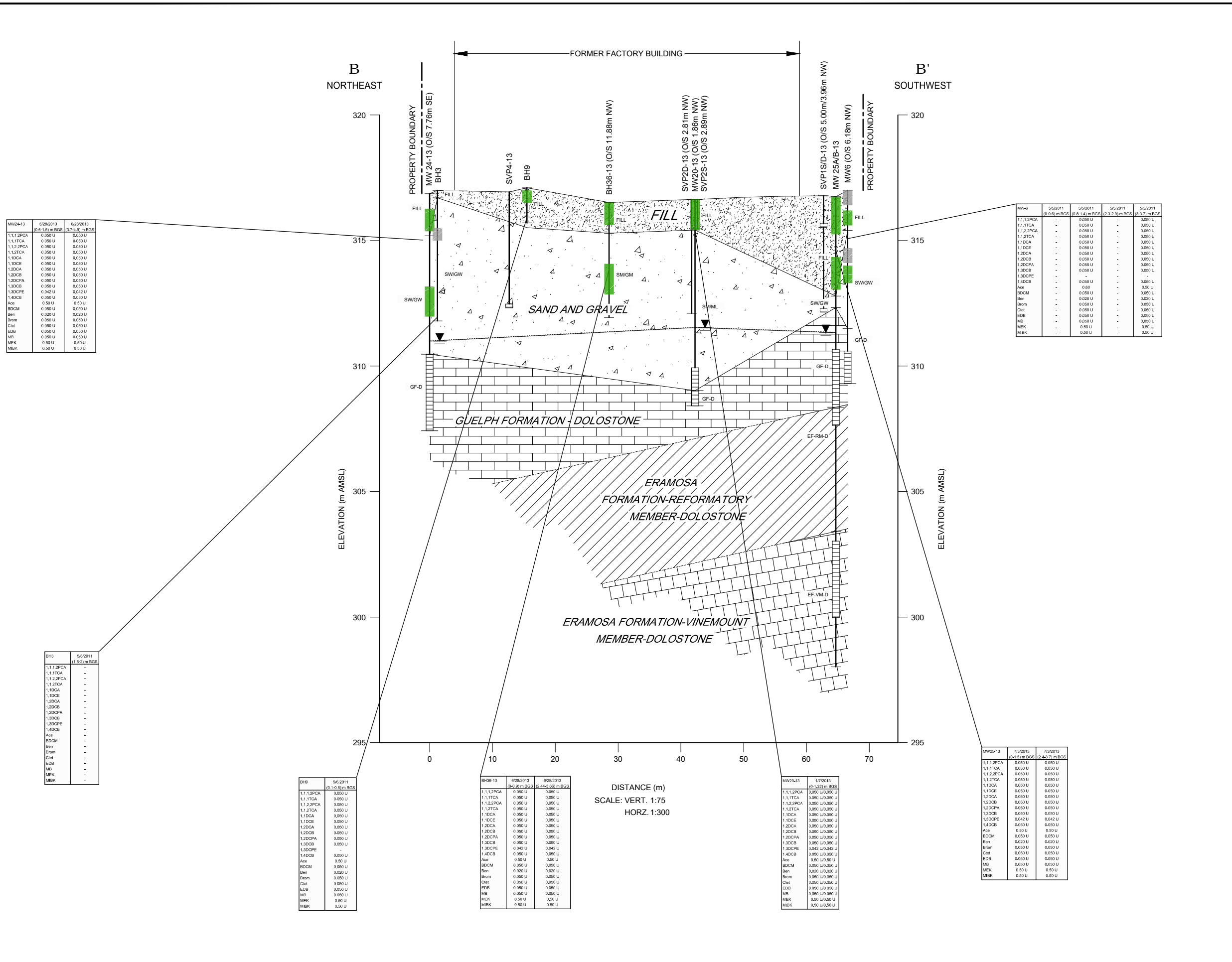
PHASE TWO ENVIRONMENTAL SITE ASSESSMENT

**VERTICAL EXTENT OF SOIL GENERAL CHEMISTRY IMPACTS
 GEOLOGIC CROSS-SECTION A-A'**



Source Reference:

Project Manager: L. SHEPHERD	Reviewed By: A. MOLENHUIS	Date: FEBRUARY 2015
Scale: AS SHOWN	Project N°: 78674-06	Report N°: 003
		Drawing N°: figure 12h



LEGEND

- MW/7-13: WELL/BORING ID
- GROUND SURFACE
- GROUNDWATER ELEVATION (AUG. 1, 2013)
- WELL SCREEN
- END OF WELL
- OFF-SET

ug/g: MICROGRAMS PER GRAM
m BGS: METERS BELOW GROUND SURFACE
4.9/4.2: RESULT/DUPLICATE RESULT

Exceedance of the MOE Table 2 Standard (Green bar)
J: ESTIMATED CONCENTRATION
U: DETECTION LIMIT
Soil Sample Interval - Not Analyzed (Grey bar)
Soil Sample Interval - Impacted (Red bar)
Soil Sample Interval - Clean (Green bar)

Sample Location (MW/4, 5/9/2011, 0.3-0.5 m BGS)
Sample Date (5/9/2011)
Sample Depth (0.3-0.5 m BGS)
Result (ug/g) (0.00 U)

Parameter

MOE TABLE 2 STANDARDS

Chemical Name	Abbreviation	MOE Table 2 Standard
1,1,1-Trichloroethane	1,1,1,2PCA	0.050
1,1,2-Trichloroethane	1,1,2TCA	0.38
1,1,2,2-Tetrachloroethane	1,1,2,2PCA	0.05
1,1,2-Trichloroethane	1,1,2TCA	0.05
1,1-Dichloroethane	1,1DCA	0.67
1,2-Dichloroethane	1,2DCE	0.05
1,2-Dichloroethane (ethylene dibromide)	EDB	0.05
1,2-Dichlorobenzene	1,2DCB	1.2
1,2-Dichlorobenzene	1,2DCA	0.05
1,2-Dichloropropane	1,2DCPA	0.05
1,3-Dichloropropane	1,3DCP	4.8
1,3-Dichloropropane	1,3DCE	0.05
1,4-Dichlorobenzene	1,4DCB	0.05
2,4-Dichlorobenzene	2,4DCB	0.05
2,4-Dichlorobenzene (ortho isomer) (MDE)	MEK	0.05
2-Methyl-2-butanol (Methyl isobutyl ketone) (MIBK)	MIBK	1.2
Axetone	Ace	0.5
Benzene	Ben	0.21
Bromochloroethane	BCEM	1.5
Bromobenzene	Brom	0.27
Bromonitroethane (Methyl bromide)	MB	0.05
Carbon tetrachloride	Chl	0.05

NOTE: TABLE 2: FULL DEPTH GENERIC SITE CONDITION STANDARDS IN A POTABLE GROUNDWATER CONDITION, RESIDENTIAL/PARKLAND INSTITUTIONAL PROPERTY USE, COARSE GRAINED SOIL (MOE, 2011).

SCALE VERIFICATION

THIS BAR MEASURES 50mm ON ORIGINAL. ADJUST SCALE ACCORDINGLY.

139 MORRIS STREET HOLDINGS LTD.
GUELPH, ONTARIO

PHASE TWO ENVIRONMENTAL SITE ASSESSMENT

VERTICAL EXTENT OF SOIL VOC IMPACTS
GEOLOGIC CROSS-SECTION B-B'

CONESTOGA-ROVERS & ASSOCIATES

Source Reference:

Project Manager:	Reviewed By:	Date:
L. SHEPHERD	A. MOLENHUIS	FEBRUARY 2015
Scale:	Project No.:	Report No.:
AS SHOWN	78674-06	003

Drawing No.: figure 12i

MW24-13	6/28/2013 (0.1-1.5) m BGS	6/28/2013 (3.7-4.9) m BGS
C1,2DCE	0.050 U	0.050 U
C1,3DCP	0.050 U	0.050 U
CB	0.050 U	0.050 U
CFC-11	0.050 U	0.050 U
CFC-12	0.050 U	0.050 U
Ch4	0.050 U	0.050 U
DBCM	0.050 U	0.050 U
EB	0.050 U	0.050 U
Hex	0.050 U	0.050 U
MC	0.100	0.050 U
mpxyl	0.050 U	0.050 U
MTBE	-	-
oXyl	-	-
PCE	0.050 U	0.050 U
Sty	0.050 U	0.050 U
T	0.20 U	0.20 U
T1,2DCE	0.050 U	0.050 U
T1,3DCP	0.050 U	0.050 U
TCE	0.050 U	0.050 U
VC	0.020 U	0.020 U
Xyl	0.050 U	0.050 U

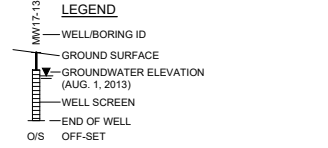
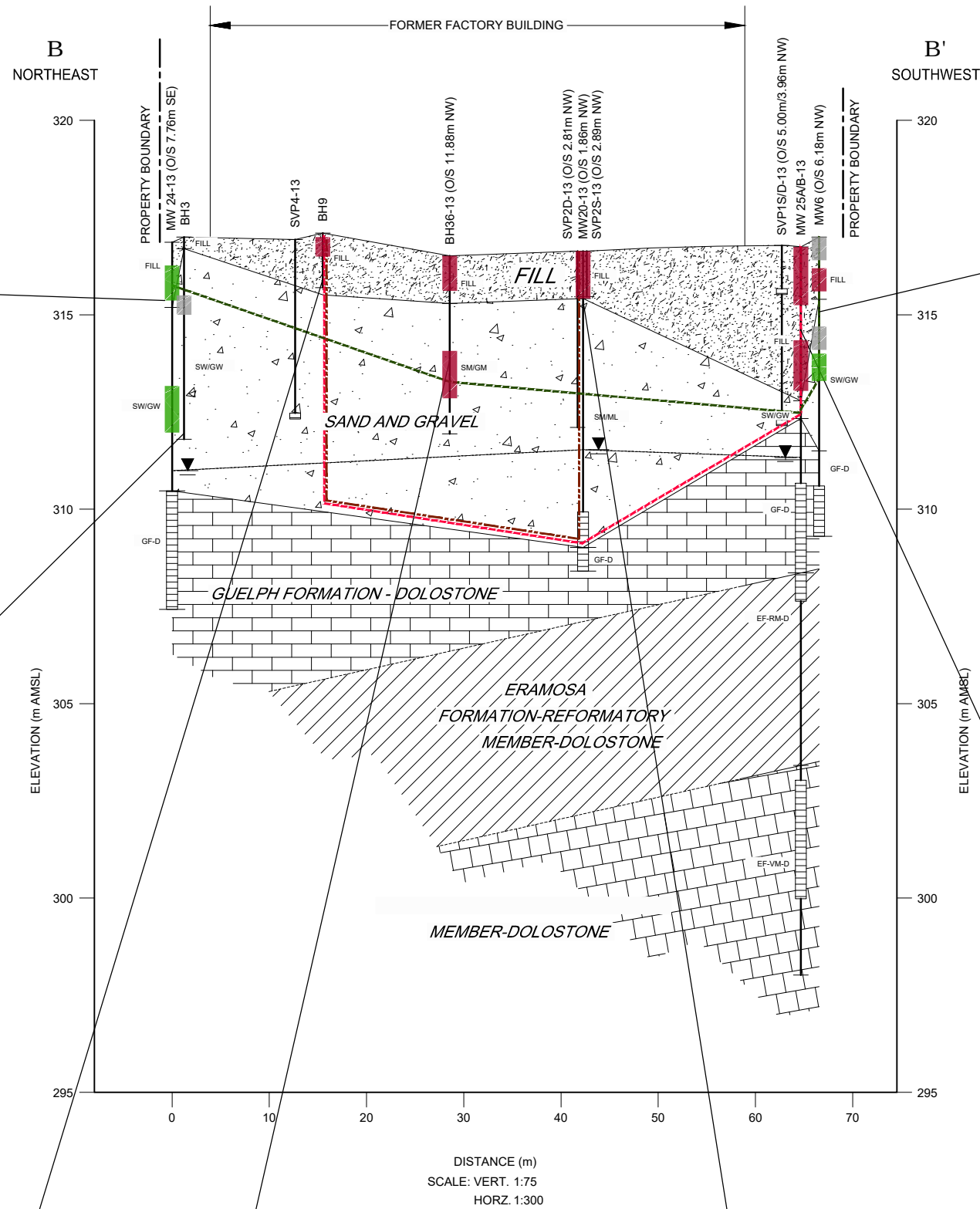
BH9	5/6/2011 (1.5-2) m BGS
C1,2DCE	-
C1,3DCP	-
CB	-
CFC-11	-
CFC-12	-
Ch4	-
DBCM	-
EB	-
Hex	-
MC	-
mpxyl	-
MTBE	-
oXyl	-
PCE	-
Sty	-
T	-
T1,2DCE	-
T1,3DCP	-
TCE	-
VC	-
Xyl	-

BH9	5/6/2011 (1.5-2) m BGS
C1,2DCE	0.050 U
C1,3DCP	0.050 U
CB	0.050 U
CFC-11	0.050 U
CFC-12	0.050 U
Ch4	0.050 U
DBCM	0.050 U
EB	0.050 U
Hex	0.050 U
MC	0.050 U
mpxyl	0.050 U
MTBE	0.050 U
oXyl	0.020 U
PCE	0.050 U
Sty	0.050 U
T	0.20 U
T1,2DCE	0.050 U
T1,3DCP	0.050 U
TCE	0.050 U
VC	0.020 U
Xyl	0.050 U

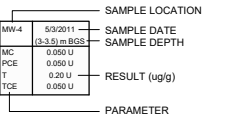
BH36-13	6/28/2013 (0-1) m BGS	6/28/2013 (2.4-3.9) m BGS
C1,2DCE	0.050 U	0.050 U
C1,3DCP	0.030 U	0.030 U
CB	0.050 U	0.050 U
CFC-11	0.050 U	0.050 U
CFC-12	0.050 U	0.050 U
Ch4	0.050 U	0.050 U
DBCM	0.050 U	0.050 U
EB	0.050 U	0.050 U
Hex	0.210	0.099
MC	0.436	0.977
mpxyl	0.030 U	0.030 U
MTBE	0.050 U	0.050 U
oXyl	0.020 U	0.020 U
PCE	2.08	3.04
Sty	0.050 U	0.050 U
T	0.20 U	0.20 U
T1,2DCE	0.050 U	0.050 U
T1,3DCP	0.030 U	0.030 U
TCE	0.416	0.950 U
VC	0.020 U	0.020 U
Xyl	0.050 U	0.050 U

MW20-13	1/7/2013 (0-1.5) m BGS
C1,2DCE	0.050 U
C1,3DCP	0.030 U
CB	0.050 U
CFC-11	0.050 U
CFC-12	0.050 U
Ch4	0.050 U
DBCM	0.050 U
EB	0.050 U
Hex	0.050 U
MC	0.050 U
mpxyl	0.030 U
MTBE	0.050 U
oXyl	0.020 U
PCE	0.050 U
Sty	0.050 U
T	0.20 U
T1,2DCE	0.050 U
T1,3DCP	0.030 U
TCE	0.236
VC	0.020 U
Xyl	0.050 U

MW25-13	7/3/2013 (0-1.5) m BGS	7/3/2013 (2.4-3.7) m BGS
C1,2DCE	0.050 U	0.050 U
C1,3DCP	0.030 U	0.030 U
CB	0.050 U	0.050 U
CFC-11	0.050 U	0.050 U
CFC-12	0.050 U	0.050 U
Ch4	0.050 U	0.050 U
DBCM	0.050 U	0.050 U
EB	0.073	0.050 U
Hex	0.050 U	0.050 U
MC	0.300	0.950 U
mpxyl	0.050 U	0.050 U
MTBE	0.050 U	0.050 U
oXyl	0.190	0.050 U
PCE	0.142	0.050 U
Sty	0.050 U	0.050 U
T	0.971	0.20 U
T1,2DCE	0.050 U	0.050 U
T1,3DCP	0.030 U	0.030 U
TCE	0.667	0.988
VC	0.020 U	0.020 U
Xyl	0.466	0.050 U



- ug/g MICROGRAMS PER GRAM
- m BGS METERS BELOW GROUND SURFACE
- 4.9/4.2 RESULT/DUPLICATE RESULT
- EXCEEDANCE OF THE MOE TABLE 2 STANDARD
- J ESTIMATED CONCENTRATION
- U DETECTION LIMIT
- SOIL SAMPLE INTERVAL - NOT ANALYZED
- SOIL SAMPLE INTERVAL - IMPACTED
- SOIL SAMPLE INTERVAL - CLEAN



MOE TABLE 2 STANDARDS

Chemical Name	Abbreviation	MOE Table 2 Standard
Chlorobenzene	CB	2.4
Chloroform (Trichloromethane)	Ch4	0.05
Cis-1,2-Dichloroethane	C1,2DCE	1.9
Cis-1,3-Dichloropropene	C1,3DCP	-
Dibromochloromethane	DBCM	2.3
Dichlorodifluoromethane (CFC-12)	CFC-12	16
Dibromomethane	DB	1.3
Hexane	Hex	2.8
m,p-Xylenes	mpxyl	-
Methyl tert-butyl ether (MTBE)	MTBE	0.75
Methylene chloride	MC	0.5
o-Xylene	oXyl	-
Styrene	Sty	0.7
Tetrachloroethane	T	2.8
Trans-1,2-Dichloroethane	T1,2DCE	0.084
Trans-1,3-Dichloropropene	T1,3DCP	-
Trichloroethane	TCE	0.081
Trichlorofluoromethane (CFC-11)	CFC-11	4
Vinyl chloride	VC	0.03
Xylenes (total)	Xyl	3.1

NOTE: TABLE 2: FULL DEPTH GENERIC SITE CONDITION STANDARDS IN A POTABLE GROUNDWATER CONDITION, RESIDENTIAL/PARKLAND INSTITUTIONAL PROPERTY USE, COARSE GRAINED SOIL (MOE, 2011).

- EXTENT OF PCE IMPACTS
- EXTENT OF TCE IMPACTS
- EXTENT OF METHYLENE CHLORIDE IMPACTS

SCALE VERIFICATION

THIS BAR MEASURES 50mm ON ORIGINAL. ADJUST SCALE ACCORDINGLY.

139 MORRIS STREET HOLDINGS LTD.
GUELPH, ONTARIO

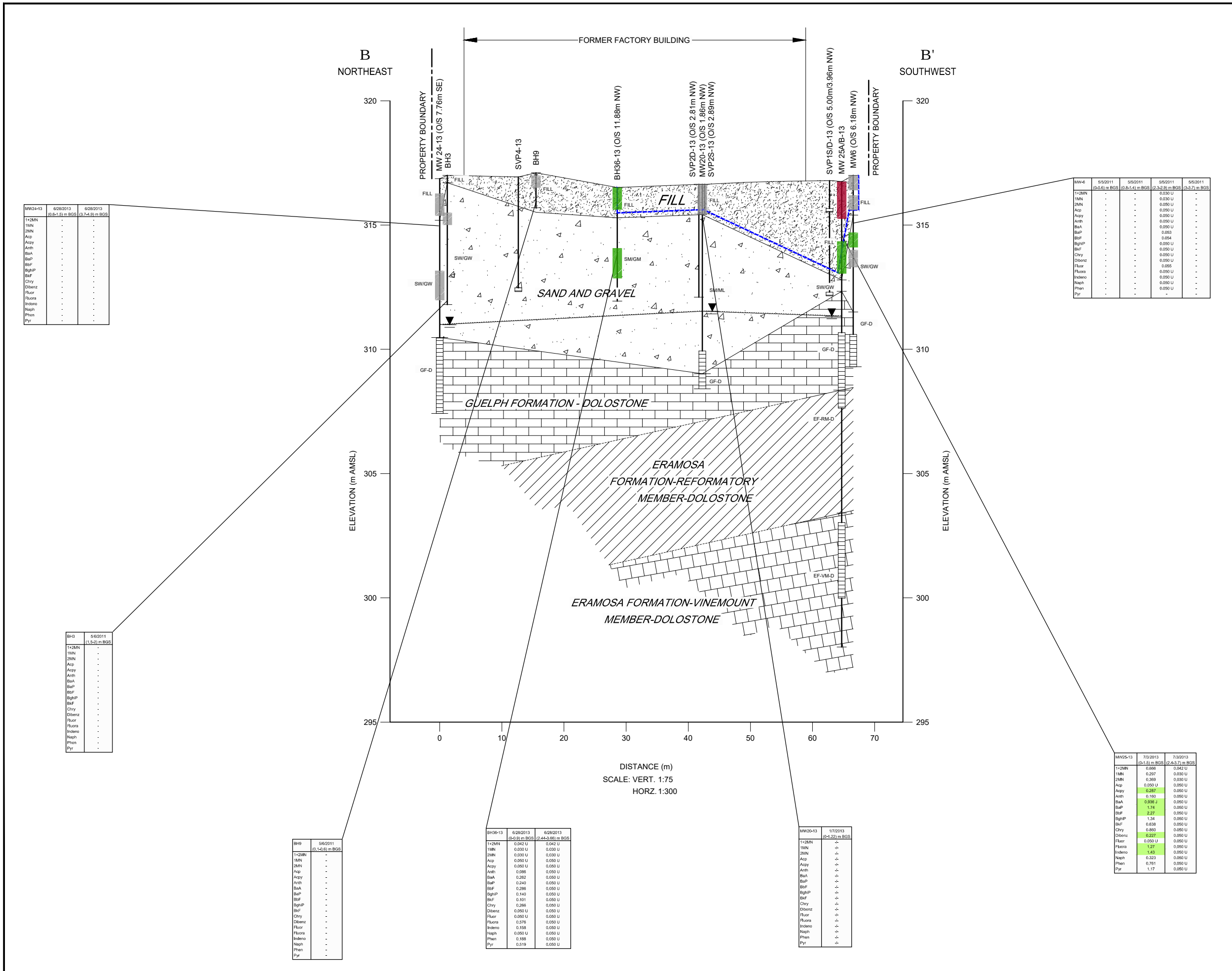
PHASE TWO ENVIRONMENTAL SITE ASSESSMENT

VERTICAL EXTENT OF SOIL VOC IMPACTS CONTINUED
GEOLOGIC CROSS-SECTION B-B'



Source Reference:

Project Manager: L. SHEPHERD	Reviewed By: A. MOLENNHUIS	Date: FEBRUARY 2015
Scale: AS SHOWN	Project No.: 78674-06	Report No.: 003 Drawing No.: figure 12j



LEGEND

- WELL/BORING ID
- GROUND SURFACE
- GROUNDWATER ELEVATION (AUG. 1, 2013)
- WELL SCREEN
- END OF WELL
- OFF-SET

ug/g MICROGRAMS PER GRAM

m BGS METERS BELOW GROUND SURFACE

4.9/4.2 RESULT/DUPLICATE RESULT

EXCEEDANCE OF THE MOE TABLE 2 STANDARD

J ESTIMATED CONCENTRATION

U DETECTION LIMIT

SOIL SAMPLE INTERVAL - NOT ANALYZED

SOIL SAMPLE INTERVAL - IMPACTED

SOIL SAMPLE INTERVAL - CLEAN

SAMPLE LOCATION

SAMPLE DATE

SAMPLE DEPTH

MC 0.050 U

PCE 0.050 U

T 0.20 U

TCE 0.050 U

RESULT (ug/g)

PARAMETER

MOE TABLE 2 STANDARDS

Chemical Name	Abbreviation	MOE Table 2 Standard
1,2-Methylnaphthalene	1+2MN	0.99
2-Methylnaphthalene	2MN	0.99
Acenaphthene	AcP	7.8
Acenaphthylene	AcPy	0.55
Anthracene	Anth	0.67
Benzo[a]anthracene	BaA	0.5
Benzo[a]pyrene	BaP	0.3
Benzo[b]fluoranthene	BbF	0.78
Benzo[k]fluoranthene	BkF	0.78
Chrysene	Chry	7
Dibenz[a,h]anthracene	Dibenz	0.1
Fluoranthene	Fluor	0.69
Fluorene	Fluora	0.2
Indeno[1,2,3-cd]perylene	Indeno	0.38
Naphthalene	Naph	0.6
Phenanthrene	Phen	0.2
Pyrene	Py	0.6

NOTE:
TABLE 2: FULL DEPTH GENERIC SITE CONDITION STANDARDS IN A POTABLE GROUNDWATER CONDITION, RESIDENTIAL/PARKLAND INSTITUTIONAL PROPERTY USE, COARSE GRAINED SOIL (MOE, 2011).

SCALE VERIFICATION

THIS BAR MEASURES 50mm ON ORIGINAL. ADJUST SCALE ACCORDINGLY.

139 MORRIS STREET HOLDINGS LTD.
GUELPH, ONTARIO

PHASE TWO ENVIRONMENTAL SITE ASSESSMENT

VERTICAL EXTENT OF SOIL PAH IMPACTS
GEOLOGIC CROSS-SECTION B-B'

CONESTOGA-ROVERS & ASSOCIATES

Source Reference:

Project Manager: L. SHEPHERD	Reviewed By: A. MOLENHUIS	Date: FEBRUARY 2015
Scale: AS SHOWN	Project N°: 78674-06	Report N°: 003
		Drawing N°: figure 12k

78674-06(003)GN-WA048 FEB 23/2015

MW24-13	6/28/2013	6/28/2013
(0.6-1.5) m BGS	(3.7-4.9) m BGS	(3.7-4.9) m BGS
2.4DDO	-	-
2.4DDE	-	-
2.4DDT	-	-
4.4DDO	-	-
4.4DDE	-	-
4.4DDT	-	-
αChlor	-	-
Alc	-	-
Chlor	-	-
Dnl	-	-
End-I	-	-
End-II	-	-
Endr	-	-
gBHC	-	-
HepE	-	-
HexCB	-	-
HexCBD	-	-
HexCE	-	-
Meth	-	-

BH3	5/6/2011
(1.5-2) m BGS	
2.4DDO	-
2.4DDE	-
2.4DDT	-
4.4DDO	-
4.4DDE	-
4.4DDT	-
αChlor	-
Alc	-
Chlor	-
Dnl	-
End-I	-
End-II	-
Endr	-
gBHC	-
HepE	-
HexCB	-
HexCBD	-
HexCE	-
Meth	-

BH9	5/6/2011
(0.1-0.6) m BGS	
2.4DDO	-
2.4DDE	-
2.4DDT	-
4.4DDO	-
4.4DDE	-
4.4DDT	-
αChlor	-
Alc	-
Chlor	-
Dnl	-
End-I	-
End-II	-
Endr	-
gBHC	-
HepE	-
HexCB	-
HexCBD	-
HexCE	-
Meth	-

BH36-13	6/28/2013	6/28/2013
(0-4.9) m BGS	(2.4-3.66) m BGS	
2.4DDO	-	-
2.4DDE	-	-
2.4DDT	-	-
4.4DDO	-	-
4.4DDE	-	-
4.4DDT	-	-
αChlor	-	-
Alc	-	-
Chlor	-	-
Dnl	-	-
End-I	-	-
End-II	-	-
Endr	-	-
gBHC	-	-
HepE	-	-
HexCB	-	-
HexCBD	-	-
HexCE	-	-
Meth	-	-

MW25-13	7/3/2013	7/3/2013
(0-1.22) m BGS	(2.4-3.7) m BGS	
2.4DDO	-	-
2.4DDE	0.20 U	-
2.4DDT	0.20 U	-
4.4DDO	0.20 U	-
4.4DDE	0.20 U	-
4.4DDT	0.20 U	-
αChlor	-	-
Alc	-	-
Chlor	-	-
Dnl	-	-
End-I	-	-
End-II	-	-
Endr	-	-
gBHC	0.10 U	-
HepE	0.20 U	-
HexCB	0.10 U	-
HexCBD	0.10 U	-
HexCE	0.10 U	-
Meth	0.20 U	-

MW-6	5/5/2011	5/5/2011	5/5/2011	5/5/2011
(0-4.9) m BGS	(0.8-1.4) m BGS	(0.3-2.0) m BGS	(0.3-1.7) m BGS	
2.4DDO	-	-	-	-
2.4DDE	-	-	-	-
2.4DDT	-	-	-	-
4.4DDO	-	-	-	-
4.4DDE	-	-	-	-
4.4DDT	-	-	-	-
αChlor	-	-	-	-
Alc	-	-	-	-
Chlor	-	-	-	-
Dnl	-	-	-	-
End-I	-	-	-	-
End-II	-	-	-	-
Endr	-	-	-	-
gBHC	-	-	-	-
HepE	-	-	-	-
HexCB	-	-	-	-
HexCBD	-	-	-	-
HexCE	-	-	-	-
Meth	-	-	-	-

Chemical Name	Abbreviation	MOE Table 2 Standard
2,4-DDE	2.4DDE	-
2,4-DDO	2.4DDO	-
2,4-DDT	2.4DDT	-
4,4-DDO	4.4DDO	3.3
4,4-DDE	4.4DDE	0.26
4,4-DDT	4.4DDT	1.4
Alc	Alc	0.05
α-Chloro	αChlor	-
Chloroform	Chlor	-
Dieldrin	Dnl	0.05
Endosulfan I	End-I	-
Endosulfan II	End-II	-
Endrin	Endr	0.06
gamma-BHC (Dieldrin)	gBHC	0.055
Heptachlor	HepE	0.15
Heptachlor epoxide	HepE	0.05
Hexachlorobenzene	HexCB	0.32
Hexachlorobutadiene	HexCBD	0.013
Hexachlorocyclopentadiene	HexCE	0.089
Methoxychlor	Meth	0.13

NOTE: TABLE 2: FULL DEPTH GENERIC SITE CONDITION STANDARDS IN A POTABLE GROUNDWATER CONDITION, RESIDENTIAL/PARKLAND INSTITUTIONAL PROPERTY USE, COARSE GRAINED SOIL (MOE, 2011).

SCALE VERIFICATION

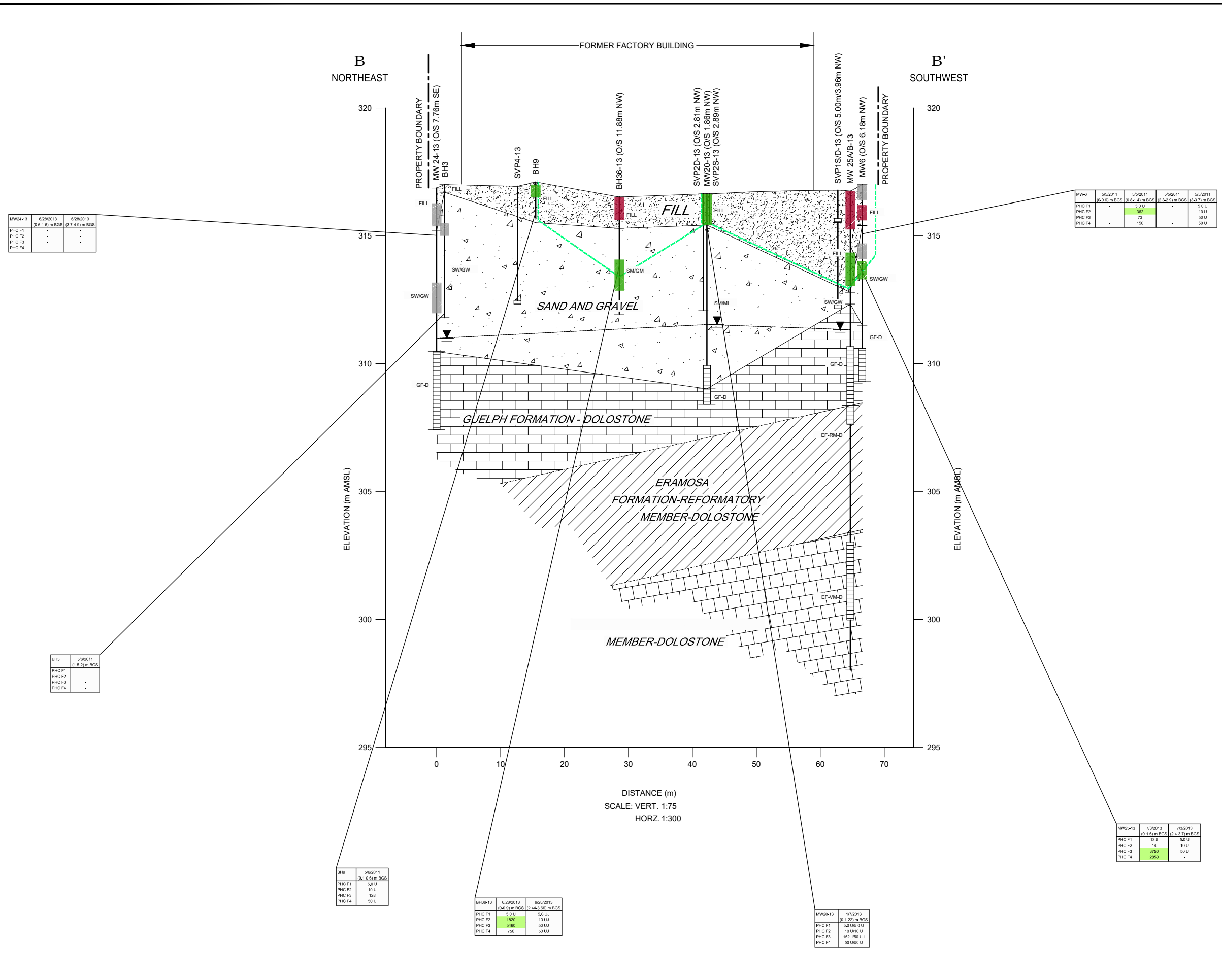
THIS BAR MEASURES 50mm ON ORIGINAL. ADJUST SCALE ACCORDINGLY.

139 MORRIS STREET HOLDINGS LTD.
GUELPH, ONTARIO
PHASE TWO ENVIRONMENTAL SITE ASSESSMENT
VERTICAL EXTENT OF SOIL PESTICIDE IMPACTS
GEOLOGIC CROSS-SECTION B-B'



Source Reference:

Project Manager: L. SHEPHERD	Reviewed By: A. MOLENHUIS	Date: FEBRUARY 2015
Scale: AS SHOWN	Project No: 78674-06	Report No: 003
		Drawing No: figure 121



MW24-13	6/29/2013	8/28/2013
PHC F1	-	-
PHC F2	-	-
PHC F3	-	-
PHC F4	-	-

BH3	5/6/2011
PHC F1	-
PHC F2	-
PHC F3	-
PHC F4	-

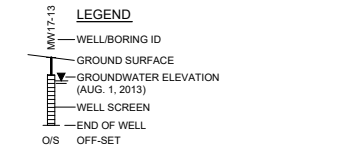
BH9	5/6/2011
PHC F1	0.9 U
PHC F2	10 U
PHC F3	128
PHC F4	50 U

BH36-13	6/28/2013	6/29/2013
PHC F1	5.0 U	5.0 U
PHC F2	1820	10 U
PHC F3	5469	50 U
PHC F4	796	50 U

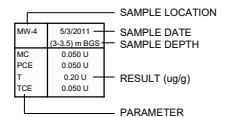
MW25-13	1/7/2013
PHC F1	5.0 U/5.0 U
PHC F2	10 U/10 U
PHC F3	152 U/50 U
PHC F4	50 U/50 U

MW-6	5/5/2011	5/5/2011	5/5/2011	5/5/2011
PHC F1	-	5.0 U	-	5.0 U
PHC F2	-	362	-	10 U
PHC F3	-	73	-	50 U
PHC F4	-	150	-	50 U

MW25-13	7/3/2013	7/3/2013
PHC F1	13.5	5.0 U
PHC F2	14	10 U
PHC F3	3750	50 U
PHC F4	2690	-



- ug/g MICROGRAMS PER GRAM
- m BGS METERS BELOW GROUND SURFACE
- 4.9/4.2 RESULT/DUPLICATE RESULT
- EXCEEDANCE OF THE MOE TABLE 2 STANDARD
- J ESTIMATED CONCENTRATION
- U DETECTION LIMIT
- SOIL SAMPLE INTERVAL - NOT ANALYZED
- SOIL SAMPLE INTERVAL - IMPACTED
- SOIL SAMPLE INTERVAL - CLEAN



Chemical Name	Abbreviation	MOE Table 2 Standard
Petroleum hydrocarbons F1 (C6-C8)	PHC F1	55
Petroleum hydrocarbons F2 (C9-C16)	PHC F2	58
Petroleum hydrocarbons F3 (C15-C40)	PHC F3	300
Petroleum hydrocarbons F4 (C24-C35)	PHC F4	3000

NOTE: TABLE 2: FULL DEPTH GENERIC SITE CONDITION STANDARDS IN A POTABLE GROUNDWATER CONDITION, RESIDENTIAL/PARKLAND INSTITUTIONAL PROPERTY USE, COARSE GRAINED SOIL (MOE, 2011).

--- EXTENT OF PHC IMPACTS

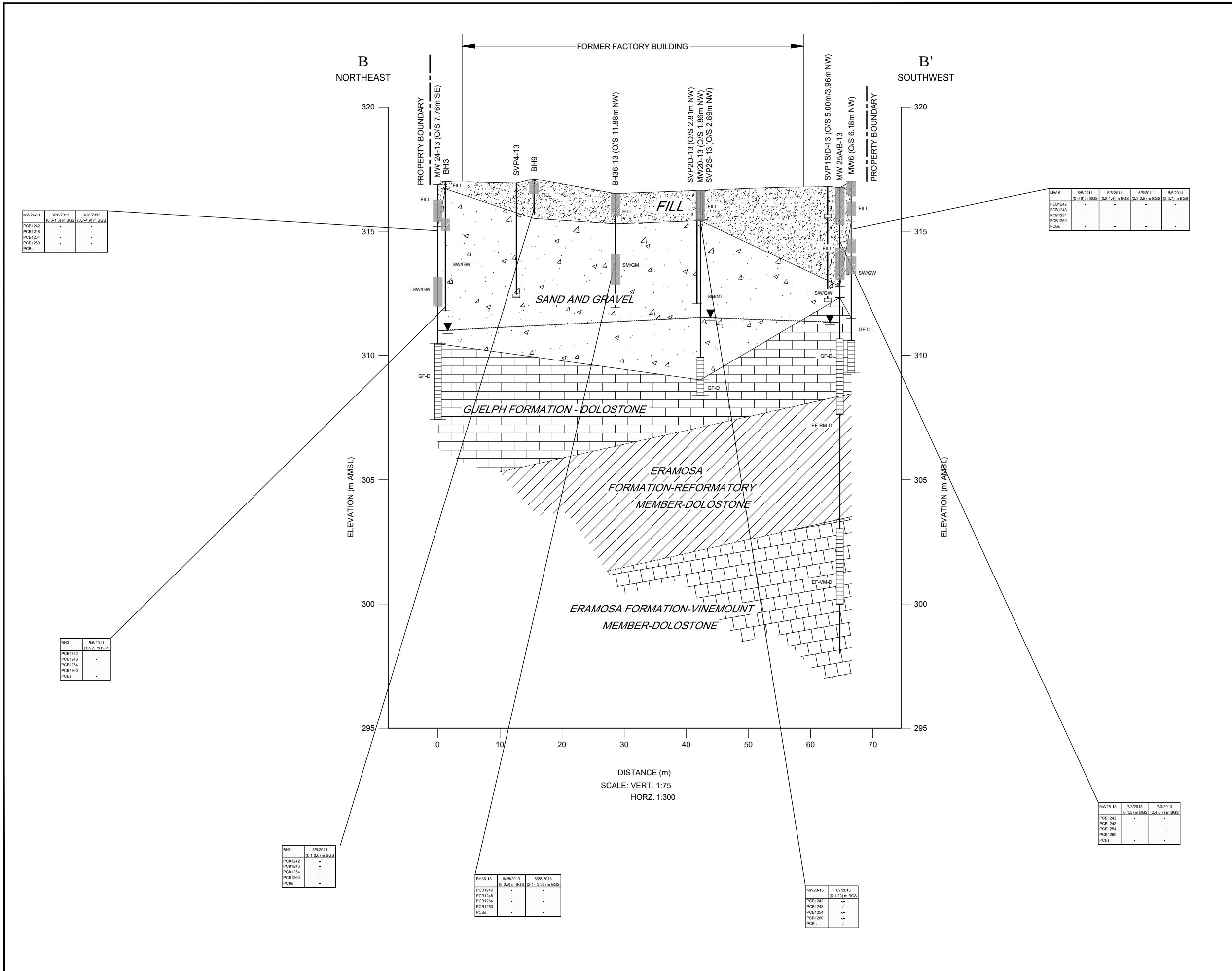
SCALE VERIFICATION

THIS BAR MEASURES 50mm ON ORIGINAL. ADJUST SCALE ACCORDINGLY.

139 MORRIS STREET HOLDINGS LTD.
GUELPH, ONTARIO
PHASE TWO ENVIRONMENTAL SITE ASSESSMENT
VERTICAL EXTENT OF SOIL PHC IMPACTS
GEOLOGIC CROSS-SECTION B-B'



Source Reference:			
Project Manager:	Reviewed By:	Date:	
L. SHEPHERD	A. MOLENHUIS	FEBRUARY 2015	
Scale:	Project N ^o :	Report N ^o :	Drawing N ^o :
AS SHOWN	78674-06	003	figure 12m



LEGEND

- WELL/BORING ID
- GROUND SURFACE
- GROUNDWATER ELEVATION (AUG. 1, 2013)
- WELL SCREEN
- END OF WELL
- OFF-SET

ug/g MICROGRAMS PER GRAM
 m BGS METERS BELOW GROUND SURFACE
 4.9/4.2 RESULT/DUPLICATE RESULT

EXCEEDANCE OF THE MOE TABLE 2 STANDARD
 J ESTIMATED CONCENTRATION
 U DETECTION LIMIT

SOIL SAMPLE INTERVAL - NOT ANALYZED
 SOIL SAMPLE INTERVAL - IMPACTED
 SOIL SAMPLE INTERVAL - CLEAN

MOE TABLE 2 STANDARDS

Chemical Name	Abbreviation	MOE Table 2 Standard
Arochlor-1242 (PCB-1242)	PCB1242	-
Arochlor-1248 (PCB-1248)	PCB1248	-
Arochlor-1254 (PCB-1254)	PCB1254	-
Arochlor-1260 (PCB-1260)	PCB1260	-
Total PCBs	PCBs	0.95

NOTE:
 TABLE 2: FULL DEPTH GENERIC SITE CONDITION STANDARDS IN A POTABLE GROUNDWATER CONDITION, RESIDENTIAL/PARKLAND INSTITUTIONAL PROPERTY USE, COARSE GRAINED SOIL (MOE, 2011).

SCALE VERIFICATION

THIS BAR MEASURES 50mm ON ORIGINAL. ADJUST SCALE ACCORDINGLY.

**139 MORRIS STREET HOLDINGS LTD.
 GUELPH, ONTARIO**

PHASE TWO ENVIRONMENTAL SITE ASSESSMENT

**VERTICAL EXTENT OF SOIL PCB IMPACTS
 GEOLOGIC CROSS-SECTION B-B'**

CONESTOGA-ROVERS & ASSOCIATES

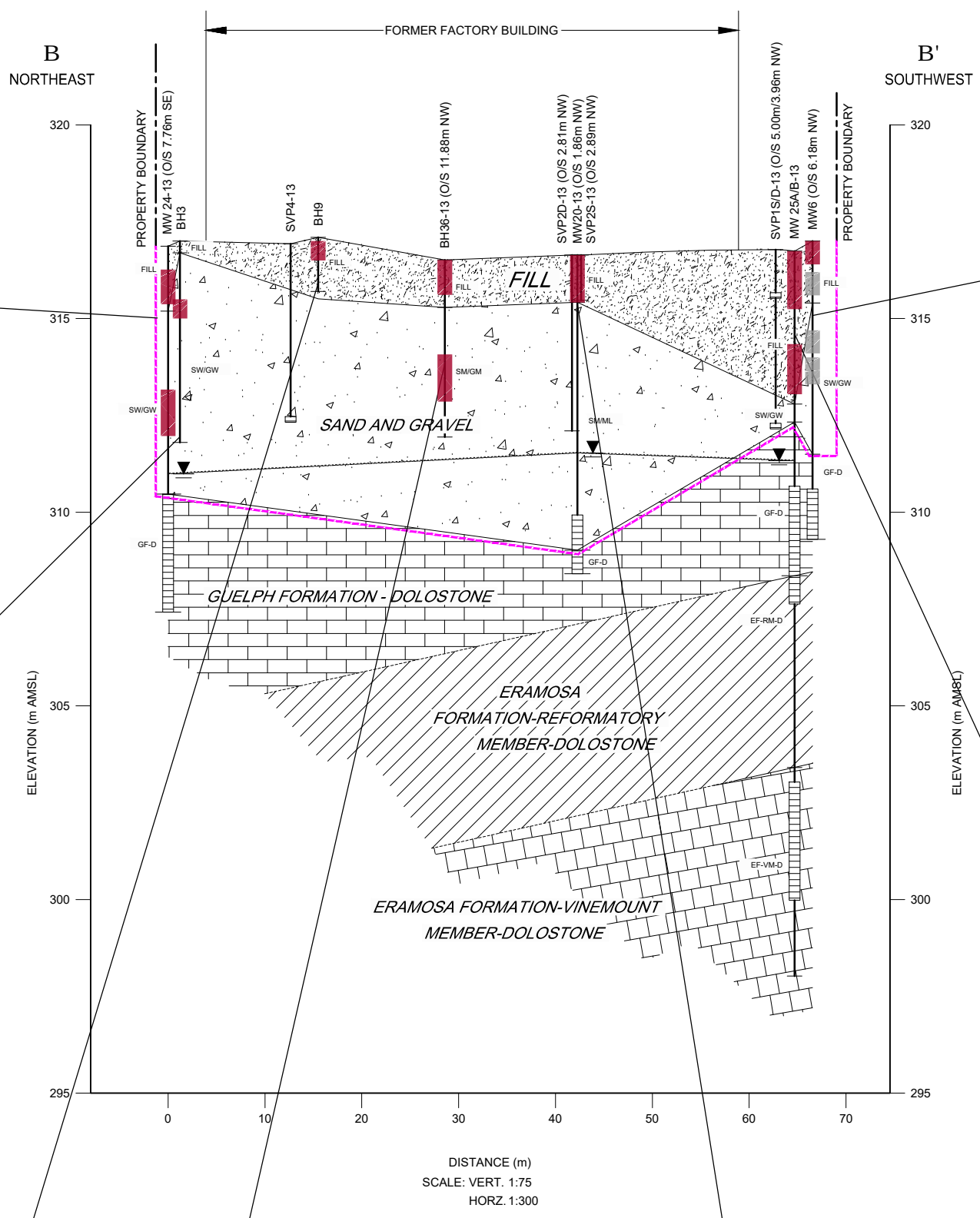
Source Reference:

Project Manager: L. SHEPHERD	Reviewed By: A. MOLENHUIS	Date: FEBRUARY 2015
Scale: AS SHOWN	Project N°: 78674-06	Report N°: 003
		Drawing N°: figure 12h

78674-06(003)GN-WA051 FEB 23/2015

MW24-13	6/28/2013 (0.6-1.5) m BGS	6/28/2013 (3.7-4.9) m BGS
Ag	0.20 U	0.20 U
As	16.3	5.9
B	143	10.9
B HWS	1.85	0.12
Be	66.6	34.1
Cd	0.55	0.50 U
Cu	10.7	1.90
CN	-	-
Co	9.8	6.8
Cr	22.8	13.7
CrVI	0.55	0.20 U
Cu	909	46.4
Hg	0.102	0.014
Mn	1.7	1.0 U
Ni	20.0	15.8
Pb	292	66.0
Se	15.4	1.0 U
Se	1.0 U	1.0 U
Tl	0.50 U	0.50 U
U	1.0 U	1.0 U
V	37.8	28.6
Zn	3170	955

BH3	5/9/2011 (1.5-2) m BGS
Ag	0.20 U
As	4.0
B	18.6
B HWS	-
Ba	15.9
Be	0.50 U
Cd	0.72
CN	-
Co	3.7
Cr	7.6
CrVI	-
Cu	35.9
Hg	-
Mn	1.0 U
Ni	8.2
Pb	194
Se	1.0 U
Se	1.0 U
Tl	0.50 U
U	1.0 U
V	18.7
Zn	506

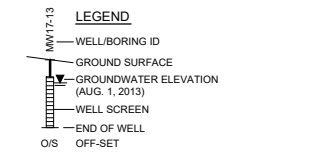


BH9	5/9/2011 (1.0-1.6) m BGS
Ag	0.20 U
As	18.3
B	664
B HWS	-
Ba	83.4
Be	0.50 U
Cd	0.72
CN	-
Co	3.7
Cr	7.6
CrVI	-
Cu	35.9
Hg	-
Mn	1.0 U
Ni	8.2
Pb	194
Se	1.0 U
Se	1.0 U
Tl	0.50 U
U	1.0 U
V	18.7
Zn	506

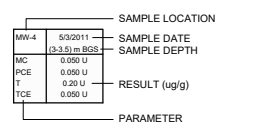
BH36-13	6/28/2013 (0-0.9) m BGS	6/28/2013 (2.44-3.86) m BGS
Ag	0.20 U	0.20 U
As	4.5	102
B	8.3	7.8
B HWS	0.35	0.15
Ba	28.7	35.9
Be	0.50 U	0.50 U
Cd	0.50 U	0.50 U
CN	2.50	1.32
Co	3.9	7.3
Cr	11.1	8.4
CrVI	0.22	0.20 U
Cu	35.7	32.7
Hg	0.096	0.016
Mn	1.0 U	1.0 U
Ni	10.4	13.1
Pb	130	63.8
Se	1.0 U	1.0 U
Se	1.0 U	1.0 U
Tl	0.50 U	0.50 U
U	1.0 U	1.0 U
V	19.2	17.2
Zn	485	746

MW25-13	1/7/2013 (0-1.22) m BGS
Ag	0.20 U/0.20 U
As	7.3/5.5
B	9.2/8.8
B HWS	0.200/0.10 U
Ba	38.5/26.6
Be	0.50 U/0.50 U
Cd	1.20/1.16
CN	-
Co	6.0/5.1
Cr	15.7/16.3
CrVI	0.20 U/0.20 U
Cu	55.6/32.9
Hg	0.200 U/0.032 U
Mn	2.2/1.0 U
Ni	12.1/11.1
Pb	51.9/42.7
Se	1.0 U/1.0 U
Se	1.0 U/1.0 U
Tl	0.50 U/0.50 U
U	1.0 U/1.0 U
V	24.5/23.6
Zn	703/717

MW4	5/5/2011 (0-0.6) m BGS	5/5/2011 (0.8-1.4) m BGS	5/9/2011 (2.3-2.9) m BGS	5/9/2011 (3-3.7) m BGS
Ag	0.42	-	-	-
As	6.9	-	-	-
B	74.0	-	-	-
B HWS	1.90	-	-	-
Ba	3370	-	-	-
Be	0.50 U	-	-	-
Cd	0.32	-	-	-
CN	-	-	-	-
Co	47.7	-	-	-
Cr	160	-	-	-
CrVI	0.23	-	-	-
Cu	1790	-	-	-
Hg	46.1	-	-	-
Mn	12.8	-	-	-
Ni	141	-	-	-
Pb	756	-	-	-
Sb	32.4	-	-	-
Se	1.6	-	-	-
Tl	0.50 U	-	-	-
U	1.1	-	-	-
V	296	-	-	-
Zn	3439	-	-	-



- ug/g MICROGRAMS PER GRAM
- m BGS METERS BELOW GROUND SURFACE
- 4.9/4.2 RESULT/DUPLICATE RESULT
- EXCEEDANCE OF THE MOE TABLE 2 STANDARD
- J ESTIMATED CONCENTRATION
- U DETECTION LIMIT
- SOIL SAMPLE INTERVAL - NOT ANALYZED
- SOIL SAMPLE INTERVAL - IMPACTED
- SOIL SAMPLE INTERVAL - CLEAN



Chemical Name	Abbreviation	MOE Table 2 Standard
Antimony	Sb	7.5
Arsenic	As	18
Barium	Ba	390
Beryllium	Be	4
Boron	B	120
Boron (hot water extractable)	B HWS	1.5
Cadmium	Cd	1.2
Chromium	Cr	160
Chromium VI (hexavalent)	CrVI	8
Cobalt	Co	23
Copper	Cu	168
Cyanide	CN	0.053
Lead	Pb	120
Manganese	Mn	0.27
Molybdenum	Mo	6.8
Nickel	Ni	100
Selenium	Se	2.4
Silver	Ag	30
Thallium	Tl	1
Uranium	U	23
Vanadium	V	86
Zinc	Zn	348

NOTE: TABLE 2: FULL DEPTH GENERIC SITE CONDITION STANDARDS IN A POTABLE GROUNDWATER CONDITION, RESIDENTIAL/PARKLAND INSTITUTIONAL PROPERTY USE, COARSE GRAINED SOIL (MOE, 2011).

EXTENT OF METALS IMPACTS

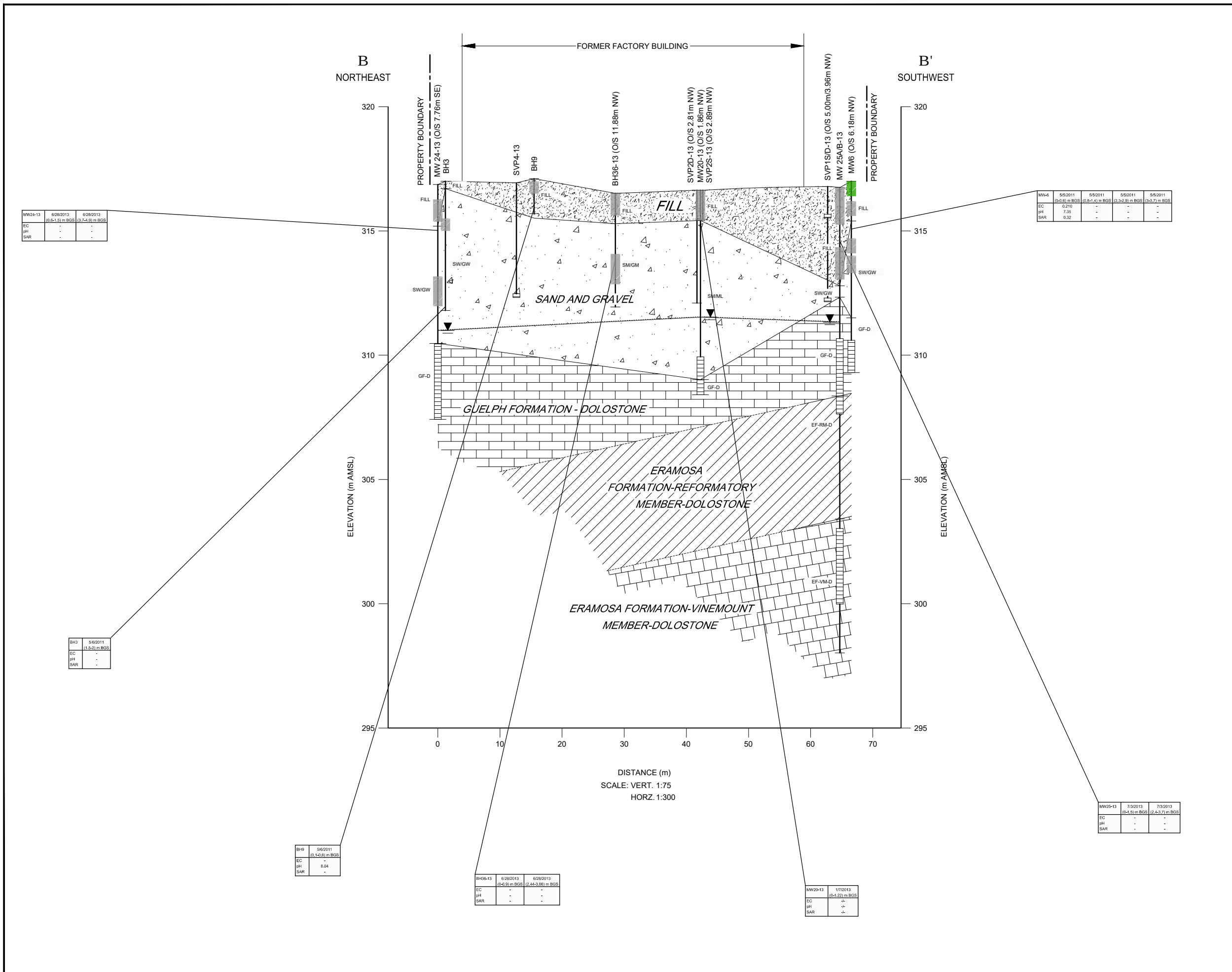
SCALE VERIFICATION

THIS BAR MEASURES 50mm ON ORIGINAL. ADJUST SCALE ACCORDINGLY.

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PHASE TWO ENVIRONMENTAL SITE ASSESSMENT
VERTICAL EXTENT OF SOIL METALS IMPACTS
GEOLOGIC CROSS-SECTION B-B'



Source Reference:			
Project Manager:	Reviewed By:	Date:	
L. SHEPHERD	A. MOLENHUIS	FEBRUARY 2015	
Scale:	Project N°:	Report N°:	Drawing N°:
AS SHOWN	78674-06	003	figure 12o



LEGEND

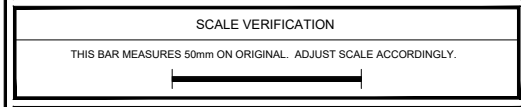
- WELL/BORING ID
- GROUND SURFACE
- GROUNDWATER ELEVATION (AUG. 1, 2013)
- WELL SCREEN
- END OF WELL
- OFF-SET

ug/g MICROGRAMS PER GRAM
 m BGS METERS BELOW GROUND SURFACE
 4.9/4.2 RESULT/DUPLICATE RESULT
 EXCEEDANCE OF THE MOE TABLE 2 STANDARD
 J ESTIMATED CONCENTRATION
 U DETECTION LIMIT
 SOIL SAMPLE INTERVAL - NOT ANALYZED
 SOIL SAMPLE INTERVAL - IMPACTED
 SOIL SAMPLE INTERVAL - CLEAN

MOE TABLE 2 STANDARDS

Chemical Name	Abbreviation	MOE Table 2 Standard
Conductivity	EC	0.7
pH	pH	-
Sodium adsorption ratio (SAR)	SAR	5

NOTE:
TABLE 2: FULL DEPTH GENERIC SITE CONDITION STANDARDS IN A POTABLE GROUNDWATER CONDITION, RESIDENTIAL/PARKLAND INSTITUTIONAL PROPERTY USE, COARSE GRAINED SOIL (MOE, 2011).



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PHASE TWO ENVIRONMENTAL SITE ASSESSMENT

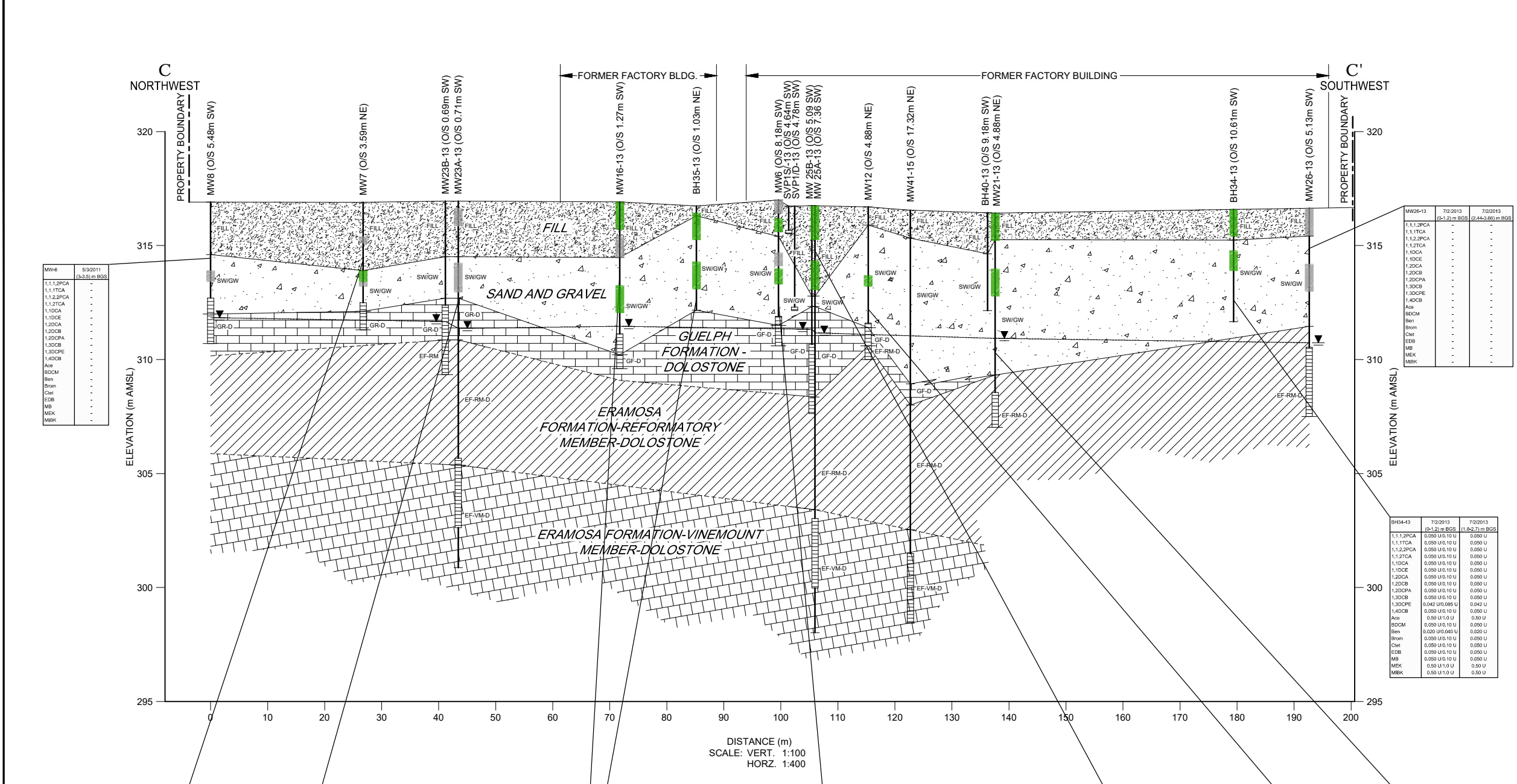
VERTICAL EXTENT OF SOIL GENERAL CHEMISTRY IMPACTS
GEOLOGIC CROSS-SECTION B-B'

CRA CONESTOGA-ROVERS & ASSOCIATES

Source Reference:

Project Manager: L. SHEPHERD	Reviewed By: A. MOLENHUIS	Date: FEBRUARY 2015
Scale: AS SHOWN	Project N°: 78674-06	Report N°: 003
		Drawing N°: figure 12p

78674-06(003)GN-WA053 FEB 23/2015



LEGEND

- WELL BORING ID
- GROUND SURFACE
- GROUNDWATER ELEVATION (AUG. 1, 2013)
- WELL SCREEN
- END OF WELL
- OFF-SET

ug/g MICROGRAMS PER GRAM
 m BGS METERS BELOW GROUND SURFACE
 4.9/4.2 RESULT/DUPLICATE RESULT
 EXCEEDANCE OF THE MOE TABLE 2 STANDARD
 J ESTIMATED CONCENTRATION
 U DETECTION LIMIT
 SOIL SAMPLE INTERVAL - NOT ANALYZED
 SOIL SAMPLE INTERVAL - IMPACTED
 SOIL SAMPLE INTERVAL - CLEAN

SAMPLE LOCATION

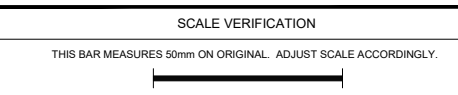
MW-4 5/3/2011 (3-3.5) m BGS
 MC 0.050 U
 PCE 0.050 U
 T 0.20 U
 TCE 0.050 U

PARAMETER

MOE TABLE 2 STANDARDS

Chemical Name	Abbreviation	MOE Table 2 Standard
1,1,1,2-Tetrachloroethane	1,1,1,2-TCPE	0.08
1,1,1-Trichloroethane	1,1,1-TCA	0.38
1,1,2,2-Tetrachloroethane	1,1,2,2-TCPE	0.05
1,1,2-Trichloroethane	1,1,2-TCA	0.05
1,1-Dichloroethane	1,1-DCE	0.47
1,1-Dichloroethane (ethylene dibromide)	EDB	0.05
1,2-Dichloroethane	1,2-DCE	1.2
1,2-Dichloroethane	1,2-DCA	0.05
1,2-Dibromopropane	1,2-DDBP	0.05
1,3-Dichlorobenzene	1,3-DCE	4.8
1,3-Dichlorobenzene	1,3-DCP	0.05
1,4-Dichlorobenzene	1,4-DCB	0.083
2-Butanone (Methyl ethyl ketone) (MEK)	MEK	36
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	MIBK	1.7
Axone	Ax	35
Benzene	Ben	0.21
Bromodichloromethane	BDCM	0.27
Bromofluoromethane	BFM	0.05
Carbon tetrachloride	CCl4	0.05

NOTE: TABLE 2: FULL DEPTH GENERIC SITE CONDITION STANDARDS IN A POTABLE GROUNDWATER CONDITION, RESIDENTIAL/PARKLAND INSTITUTIONAL PROPERTY USE, COARSE GRAINED SOIL (MOE, 2011).



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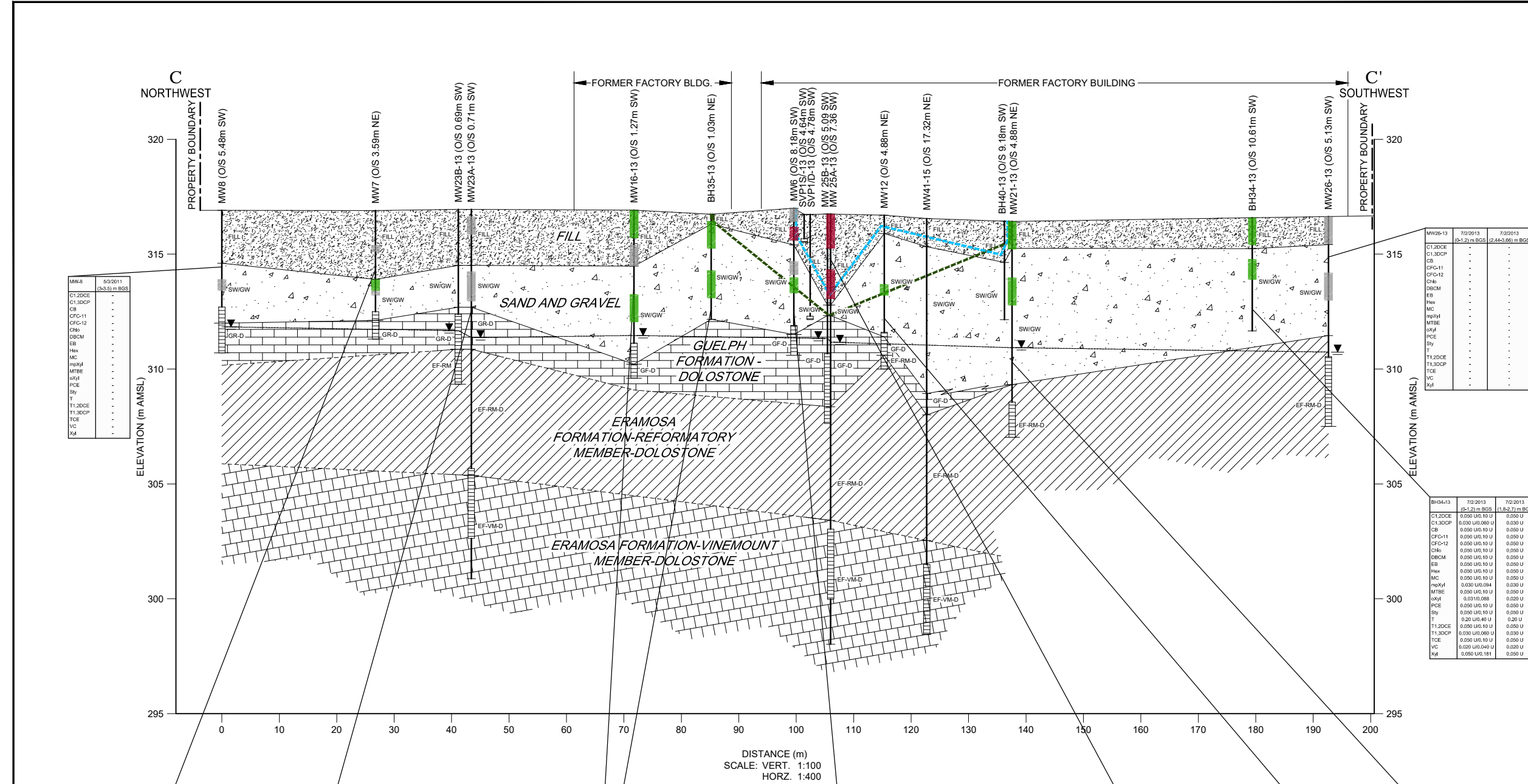
PHASE TWO ENVIRONMENTAL SITE ASSESSMENT

**VERTICAL EXTENT OF SOIL VOC IMPACTS
 GEOLOGIC CROSS-SECTION C-C'**



Source Reference:

Project Manager: L. SHEPHERD	Reviewed By: A. MOLENHUIS	Date: FEBRUARY 2015
Scale: AS SHOWN	Project No.:	Report No.:
	78674-06	003
		Drawing No.:
		figure 12q



LEGEND

- WELL BORING ID
- GROUND SURFACE
- GROUNDWATER ELEVATION (AUG. 1, 2013)
- WELL SCREEN
- END OF WELL
- OFF-SET

- ug/g MICROGRAMS PER GRAM
- m BGS METERS BELOW GROUND SURFACE
- 4.9/4.2 RESULT/DUPLICATE RESULT
- EXCEEDANCE OF THE MOE TABLE 2 STANDARD
- J ESTIMATED CONCENTRATION
- U DETECTION LIMIT
- SOIL SAMPLE INTERVAL - NOT ANALYZED
- SOIL SAMPLE INTERVAL - IMPACTED
- SOIL SAMPLE INTERVAL - CLEAN

SAMPLE LOCATION

MW-4 5/3/2011 (3-3.5) m BGS

MC 0.050 U
PCE 0.050 U
T 0.20 U
TCE 0.050 U

PARAMETER

MOE TABLE 2 STANDARDS

Chemical Name	Abbreviation	MOE Table 2 Standard
Chlorobenzene	CB	2.4
Chloroform (Trichloromethane)	Chf	0.05
cis-1,2-Dichloroethane	C1,2DCE	1.9
cis-1,3-Dichloropropene	C1,3DCP	-
Dibromochloromethane	DBCM	2.3
Dichlorodifluoromethane (CFC-12)	CFC-12	16
Ethylbenzene	EB	1.1
Heptane	Hept	2.8
m,p-Xylenes	mpXyl	2.8
Methyl tert butyl ether (MTBE)	MTBE	0.75
Methylene chloride	MC	0.3
n-Heptane	n-Hept	-
Syrene	Syr	0.7
Tetrahaloethane	T	0.28
Toluene	T	2.3
trans-1,2-Dichloroethane	T1,2DCE	0.84
trans-1,3-Dichloropropene	T1,3DCP	-
Trichloroethane	TCE	0.061
Trichloroethane (CFC-113)	CFC-11	4
Vinyl chloride	VC	0.02
Xylenes (Total)	Xyl	3.1

NOTE: TABLE 2: FULL DEPTH GENERIC SITE CONDITION STANDARDS IN A POTABLE GROUNDWATER CONDITION, RESIDENTIAL/PARKLAND INSTITUTIONAL PROPERTY USE, COARSE GRAINED SOIL (MOE, 2011).

--- EXTENT OF TCE IMPACTS
--- EXTENT OF TOLUENE IMPACTS

MW-8	5/3/2011 (5-5.5) m BGS	5/3/2011 (5-5.5) m BGS	5/3/2011 (5-5.5) m BGS	5/3/2011 (5-5.5) m BGS	5/3/2011 (5-5.5) m BGS
C1,2DCE	-	-	-	-	-
C1,3DCP	-	-	-	-	-
CB	-	-	-	-	-
CFC-11	-	-	-	-	-
CFC-12	-	-	-	-	-
Chf	-	-	-	-	-
DBCM	-	-	-	-	-
EB	-	-	-	-	-
Hept	-	-	-	-	-
MC	-	-	-	-	-
mpXyl	-	-	-	-	-
MTBE	-	-	-	-	-
n-Hept	-	-	-	-	-
PCE	-	-	-	-	-
Syr	-	-	-	-	-
T	-	-	-	-	-
T1,2DCE	-	-	-	-	-
T1,3DCP	-	-	-	-	-
TCE	-	-	-	-	-
VC	-	-	-	-	-
Xyl	-	-	-	-	-

SCALE VERIFICATION

THIS BAR MEASURES 50mm ON ORIGINAL. ADJUST SCALE ACCORDINGLY.

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GUELPH, ONTARIO

PHASE TWO ENVIRONMENTAL SITE ASSESSMENT

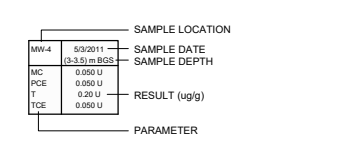
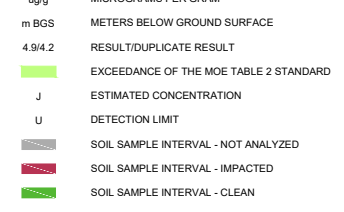
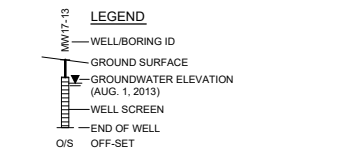
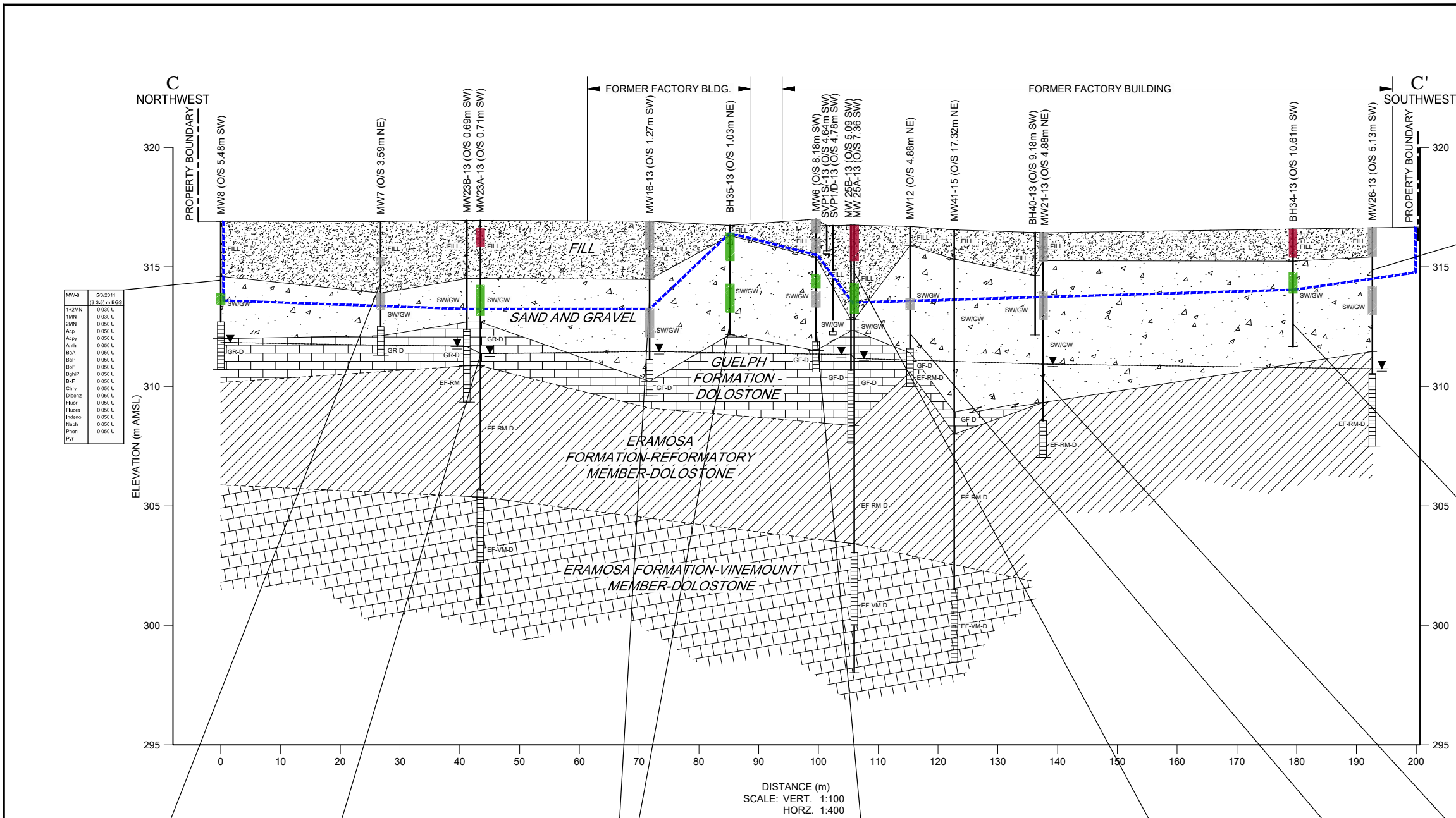
VERTICAL EXTENT OF SOIL VOC IMPACTS CONTINUED
GEOLOGIC CROSS-SECTION C-C'

CRA CONESTOGA-ROVERS & ASSOCIATES

Source Reference:

Project Manager: L. SHEPHERD	Reviewed By: A. MOLENHUIS	Date: FEBRUARY 2015
Scale: AS SHOWN	Project No: 78674-06	Report No: 003
		Drawing No: figure 12r

78674-06(003)GN-WA055 APR 15/2015



MOE TABLE 2 STANDARDS

Chemical Name	Abbreviation	MOE Table 2 Standard
1,1-Dichloroethane	1,1DCE	0.09
1-Methylpiperazine	1MP	0.99
2-Methylpiperazine	2MP	0.99
Acetaminophen	AcP	7.9
Acetylphenylamine	AcP	0.5
Anthracene	Anth	0.67
Benzo[a]anthracene	BaA	0.5
Benzo[a]pyrene	BP	0.5
Benzo[b]fluoranthene	BbF	0.78
Benzo[k]fluoranthene	BkF	0.6
Benzo[k]perylene	BkP	0.78
Chrysene	Chr	7
Dibenz[a,h]anthracene	Dibenz	0.1
Fluoranthene	Fluor	0.69
Fluorene	Fluor	0.2
Hexachloro-2,3-dioxepene	HxCl	0.38
Naphthalene	Naph	0.6
Phenanthrene	Phen	0.2
Pyrene	Pyr	0.8

NOTE: TABLE 2: FULL DEPTH GENERIC SITE CONDITION STANDARDS IN A POTABLE GROUNDWATER CONDITION: RESIDENTIAL/PARKLAND INSTITUTIONAL PROPERTY USE, COARSE GRAINED SOIL (MOE, 2011).

--- EXTENT OF PAH IMPACTS

MW-4	5/3/2011	(3-3.5) m BGS
1+2MN	0.030 U	
1MN	0.030 U	
2MN	0.050 U	
AcP	0.050 U	
Anth	0.050 U	
BaA	0.050 U	
BbF	0.050 U	
BkF	0.050 U	
BkP	0.050 U	
Chr	0.050 U	
Dibenz	0.050 U	
Fluor	0.050 U	
Fluora	0.050 U	
Indeno	0.050 U	
Naph	0.050 U	
Phen	0.050 U	
Pyr	0.050 U	

MW-6	7/2/2013	7/2/2013
(0-1.2) m BGS	(2.44-3.66) m BGS	
1+2MN	-	-
1MN	-	-
2MN	-	-
AcP	-	-
Anth	-	-
BaA	-	-
BbF	-	-
BkF	-	-
BkP	-	-
Chr	-	-
Dibenz	-	-
Fluor	-	-
Fluora	-	-
Indeno	-	-
Naph	-	-
Phen	-	-
Pyr	-	-

BH-44-13	7/2/2013	7/2/2013
(0-1.2) m BGS	(1.8-2.7) m BGS	
1+2MN	0.067/0.19	0.042 U
1MN	0.31/0.58	0.050 U
2MN	0.35/0.63	0.050 U
AcP	2.45/7.85	0.050 U
Anth	0.50/1.05	0.050 U
Anth	3.67/6.76	0.050 U
BaA	13.8/31.4	0.050 U
BbF	13.4/28.1	0.050 U
BbF	16.8/49.4	0.050 U
BkF	8.86/15.3	0.050 U
BkP	6.82/12.8	0.050 U
Chr	13.7/33.5	0.050 U
Dibenz	1.46/3.33	0.050 U
Fluor	1.50/3.5	0.050 U
Fluora	37.6/88.2	0.050 U
Indeno	8.04/18.5	0.050 U
Naph	0.62/1.39	0.050 U
Phen	25.9/57.6	0.078
Pyr	31.4/72.2	0.073

MW-7	5/3/2011	5/3/2011	5/3/2011
(1.5-1.8) m BGS	(3-3.5) m BGS	(3-3.7) m BGS	
1+2MN	-	-	-
1MN	-	-	-
2MN	-	-	-
AcP	-	-	-
Anth	-	-	-
BaA	-	-	-
BbF	-	-	-
BkF	-	-	-
BkP	-	-	-
Chr	-	-	-
Dibenz	-	-	-
Fluor	-	-	-
Fluora	-	-	-
Indeno	-	-	-
Naph	-	-	-
Phen	-	-	-
Pyr	-	-	-

MW-23-13	7/2/2013	7/2/2013
(0-1.1) m BGS	(2-2.4) m BGS	
1+2MN	0.31/0.60	0.042 U
1MN	0.56/1.19	0.030 U
2MN	0.72/1.51	0.030 U
AcP	0.77/1.05	0.050 U
Anth	0.88/1.05	0.050 U
Anth	2.26/3.19	0.050 U
BaA	4.29/3.27	0.050 U
BbF	3.52/3.25	0.062
BbF	4.40/3.27	0.073
BkF	1.50/1.14	0.050 U
BkP	1.47/3.09	0.050 U
Chr	4.79/3.26	0.078
Dibenz	0.67/1.05	0.050 U
Fluor	1.05/1.05	0.050 U
Fluora	15.8/3.69	0.175
Indeno	1.50/1.16	0.050 U
Naph	0.82/1.12	0.050 U
Phen	15.3/3.88	0.115
Pyr	8.81/3.96	0.148

MW-16-13	1/7/2013	1/7/2013	1/7/2013
(0-1.2) m BGS	(1.52-1.44) m BGS	(3.66-4.88) m BGS	
1+2MN	-	-	-
1MN	-	-	-
2MN	-	-	-
AcP	-	-	-
Anth	-	-	-
BaA	-	-	-
BbF	-	-	-
BkF	-	-	-
BkP	-	-	-
Chr	-	-	-
Dibenz	-	-	-
Fluor	-	-	-
Fluora	-	-	-
Indeno	-	-	-
Naph	-	-	-
Phen	-	-	-
Pyr	-	-	-

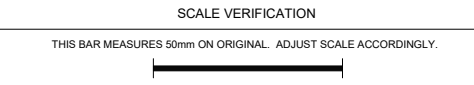
BH-35-13	7/2/2013	7/2/2013
(0-3.1) m BGS	(2.44-3.86) m BGS	
1+2MN	0.042 U	0.042 U
1MN	0.030 U	0.030 U
2MN	0.030 U	0.030 U
AcP	0.050 U	0.050 U
Anth	0.050 U	0.050 U
BaA	0.050 U	0.050 U
BbF	0.050 U	0.050 U
BkF	0.050 U	0.050 U
BkP	0.050 U	0.050 U
Chr	0.050 U	0.050 U
Dibenz	0.050 U	0.050 U
Fluor	0.050 U	0.050 U
Fluora	0.050 U	0.050 U
Indeno	0.050 U	0.050 U
Naph	0.050 U	0.050 U
Phen	0.050 U	0.050 U
Pyr	0.050 U	0.050 U

MW-4	5/9/2011	5/9/2011	5/9/2011	5/9/2011
(0-0.6) m BGS	(0.6-1.4) m BGS	(2.3-2.9) m BGS	(3-3.7) m BGS	
1+2MN	-	-	-	-
1MN	-	-	-	-
2MN	-	-	-	-
AcP	-	-	-	-
Anth	-	-	-	-
BaA	-	-	-	-
BbF	-	-	-	-
BkF	-	-	-	-
BkP	-	-	-	-
Chr	-	-	-	-
Dibenz	-	-	-	-
Fluor	-	-	-	-
Fluora	-	-	-	-
Indeno	-	-	-	-
Naph	-	-	-	-
Phen	-	-	-	-
Pyr	-	-	-	-

MW-26-13	7/2/2013	7/2/2013
(0-1.3) m BGS	(2-2.7) m BGS	
1+2MN	0.566	0.042 U
1MN	0.287	0.030 U
2MN	0.369	0.030 U
AcP	0.050 U	0.050 U
Anth	0.287	0.050 U
Anth	0.160	0.050 U
BaA	0.039/0.2	0.050 U
BbF	1.74	0.050 U
BbF	2.27	0.050 U
BkF	1.34	0.050 U
BkP	0.638	0.050 U
Chr	0.860	0.050 U
Dibenz	0.227	0.050 U
Fluor	0.050 U	0.050 U
Fluora	1.27	0.050 U
Indeno	1.43	0.050 U
Naph	0.323	0.050 U
Phen	0.761	0.050 U
Pyr	1.17	0.090 U

MW-12	5/10/2011
(3-3.5) m BGS	
1+2MN	-
1MN	-
2MN	-
AcP	-
Anth	-
BaA	-
BbF	-
BkF	-
BkP	-
Chr	-
Dibenz	-
Fluor	-
Fluora	-
Indeno	-
Naph	-
Phen	-
Pyr	-

MW-21-13	1/7/2013	1/7/2013
(0-1.2) m BGS	(2.44-3.66) m BGS	
1+2MN	-	-
1MN	-	-
2MN	-	-
AcP	-	-
Anth	-	-
BaA	-	-
BbF	-	-
BkF	-	-
BkP	-	-
Chr	-	-
Dibenz	-	-
Fluor	-	-
Fluora	-	-
Indeno	-	-
Naph	-	-
Phen	-	-
Pyr	-	-



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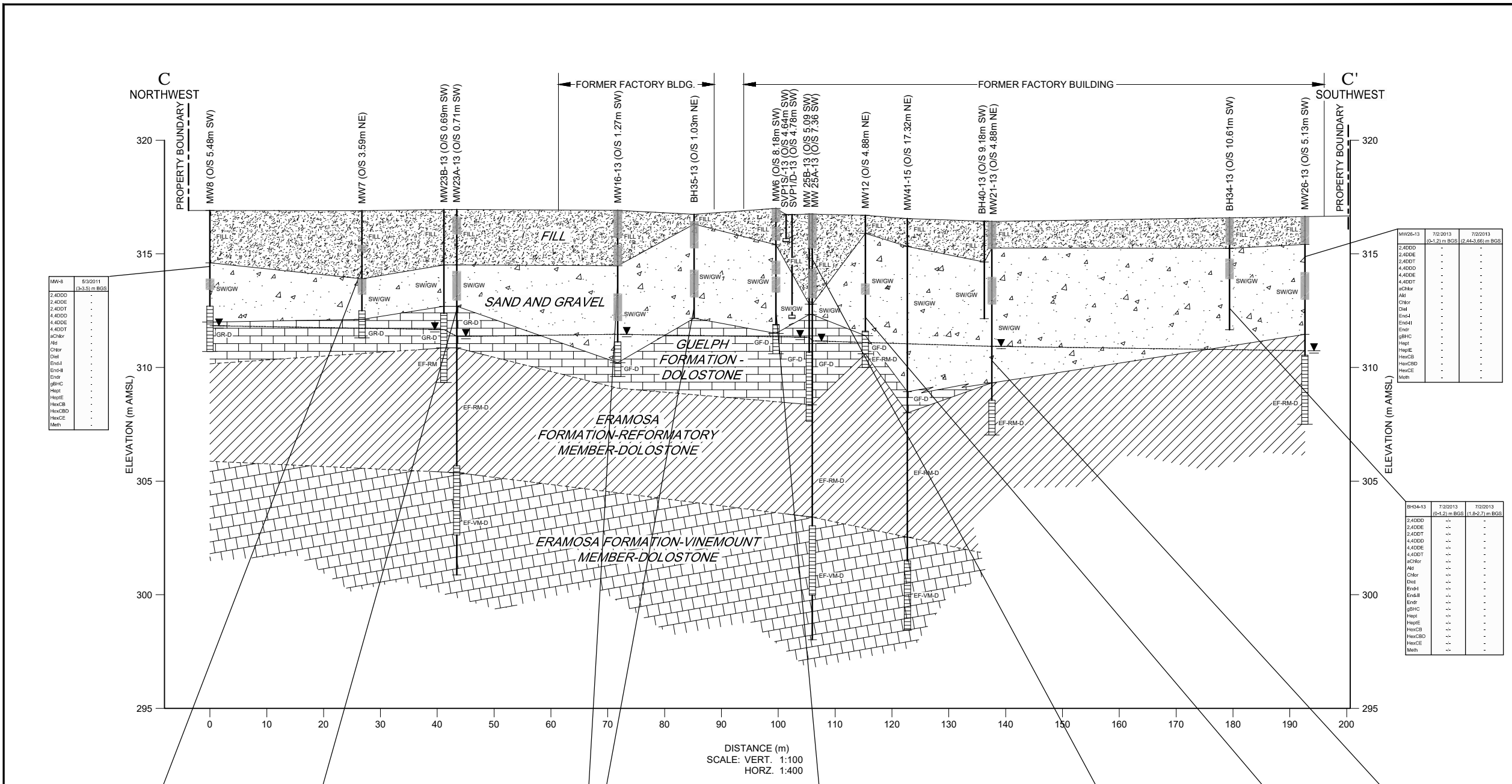
PHASE TWO ENVIRONMENTAL SITE ASSESSMENT

VERTICAL EXTENT OF SOIL PAH IMPACTS
GEOLOGIC CROSS-SECTION C-C'



Source Reference:

Project Manager:	Reviewed By:	Date:
L. SHEPHERD	A. MOLENHUIS	FEBRUARY 2015
Scale:	Project N°:	Report N°:
AS SHOWN	78674-06	003
		Drawing N°:
		figure 12s



MW-8	8/3/2011	3-3.5 m BGS
2,4DDO	-	-
2,4DDE	-	-
2,4DDT	-	-
4,4DDO	-	-
4,4DDE	-	-
4,4DDT	-	-
Chlor	-	-
Diol	-	-
End4	-	-
End8	-	-
Endr	-	-
gBHC	-	-
HepE	-	-
HexCB	-	-
HexCBD	-	-
HexCE	-	-
Meth	-	-

MW-7	5/3/2011	5/3/2011	5/3/2011
	(1.6-1.8) m BGS	(3-3.5) m BGS	(3-3.7) m BGS
2,4DDO	-	-	-
2,4DDE	-	-	-
2,4DDT	-	-	-
4,4DDO	-	-	-
4,4DDE	-	-	-
4,4DDT	-	-	-
Chlor	-	-	-
Diol	-	-	-
End4	-	-	-
End8	-	-	-
Endr	-	-	-
gBHC	-	-	-
HepE	-	-	-
HexCB	-	-	-
HexCBD	-	-	-
HexCE	-	-	-
Meth	-	-	-

MW23-13	7/2/2013	7/2/2013
	(0-1.1) m BGS	(2.7-4) m BGS
2,4DDO	-	-
2,4DDE	-	-
2,4DDT	-	-
4,4DDO	-	-
4,4DDE	-	-
4,4DDT	-	-
Chlor	-	-
Diol	-	-
End4	-	-
End8	-	-
Endr	-	-
gBHC	-	-
HepE	-	-
HexCB	-	-
HexCBD	-	-
HexCE	-	-
Meth	-	-

MW16-13	1/7/2013	1/7/2013	1/7/2013
	(0-1.22) m BGS	(1.52-2.44) m BGS	(3.66-4.88) m BGS
2,4DDO	-	-	-
2,4DDE	-	-	-
2,4DDT	-	-	-
4,4DDO	-	-	-
4,4DDE	-	-	-
4,4DDT	-	-	-
Chlor	-	-	-
Diol	-	-	-
End4	-	-	-
End8	-	-	-
Endr	-	-	-
gBHC	-	-	-
HepE	-	-	-
HexCB	-	-	-
HexCBD	-	-	-
HexCE	-	-	-
Meth	-	-	-

BH35-13	7/2/2013	7/2/2013
	(0.3-1.5) m BGS	(2.44-3.66) m BGS
2,4DDO	-	-
2,4DDE	-	-
2,4DDT	-	-
4,4DDO	-	-
4,4DDE	-	-
4,4DDT	-	-
Chlor	-	-
Diol	-	-
End4	-	-
End8	-	-
Endr	-	-
gBHC	-	-
HepE	-	-
HexCB	-	-
HexCBD	-	-
HexCE	-	-
Meth	-	-

MW6	5/5/2011	5/5/2011	5/5/2011
	(0-0.6) m BGS	(0.8-1.4) m BGS	(2.3-2.9) m BGS
2,4DDO	-	-	-
2,4DDE	-	-	-
2,4DDT	-	-	-
4,4DDO	-	-	-
4,4DDE	-	-	-
4,4DDT	-	-	-
Chlor	-	-	-
Diol	-	-	-
End4	-	-	-
End8	-	-	-
Endr	-	-	-
gBHC	-	-	-
HepE	-	-	-
HexCB	-	-	-
HexCBD	-	-	-
HexCE	-	-	-
Meth	-	-	-

MW25-13	7/2/2013	7/2/2013
	(0-1.5) m BGS	(2.4-3.7) m BGS
2,4DDO	-	-
2,4DDE	-	-
2,4DDT	-	-
4,4DDO	-	-
4,4DDE	-	-
4,4DDT	-	-
Chlor	-	-
Diol	-	-
End4	-	-
End8	-	-
Endr	-	-
gBHC	-	-
HepE	-	-
HexCB	-	-
HexCBD	-	-
HexCE	-	-
Meth	-	-

MW12	5/19/2011
	(3-3.5) m BGS
2,4DDO	-
2,4DDE	-
2,4DDT	-
4,4DDO	-
4,4DDE	-
4,4DDT	-
Chlor	-
Diol	-
End4	-
End8	-
Endr	-
gBHC	-
HepE	-
HexCB	-
HexCBD	-
HexCE	-
Meth	-

MW26-13	7/2/2013	7/2/2013
	(0-1.2) m BGS	(2.44-3.66) m BGS
2,4DDO	-	-
2,4DDE	-	-
2,4DDT	-	-
4,4DDO	-	-
4,4DDE	-	-
4,4DDT	-	-
Chlor	-	-
Diol	-	-
End4	-	-
End8	-	-
Endr	-	-
gBHC	-	-
HepE	-	-
HexCB	-	-
HexCBD	-	-
HexCE	-	-
Meth	-	-

BH34-13	7/2/2013	7/2/2013
	(0-1.2) m BGS	(1.8-2.7) m BGS
2,4DDO	-	-
2,4DDE	-	-
2,4DDT	-	-
4,4DDO	-	-
4,4DDE	-	-
4,4DDT	-	-
Chlor	-	-
Diol	-	-
End4	-	-
End8	-	-
Endr	-	-
gBHC	-	-
HepE	-	-
HexCB	-	-
HexCBD	-	-
HexCE	-	-
Meth	-	-

LEGEND

- WELL/BORING ID
- GROUND SURFACE
- GROUNDWATER ELEVATION (AUG. 1, 2013)
- WELL SCREEN
- END OF WELL
- OFF-SET

ug/g MICROGRAMS PER GRAM
m BGS METERS BELOW GROUND SURFACE
4.9/4.2 RESULT/DUPLICATE RESULT
J EXCEEDANCE OF THE MOE TABLE 2 STANDARD
U ESTIMATED CONCENTRATION
U DETECTION LIMIT
SOIL SAMPLE INTERVAL - NOT ANALYZED
SOIL SAMPLE INTERVAL - IMPACTED
SOIL SAMPLE INTERVAL - CLEAN

SAMPLE LOCATION

MW-4 5/3/2011 3-3.5 m BGS

MC 0.050 U
PCE 0.20 U
T 0.20 U
TCE 0.050 U

RESULT (ug/g)
PARAMETER

MOE TABLE 2 STANDARDS

Chemical Name	Abbreviation	MOE Table 2 Standard
2,4-DDE	2,4DDE	-
2,4-DDT	2,4DDT	-
4,4-DDE	4,4DDE	3.3
4,4-DDT	4,4DDT	0.26
4,4-DDO	4,4DDO	1.4
Chlor	Chlor	0.05
Diol	Diol	0.05
Endosulfan I	EndI	-
Endosulfan II	EndII	-
Endr	Endr	0.04
Gamma-BHC (BHC)	gBHC	0.056
Heptachlor	HepE	0.15
Heptachlor epoxide	HepE	0.05
Hexachlorobenzene	HexCB	0.02
Hexachlorobutadiene	HexCBD	0.02
Hexachlorocyclopentadiene	HexCE	0.089
Methoxychlor	Meth	0.13

NOTE:
TABLE 2: FULL DEPTH GENERIC SITE CONDITION STANDARDS IN A POTABLE GROUNDWATER CONDITION, RESIDENTIAL/PARKLAND INSTITUTIONAL PROPERTY USE, COARSE GRAINED SOIL (MOE, 2011).

SCALE VERIFICATION

THIS BAR MEASURES 50mm ON ORIGINAL. ADJUST SCALE ACCORDINGLY.

**139 MORRIS STREET HOLDINGS LTD.
GUELPH, ONTARIO**

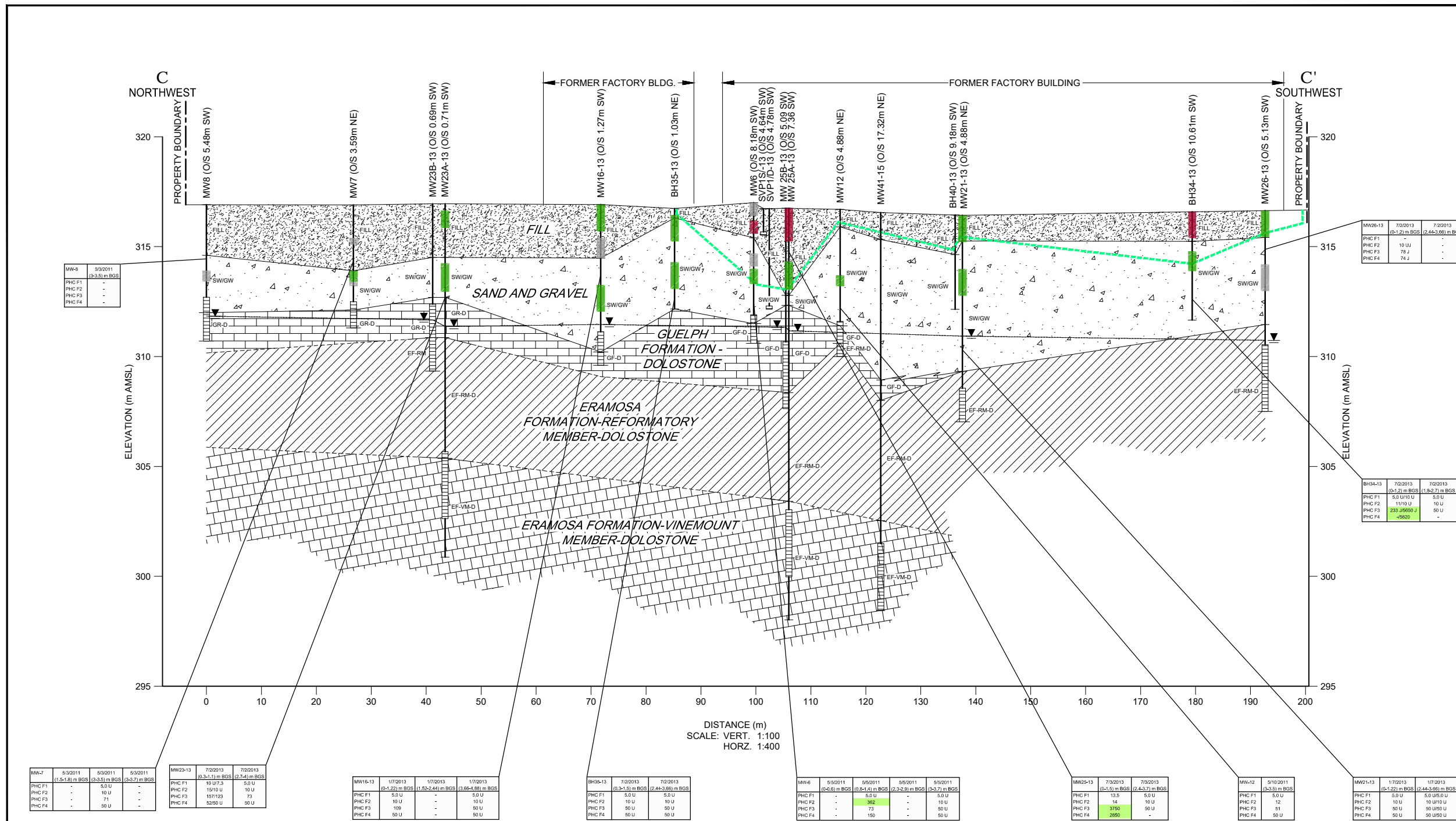
PHASE TWO ENVIRONMENTAL SITE ASSESSMENT

**VERTICAL EXTENT OF SOIL PESTICIDE IMPACTS
GEOLOGIC CROSS-SECTION C-C'**



Source Reference:

Project Manager: L. SHEPHERD	Reviewed By: A. MOLENHUIS	Date: FEBRUARY 2015
Scale: AS SHOWN	Project No: 78674-06	Report No: 003
		Drawing No: figure 12t



LEGEND

- Well/Boring ID
- GROUND SURFACE
- GROUNDWATER ELEVATION (AUG. 1, 2013)
- WELL SCREEN
- END OF WELL
- OFF-SET

ug/g MICROGRAMS PER GRAM
 m BGS METERS BELOW GROUND SURFACE
 4.9/4.2 RESULT/DUPLICATE RESULT
 EXCEEDANCE OF THE MOE TABLE 2 STANDARD
 J ESTIMATED CONCENTRATION
 U DETECTION LIMIT
 SOIL SAMPLE INTERVAL - NOT ANALYZED
 SOIL SAMPLE INTERVAL - IMPACTED
 SOIL SAMPLE INTERVAL - CLEAN

SAMPLE LOCATION

Sample Date: 5/3/2011
 Sample Depth: (3-3.5) m BGS
 Parameter: MC, PCE, T, TCE
 Result (ug/g): 0.050 U, 0.050 U, 0.20 U, 0.050 U

MOE TABLE 2 STANDARDS

Chemical Name	Abbreviation	MOE Table 2 Standard
Petroleum Hydrocarbons F1 (C6-C10)	PHC F1	50
Petroleum Hydrocarbons F2 (C10-C16)	PHC F2	10
Petroleum Hydrocarbons F3 (C16-C34)	PHC F3	500
Petroleum Hydrocarbons F4 (EPA-C10)	PHC F4	2000

NOTE: TABLE 2: FULL DEPTH GENERIC SITE CONDITION STANDARDS IN A POTABLE GROUNDWATER CONDITION, RESIDENTIAL/PARKLAND INSTITUTIONAL PROPERTY USE, COARSE GRAINED SOIL (MOE, 2011).

--- EXTENT OF PHC IMPACTS

SCALE VERIFICATION
 THIS BAR MEASURES 50mm ON ORIGINAL. ADJUST SCALE ACCORDINGLY.

**139 MORRIS STREET HOLDINGS LTD.
 GUELPH, ONTARIO**

PHASE TWO ENVIRONMENTAL SITE ASSESSMENT

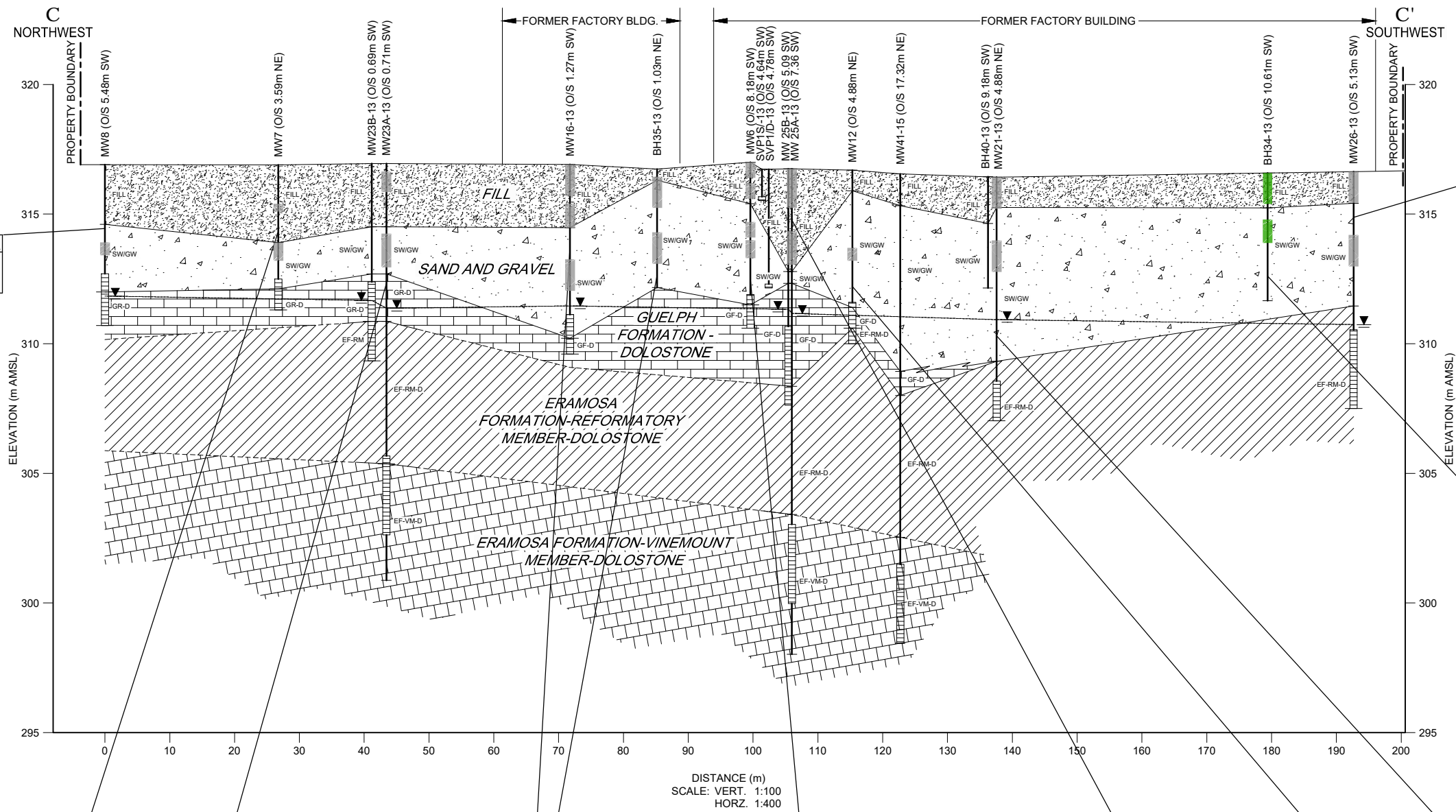
VERTICAL EXTENT OF SOIL PHC IMPACTS
 GEOLOGIC CROSS-SECTION C-C'

CRA CONESTOGA-ROVERS & ASSOCIATES

Source Reference:

Project Manager: L. SHEPHERD	Reviewed By: A. MOLENHUIS	Date: FEBRUARY 2015
Scale: AS SHOWN	Project No: 78674-06	Report No: 003
		Drawing No: figure 12u

78674-06(003)GN-WA058 APR 15/2015



LEGEND

- WELL/BORING ID
- GROUND SURFACE
- GROUNDWATER ELEVATION (AUG. 1, 2013)
- WELL SCREEN
- END OF WELL
- OFF-SET

ug/g MICROGRAMS PER GRAM
 m BGS METERS BELOW GROUND SURFACE
 4.9/4.2 RESULT/DUPLICATE RESULT
 EXCEEDANCE OF THE MOE TABLE 2 STANDARD
 J ESTIMATED CONCENTRATION
 U DETECTION LIMIT
 SOIL SAMPLE INTERVAL - NOT ANALYZED
 SOIL SAMPLE INTERVAL - IMPACTED
 SOIL SAMPLE INTERVAL - CLEAN

SAMPLE LOCATION

MW-4 5/3/2011 (3-3.5) m BGS

MC 0.050 U
 PCE 0.20 U
 T 0.20 U
 HCE 0.050 U

PARAMETER

MOE TABLE 2 STANDARDS

Chemical Name	Abbreviation	MOE Table 2 Standard
Arochlor 1242 (PCB-1242)	PCB1242	-
Arochlor 1248 (PCB-1248)	PCB1248	-
Arochlor 1254 (PCB-1254)	PCB1254	-
Arochlor 1260 (PCB-1260)	PCB1260	-
Total PCBs	PCBs	0.35

NOTE:
 TABLE 2: FULL DEPTH GENERIC SITE CONDITION STANDARDS IN A POTABLE GROUNDWATER CONDITION, RESIDENTIAL/PARKLAND INSTITUTIONAL PROPERTY USE, COARSE GRAINED SOIL (MOE, 2011).

MW26-13	7/2/2013	7/2/2013
PCB1242	(0-1.7) m BGS	(2.44-3.66) m BGS
PCB1248	-	-
PCB1254	-	-
PCB1260	-	-
PCBs	-	-

BH44-13	7/2/2013	7/2/2013
PCB1242	0.050 U@0.050 U	0.010 U
PCB1248	0.050 U@0.050 U	0.010 U
PCB1254	0.050 U@0.050 U	0.010 U
PCB1260	0.050 U@0.167 U	0.010 U
PCBs	0.10 U@0.17	0.020 U

MW-4	5/3/2011	5/3/2011
PCB1242	-	-
PCB1248	-	-
PCB1254	-	-
PCB1260	-	-
PCBs	-	-

MW-7	5/3/2011	5/2/2011	5/3/2011
PCB1242	-	-	-
PCB1248	-	-	-
PCB1254	-	-	-
PCB1260	-	-	-
PCBs	-	-	-

MW23-13	7/2/2013	7/2/2013
PCB1242	-	-
PCB1248	-	-
PCB1254	-	-
PCB1260	-	-
PCBs	-	-

MW16-13	1/7/2013	1/7/2013	1/7/2013
PCB1242	-	-	-
PCB1248	-	-	-
PCB1254	-	-	-
PCB1260	-	-	-
PCBs	-	-	-

BH35-13	7/2/2013	7/2/2013
PCB1242	-	-
PCB1248	-	-
PCB1254	-	-
PCB1260	-	-
PCBs	-	-

MW-6	5/5/2011	5/5/2011	5/5/2011	5/5/2011
PCB1242	-	-	-	-
PCB1248	-	-	-	-
PCB1254	-	-	-	-
PCB1260	-	-	-	-
PCBs	-	-	-	-

MW25-13	7/2/2013	7/2/2013
PCB1242	-	-
PCB1248	-	-
PCB1254	-	-
PCB1260	-	-
PCBs	-	-

MW-12	5/10/2011	5/10/2011
PCB1242	-	-
PCB1248	-	-
PCB1254	-	-
PCB1260	-	-
PCBs	-	-

MW21-13	1/7/2013	1/7/2013
PCB1242	-	-
PCB1248	-	-
PCB1254	-	-
PCB1260	-	-
PCBs	-	-

SCALE VERIFICATION

THIS BAR MEASURES 50mm ON ORIGINAL. ADJUST SCALE ACCORDINGLY.

**139 MORRIS STREET HOLDINGS LTD.
 GUELPH, ONTARIO**

PHASE TWO ENVIRONMENTAL SITE ASSESSMENT

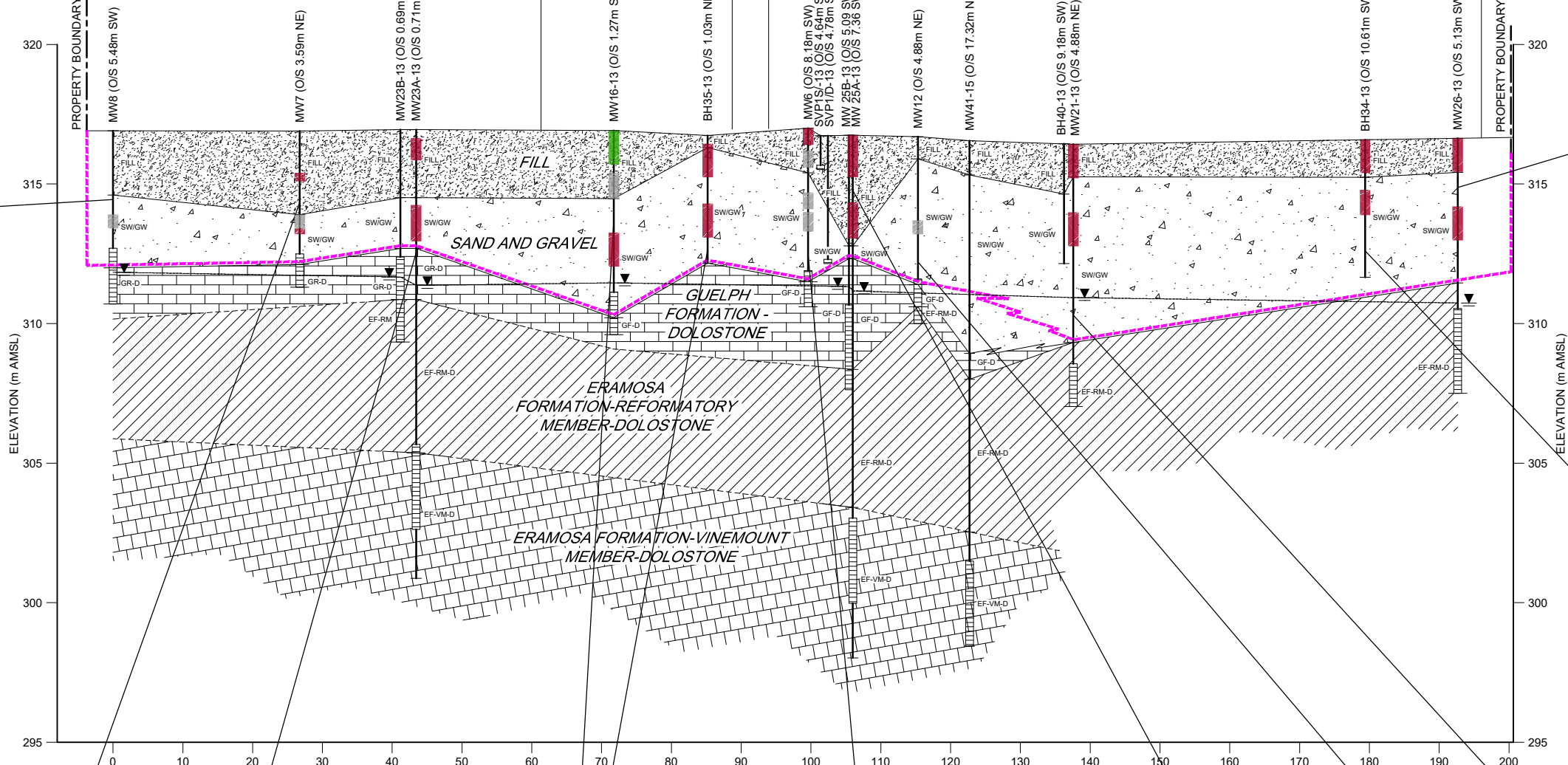
VERTICAL EXTENT OF SOIL PCB IMPACTS
 GEOLOGIC CROSS-SECTION C-C'

CRA CONESTOGA-ROVERS & ASSOCIATES

Source Reference:

Project Manager: L. SHEPHERD	Reviewed By: A. MOLENHUIS	Date: FEBRUARY 2015
Scale: AS SHOWN	Project N°: 78674-06	Report N°: 003
		Drawing N°: figure 12v

C NORTHWEST
 FORMER FACTORY BLDG.
 FORMER FACTORY BUILDING
 C' SOUTHWEST
 PROPERTY BOUNDARY



ELEVATION (m AMSL)
 DISTANCE (m)
 SCALE: VERT. 1:100
 HORZ. 1:400

MW#	5/3/2011 (3-3.0) m BGS
Ag	-
As	-
B	-
B HWS	-
Ba	-
Bb	-
Cd	-
CN	-
Co	-
Cr	-
Cv1	-
Cu	-
Hg	-
Mo	-
Ni	-
Pb	-
Sb	-
Se	-
Tl	-
U	-
V	-
Zn	-

MW#	5/3/2011 (1.5-1.0) m BGS	5/3/2011 (2-3.0) m BGS	5/3/2011 (3-3.7) m BGS
Ag	0.20 U	-	0.20 U
As	3.5	-	5.7
B	9.6	-	9.0
B HWS	0.11	-	60.3
Ba	21.5	-	0.50 U
Bb	0.50 U	-	0.50 U
Cd	0.56	-	0.72
CN	0.650 U	-	-
Co	3.1	-	5.6
Cr	14.2	-	12.3
Cv1	0.20 U	-	-
Cu	17.3	-	24.0
Hg	0.050 U	-	-
Mo	1.9	-	1.6
Ni	6.0	-	10.0
Pb	143	-	78.4
Sb	1.0 U	-	1.0 U
Se	1.0 U	-	1.0 U
Tl	0.50 U	-	0.50 U
U	1.0 U	-	1.0 U
V	11.4	-	26.5
Zn	492	-	579

MW23A-13	7/2/2013 (0.3-1.1) m BGS	7/2/2013 (2-2.4) m BGS
Ag	0.20 U/0.20 U	0.20 U
As	14.51/5.4	6.3
B	79.8/43.2	29.6
B HWS	2.28/1.28	3.87
Ba	289/129	64.5
Bb	2.35 J1, 19 J	0.58
Cd	3.47/3.08	1.33
CN	-	-
Co	4.7	3.2
Cr	16.4/8.3	8.7
Cv1	0.20 U	0.20 U
Cu	23.8/18.2	20.7
Hg	0.02/0.027	0.020 U
Mo	409/422	47.8
Ni	0.075/0.091	0.028
Nb	2.32/1.1	1.1
Pb	26.8/20.1	22.1
Sb	1.58/1.52	1.45
Se	3.6/1.9	1.0 U
Tl	1.0 U/1.0 U	1.0 U
U	0.50 U/0.50 U	0.50 U
V	1.0 U/1.0 U	1.0 U
Zn	37.8/28.9	32.6
	1588/1170	1102

MW16-13	1/7/2013 (0.1-2.2) m BGS	1/7/2013 (1.52-2.44) m BGS	1/7/2013 (1.66-4.88) m BGS
Ag	0.20 U	-	0.20 U
As	6.8	-	6.2
B	9.9	-	12.2
B HWS	0.87	-	0.19
Ba	22.6	-	16.4
Bb	0.50 U	-	0.50 U
Cd	0.50 U	-	1.07
CN	-	-	1.61
Co	4.7	-	3.2
Cr	15.0	-	8.8
Cv1	0.20 U	-	0.20 U
Cu	45.8	-	21.6
Hg	0.231	-	0.022
Mo	1.9 U	-	1.0 U
Ni	70.7	-	8.0
Pb	96.3	-	58.7
Sb	2.9	-	1.0 U
Se	12.1	-	1.0 U
Tl	0.50 U	-	0.50 U
U	1.0 U	-	1.0 U
V	24.9	-	14.9
Zn	196	-	440

BH35-13	7/2/2013 (0.3-1.5) m BGS	7/2/2013 (2.44-3.86) m BGS
Ag	0.20 U	0.20 U
As	9.1	45.4
B	15.6	9.3
B HWS	0.59	0.17
Ba	76.9	34.8
Bb	0.86	0.50 U
Cd	1.61	1.32
CN	-	-
Co	7.6	5.1
Cr	18.1	12.1
Cv1	0.20 U	0.20 U
Cu	26.4	30.6
Hg	0.078	0.016
Mo	1.3	3.7
Ni	199	55.1
Nb	16.8	12.6
Pb	199	85.1
Sb	1.0 U	1.0 U
Se	1.0 U	1.0 U
Tl	0.50 U	0.50 U
U	1.0 U	1.0 U
V	36.1	16.3
Zn	671	683

MW4	5/3/2011 (0-0.6) m BGS	5/3/2011 (0.8-1.4) m BGS	5/3/2011 (2.3-2.9) m BGS	5/3/2011 (3-3.7) m BGS
Ag	8.2	-	-	-
As	9.9	-	-	-
B	74.0	-	-	-
B HWS	1.50	-	-	-
Ba	3370	-	-	-
Bb	0.50 U	-	-	-
Cd	9.32	-	-	-
CN	-	-	-	-
Co	17.7	-	-	-
Cr	160	-	-	-
Cv1	0.23	-	-	-
Cu	1790	-	-	-
Hg	46.1	-	-	-
Mo	12.8	-	-	-
Ni	141	-	-	-
Pb	756	-	-	-
Sb	32.4	-	-	-
Se	1.6	-	-	-
Tl	0.80 U	-	-	-
U	1.1	-	-	-
V	296	-	-	-
Zn	3430	-	-	-

MW25-13	7/2/2013 (0-1.2) m BGS	7/2/2013 (2-4.3) m BGS
Ag	3.11	0.20 U
As	19.1	6.1
B	137	13.8
B HWS	1.11	0.10 U
Ba	3890	39.3
Bb	0.58	0.50 U
Cd	6.87	1.33
CN	-	-
Co	15.6	6.9
Cr	290	13.9
Cv1	3.21	0.20 U
Cu	1940	60.9
Hg	4430	144
Mo	34.7	1.6
Ni	337	17.3
Pb	4430	144
Sb	34.7	1.0 U
Se	3.3	1.0 U
Tl	0.53	0.50 U
U	1.1	1.0 U
V	1970	26.3
Zn	3600	1180

MW12	5/10/2011 (3-3.5) m BGS
Ag	-
As	-
B	-
B HWS	-
Ba	-
Bb	-
Cd	-
CN	-
Co	-
Cr	-
Cv1	-
Cu	-
Hg	-
Mo	-
Ni	-
Pb	-
Sb	-
Se	-
Tl	-
U	-
V	-
Zn	-

MW26-13	7/2/2013 (0-1.2) m BGS	7/2/2013 (2.44-3.66) m BGS
Ag	0.20 U	0.20 U
As	7.1	27.9
B	13.0	8.4
B HWS	0.28	0.10
Ba	61.8	19.9
Bb	0.50 U	0.50 U
Cd	1.30	0.67
CN	-	-
Co	6.8	3.9
Cr	17.5	10.0
Cv1	0.35	0.20 U
Cu	31.1	24.0
Hg	0.253	0.013
Mo	1.2	1.0 U
Ni	16.9	8.4
Pb	123	159
Sb	1.0 U	1.0 U
Se	1.0 U	1.0 U
Tl	0.50 U	0.50 U
U	1.0 U	1.0 U
V	28.0	13.7
Zn	695	342

BH4-13	7/2/2013 (0-1.2) m BGS	7/2/2013 (1.8-2.7) m BGS
Ag	0.20 U/0.20 U	0.20 U
As	4.4/4.9	4.5
B	13.9/16.3	11.9
B HWS	0.17/0.21	0.10 U
Ba	16.1/19.8	47.5
Bb	0.94/1.59	0.50 U
Cd	1.04/1.12	1.01
CN	-	-
Co	5.2/6.0	5.4
Cr	18.1/17.1	13.6
Cv1	0.20 U/0.20 U	0.20 U
Cu	37.1/77.1	37.4
Hg	3.0/2.39	0.069
Mo	1.0 U/1.2	1.5
Ni	16.9/19.8	12.8
Pb	142/156	91.0
Sb	1.6/1.8	1.0 U
Se	1.0 U/1.0 U	1.0 U
Tl	0.50 U/0.50 U	0.50 U
U	1.0 U/1.0 U	1.0 U
V	29.7/28.4	27.4
Zn	870/373	467

LEGEND

- WELL BORING ID
- GROUND SURFACE
- GROUNDWATER ELEVATION (AUG. 1, 2013)
- WELL SCREEN
- END OF WELL
- OFF-SET

ug/g MICROGRAMS PER GRAM
 m BGS METERS BELOW GROUND SURFACE
 4.9/4.2 RESULT/DUPLICATE RESULT
 EXCEEDANCE OF THE MOE TABLE 2 STANDARD
 J ESTIMATED CONCENTRATION
 U DETECTION LIMIT
 SOIL SAMPLE INTERVAL - NOT ANALYZED
 SOIL SAMPLE INTERVAL - IMPACTED
 SOIL SAMPLE INTERVAL - CLEAN

SAMPLE LOCATION

MW-4 5/3/2011 (3-3.5) m BGS
 MC SAMPLE DATE
 PCE SAMPLE DEPTH
 T RESULT (ug/g)
 TCE PARAMETER

MOE TABLE 2 STANDARDS

Chemical Name	Abbreviation	MOE Table 2 Standard
Arsenic	As	18
Barium	Ba	390
Beryllium	Be	4
Boron	B	120
Boron (hot water extractable)	B HWS	1.5
Cadmium	Cd	1.2
Chromium	Cr	100
Chromium VI (hexavalent)	CrVI	8
Cobalt	Co	22
Copper	Cu	148
Cyanide	CN	0.025
Lead	Pb	120
Manganese	Mn	0.27
Molybdenum	Mo	5.9
Nickel	Ni	100
Selenium	Se	2.4
Silver	Ag	20
Thallium	Tl	1
Uranium	U	23
Vanadium	V	86
Zinc	Zn	348

NOTE:
 TABLE 2: FULL DEPTH GENERIC SITE CONDITION STANDARDS IN A POTABLE GROUNDWATER CONDITION, RESIDENTIAL/PARKLAND INSTITUTIONAL PROPERTY USE, COARSE GRAINED SOIL (MOE, 2011).

EXTENT OF METALS IMPACTS

SCALE VERIFICATION

THIS BAR MEASURES 50mm ON ORIGINAL. ADJUST SCALE ACCORDINGLY.

139 MORRIS STREET HOLDINGS LTD.
 GUELPH, ONTARIO

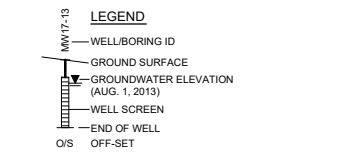
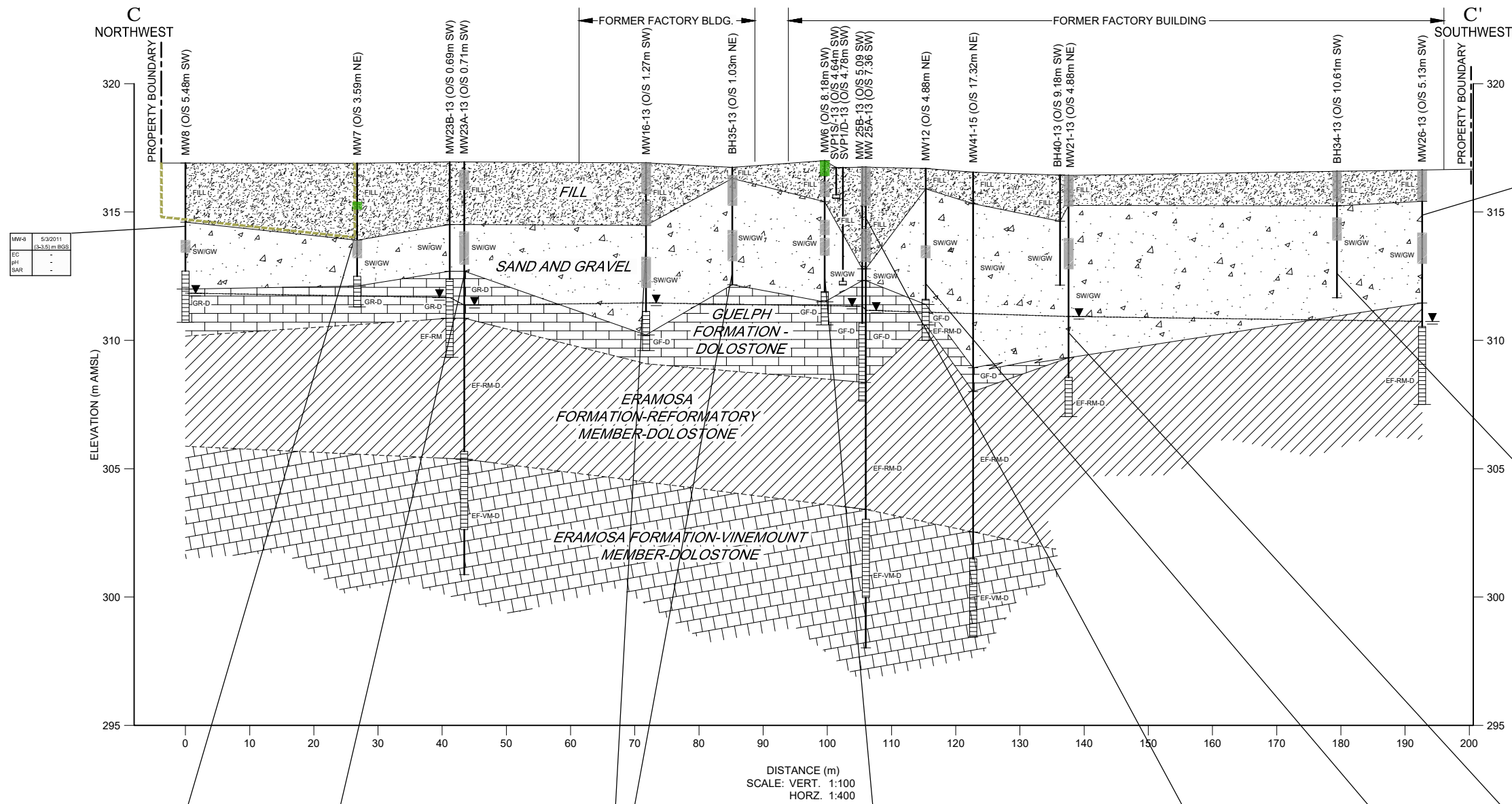
PHASE TWO ENVIRONMENTAL SITE ASSESSMENT

VERTICAL EXTENT OF SOIL METALS IMPACTS
 GEOLOGIC CROSS-SECTION C-C'

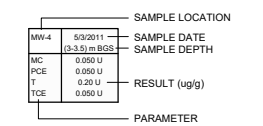


Source Reference:

Project Manager:	Reviewed By:	Date:
L. SHEPHERD	A. MOLENHUIS	FEBRUARY 2015
Scale:	Project N ^o :	Report N ^o :
AS SHOWN	78674-06	003
		Drawing N ^o :
		figure 12w



- ug/g MICROGRAMS PER GRAM
- m BGS METERS BELOW GROUND SURFACE
- 4.9/4.2 RESULT/DUPLICATE RESULT
- EXCEEDANCE OF THE MOE TABLE 2 STANDARD
- J ESTIMATED CONCENTRATION
- U DETECTION LIMIT
- SOIL SAMPLE INTERVAL - NOT ANALYZED
- SOIL SAMPLE INTERVAL - IMPACTED
- SOIL SAMPLE INTERVAL - CLEAN



MOE TABLE 2 STANDARDS

Chemical Name	Abbreviation	MOE Table 2 Standard
Conductivity	EC	5.2
pH	pH	5.2
Sodium adsorption ratio (SAR)	SAR	5

NOTE:
 TABLE 2: FULL DEPTH GENERIC SITE CONDITION STANDARDS IN A POTABLE GROUNDWATER CONDITION; RESIDENTIAL/PARKLAND INSTITUTIONAL PROPERTY USE, COARSE GRAINED SOIL (MOE, 2011).

----- EXTENT OF ELECTRICAL CONDUCTIVITY IMPACTS

MW-8	5/9/2011
EC	-
pH	-
SAR	-

MW26-13	7/2/2013	7/2/2013
EC	(0.1-2.1) m BGS	(2.44-3.66) m BGS
pH	-	-
SAR	-	-

BH84-13	7/2/2013	7/2/2013
EC	-	-
pH	-	-
SAR	-	-

MW-7	5/9/2011	5/9/2011	5/9/2011
EC	(1.54-8) m BGS	(3.3-5) m BGS	(3-3.7) m BGS
pH	7.38	-	-
SAR	0.18	-	-

MW23-13	7/2/2013	7/2/2013
EC	(0.3-1.1) m BGS	(2.3-4) m BGS
pH	-	-
SAR	-	-

MW16-13	1/7/2013	1/7/2013	1/7/2013
EC	(0-1.22) m BGS	(1.52-2.44) m BGS	(3.66-4.88) m BGS
pH	7.82	8.08	-
SAR	-	-	-

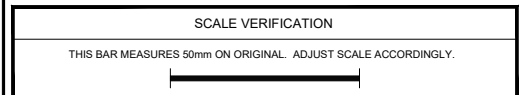
BH35-13	7/2/2013	7/2/2013
EC	(0.3-1.5) m BGS	(2.44-3.66) m BGS
pH	-	-
SAR	-	-

MW6	5/9/2011	5/9/2011	5/9/2011	5/9/2011
EC	(0-0.6) m BGS	(0.8-1.4) m BGS	(2.3-2.9) m BGS	(3-3.7) m BGS
pH	8.29	-	-	-
SAR	0.32	-	-	-

MW25-13	7/9/2013	7/9/2013
EC	(0-1.5) m BGS	(2.4-3.7) m BGS
pH	-	-
SAR	-	-

MW12	5/10/2011
EC	-
pH	-
SAR	-

MW21-13	1/7/2013	1/7/2013
EC	(0-1.22) m BGS	(2.44-3.66) m BGS
pH	-	-
SAR	-	-



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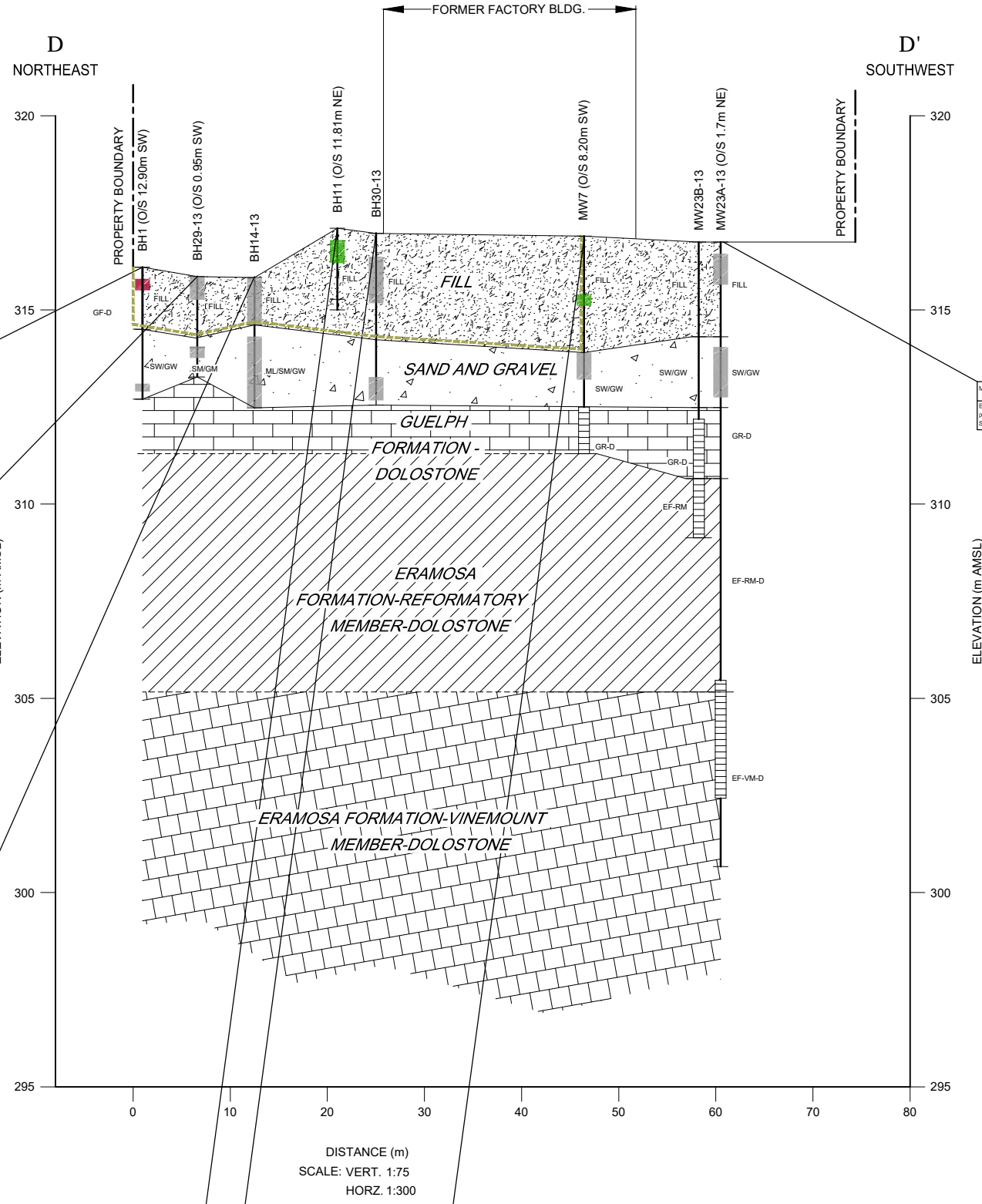
PHASE TWO ENVIRONMENTAL SITE ASSESSMENT

VERTICAL EXTENT OF SOIL GENERAL CHEMISTRY IMPACTS
GEOLOGIC CROSS-SECTION C-C'



Source Reference:

Project Manager: L. SHEPHERD	Reviewed By: A. MOLENHUIS	Date: FEBRUARY 2015
Scale: AS SHOWN	Project N ^o : 78674-06	Report N ^o : 003
		Drawing N ^o : figure 12x



BH1	5/3/2011 (0.3-0.6) m BGS	5/3/2011 (3-3.2) m BGS
EC	0.870	-
pH	8.05	-
SAR	0.24	-

BH29-13	6/27/2013 (0-0.6) m BGS	6/27/2013 (1.8-2.1) m BGS
EC	-	-
pH	-	-
SAR	-	-

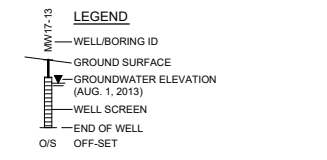
BH14-13	1/7/2013 (0-1.22) m BGS	1/7/2013 (1.52-2.44) m BGS	1/7/2013 (2.44-3.35) m BGS
EC	-	-	-
pH	7.78	8.00	-
SAR	-	-	-

BH11	5/3/2011 (0.3-0.6) m BGS
EC	0.47
pH	7.97
SAR	4.49

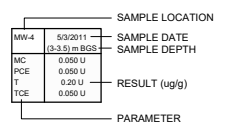
BH30-13	6/27/2013 (0.6-1.2) m BGS	6/27/2013 (3.4-4.0) m BGS
EC	-	-
pH	-	-
SAR	-	-

MW7	5/3/2011 (1.5-1.8) m BGS	5/3/2011 (3-3.5) m BGS	5/3/2011 (3-3.7) m BGS
EC	0.170	-	-
pH	7.28	-	-
SAR	0.18	-	-

MW23-13	7/3/2013 (0-1.5) m BGS	7/3/2013 (2-3.7) m BGS
EC	-	-
pH	-	-
SAR	-	-



- ug/g MICROGRAMS PER GRAM
- m BGS METERS BELOW GROUND SURFACE
- 4.9/4.2 RESULT/DUPLICATE RESULT
- EXCEEDANCE OF THE MOE TABLE 2 STANDARD
- J ESTIMATED CONCENTRATION
- U DETECTION LIMIT
- SOIL SAMPLE INTERVAL - NOT ANALYZED
- SOIL SAMPLE INTERVAL - IMPACTED
- SOIL SAMPLE INTERVAL - CLEAN



MOE TABLE 2 STANDARDS		
Chemical Name	Abbreviation	MOE Table 2 Standard
Conductivity	EC	0.2
pH, lbs	pH	-
Sodium adsorption ratio (SAR)	SAR	5

NOTE:
TABLE 2: FULL DEPTH GENERIC SITE CONDITION STANDARDS IN A POTABLE GROUNDWATER CONDITION, RESIDENTIAL/PARKLAND INSTITUTIONAL PROPERTY USE, COARSE GRAINED SOIL (MOE, 2011).

----- EXTENT OF ELECTRICAL CONDUCTIVITY IMPACTS

SCALE VERIFICATION
THIS BAR MEASURES 50mm ON ORIGINAL. ADJUST SCALE ACCORDINGLY.

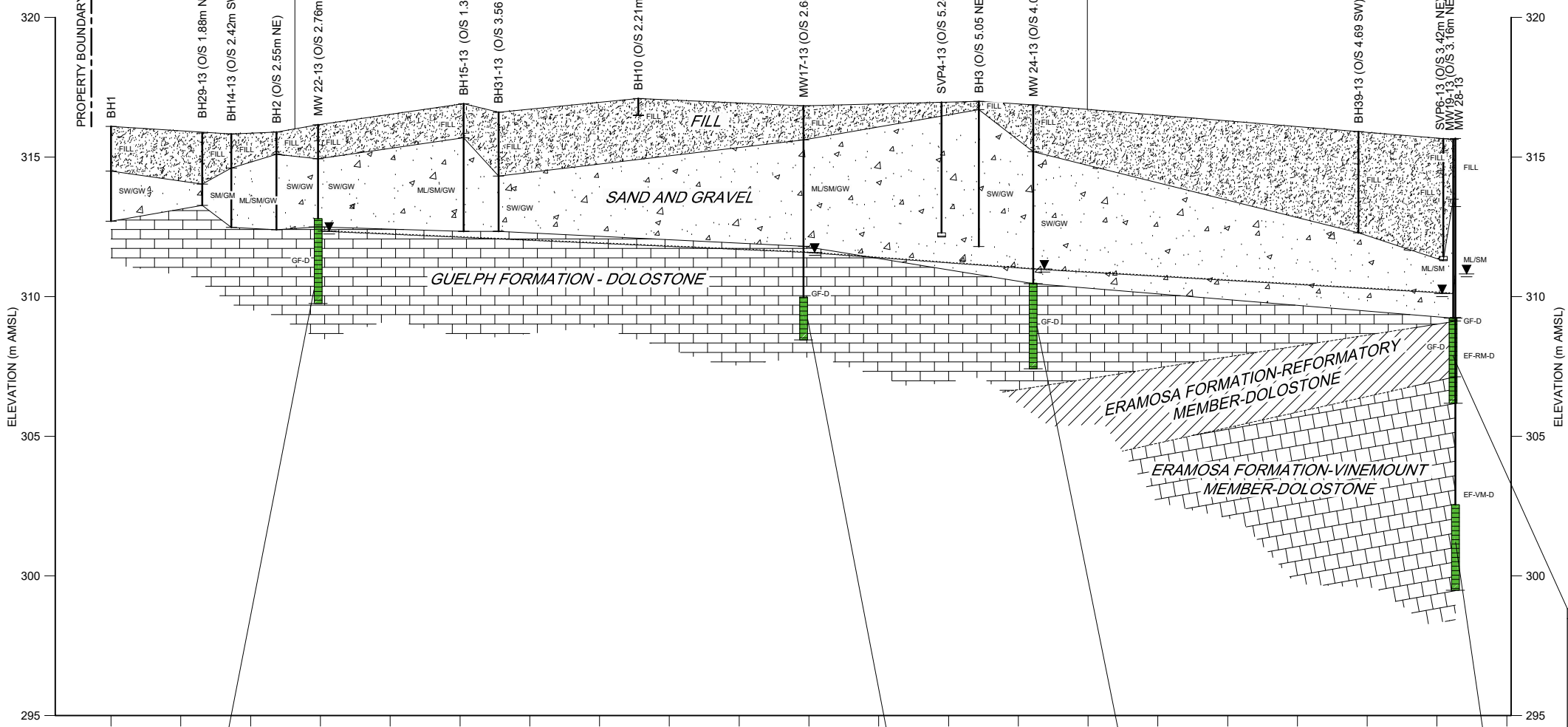
139 MORRIS STREET HOLDINGS LTD.
GUELPH, ONTARIO
PHASE TWO ENVIRONMENTAL SITE ASSESSMENT
VERTICAL EXTENT OF SOIL GENERAL CHEMISTRY IMPACTS
GEOLOGIC CROSS-SECTION D-D'



Source Reference:			
Project Manager: L. SHEPHERD	Reviewed By: A. MOLENHUIS	Date: MARCH 2015	
Scale: AS SHOWN	Project N°: 78674-06	Report N°: 003	Drawing N°: figure 12y

A
NORTHWEST

A'
SOUTHWEST



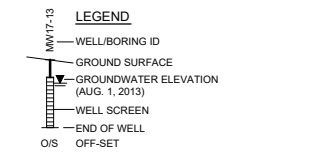
SCALE: VERT. 1:100
HORIZ. 1:400

MW22-13	8/1/2013
1,1,1,2PCA	0.50 U
1,1,1,TCA	0.50 U
1,1,2,2PCA	0.50 U
1,1,2,TCA	0.50 U
1,1,DCA	0.50 U
1,1,1DCE	0.50 U
1,2DCA	0.50 U
1,2DCB	0.50 U
1,2DCPA	0.50 U
1,3DCB	0.50 U
1,3DCPE	0.50 U
1,4DCB	0.50 U
Acet	30 U
BDCM	2.0 U
Ben	0.50 U
Brom	5.0 U
Chet	0.20 U
EDB	0.20 U
MEK	0.50 U
MEK	20 U
MBK	20 U

MW17-13	2/22/2013
1,1,1,2PCA	0.50 U
1,1,1,TCA	0.50 U
1,1,2,2PCA	0.50 U
1,1,2,TCA	0.50 U
1,1,DCA	0.50 U
1,1,1DCE	0.50 U
1,2DCA	0.50 U
1,2DCB	0.50 U
1,2DCPA	0.50 U
1,3DCB	0.50 U
1,3DCPE	0.50 U
1,4DCB	0.50 U
Acet	30 U
BDCM	2.0 U
Ben	0.50 U
Brom	5.0 U
Chet	0.20 U
EDB	0.20 U
MEK	0.50 U
MEK	20 U
MBK	20 U

MW24-13	8/1/2013
1,1,1,2PCA	0.50 U/0.50 U
1,1,1,TCA	0.50 U/0.50 U
1,1,2,2PCA	0.50 U/0.50 U
1,1,2,TCA	0.50 U/0.50 U
1,1,DCA	0.50 U/0.50 U
1,1,1DCE	0.50 U/0.50 U
1,2DCA	0.50 U/0.50 U
1,2DCB	0.50 U/0.50 U
1,2DCPA	0.50 U/0.50 U
1,3DCB	0.50 U/0.50 U
1,3DCPE	0.50 U/0.50 U
1,4DCB	0.50 U/0.50 U
Acet	30 U/30 U
BDCM	2.0 U/2.0 U
Ben	0.50 U/0.50 U
Brom	5.0 U/0.50 U
Chet	0.20 U/0.20 U
EDB	0.20 U/0.20 U
MEK	0.50 U/0.50 U
MEK	20 U/20 U
MBK	20 U/20 U

MW26-13	8/1/2013	8/21/2013
1,1,1,2PCA	0.50 U	-
1,1,1,TCA	0.50 U	-
1,1,2,2PCA	0.50 U	-
1,1,2,TCA	0.50 U	-
1,1,DCA	0.50 U	-
1,1,1DCE	0.50 U	-
1,2DCA	0.50 U	-
1,2DCB	0.50 U	-
1,2DCPA	0.50 U	-
1,3DCB	0.50 U	-
1,3DCPE	0.50 U	-
1,4DCB	0.50 U	-
Acet	30 U	-
BDCM	2.0 U	-
Ben	0.50 U	-
Brom	5.0 U	-
Chet	0.20 U	-
EDB	0.20 U	-
MEK	0.50 U	-
MEK	20 U	-
MBK	20 U	-



- ug/g MICROGRAMS PER GRAM
- m BGS METERS BELOW GROUND SURFACE
- 4.914.2 RESULT/DUPLICATE RESULT
- EXCEEDANCE OF THE MOE TABLE 2 STANDARD
- J ESTIMATED CONCENTRATION
- U DETECTION LIMIT
- GROUNDWATER SAMPLE - NOT ANALYZED
- GROUNDWATER SAMPLE - IMPACTED
- GROUNDWATER SAMPLE - CLEAN

SAMPLE LOCATION			
MW-4	5/3/2011	0.351 m BGS	
MC	0.050 U		
PCE	0.050 U		
T	0.20 U		
TCE	0.050 U		

MOE TABLE 2 STANDARDS		
Chemical Name	Abbreviation	MOE Table 2 Standard
1,1,1,2-Tetrachloroethane	1,1,1,2TCA	1.1
1,1,1-Trichloroethane	1,1,1TCA	200
1,1,2-Trichloroethane	1,1,2TCA	1
1,1,3-Trichloroethane	1,1,3TCA	4.7
1,1-Dichloroethane	1,1DCE	5
1,2-Dichloroethane	1,2DCE	1.6
1,2-Dibromoethane (Ethylene dibromide)	EDB	0.2
1,2-Dichlorobenzene	1,2DCB	3
1,3-Dichlorobenzene	1,3DCB	1.6
1,3-Dibromobenzene	1,3DCB	5
1,3-Dichlorobenzene	1,3DCB	59
1,3-Dibromobenzene	1,3DCB	0.5
1,4-Dichlorobenzene	1,4DCB	1
1,4-Dibromobenzene (Methyl subtyl ketone) (MSK)	MSK	200
1,4-Methyl-2-pentanone (Methyl subtyl ketone) (MSK)	MSK	640
Acetone	Acet	2700
Benzene	Ben	5
Bromochloromethane	BDCM	16
Bromoforn	Brom	25
Bromomethane (Methyl bromide)	MB	85
Carbon tetrachloride	Chet	79

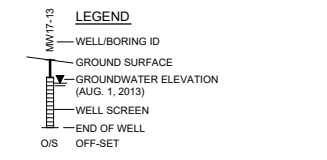
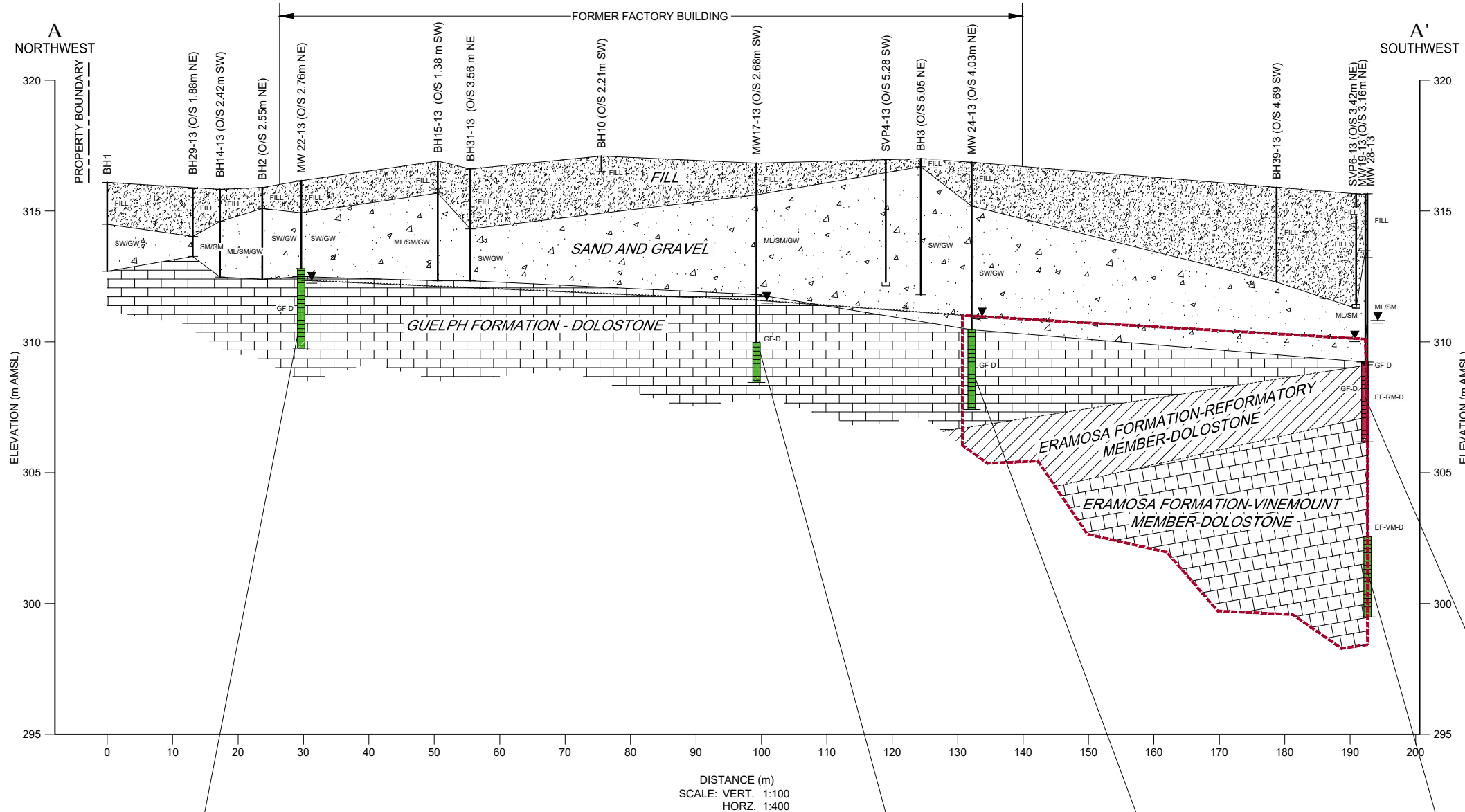
NOTE: TABLE 2: FULL DEPTH GENERIC SITE CONDITION STANDARDS IN A POTABLE GROUNDWATER CONDITION, RESIDENTIAL/PARKLAND INSTITUTIONAL PROPERTY USE, COARSE GRAINED SOIL (MOE, 2011).

SCALE VERIFICATION
THIS BAR MEASURES 50mm ON ORIGINAL. ADJUST SCALE ACCORDINGLY.

139 MORRIS STREET HOLDINGS LTD.
GUELPH, ONTARIO
PHASE TWO ENVIRONMENTAL SITE ASSESSMENT
VERTICAL EXTENT OF GROUNDWATER
VOC IMPACTS
GEOLOGIC CROSS-SECTION A-A'



Source Reference:			
Project Manager:	Reviewed By:	Date:	
L. SHEPHERD	A. MOLENHUIS	FEBRUARY 2015	
Scale:	Project N ^o :	Report N ^o :	Drawing N ^o :
AS SHOWN	78674-06	003	figure 13a



ug/g MICROGRAMS PER GRAM
 m BGS METERS BELOW GROUND SURFACE
 4.9/4.2 RESULT/DUPLICATE RESULT
 EXCEEDANCE OF THE MOE TABLE 2 STANDARD
 J ESTIMATED CONCENTRATION
 U DETECTION LIMIT
 GROUNDWATER SAMPLE - NOT ANALYZED
 GROUNDWATER SAMPLE - IMPACTED
 GROUNDWATER SAMPLE - CLEAN

SAMPLE LOCATION

MW-4	5/30/2011	(0.35) m BGS
MC	0.050 U	
PCE	0.050 U	
T	0.20 U	
TCE	0.050 U	

PARAMETER

MOE TABLE 2 STANDARDS

Chemical Name	Abbreviation	MOE Table 2 Standard
Chlorobenzene	CB	30
Chloroform (Trichloromethane)	CHC	2.4
Cis-1,2-Dichloroethane	CL12DC	1.6
Cis-1,3-Dichloropropene	CL13DCP	-
Dibromochloromethane	DBCM	25
Dichlorodifluoromethane (DCE-12)	DCE-12	100
Dichloroethane	DE	2.4
Hexane	Hex	51
M&P Toluene	mpxyl	-
Methyl tert-butyl ether (MTBE)	MTBE	15
Methylene chloride	MC	50
n-Butane	nbut	-
Styrene	Sty	5.4
Trans-1,2-Dichloroethane	TC12DC	1.6
Toluene	T	24
Trans-1,3-Dichloropropene	TL13DCP	1.6
Trichloroethane	TCE	1.6
Trichlorofluoromethane (TFC-11)	TFC-11	100
Vinyl Chloride	VC	0.5
Xylenes (total)	Xyl	100

NOTE: TABLE 2: FULL DEPTH GENERIC SITE CONDITION STANDARDS IN A POTABLE GROUNDWATER CONDITION, RESIDENTIAL/PARKLAND INSTITUTIONAL PROPERTY USE, COARSE GRAINED SOIL (MOE, 2011).

----- EXTENT OF TCE IMPACTS

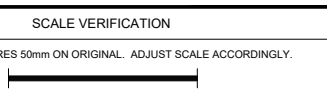
MW19-13	2/29/2013
C1,2DCE	0.50 U/0.50 U
C1,3DCP	0.30 U/0.30 U
CB	0.50 U/0.50 U
CFC-11	5.0 U/5.0 U
CFC-12	2.0 U/2.0 U
CHC	1.0 U/1.0 U
DBCM	2.0 U/2.0 U
EB	0.50 U/0.50 U
Hex	0.50 U/0.50 U
MC	5.0 U/5.0 U
mpxyl	0.40 U/0.40 U
MTBE	2.0 U/2.0 U
nbut	0.30 U/0.30 U
PCE	1.10/1.10
Sty	0.50 U/0.50 U
T	0.60 U/0.50 U
T1,2DCE	0.50 U/0.50 U
T1,3DCP	0.30 U/0.30 U
TCE	1.88/1.85
VC	0.50 U/0.50 U
Xyl	0.50 U/0.50 U

MW22-13	8/12/2013
C1,2DCE	0.50 U
C1,3DCP	0.30 U
CB	0.50 U
CFC-11	5.0 U
CFC-12	2.0 U
CHC	1.0 U
DBCM	2.0 U
EB	0.50 U
Hex	0.50 U
MC	5.0 U
mpxyl	0.40 U
MTBE	2.0 U
nbut	0.30 U
PCE	0.50 U
Sty	0.50 U
T	0.50 U
T1,2DCE	0.50 U
T1,3DCP	0.30 U
TCE	0.50 U
VC	0.50 U
Xyl	0.50 U

MW17-13	2/22/2013
C1,2DCE	0.74
C1,3DCP	0.30 U
CB	0.50 U
CFC-11	5.0 U
CFC-12	2.0 U
CHC	1.0 U
DBCM	2.0 U
EB	0.50 U
Hex	0.50 U
MC	5.0 U
mpxyl	0.40 U
MTBE	2.0 U
nbut	0.30 U
PCE	0.50 U
Sty	0.50 U
T	0.50 U
T1,2DCE	0.50 U
T1,3DCP	0.30 U
TCE	0.50 U
VC	0.50 U
Xyl	0.50 U

MW24-13	8/21/2013
C1,2DCE	0.50 U/0.50 U
C1,3DCP	0.30 U/0.30 U
CB	0.50 U/0.50 U
CFC-11	5.0 U/5.0 U
CFC-12	2.0 U/2.0 U
CHC	1.0 U/1.0 U
DBCM	2.0 U/2.0 U
EB	0.50 U/0.50 U
Hex	0.50 U/0.50 U
MC	5.0 U/5.0 U
mpxyl	0.40 U/0.40 U
MTBE	2.0 U/2.0 U
nbut	0.30 U/0.30 U
PCE	0.50 U/0.50 U
Sty	0.50 U/0.50 U
T	0.50 U/0.50 U
T1,2DCE	0.50 U/0.50 U
T1,3DCP	0.30 U/0.30 U
TCE	0.50 U/0.50 U
VC	0.50 U/0.50 U
Xyl	0.50 U/0.50 U

MW39-13	8/21/2013
C1,2DCE	0.50 U
C1,3DCP	0.30 U
CB	0.50 U
CFC-11	5.0 U
CFC-12	2.0 U
CHC	1.0 U
DBCM	2.0 U
EB	0.50 U
Hex	0.50 U
MC	5.0 U
mpxyl	0.40 U
MTBE	2.0 U
nbut	0.30 U
PCE	0.50 U
Sty	0.50 U
T	0.50 U
T1,2DCE	0.50 U
T1,3DCP	0.30 U
TCE	0.50 U
VC	0.50 U
Xyl	0.50 U



139 MORRIS STREET HOLDINGS LTD.
 GUELPH, ONTARIO
 PHASE TWO ENVIRONMENTAL SITE ASSESSMENT
 VERTICAL EXTENT OF GROUNDWATER VOC IMPACTS CONTINUED
 GEOLOGIC CROSS-SECTION A-A'

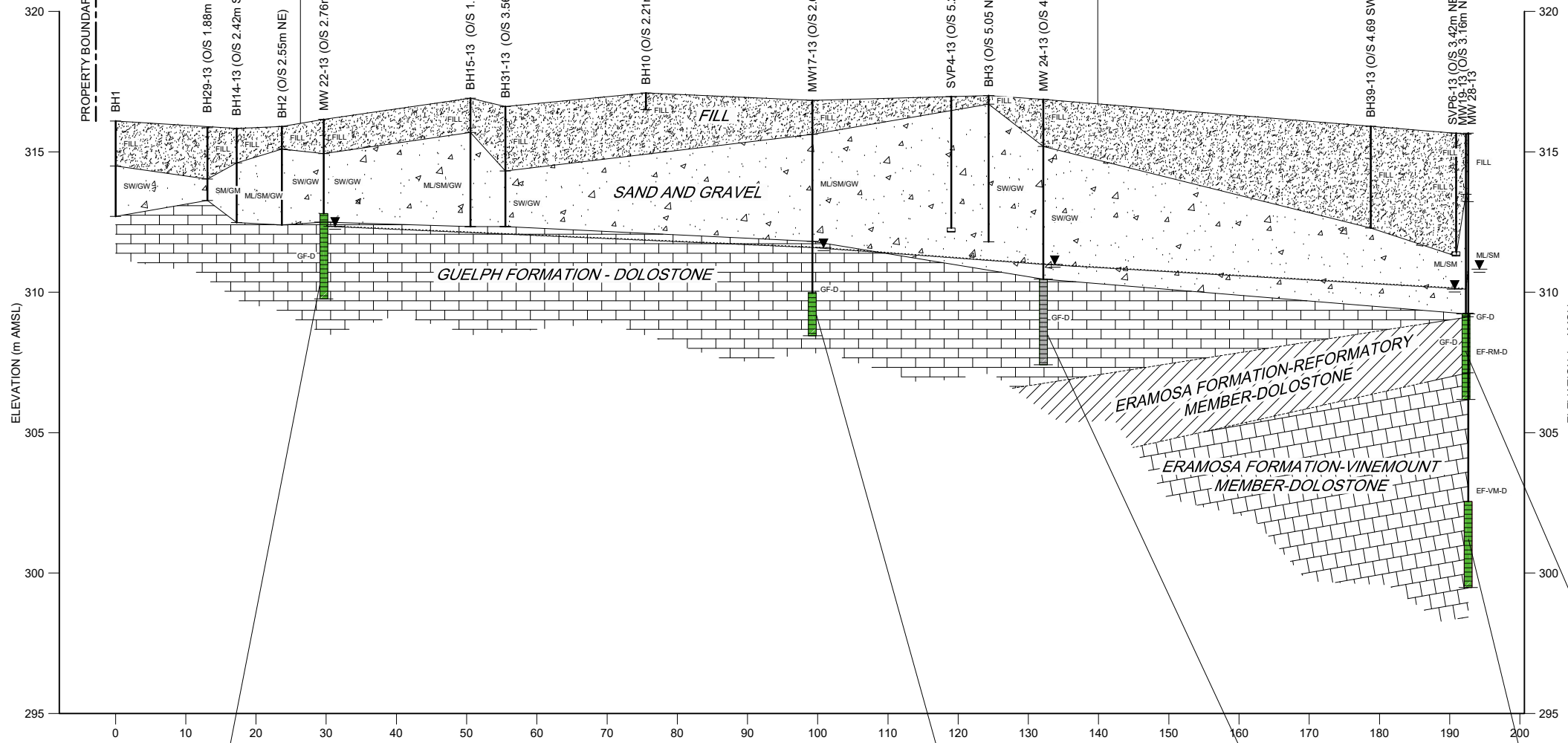


Source Reference:

Project Manager: L. SHEPHERD	Reviewed By: A. MOLENHUIS	Date: FEBRUARY 2015
Scale: AS SHOWN	Project N ^o : 78674-06	Report N ^o : 003
		Drawing N ^o : figure 13b

A
NORTHWEST

A'
SOUTHWEST



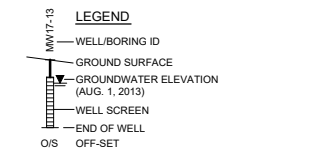
DISTANCE (m)
SCALE: VERT. 1:100
HORZ. 1:400

Well ID	Date	Parameter	Result
MW22-13	8/12/2013	1-MN	0.028 U
		2MN	0.020 U
		3MN	0.020 U
		Acq	0.020 U
		Acpy	0.020 U
		Arth	0.020 U
		BaA	0.020 U
		BaP	0.010 U
		BbF	0.020 U
		BbP	0.020 U
		BkF	0.020 U
		Chry	0.020 U
		Dibenz	0.020 U
		Fluor	0.020 U
		Fluora	0.020 U
		Indeno	0.020 U
		Naph	0.020 U
		Phen	0.020 U
		Pyr	0.020 U

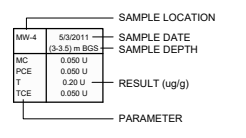
Well ID	Date	Parameter	Result
MW17-13	2/22/2013	1-MN	0.071
		2MN	0.038 UJ
		3MN	0.034 UJ
		Acq	0.468
		Acpy	0.029
		Arth	0.310
		BaA	0.060
		BaP	0.012 UJ
		BbF	0.020 U
		BbP	0.020 U
		BkF	0.020 U
		Chry	0.070
		Dibenz	0.020 U
		Fluor	0.714
		Fluora	0.064
		Indeno	0.020 U
		Naph	0.155
		Phen	0.049
		Pyr	0.488

Well ID	Date	Parameter	Result
MW24-13	8/12/2013	1-MN	--
		2MN	--
		3MN	--
		Acq	--
		Acpy	--
		Arth	--
		BaA	--
		BaP	--
		BbF	--
		BbP	--
		BkF	--
		Chry	--
		Dibenz	--
		Fluor	--
		Fluora	--
		Indeno	--
		Naph	--
		Phen	--
		Pyr	--

Well ID	Date	Parameter	Result
MW19-13	2/20/2013	1-MN	0.029 UJ, 0.020 U
		2MN	0.020 UJ, 0.020 U
		3MN	0.020 UJ, 0.020 U
		Acq	0.020 UJ, 0.020 U
		Acpy	0.020 UJ, 0.020 U
		Arth	0.020 UJ, 0.020 U
		BaA	0.020 UJ, 0.020 U
		BaP	0.010 UJ, 0.010 U
		BbF	0.020 UJ, 0.020 U
		BbP	0.020 UJ, 0.020 U
		BkF	0.020 UJ, 0.020 U
		Chry	0.020 UJ, 0.020 U
		Dibenz	0.020 UJ, 0.020 U
		Fluor	0.020 UJ, 0.020 U
		Fluora	0.020 UJ, 0.020 U
		Indeno	0.020 UJ, 0.020 U
		Naph	0.020 UJ, 0.020 U
		Phen	0.020 UJ, 0.020 U
		Pyr	0.020 UJ, 0.020 U

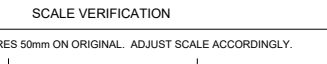


- ug/g MICROGRAMS PER GRAM
- m BGS METERS BELOW GROUND SURFACE
- 4.9/4.2 RESULT/DUPLICATE RESULT
- EXCEEDANCE OF THE MOE TABLE 2 STANDARD
- J ESTIMATED CONCENTRATION
- U DETECTION LIMIT
- GROUNDWATER SAMPLE - NOT ANALYZED
- GROUNDWATER SAMPLE - IMPACTED
- GROUNDWATER SAMPLE - CLEAN



Chemical Name	Abbreviation	Moe Table 2 Standard
1,2-Methylnaphthalene	1-MN	3.2
2-Methylnaphthalene	2MN	3.2
3-Methylnaphthalene	3MN	3.2
Acenaphthene	Acq	4.1
Acenaphthylene	Acpy	1
Anthracene	Arth	2.4
Benzo[a]anthracene	BaA	1
Benzo[b]fluoranthene	BbF	0.05
Benzo[k]fluoranthene	BbP	0.1
Benzo[a]pyrene	BaP	0.1
Benzo[e]pyrene	BbP	0.1
Chrysene	Chry	0.1
Dibenz[a,h]anthracene	Dibenz	0.2
Fluoranthene	Fluora	0.48
Fluorene	Fluor	100
Indeno[1,2,3-cd]pyrene	Indeno	0.2
Naphthalene	Naph	11
Phenanthrene	Phen	1
Pyrene	Pyr	4.1

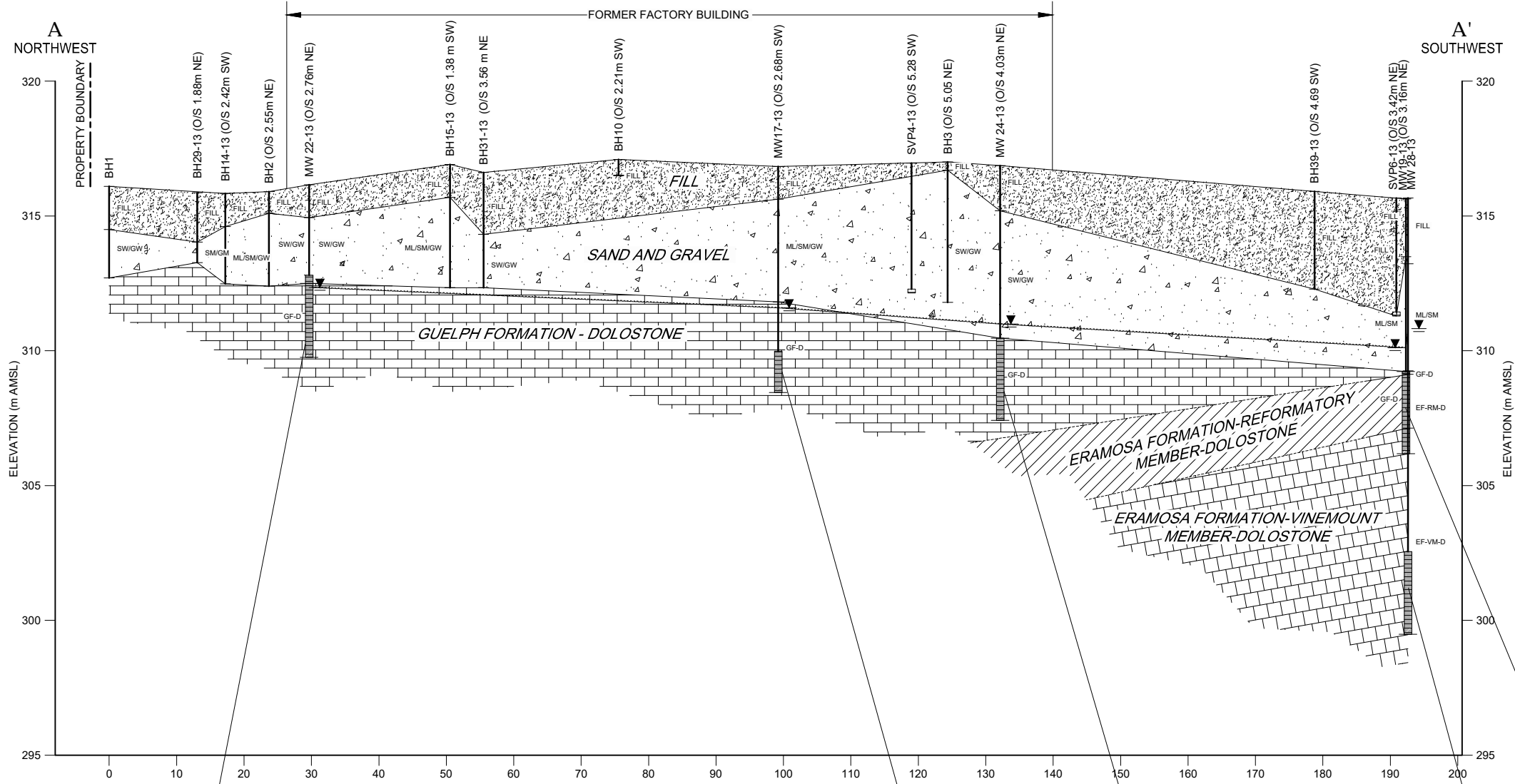
NOTE: TABLE 2: FULL DEPTH GENERIC SITE CONDITION STANDARDS IN A POTABLE GROUNDWATER CONDITION, RESIDENTIAL/PARKLAND INSTITUTIONAL PROPERTY USE, COARSE GRAINED SOIL (MOE, 2011).



139 MORRIS STREET HOLDINGS LTD.
GUELPH, ONTARIO
PHASE TWO ENVIRONMENTAL SITE ASSESSMENT
VERTICAL EXTENT OF GROUNDWATER PAH IMPACTS
GEOLOGIC CROSS-SECTION A-A'



Source Reference:			
Project Manager: L. SHEPHERD	Reviewed By: A. MOLENHUIS	Date: FEBRUARY 2015	
Scale: AS SHOWN	Project N ^o : 78674-06	Report N ^o : 003	Drawing N ^o : figure 13c



DISTANCE (m)
SCALE: VERT. 1:100
HORZ. 1:400

MW22-13	8/1/2013
2.4DDO	-
2.4DDE	-
2.4DDT	-
4.4DDD	-
4.4DDE	-
4.4DDT	-
Chlor	-
Alk	-
Chlor	-
Diel	-
End-1	-
End-8	-
Endr	-
gBHC	-
HepI	-
HepE	-
HexCB	-
HexCDB	-
HexCE	-
Meth	-

MW17-13	8/22/2013
2.4DDO	-
2.4DDE	-
2.4DDT	-
4.4DDD	-
4.4DDE	-
4.4DDT	-
Chlor	-
Alk	-
Chlor	-
Diel	-
End-1	-
End-8	-
Endr	-
gBHC	-
HepI	-
HepE	-
HexCB	-
HexCDB	-
HexCE	-
Meth	-

MW24-13	8/1/2013
2.4DDO	-
2.4DDE	-
2.4DDT	-
4.4DDD	-
4.4DDE	-
4.4DDT	-
Chlor	-
Alk	-
Chlor	-
Diel	-
End-1	-
End-8	-
Endr	-
gBHC	-
HepI	-
HepE	-
HexCB	-
HexCDB	-
HexCE	-
Meth	-

MW15-13	8/22/2013
2.4DDO	-
2.4DDE	-
2.4DDT	-
4.4DDD	-
4.4DDE	-
4.4DDT	-
Chlor	-
Alk	-
Chlor	-
Diel	-
End-1	-
End-8	-
Endr	-
gBHC	-
HepI	-
HepE	-
HexCB	-
HexCDB	-
HexCE	-
Meth	-

LEGEND

- WELL/BORING ID
- GROUND SURFACE
- GROUNDWATER ELEVATION (AUG. 1, 2013)
- WELL SCREEN
- END OF WELL
- OFF-SET

ug/g MICROGRAMS PER GRAM
m BGS METERS BELOW GROUND SURFACE
4.914.2 RESULT/ DUPLICATE RESULT
J ESTIMATED CONCENTRATION
U DETECTION LIMIT
GROUNDWATER SAMPLE - NOT ANALYZED
GROUNDWATER SAMPLE - IMPACTED
GROUNDWATER SAMPLE - CLEAN

SAMPLE LOCATION
MW-4 5/3/2011
MC 0.050 U
PCE 0.20 U
T 0.050 U
TCE 0.050 U
PARAMETER

MOE TABLE 2 STANDARDS

Chemical Name	Abbreviation	MOE Table 2 Standard
2,4-DDE	2.4DDE	-
2,4-DDT	2.4DDT	-
2,4-DDO	2.4DDO	-
4,4-DDO	4.4DDO	10
4,4-DDE	4.4DDE	10
4,4-DDT	4.4DDT	2.8
Alkyl	Alk	0.35
Chlorobenzene	Chlor	7
Chlorobenzene, technical	Chlor	7
Dieldrin	Diel	0.35
Endosulfan I	End-1	1.5
Endosulfan II	End-8	1.5
Endrin	Endr	0.48
gamma-BHC (Dieldrin)	gBHC	1.3
Heptachlor	HepI	1.5
Heptachlor epoxide	HepE	0.58
Hexachlorobenzene	HexCB	1
Hexachlorobutadiene	HexCDB	0.044
Hexachlorocyclopentadiene	HexCE	2.1
Methoxychlor	Meth	0.5

NOTE:
TABLE 2: FULL DEPTH GENERIC SITE CONDITION STANDARDS IN A POTABLE GROUNDWATER CONDITION, RESIDENTIAL/PARKLAND INSTITUTIONAL PROPERTY USE, COARSE GRAINED SOIL (MOE, 2011).

SCALE VERIFICATION
THIS BAR MEASURES 50mm ON ORIGINAL. ADJUST SCALE ACCORDINGLY.

139 MORRIS STREET HOLDINGS LTD.
GUELPH, ONTARIO

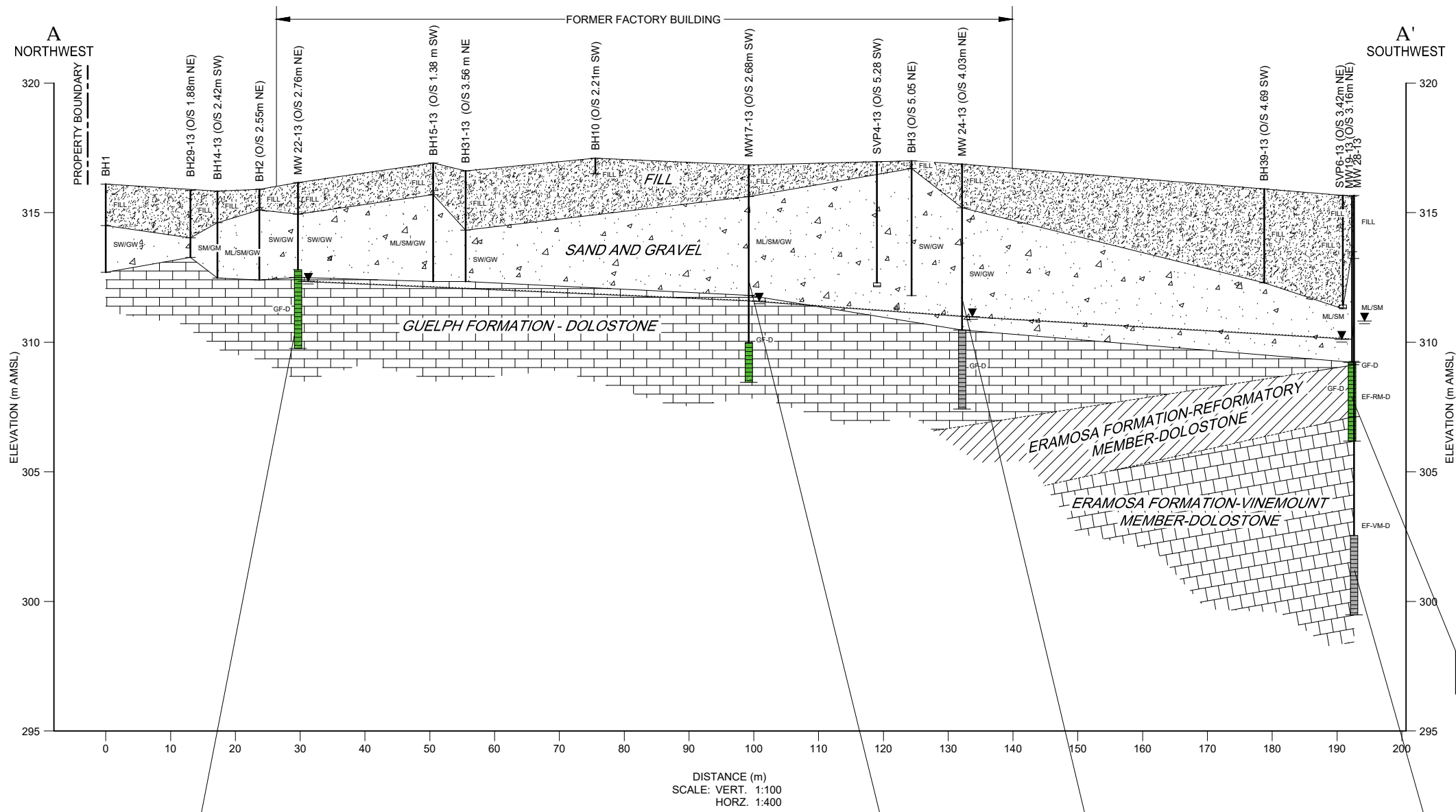
PHASE TWO ENVIRONMENTAL SITE ASSESSMENT

**VERTICAL EXTENT OF GROUNDWATER PESTICIDE
GEOLOGIC CROSS-SECTION A-A'**

CRA CONESTOGA-ROVERS & ASSOCIATES

Source Reference:

Project Manager: L. SHEPHERD	Reviewed By: A. MOLENHUIS	Date: FEBRUARY 2015
Scale: AS SHOWN	Project N ^o : 78674-06	Report N ^o : 003
		Drawing N ^o : figure 13d



LEGEND

- WELL/BORING ID
- GROUND SURFACE
- GROUNDWATER ELEVATION (AUG. 1, 2013)
- WELL SCREEN
- END OF WELL
- O/S OFF-SET

ug/g MICROGRAMS PER GRAM
 m BGS METERS BELOW GROUND SURFACE
 4.9/4.2 RESULT/DUPLICATE RESULT
 EXCEEDANCE OF THE MOE TABLE 2 STANDARD
 J ESTIMATED CONCENTRATION
 U DETECTION LIMIT
 — GROUNDWATER SAMPLE - NOT ANALYZED
 — GROUNDWATER SAMPLE - IMPACTED
 — GROUNDWATER SAMPLE - CLEAN

SAMPLE LOCATION

MW-4	5/30/11	SAMPLE DATE
(0.35) m BGS		SAMPLE DEPTH
PHC	0.050 U	RESULT (ug/g)
PCE	0.050 U	
T	0.20 U	
TCE	0.050 U	
		PARAMETER

MOE TABLE 2 STANDARDS

Chemical Name	Abbreviation	MOE Table 2 Standard
Petroleum hydrocarbon F1 (C6-C8)	PHC F1	750
Petroleum hydrocarbon F2 (C10-C16)	PHC F2	150
Petroleum hydrocarbon F3 (C18-C36)	PHC F3	100
Petroleum hydrocarbon F4 (C14-C30)	PHC F4	100

NOTE:
 TABLE 2: FULL DEPTH GENERIC SITE CONDITION STANDARDS IN A POTABLE GROUNDWATER CONDITION, RESIDENTIAL/PARKLAND INSTITUTIONAL PROPERTY USE, COARSE GRAINED SOIL (MOE, 2011).

MW19-13	2/20/2013
PHC F1	25 U/25 U/25 U
PHC F2	100 U/100 U
PHC F3	250 U/250 U/250 U/250 U
PHC F4	250 U/250 U

MW22-13	8/12/2013
PHC F1	25 U/25 U
PHC F2	100 U
PHC F3	250 U/250 U
PHC F4	250 U

MW17-13	2/22/2013
PHC F1	25 U/25 U
PHC F2	100 U
PHC F3	250 U/250 U
PHC F4	250 U

MW24-13	8/12/2013
PHC F1	-
PHC F2	-
PHC F3	-
PHC F4	-

MW28-13	8/12/2013
PHC F1	-
PHC F2	-
PHC F3	-
PHC F4	-

DISTANCE (m)
 SCALE: VERT. 1:100
 HORZ. 1:400

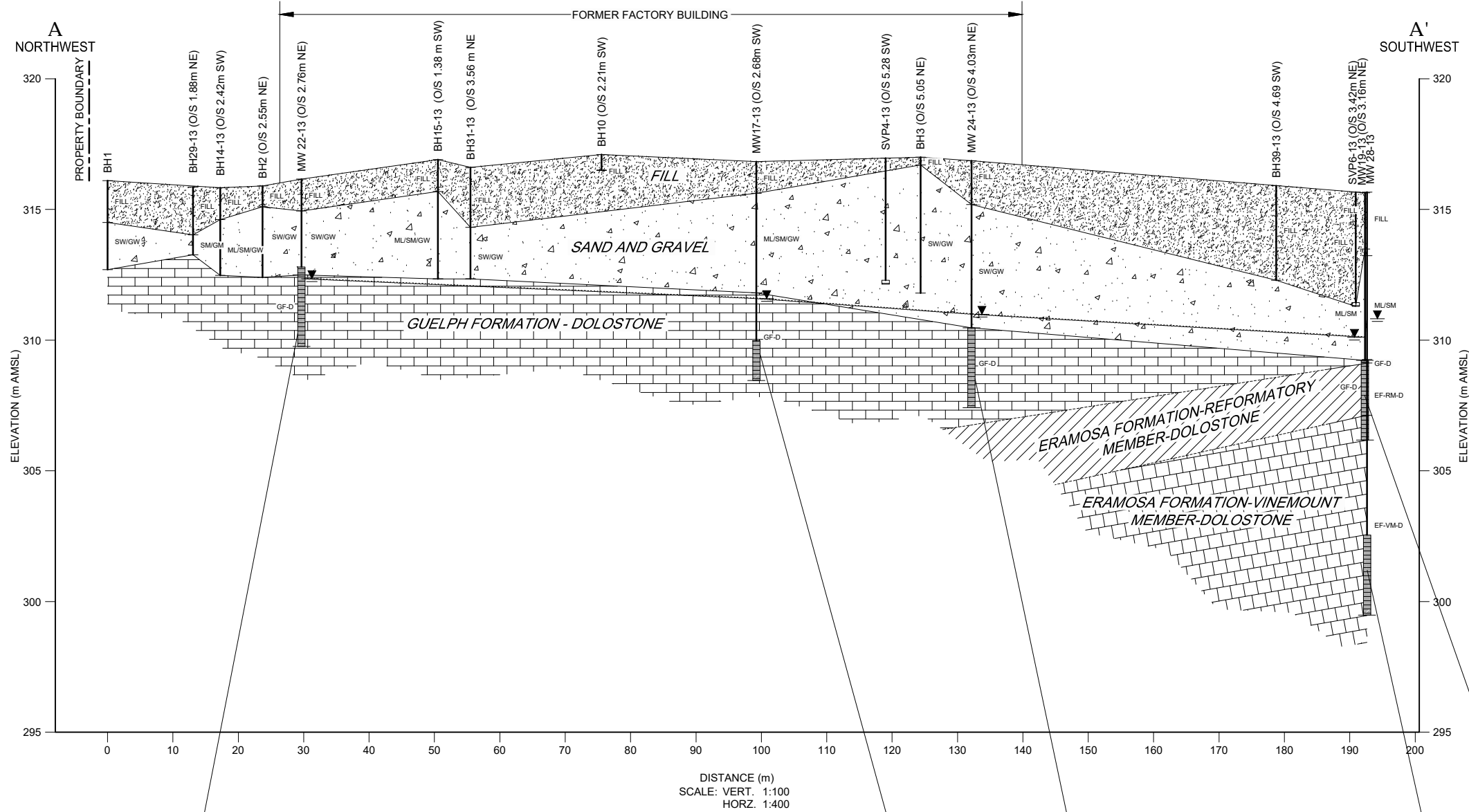
SCALE VERIFICATION
 THIS BAR MEASURES 50mm ON ORIGINAL. ADJUST SCALE ACCORDINGLY.

139 MORRIS STREET HOLDINGS LTD.
 GUELPH, ONTARIO
 PHASE TWO ENVIRONMENTAL SITE ASSESSMENT
 VERTICAL EXTENT OF GROUNDWATER PHC IMPACTS
 GEOLOGIC CROSS-SECTION A-A'



Source Reference:

Project Manager:	Reviewed By:	Date:	
L. SHEPHERD	A. MOLENHUIS	FEBRUARY 2015	
Scale:	Project N ^o :	Report N ^o :	Drawing N ^o :
AS SHOWN	78674-06	003	figure 13e



- LEGEND**
- WELL/BORING ID
 - GROUND SURFACE
 - GROUNDWATER ELEVATION (AUG. 1, 2013)
 - WELL SCREEN
 - END OF WELL
 - OFF-SET
- ug/g MICROGRAMS PER GRAM
 m BGS METERS BELOW GROUND SURFACE
 4.9/4.2 RESULT/DUPLICATE RESULT
 EXCEEDANCE OF THE MOE TABLE 2 STANDARD
 J ESTIMATED CONCENTRATION
 U DETECTION LIMIT
 — GROUNDWATER SAMPLE - NOT ANALYZED
 — GROUNDWATER SAMPLE - IMPACTED
 — GROUNDWATER SAMPLE - CLEAN

SAMPLE LOCATION

MW-4	5/3/2011	SAMPLE DATE
(0.35) m BGS		SAMPLE DEPTH
MC	0.050 U	RESULT (ug/g)
PCE	0.050 U	
T	0.20 U	
TCE	0.050 U	
		PARAMETER

MOE TABLE 2 STANDARDS

Chemical Name	Abbreviation	MOE Table 2 Standard
Arochlor 1242 (PCB-1242)	PCB1242	3
Arochlor 1248 (PCB-1248)	PCB1248	3
Arochlor 1254 (PCB-1254)	PCB1254	3
Arochlor 1260 (PCB-1260)	PCB1260	3
Total PCBs	PCBs	3

NOTE:
 TABLE 2: FULL DEPTH GENERIC SITE CONDITION STANDARDS IN A POTABLE GROUNDWATER CONDITION, RESIDENTIAL/PARKLAND INSTITUTIONAL PROPERTY USE, COARSE GRAINED SOIL (MOE, 2011).

SCALE VERIFICATION
 THIS BAR MEASURES 50mm ON ORIGINAL. ADJUST SCALE ACCORDINGLY.

139 MORRIS STREET HOLDINGS LTD.
GUELPH, ONTARIO
 PHASE TWO ENVIRONMENTAL SITE ASSESSMENT
 VERTICAL EXTENT OF GROUNDWATER PCB IMPACTS
 GEOLOGIC CROSS-SECTION A-A'



Source Reference:

Project Manager: L. SHEPHERD	Reviewed By: A. MOLENHUIS	Date: FEBRUARY 2015
Scale: AS SHOWN	Project N ^o : 78674-06	Report N ^o : 003
		Drawing N ^o : figure 13f

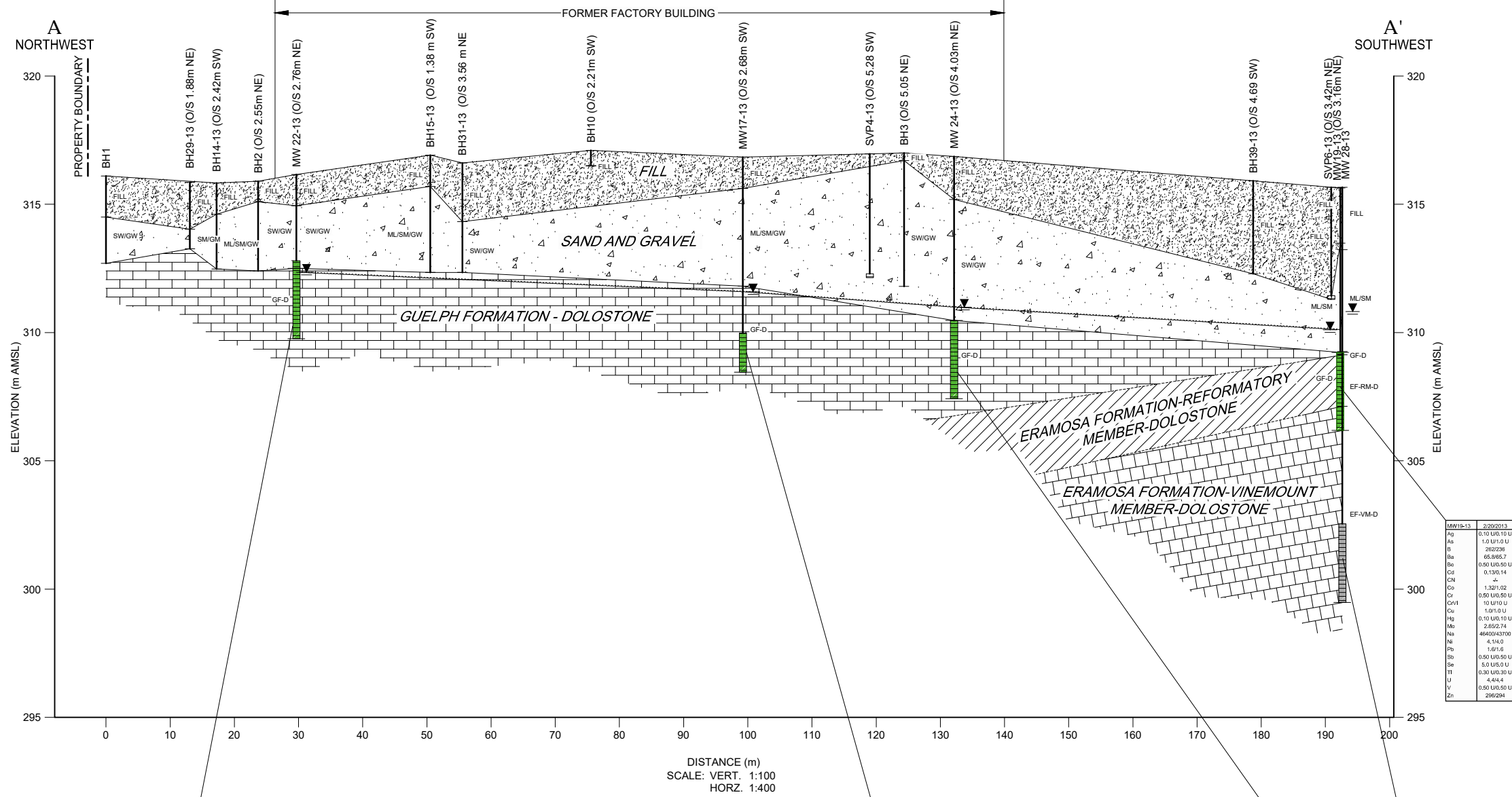
MW22-13	8/1/2013
PCB1242	-
PCB1248	-
PCB1254	-
PCB1260	-
PCBs	-

MW17-13	2/22/2013
PCB1242	-
PCB1248	-
PCB1254	-
PCB1260	-
PCBs	-

MW24-13	8/1/2013
PCB1242	-
PCB1248	-
PCB1254	-
PCB1260	-
PCBs	-

MW28-13	8/1/2013	8/21/2013
PCB1242	-	-
PCB1248	-	-
PCB1254	-	-
PCB1260	-	-
PCBs	-	-

MW19-13	2/20/2013
PCB1242	-
PCB1248	-
PCB1254	-
PCB1260	-
PCBs	-



LEGEND

- WELL/BORING ID
- GROUND SURFACE
- GROUNDWATER ELEVATION (AUG. 1, 2013)
- WELL SCREEN
- END OF WELL
- OFF-SET

ug/g MICROGRAMS PER GRAM
 m BGS METERS BELOW GROUND SURFACE
 4.9/4.2 RESULT/DUPLICATE RESULT
 EXCEEDANCE OF THE MOE TABLE 2 STANDARD
 J ESTIMATED CONCENTRATION
 U DETECTION LIMIT
 GROUNDWATER SAMPLE - NOT ANALYZED
 GROUNDWATER SAMPLE - IMPACTED
 GROUNDWATER SAMPLE - CLEAN

SAMPLE LOCATION

MW-4	5/3/2011	SAMPLE DATE
MC	0.050 U	SAMPLE DEPTH
PCE	0.050 U	RESULT (ug/g)
T	0.20 U	
TCE	0.050 U	

MOE TABLE 2 STANDARDS

Chemical Name	Abbreviation	MOE Table 2 Standard
Antimony	Sb	6
Arsenic	As	25
Barium	Ba	2000
Beryllium	Be	4
Boron	B	5000
Boron (hot water extractable)	B HWS	2.7
Calcium	Ca	2.7
Chromium	Cr	50
Chromium VI (hexavalent)	CrVI	25
Cobalt	Co	3.8
Copper	Cu	37
Cyanide	CN	66
Lead	Pb	30
Manganese	Mn	2.28
Molybdenum	Mo	70
Nickel	Ni	100
Selenium	Se	10
Silver	Ag	1.5
Sodium	Na	480000
Thallium	Tl	2
Uranium	U	30
Vanadium	V	6.2
Zinc	Zn	1100

NOTE: TABLE 2: FULL DEPTH GENERIC SITE CONDITION STANDARDS IN A POTABLE GROUNDWATER CONDITION, RESIDENTIAL/PARKLAND INSTITUTIONAL PROPERTY USE, COARSE GRAINED SOIL (MOE, 2011).

SCALE VERIFICATION

THIS BAR MEASURES 50mm ON ORIGINAL. ADJUST SCALE ACCORDINGLY.

139 MORRIS STREET HOLDINGS LTD.
GUELPH, ONTARIO

PHASE TWO ENVIRONMENTAL SITE ASSESSMENT

VERTICAL EXTENT OF GROUNDWATER METALS IMPACTS
GEOLOGIC CROSS-SECTION A-A'

CRA CONESTOGA-ROVERS & ASSOCIATES

Source Reference:

Project Manager:	Reviewed By:	Date:
L. SHEPHERD	A. MOLENHUIS	FEBRUARY 2015
Scale:	Project N ^o :	Report N ^o :
AS SHOWN	78674-06	003
		Drawing N ^o :
		figure 13g

MW22-13 8/1/2013

Ag	0.020 U
As	1.0 U
B	381
Ba	40.4
Be	0.50 U
Cd	0.090 U
CN	-
Co	0.50 U
Cr	1.35
CrVI	10 U
Cu	2.8
Hg	5.10 U
Mo	1.97
Na	140000
Ni	1.0 U
Pb	0.50 U
Sb	0.50 U
Se	3.15
Tl	0.080 U
U	1.0 U
V	0.50 U
Zn	3.0 U

MW17-13 2/22/2013

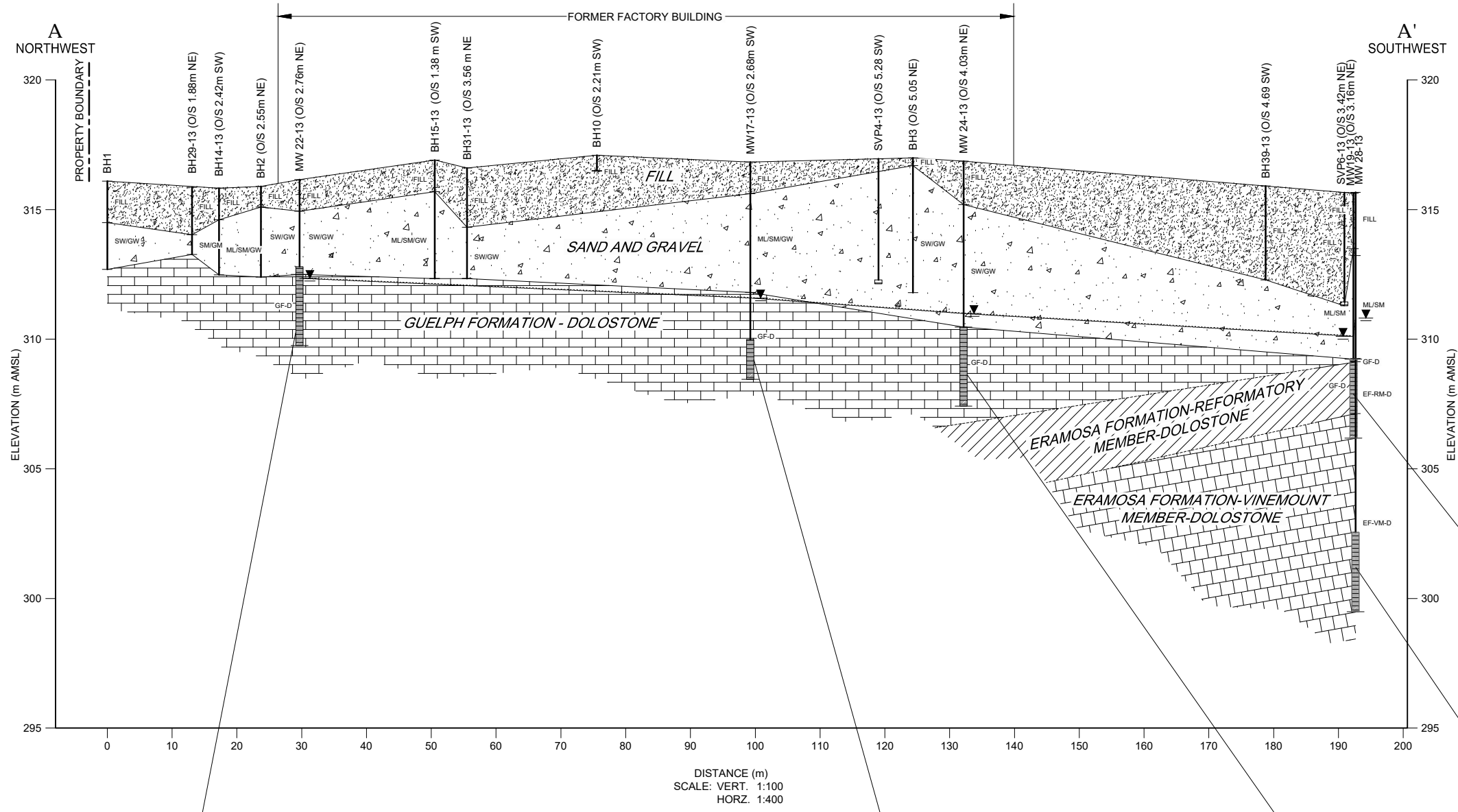
Ag	0.10 U
As	4.0
B	77
Ba	0.3
Be	0.50 U
Cd	0.10 U
CN	-
Co	0.50 U
Cr	0.50 U
CrVI	10 U
Cu	1.0 U
Hg	0.10 U
Mo	0.81
Na	18000
Ni	1.0 U
Pb	1.0 U
Sb	0.50 U
Se	5.0 U
Tl	0.30 U
U	2.0
V	0.50 U
Zn	6.1

MW24-13 8/1/2013

Ag	0.020 U (0.020 U)
As	1.0 U (1.0 U)
B	145-130
Ba	74.086.5
Be	0.50 U (0.50 U)
Cd	0.332 (0.287)
CN	-
Co	0.50 U (0.50 U)
Cr	0.50 (0.71)
CrVI	10 U (10 U)
Cu	1.31 (1)
Hg	0.10 U (0.10 U)
Mo	4.78 (4.52)
Na	190000 (108000)
Ni	3.2 (3.2)
Pb	0.50 U (0.50 U)
Sb	0.50 (0.87)
Se	1.08 (1.07)
Tl	0.144 (0.129)
U	3.3 (3.1)
V	0.50 U (0.50 U)
Zn	236 (225)

MW28-13 8/1/2013 8/21/2013

Ag	-	-
As	-	-
B	-	-
Ba	-	-
Be	-	-
Cd	-	-
CN	-	-
Co	-	-
Cr	-	-
CrVI	-	-
Cu	-	-
Hg	-	-
Mo	-	-
Na	-	-
Ni	-	-
Pb	-	-
Sb	-	-
Se	-	-
Tl	-	-
U	-	-
V	-	-
Zn	-	-



LEGEND

- WELL/BORING ID
- GROUND SURFACE
- GROUNDWATER ELEVATION (AUG. 1, 2013)
- WELL SCREEN
- END OF WELL
- OFF-SET

ug/g MICROGRAMS PER GRAM
 m BGS METERS BELOW GROUND SURFACE
 4.9/4.2 RESULT/DUPLICATE RESULT
 EXCEEDANCE OF THE MOE TABLE 2 STANDARD
 J ESTIMATED CONCENTRATION
 U DETECTION LIMIT
 GROUNDWATER SAMPLE - NOT ANALYZED
 GROUNDWATER SAMPLE - IMPACTED
 GROUNDWATER SAMPLE - CLEAN

MOE TABLE 2 STANDARDS

Chemical Name	Abbreviation	MOE Table 2 Standard
Conductivity	EC	-
pH, lab	pH	-
Chloride	Cl	70000

NOTE:
 TABLE 2: FULL DEPTH GENERIC SITE CONDITION STANDARDS IN A POTABLE GROUNDWATER CONDITION, RESIDENTIAL/PARKLAND INSTITUTIONAL PROPERTY USE, COARSE GRAINED SOIL (MOE, 2011).

SCALE VERIFICATION

THIS BAR MEASURES 50mm ON ORIGINAL. ADJUST SCALE ACCORDINGLY.

139 MORRIS STREET HOLDINGS LTD.
GUELPH, ONTARIO

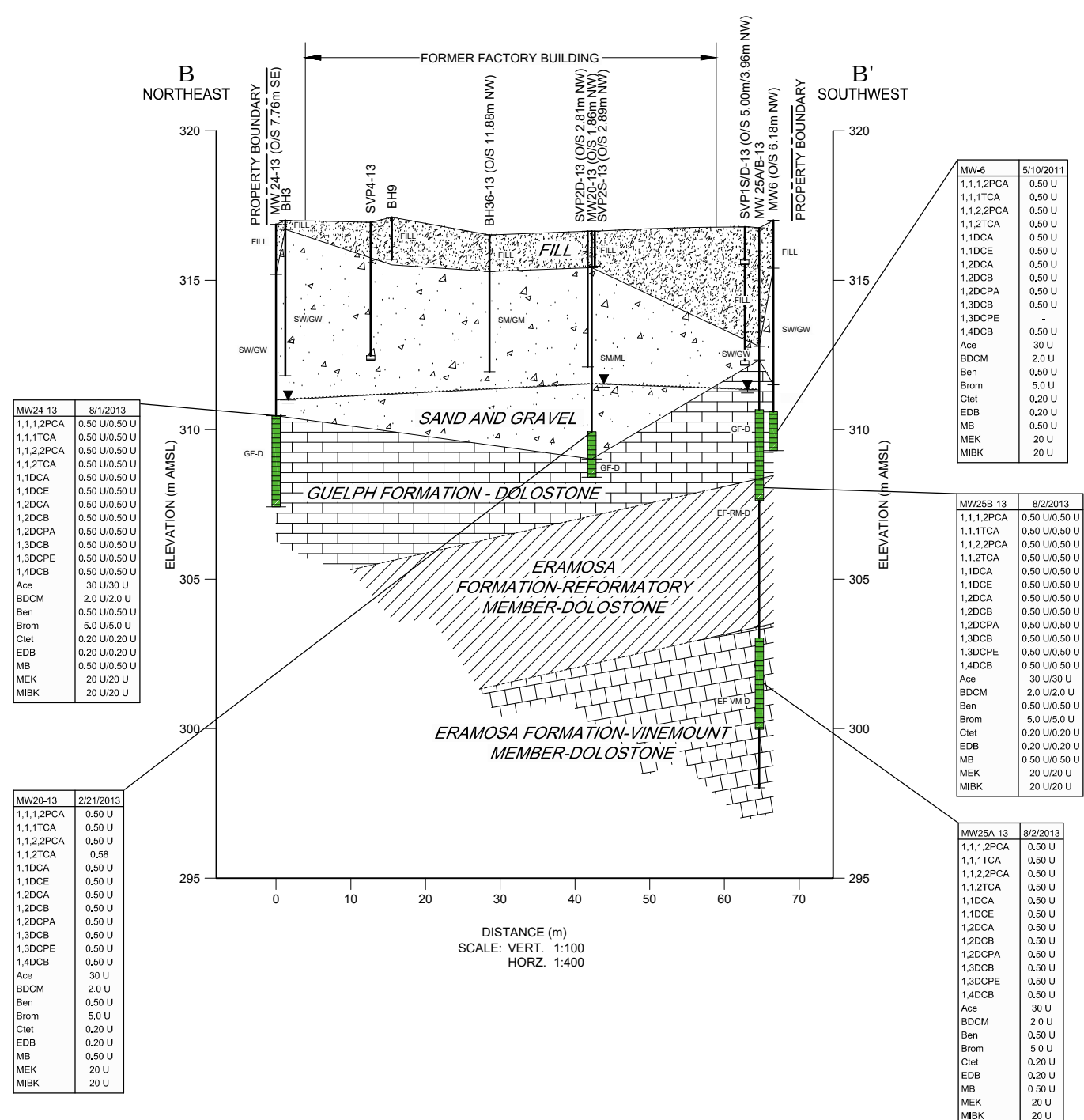
PHASE TWO ENVIRONMENTAL SITE ASSESSMENT

VERTICAL EXTENT OF GROUNDWATER GENERAL CHEMISTRY IMPACTS
 GEOLOGIC CROSS-SECTION A-A'

CONESTOGA-ROVERS & ASSOCIATES

Source Reference:

Project Manager: L. SHEPHERD	Reviewed By: A. MOLENHUIS	Date: FEBRUARY 2015
Scale: AS SHOWN	Project N ^o : 78674-06	Report N ^o : 003 Drawing N ^o : figure 13h



LEGEND

- WELL/BORING ID
- GROUND SURFACE
- GROUNDWATER ELEVATION (AUG. 1, 2013)
- WELL SCREEN
- END OF WELL
- OFF-SET

ug/g MICROGRAMS PER GRAM
 m BGS METERS BELOW GROUND SURFACE
 4.9/4.2 RESULT DUPLICATE RESULT
 EXCEEDANCE OF THE MOE TABLE 2 STANDARD
 J ESTIMATED CONCENTRATION
 U DETECTION LIMIT
 — GROUNDWATER SAMPLE - NOT ANALYZED
 — GROUNDWATER SAMPLE - IMPACTED
 — GROUNDWATER SAMPLE - CLEAN

SAMPLE LOCATION

MW-4 5/3/2011
 (3.35) m BGS
 MC 0.050 U
 PCE 0.050 U
 T 0.20 U
 TCE 0.050 U

— SAMPLE DATE
 — SAMPLE DEPTH
 — RESULT (ug/g)
 — PARAMETER

MOE TABLE 2 STANDARDS

Chemical Name	Abbreviation	MOE Table 2 Standard
1,1,1,2-Tetrachloroethane	1,1,1,2-PCPA	1.1
1,1,1-Trichloroethane	1,1,1-TCA	200
1,1,2-Trichloroethane	1,1,2-PCPA	1
1,1,2-Trichloroethane	1,1,2-TCA	4.7
1,1-Dichloroethane	1,1-DCE	5
1,2-Dichloroethane (Ethylene dibromide)	EDB	0.2
1,2-Dichlorobenzene	1,2-DCB	3
1,3-Dichlorobenzene	1,3-DCB	1.6
1,3-Dichloropropane	1,3-DCPA	5
1,3-Dichlorobenzene	1,3-DCB	59
1,3-Dichloropropane	1,3-DCPE	0.5
1,4-Dichlorobenzene	1,4-DCB	1
1,4-Dioxane (Methyl ethyl ketone) (MEK)	MEK	650
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	MIBK	640
Acetone	Acet	2700
Benzene	Ben	5
Bromochloromethane	BCM	16
Bromoforn	Brom	25
Bromomethane (Methyl bromide)	MB	85
Carbon tetrachloride	CCl4	79

NOTE:
 TABLE 2: FULL DEPTH GENERIC SITE CONDITION STANDARDS IN A POTABLE GROUNDWATER CONDITION, RESIDENTIAL/PARKLAND INSTITUTIONAL PROPERTY USE, COARSE GRAINED SOIL (MOE, 2011).

SCALE VERIFICATION

THIS BAR MEASURES 50mm ON ORIGINAL. ADJUST SCALE ACCORDINGLY.

139 MORRIS STREET HOLDINGS LTD.
GUELPH, ONTARIO

PHASE TWO ENVIRONMENTAL SITE ASSESSMENT

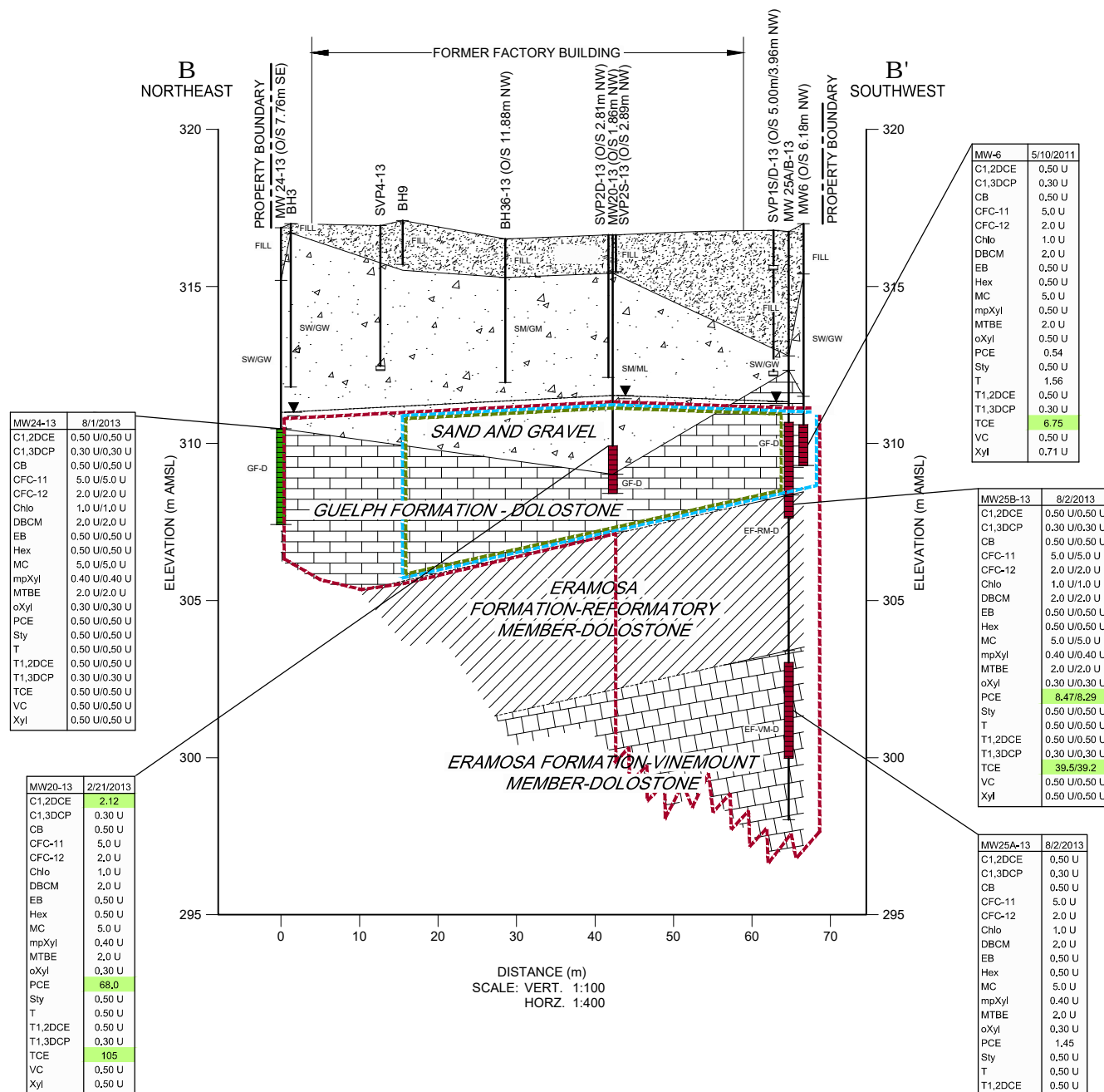
VERTICAL EXTENT OF GROUNDWATER VOC IMPACTS
GEOLOGIC CROSS-SECTION B-B'



Source Reference:

Project Manager: L. SHEPHERD	Reviewed By: A. MOLENHUIS	Date: FEBRUARY 2015
Scale: AS SHOWN	Project N ^o : 78674-06	Report N ^o : 003

Drawing N^o:
figure 13i



LEGEND

- WELL BORING ID
- GROUND SURFACE
- GROUNDWATER ELEVATION (AUG. 1, 2013)
- WELL SCREEN
- END OF WELL
- OFF-SET

ug/g MICROGRAMS PER GRAM
m BGS METERS BELOW GROUND SURFACE
4.9/4.2 RESULT/DOUBLE RESULT
EXCEEDANCE OF THE MOE TABLE 2 STANDARD
J ESTIMATED CONCENTRATION
U DETECTION LIMIT
GROUNDWATER SAMPLE - NOT ANALYZED
GROUNDWATER SAMPLE - IMPACTED
GROUNDWATER SAMPLE - CLEAN

SAMPLE LOCATION

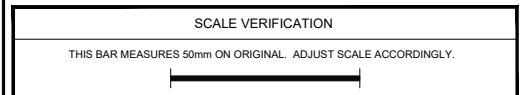
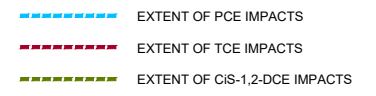
MW-4 5/3/2011
1.3-3.5 m BGS
MC 0.050 U
PCE 0.20 U
T 0.050 U
TCE 0.050 U

PARAMETER

MOE TABLE 2 STANDARDS

Chemical Name	Abbreviation	MOE Table 2 Standard
Chlorobenzene	CB	30
Chloroform (Trichloromethane)	Chl	2.4
Cis-1,2-Dichloroethane	C1,2DCE	1.6
Cis-1,3-Dichloropropene	C1,3DCP	1.6
Dibromochloromethane	DBCM	25
Dichlorodifluoromethane (CFC-12)	CFC-12	599
Dichloroethane	CE	2.4
Hexane	Hex	51
Methyl Styrene	mpSty	1
Methyl tert Butyl ether (MTBE)	MTBE	15
Methylene Chloride	MC	50
o-Xylene	oXyl	1
Styrene	Sty	5.4
Tetrahydrofuran	TCE	1.6
Toluene	T	24
Trans-1,2-Dichloroethane	T1,2DCE	1.6
Trans-1,3-Dichloropropene	T1,3DCP	1.6
Trichloroethane	TCE	1.6
Trichlorofluoromethane (CFC-11)	CFC-11	150
Vinyl Chloride	VC	0.5
Xylene (total)	Xyl	300

NOTE: TABLE 2: FULL DEPTH GENERIC SITE CONDITION STANDARDS IN A POTABLE GROUNDWATER CONDITION, RESIDENTIAL/PARKLAND INSTITUTIONAL PROPERTY USE, COARSE GRAINED SOIL (MOE, 2011).



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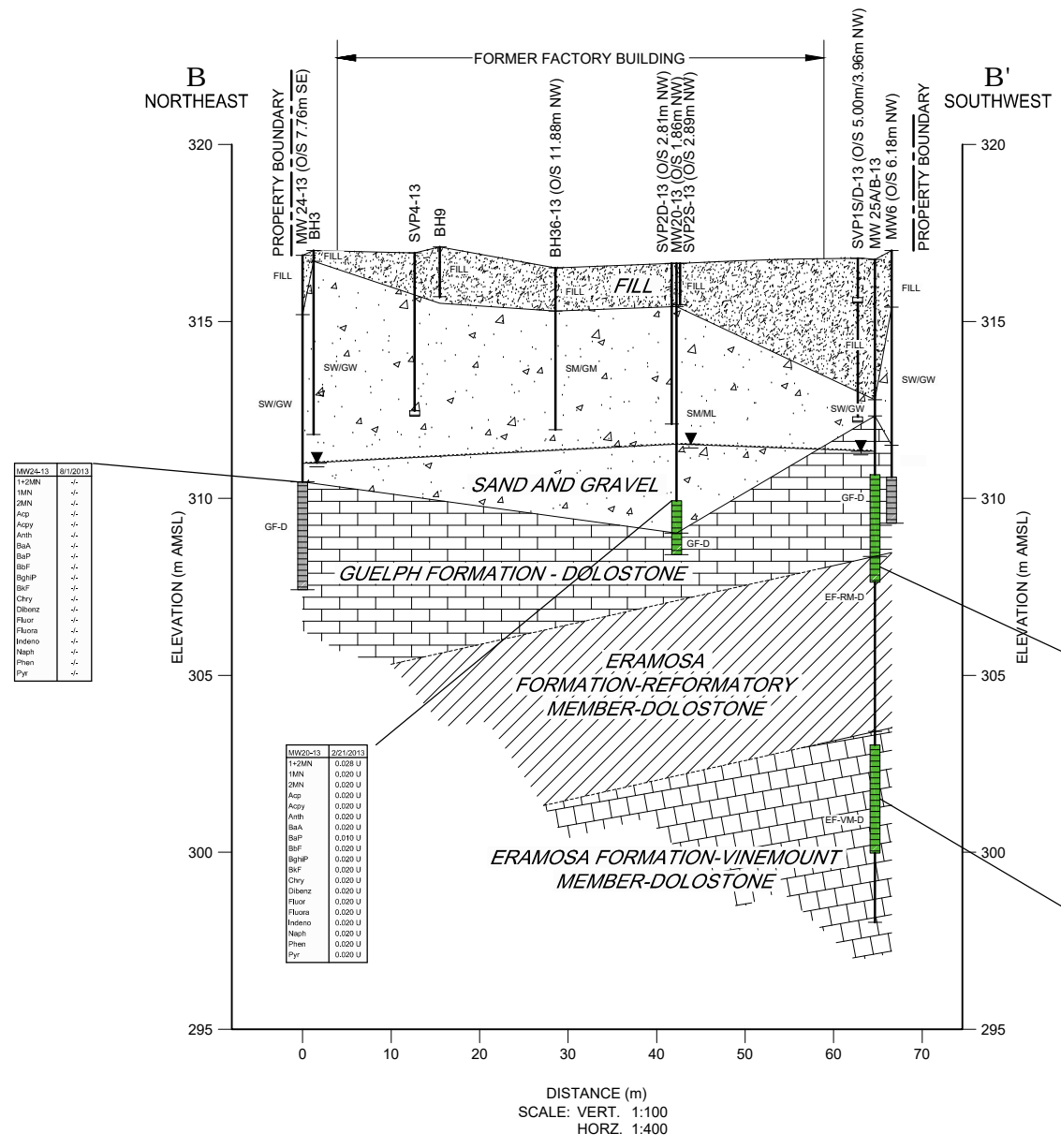
PHASE TWO ENVIRONMENTAL SITE ASSESSMENT

VERTICAL EXTENT OF GROUNDWATER VOC IMPACTS CONTINUED
GEOLOGIC CROSS-SECTION B-B'

CRA CONESTOGA-ROVERS & ASSOCIATES

Source Reference:

Project Manager: L. SHEPHERD	Reviewed By: A. MOLENHUIS	Date: FEBRUARY 2015
Scale: AS SHOWN	Project N°: 78674-06	Report N°: 003
		Drawing N°: figure 13j



LEGEND

- WELL/BORING ID
- GROUND SURFACE
- GROUNDWATER ELEVATION (AUG. 1, 2013)
- WELL SCREEN
- END OF WELL
- OFF-SET

ug/g MICROGRAMS PER GRAM
m BGS METERS BELOW GROUND SURFACE

4.914.2 RESULT/ DUPLICATE RESULT

EXCEEDANCE OF THE MOE TABLE 2 STANDARD

J ESTIMATED CONCENTRATION

U DETECTION LIMIT

GROUNDWATER SAMPLE - NOT ANALYZED

GROUNDWATER SAMPLE - IMPACTED

GROUNDWATER SAMPLE - CLEAN

SAMPLE LOCATION

MW-4 5/3/2011 (3.35) m BGS

MC 0.050 U
PCE 0.050 U
T 0.20 U
TCE 0.050 U

PARAMETER

MOE TABLE 2 STANDARDS

Chemical Name	Abbreviation	MOE Table 2 Standard
1,2-Methylnaphthalene	1-MN	3.2
1-Methylnaphthalene	1MN	3.2
2-Methylnaphthalene	2MN	3.2
Acenaphthene	AcP	4.1
Acenaphthylene	AcPY	1
Anthracene	Anth	2.4
Benzo[a]anthracene	BaA	1
Benzo[a]pyrene	BaP	0.05
Benzo[b]fluoranthene	BbF	0.1
Benzo[k]fluoranthene	BkF	0.2
Benzo[e]pyrene	BeP	0.1
Chrysene	Chry	0.1
Dibenz[a,h]anthracene	Dibenz	0.2
Fluoranthene	Fluo	0.45
Fluorene	Fluo	100
Indeno[1,2,3-cd]pyrene	Indeno	0.2
Naphthalene	Naph	11
Phenanthrene	Phen	1
Pyrene	Pyr	4.1

NOTE: FULL DEPTH GENERIC SITE CONDITION STANDARDS IN A POTABLE GROUNDWATER CONDITION, RESIDENTIAL/PARKLAND INSTITUTIONAL PROPERTY USE, COARSE GRAINED SOIL (MOE, 2011).

SCALE VERIFICATION

THIS BAR MEASURES 50mm ON ORIGINAL. ADJUST SCALE ACCORDINGLY.

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GUELPH, ONTARIO

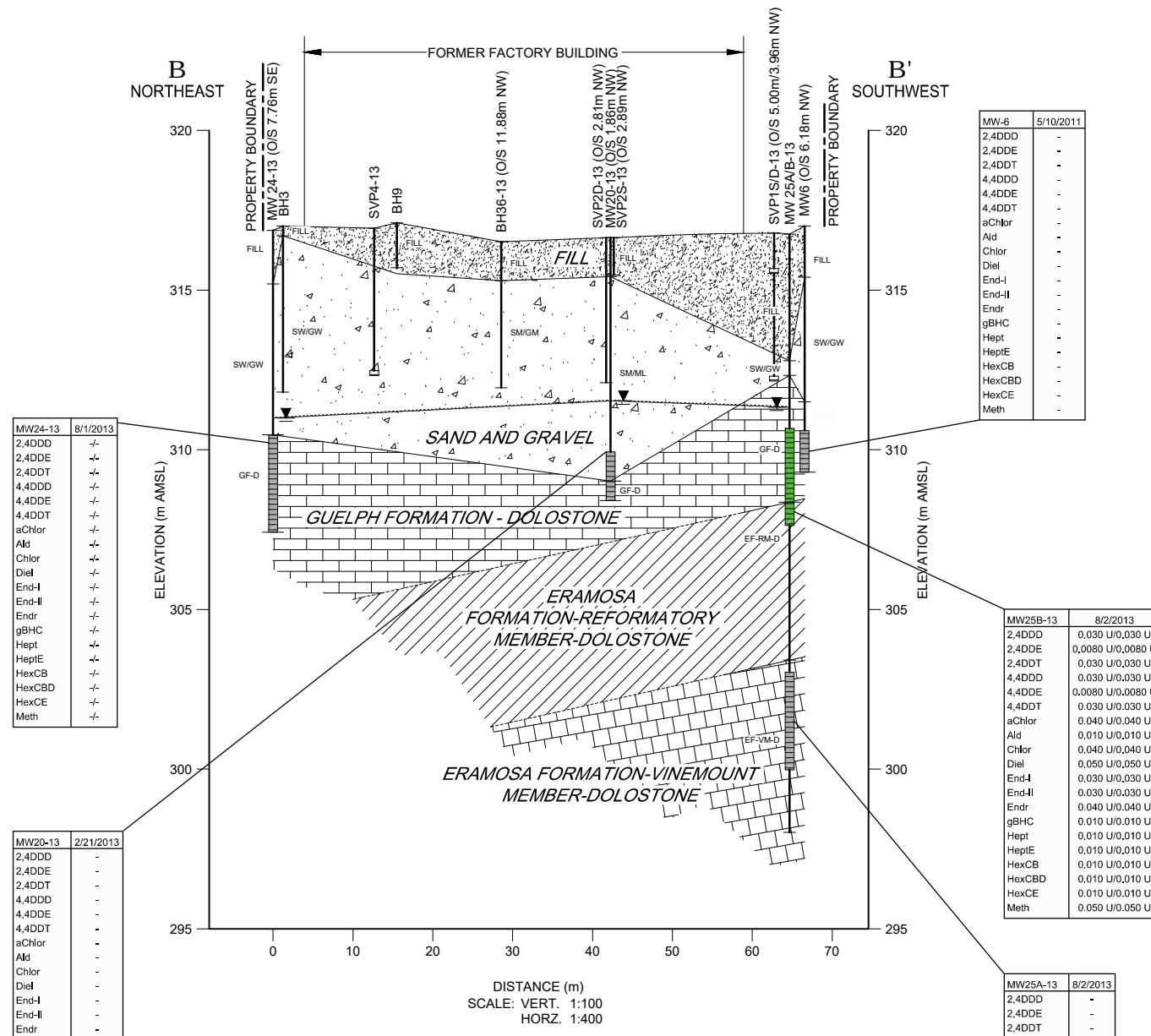
PHASE TWO ENVIRONMENTAL SITE ASSESSMENT

VERTICAL EXTENT OF GROUNDWATER PAH IMPACTS
GEOLOGIC CROSS-SECTION B-B'



Source Reference:

Project Manager: L. SHEPHERD	Reviewed By: A. MOLENHUIS	Date: FEBRUARY 2015
Scale: AS SHOWN	Project N ^o : 78674-06	Report N ^o : 003
		Drawing N ^o : figure 13k



LEGEND

- WELL/BORING ID
- GROUND SURFACE
- GROUNDWATER ELEVATION (AUG. 1, 2013)
- WELL SCREEN
- END OF WELL
- OFF-SET

ug/g MICROGRAMS PER GRAM
m BGS METERS BELOW GROUND SURFACE

4.914.2 RESULT DUPLICATE RESULT
EXCEEDANCE OF THE MOE TABLE 2 STANDARD

J ESTIMATED CONCENTRATION
U DETECTION LIMIT

GROUNDWATER SAMPLE - NOT ANALYZED
GROUNDWATER SAMPLE - IMPACTED
GROUNDWATER SAMPLE - CLEAN

SAMPLE LOCATION
MW-4 5/3/2011 0.3 to 1.0 BGS
SAMPLE DATE
SAMPLE DEPTH
MC 0.050 U
PCE 0.050 U
T 0.20 U
TCE 0.050 U
RESULT (ug/g)
PARAMETER

MOE TABLE 2 STANDARDS

Chemical Name	Abbreviation	MOE Table 2 Standard
2,4-DDE	2.4DDE	-
2,4-DDT	2.4DDT	-
2,4-DDD	2.4DDD	-
2,4-DDE	2.4DDE	-
2,4-DDT	2.4DDT	-
2,4-DDD	2.4DDD	10
2,4-DDE	2.4DDE	10
2,4-DDT	2.4DDT	2.8
2,4-DDD	2.4DDD	2.8
Aldrin	Ald	0.35
alpha-Chloro	aChlor	7
Chlorobenzene	Chlor	7
Chlorobenzene, technical	Chlor	7
Dieldrin	Diel	0.35
Endosulfan I	End-I	1.5
Endosulfan II	End-II	1.5
Endrin	Endr	0.48
gamma-BHC (lindane)	gBHC	1.2
Heptachlor	Hept	1.5
Heptachlor epoxide	HeptE	0.58
Hexachlorobenzene	HexCB	1
Hexachlorocyclopentadiene	HexCBD	0.044
Hexachlorobutadiene	HexCE	2.1
Methoxychlor	Meth	6.5

NOTE:
TABLE 2: FULL DEPTH GENERIC SITE CONDITION STANDARDS IN A POTABLE GROUNDWATER CONDITION, RESIDENTIAL/PARKLAND INSTITUTIONAL PROPERTY USE, COARSE GRAINED SOIL (MOE, 2011).

SCALE VERIFICATION

THIS BAR MEASURES 50mm ON ORIGINAL. ADJUST SCALE ACCORDINGLY.

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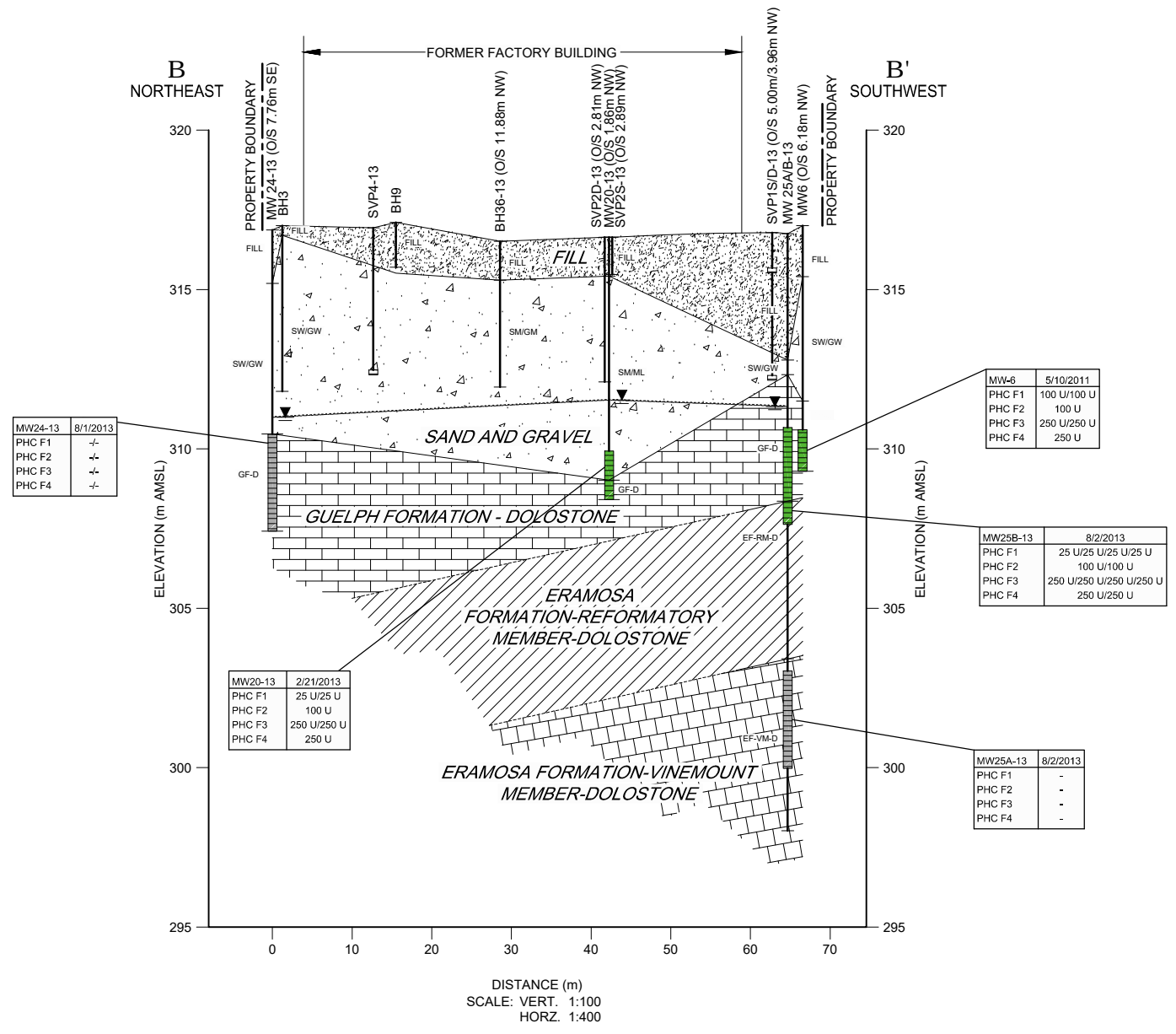
PHASE TWO ENVIRONMENTAL SITE ASSESSMENT

VERTICAL EXTENT OF GROUNDWATER PESTICIDE IMPACTS
GEOLOGIC CROSS-SECTION B-B'

CRA CONESTOGA-ROVERS & ASSOCIATES

Source Reference:

Project Manager: L. SHEPHERD	Reviewed By: A. MOLENHUIS	Date: FEBRUARY 2015
Scale: AS SHOWN	Project N ^o : 78674-06	Report N ^o : 003
		Drawing N ^o : figure 13I



LEGEND

- WELL/BORING ID
- GROUND SURFACE
- GROUNDWATER ELEVATION (AUG. 1, 2013)
- WELL SCREEN
- END OF WELL
- OFF-SET

ug/g MICROGRAMS PER GRAM
m BGS METERS BELOW GROUND SURFACE

4.914.2 RESULT/DUPLICATE RESULT

EXCEEDANCE OF THE MOE TABLE 2 STANDARD

J ESTIMATED CONCENTRATION

U DETECTION LIMIT

GROUNDWATER SAMPLE - NOT ANALYZED

GROUNDWATER SAMPLE - IMPACTED

GROUNDWATER SAMPLE - CLEAN

SAMPLE LOCATION

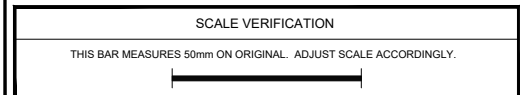
MW-4	5/3/2011	
	(3.35) m BGS	
MC	0.050 U	
PCE	0.050 U	
T	0.20 U	
TCE	0.050 U	

PARAMETER

MOE TABLE 2 STANDARDS

Chemical Name	Abbreviation	MOE Table 2 Standard
Petroleum Hydrocarbons F1 (C6-C8)	PHC F1	750
Petroleum Hydrocarbons F2 (C10-C16)	PHC F2	150
Petroleum Hydrocarbons F3 (C18-C36)	PHC F3	500
Petroleum Hydrocarbons F4 (C14-C20)	PHC F4	500

NOTE:
TABLE 2: FULL DEPTH GENERIC SITE CONDITION STANDARDS IN A POTABLE GROUNDWATER CONDITION, RESIDENTIAL/PARKLAND INSTITUTIONAL PROPERTY USE, COARSE GRAINED SOIL (MOE, 2011).



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GUELPH, ONTARIO

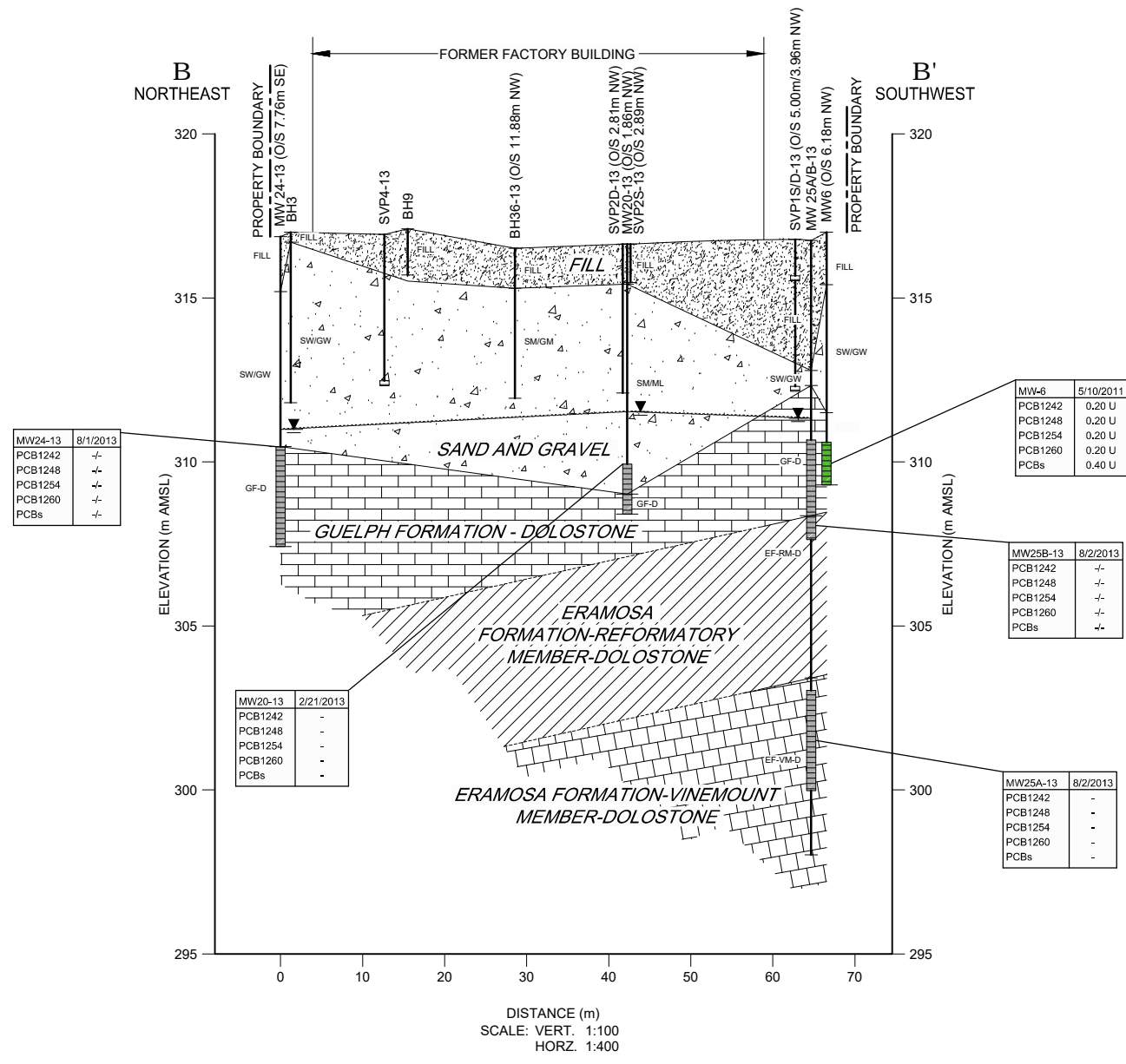
PHASE TWO ENVIRONMENTAL SITE ASSESSMENT

VERTICAL EXTENT OF GROUNDWATER PHC IMPACTS
GEOLOGIC CROSS-SECTION B-B'



Source Reference:

Project Manager: L. SHEPHERD	Reviewed By: A. MOLENHUIS	Date: FEBRUARY 2015
Scale: AS SHOWN	Project N ^o : 78674-06	Report N ^o : 003
		Drawing N ^o : figure 13m



LEGEND

- WELL/BORING ID
- GROUND SURFACE
- GROUNDWATER ELEVATION (AUG. 1, 2013)
- WELL SCREEN
- END OF WELL
- OFF-SET

ug/g MICROGRAMS PER GRAM
 m BGS METERS BELOW GROUND SURFACE
 4.9/4.2 RESULT/ DUPLICATE RESULT
 EXCEEDANCE OF THE MOE TABLE 2 STANDARD
 J ESTIMATED CONCENTRATION
 U DETECTION LIMIT
 GROUNDWATER SAMPLE - NOT ANALYZED
 GROUNDWATER SAMPLE - IMPACTED
 GROUNDWATER SAMPLE - CLEAN

SAMPLE LOCATION

MW-4	5/3/2011	(3.35) m BGS
MC	0.050 U	
PCE	0.050 U	
T	0.20 U	
TCE	0.050 U	

PARAMETER

MOE TABLE 2 STANDARDS

Chemical Name	Abbreviation	MOE Table 2 Standard
Arochlor 1242 (PCB-1242)	PCB1242	3
Arochlor 1248 (PCB-1248)	PCB1248	3
Arochlor 1254 (PCB-1254)	PCB1254	3
Arochlor 1260 (PCB-1260)	PCB1260	3
Total PCBs	PCBs	3

NOTE:
 TABLE 2: FULL DEPTH GENERIC SITE CONDITION STANDARDS IN A POTABLE GROUNDWATER CONDITION, RESIDENTIAL/PARKLAND INSTITUTIONAL PROPERTY USE, COARSE GRAINED SOIL (MOE, 2011).

SCALE VERIFICATION

THIS BAR MEASURES 50mm ON ORIGINAL. ADJUST SCALE ACCORDINGLY.

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GUELPH, ONTARIO

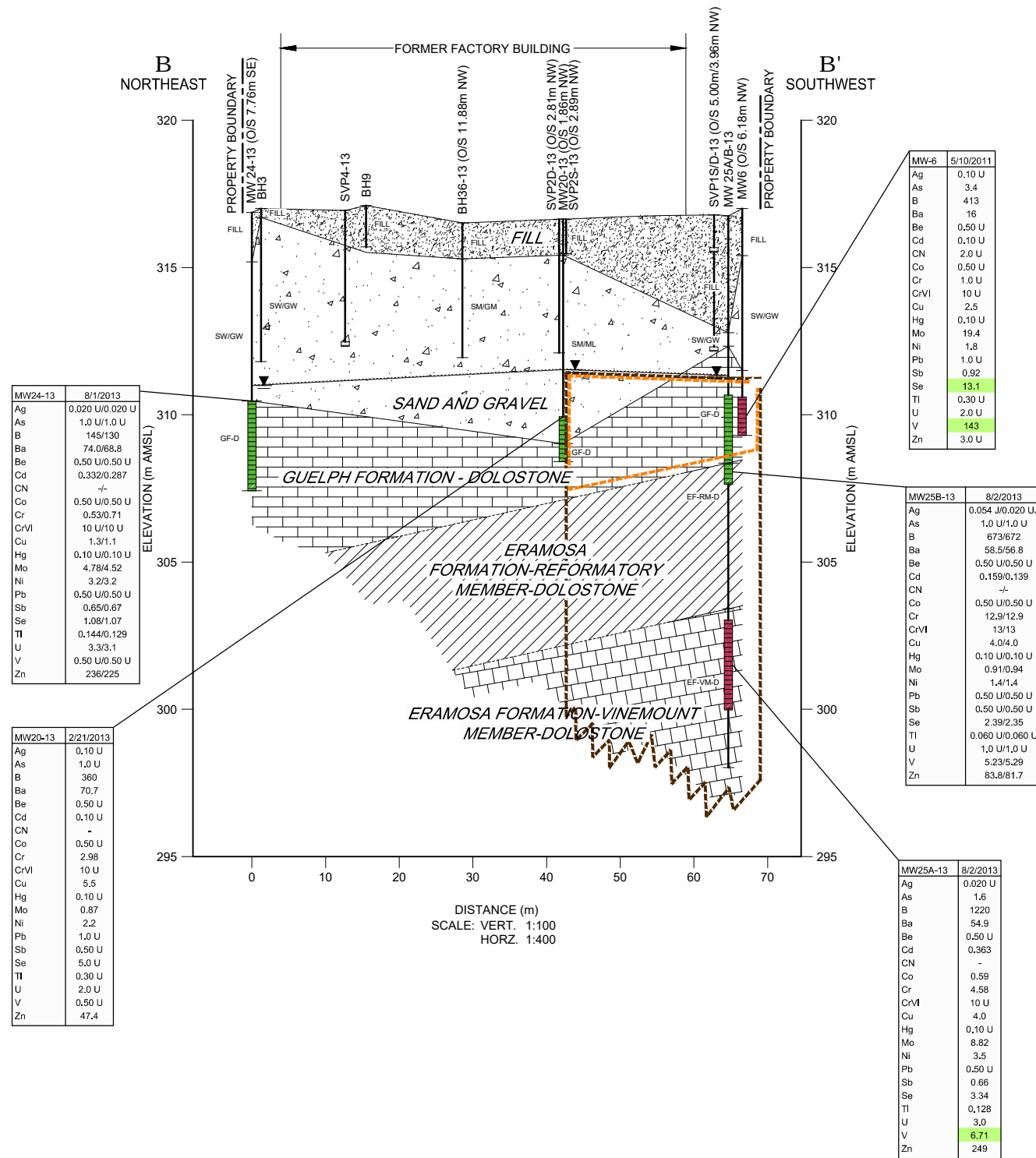
PHASE TWO ENVIRONMENTAL SITE ASSESSMENT

VERTICAL EXTENT OF GROUNDWATER PCB IMPACTS
GEOLOGIC CROSS-SECTION B-B'



Source Reference:

Project Manager: L. SHEPHERD	Reviewed By: A. MOLENHUIS	Date: FEBRUARY 2015
Scale: AS SHOWN	Project N ^o : 78674-06	Report N ^o : 003
		Drawing N ^o : figure 13n



LEGEND

- WELL/BORING ID
- GROUND SURFACE
- ▲ GROUND SURFACE (AUG. 1, 2013)
- WELL SCREEN
- END OF WELL
- OFF-SET

ug/g MICROGRAMS PER GRAM
m BGS METERS BELOW GROUND SURFACE

4.9/4.2 RESULT/DUPLICATE RESULT

EXCEEDANCE OF THE MOE TABLE 2 STANDARD

J ESTIMATED CONCENTRATION

U DETECTION LIMIT

— GROUNDWATER SAMPLE - NOT ANALYZED

— GROUNDWATER SAMPLE - IMPACTED

— GROUNDWATER SAMPLE - CLEAN

SAMPLE LOCATION

MW-4 5/3/2011

(3.35) m BGS

MC 0.050 U

PCE 0.050 U

T 0.20 U

TCE 0.050 U

RESULT (ug/g)

PARAMETER

MOE TABLE 2 STANDARDS

Chemical Name	Abbreviation	MOE Table 2 Standard
Antimony	Sb	6
Arsenic	As	25
Barium	Ba	2000
Beryllium	Be	4
Boron	B	5000
Boron (hot water extractable)	B HWS	—
Cadmium	Cd	2.7
Chromium	Cr	50
Chromium VI (hexavalent)	CrVI	25
Cobalt	Co	3.8
Copper	Cu	87
Cyanide	CN	66
Lead	Pb	50
Manganese	Mn	0.29
Molybdenum	Mo	70
Nickel	Ni	100
Selenium	Se	10
Silver	Ag	1.5
Sodium	Na	480000
Thallium	Tl	2
Uranium	U	20
Vanadium	V	6.2
Zinc	Zn	1100

NOTE: TABLE 2: FULL DEPTH GENERIC SITE CONDITION STANDARDS IN A POTABLE GROUNDWATER CONDITION, RESIDENTIAL/PARKLAND INSTITUTIONAL PROPERTY USE, COARSE GRAINED SOIL (MOE, 2011).

--- EXTENT OF SELENIUM IMPACTS

--- EXTENT OF VANADIUM IMPACTS

SCALE VERIFICATION

THIS BAR MEASURES 50mm ON ORIGINAL. ADJUST SCALE ACCORDINGLY.

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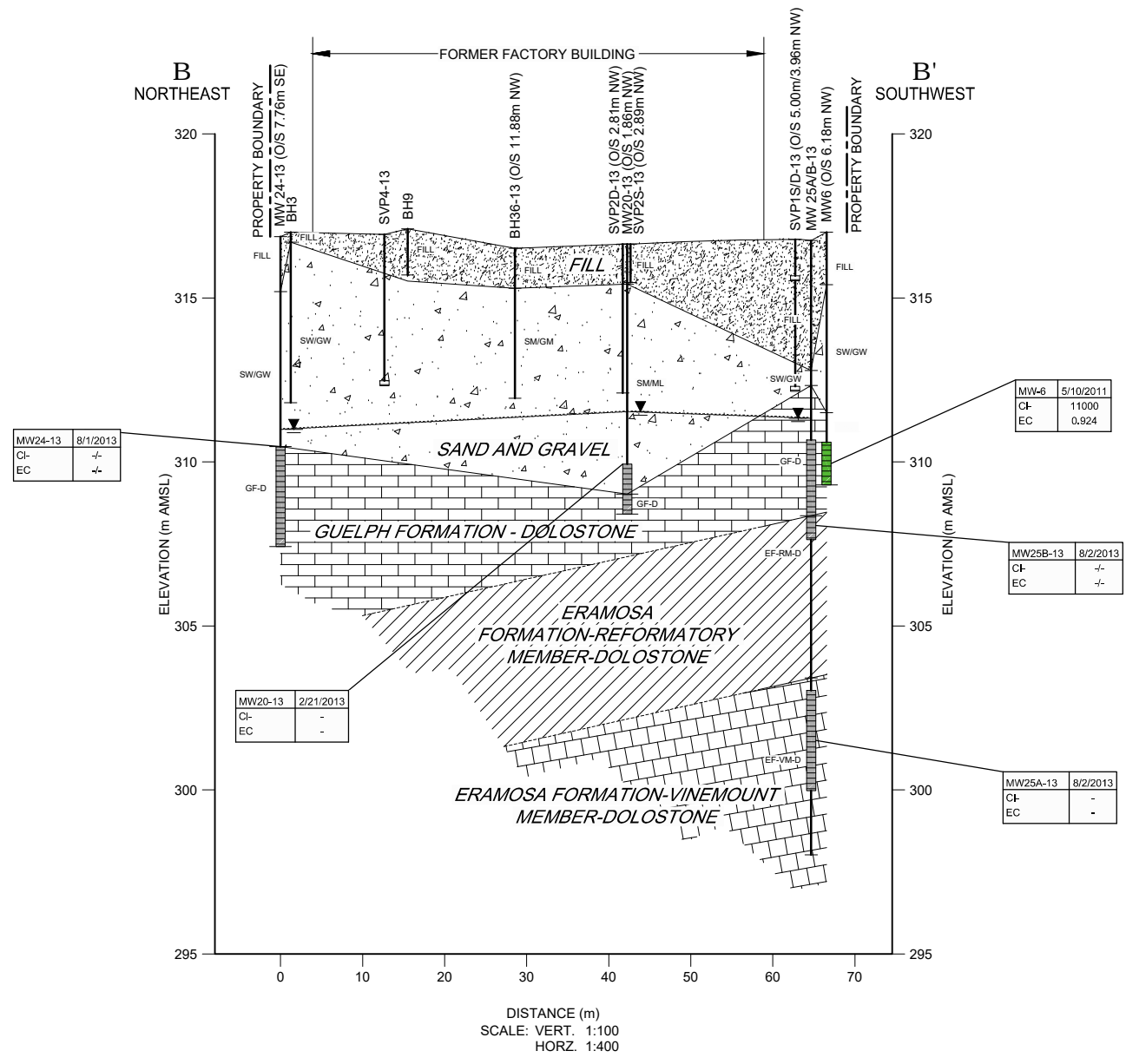
PHASE TWO ENVIRONMENTAL SITE ASSESSMENT

VERTICAL EXTENT OF GROUNDWATER METALS IMPACTS
GEOLOGIC CROSS-SECTION B-B'



Source Reference:

Project Manager: L. SHEPHERD	Reviewed By: A. MOLENHUIS	Date: FEBRUARY 2015
Scale: AS SHOWN	Project N ^o : 78674-06	Report N ^o : 003
		Drawing N ^o : figure 13o



LEGEND

- WELL/BORING ID
- GROUND SURFACE
- GROUNDWATER ELEVATION (AUG. 1, 2013)
- WELL SCREEN
- END OF WELL
- OFF-SET

ug/g MICROGRAMS PER GRAM
 m BGS METERS BELOW GROUND SURFACE
 4.9/4.2 RESULT/DUPLICATE RESULT
 EXCEEDANCE OF THE MOE TABLE 2 STANDARD
 J ESTIMATED CONCENTRATION
 U DETECTION LIMIT
 GROUNDWATER SAMPLE - NOT ANALYZED
 GROUNDWATER SAMPLE - IMPACTED
 GROUNDWATER SAMPLE - CLEAN

SAMPLE LOCATION

MW-4	5/3/2011	(3.35) m BGS
MC	0.050 U	
PCE	0.050 U	
T	0.20 U	
TCE	0.050 U	

MOE TABLE 2 STANDARDS

Chemical Name	Abbreviation	MOE Table 2 Standard
Conductivity	EC	-
pH, sat	pH	-
Chloride	Cl	70000

NOTE:
TABLE 2: FULL DEPTH GENERIC SITE CONDITION STANDARDS IN A POTABLE GROUNDWATER CONDITION, RESIDENTIAL/PARKLAND INSTITUTIONAL PROPERTY USE, COARSE GRAINED SOIL (MOE, 2011).

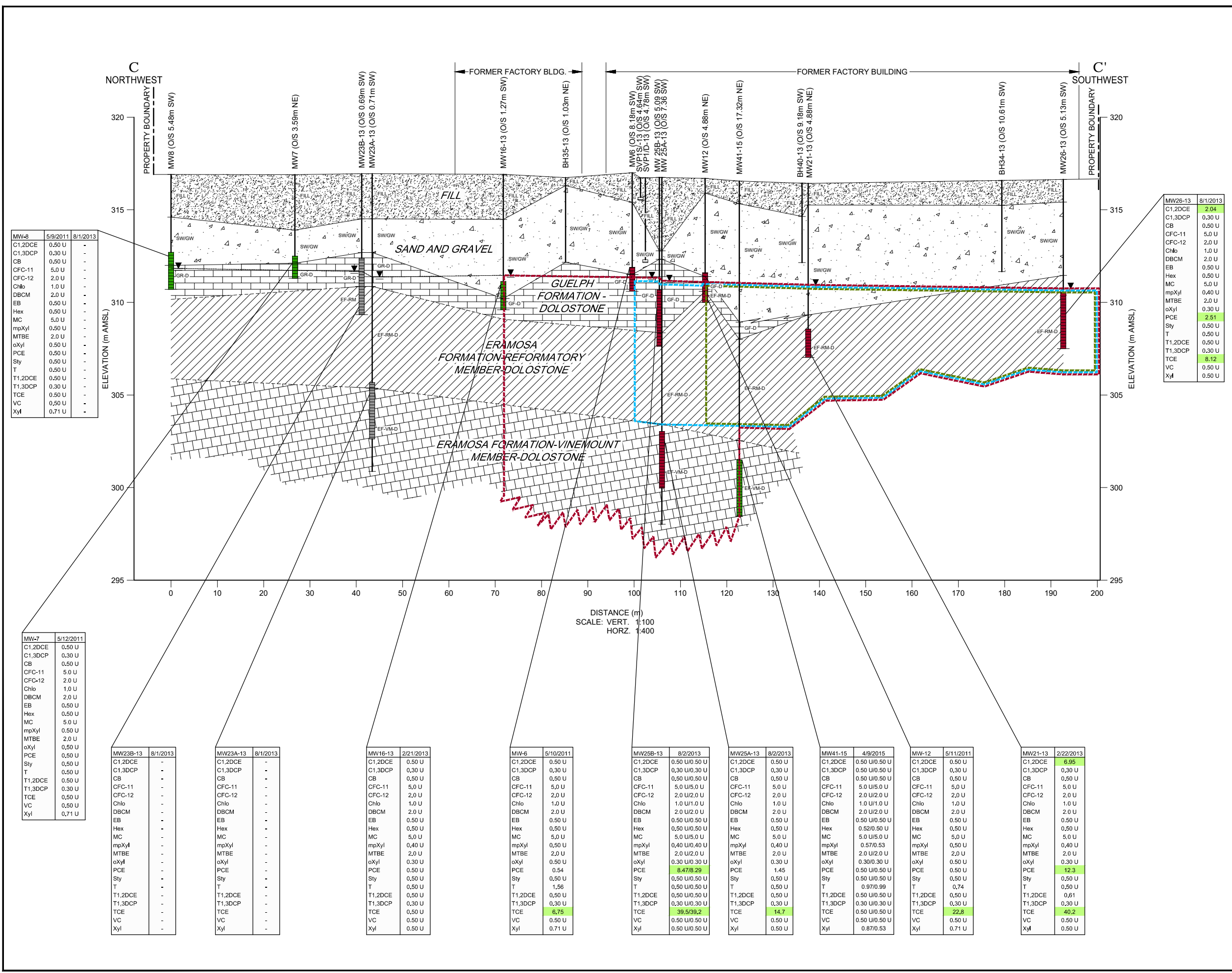
SCALE VERIFICATION
THIS BAR MEASURES 50mm ON ORIGINAL. ADJUST SCALE ACCORDINGLY.

139 MORRIS STREET HOLDINGS LTD.
GUELPH, ONTARIO
PHASE TWO ENVIRONMENTAL SITE ASSESSMENT
VERTICAL EXTENT OF GROUNDWATER GENERAL CHEMISTRY IMPACTS
GEOLOGIC CROSS-SECTION B-B'



Source Reference:

Project Manager: L. SHEPHERD	Reviewed By: A. MOLENHUIS	Date: FEBRUARY 2015
Scale: AS SHOWN	Project N ^o : 78674-06	Report N ^o : 003 Drawing N ^o : figure 13p



LEGEND

- WELL/BORING ID
- GROUND SURFACE
- GROUNDWATER ELEVATION (AUG. 1, 2013)
- WELL SCREEN
- END OF WELL
- OFF-SET

ug/g MICROGRAMS PER GRAM
 m BGS METERS BELOW GROUND SURFACE
 4.9/4.2 RESULT/DUPLICATE RESULT
 J EXCEEDANCE OF THE MOE TABLE 2 STANDARD
 U ESTIMATED CONCENTRATION
 U DETECTION LIMIT
 GROUNDWATER SAMPLE - NOT ANALYZED
 GROUNDWATER SAMPLE - IMPACTED
 GROUNDWATER SAMPLE - CLEAN

SAMPLE LOCATION

MW-4 5/9/2011 (1.3-1.5 m BGS)
 MC 0.050 U
 PCE 0.20 U
 TCE 0.050 U
 RESULT (ug/g)
 PARAMETER

MOE TABLE 2 STANDARDS

Chemical Name	Abbreviation	MOE Table 2 Standard
Chlorobenzene	CB	30
Chloroform (Trichloromethane)	Chl	2.4
Cis-1,2-Dichloroethane	C1,2DCE	1.6
Cis-1,3-Dichloropropane	C1,3DCP	0.30
Dibromochloromethane	DBCM	25
Dichlorodifluoromethane (CFC-12)	CFC-12	500
Dichloromethane	Chl	2.4
Hexane	Hex	51
Methyl Ethyl Ketone	MEK	15
Methylene Chloride	MC	50
n-Butane	n-But	50
n-Pentane	n-Pen	50
Styrene	Sty	5.4
Toluene	T	1.6
Toluene	T	24
Trans-1,2-Dichloroethane	T1,2DCE	1.6
Trans-1,3-Dichloropropane	T1,3DCP	0.30
Trichloroethane	TCE	1.6
Trichlorofluoromethane (CFC-11)	CFC-11	150
Vinyl Chloride	VC	0.5
Xylenes (Total)	Xyl	500

NOTE: TABLE 2: FULL DEPTH GENERIC SITE CONDITION STANDARDS IN A POTABLE GROUNDWATER CONDITION, RESIDENTIAL/PARKLAND INSTITUTIONAL PROPERTY USE, COARSE GRAINED SOIL (MOE, 2011).

--- EXTENT OF PCE IMPACTS
 --- EXTENT OF TCE IMPACTS
 --- EXTENT OF CIS-1,2-DCE IMPACTS

SCALE VERIFICATION

THIS BAR MEASURES 50mm ON ORIGINAL. ADJUST SCALE ACCORDINGLY.

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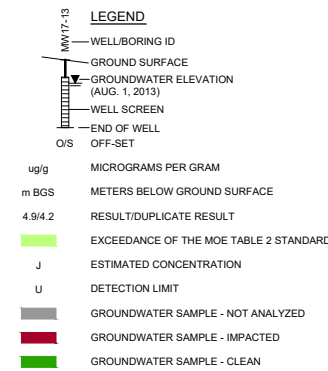
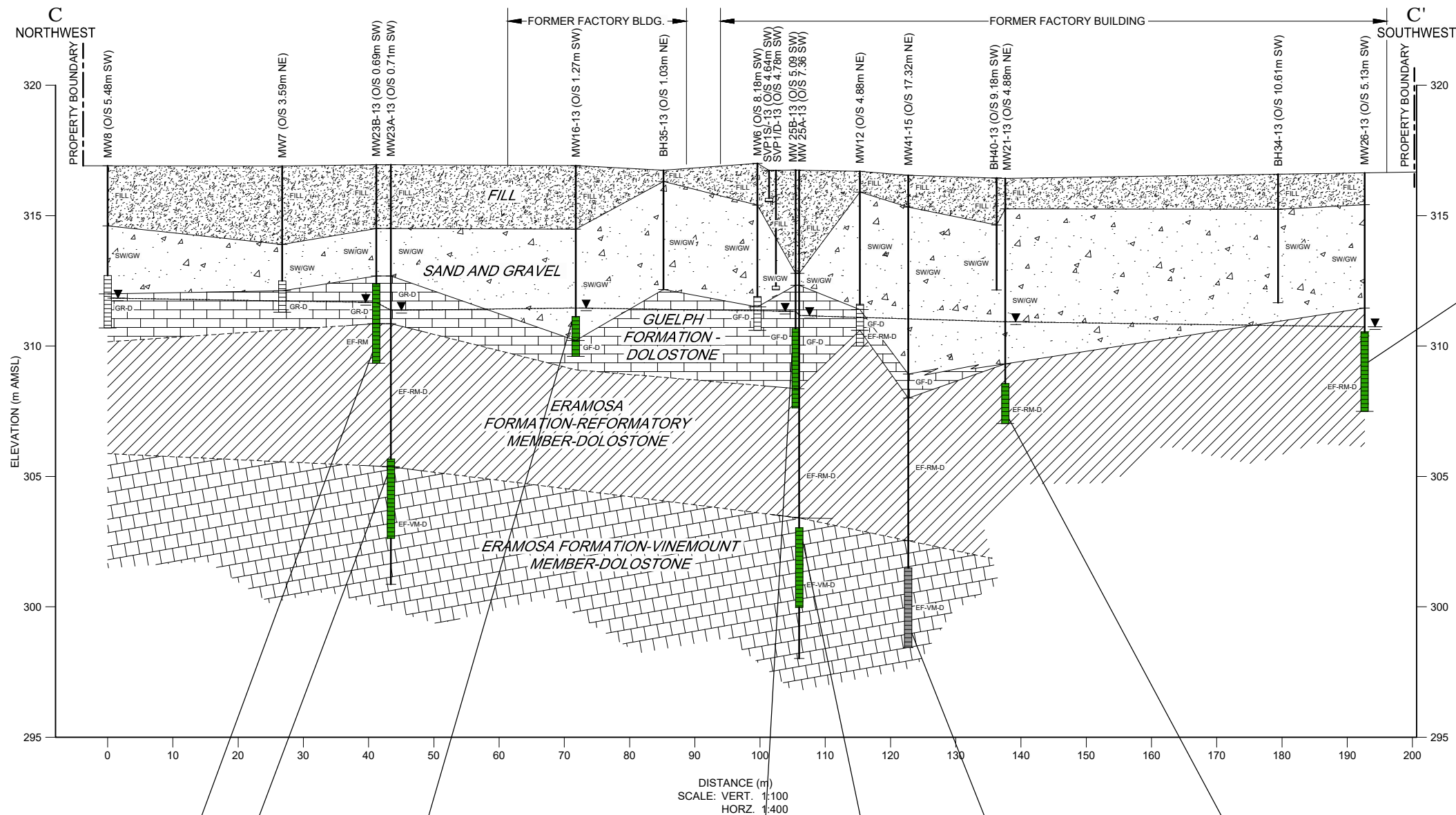
PHASE TWO ENVIRONMENTAL SITE ASSESSMENT

VERTICAL EXTENT OF GROUNDWATER VOC IMPACTS CONTINUED
 GEOLOGIC CROSS-SECTION C-C'

CONESTOGA-ROVERS & ASSOCIATES

Source Reference:

Project Manager: L. SHEPHERD	Reviewed By: A. MOLENHUIS	Date: FEBRUARY 2015
Scale: AS SHOWN	Project N ^o : 78674-06	Report N ^o : 003 Drawing N ^o : figure 13r



SAMPLE LOCATION

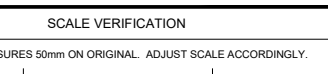
MW-4	5/3/2011	1-3.5 m BGS
MC	0.050 U	
PCE	0.050 U	
T	0.20 U	
TCE	0.050 U	

PARAMETER

MOE TABLE 2 STANDARDS

Chemical Name	Abbreviation	MOE Table 2 Standard
1,2-Dichloroethane	1,2-DCE	3.0
1,4-Dichlorobenzene	1,4-DCE	3.0
1,1,1-Trichloroethane	1,1,1-TCE	3.0
1,1,2-Trichloroethane	1,1,2-TCE	3.0
Acetophenone	AcP	4.1
Acenaphthylene	AcPy	1.0
Anthracene	Anth	2.4
Benzo[a]anthracene	BaA	1.0
Benzo[a]pyrene	BP	0.05
Benzo[b]fluoranthene	BbF	0.1
Benzo[b]kfluoranthene	BbKf	0.1
Chrysene	Chry	0.1
Dibenz[a,h]anthracene	Dibenz	0.2
Fluoranthene	Fluor	0.45
Indene	Inden	3.00
Indeno[1,2,3-cd]pyrene	Indeno	0.2
Naphthalene	Naph	1.0
Phenanthrene	Phen	1.0
Pyrene	Py	4.1

NOTE: TABLE 2: FULL DEPTH GENERIC SITE CONDITION STANDARDS IN A POTABLE GROUNDWATER CONDITION, RESIDENTIAL/PARKLAND INSTITUTIONAL PROPERTY USE, COARSE GRAINED SOIL (MOE, 2011).



139 MORRIS STREET HOLDINGS LTD.
GUELPH, ONTARIO

PHASE TWO ENVIRONMENTAL SITE ASSESSMENT

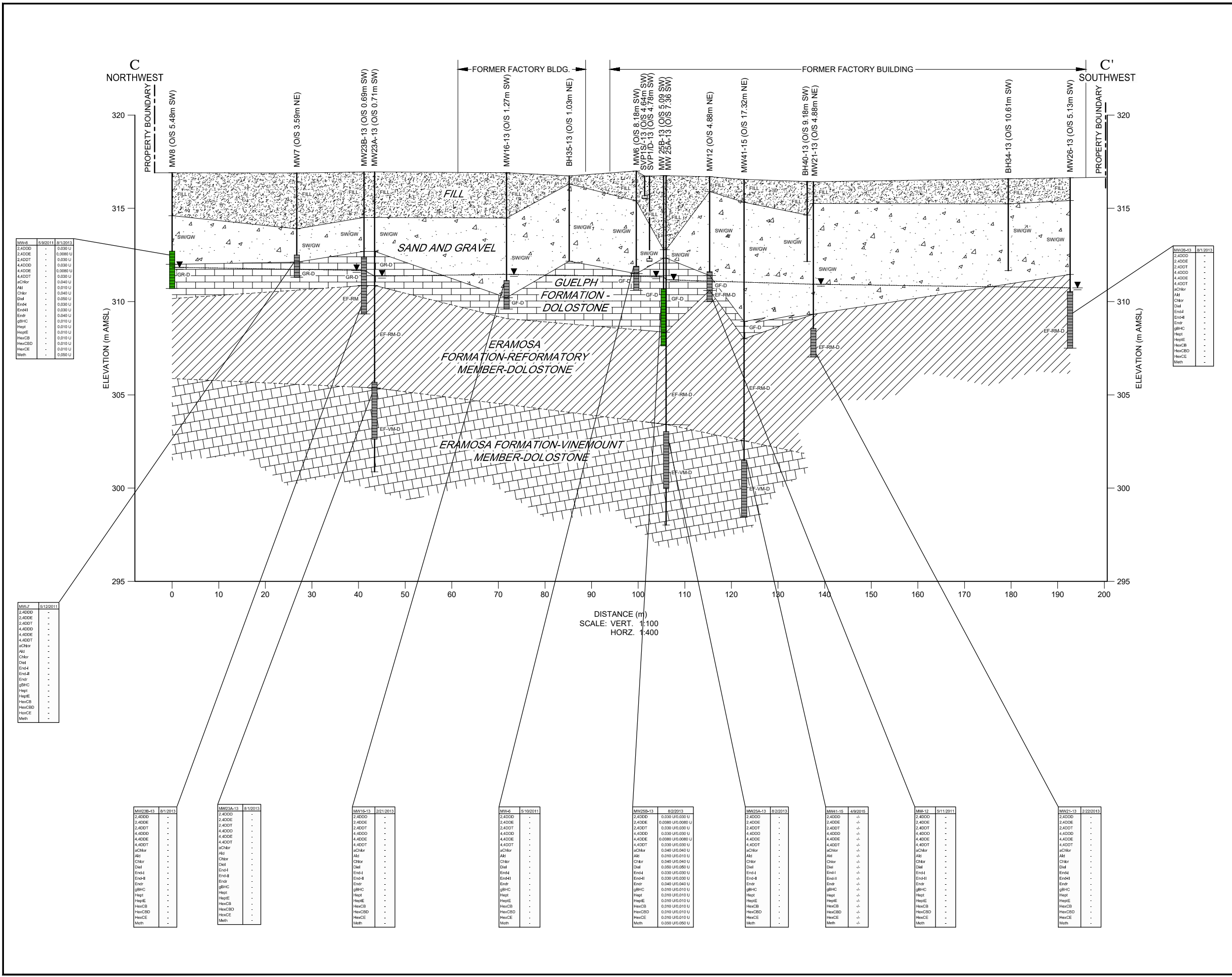
VERTICAL EXTENT OF GROUNDWATER PAH IMPACTS
GEOLOGIC CROSS-SECTION C-C'



Source Reference:

MW23B-13	8/1/2013	MW23A-13	8/1/2013	MW16-13	2/21/2013	MW25B-13	8/2/2013	MW25A-13	8/2/2013	MW12-13	8/9/2015
1,2-MN	0.020 U	1,2-MN	0.020 U	1,2-MN	0.020 U	1,2-MN	0.020 U	1,2-MN	0.020 U	1,2-MN	0.020 U
1-MN	0.020 U	1-MN	0.020 U	1-MN	0.020 U	1-MN	0.020 U	1-MN	0.020 U	1-MN	0.020 U
2-MN	0.020 U	2-MN	0.020 U	2-MN	0.020 U	2-MN	0.020 U	2-MN	0.020 U	2-MN	0.020 U
AcP	0.020 U	AcP	0.020 U	AcP	0.020 U	AcP	0.020 U	AcP	0.020 U	AcP	0.020 U
AcPy	0.020 U	AcPy	0.020 U	AcPy	0.020 U	AcPy	0.020 U	AcPy	0.020 U	AcPy	0.020 U
Anth	0.020 U	Anth	0.020 U	Anth	0.020 U	Anth	0.020 U	Anth	0.020 U	Anth	0.020 U
BaA	0.020 U	BaA	0.020 U	BaA	0.020 U	BaA	0.020 U	BaA	0.020 U	BaA	0.020 U
BaP	0.010 U	BaP	0.010 U	BaP	0.010 U	BaP	0.010 U	BaP	0.010 U	BaP	0.010 U
BbF	0.020 U	BbF	0.020 U	BbF	0.020 U	BbF	0.020 U	BbF	0.020 U	BbF	0.020 U
BbKf	0.020 U	BbKf	0.020 U	BbKf	0.020 U	BbKf	0.020 U	BbKf	0.020 U	BbKf	0.020 U
Chry	0.020 U	Chry	0.020 U	Chry	0.020 U	Chry	0.020 U	Chry	0.020 U	Chry	0.020 U
Dibenz	0.020 U	Dibenz	0.020 U	Dibenz	0.020 U	Dibenz	0.020 U	Dibenz	0.020 U	Dibenz	0.020 U
Fluor	0.020 U	Fluor	0.020 U	Fluor	0.020 U	Fluor	0.020 U	Fluor	0.020 U	Fluor	0.020 U
Fluora	0.020 U	Fluora	0.020 U	Fluora	0.020 U	Fluora	0.020 U	Fluora	0.020 U	Fluora	0.020 U
Indeno	0.020 U	Indeno	0.020 U	Indeno	0.020 U	Indeno	0.020 U	Indeno	0.020 U	Indeno	0.020 U
Naph	0.020 U	Naph	0.020 U	Naph	0.020 U	Naph	0.020 U	Naph	0.020 U	Naph	0.020 U
Phen	0.020 U	Phen	0.020 U	Phen	0.020 U	Phen	0.020 U	Phen	0.020 U	Phen	0.020 U
Py	0.020 U	Py	0.020 U	Py	0.020 U	Py	0.020 U	Py	0.020 U	Py	0.020 U

Project Manager:	Reviewed By:	Date:
L. SHEPHERD	A. MOLENHUIS	FEBRUARY 2015
Scale:	Project No.:	Report No.:
AS SHOWN	78674-06	003
		Drawing No.:
		figure 13s



LEGEND

- WELL/BORING ID
- GROUND SURFACE
- GROUNDWATER ELEVATION (AUG. 1, 2013)
- WELL SCREEN
- END OF WELL
- OFF-SET

ug/g MICROGRAMS PER GRAM
 m BGS METERS BELOW GROUND SURFACE
 4.9/4.2 RESULT/DUPLICATE RESULT
 EXCEEDANCE OF THE MOE TABLE 2 STANDARD
 J ESTIMATED CONCENTRATION
 U DETECTION LIMIT
 GROUNDWATER SAMPLE - NOT ANALYZED
 GROUNDWATER SAMPLE - IMPACTED
 GROUNDWATER SAMPLE - CLEAN

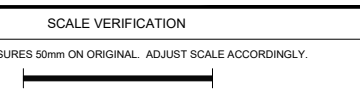
SAMPLE LOCATION

MW26-13 8/1/2013
 MC 0.30 U
 PCE 0.050 U
 T 0.20 U
 TCE 0.050 U
 PARAMETER

MOE TABLE 2 STANDARDS

Chemical Name	Abbreviation	MOE Table 2 Standard
2,4-D	2,4DD	0.050
2,4-DE	2,4DE	0.050
2,4-DT	2,4DT	0.050
2,4-DDT	2,4DDT	0.050
4,4-DDD	4,4DDD	0.050
4,4-DE	4,4DE	0.050
4,4-DT	4,4DT	0.050
4,4-DDT	4,4DDT	0.050
Chlor	Chlor	0.050
Diel	Diel	0.050
Endr	Endr	0.050
Ends	Ends	0.050
EndsH	EndsH	0.050
EndrH	EndrH	0.050
gBHC	gBHC	0.050
Hep	Hep	0.050
HepE	HepE	0.050
HexCB	HexCB	0.050
HexCBD	HexCBD	0.050
HexCE	HexCE	0.050
Meth	Meth	0.050

NOTE:
 TABLE 2: FULL DEPTH GENERIC SITE CONDITION STANDARDS IN A POTABLE GROUNDWATER CONDITION, RESIDENTIAL/PARKLAND INSTITUTIONAL PROPERTY USE, COARSE GRAINED SOIL (MOE, 2011).



**139 MORRIS STREET HOLDINGS LTD.
 GUELPH, ONTARIO**

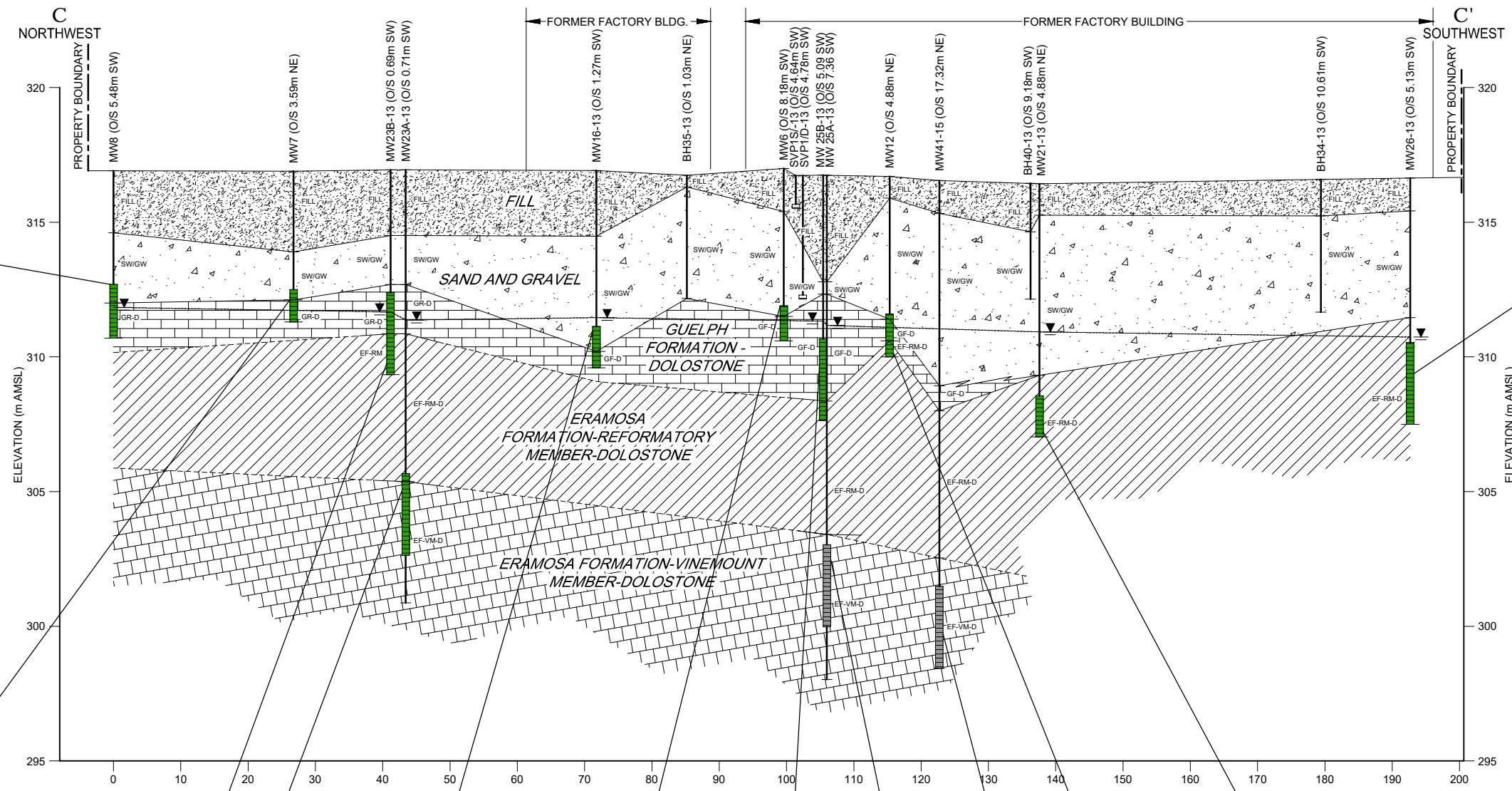
PHASE TWO ENVIRONMENTAL SITE ASSESSMENT

**VERTICAL EXTENT OF GROUNDWATER PESTICIDE IMPACTS
 GEOLOGIC CROSS-SECTION C-C'**



Source Reference:

Project Manager: L. SHEPHERD	Reviewed By: A. MOLENHUIS	Date: FEBRUARY 2015
Scale: AS SHOWN	Project No: 78674-06	Report No: 003
		Drawing No: figure 13t



MW-6	5/9/2011	8/1/2013
PHC F1	100 U/100 U	-
PHC F2	100 U	-
PHC F3	250 U/250 U	-
PHC F4	250 U	-

MW-7	6/12/2011	
PHC F1	100 U/100 U	
PHC F2	100 U	
PHC F3	425	
PHC F4	270	

MW23B-13	8/1/2013	
PHC F1	25 U	
PHC F2	100 U	
PHC F3	250 U/250 U	
PHC F4	250 U	

MW23A-13	8/1/2013	
PHC F1	25 U	
PHC F2	100 U	
PHC F3	250 U/250 U	
PHC F4	250 U	

MW16-13	2/21/2013	
PHC F1	25 U/25 U	
PHC F2	100 U	
PHC F3	250 U/250 U	
PHC F4	250 U	

MW-6	5/10/2011	
PHC F1	100 U/100 U	
PHC F2	100 U	
PHC F3	250 U/250 U	
PHC F4	250 U	

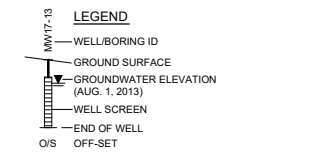
MW25B-13	8/2/2013	
PHC F1	25 U/25 U/25 U/25 U	
PHC F2	100 U/100 U	
PHC F3	250 U/250 U/250 U/250 U	
PHC F4	250 U/250 U	

MW23A-13	8/2/2013	
PHC F1	-	
PHC F2	-	
PHC F3	-	
PHC F4	-	

MW41-15	4/9/2015	
PHC F1	-	
PHC F2	-	
PHC F3	-	
PHC F4	-	

MW-12	5/11/2011	
PHC F1	100 U/100 U	
PHC F2	100 U	
PHC F3	250 U/250 U	
PHC F4	250 U	

MW21-13	2/22/2013	
PHC F1	25 U/25 U	
PHC F2	100 U	
PHC F3	250 U/250 U	
PHC F4	250 U	

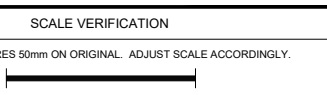


- ug/g MICROGRAMS PER GRAM
- m BGS METERS BELOW GROUND SURFACE
- 4.9/4.2 RESULT/DUPLICATE RESULT
- EXCEEDANCE OF THE MOE TABLE 2 STANDARD
- J ESTIMATED CONCENTRATION
- U DETECTION LIMIT
- GROUNDWATER SAMPLE - NOT ANALYZED
- GROUNDWATER SAMPLE - IMPACTED
- GROUNDWATER SAMPLE - CLEAN

SAMPLE LOCATION			
MW-4	5/9/2011	13.35 m BGS	
MC	0.050 U		
PCE	0.20 U		
T	0.20 U		
TCE	0.050 U		
			PARAMETER

MOE TABLE 2 STANDARDS			
Chemical Name	Abbreviation	Moe Table 2 Standard	
Petroleum hydrocarbon F1 (C1-C6)	PHC F1	750	
Petroleum hydrocarbon F2 (C7-C10)	PHC F2	150	
Petroleum hydrocarbon F3 (C11-C14)	PHC F3	500	
Petroleum hydrocarbon F4 (C15-C20)	PHC F4	500	

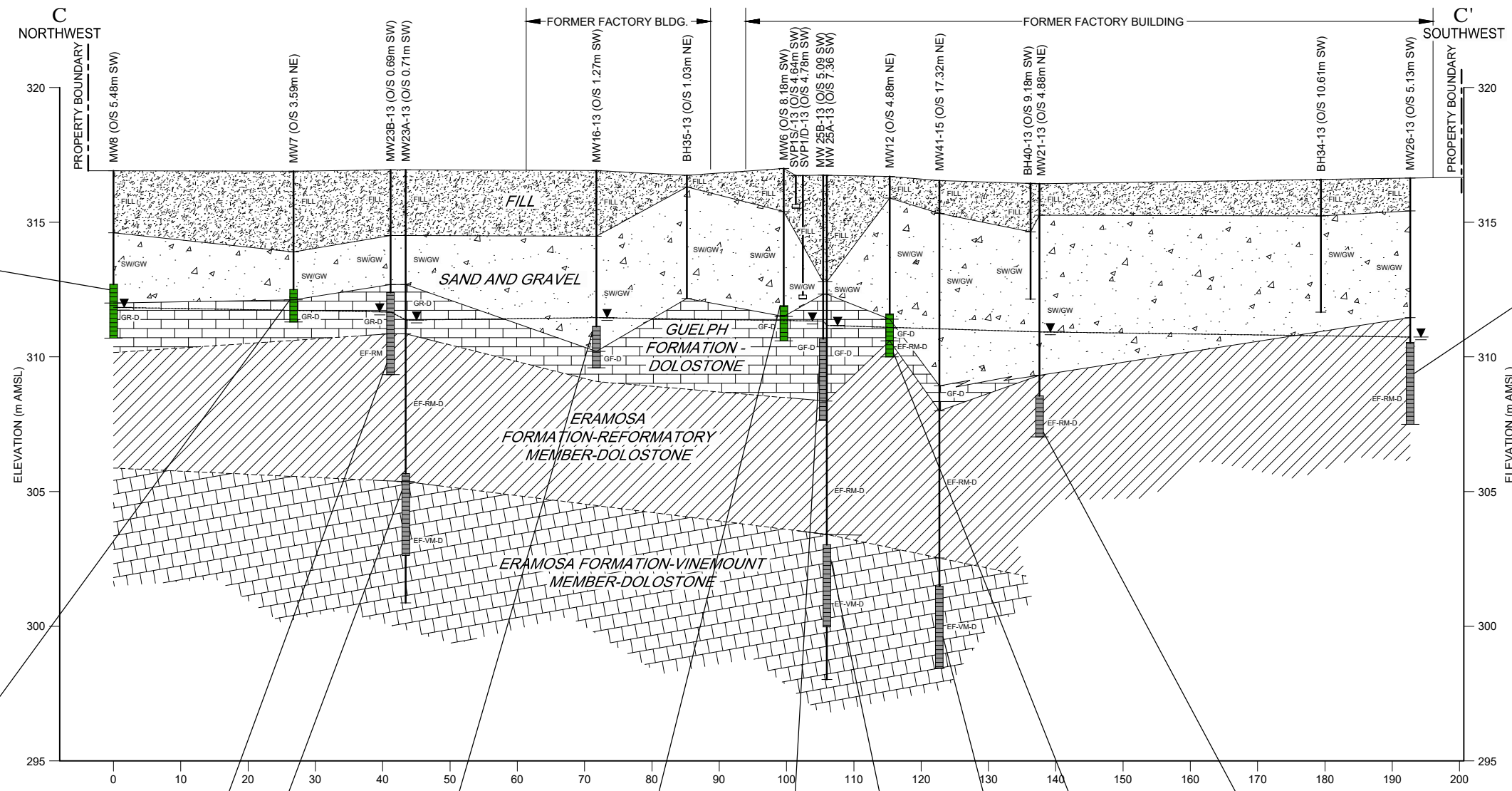
NOTE: TABLE 2: FULL DEPTH GENERIC SITE CONDITION STANDARDS IN A POTABLE GROUNDWATER CONDITION, RESIDENTIAL/PARKLAND INSTITUTIONAL PROPERTY USE, COARSE GRAINED SOIL (MOE, 2011).



139 MORRIS STREET HOLDINGS LTD.
GUELPH, ONTARIO
PHASE TWO ENVIRONMENTAL SITE ASSESSMENT
VERTICAL EXTENT OF GROUNDWATER PHC IMPACTS
GEOLOGIC CROSS-SECTION C-C'



Source Reference:			
Project Manager:	Reviewed By:	Date:	
L. SHEPHERD	A. MOLENHUIS	FEBRUARY 2015	
Scale:	Project N°:	Report N°:	Drawing N°:
AS SHOWN	78674-06	003	figure 13u



MW-6	5/9/2011	8/1/2013
PCB1242	0.20 U	-
PCB1248	0.20 U	-
PCB1254	0.20 U	-
PCB1260	0.20 U	-
PCBs	0.40 U	-

MW-7	5/12/2011
PCB1242	2.0 U
PCB1248	2.0 U
PCB1254	2.0 U
PCB1260	2.0 U
PCBs	4.0 U

MW23B-13	8/1/2013
PCB1242	-
PCB1248	-
PCB1254	-
PCB1260	-
PCBs	-

MW23A-13	8/1/2013
PCB1242	-
PCB1248	-
PCB1254	-
PCB1260	-
PCBs	-

MW16-13	2/21/2013
PCB1242	-
PCB1248	-
PCB1254	-
PCB1260	-
PCBs	-

MW-8	5/19/2011
PCB1242	0.20 U
PCB1248	0.20 U
PCB1254	0.20 U
PCB1260	0.20 U
PCBs	0.40 U

MW25B-13	8/2/2013
PCB1242	+
PCB1248	+
PCB1254	+
PCB1260	+
PCBs	+

MW25A-13	8/2/2013
PCB1242	-
PCB1248	-
PCB1254	-
PCB1260	-
PCBs	-

MW41-15	4/9/2015
PCB1242	+
PCB1248	+
PCB1254	+
PCB1260	+
PCBs	+

MW-12	5/11/2011
PCB1242	2.0 U
PCB1248	2.0 U
PCB1254	2.0 U
PCB1260	2.0 U
PCBs	4.0 U

MW21-13	2/22/2013
PCB1242	-
PCB1248	-
PCB1254	-
PCB1260	-
PCBs	-

LEGEND

- WELL/BORING ID
- GROUND SURFACE
- GROUNDWATER ELEVATION (AUG. 1, 2013)
- WELL SCREEN
- END OF WELL
- OFF-SET

ug/g MICROGRAMS PER GRAM
 m BGS METERS BELOW GROUND SURFACE
 4.9/4.2 RESULT/DUPLICATE RESULT
 EXCEEDANCE OF THE MOE TABLE 2 STANDARD
 J ESTIMATED CONCENTRATION
 U DETECTION LIMIT
 GROUNDWATER SAMPLE - NOT ANALYZED
 GROUND WATER SAMPLE - IMPACTED
 GROUND WATER SAMPLE - CLEAN

SAMPLE LOCATION

MW-4	5/9/2011	8/1/2013
MC	0.050 U	-
PCE	0.20 U	-
T	0.20 U	-
TCE	0.050 U	-

PARAMETER

MOE TABLE 2 STANDARDS

Chemical Name	Abbreviation	MOE Table 2 Standard
Arochlor 1242 (PCB-1242)	PCB1242	1
Arochlor 1248 (PCB-1248)	PCB1248	1
Arochlor 1254 (PCB-1254)	PCB1254	1
Arochlor 1260 (PCB-1260)	PCB1260	1
Total PCBs	PCBs	1

NOTE: TABLE 2: FULL DEPTH GENERIC SITE CONDITION STANDARDS IN A POTABLE GROUNDWATER CONDITION, RESIDENTIAL/PARKLAND INSTITUTIONAL PROPERTY USE, COARSE GRAINED SOIL (MOE, 2011).

SCALE VERIFICATION

THIS BAR MEASURES 50mm ON ORIGINAL. ADJUST SCALE ACCORDINGLY.

**139 MORRIS STREET HOLDINGS LTD.
 GUELPH, ONTARIO**

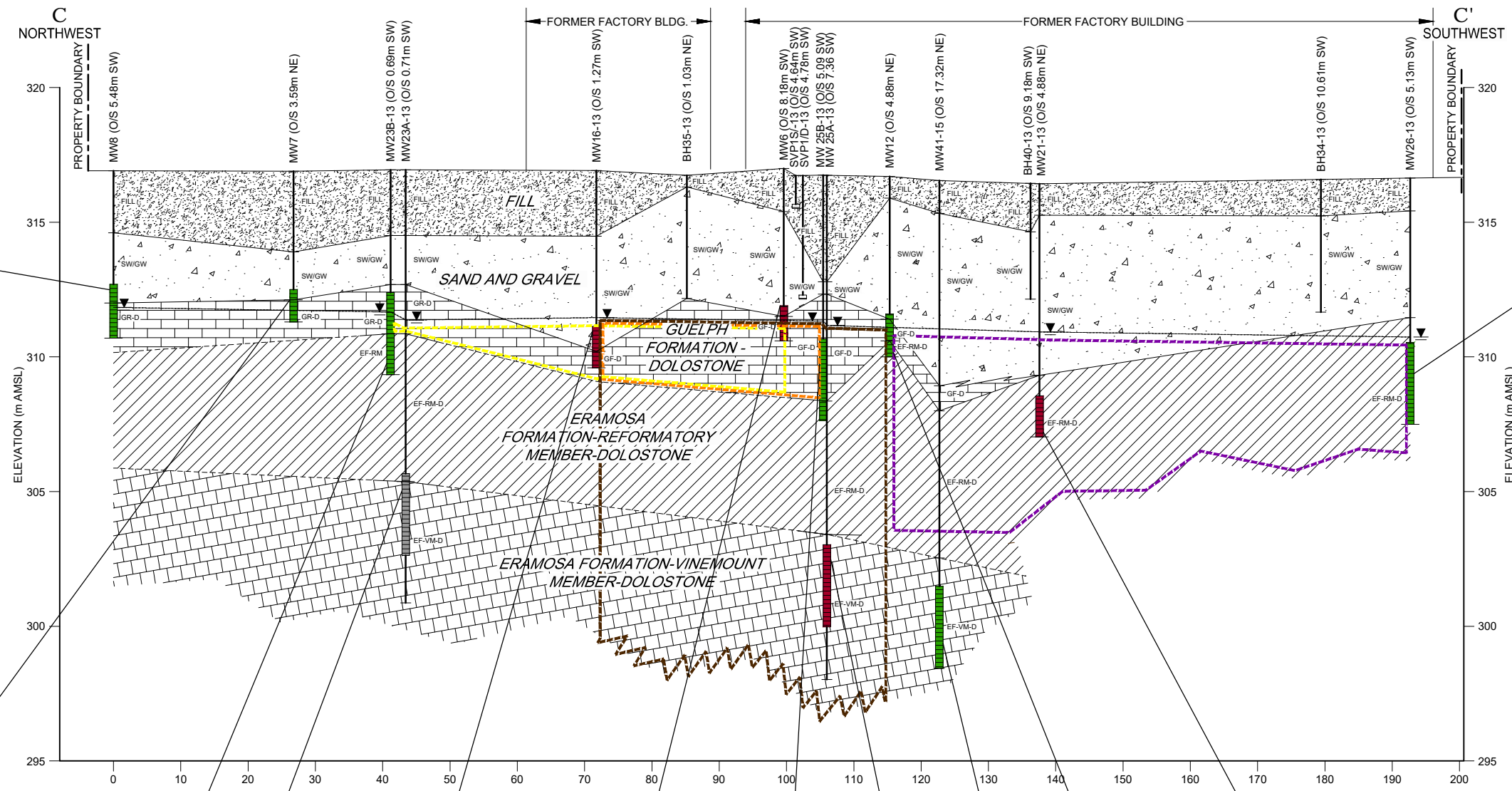
PHASE TWO ENVIRONMENTAL SITE ASSESSMENT

**VERTICAL EXTENT OF GROUNDWATER PCB IMPACTS
 GEOLOGIC CROSS-SECTION C-C'**

CRA CONESTOGA-ROVERS & ASSOCIATES

Source Reference:

Project Manager: L. SHEPHERD	Reviewed By: A. MOLENHUIS	Date: FEBRUARY 2015
Scale: AS SHOWN	Project N ^o : 78674-06	Report N ^o : 003 Drawing N ^o : figure 13v



MW#	5/9/2011	8/1/2013
Ag	0.10 U	-
As	1.0 U	-
B	80	-
Ba	34	-
Be	0.20 U	-
Cd	2.0 U	-
Cf	0.05 U	-
Co	1.0 U	-
Cu	1.0 U	-
Cv1	1.0 U	-
Cu	1.3	-
Hg	0.10 U	-
Mo	1.27	-
Na	48400	-
Ni	3.7	-
Pb	1.0 U	-
Sb	0.50 U	-
Se	5.0 U	-
Tl	0.30 U	-
V	2.0 U	-
Zn	0.50 U	-
Zn	30.7	-

MW#	5/12/2011
Ag	0.10 U
As	1.0 U
B	229
Ba	51
Be	0.50 U
Bi	0.13
Cd	2.0 U
Co	0.50 U
Cu	1.0 U
Cv1	10.0 U
Cu	2.2
Hg	0.10 U
Mo	2.0
Na	94800
Ni	5.6
Pb	1.0 U
Sb	0.50 U
Se	5.8
Tl	0.30 U
V	2.0 U
Zn	4.9

MW23B-13	8/1/2013
Ag	0.020 U
As	1.0 U
B	833
Ba	63.4
Be	0.20 U
Cd	0.161
Cf	0.10 U
Co	0.50 U
Cu	0.71
Cv1	10 U
Cu	2.2
Hg	0.10 U
Mo	0.89
Na	100000
Ni	1.0 U
Pb	0.50 U
Sb	0.50 U
Se	5.92
Tl	0.060 U
V	1.0 U
Zn	0.50 U
Zn	33.0

MW23A-13	8/1/2013
Ag	-
As	-
B	-
Ba	-
Be	-
Cd	-
Cf	-
Co	-
Cu	-
Cv1	-
Cu	-
Hg	-
Mo	-
Na	-
Ni	-
Pb	-
Sb	-
Se	-
Tl	-
V	-
Zn	-

MW16-13	2/21/2013
Ag	1.0 U
As	1.0 U
B	10100
Ba	108
Be	5.0 U
Cd	0.90 U
Cf	0.10 U
Co	0.50 U
Cu	5.0 U
Cr	5.0 U
Cv1	10 U
Cu	2.5
Hg	0.10 U
Mo	5.0 U
Na	117000
Ni	1.8
Pb	5.0 U
Sb	5.0 U
Se	5.0 U
Tl	3.0 U
V	10.0 U
Zn	5.0 U
Zn	56

MW#	8/10/2011
Ag	1.0 U
As	3.4
B	413
Ba	16
Be	0.50 U
Cd	0.10 U
Cf	0.10 U
Co	2.0 U
Cu	0.50 U
Cr	1.0 U
Cv1	10 U
Cu	2.5
Hg	0.10 U
Mo	19.4
Na	49000
Ni	1.8
Pb	1.0 U
Sb	0.50 U
Se	13.1
Tl	0.30 U
V	2.0 U
Zn	3.0 U

MW28B-13	8/2/2013
Ag	0.054 J0.050 U
As	1.0 U
B	1.6
Ba	73872
Be	50.550.8
Bi	0.50 U
Cd	0.10 U
Cf	0.10 U
Co	0.50 U
Cu	0.50 U
Cr	12.912.9
Cv1	313
Cu	4.0
Hg	0.10 U
Mo	0.910.94
Na	20400198000
Ni	1.41.4
Pb	0.50 U
Sb	0.50 U
Se	2.992.35
Tl	0.30 U
V	1.0 U
Zn	83.881.7

MW25A-13	8/2/2013
Ag	0.020 U
As	1.6
B	1220
Ba	54.9
Be	0.50 U
Cd	0.363
Cf	-
Co	0.50 U
Cu	4.58
Cv1	10 U
Cu	4.0
Hg	0.10 U
Mo	8.2
Na	164000
Ni	3.5
Pb	0.50 U
Sb	0.50 U
Se	3.34
Tl	0.128
V	3.0
Zn	249

MW41-15	4/9/2015
Ag	0.10 U
As	1.70.7
B	230340
Ba	65.765.6
Be	0.50 U
Cd	0.10 U
Cf	0.10 U
Co	0.50 U
Cu	0.50 U
Cr	1.651.41
Cv1	10 U
Cu	1.1
Hg	0.10 U
Mo	5.905.83
Na	5240052500
Ni	2.32.1
Pb	1.0 U
Sb	0.50 U
Se	5.0 U
Tl	0.30 U
V	2.0 U
Zn	10.215.1

MW-12	8/1/2011
Ag	0.10 U
As	1.0 U
B	132
Ba	24.4
Be	0.50 U
Cd	0.10 U
Cf	0.10 U
Co	0.50 U
Cu	1.0 U
Cv1	10 U
Cu	2.3
Hg	0.10 U
Mo	11.8
Na	58600
Ni	1.0 U
Pb	1.0 U
Sb	0.50 U
Se	5.0 U
Tl	0.30 U
V	2.0 U
Zn	83.7

MW26-13	8/1/2013
Ag	0.10 U
As	1.0 U
B	460
Ba	77.3
Be	0.50 U
Bi	0.20
Borax	B
Calcium	Ca
Chromium VI	CrVI
Chromium VI (hexavalent)	CrVI
Copper	Cu
Cyanide	CN
Lead	Pb
Manganese	Mn
Molybdenum	Mo
Nickel	Ni
Selenium	Se
Silver	Ag
Sodium	Na
Thallium	Tl
Vanadium	V
Zinc	Zn

LEGEND

- WELL/BORING ID
- GROUND SURFACE
- GROUNDWATER ELEVATION (AUG. 1, 2013)
- WELL SCREEN
- END OF WELL
- OFF-SET

ug/g MICROGRAMS PER GRAM
m BGS METERS BELOW GROUND SURFACE
4.9/4.2 RESULT/DUPLICATE RESULT

EXCEEDANCE OF THE MOE TABLE 2 STANDARD
J ESTIMATED CONCENTRATION
U DETECTION LIMIT
GROUNDWATER SAMPLE - NOT ANALYZED
GROUNDWATER SAMPLE - IMPACTED
GROUNDWATER SAMPLE - CLEAN

SAMPLE LOCATION

MW#	DATE	DEPTH	RESULT	PARAMETER
MW-4	5/9/2011	1.0 U	0.050 U	MC
		1.0 U	0.20 U	T
		1.0 U	0.050 U	HCE

MOE TABLE 2 STANDARDS

Chemical Name	Abbreviation	MOE Table 2 Standard
Antimony	Sb	6
Arsenic	As	25
Barium	Ba	1000
Beryllium	Be	4
Borax	B	5000
Boron (hot water extractable)	B (HW)	2.7
Calcium	Ca	2.7
Chromium	Cr	50
Chromium VI (hexavalent)	CrVI	25
Copper	Cu	8.8
Cyanide	CN	66
Lead	Pb	15
Manganese	Mn	0.20
Molybdenum	Mo	30
Nickel	Ni	100
Selenium	Se	15
Silver	Ag	1.5
Sodium	Na	480000
Thallium	Tl	2
Vanadium	V	26
Zinc	Zn	6.2
Zinc	Zn	1100

NOTE: TABLE 2: FULL DEPTH GENERIC SITE CONDITION STANDARDS IN A POTABLE GROUNDWATER CONDITION, RESIDENTIAL/PARKLAND INSTITUTIONAL PROPERTY USE, COARSE GRAINED SOIL (MOE, 2011).

- EXTENT OF BORON IMPACTS
- EXTENT OF SELENIUM IMPACTS
- EXTENT OF SODIUM IMPACTS
- EXTENT OF VANADIUM IMPACTS

SCALE VERIFICATION

THIS BAR MEASURES 50mm ON ORIGINAL. ADJUST SCALE ACCORDINGLY.

139 MORRIS STREET HOLDINGS LTD. GUELPH, ONTARIO

PHASE TWO ENVIRONMENTAL SITE ASSESSMENT

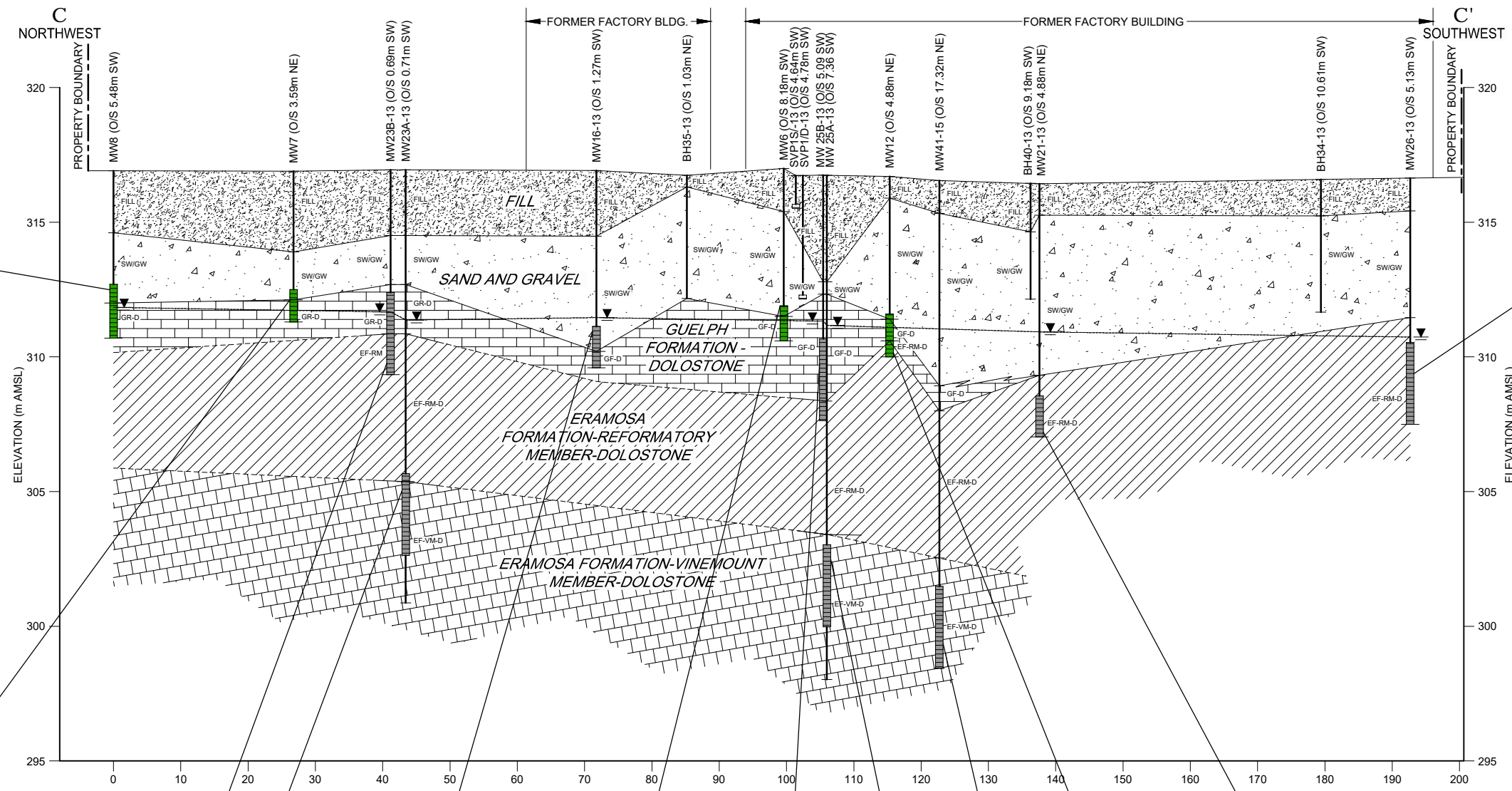
VERTICAL EXTENT OF GROUNDWATER METALS IMPACTS

GEOLOGIC CROSS-SECTION C-C'



Source Reference:

Project Manager:	Reviewed By:	Date:
L. SHEPHERD	A. MOLENHUIS	FEBRUARY 2015
Scale:	Project N°:	Report N°:
AS SHOWN	78674-06	003
		Drawing N°:
		figure 13w



MW-4	5/9/2011	8/1/2013
CP	8000	-
EC	0.988	-

MW-7	5/13/2011	-
CP	305000	-
EC	1.65	-

MW23B-13	8/1/2013	-
CP	-	-
EC	-	-

MW23A-13	8/1/2013	-
CP	-	-
EC	-	-

MW16-13	2/21/2013	-
CP	-	-
EC	-	-

MW-6	5/15/2011	-
CP	11000	-
EC	0.924	-

MW25B-13	8/2/2013	++
CP	-	-
EC	-	-

MW25A-13	8/2/2013	-
CP	-	-
EC	-	-

MW41-15	4/9/2015	-
CP	-	-
EC	-	-

MW-12	5/11/2011	-
CP	177000	-
EC	1.22	-

MW21-13	2/22/2013	-
CP	-	-
EC	-	-

LEGEND

- WELL/BORING ID
- GROUND SURFACE
- GROUNDWATER ELEVATION (AUG. 1, 2013)
- WELL SCREEN
- END OF WELL
- OFF-SET

ug/g MICROGRAMS PER GRAM
 m BGS METERS BELOW GROUND SURFACE
 4.9/4.2 RESULT/DUPLICATE RESULT
 EXCEEDANCE OF THE MOE TABLE 2 STANDARD
 J ESTIMATED CONCENTRATION
 U DETECTION LIMIT
 GROUNDWATER SAMPLE - NOT ANALYZED
 GROUNDWATER SAMPLE - IMPACTED
 GROUNDWATER SAMPLE - CLEAN

SAMPLE LOCATION

MW-4	5/9/2011	3.35 m BGS
MC	0.050 U	
PCE	0.20 U	
T	0.20 U	
TCE	0.050 U	

MOE TABLE 2 STANDARDS

Chemical Name	Abbreviation	MOE Table 2 Standard
Conductivity	EC	-
pH, SA	pH	-
Chloride	Cl	79000

NOTE:
 TABLE 2: FULL DEPTH GENERIC SITE CONDITION STANDARDS IN A POTABLE GROUNDWATER CONDITION, RESIDENTIAL/PARKLAND INSTITUTIONAL PROPERTY USE, COARSE GRAINED SOIL (MOE, 2011).

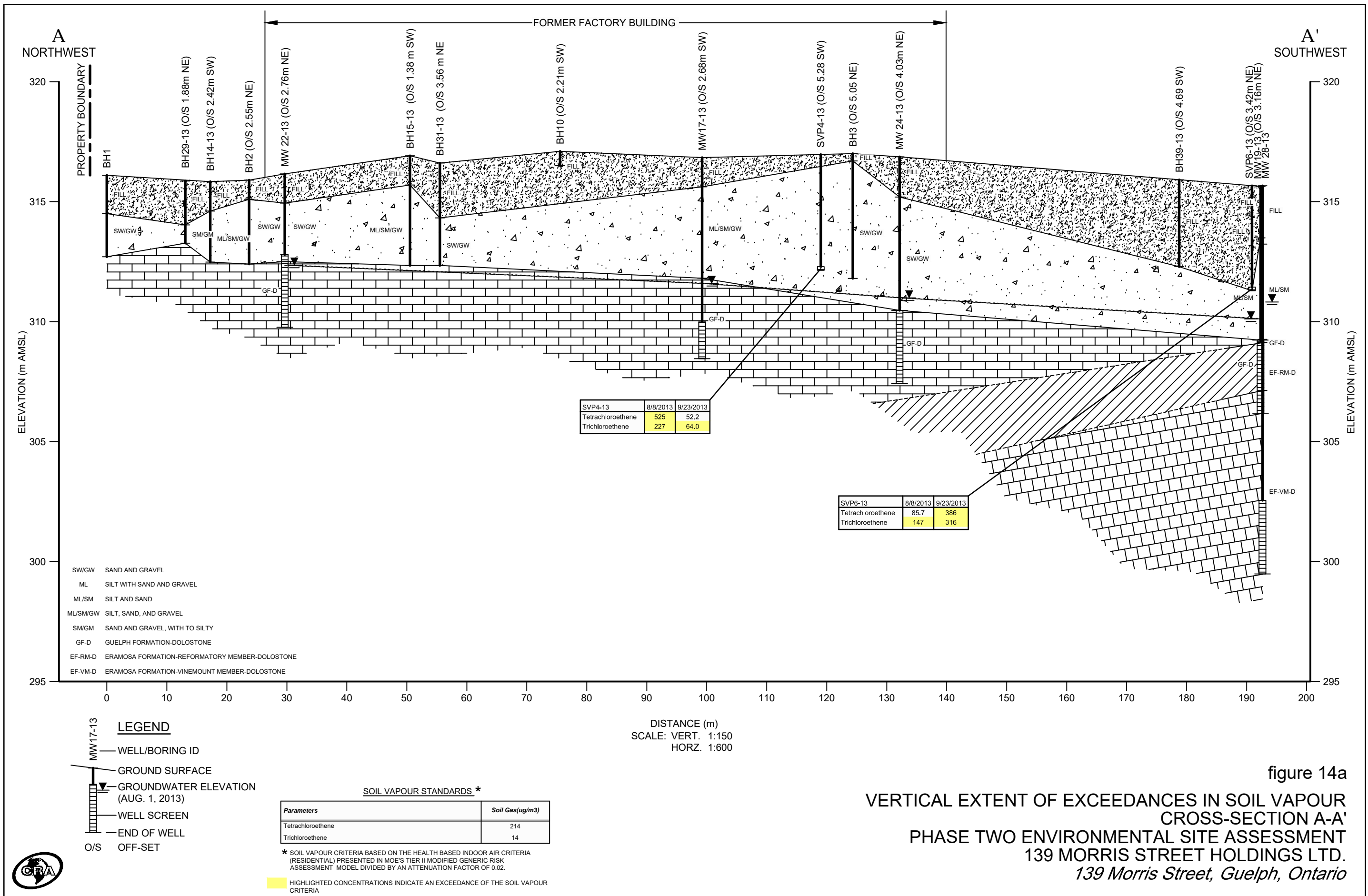
SCALE VERIFICATION
 THIS BAR MEASURES 50mm ON ORIGINAL. ADJUST SCALE ACCORDINGLY.

139 MORRIS STREET HOLDINGS LTD.
GUELPH, ONTARIO
PHASE TWO ENVIRONMENTAL SITE ASSESSMENT
 VERTICAL EXTENT OF GROUNDWATER GENERAL CHEMISTRY IMPACTS
 GEOLOGIC CROSS-SECTION C-C'



Source Reference:

Project Manager:	Reviewed By:	Date:	
L. SHEPHERD	A. MOLENHUIS	FEBRUARY 2015	
Scale:	Project N°:	Report N°:	Drawing N°:
AS SHOWN	78674-06	003	figure 13x



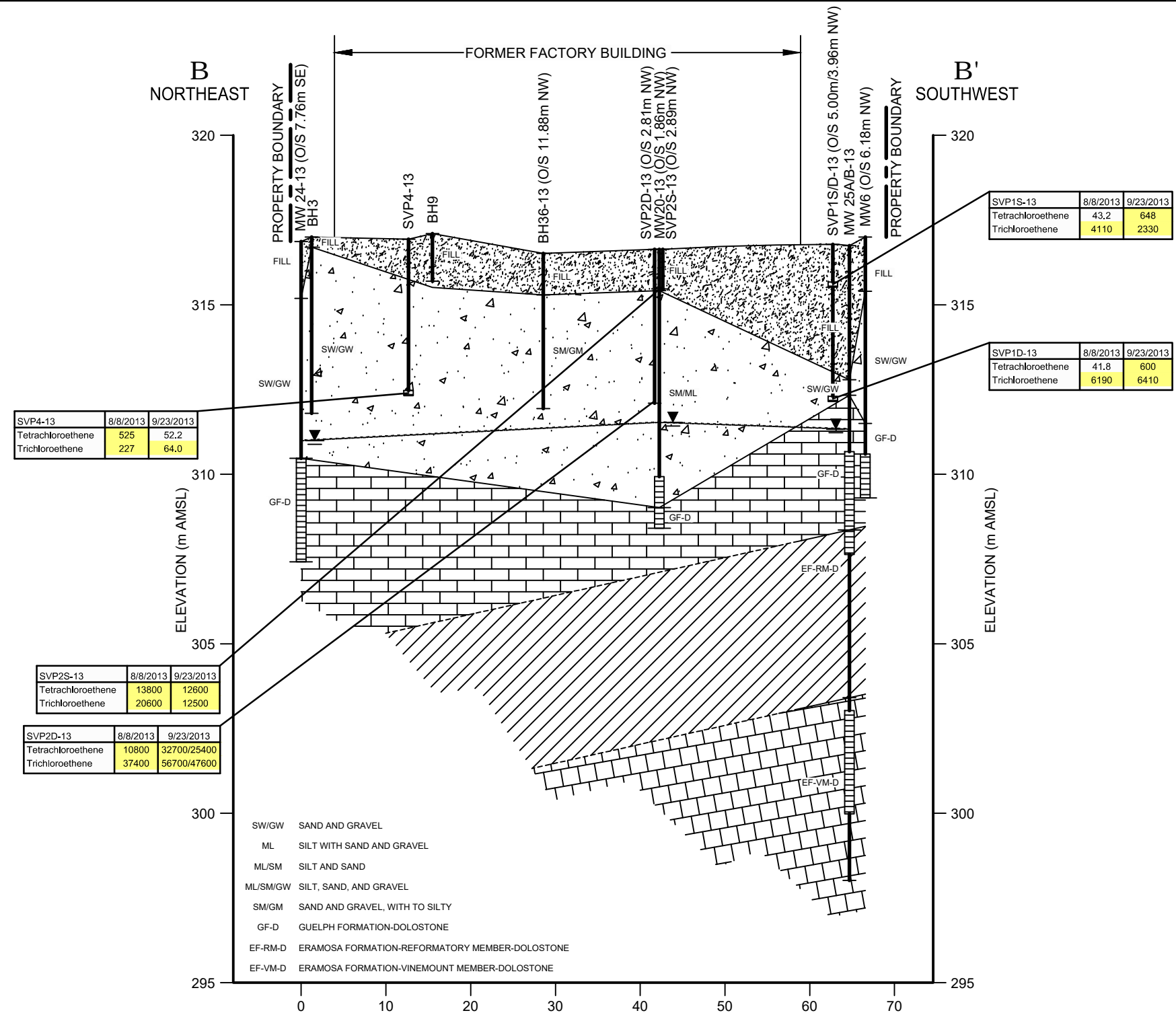
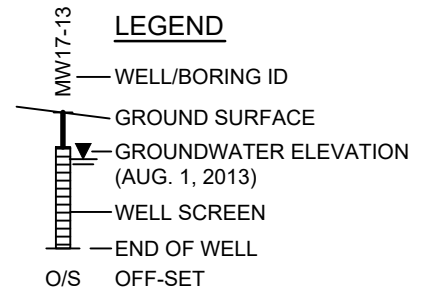
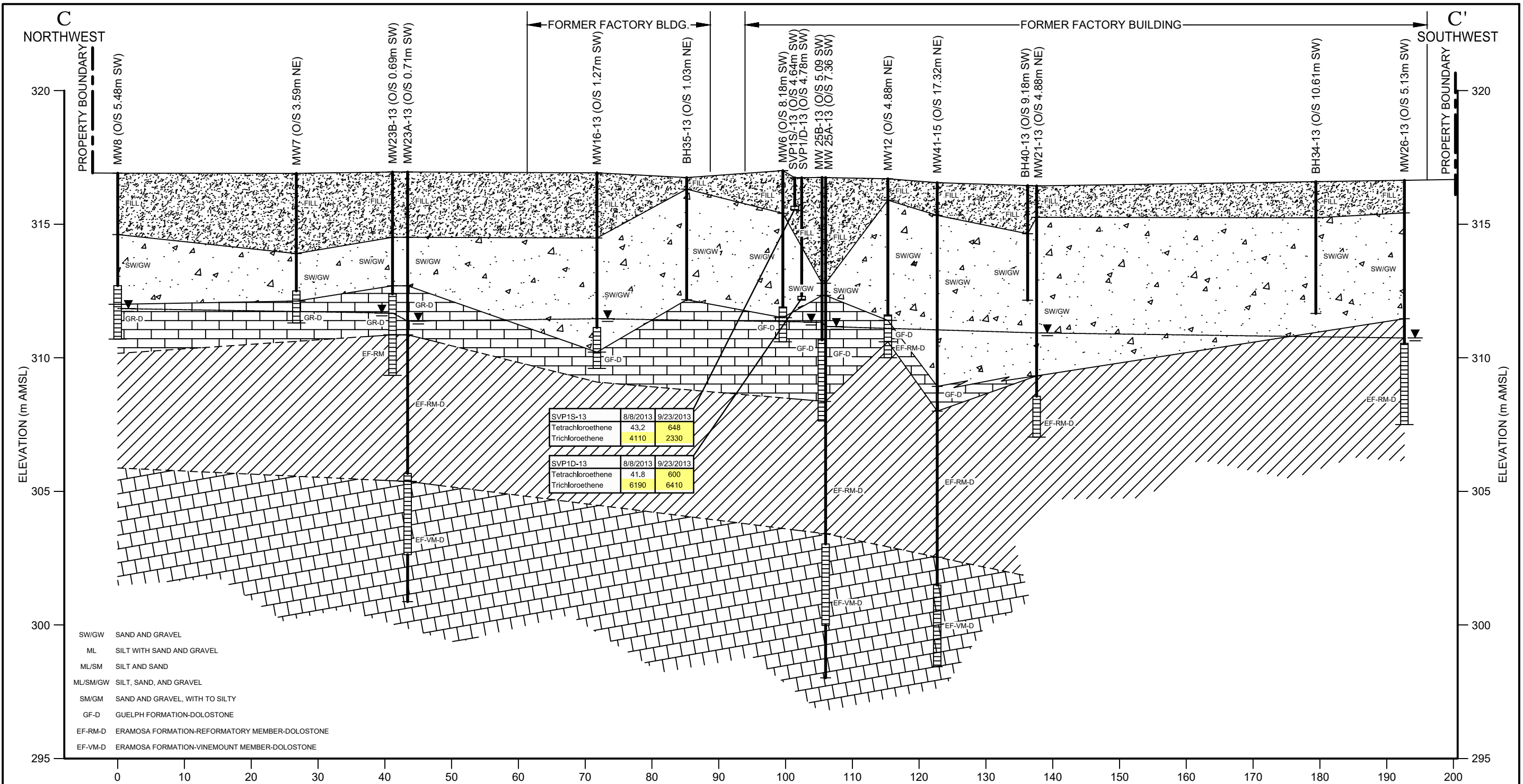


figure 14b
**VERTICAL EXTENT OF EXCEEDANCES IN SOIL VAPOUR
 CROSS-SECTION B-B'**
PHASE TWO ENVIRONMENTAL SITE ASSESSMENT
139 MORRIS STREET HOLDINGS LTD.
139 Morris Street, Guelph, Ontario





SOIL VAPOUR STANDARDS*

Parameters	Soil Gas(ug/m3)
Tetrachloroethene	214
Trichloroethene	14

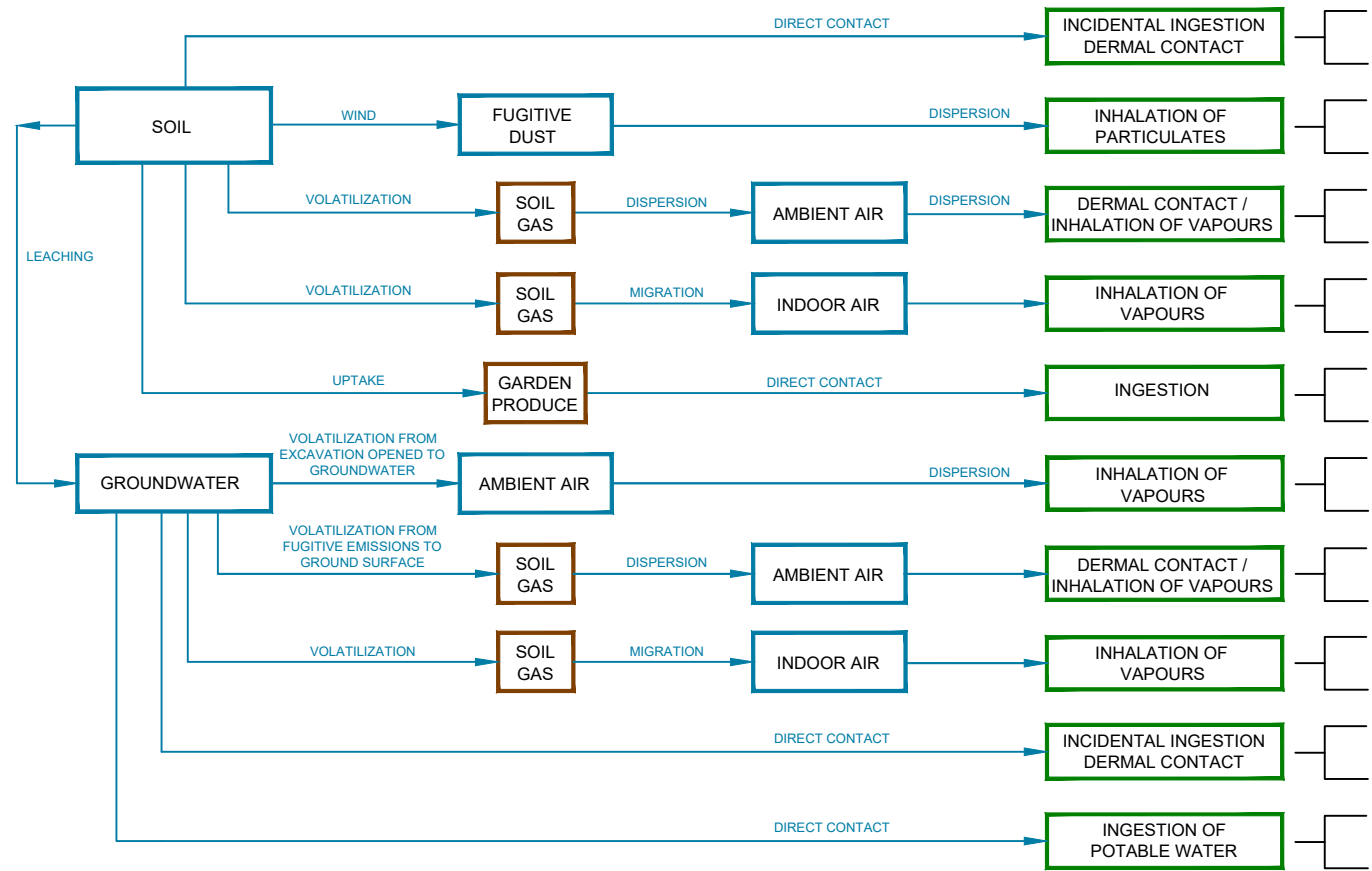
* SOIL VAPOUR CRITERIA BASED ON THE HEALTH BASED INDOOR AIR CRITERIA (RESIDENTIAL) PRESENTED IN MOE'S TIER II MODIFIED GENERIC RISK ASSESSMENT MODEL DIVIDED BY AN ATTENUATION FACTOR OF 0.02.

HIGHLIGHTED CONCENTRATIONS INDICATE AN EXCEEDANCE OF THE SOIL VAPOUR CRITERIA

DISTANCE (m)
SCALE: VERT. 1:150
HORZ. 1:600

figure 14c
**VERTICAL EXTENT OF EXCEEDANCES IN SOIL VAPOUR
CROSS-SECTION C-C'**
PHASE TWO ENVIRONMENTAL SITE ASSESSMENT
139 MORRIS STREET HOLDINGS LTD.
139 Morris Street, Guelph, Ontario



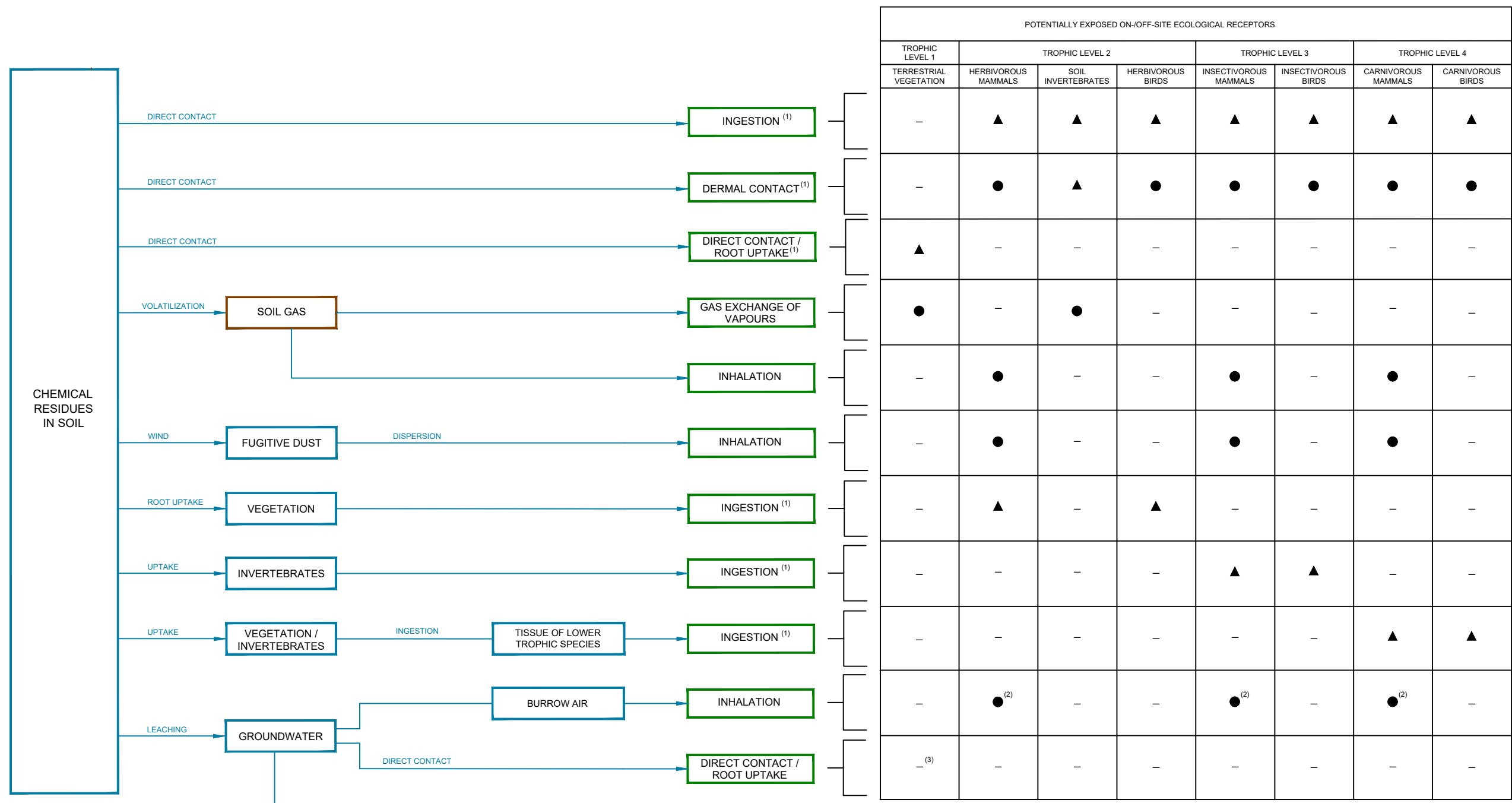


POTENTIALLY EXPOSED RECEPTORS				
ON-SITE		OFF-SITE		
RESIDENT	CONSTRUCTION/ UTILITY WORKER	RESIDENT	INDUSTRIAL/ COMMERCIAL WORKER	CONSTRUCTION/ UTILITY WORKER
▲	▲	-	-	-
●	▲	●	●	●
▲ (1)	▲ (1)	●	●	●
▲	-	-	-	-
●	-	-	-	-
-	▲	-	-	●
●	●	●	●	●
▲	-	●	●	-
-	▲	-	-	●
●	-	●	●	-

- LEGEND**
- ▲ POTENTIALLY COMPLETE EXPOSURE PATHWAY EVALUATED QUANTITATIVELY
 - INCOMPLETE EXPOSURE PATHWAY
 - ➡ POTENTIAL EXPOSURE PATHWAY
 - POTENTIALLY COMPLETE EXPOSURE PATHWAY EVALUATED QUALITATIVELY
 - (1) DERMAL CONTACT EXPOSURE PATHWAY EVALUATED QUALITATIVELY

Figure 15
 HUMAN HEALTH CONCEPTUAL SITE MODEL
 PHASE TWO ENVIRONMENTAL SITE ASSESSMENT
 139 MORRIS STREET HOLDINGS LTD.
 139 Morris Street, Guelph, Ontario



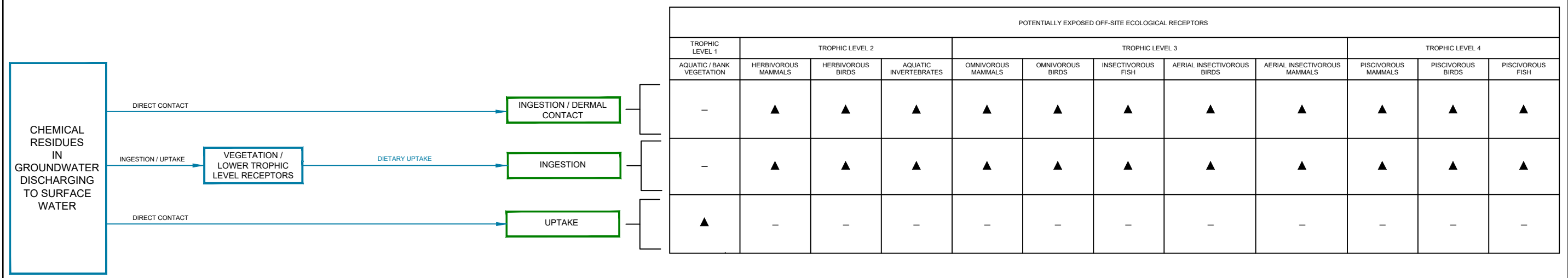


POTENTIALLY EXPOSED ON-/OFF-SITE ECOLOGICAL RECEPTORS							
TROPHIC LEVEL 1	TROPHIC LEVEL 2		TROPHIC LEVEL 3		TROPHIC LEVEL 4		
TERRESTRIAL VEGETATION	HERBIVOROUS MAMMALS	SOIL INVERTEBRATES	HERBIVOROUS BIRDS	INSECTIVOROUS MAMMALS	INSECTIVOROUS BIRDS	CARNIVOROUS MAMMALS	CARNIVOROUS BIRDS
-	▲	▲	▲	▲	▲	▲	▲
-	●	▲	●	●	●	●	●
▲	-	-	-	-	-	-	-
●	-	●	-	-	-	-	-
-	●	-	-	●	-	●	-
-	▲	-	▲	-	-	-	-
-	-	-	-	▲	▲	-	-
-	-	-	-	-	-	▲	▲
-	● ⁽²⁾	-	-	● ⁽²⁾	-	● ⁽²⁾	-
- ⁽³⁾	-	-	-	-	-	-	-

- LEGEND**
- ▲ POTENTIALLY COMPLETE EXPOSURE PATHWAY EVALUATED QUANTITATIVELY
 - PATHWAY INCOMPLETE
 - POTENTIAL EXPOSURE PATHWAY
 - POTENTIALLY COMPLETE EXPOSURE PATHWAY EVALUATED QUALITATIVELY
 - (1) APPLIES ONLY TO ON-SITE RECEPTORS
 - (2) APPLIES ONLY TO BURROWING MAMMALS
 - (3) AS DEPTH TO GROUNDWATER IS GREATER THAN 3 mBGS, DEEP-ROOTED TERRESTRIAL VEGETATION DIRECT CONTACT/ROOT UPTAKE OF GROUNDWATER IS CONSIDERED TO BE AN INCOMPLETE EXPOSURE PATHWAY

Figure 16
 TERRESTRIAL ECOLOGICAL CONCEPTUAL SITE MODEL
 PHASE TWO ENVIRONMENTAL SITE ASSESSMENT
 139 MORRIS STREET HOLDINGS LTD.
 139 Morris Street, Guelph, Ontario





POTENTIALLY EXPOSED OFF-SITE ECOLOGICAL RECEPTORS											
TROPIC LEVEL 1	TROPIC LEVEL 2			TROPIC LEVEL 3					TROPIC LEVEL 4		
AQUATIC / BANK VEGETATION	HERBIVOROUS MAMMALS	HERBIVOROUS BIRDS	AQUATIC INVERTEBRATES	OMNIVOROUS MAMMALS	OMNIVOROUS BIRDS	INSECTIVOROUS FISH	AERIAL INSECTIVOROUS BIRDS	AERIAL INSECTIVOROUS MAMMALS	PISCIVOROUS MAMMALS	PISCIVOROUS BIRDS	PISCIVOROUS FISH
-	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲
-	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲
▲	-	-	-	-	-	-	-	-	-	-	-

LEGEND
 ▲ POTENTIALLY COMPLETE EXPOSURE PATHWAY QUANTITATIVELY
 - INCOMPLETE EXPOSURE PATHWAY
 → POTENTIAL EXPOSURE PATHWAY

Figure 17
 AQUATIC ECOLOGICAL CONCEPTUAL SITE MODEL
 PHASE TWO ENVIRONMENTAL SITE ASSESSMENT
 139 MORRIS STREET HOLDINGS LTD.
 139 Morris Street, Guelph, Ontario



TABLE E.1
CONTAMINANTS OF CONCERN
RISK ASSESSMENT
139 MORRIS STREET, GUELPH, ONTARIO

<i>Contaminants of Concern (Soil)</i>	<i>APEC(s)</i>	<i>Location</i>
General Chemistry <ul style="list-style-type: none"> • Electrical Conductivity 	11	Northern corner of the Property (BH1)
Metals <ul style="list-style-type: none"> • Antimony • Arsenic • Barium • Boron • Boron (Hot Water Extractable) • Cadmium • Chromium • Cobalt • Copper • Cyanide • Lead • Molybdenum • Nickel • Selenium • Vanadium • Zinc • Mercury 	10	Throughout the Property where demolition occurred
	10 / 11	Throughout the Property where demolition occurred / Central portion of the Property
PAHs <ul style="list-style-type: none"> • 1+2-Methylnaphthalene • 1-Methylnaphthalene • 2-Methylnaphthalene • Acenaphthylene • Acenaphthene • Anthracene • Benzo(a)anthracene • Benzo(a)pyrene • Benzo(g,h,i)perylene • Benzo(b)fluoranthene • Benzo(k)fluoranthene • Chrysene • Dibenz(a,h)anthracene • Indeno(1,2,3-cd)pyrene • Flouranthene • Pyrene • Naphthalene • Phenanthrene 	8 / 10	Western Property boundary – adjacent to the railway / Throughout the Property where demolition occurred

TABLE E.1
CONTAMINANTS OF CONCERN
RISK ASSESSMENT
139 MORRIS STREET, GUELPH, ONTARIO

<i>Contaminants of Concern (Soil)</i>	<i>APEC(s)</i>	<i>Location</i>
Petroleum Hydrocarbons <ul style="list-style-type: none"> • F2 (C10 – C16) • F3 (C16- C34) • F4 (C34 – C50) 	1 / 4	Northern Property boundary / Western portion of the Property
VOCs <ul style="list-style-type: none"> • Methylene Chloride • PCE • TCE • Toluene 	4 / 5 / 11	Western portion of the Property / Central portion of the Property / Central Portion of the Property

Notes:

APEC – Area of Potential Environmental Concern
PCE – Tetrachloroethene
TCE - Trichloroethene
VOCs - Volatile Organic Compounds (EPA 624 Scan)

TABLE E.1
CONTAMINANTS OF CONCERN
RISK ASSESSMENT
139 MORRIS STREET, GUELPH, ONTARIO

<i>Contaminants of Concern (Groundwater)</i>	<i>APEC(s)</i>	<i>Location</i>
<u>Metals (dissolved)</u> <ul style="list-style-type: none"> • Boron • Sodium • Selenium • Vanadium 	10	Throughout the Property where demolition occurred
<u>VOCs</u> <ul style="list-style-type: none"> • Cis-1,2-DCE • PCE • TCE 	4 / 5 / 11	Western portion of the Property / Central portion of the Property / Central Portion of the Property
<i>Contaminants of Concern (Soil Vapour)</i>	<i>APEC(s)</i>	<i>Location</i>
<u>VOCs</u> <ul style="list-style-type: none"> • PCE • TCE 	4 / 5 / 11	Western portion of the Property / Central portion of the Property / Central Portion of the Property

Notes:

APEC – Area of Potential Environmental Concern

PAHs – polycyclic aromatic hydrocarbons (subset of semi-volatile organic compounds)

PCE – Tetrachloroethene

TCE – Trichloroethene

DCE - Dichloroethene

VOCs - Volatile Organic Compounds (EPA 624 Scan)

Attachment A

Guelph Region StratigraphyS

Guelph Region

Preliminary Revisions to Silurian Stratigraphy

Hydrostratigraphy

Karst Aquifers

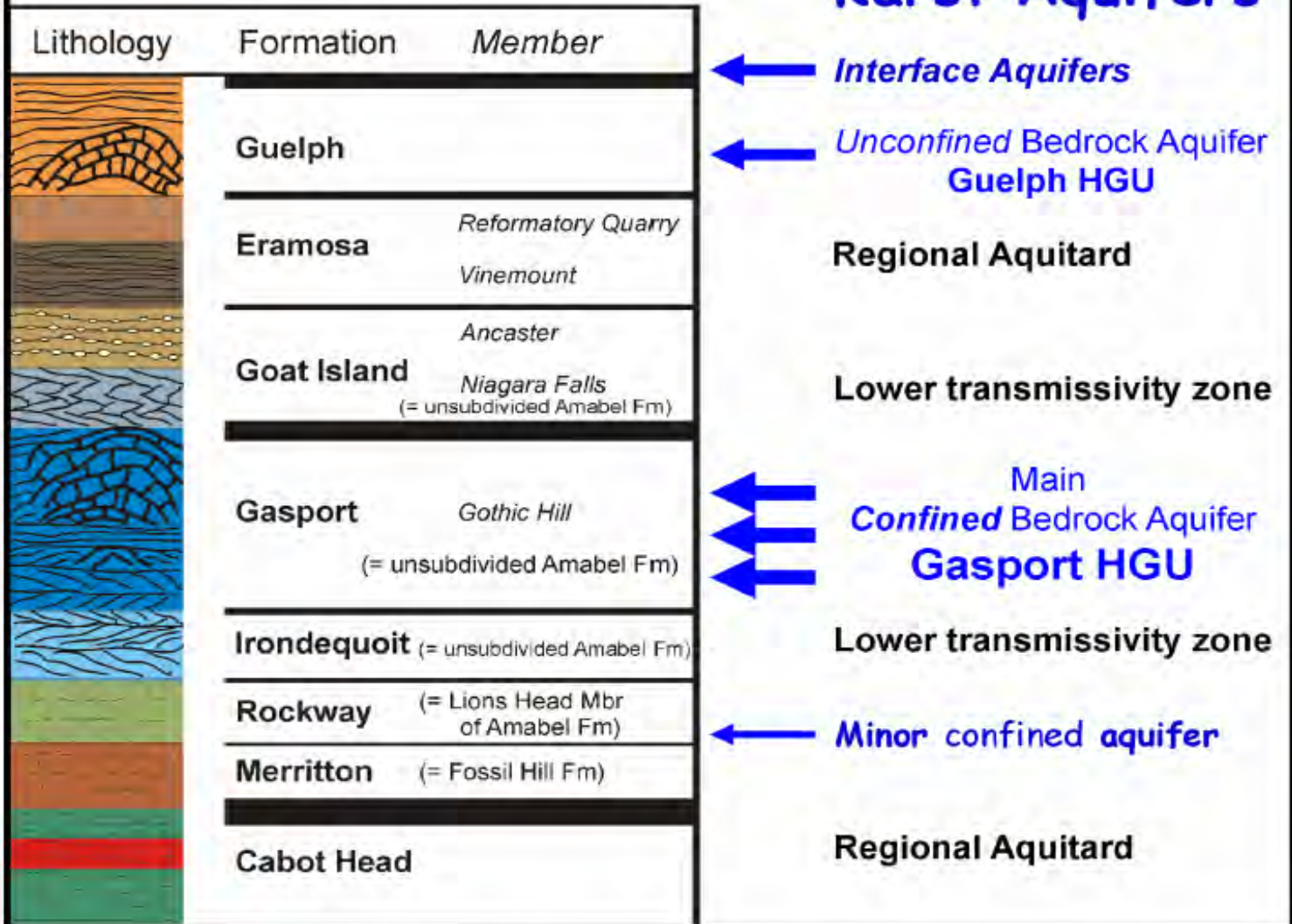


Figure 31.3. Preliminary revised Early Silurian stratigraphy and hydrostratigraphic framework for Guelph region of Niagara Escarpment. The relative thickness of lines separating each formation in right column reflects the significance of the diastem (thicker line reflects greater time break). Key aquitards include the regional Cabot Head Formation shales, the overlying dolostones of the Merritton and Rockway formations, and dolostones and calcareous shales of the Vinemount Member (Eramosa Formation). The Niagara Falls Member of Goat Island Formation is a relatively low transmissivity (reduced hydraulic conductivity) crinoidal grainstone unit. Previous hydrogeology studies have allocated the Irondequoit and Gasport formations and Niagara Falls Member of the Goat Island Formation to the unsubdivided Amabel Formation. Key regional hydrogeologic units (HGU) include the Gasport Formation reef mound and inter-reefal bleached shell coquinas (Gasport HGU) and the overlying Guelph Formation (Guelph HGU); interface aquifers (groundwaters flowing along bedrock surface and within basal unconsolidated sediments) are also regional sources of groundwater (see Brunton et al. 2007).

Figure A1

Source: Preliminary Revisions to the Early Silurian Stratigraphy of Niagra Escarpment: Integration of Sequence Stratigraphy, Sedimentology and Hydrogeology to Delineate Hydrogeologic Units, F.R. Brunton, Queen's Printer for Ontario, 2008

**GUELPH REGION STRATIGRAPHY
PHASE TWO ENVIRONMENTAL SITE ASSESSMENT
139 MORRIS STREET HOLDINGS LTD.
Guelph, Ontario**

Certificate of Property Use

Environmental Protection Act, R.S.O. 1990, c.E.19, s.168.6

Certificate of property use number: 6646-9W3RTZ

Risk assessment number: 1356-9CZR5R

Owner:

139 Morris Street Ltd.

(Owner)

178 St. George Street
Toronto, ON
M5R 2M7

Site:

139 Morris Street, Guelph, ON

(Property)

With a Legal Description of:

Factory Lot Plan 322; Lots 21, 22, 23, 24, 25, 26, 27, 28, 29 and 30, Plan
322, City of Guelph, County of Wellington

PIN: 71341-0012 (LT)

The conditions of this Certificate of Property Use (CPU) address the Risk Management Measures in the Risk Assessment noted above and described in detail in Part 1 below (Risk Assessment). In the event of a conflict between the CPU and the Risk Assessment, the conditions of the CPU take precedence.

Summary:

Refer to Part 1 of the CPU, Interpretation, for the meaning of all the defined capitalized terms that apply to the CPU.

- i) CPU requirements addressed in Part 4 of the CPU, Director Requirements, are summarized as follows:
- | | |
|---|-----|
| a. Installing/maintaining any equipment | No |
| b. Monitoring any contaminant | Yes |
| c. Refraining from constructing any building specified | Yes |
| d. Refraining from using the Property for any use specified | Yes |
| e. Other: see ii below for details | Yes |

ii) Duration of Risk Management Measures identified in Part 4 of the CPU is summarized as follows:

- a. The hard cap and fill cap barriers installed on the entirety of the Property are required to be maintained for as long as the Contaminants of Concern are present on the Property;

- b. The construction of any building (s) on the Property is prohibited for as long as the Contaminants of Concern are present on the Property, with the following exceptions:
 - a. a building (s) that is constructed with an at or below grade storage/parking garage as identified in Section 4.2 (g) of this CPU; and or,
 - b. any building (s) that includes a vapour mitigation system as identified in Section 4.2 (h) of this CPU;
- c. In the event that any new building (s) on the Property includes a vapour mitigation system as identified in Section 4.2 (h), the confirmatory sub-slab vapour monitoring program shall be implemented for two years and until written approval to discontinue the program is provided in writing to the Director;
- d. The groundwater monitoring program shall be implemented for a minimum of two years and until written approval to discontinue the program is provided in writing by the Director;
- e. The soil and groundwater management plan for all intrusive work and excavation activities potentially exposing the Contaminants of Concern identified on the Property shall be required for as long as the Contaminants of Concern are present on the Property;
- f. The site specific health and safety plan for workers potentially exposed to Contaminants of Concern identified on the Property shall be required for as long as the Contaminants of Concern are present on the Property;
- g. The planting of fruit or vegetables for consumption, other than those planted in above ground containers such that they are isolated from the subsurface conditions, is prohibited for as long as the Contaminants of Concern are present on the Property
- h. The installation of potable groundwater supply wells on the Property is prohibited for as long as the Contaminants of Concern are present in groundwater on the Property; and,
- i. The other Risk Management Measures shall continue indefinitely until the Director amends or revokes the CPU.

Part 1: Interpretation

In the CPU the following terms shall have the meanings described below:

“Adverse Effect” has the same meaning as in the Act; namely,

- (a) impairment of the quality of the natural environment for any use that can be made of it,
- (b) injury or damage to property or to plant or animal life,
- (c) harm or material discomfort to any person,
- (d) an adverse effect on the health of any person,
- (e) impairment of the safety of any person,
- (f) rendering any property or plant or animal life unfit for human use,
- (g) loss of enjoyment of normal use of property, and
- (h) interference with the normal conduct of business;

“Act” means the *Environmental Protection Act*, R.S.O. 1990, c. E. 19, as amended;

“Competent Person” has the same meaning as set out in the Occupational Health and Safety Act R.S.O. 1990, c.O.1, as amended;

“Contaminant” has the same meaning as in the Act; namely any solid, liquid, gas, odour, heat, sound, vibration, radiation or combination of any of them, resulting directly or indirectly from human activities that may cause an Adverse Effect;

“Contaminant of Concern” & “COC” has the meaning as set out in section 3.2 of the CPU;

“CPU” means this Certificate of Property Use Number No. 6646-9W3RTZ as may be amended from time to time;

"Director" means the undersigned Director or any other person appointed as a Director for the purpose of issuing a certificate of property use;

“EBR” means the Environmental Bill of Rights, 1993, .S.O. 1993, c.28, as amended;

“Environmental Compliance Approval” has the same meaning as set out in the *Environmental Protection Act*, R.S.O. 1990, Chapter E.19;

“Licensed Professional Engineer” means a person who holds a license, limited license or temporary license under the *Professional Engineers Act*, R.R.O. 1990, c.P.28, as amended;

"Ministry" means Ontario Ministry of the Environment and Climate Change;

“OHSA” means the *Occupational Health and Safety Act*, R.S.O. 1990, c.O.1, as amended from time to time;

“Owner” means **139 Morris Street Ltd.**, the current owner of the Property, and any future Property Owner (s);

"OWRA" means the *Ontario Water Resources Act*, R.S.O. 1990, c.0.40, as amended;

“Property” means the property that is the subject of the CPU and described in the “Property” section on page 1 above, and illustrated in Figure 1 of Schedule A which is attached to and forms part of this CPU;

“Property Specific Standards” means the property specific standards established for the Contaminants of Concern set out in the Risk Assessment and in section 3.2 of the CPU;

"Provincial Officer" means a person who is designated as a provincial officer for the purposes of the Act;

“Qualified Person” means a person who meets the qualifications prescribed in O. Reg. 153/04, as amended, made under the Act;

"Risk Assessment" (RA) means the Risk Assessment No. **1356-9CZR5R** accepted by the Director on **April 27, 2015** (“RA”), and set out in the following final document:

- **“Risk Assessment Report, 139 Morris Street, Guelph, Ontario”, report by Conestoga-Rovers & Associates, dated February 2014;**
- **“Risk Assessment Addendum, 139 Morris Street, Guelph, Ontario”, report by Conestoga-Rovers & Associates, dated August 2014;**
- **“RE: RA for 139 Morris Street, Guelph; RA1354-13; IDS# 1356-9CZR5R”, email from Vincent Nero, Conestoga-Rovers & Associates, received by SDB on September 18, 2014, with following attachments:**
 - ⊗ Risk Assessment report, redline version; file name: 078674-5-Risk Assessment-July 2014-Redline.pdf
 - ⊗ Attachment E.4, Phase Two ESA Conceptual Site Model; file name:

- “RE: RA for 139 Morris Street, Guelph; RA1354-13; IDS# 1356-9CZR5R”, email from Lindsay Shepherd, Conestoga-Rovers & Associates, received by SDB on January 9, 2015, with following attachment:
 - Updated ESA phase two Conceptual Site Model, January 2015; file name: 078674-5-APPE.pdf

"Risk Management Measures" means the risk management measures specific to the Property described in the Risk Assessment and/or Part 4 of the CPU;

“Tribunal” has the same meaning as in the Act; namely, the Environmental Review Tribunal;

Unimpacted Soil” means soil that meets the soil criteria identified in *Table 2: Full Depth Generic Site Condition Standards in a Potable Groundwater Condition* of the Ministry’s Soil, Ground water and Sediment Standards for Use under Part XV.1 of the Act published by the Ministry and dated April 15, 2011.

Part 2: Legal Authority

- 2.1 Section 19 of the Act states that a certificate of property use is binding on the executor, administrator, administrator with the will annexed, guardian of property or attorney for property of the person to whom it was directed, and on any other successor or assignee of the person to whom it was directed.
- 2.2 Subsection 132(1.1) of the Act states that the Director may include in a certificate of property use a requirement that the person to whom the certificate is issued provide financial assurance to the Crown in right of Ontario for any one or more of,
- (a) the performance of any action specified in the certificate of property use;
 - (b) the provision of alternate water supplies to replace those that the Director has reasonable and probable grounds to believe are or are likely to be contaminated or otherwise interfered with by a contaminant on, in or under the property to which the certificate of property use relates; and
 - (c) measures appropriate to prevent adverse effects in respect of the property to which the certificate of property use relates.
- 2.3 Section 168.6 (1) of the Act states that if the Director accepts a risk assessment relating to a property, he or she may, when giving notice under clause 168.5 (1)(a), issue a certificate of property use to the owner of the property, requiring the owner to do any of the following things:
- 1) Take any action specified in the certificate that, in the Director’s opinion, is necessary to prevent, eliminate or ameliorate any adverse effect on the property, including installing any equipment, monitoring any contaminant or recording or reporting information for that purpose.
 - 2) Refrain from using the property for any use specified in the certificate or from constructing any building specified in the certificate on the property.
- 2.4 Subsection 168.6(2) of the Act states that a certificate of property use shall not require an owner of property to take any action that would have the effect of reducing the concentration of a contaminant on, in or under the property to a level below the level that is required to meet the standards specified for the contaminant in the risk assessment.
- 2.5 Subsection 168.6(3) of the Act states that the Director may, on his or her own initiative or on application by the owner of the property in respect of which a certificate has been issued under subsection 168.6(1),
- (a) alter any terms and conditions in the certificate or impose new terms and conditions; or
 - (b) revoke the certificate.
- 2.6 Subsection 168.6(4) of the Act states that if a certificate of property use contains a provision requiring the owner of the property to refrain from using the property for a specified use or from constructing a specified building on the property,

- (a) the owner of the property shall ensure that a copy of the provision is given to every occupant of the property;
 - (b) the provision applies, with necessary modifications, to every occupant of the property who receives a copy of the provision; and
 - (c) the owner of the property shall ensure that every occupant of the property complies with the provision.
- 2.7 Subsection 196(1) of the Act states that the authority to make an order under the Act includes the authority to require the person or body to whom the order is directed to take such intermediate action or such procedural steps or both as are related to the action required or prohibited by the order and as are specified in the order.
- 2.8 Subsection 197(1) of the Act states that a person who has authority under the Act to make an order or decision affecting real property also has authority to make an order requiring any person with an interest in the property, before dealing with the property in any way, to give a copy of the order or decision affecting the property to every person who will acquire an interest in the property as a result of the dealing.
- 2.9 Subsection 197(2) of the Act states that a certificate setting out a requirement imposed under subsection 197(1) may be registered in the proper land registry office on the title of the real property to which the requirement relates, if the certificate is in a form approved by the Minister, is signed or authorized by a person who has authority to make orders imposing requirements under subsection 197(1) and is accompanied by a registrable description of the property.
- 2.10 Subsection 197(3) of the Act states that a requirement, imposed under subsection 197(1) that is set out in a certificate registered under subsection 197(2) is, from the time of registration, deemed to be directed to each person who subsequently acquires an interest in the real property.
- 2.11 Subsection 197(4) of the Act states that a dealing with real property by a person who is subject to a requirement imposed under subsection 197(1) or 197(3) is voidable at the instance of a person who was not given the copy of the order or decision in accordance with the requirement.

Part 3: Background

- 3.1 The Risk Assessment (RA) was undertaken for the Property to establish the risks that the Contaminants identified in the Risk Assessment may pose to future users and to identify appropriate Risk Management Measures to be implemented to ensure that the Property is suitable for the intended use: **Residential** as defined in O. Reg. 153/04, as amended, made under the Act.
- 3.2 The Contaminants on, in or under the Property that are present either above *Table 2: Full Depth Generic Site Condition Standards in a Potable Groundwater Condition of the Soil, Ground water and Sediment Standards for Use under Part XV.1 of the Act published by the Ministry and dated April 15, 2011* or for which there are no such standards, are set out in the Risk Assessment (Contaminants of Concern). The Property Specific Standards for these Contaminants of Concern are set out in **Table 1A and Table 1B of Schedule "A"** which is attached to and forms part of the CPU.
- 3.3 I am of the opinion, for the reasons set out in the Risk Assessment that the Risk Management Measures described therein and outlined in Part 4 of the CPU are necessary to prevent, eliminate or ameliorate an Adverse Effect on the Property.
- 3.4 The Risk Assessment indicates the presence of Contaminants of Concern in soil and groundwater which require on-going restriction of land use and pathway elimination. As such, it is necessary to restrict the use of the Property and impose building restrictions and implement Risk Management Measures as set out in the Risk Assessment and in Part 4 of the CPU.

Part 4: Director Requirements

Pursuant to the authority vested in me under section 168.6(1) of the Act, I hereby require the Owner to do or cause to be done the following:

Risk Management Measures

- 4.1 Implement, and thereafter maintain or cause to be maintained, the Risk Management Measures.
- 4.2 Without restricting the generality of the foregoing in Section 4.1, carry out or cause to be carried out the following key elements of the Risk Management Measures:
- a) Prior to first use, hard cap and fill cap barriers shall be installed over the entirety of the Property, or portion (s) of the Property under development or redevelopment, in accordance with Section 7.3.1 and Appendix L & Figure L.1: Typical Soil Cover Details of the RA. Hard cap and fill cap barriers are required over the entirety of the Property so as to prevent exposure to the Contaminants of Concern (COCs) identified on the Property and shall be maintained for as long as the COCs are present on the Property. The hard cap barrier and the fill cap barriers shall consist of the following, at minimum:
 - (i) The hard cap barrier (s) shall consist of a cover of asphalt, concrete, a building slab, or building foundation and floor slab overlaying a layer of Granular "A" or equivalent material that has a combined minimum thickness of 0.225 m.
 - (ii) The fill cap barrier (s) shall consist of a minimum of 0.5 m thick cover, consisting of at least 0.5 m of Unimpacted Soil immediately on top of a geotextile material.
 - b) Within 90 days of completion of the installation of any hard cap and fill cap barriers on the Property, or any portion (s) of the Property under development or redevelopment, and upon issuance of this CPU, the Owner shall submit to the Director written confirmation signed by a qualified Licensed Professional Engineer that the barriers have been installed in accordance with the requirements of Section 7.3.1 and Appendix L & Figure L.1 : Typical Soil Cover Details of the RA and Section 4.2(a)(i) and 4.2 (a)(ii) of this CPU along with final design specifications/drawings and or as built drawings.
 - c) Prior to first use and within 90 days of completion of the installation of the hard cap and fill cap barriers on the Property, or any portion (s) of the Property under development or redevelopment, the Owner shall submit to the Director a site plan that clearly identifies the location of each of the different barriers.
 - d) In relation to Section 4.2 (a) of this CPU, areas of the Property that are *not in use* or *not under development or redevelopment*, hard cap and fill cap barriers are not required as long as exposure to the COCs is prevented by a fence barrier that restricts access to those areas of the Property and a dust control plan is implemented.
 - e) An inspection and maintenance program shall be implemented to ensure the continuing integrity of the hard cap and fill cap barriers as long as the COCs are present on the Property or portion (s) of the Property. The inspection program shall include semi-annual (spring and fall) inspections of the barrier's integrity in accordance with the inspection and maintenance program as detailed in Section 7.5.2 and Appendix L of the RA. Any barrier deficiencies shall be repaired within a reasonable period of time in accordance with Section 7.5.2 and Appendix L of the RA and this CPU. If cracks, breeches or any loss of integrity in the barriers cannot be repaired or addressed in a timely manner, contingency measures shall be implemented to ensure that no exposure to the COCs that have been identified on the Property or portion (s) of the Property occurs. The restoration of any damaged portions of the barriers shall meet the original design specifications, at minimum, as detailed in Appendix L & Figure L.1: Typical Soil Cover Details of the RA along with Section 4.2 (a) of this CPU. The Owner shall submit to the Director written confirmation prepared and signed by a qualified Licensed Professional Engineer that the barriers have been repaired in accordance with the requirements of Appendix L & Figure L.1: Typical Soil Cover Details of RA along with Section 4.2 (a) of this CPU. The written confirmation shall also include a description of any contingency measures put in place and shall be submitted to the Director within 30 days of the completion of any barrier repairs and/or restorations. The Owner shall keep records of the inspections and maintenance and make them available for review by the Ministry upon request.

- f) Refrain from constructing any enclosed buildings on, in or under the Property unless the building (s) includes a storage garage, as detailed in Section 4.2 (g) of this CPU or the building (s) includes a vapour mitigation system as detailed in Section 4.2 (h) of this CPU.
- g) The construction of any new enclosed building (s) on the Property that includes a storage garage, as defined in O. Reg. 350/06 (Building Code) as of November 13, 2009 (the “2006 Ontario Building Code”), shall meet the following requirements:
 - i. The storage garage area is constructed at or below the final grade of the building;
 - ii. The storage garage area covers the entire area of the building footprint at the final grade of the building; and,
 - iii. The storage garage is in compliance with all applicable requirements of the 2006 Ontario Building Code, including, without limitation, the provisions governing the following:
 - 1. design of a mechanical ventilation system as set out in Division B, subsection 6.2.2.3, Ventilation of Storage and Repair Garages;
 - 2. interconnection of air duct systems as set out in Division B, subsection 6.2.3.9 (2); and,
 - 3. air leakage as set out in Division B, section 5.4.
- h) The construction of any new enclosed building (s), other than that identified in Section 4.2 (g) of this CPU, is permitted on the Property provided that a vapour mitigation system, as identified in Section 7.3.2 and detailed in Appendix M of the RA, has been incorporated into the design of, and installed in, any new building (s) to be constructed on the Property or portions of the Property. The vapour mitigation system shall be designed by an appropriately qualified Licensed Professional Engineer in consultation with the Qualified Person in accordance with the conceptual design detailed in Appendix M of the RA and shall also include the following components:
 - a) The Owner shall obtain an Environmental Compliance Approval, as necessary, and any other permits or approvals as may be required;
 - b) The installation of the vapour mitigation system shall be completed under the supervision of an appropriately qualified Licensed Professional Engineer and a Qualified Person;
 - c) The vapour mitigation system detailed in Appendix M of the RA shall be designed and constructed such that the passive venting system can easily be converted to an active venting system with all applicable approvals and permits as may be necessary; and,
 - d) A quality assurance/quality control (QA/QC) program shall be undertaken during the installation of the vapour mitigation system and shall be completed by, and clearly documented in a report prepared by, a qualified contractor and overseen by an appropriately qualified Licensed Professional Engineer and Qualified Person.
- i) Within 90 days of the installation of the vapour mitigation system as detailed in Appendix M of the RA and Section 4.2 (h) of this CPU, in any new building (s) on the Property, the Owner shall submit to the Director as-built drawings and detailed design specifications of the vapour mitigation system, including any verification and QA/QC reports, prepared by the appropriately qualified Licensed Professional Engineer along with a statement from the qualified Licensed Professional Engineer that the vapour mitigation system has been installed in accordance with the original design specifications and that it has been designed to meet the requirements and objectives of Section 7.2, Section 7.3 and Appendix M of the RA and Section 4.2 (h) of this CPU.
- j) The vapour mitigation system detailed in Section 7.3.2 and Appendix M of the RA and Section 4.2 (h) of this CPU shall be operated, monitored and maintained by the Owner for as long as the COCs are present on the Property. As detailed in Section 7.5 and Appendix M of the RA, the qualified Licensed Professional Engineer that designed the vapour mitigation system shall prepare an operation, monitoring, and maintenance program, including a contingency plan, that is to be implemented by the Owner, prior to first occupancy, and shall be made available by the Owner to the Ministry upon request.
- k) An inspection, monitoring and maintenance program specified in Section 7.5 and Appendix M of the RA and Section 4.2 (j) of this CPU shall be implemented to ensure the continued integrity of the building floor slab and vapour mitigation system for as long as the COCs are present on the Property. The inspection

program shall include, at minimum, semi-annual inspections of the integrity of the building floor slab and monitoring of the vapour mitigation system in accordance with the monitoring and maintenance program specified in Section 4.2 (j) of this CPU. Any cracks, breaches or loss of integrity observed in the building floor slab or any observed deficiencies or necessary maintenance requirements with the vapour mitigation system shall be repaired forthwith to the original design specification, at minimum. Repairs or maintenance shall be made by an appropriately qualified contractor, under the supervision of a qualified Licensed Professional Engineer as necessary. If repairs to the building floor slab or the vapour mitigation system cannot be completed in a timely manner, the Owner shall ensure that the contingency measures prepared by a qualified Professional Engineer, as specified in Section 4.2 (j) of this CPU, are implemented. All repairs are to be inspected by an appropriately qualified Licensed Professional Engineer and signed documentation shall be provided to the Owner that states that the repairs meet the original design specifications, at minimum. The Owner shall submit to the Director the written confirmation, prepared and signed by a qualified Licensed Professional Engineer, that the vapour mitigation System has been repaired to meet the original design specifications, at minimum. The written confirmation shall also include a description of any contingency measures that were put in place and shall be submitted to the Director within 30 days of the completion of any repairs to the vapour mitigation system. The Owner shall keep records of the inspections, monitoring and maintenance program, along with documentation of all repairs that were required to be undertaken and these records shall be made available by the Owner to the Ministry for review upon request.

- l) The Owner shall ensure that all individuals/contractors intending to undertake work which could potentially come into contact with or interfere with the vapour mitigation system specified Section 7.3.2 and Appendix M of the RA and Section 4.2 (h) of this CPU are made aware of the presence of the vapour mitigation system and the need to take appropriate precautions to ensure the integrity of the vapour mitigation system at all times. If the vapour mitigation system is damaged at any time, the Owner shall ensure that it is repaired forthwith by a qualified contractor, under the supervision of a qualified Licensed Professional Engineer as necessary, to the original design specifications, at minimum. If repairs to the vapour mitigation system cannot be completed in a timely manner, the Owner shall ensure that the contingency measures prepared by a qualified Professional Engineer, as specified in Section 4.2 (j) of this CPU are implemented. All repairs to the vapour mitigation system are to be inspected by an appropriately qualified Licensed Professional Engineer and signed documentation shall be provided to the Owner that states that the repairs meet the original design specifications, at minimum. The Owner shall submit to the Director the written confirmation, prepared and signed by a qualified Licensed Professional Engineer, that the vapour mitigation system has been repaired to meet the original design specifications, at minimum. The written confirmation shall also include a description of any contingency measures that were put in place and shall be submitted to the Director within 30 days of the completion of any repairs to the vapour mitigation system. The Owner shall maintain records of all activities and repairs in relation to the vapour mitigation system and these records shall be made available by the Owner to the Ministry for review upon request.
- m) Once the final design of the vapour mitigation system is completed as specified in Section 4.2 (h) of this CPU, the Owner shall submit to the Director, for review and approval, a confirmatory sub-slab vapour monitoring program. The confirmatory sub-slab vapour monitoring program shall be prepared by a qualified Licensed Professional Engineer in consultation with an appropriately Qualified Person in accordance with Section 7.5.2, Section 7.5.3 and Appendix M of the RA. Specifically, the vapour monitoring program shall include the following key components:
 - a. Be overseen by a Qualified Person;
 - b. The collection of confirmatory sub-slab vapour samples collected from all available sample ports installed at the base of the vent stacks at the following frequency:
 - i. Quarterly (spring, summer, fall and winter) for the first year; and
 - ii. Semi-annually (summer and winter) thereafter;
 - c. The vapour samples shall be sent to an appropriately accredited laboratory and analyzed for the Target Analytes listed in Table 1C of Schedule A attached to this CPU.
 - d. An annual report documenting the vapour monitoring program shall be prepared by an appropriately Qualified Person and submitted to the Director on or before **March 31** following each year of monitoring until written approval to discontinue the program is received by the Owner from the Director. The annual report shall include, but not be limited to:
 - i. Laboratory results and laboratory certificates of analysis;

- ii. Field logs and documentation of QA/QC;
 - iii. Discussion and interpretation of the results in comparison to the respective Target Sub-Slab Vapour Concentrations as listed in Table 1C of Schedule A attached to this CPU; and,
 - iv. Conclusions and recommendations with respect the need for additional and/or continued monitoring as may be warranted;
- n) Upon completion of the installation of the vapour mitigation system as specified in Section 4.2 (h) of this CPU, and prior to first occupancy, the Owner shall implement the confirmatory sub-slab vapour monitoring program, that has been approved in writing by the Director, as required by Section 4.2 (m) of this CPU and detailed in Section 7.5.1 of the RA for a minimum of two years and until the Owner receives written approval from the Director to discontinue the program. Any changes to the confirmatory sub-slab vapour monitoring program that has been approved by the Director, as required by Section 4.2 (m) of this CPU, (i.e. sampling frequency, locations, methodology etc.) must be requested in writing by an appropriately Qualified Person and these changes shall only be implemented upon the Owner receiving written approval from the Director.
- o) In the event that the confirmatory sub-slab vapour monitoring program detailed in Section 4.2 (m) of this CPU identifies one or more of the Target Analytes at concentrations above the Target Sub-Slab Vapour Concentration in Table 1C, Schedule A attached to this CPU, the Owner shall implement the contingency measures detailed in Section 7.5.3 and Appendix M of the RA and as follows:
- i. Written notice shall be submitted to the Director by the Owner within 7 calendar days of the Owner's receipt of the laboratory analysis. This written notice shall include the sub-slab vapour quality sampling results, the laboratory certificates of analysis and the anticipated timeline for the implementation of the confirmatory sampling program and any additional work as may be deemed necessary by an appropriately Licensed Professional Engineer (that may include, but not be limited, to system maintenance and/or recommendations for modifying the vapour mitigation system). Confirmatory sampling shall occur within 14 calendar days from the date of the initial sample collection and be completed by an appropriately Qualified Person.
 - ii. In the event that the confirmatory sub-slab vapour sampling verifies the exceedances of one or more of the Target Analytes concentrations above the Target Sub-Slab Vapour Concentration in Table 1C, Schedule A attached to this CPU, the Owner shall:
 - 1. Submit written notice to the Director within 14 calendar days of the Owner's receipt of the laboratory analysis. This written notice shall include the sub-slab vapour quality sampling results, the laboratory certificates of analysis and the details of, and the anticipated timeline to implement, an indoor air testing program along with the implementation of further evaluation/assessment of the vapour mitigation system as may be deemed necessary by an appropriately Licensed Professional Engineer Qualified Person. Indoor air testing shall occur within 7 calendar days of notification being submitted to the Director.
 - 2. In the event that the indoor air quality sampling program identifies one or more the Target Analytes at concentrations above the Target Indoor Air Quality Concentration in Table 1C, Schedule A attached to this CPU the Owner shall:
 - a. Within 7 calendar days of the Owner's receipt of the laboratory analysis, the Owner shall notify the Director in writing. This written notice shall include the indoor air quality sampling results, the laboratory certificates of analysis and the anticipated timelines to implement the following:
 - i. The commissioning of the active venting system as required by 4.2 (h)(c). The commissioning of the active venting system shall occur no later than within 4 weeks of the Director receiving the written notice above; and
 - ii. The initiation of a confirmatory indoor air sampling program prepared and overseen by an appropriately Qualified Person.
 - iii. Submission of a report to the Director within 7 calendar days of commissioning the active venting system prepared by an appropriately Qualified Person confirming commissioning of the active venting system.

- iv. The submission of a report to the Director on a *monthly basis* of all confirmatory indoor air sampling program results prepared an appropriately Qualified Person.
- p) Upon issuance of this CPU, the groundwater monitoring program shall be implemented by the Owner in accordance with Section 7.5.1 and Section 7.5.3 of the RA. Specifically, the groundwater monitoring program shall include, but not be limited to, the following components:
- i. Be overseen by a Qualified Person;
 - ii. Consist of the measurement of groundwater levels and the collection of groundwater samples from the groundwater monitoring network. Specifically, MW4, MW16-13, MW19-13, MW20-13, MW21-13, MW25A-13, MW25B-13, MW24-16, MW26-13 and MW27B-13 or suitable replacement (s) as deemed appropriate by a Qualified Person and approved by the Director as identified in Schedule A – Figure 2;
 - iii. The measurement of groundwater levels and the collection of groundwater samples shall occur on a quarterly basis in year one (i.e. spring, summer, fall and winter) and semi-annually (spring/summer and fall/winter) in year two and annually (summer) thereafter;
 - iv. Groundwater samples shall be sent to a Certified Laboratory and analyzed for 1,2-cis-dichloroethylene, tetrachloroethylene, trichloroethylene, vinyl chloride, boron (total), selenium, sodium and vanadium;
 - v. The groundwater monitoring program shall occur for a minimum of two years and until written approval to reduce or discontinue the groundwater sampling program from the Director is received by the Owner;
 - vi. An annual report detailing the sample results, sample locations along with an evaluation of the temporal trends in groundwater quality and an assessment of the potential for off-property migration of impacted groundwater shall be submitted to the Director on or before **March 31st** following each year of monitoring until written approval to discontinue the program from the Director is received by the Owner;
 - vii. Any changes to the groundwater monitoring program as specified in Section 7.5.1 of the RA must be requested in writing by the Qualified Person and these changes shall only be implemented by the Owner upon receiving approval from the Director; and,
 - viii. In accordance with the contingency plan detailed in Section 7.5.3 of the RA, and summarized as follows:
 - 1. In the event that groundwater concentrations are observed to exceed their respective Property Specific Standard identified in Schedule A – Table 1B (PSS) attached to this CPU, the Owner shall notify the Director in writing within 14 calendar days of the Owner receiving the laboratory analysis. Written notification shall be prepared by a Qualified Person and include the groundwater data, laboratory certificates of analysis and timeline for the implementation of the confirmatory sampling program.
 - 2. Within 30 days of the Owner receiving the laboratory analysis, the confirmatory groundwater sampling program shall be implemented by a Qualified Person.
 - 3. In the event that the groundwater concentrations continue to be observed to exceed their respective PSS, the Owner shall notify the Director in writing within 14 calendar days of the Owner receiving the laboratory analysis. Written notification shall be prepared by a Qualified Person and include the groundwater data, laboratory certificates of analysis and timeline for the submission of a DRAFT Remedial Action Plan.
 - 4. Within 30 days of the Owner receiving the laboratory analysis, the Owner shall submit to the Director a DRAFT Remedial Action Plan for review and approval. The DRAFT Remedial Action Plan shall be prepared by a Qualified Person and include, but not be limited to, a detailed interpretation of the available data collected to date along with recommendations for any additional investigation/monitoring as may be required and or recommendations for the implementation of additional remedial measures and or mitigation measures.

5. Upon the Owner receiving written approval from the Director, the Owner shall implement the approved Remedial Action Plan.
 6. Within 30 days of completion of the Remedial Action Plan, the Owner shall submit written confirmation, along with supporting documentation, prepared by a Qualified Person that the Remedial Action Plan has been implemented.
- q) The Property specific Soil and Groundwater Management Plan (Plan) shall be developed for the Property and implemented during all intrusive activities potentially in contact with or exposing COCs identified in on-site soils or groundwater on the Property as detailed in Section 7.3.5 of the RA. A copy of the Plan shall be maintained on the Property for the duration of all planned intrusive activities. Any short term intrusive activities required for the purposes of emergency repairs (i.e. for repairs to underground utilities etc.) will not require the submission of the Plan prior to undertaking the short term emergency repairs. For planned intrusive activities, this Plan shall be submitted to the Director by the Owner at least 14 calendar days prior to any such intrusive activities being undertaken and shall be consistent with the measures specified in Section 7.3.5 of the RA and including, but not be limited to, the following key components as deemed necessary by a Qualified Person:
- (i) oversight by a Qualified Person;
 - (ii) include dust control measures and prevention of soils tracking by vehicles and personnel from the Property;
 - (iii) management of excavated soils including cleaning equipment, placement of materials for stockpiling on designated areas lined and covered with polyethylene sheeting, bermed and fenced to prevent access, runoff control to minimize contact and provisions for discharge to sanitary sewers or other approved treatment;
 - (iv) storm water management measures to control the potential transport of COCs off-site during on-site construction/redevelopment activities. This shall include, but not be limited to, silt fences and filter socks on catch-basins and utility covers as necessary;
 - (v) characterization of excavated excess soils and groundwater, obtained as a result of dewatering activities, to determine if the excavated excess soils or groundwater exceed the Property Specific Standards listed in Table 1A and Table 1B of Schedule "A" attached to this CPU and/or the applicable generic site condition standards for parameters other than those identified in Table 1A and Table 1B of Schedule "A" attached to this CPU and require off-site disposal in accordance with the provisions of Ontario Regulation 347, as amended, made under the Act;
 - (vi) include record keeping. Record keeping is to include, but not to be limited to, dates and duration of work, weather and site conditions, location and depth of excavation activities/dewatering activities, dust control measures, stockpile management and drainage, all soil and groundwater characterization results obtained as part of the Soil and Groundwater Management Plan, names of the Qualified Persons, contractors, haulers and receiving sites for any excavated excess soils and groundwater, as a result of dewatering activities, removed from the property and any complaints received relating to site activities; and,
 - (vii) copy of the plan and any amendments and the records kept thereunder shall be made available for review by the Ministry upon request.
- r) A property specific Health and Safety Plan shall be developed for the Property and implemented during all

planned intrusive activities potentially in contact with or exposing COCs identified on the Property or portion (s) of the Property as detailed in Section 7.3.4 of the RA and a copy shall be maintained on the Property for the duration of all intrusive activities. The Owner shall ensure that the Health and Safety Plan takes into account the presence of the COCs and is implemented prior to any intrusive activities being undertaken on the Property or portion (s) of the Property in order to protect workers from exposure to the COCs. The Health and Safety plan shall be prepared in accordance with applicable Ministry of Labour health and safety regulations, along with all potential risks identified in the RA and include, but not limited to, occupational hygiene requirements, personal protective equipment, contingency plans and contact information. Prior to initiation of any Project (on the Property or portion (s) of the Property), the local Ministry of Labour office shall be notified, where so prescribed under the OHSA, of the proposed activities and that COCs have been identified in soils and or groundwater on the Property. The Health and Safety Plan shall be overseen by a Competent Person to review the provisions of the plan with respect to the proposed site work and conduct daily inspections. The Owner shall retain a copy of the plan to be available for review by the Ministry upon request.

- 4.3 The planting of fruit or vegetables for consumption on the Property, unless in above ground containers such that they are isolated from the subsurface conditions, is prohibited.
- 4.4 Refrain from using the groundwater beneath the Property as a potable water supply. The installation of potable groundwater wells on the Property is prohibited.
- 4.5 Further to Section 4.4 of this CPU, the installation of groundwater monitoring wells for environmental testing purposes is not prohibited.

Site Changes

- 4.6 In the event of a change in the physical site conditions or receptor characteristics at the Property that may affect the Risk Management Measures and/or any underlying basis for the Risk Management Measures, forthwith notify the Director of such changes and the steps taken, to implement, maintain and operate any further Risk Management Measures as are necessary to prevent, eliminate or ameliorate any Adverse Effect that will result from the presence on, in or under the Property or the discharge of any Contaminant of Concern into the natural environment from the Property. An amendment to the CPU will be issued to address the changes set out in the notice received and any further changes that the Director considers necessary in the circumstances.

Reports

- 4.7 Retain a copy of any reports required under the CPU, the Risk Assessment and any reports referred to in the Risk Assessment (until otherwise notified by the Director) and within ten (10) days of the Director or a Provincial Officer making a request for a report, provide a copy to the Director or Provincial Officer.

Property Requirement

- 4.8 For the reasons set out in the CPU and pursuant to the authority vested in me under subsection 197(1) of the Act, I hereby order you and any other person with an interest in the Property, before dealing with the Property in any way, to give a copy of the CPU, including any amendments thereto, to every person who will acquire an interest in the Property, as a result of the dealing.

Certificate of Requirement

- 4.9 Within fifteen (15) days from the date of receipt of a certificate of requirement, issued under subsection 197(2) of the Act, register the certificate of requirement on title to the Property in the appropriate Land Registry Office.

- 4.10 Immediately after registration of the certificate of requirement, provide to the Director written verification that the certificate of requirement has been registered on title to the Property.

Owner / Occupant Change

- 4.11 While the CPU is in effect, forthwith report in writing to the Director any changes of ownership, of the Property, except that while the Property is registered under the *Condominium Act, 1998*, S.O. 1998, c.19, as amended, no notice shall be given of changes in the ownership of individual condominium units or any related common elements on the Property.

Financial Assurance

- 4.12 In the event that **Residential** building (s) are constructed on the Property or portions of the Property and the enclosed building (s) is constructed as detailed in Section 4.2 (h) of this CPU (i.e. a vapour mitigation system has been incorporated into the design the building), prior to occupancy and prior to the implementation of the confirmatory sub-slab vapour sampling program as required by Section 4.2 (n) of this CPU, the Owner shall submit to the Director, a detailed written cost estimate, prepared by a Qualified Person, to complete the approved confirmatory sub-slab vapour sampling program as required by Section 4.2 (m) for a period of two years.
- 4.13 Within 15 days of the Owner's receipt of written approval from the Director of the acceptance of the cost estimate amount specified in Section 4.12 of this CPU, the Owner shall provide financial assurance to the Crown in the right of Ontario in the same amount that was approved by the Director. The financial assurance shall be in the form of a certified cheque payable to the Ontario Minister of Finance or an irrevocable letter of credit issued by a Canadian Chartered Bank as outlined in the Ministry's *Financial Assurance Guideline* revised November 2005. This amount is to cover the costs associated with the confirmatory sub-slab vapour sampling program as detailed in Section 7.5.1 and Appendix M of the RA and as required by Section 4.2 (m) of this CPU.
- 4.14 The amount of financial assurance required in Section 4.13 of this CPU shall be reviewed every **two years**, for as long as the sub-slab vapour sampling program is required, by a Qualified Person, for the Owner, and an updated cost estimate shall be included in the annual sub-slab vapour monitoring report as required by Section 4.2 (m) of this CPU.

Part 5: General

- 5.1 The requirements of the CPU are severable. If any requirement of the CPU or the application of any requirement to any circumstance is held invalid, the application of such requirement to other circumstances and the remainder of the CPU shall not be affected thereby.
- 5.2 An application under sub section 168.6(3) of the Act to,
a) alter any terms and conditions in the CPU or impose new terms and conditions; or
b) revoke the CPU;
shall be made in writing to the Director, with reasons for the request.
- 5.3 The Director may amend the CPU under subsections 132(2) or (3) of the Act to change a requirement as to financial assurance, including that the financial assurance may be increased or provided, reduced or released in stages. The total financial assurance required may be reduced from time to time or released by an order issued by the Director under section 134 of the Act upon request and submission of such supporting documentation as required by the Director.
- 5.4 Subsection 186(3) of the Act provides that non-compliance with the requirements of the CPU constitutes an offence.
- 5.5 The requirements of the CPU are minimum requirements only and do not relieve you from,
a) complying with any other applicable order, statute, regulation, municipal, provincial or

- b) federal law; or
 - b) obtaining any approvals or consents not specified in the CPU.
- 5.6 Notwithstanding the issuance of the CPU, further requirements may be imposed in accordance with legislation as circumstances require.
- 5.7 In the event that, any person is, in the opinion of the Director, rendered unable to comply with any requirements in the CPU because of,
- a) natural phenomena of an inevitable or irresistible nature, or insurrections,
 - b) strikes, lockouts or other labour disturbances,
 - c) inability to obtain materials or equipment for reasons beyond your control, or
 - d) any other cause whether similar to or different from the foregoing beyond your control,

the requirements shall be adjusted in a manner defined by the Director. To obtain such an adjustment, the Director must be notified immediately of any of the above occurrences, providing details that demonstrate that no practical alternatives are feasible in order to meet the requirements in question.

- 5.8 Failure to comply with a requirement of the CPU by the date specified does not absolve you from compliance with the requirement. The obligation to complete the requirement shall continue each day thereafter.
- 5.9 In the event that the Owner complies with provisions of Sections 4.9 and 4.10 of the CPU regarding the registration of the certificate of requirement on title to the Property, and then creates a condominium corporation by the registration of a declaration and description with respect to the Property pursuant to the *Condominium Act, 1998*, S.O. 1998, c.19, as amended, and then transfers ownership of the Property to various condominium unit owners, the ongoing obligations of the Owner under this CPU may be carried out and satisfied by the condominium corporation by and on behalf of the new Owners of the Property.

Part 6: Hearing before the Environmental Review Tribunal

- 6.1 Pursuant to section 139 of the Act, you may require a hearing before the Environmental Review Tribunal (the "Tribunal"), if within fifteen (15) days after service on you of a copy of the CPU, you serve written notice upon the Director and the Tribunal.
- 6.2 Pursuant to section 142 of the Act, the notice requiring the hearing must include a statement of the portions of the CPU and the grounds on which you intend to rely at the hearing. Except by leave of the Tribunal, you are not entitled to appeal a portion of the CPU or to rely on a ground that is not stated in the notice requiring the hearing.
- 6.3 Service of a notice requiring a hearing must be carried out in a manner set out in section 182 of the Act and Ontario Regulation 227/07: *Service of Documents*, made under the Act as they may be amended from time to time. The address, email address and fax numbers of the Director and the Tribunal are:

The Secretary
Environmental Review Tribunal
655 Bay Street, Suite 1500
Toronto, ON, M5G 1E5
Fax: (416) 326-5370
Fax (Toll Free): 1(844) 213-3474
Email: ERTTribunalSecretary@ontario.ca

and

Jane Glassco, Director
Ministry of the Environment and Climate Change
1 Stone Rd. West, 4th Floor


Guelph, ON
N1G 4Y2

Fax: 519-826-4286
Email: jane.glassco@ontario.ca

- 6.4 Unless stayed by application to the Tribunal under section 143 of the Act, the CPU is effective from the date of issue.
- 6.5 If you commence an appeal before the Tribunal, under section 47 of the Environmental Bill of Rights, 1993 (the "EBR"), you must give notice to the public in the EBR registry. The notice must include a brief description of the CPU (sufficient to identify it) and a brief description of the grounds of appeal.
- The notice must be delivered to the Environmental Commissioner of Ontario who will place it on the EBR registry. The notice must be delivered to the Environmental Commissioner at 605-1075 Bay Street, Toronto, Ontario M5S 2B1 by the earlier of:
- 6.5.1 two (2) days after the day on which the appeal before the Tribunal was commenced; and
- 6.5.2 fifteen (15) days after service on you of a copy of the CPU.
- 6.6 Pursuant to subsection 47(7) of the EBR, the Tribunal may permit any person to participate in the appeal, as a party or otherwise, in order to provide fair and adequate representation of the private and public interests, including governmental interests, involved in the appeal.
- 6.7 For your information, under section 38 of the EBR, any person resident in Ontario with an interest in the CPU may seek leave to appeal the CPU. Under section 40 of the EBR, the application for leave to appeal must be made to the Tribunal by the earlier of:
- 6.7.1 fifteen (15) days after the day on which notice of the issuance of the CPU is given in the EBR registry; and
- 6.7.2 if you appeal, fifteen (15) days after the day on which your notice of appeal is given in the EBR registry.

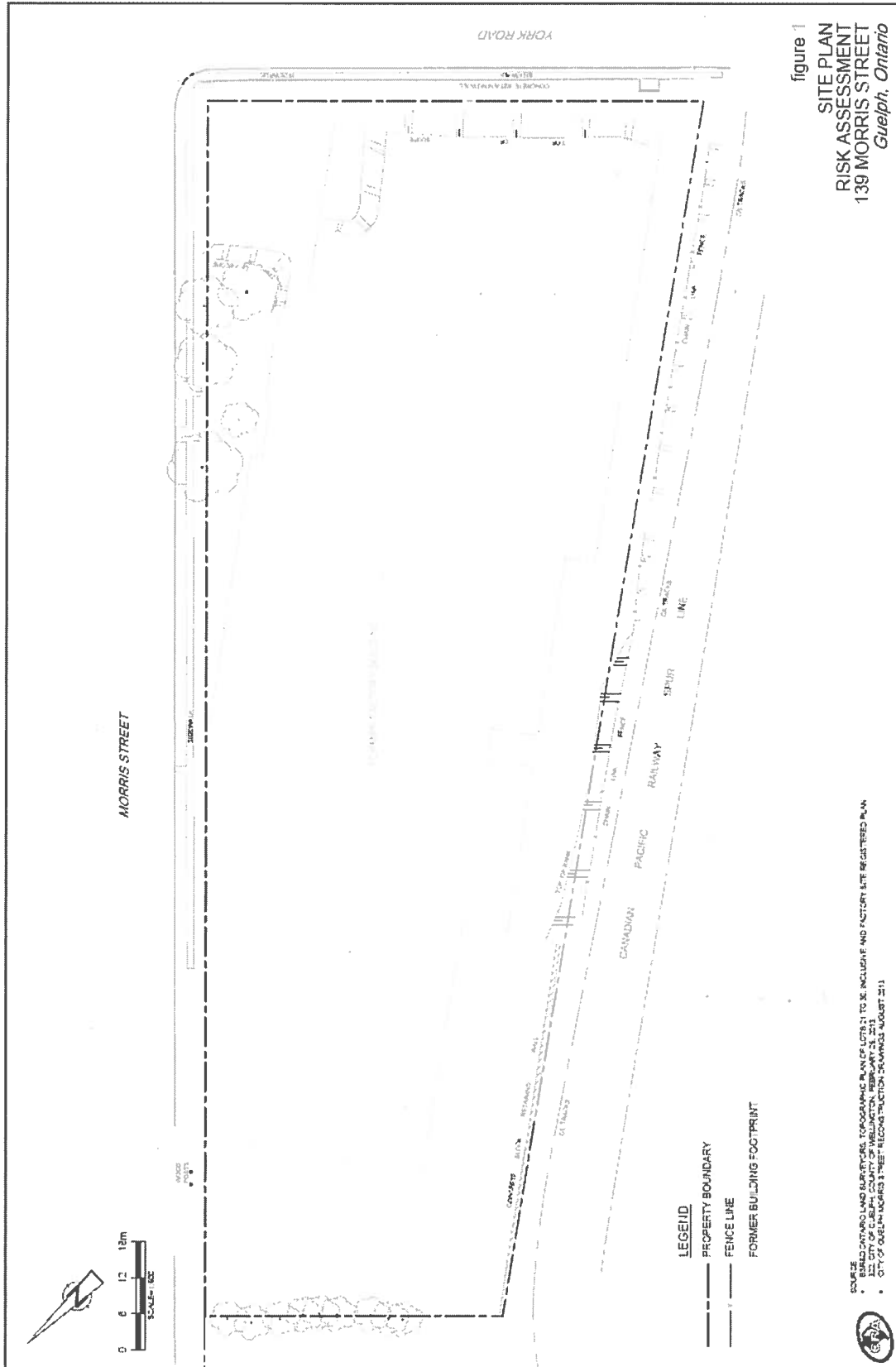
Issued at Guelph this 16th day of September 2015.

Original Signed By



Jane Glassco,
Director, section 168.6 of the Act

**Schedule 'A': Figure 1 – Site Plan
(Not to Scale)**



Schedule "A" – Table 1A: Property Specific Standards (PSS) – Soil

<i>Soil Contaminant of Concern (COC)</i>	<i>Property Specific Standard (µg/g)</i>
<i>Volatile Organic Compounds (VOCs)</i>	
Methylene Chloride	1.1
Tetrachloroethylene	2.5
Toluene	6
Trichloroethylene	80
<i>Polycyclic Aromatic Hydrocarbons (PAHs)</i>	
Acenaphthene	29
Acenaphthylene	22
Anthracene	66
Benz[a]anthracene	93
Benzo[a]pyrene	76
Benzo[b]fluoranthene	92
Benzo[ghi]perylene	41
Benzo[k]fluoranthene	31
Chrysene	90
Dibenz[a h]anthracene	12
Fluoranthene	238
Indeno[1 2 3-cd]pyrene	49
Methlynaphthalene, 2-(1-)	35
Naphthalene	51
Phenanthrene	263
Pyrene	191
<i>Metals</i>	
Antimony	42
Arsenic	122
Barium	4,668
Boron (Hot Water Soluble)	5
Boron (total)	797
Cadmium	36
Chromium Total	348
Cobalt	44
Copper	2,580
Cyanide (CN-)	0.1
Lead	5,316
Mercury	55
Molybdenum	34
Nickel	404
Selenium	4
Vanadium	1,884
Zinc	12,360
<i>Petroleum Hydrocarbons (PHC)</i>	
PHC F2	2,184
PHC F3	6,780
PHC F4	6,744
<i>General Chemistry</i>	
Electrical Conductivity	1

Schedule “A” – Table 1B: Property Specific Standards (PSS) - Groundwater

<i>Groundwater Contaminant of Concern (COC)</i>	<i>Property Specific Standard (µg/L)</i>
<i>Volatile Organic Compounds (VOCs)</i>	
Dichloroethylene, 1,2-cis-	8.3
Tetrachloroethylene	82
Trichloroethylene	126
Vinyl Chloride	0.6
<i>Metals</i>	
Boron (Total)	12,120
Selenium	16
Sodium	793,200
Vanadium	172

Schedule "A" – Table 1C: Target Indoor Air and Sub-Slab Vapour Quality Criteria

<i>Target Analytes</i>	<i>Target Indoor Air Quality Concentrations* (µg/m³)</i>	<i>Target Sub-Slab Vapour Concentrations** (µg/m³)</i>
Naphthalene	0.77	39
PHC F2 (See below for sub-fractions)		
Aliphatic C>10-C12	521	26,071
Aliphatic C>12-C16	521	26,050
Aromatic C>10-C12	104	5,200
Aromatic C>12-C16	104	5,200
1,2-cis-Dichloroethylene	31	1,564
Methylene Chloride	48	2,418
Tetrachloroethylene	4.3	214
Trichloroethylene	0.28	14
Vinyl Chloride	0.13	6.3
Cyanide (CN-)	1.7	83
Mercury	0.019	0.94

Notes:

* Indoor Air Target Concentrations obtained from Table 4.24 of the RA

** Sub-Slab Vapour screening values were calculated by dividing the Indoor Air Target Concentrations by an attenuation factor of 0.02

The applicant(s) hereby applies to the Land Registrar.

yyyy mm dd

Page 1 of 1

Properties

PIN 71341 - 0167 LT
Description PT LOTS 21 TO 30, PART FACTORY LOT PLAN 322 PT 2, 61R20948; CITY OF GUELPH
Address GUELPH

Consideration

Consideration \$ 0.00

Applicant(s)

The notice is based on or affects a valid and existing estate, right, interest or equity in land

Name THE CORPORATION OF THE CITY OF GUELPH
Address for Service 1 Carden Street
 Guelph, ON
 N1H 3A1

This document is not authorized under Power of Attorney by this party.

This document is being authorized by a municipal corporation CAM GUTHRIE - Mayor and STEPHEN O'BRIEN - City Clerk.

Statements

This notice is pursuant to Section 71 of the Land Titles Act.

This notice is for an indeterminate period

Schedule: See Schedules

Signed By

Terri Lee MacCulloch	1 Carden St. Guelph N1H 3A1	acting for Applicant(s)	Signed	2017 12 20
Tel	519-837-5637			
Fax	519-822-0705			

I have the authority to sign and register the document on behalf of the Applicant(s).

Submitted By

THE CITY OF GUELPH	1 Carden St. Guelph N1H 3A1	2017 12 20
Tel	519-837-5637	
Fax	519-822-0705	

Fees/Taxes/Payment

<i>Statutory Registration Fee</i>	\$63.65
<i>Total Paid</i>	\$63.65

SITE PLAN CONTROL AGREEMENT

This Agreement made this 16th day of December, 2017.

BETWEEN:

139 MORRIS STREET LTD.

(the "Owner")

AND

THE CORPORATION OF THE CITY OF GUELPH

(the "City")

WHEREAS:

- A. The Owner is the registered owner of the lands and premises municipally known as 195 Morris Street and legally described as Part Lots 21 to 30, Part Factory Lot Plan 322, designated as Part 2, Reference Plan 61R-20948, City of Guelph (the "Lands").
- B. The Owner proposes to develop a residential apartment building (the "Development") as shown on the plans, drawings and reports listed in section 2 of this Agreement.
- C. The Owner covenants that there are no mortgages, charges or liens on the Lands.
- D. The City requires the submission of plans and the execution of this Agreement pursuant to Section 41 of the *Planning Act*, R.S.O. 1990, c. P.13, as amended (the "*Planning Act*") and City By-law (1986)-12024, prior to the development of the Lands.
- E. Subsection 41(1) of the *Planning Act* provides for the registration of Site Plan Agreements on title to the Lands.

NOW THEREFORE THIS AGREEMENT WITNESSES that in consideration of the mutual covenants contained in this Agreement and other good and valuable consideration, the parties covenant and agree as follows:

RECITALS

- 1. The foregoing recitals are true and accurate and the terms defined therein shall bear the meanings indicated throughout this Agreement.

PLANS, DRAWINGS AND REPORTS

2. The following plans, drawings and reports shall be deemed to be a part of this Agreement:
 - SP-1: Site Plan
 - A-102: Typical Site Details
 - A-301: Conceptual Elevations
 - A-302: Site Sections & Angular Plane
 - ESC-1: Erosion and Sediment Control Plan
 - GP-1: Grading Plan
 - SSP-1: Site Servicing Plan
 - EX-1: Existing Conditions and Removals Plan
 - ND-1: Notes and Details Plan
 - SATCP-1: Site Access and Traffic Circulation Plan
 - LP-1: Landscape Plan
 - LP-2: Landscape Plan
 - LP-3: Landscape Details
 - TP-1: Tree Preservation Plan
 - TP-2: Tree Preservation Plan
 - E-SL01: Site Plan Photometric and Statistic
 - Stormwater Management Design Report for 195 Morris Street (formerly 139 Morris Street), City of Guelph, SP16A022; revised June 17, 2017, by GM BluePlan Engineering.
 - Waste Management Plan – Site Plan, SP16A022 – 195 Morris Street (formerly 139 Morris Street), Guelph; dated May 10, 2017 by 139 Morris Street Ltd.
 - SP16A022 – 195 Morris Street (formerly 139 Morris Street) Salt Management Plan; dated February 13, 2017 by GM BluePlan Engineering

3. In the event of a conflict between the plans, drawings and reports as listed in section 2 of this Agreement and any other plans, drawings and reports, the plans, drawings and reports as listed in section 2 and stamped “final approval” once final approval has been given by the City shall prevail (subject to any subsequent minor revisions to the same as approved in writing by the City in its sole and absolute discretion).

PROHIBITION

4. The Owner agrees that no development or redevelopment will proceed or take place on the Lands except as shown on plans, drawings and specifications approved by the City's General Manager of Planning, Urban Design and Building Services (hereinafter referred to as the "Site Development Plans"). For the purposes of this Agreement, "development" and "re-development" shall have the same meaning as prescribed at s.41 of the *Planning Act*.

CONFORMITY WITH SITE DEVELOPMENT PLANS AND CONDITIONS

5. The Owner shall develop the Lands substantially in accordance with the Site Development Plans, and the terms and conditions of this Agreement (including any schedules attached hereto).

GRADING CERTIFICATES

6. The Owner shall submit a grading certificate from a Professional Engineer or Ontario Land Surveyor to certify that the grading of the property was graded in accordance with the Site Grading Plans approved by the General Manager/City Engineer, upon completion of construction.

SECURITY

7. As a condition of approval of any Site Development Plans, the Owner shall provide the City with financial security in the amounts set out in Schedule "A" and in a form satisfactory to the City ("Security"), for the work as specified in Schedule "A" ("Secured Work"). The Security shall remain in effect until the Secured Work to which such Security relates has been completed in accordance with the requirements of this Agreement. In the event the Owner does not comply with the requirements related to the Secured Work under this Agreement, the City shall have the right to draw on the Security for such Secured Work, in whole or in part, from time to time, retain the money secured by such Security and apply such money for the sole purpose of completing the Secured Work to which the Security relates.

RELEASE OF SECURITY

8. Upon certification by the City's General Manager of Planning, Urban Design and Building Services or his delegate that all conditions imposed by this Agreement relating to any Secured Work have been satisfied and provided the Owner is not in default with respect to any other provisions of this Agreement, the Owner shall be entitled to the release of the balance of the Security held by the City at the time of such certification in respect of such Secured Work. The City shall not be required to refund or account for any Security utilized by the City as a result of any default by the Owner under the provisions of this Agreement. If in the opinion of the City, the amount of the Security should be reduced to reflect partial completion of the Secured Work, the Owner may substitute a Security in the reduced amount and the City will return the earlier issued security in its possession to the Owner.

CONSULTANTS

9. The Owner shall retain the services of appropriate professional consultants which may include an architect, an engineer and a landscape architect, to supervise the installation and construction of the Development and to maintain records of the same, which records shall be made available to the City upon request, and to provide certifications to and as required by the City.
10. Immediately upon request by the City, the Owner shall advise the City in writing of the names of and contact information for its professional consultants and shall

thereafter advise the City in writing of any change in the names of or contact information for its professional consultants within ten (10) days of any such change.

11. Upon completion of the Development, the Owner shall cause its professional consultants to certify to the City that the Development has been completed in accordance with the plans, drawings and reports listed in section 2.
12. If, following receipt of the certifications referred to in section 10 of this Agreement, the City inspects the Lands and finds deficiencies of any nature whatsoever, the City shall notify the Owner, and the Owner shall remedy such deficiencies and shall cause its professional consultants to provide further certifications confirming that the deficiencies have been remedied.

GUIDELINES AND STANDARDS

13. Unless otherwise specified on the plans, drawings and reports listed in section 2, the Owner shall install and construct the Development in accordance with the guidelines of the City, Grand River Conservation Authority and any provincial or federal laws, regulations and standards.

CONSTRUCTION

14. The Owner shall undertake all construction activity on the Lands in such a manner so as not to unreasonably interfere with adjoining lands or traffic on adjacent streets. The Owner shall control all dust, mud and debris resulting from any construction activities and remove the same promptly from any municipal catch basin, manhole, sewer, ditch, culvert, roadway, boulevard or sidewalk. The Owner shall reimburse the City for any damage to any municipal services, facilities or works resulting from the development or redevelopment of the Lands, howsoever caused and the determination of the City's General Manager/City Engineer with respect to whether or not said damage was caused by the Owner or with respect to the extent of the damage shall be final and binding on all parties.
15. The Owner shall maintain in good repair and in a safe and clean condition the Lands, vegetation, structures, buildings, facilities, services, works and landscaping improvements on the Lands at his own expense and shall do all acts necessary to comply with and properly carry out and provide for the maintenance and use thereof, including the replacement or repair of broken, damaged or worn material or parts and the replacement of dead or deceased vegetation. The Owner shall further keep the Lands free and clear of all refuse, debris and obstructions. Without limiting the generality of the foregoing, and in addition to anything else contained herein, the Owner shall:

- a) keep in a proper state of repair and operation the access roadways to the satisfaction of the City;
- b) to rectify, replace or repair any part of the development not constructed in accordance with the Site Development Plans or in accordance with any "as constructed" drawings submitted by the Owner and approved in writing by the City in its sole and absolute discretion;
- c) to do all maintenance and repairs pursuant to this Agreement as the Owner may be directed to do in writing by the City; and
- d) ensure all snow shall either be placed, stored or deposited on the Lands in accordance with the plans, drawings and reports listed in section 2.

FAILURE TO MAINTAIN OR PERFORM OBLIGATIONS

16. If, in the reasonable opinion of the City, the Owner is not adequately performing its obligations pursuant to this Agreement, or such obligations are not being performed expeditiously or in the best interests of the City, the City may, upon providing 10 days' written notice to the Owner respecting such non-performance, and an opportunity to rectify same within that time, enter upon the Lands and repair, replace or otherwise maintain the Lands at the Owner's expense.
17. The Owner hereby covenants and agrees that should it be in default of any of its obligations with respect to maintenance, without any limitation whatsoever, the City in its sole discretion may add any costs incurred by the City to fulfill or rectify such default to the tax roll for the Lands and that the City shall be permitted to collect such amount outstanding in the same manner as municipal taxes. The Owner further agrees that the amount outstanding shall accrue interest payable to the City in the same manner as taxes in arrears.

CONNECTIONS TO MUNICIPAL SERVICES

18. Relocation of any municipal services, facilities or utilities (including any curbs, gutters, catch basins, poles, bus shelters, manholes, telephone boxes, valves, drains, or transformers), whether owned by the City or any utility company, shall be carried out by the City, a City approved contractor or the utility company at the Owner's expense.

PARKING AREA

19. The parking spaces shall be laid out and clearly marked on the site by painted lines or such other method approved by the City in accordance with the Site Development Plans.

GARBAGE

20. The Owner shall store all garbage in the garbage storage facilities as shown on the Site Development Plans. If the garbage storage facilities are designed for the use of a bulk lift container, it shall be the Owner's responsibility to provide for such container and for the regular removal and replacement of the same as may be reasonably required. In the event no garbage storage facilities are shown on the Site Development Plans, all garbage shall be stored indoors.

STORM WATER MANAGEMENT

21. The Owner agrees to develop and maintain the Lands, including the storm water management facilities designed by a Professional Engineer, in accordance with a site plan that has been submitted to and approved by the General Manager/City Engineer or his delegate. Furthermore, the Owner shall have the Professional Engineer who designed the storm water management system certify to the City that he/she supervised the construction of the storm water management system and that the storm water management system was built as it was approved by the City and is functioning properly.

INSPECTIONS

22. The Owner hereby grants permission to the City and its agents, contractors and employees to enter upon the Lands at any time or times to perform such inspections as may be reasonably necessary to determine whether the Development is in compliance with and continues to be in compliance with the provisions of this Agreement.

EMERGENCY REPAIRS

23. During the development of the Lands, the City and its agents, contractors and employees may enter upon the Lands at any time or times for the purpose of making emergency repairs to the Development. Such entry and repair shall not be deemed to be an assumption by the City of any liability in connection with the development of the Lands, nor a release of the Owner from any of its obligations under this Agreement.

ADDITIONAL WORKS

24. If at any time or from time to time during the development of the Lands, the City is of the opinion that, because of previously unknown or unforeseen conditions, it is necessary to supply, install or construct additional works in order to adequately provide services for the Lands or in order to prevent damage to any other lands, the Owner shall supply, install or construct such additional works at the request of the City.

DAMAGE

25. The Owner shall immediately repair any damage done to any property as a result of the development of the Lands.
26. If the Owner fails or neglects to immediately repair any damage done to any property as a result of the development of the Lands, the City shall be entitled to draw upon the Security if the damage relates to the purpose of the Security and to use the proceeds thereof to repair such damage. In the event there is no Security applicable to the damage, the City shall be entitled to collect the costs and expenses incurred to repair the damage in a like manner as municipal taxes.
27. The Owner shall stabilize all disturbed soil with a vegetative cover within 90 days of being disturbed, control all noxious weeds and keep ground cover to a maximum height of 150mm (6 inches).

OWNER'S EXPENSE

28. The Owner acknowledges that where this Agreement obliges the Owner to perform any work or do anything it is to be done at the Owner's expense and not at the City's expense.

COSTS

29. The Owner shall pay to the City, forthwith upon demand, all costs and expenses incurred by the City, whether directly or indirectly, in connection with this Agreement and the approval of any Site Development Plans. Without limiting the generality of the foregoing, such costs and expenses shall include a charge for the processing of the Site Development Plans by the City, and all legal, surveying and engineering costs and the costs of any consultants retained by the City incurred in connection with this Agreement, the supervision of all of the works undertaken in connection therewith or in ensuring compliance with this Agreement and the registration thereof on title to the Lands.

INDEMNITY

30. Save and except for any actions, causes of action, suits, liens, claims, demands or costs arising out of any fault or neglect of the City, the Owner shall indemnify the City against all actions, causes of action, suits, liens, claims, demands and costs whatsoever which may arise either directly or indirectly as a result of the development of the Lands.

DEFAULT

31. In the event of any default by the Owner pursuant to any of the terms of this Agreement, in addition to any other remedies available to the City and without any limitation thereof, the City may:

- a) draw on the Security in whole or in part for the purpose of the Security;
- b) undertake or complete any obligation of the Owner hereunder;
- c) enter upon the Lands through its servants or agents for any purpose whatsoever;
- d) issue a stop work order with respect to any further development, redevelopment or work upon the Lands pursuant to the *Building Code Act* or other applicable legislation; and
- e) recover from the Owner all costs and expenses incurred by the City whether directly or indirectly, with respect to the default or the remedy thereof and collect such costs and expenses in like manner as municipal taxes.

CONSTRUCTION LIEN ACT

- 32. The Owner shall comply with all of the provisions of the *Construction Lien Act*, R.S.O. 1990, c. C.30 as amended, including retention of all holdbacks and funds required. The Owner shall at its own expense, within ten (10) days of receiving written notice from the City to do so, pay or otherwise discharge or vacate any lien, charge or claim brought or registered pursuant to the Act (whether perfected or not) which affects any lands owned by the City or in which the City has an interest, and which arise out of the performance of this Agreement.
- 33. The Owner hereby indemnifies the City from and against all suits and claims of any nature arising out of or connected with the carrying out of the Owner's obligations pursuant to this Agreement and, particularly, against any claim(s) pursuant to the *Construction Lien Act*. This indemnity does not extend to the negligence of the City, its employees, agents or contractors.
- 34. Any reductions in the Security are subject to the provisions of the *Construction Lien Act* and the City shall retain a holdback either in accordance with the said Act or in accordance with the *Construction Lien Act* provisions of this Agreement.
- 35. The City may use all or part of the Security to pay, discharge, vacate and obtain and register a release of all charges, claims, liens, and all preserved or perfected liens, made, brought, or registered pursuant to the *Construction Lien Act* which affect any lands owned by the City including public highways in the event that the Owner defaults in respect of its obligations of this Agreement relating to the purpose of the Security.

OWNER'S EXPENSE

36. Every provision of this Agreement by which the Owner is obligated in any way shall be deemed to include the words "at the expense of the Owner" unless the context otherwise requires.

FEES

37. Upon execution of this Agreement, the Owner shall pay to the City the fee for preparing the Agreement pursuant to the City's Planning Act Fees By-law.

REMEDIES

38. The rights and remedies provided for in this Agreement are in addition to and shall not limit the ability of the City to take such actions as may be available to it to ensure compliance with the requirements of this Agreement.

NOTICE

39. To be effective, a Notice must be in writing and delivered (a) personally, either to the individual designated below for that party, or to an individual having apparent authority to accept deliveries on behalf of that individual at its address set out below (b) by fax, (c) by registered mail; [or (d) by electronic mail], to the address [or electronic mail address] set out opposite the party's name below or to any other address [or electronic mail address] for a party as that party from time to time designates to the other parties in the same manner:

To the Owner at:

139 Morris Street Ltd.
178 St. George Street
Toronto, ON M5R 2M2
Attention: Wolf Von Teichman
P: 416-968-7070

To the City at:

City of Guelph,
1 Carden Street
Guelph ON N1H 3A1
Attention: General Manager of Planning, Urban Design and Building
Services
T: 519-822-1260
F: 519-822-4632

Any Notice is effective (i) if personally delivered, as described above, on the day of delivery if that day is a Business Day and it was delivered before 5:00 p.m. local time in the place of delivery or receipt, and otherwise on the next Business Day, (ii) if sent by fax, on the day of transmission if that day is a Business Day and the fax transmission was made before 5:00 p.m. local time in the place of delivery or receipt, and otherwise on the next

Business Day, or (iii) if by registered mail, on the fourth Business Day following the day on which it is mailed, except that if at any time between the date of mailing and the fourth Business Day thereafter there is a disruption of postal service, Notice must be given by means other than mail, or (iv) if by electronic mail, on the day the sender receives confirmation of receipt by return electronic mail from the recipient, if that day is a Business Day and if the confirmation was received before 5:00 p.m. local time in the place of delivery or receipt, and otherwise, on the next Business Day.

REGISTRATION

40. The City shall be entitled to register this Agreement upon the title to the Lands at the Owner's expense and the Owner shall execute any document that may be required to allow such registration.

TAXES

41. Prior to commencing construction of the Development, the Owner shall pay any and all outstanding taxes.

RELEASE FROM AGREEMENT

42. The Owner may make an application for release of this agreement in a form acceptable for registration. The City shall grant a release at the City's sole discretion, if, without limitation, the Owner has satisfied all the requirements of this Agreement, there are no longer any ongoing obligations on the part of the Owner and the Owner is not in default of any provision of this Agreement. All applications for a release must include a payment of the fee in effect at the time of the request.

COUNCIL DISCRETION

43. Notwithstanding any other provision of this Agreement, the Owner acknowledges and agrees that none of the provisions of this Agreement is intended to operate, nor shall have the effect of operating, in any way to fetter the Council of the City in the exercise of any of its discretionary powers. The Owner hereby acknowledges and agrees that it does not expect and shall not receive any advantageous planning or other consideration by virtue of it having entered into this Agreement or by virtue of the existence of this Agreement.

SEVERABILITY

44. The invalidity of any provision of this Agreement shall not affect any other provision of it, and, if any particular provision of this Agreement is declared to be invalid by a court or tribunal of competent jurisdiction, this Agreement shall be construed as if the invalid provision had been omitted.

GOVERNING LAW

45. This Agreement shall be governed by and construed in accordance with the laws of the Province of Ontario.

HEADINGS

46. The headings in this Agreement are for convenience of reference only.

GENDER AND NUMBER

47. This Agreement shall be read with such changes in gender and number as the context may require.

COVENANTS

48. The covenants, agreements, conditions and undertakings contained in this Agreement on the part of the Owner shall run with the Lands and shall be binding upon them and upon the Owner's successors and assigns.

COUNTERPARTS

49. This Agreement may be signed in any number of counterparts, each of which is an original, and all of which taken together, constitute one single document. Counterparts may be in an electronically scanned form. Parties transmitting electronically will also deliver the original counterpart to the other parties, but failure to do so does not invalidate this Agreement.

ADDITIONAL CONDITIONS

50. The Owner agrees in perpetuity to accept stormwater runoff from the adjacent townhouse development, known as 139 Morris Street Registered Plan 61R-29011, as shown on Site Plan File No. SP17A024 GM BluePlan drawing GP-1 Rev. 5 as approved and may be amended from time to time.
51. The Owner further agrees to ensure that the approved overland drainage is not blocked or impeded. The approved design drainage patterns must be maintained in perpetuity.
52. The recommendations provided in the Noise Impact Study prepared by Conestoga-Rovers Associates, dated November 14, 2012 shall be integrated into the design of the building, particularly with respect to noise mitigation

specifications for upgraded windows/cladding, building materials, outdoor amenity areas and air-conditioning requirements.

53. The following warning clause shall be incorporated into the site plan agreement and offers of purchase and sale or lease/rent for all units in the apartment building facing York Road:

"This dwelling unit has been supplied with a central air conditioning system which will allow windows and exterior doors to remain closed, thereby ensuring that the indoor sound levels are within the Municipality's and the Ministry of the Environment's noise criteria."

54. The following warning clauses shall be incorporated into the site plan agreement and offers of purchase and sale or lease/rent for all apartment units:

"Purchasers/Tenants are advised that despite the inclusion of noise control features in the development and with the building units, sound levels due to increasing road and rail traffic may on occasions interfere with some activities of the dwelling occupants as the sound levels exceed the Municipality's and the Ministry of the Environment's noise criteria. The Guelph Junction Railway (GJR)/Ontario Southland Railway (OSR) shall not be held liable for noise level or vibration level increases."

"Purchasers/Tenants are advised that due to the proximity of the adjacent industry, sound levels from the industry may at times be audible."

"Purchasers/Tenants are advised that Owens Corning (OC) has a Ministry of the Environment and Climate Change (MOECC) approved 8-year, 3-stage Noise Abatement Plan (NAP). The purpose of the NAP is to significantly reduce noise from the OC site by October 2020. The Stage 3 abatement work is to be completed by October 27, 2019. Until this abatement work is complete, sound levels from OC operations may on occasions interfere with some activities of the dwelling occupants as the sound levels exceed the MOECC's noise criteria."

55. That prior to the issuance of a building permit, the Owner shall construct an acoustic barrier wall (berm and/or fence) being a total of 210 metres long with a maximum height of 3.85 metres along the Guelph Junction Railway property line.

56. A 9-metre sight line triangle at the south-west corner of the property adjacent to the GJR corridor and York Road will be provided for this property. No buildings, parking or landscaping taller than 0.5 metres above the level of the travelled portion of the street will be allowed in this sight line triangle. The Owner further agrees that any proposed landscaping will be reviewed and certified to be in accordance with the sightline requirements of Transport Canada's Canadian Railway-Roadway Grade Crossing Standards (CRRGCS).

57. The following warning clause shall be incorporated into the site plan agreement and offers of purchase and sale or lease/rent for all apartment units:

"Purchasers/Tenants are advised that the Guelph Junction Railway will not accept any overland drainage from abutting properties and approved property line elevations are to be maintained."

58. The following warning clause shall be incorporated into the site plan agreement and offers of purchase and sale or lease/rent for all apartment units:

"Purchasers/Tenants are advised that disposal of any type of refuse along the Guelph Junction Railway tracks is strictly prohibited."


59. The Owner must follow Guelph Junction Railway's (GJR) policy document entitled, "Requirements for Contractors and Other Third Parties Entering onto and Working on GJR Property", or any successor thereof, when carrying out work involving machines within 15 metres of GJR track centreline.

IN WITNESS WHEREOF the parties hereto have duly executed this Agreement.

SIGNED, SEALED AND DELIVERED

In the presence of:


139 MORRIS STREET LTD:


Name: *WOLF VON TERKMAN*
Title: *PRESTIGE*

Name:
Title:

I/We have authority to bind the Corporation.

THE CORPORATION OF THE CITY OF GUELPH


CAM GUTHRIE – MAYOR


STEPHEN O'BRIEN – CITY CLERK

We have the authority to bind the Corporation

Dated and Signed at the
City of Guelph, this 18 day of
December, 2017.

SCHEDULE "A"

LIST OF SECURITY

Secured Work	Amount (\$)
Landscape Security	\$32,500.00