INDUSTRIAL PROPERTY
3195 EAST BAYSHORE ROAD
(ALSO KNOWN AS THIRD AVENUE EAST)

Phase II
Environmental Site Assessment

PREPARED FOR:
Northridge Property Management Inc.
PO Box 325
908 2nd Avenue East, Suite 200
Owen Sound, Ontario

Rubicon Job Number • R55001.2
Report Date • September 01, 2013

"....Environmental Solutions."

Rubicon Environmental (2008) Inc.
60 Toronto Road, P.O. Box 509
Flesherton, Ontario
N0C 1E0

T: 519-924-0003
F: 519-924-0004

Rubicon Environmental (2008) Inc.

September 01, 2013

Northridge Property Management Inc.
PO Box 325
908 2nd Ave East, Suite 200
Owen Sound, Ontario

Attn: Mr. Trevor Heathers

R55001.2- **Phase II ESA – Environmental Site Assessment**

Industrial Property: 3195 East Bayshore Rd., Owen Sound, Ont.

Dear Sir,

Please find enclosed the results for the above-mentioned investigation conducted on your behalf. Please feel free to contact me at 519-924-0003 if you require any additional information.

Sincerely,

RUBICON ENVIRONMENTAL (2008) INC.

Paul Rew, P. Eng.

Distribution:

Client: 1
Office: 1

"...Environmental Solutions"

PO Box 509,
60 Toronto Road,
Flesherton, Ontario N0C 1E0

Tel: 519 924 0003
Fax: 519 924 0004
Email: paulrew@rubiconenviro.com

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1.0 EXECUTIVE SUMMARY

Rubicon Environmental (2008) Inc. was retained by Northridge Property Management Inc. to undertake a Phase II ESA investigation in accordance with O. Reg. 153/04 for the purpose of filing a Record of Site Condition (RSC) with the Ontario Ministry of the Environment.

The RSC property was assessed using the Table 3 Standards for residential / parkland / institutional (RPI) land use, non-potable groundwater, medium / fine textured soil from the Ministry of Environment (MOE) document "Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the *Environmental Protection Act*" (April 15, 2011), referred to as MOE Table 3 RPI Standards.

As part of the Phase One ESA completed by Rubicon Environmental (2008) Inc.; eight (8) general areas of potential environmental concern were identified on the RSC property. Six (6) main potential contaminants of concern were identified at the Site: Petroleum Hydrocarbons (PHC F1-F4), Benzene, Toluene, Ethylbenzene and Xylenes (BTEX), Volatile Organic Compounds (VOC's), Polycyclic Aromatic Hydrocarbons (PAH's), Metals and Polychlorinated Biphenyls (PCBs).

Based on the findings of the Phase I ESA investigation, a judgemental sampling approach was implemented based on the potentially contaminating activities and areas of environmental concerns identified on the RSC property. The Phase II ESA investigation completed on the RSC property included the advancement of twenty (20) boreholes (BH) and the installation of ten (10) groundwater monitoring wells. The locations of the boreholes and groundwater monitoring wells were strategically placed to fully investigate and identify any contaminants of concern which may be present on, in or under the Phase II ESA property.

Soil analysis completed during the Phase Two ESA indicated that soil met the MOE Table 3 Standards for all parameters tested which included potential contaminants of concern; Petroleum Hydrocarbons (PHC F1-F4), Benzene, Toluene, Ethylbenzene and Xylenes (BTEX), Volatile Organic Compounds (VOC's), Polycyclic Aromatic Hydrocarbons (PAH's), Metals, Polychlorinated Biphenyls (PCBs) and pH.

Groundwater analysis completed during the Phase Two ESA indicated that groundwater met the MOE Table 3 Standards for all parameters tested which included potential contaminants of concern; ; Petroleum Hydrocarbons (PHC F1-F4), Benzene, Toluene, Ethylbenzene and Xylenes (BTEX), Volatile Organic Compounds (VOC's), Polycyclic Aromatic Hydrocarbons (PAH's), Metals and Polychlorinated Biphenyls (PCBs).

Based on the findings of the Phase II ESA, the RSC property meets the Table 3 Standards for residential / parkland / institutional (RPI) land use, non-potable groundwater, medium / fine textured soil from the Ministry of Environment (MOE) document "Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the *Environmental Protection Act*" (April 15, 2011), referred to as MOE Table 3 RPI Standards.

The completion of this Phase II ESA investigation along with the findings and conclusions of this report was carried out by Mr. Paul Rew, P. Eng., a qualified person (QP) registered with the Ministry of the Environment, as defined by O. Reg. 153/04, amended by O. Reg. 511/09.

2.0 INTRODUCTION

2.1 Site Description

i) The municipal address of the Phase II ESA property is 3195 East Bayshore Rd. (formerly known as Third Ave. East) and property identifier number is PIN 37060-0123 (LT).
ii) The Phase II ESA property has an area of 37.45 acres (15.16 hectares), and borders 32nd Ave East (north), 9th Ave East (east), East Bayshore Rd (west), and an undeveloped parcel to the south (Figure 2).

2.2 Property Ownership

Property owner:	Northridge Property Management Inc. 908 2nd Avenue East, Suite 200, Owen Sound, Ontario
Authorized Representative:	Mr. Trevor Heathers, 1- 519-270-0468 Secretary, Northridge Property Management Inc.

2.3 Current and Proposed Future Uses

The subject property was first developed in 1965 by RCA Victor Co. Ltd. The site was developed with one (1) 240,000 ft² industrial building and one (1) 4,000 ft² outbuilding which remains to the present day. The industrial building is separated into multiple units occupied, or formerly occupied, by various commercial and industrial operations and the outbuilding is separated into two (2) units.

Rubicon Environmental (2008) Inc. was informed by the authorized representative that an official proposal for future use has not been finalized. The intended future property use will be residential, and a record of site condition is required.

2.4 Applicable Site Condition Standard

The RSC property was assessed using the Table 3 Standards for residential / parkland / institutional (RPI) land use, non-potable groundwater, medium / fine textured soil from the Ministry of Environment (MOE) document "Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the *Environmental Protection Act*" (April 15, 2011), referred to as MOE Table 3 RPI Standards.

The following rationale was used to determine the applicable site condition standard for use at this site:

Under *Section 35: Non-potable and potable groundwater conditions* of the regulation, the RSC property meets the following conditions to warrant the use of non-potable groundwater criteria;

(a) the property, and all other properties located, in whole or in part, within 250 metres of the boundaries of the property, are supplied by a municipal drinking water system, as defined in the *Safe Drinking Water Act, 2002*, and have no wells installed;

(b) the property is not located in an area designated in a municipal official plan as a well-head protection area or other designation identified by the municipality for the protection of ground water, or

(c) the record of site condition does not specify agricultural or other use as the type of property use for which the record of site condition is filed;

(d) on November 21, 2013, the QP, on behalf of the owner, has given the clerk of the local municipality (Owen Sound), and of any upper-tier municipality (Grey County), in which the property is located and written notice of intention to apply the non-potable ground water site condition standards in preparing a record of site condition for the property, (refer to Appendix 2 – Municipal Documentation); and,

(e) within 30 days after receiving the notice described in clause, neither the local municipality nor the upper-tier municipality (if any) has given written notice (in this clause called a "notice of objection") to the owner that it objects to that application of the non-potable ground water site condition standards

Section 41: Site condition standards, environmentally sensitive areas of the regulation, does **not** apply to the RSC property due to the following conditions;

(a) the property is **not**,

(i) within an area of natural significance,

(ii) includes or is adjacent to an area of natural significance or part of such an area, or

(iii) includes land that is within 30 metres of an area of natural significance or part of such an area;

(b) the soil at the property does **not** have a pH value as follows:

(i) for surface soil, less than 5 or greater than 9,

(ii) for sub-surface soil, less than 5 or greater than 11; or

The pH value ranged from 7.55 to 8.21. Refer to Appendix 4 – Laboratory Certificates of Analysis.

Section 43.1: Site condition standards, shallow soil property or water body of the regulation does **not** apply to the RSC property for the following conditions;

(a) the property is **not** a shallow soil property; or

(b) the property does **not** include all or part of a water body or is adjacent to a water body or includes land that is within 30 metres of a water body. O. Reg. 511/09, s. 21.

(c) In this section,

"shallow soil property" means a property of which 1/3 or more of the area consists of soil equal to or less than 2 metres in depth beneath the soil surface, excluding any non-soil surface treatment such as asphalt, concrete or aggregate;

"soil" means, for the purposes of the definition of shallow soil property, unconsolidated naturally occurring mineral particles and other naturally occurring material resulting from the natural breakdown of rock or organic matter by physical, chemical or biological processes that are smaller than 2 millimetres in size or that pass the US #10 sieve, and includes a mixture of soil and rock if less than 50 per cent by mass of the mixture is rock. O. Reg. 511/09, s. 21.

Property Use:
Current property use is industrial / commercial. The proposed property use is residential.

Soil Texture Criteria:
Based on a grain size analysis completed for the RSC property the medium / fine textured soil standard will apply based on the following results;

Description: Clayey Silt with an estimated Hazen Number of 4.97E-07 cm/s. Refer to Appendix 4 - Laboratory Certificates of Analysis.

"coarse textured soil" means soil that contains more than 50 per cent by mass of particles that are 75 micrometres or larger in mean diameter;

"medium and fine textured soil" means soil that contains 50 per cent or more by mass of particles that are smaller than 75 micrometres in mean diameter. O. Reg. 153/04, s. 42 (2); O. Reg. 511/09, s. 19.

3.0 BACKGROUND INFORMATION

3.1 Physical Setting

The subject property is located on the east side of East Bayshore Road, just south of 32nd Street, in Owen Sound, Ontario (Figure 1). The subject property encompasses a total area of approximately 37.45 acres. Georgian Bay is located approximately 40m west of the northwestern corner of the property boundary, and the distance to Georgian Bay increases significantly towards the southwestern property boundary. Conservation lands are located more than 300m north of the subject property, with limited commercial/industrial and residential developments located north, east, and south of the subject property.

The site is currently developed with one (1) 240,000 sq. ft. industrial/commercial building which is separated into multiple units occupied, or formerly occupied, by various commercial and industrial operations, and one (1) 4,000 sq. ft. outbuilding which is separated into two (2) units.

The topography of the subject property is generally flat with a slope to the west towards Georgian Bay. The north, east, and southern property boundaries are built up into slight berms to create the drainage ditch-lines that discharge to Georgian Bay.

Surface water on the subject property is managed with on-site catch basins that discharges to Georgian Bay via the western property ditch, and a municipal sewer discharge point located north of the northwest corner of the subject property.

3.2 Past Investigations

The following is list of five (5) past environmental investigations completed on the RSC property which were provided by the authorized agent. Rubicon Environmental (2008) Inc. **did not** rely on any of the information or data to complete the current Phase II ESA. The information and data within the past reports were referenced as background information. Each report did not meet the requirements outlined in Section 35.5 of the regulation, as follows;

A report may be used by a qualified person as a phase two environmental site assessment report in a record of site condition or used as a phase two environmental site assessment report in planning, conducting or supervising a risk assessment, for the phase two property that is the subject of the report or an RSC property within it, if,

(a) the date the last work on all of the planning the site investigation, conducting the site investigation and reviewing and evaluating the information gathered through the site investigation required for the phase two environmental site assessment that is the subject of the report that was done is ***no later than 18 months*** *before the submission of the record of site condition or the commencement of the risk assessment;*

(b) in the professional opinion of the qualified person, there is ***no new or materially changed area of potential environmental concern at the property;***

(c) the phase two environmental site assessment ***meets all other requirements of this Part and Schedule E for a phase two environmental site assessment****, including the requirements for a phase two environmental site assessment report;*

(d) the report is a single document; and

(e) the report is the most recent document that ***meets the requirements of this Part and Schedule E*** *for a phase two environmental site assessment report. O. Reg. 511/09, s. 14.*

LIST OF PAST INVESTIGATIONS

i) *A Phase I ESA report was completed in July 1997, by Peto MacCallum Ltd. Consulting Engineers, entitled "Phase I Environmental Site Assessment, Skyline Estates Ltd.", on behalf of Skyline Estates Ltd., the property owner at that time. The following potential sources of onsite contaminating activities were identified at that time:*

- Possible impairment from metals related to abandoned machinery and parts located in the northern area of the industrial building;
- Possible asbestos containing materials (ACM's) in the pipe insulation used in the boiler room;
- Possible lead-based paints or other designated substances used in the construction materials of the industrial building, due to the age of the building;
- Possible presence of PCB's in the transformer area and in the fluorescent lighting fixtures that pre-dated 1980;
- Possible contamination from drums, wood debris, and older vehicles and tires stored in the eastern parking area of the site;
- Possible hydrocarbon impairment relating potential to spills, leakage, and overflows in the compressor room, the auto-body shop, and an above ground storage tank (AST) located in the southeastern area of the site occupied by Weld-Tek;
- Possible impairment relating to metals and cutting oils used by historical tenants operating as metal fabricators, metal stamping, and machine shops;
- Possible impairment due to volatile organic compounds relating to the potential for spills and leakage of varnish and paints associated with the former RCA plant operations.

ii) *A report prepared in August 2005, entitled "MOE Order Response, Commercial/Industrial Property, 3195 East Bayshore Road, Owen Sound, Ontario", performed by Rubicon Environmental Inc.;*

- Rubicon Environmental Inc. was retained by 1598240 Ontario Inc., the current property owner at that time, to respond to an MOE order issued against the subject property. The investigation was conducted to oversee the removal of waste stored in drums on site, and to verify that the soils in the storage area were not impacted by the waste drum storage.

iii) *A report was prepared by Rubicon Environmental Inc. in August of 2005, entitled "Phase II Environmental Site Assessment, Industrial Property, 3195 East Bayshore Road, Owen Sound, Ontario". The limited Phase II ESA was conducted in the Dorval Boats Inc.'s northern shipping area of the subject property.*

- The Phase II borehole program was completed to determine if soils and /or groundwater in this area had been impacted by the manufacturing processes of Dorval Boats Inc.
- A follow-up to the limited Phase II ESA investigation was completed with a further soil sampling program. The finding of the follow-up drilling program showed that all soil verification samples met the Table 3 O.Reg. 153/04 criteria.

iv) *A report was prepared by Rubicon Environmental Inc. in January 2006, entitled "R4682.4 – Former RCA Plant/Industrial Property, 3195 East Bayshore Road, Owen Sound, Ontario, Phase I Environmental Site Assessment". The findings of the Phase I ESA were:*

- The subject property was undeveloped until 1965 when the subject property was developed by the RCA Victor Co. Ltd. The industrial building and the wood frame outbuilding were constructed for the purpose of manufacturing television and radio cabinets to be distributed to various assembly facilities by train;
- During the 1980's, the RCA Victor Co. Ltd. ceased operations and was vacant until 1985. Since 1985, the site has had a variety of commercial and industrial tenants. Some of the tenants included Georgian College, metal fabricating and machining operations, boat manufacturing operations, a Nor Var Paints manufacturing facility, self storage operations, an auto body shop, a catering company operation, a marine windshield manufacturer, a wire harness assembly operation, a gymnasium, and a restaurant/bar;
- An inspection was conducted of the individual operations and their practices related to solid and liquid waste generation and disposal, chemicals and storage practices, equipment used in the operations, and for the presence of UST's and/or AST's on site;
- An autobody and upholstery shop, and an artist's studio occupies the outbuilding formerly used as the saw mill. A variety of older vehicles, drums, and scrap metal were stored around the perimeter of the outbuilding. The use of paints and solvents associated with body shop and the leaking or spillage of vehicle fluids may pose an environmental risk. The outbuilding was also historically occupied by a paint manufacturer and the potential exists that there may be impacts related to spillage or leaking of paints, varnishes, and /or solvents;
- Waste materials were observed across the eastern area of the property including wood debris, tires, concrete debris, scrap metal, plastics, and mounds of soil with wood, steel, concrete, metal, and plastic debris. It was recommended that source separation of the debris should be undertaken to remove the debris from the site;
- A large scale transformer is located on site. No maintenance records were available and it was unknown if PCB based oils were present in the transformer. It was recommended that oil samples be obtained to determine if PCB's were present;
- Flourescent light fixtures were present in the industrial building. It was noted that the current property owner advised that many of the light fixtures had recently been replaced. Due to the age of the building, the potential that PCB containing ballasts were still present. If renovations or demolition was to occur, and PCB containing ballasts were present, they would not pose a significant environmental risk if properly disposed of by following regulatory guidelines;
- Laws relating to lead content in paint were issued in 1977. Due to the age of the building, the potential exists that lead based paints were used. Painted surfaces were in good shape, with no chipping or peeling observed. The outbuilding showed some chipping and peeling of the painted surfaces. Prior to renovations or demolition to occur, testing for lead based paint should be completed;
- It was recommended that a Phase II ESA be undertaken with boreholes to be advanced on site and soil samples should be analysed for metals and inorganics, VOC's(volatile organic compounds), petroleum hydrocarbons(BTEX, PHC(F1-F4)), and PAH's(polycyclic aromatic hydrocarbons). A minimum of three boreholes should be developed as monitoring wells and groundwater samples should be analysed for those parameters identified above.

v) *A report was prepared by Rubicon Environmental Inc. in March 2006, entitled "R4682.4 – Former RCA Plant/Industrial Property, 3195 East Bayshore Road, Owen Sound, Ontario, Phase II Environmental Site Assessment". The findings of the Phase Ii ESA were:*

- On March 1 & 2, 2006, fifteen boreholes and eighteen test pits were advanced on the subject property.
- 24 soil samples were analyzed for petroleum hydrocarbon parameters, and 17 soil samples were analyzed for VOC compounds, 21 soil samples were analyzed for general metals and in-organics, and five samples were analyzed for PAH parameters.
- All soil sample concentrations of parameters analyzed met the current Table 3 O.Reg. 153 criteria, except for BH207, in which a slightly elevated level of F2 parameter of TPH was recorded.
- An area of 3mX3mX0.5m was excavated from the area of BH207, the floor of the excavation was sampled and analyzed for hydrocarbon parameters, and proved to meet the current Table 3 O.Reg. 153 criteria.
- An area of surficial soil staining was excavated and the soil stockpiled on-site. A representative soil sample was obtained from the base of the excavation and submitted for analysis of the petroleum hydrocarbon parameters. The analysis confirmed that current Table 3 O.Reg 153 criteria was met.
- Two boreholes were developed as monitoring wells. Groundwater samples were obtained from the wells and analysed for petroleum hydrocarbons parameters, VOC's, general metals and in-organics, and the PAH parameters. Analysis showed that Regulatory criteria had been met.
- The transformers oil was analysed for PCB's and revealed that the oil was a PCB containing oil (Aroclor 1254) at concentrations of 12,000ppm – 13,0000ppm. It was recommended that the transformers be decommissioned in accordance with Regulatory criteria.
- No further environmental investigation was recommended at the time.

4.0 SCOPE OF THE INVESTIGATION

4.1 Overview of Site Investigation

Based on the findings of the Phase I ESA investigation, a judgemental sampling approach was implemented based on the potentially contaminating activities and areas of environmental concerns identified on the RSC property. The Phase II ESA investigation completed on the RSC property included the advancement of twenty (20) boreholes (BH) and the installation of ten (10) groundwater monitoring wells. The locations of the boreholes and groundwater monitoring wells were strategically placed to fully investigate and identify any contaminants of concern which may be present on, in or under the Phase II ESA property.

4.2 Media Investigated

Soil and groundwater media were deemed relevant to the Phase II ESA based on the potentially contaminating activities, the areas of environmental concerns and potential contaminants of concern including; Petroleum Hydrocarbons (PHC F1-F4), Benzene, Toluene, Ethylbenzene and Xylenes (BTEX), Volatile Organic Compounds (VOC's), Polycyclic Aromatic Hydrocarbons (PAH's), Metals and Polychlorinated Biphenyls (PCBs), identified on the RSC property.

4.3 Phase One Conceptual Site Model

The following outlines the key findings pertaining to the RSC property as part of the Phase I ESA report completed by Rubicon Environmental (2008) Inc.

Based on the findings of the Phase One ESA completed by Rubicon Environmental (2008) Inc. potentially contaminating activities (PCA's) have occurred at the Site that are outlined in the following table;

Potentially Contaminating Activities Pertaining to the RSC Property

Type of Activity	Location	Comments
Former CP Rail Spur PCA # 46	On site – Outside at the southeast area of southern property boundary	Former Canadian Pacific Railway Spur
Former storage area of wastes related to former operations of a paint manufacturer and former boat manufacturers. PCA # 2 PCA # 39 PCA # 43 PCA # 49 PCA # 51	On site – Outside at the central eastern region of subject property.	Liquid wastes in the form of resins, paints and solvents were formerly stored in sealed drums in the central eastern area of the asphalt groundcover. Solid wastes such as concrete, tires, soils, scrap vehicles and scrap metals were formerly stock-piled in this area of the asphalt groundcover as well. These items were removed under an MOE order issued in 2005. The area was investigated by Rubicon Environmental Inc. in 2005, and met the current guidelines.
Former area of historical boats manufacturing operations and shipping receiving area of products associated with boat manufacturing. PCA # 2 PCA # 7 PCA #39	On site – Outside at the central north eastern area of the building in the area of shipping/receiving docks, outside at the north central area of the building's shipping & receiving area, outside at the northwest corner of the building on the north side of the building, outside at the central west area of the building, and outside at the northwest area of the building on the west side of the building.	Former Doral Boats Inc., Georgian Boat Works, and Lyon's Marine boat manufacturing area, and the area of shipping and receiving of manufacturing products.

Former area of historical plexi-glass windshield manufacturing operation & current engineering tenant's warehouse and parts storage area. PCA #2, 39, 43, & 51	On-site – Outside at the central west area of the building.	Former Marine Windshield Manufacturers Inc. area of operation.
Onsite Hydro Transformer PCA # 18	On site – Outside along the eastern wall of the building in the northeast area of the building	Onsite large scale transformer.
Outbuilding used for minor autobody repair and painting. Former area of paint manufacturer. PCA # 2, 27, 39, & 51	On-site – Outside in the north eastern region of subject property around the area of the outbuilding.	Former location of Nor Var Paints, a paint manufacturing operation. Current location of Tim's Repair, U-Fix-It auto-body and upholstery shop and Vince Goodeve's Artisit's Studio. The outbuilding has a pre-fabricated paint booth with complete ventilation system, manufactured by Atlantic International.
Former area of historical wood cabinet manufacturing processes, and shipping & receiving of products related to the former RCA Victor Co. Ltd. operations. PCA # 2 PCA #39 PCA # 51	On-site – Outside in the southern region of subject property in the area of the industrial building bay doors.	Currently occupied by Heated Boat Storage, Transcontinental Printing/RBW Graphics paper & equipment storage, and Harbour Self Storage.
Former area of historical wood cabinet manufacturing processes, related to the former RCA Victor Co. Ltd. operations. Current area of mould & pattern tenant. PCA # 2 PCA # 33 PCA # 34 PCA # 39 PCA # 43 PCA # 51	On-site – Outside in the south central region on the west side of the industrial building in the area of the current industrial mould manufacturer.	Currently occupied by Thompson Mould & Pattern, an industrial mould manufacturer.

Note: PCA # - as per Clause 16 (2) (a) of Schedule D, Table 2

As part of the Phase One ESA, Rubicon Environmental (2008) Inc.; identified eight (8) general areas of potential environmental concern listed in the Table of Areas of Potential Environmental Concern.

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

Area of Potential Environmental Concern	Location of Area of Potential Environmental Concern on Phase One Property	Potentially Contaminating Activity (#) – Table 2 of Schedule D- reference number	Location of PCA (on-site or off-site)	Contaminants of Potential Concern	Media Potentially Impacted (Ground water, soil and/or sediment)
APEC #1 ***Former*** location of CP Rail spur	Outside at the southeast corner of the industrial building	(46) Rail Yards, Tracks, and Spurs	On-site	BTEX PHC's PAH's METALS	Soil Groundwater
APEC #2 ***Former*** storage area of wastes related to the former operations of a paint manufacturer, former boat manufacturers, and stockpiled scrap metal, soils, and waste debris.	Outside in the central east region	(2) Adhesives and Resins Manufacturing, Processing and Bulk Storage (39) Paints Manufacturing, Processing and Bulk Storage (43)Plastics (including Fibreglass) Manufacturing and Processing (49) Salvage Yard, including automobile wrecking (51) Solvent Manufacturing, Processing and Bulk Storage	On-site	METALS PHC's BTEX VOC's PAH's PCB's	Soil Groundwater

APEC #3 ***Former*** area of historical boat manufacturing operations and shipping receiving area of products associated with boat manufacturing. ***Former*** area of RCA Victor Co. Ltd. shipping & receiving and manufacturing processes. ***Currently*** used for miscellaneous storage, gymnasium, warehousing, dance studio & engineering firm.	Outside at the central north eastern area of the building in the area of shipping and receiving docks; outside at the north central area of the building's shipping & receiving area; outside at the northwest corner of the building on the north side of the building; outside at the central west area of the building; outside at the northwest area of the building on the west side of the building.	(2) Adhesives and Resins Manufacturing, Processing and Bulk Storage (7) Boat Manufacturing (39) Paints Manufacturing, Processing and Bulk Storage	On-site	PAH's PHC's BTEX VOC's METALS	Soil Groundwater
APEC #4 ***Former*** area of historical plexi-glass windshield manufacturing operation. ***Former*** area of RCA Victor Co. Ltd. shipping & receiving and manufacturing processes. ***Former*** area of electronics manufacturer, and a machine shop/fabrication. ***Current*** tenant's parts warehouse.	Outside at the central west area of the building.	(2) Adhesives and Resins Manufacturing, Processing and Bulk Storage (39) Paints Manufacturing, Processing and Bulk Storage (43) Plastics (including Fibreglass) Manufacturing and Processing (51)Solvent Manufacturing, Processing and Bulk Storage	On-site	PAH's PHC's BTEX VOC's METALS	Soil Groundwater
APEC #5 ***Onsite*** Hydro Transformer	Outside along the eastern wall of the building in the northeast area of the building	(18)Electricity Generation, Transformation and Power Stations	On-site	PCB's BTEX PHC's VOC's PAH's METALS	Soil Groundwater

APEC #6 ***Former*** area of paint manufacturer, former area of RCA Victor Co. Ltd. saw mill. ***Currently*** used for auto-body & upholstery repair and an artist's studio.	Outside in the north eastern region of subject property around the area of the outbuilding	(2) Adhesives and Resins Manufacturing, Processing and Bulk Storage (27)Commercial Autobody Shops (39)Paints Manufacturing, Processing and Bulk Storage (51)Solvent Manufacturing, Processing and Bulk Storage	On-site	PAH's PHC's BTEX VOC's METALS	Soil Groundwater
APEC #7 ***Former*** area of historical wood cabinet manufacturing processes, and shipping & receiving of products related to the former RCA Victor Co. Ltd. operations. ***Currently*** occupied for self-storage units & warehousing units.	Outside in the southern region of subject property in the area of the industrial building bay doors.	(2) Adhesives and Resins Manufacturing, Processing and Bulk Storage (39)Paints Manufacturing, Processing and Bulk Storage (51)Solvent Manufacturing, Processing and Bulk Storage	On-site	PAH's PHC's BTEX VOC's METALS	Soil Groundwater

APEC #8 ***Former*** RCA Victor Co. Ltd. manufacturing area. ***Currently*** occupied by industrial mould & pattern operation.	Outside in the western south central area of the industrial building.	(2) Adhesives and Resins Manufacturing, Processing and Bulk Storage (33) Metal Treatment, Coating, Plating, and Finishing (34) Metal Fabrication (39)Paints Manufacturing, Processing and Bulk Storage (43) Plastics (including Fibreglass) Manufacturing and Processing (51) Solvent Manufacturing, Processing and Bulk Storage	On-site	PAH's PHC's BTEX VOC's METALS	Soil Groundwater

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

Six (6) main potential contaminants of concern were identified at the Site: Petroleum Hydrocarbons (PHC F1-F4), Benzene, Toluene, Ethylbenzene and Xylenes (BTEX), Volatile Organic Compounds (VOC's), Polycyclic Aromatic Hydrocarbons (PAH's), Metals and Polychlorinated Biphenyls (PCBs).

4.4 Deviations from Sampling and Analysis Plan

No deviations from the sampling and analysis plan were necessary during the completion of the Phase II ESA on the RSC property.

4.5 Impediments

No physical impediments including site access restrictions were encountered during the completion of the Phase II ESA on the RSC property.

5.0 INVESTIGATION METHOD

5.1 General

The Phase II ESA investigation was conducted in accordance with the criteria meeting O. Reg. 153/04 as amended, for the purpose of filing a Record of Site Condition (RSC) with the Ontario Ministry of the Environment.

The RSC property was assessed using the Table 3 Standards for residential / parkland / institutional (RPI) land use, non-potable groundwater, medium / fine textured soil from the Ministry of Environment (MOE) document "Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the *Environmental Protection Act*" (April 15, 2011), referred to as MOE Table 3 RPI Standards.

5.2 Drilling and Excavating

Rubicon Environmental (2008) Inc. retained the services of Henderson Drilling Inc., 2200 Gracey Side Road, RR#5 Tilbury, Ontario, N0P 2L0, License # 7488 to complete the borehole drilling program at the RSC property between the dates January 29 and 31, 2013. A truck mounted CME 55 was used to drill the twenty (20) 15 cm boreholes. Soil samples were obtained at 0.75 m intervals using a 76 cm long, 5 cm diameter split spoon sampler. The sampler was thoroughly cleaned by the licensed drillers between each sampling interval to prevent possible cross contamination.

5.3 Soil Sampling

Soil samples were obtained at 0.75 m intervals using a 76 cm long, 5 cm diameter split spoon sampler. All field screening soil samples were collected with the use of dedicated nitrile gloves and were placed in 1 litre dedicated sterile bags as part of the field sampling procedure. All representative soil samples selected for laboratory analysis were placed in dedicated sterile sample jars using a dedicated sterile T-Core soil sampler, all provided in advance by the laboratory, and placed in ice packed coolers at a temperature of approximately 3-10 degrees Celsius.

The soil geology encountered in the twenty (20) boreholes advanced on-site was uniformly distributed, and consisted of mainly of native silty clay (Hazen Number 4.97E-07 cm/s), reddish brown in colour. Surficial layers of engineered coarse fill were encountered at depths ranging from 0.2 – 0.6m bgl in most borehole locations, and intermittently as far as 2.3m bgl in BH/MW2, BH/MW15, BH16, and BH/MW18. Refer to Appendix 3 – Borehole Logs.

5.4 Field Screening Measurements

The headspace vapours of each sample was tested for VOC concentrations using a Thermo Gas Model 1238ME Gastechtor Hydrocarbon Surveyor, calibrated against methane. This field screening method of soil samples was used to determine 'worst' case sample selection. This system is designed to measure organic vapour concentrations and has a detection range of 5 to 500 ppm and 0 - 100% LEL (lower explosive limit of gasoline). As part of the field screening method, all soils encountered were also examined for olfactory and visual indicators of impairment such as petroleum odours and staining.

5.5 Groundwater: Monitoring Well Installation

The installation of ten (10) groundwater monitoring wells at the RSC property was completed between the dates January 29 and 31, 2013. by Henderson Drilling Inc., 2200 Gracey Side Road, RR#5 Tilbury, Ontario, N0P 2L0, License # 7488. The requirements for installing these wells were completed by the licensed drilling company as per Ontario Regulation 903 enacted under the EPA, as amended. Soil samples were obtained at 0.75 m intervals using a 76 cm long, 5 cm diameter split spoon sampler. The sampler was thoroughly cleaned by the licensed drillers between each sampling interval to prevent possible cross contamination. The groundwater monitoring wells were developed using 50 mm, Schedule 40 PVC pipe with slotted screen in the area of the groundwater. Silica sand was positioned around the screen with a bentonite seal located above the filter pack to grade to prevent surface water from entering the monitoring well. Refer to Appendix 3 - Borehole Logs

5.6 Groundwater: Field Measurement of Water Quality Parameters

The headspace vapours of each monitoring well was tested for VOC concentrations using a Thermo Gas Model 1238ME Gastechtor Hydrocarbon Surveyor, calibrated against methane. This system is designed to measure organic vapour concentrations and has a detection range of 5 to 500 ppm and 0 - 100% LEL (lower explosive limit of gasoline). As part of the field investigation method, all monitoring wells were examined for VOC concentrations prior to groundwater sampling. No VOC concentrations were detected in the monitoring wells.

The pH of three monitoring wells were recorded on May 6, 2013. BH/MW02 was recorded as 7.4, BH/MW5 as 7.4, and BH/MW8 as 7.3.

Temperature was recorded in these wells on May 6, 2013 as BH/MW02 was recorded as 8.2±°C, BH/MW5 as 8.1±°C, and BH/MW8 as 8.1±°C.

5.7 Groundwater: Sampling

On May 3, 2013, three (3) well water volumes were purged from each of the ten (10) groundwater monitoring wells with the use of dedicated disposable bailers. All purged groundwater was placed in sealed containers and stored at the RSC property. On May 06, 2013, with the use of dedicated disposable bailers, groundwater samples were collected from each of the ten (10) groundwater monitoring wells, including adequate duplicate and trip blank samples, and placed in specified sampling bottles/vials provided by the laboratory. All representative groundwater samples selected for laboratory analysis were placed in specified sampling bottles/vials provided by the laboratory, and placed in ice packed coolers at a temperature of approximately 3-10 degrees Celsius.

5.8 Sediment Sampling

Sediment sampling was not completed as part of the Phase II ESA investigation on the RSC property.

5.9 Analytical Testing

The chemical analyses of soil and groundwater samples were completed by ALS Environmental Laboratories of Waterloo, Ontario. ALS Environmental Laboratories is a member of the Canadian Association for Laboratory Accreditation Inc. (CALA) and meets the requirements of Section 47 of O.Reg. 153/04 certifying that the analytical laboratory be accredited in accordance with the International Standard ISO/IEC 17025 and with standards developed by the Standards Council of Canada.

5.10 Residual Management Procedures

All residual soil clippings from each borehole advanced, all purged groundwater volumes, and all fluids from equipment cleaning, were placed in sealed drums and water containers and stored at the RSC property for future disposal.

5.11 Elevation Surveying

Elevations were obtained from a survey provided to Rubicon Environmental (2008) Inc. by Northridge Property Management Inc., completed by Hewett and Milne Limited, Ontario Land Surveyors, on September 5, 2012, providing astronomic bearings and geodetic elevations, and derived from the southerly limit of Lot 54 of the RSC property, denoted as 74°36'10".

5.12 Quality Assurance and Quality Control Measures

For soil samples submitted for chemical analyses:

Parameter	Container / Field Preservative Information
BTEX, PHCs (F1-F4) and VOCs	2 x 40-60ml glass vials charged with methanol preservative, pre-weighed and 1 x glass, wide jar with Teflon lined lid.
PAHs	1 x glass, wide jar with Teflon lined lid
PCBs	1 x glass, wide jar with Teflon lined lid
METALS	1 x glass, HDPE
pH	1 x glass, HDPE

For groundwater samples submitted for chemical analyses:

Parameter	Container / Field Preservative Information
BTEX, PHCs (F1) and VOCs	2 x 40-60ml glass vials with no headspace, field preservative NaHSO4
PHCs (F2-F4)	1L amber glass bottle, Teflon lined lid, field preservative NaHSO4
PAHs	1L amber glass bottle, Teflon lined lid
PCBs	1L amber glass bottle, Teflon lined lid
METALS	HDPE followed by HCl (field filtered)

All sampling containers, bottles and vials were pre-ordered by Rubicon Environmental (2008) Inc., and were supplied by ALS Environmental Laboratory.

Soil samples were obtained at 0.75 m intervals using a 76 cm long, 5 cm diameter split spoon sampler that was thoroughly cleaned with a decontaminate wash provided, and executed, by the licensed drillers between split spoon samples. The headspace vapours of each sample was tested for VOC concentrations using a Thermo Gas Model 1238ME Gastechtor Hydrocarbon Surveyor, calibrated against methane.

This field screening method for soil samples was used to determine 'worst' case sample selection. This system is designed to measure organic vapour concentrations and has a detection range of 5 to 500 ppm and 0 - 100% LEL (lower explosive limit of gasoline). As part of the field screening method, all soils encountered were also examined for olfactory and visual indicators of impairment such as petroleum odours and staining.

Groundwater samples were collected with the use of dedicated HDPE disposable bailers, after each monitoring well had been purged a minimum of three well volumes, and allowed to stabilize prior to sampling.

All samples selected for analysis were placed in the laboratory provided containers/vials/jars, and labelled according to the borehole/monitoring well location and/or split spoon sample ID, as per the proposed investigation and analysis plan.

All samples submitted for analysis were placed in ice packed coolers for transport to the laboratory, and were submitted using the ALS Environmental Laboratory provided Chain of Custody forms.

There were no deviations from the procedures set out in the quality assurance and quality control program, as set out in the sampling and analysis plan.

6.0 REVIEW AND EVALUATION

6.1 Geology

The site is located in a physiographic region known as Bruce Peninsula (Physiography of Southern Ontario, Chapman and Putnam, 1984). This region lies on the south shore of Georgian Bay.

Based on the findings of various geological maps and resources, native soils on site and within the surrounding area consist of clayey silts. Site stratigraphy from ground surface to deepest point investigated was generally comprised of: gravel from grade to 0.61m and silty soils to the depth explored at a maximum of 4.6 m bgl. Refer to Appendix 3 - Borehole Logs, which provide stratigraphic information at individual locations investigated.

The shallow sub-surface groundwater table was the primary groundwater investigated during the Phase II investigation, and was the only aquifer encountered at drill depths of 4.6m below grade level. The underlying native soils on the RSC property are medium/fine grained clayey silt with a Hazen Number of 4.97E-07 cm/s. Refer to Appendix 4 - Laboratory Certificates of Analysis.

Map 2556 "Quaternary Geology of Ontario, Southern Sheet" shows the subject property to be within a region of Elma Till (Huron – Georgian Bay lobe) sandy silt to silt matrix, clayey silt along the southern margin, moderately stony, strongly calcareous. This site was characterized by clayey silt soils.

Map P.2715 "Physiography of Southern Ontario" and 2224 "Physiography of the North western Portion Southern Ontario", shows the site to be located on a shale plain in an area referred to as the Cape Rich Steps. Maps 2544 and 2131 show bedrock in the Owen Sound area to be red shale of the Upper Ordovician age, Queenston Formation. Refer to Appendix 5 – Topographic/Geologic Maps.

The topography of the subject property is generally flat with an overall gradual slope to the west, with a slope to the south in the southwest region of the industrial building.

No other aquifer was investigated on the RSC property, as no known releases, potentially migrating contaminates, or potentially contaminating activities were identified that could potentially result in an impact beyond the shallow sub-surface groundwater table.

6.2 Groundwater: Elevations and Flow Direction

Each of the ten (10) groundwater monitoring wells developed on the RSC property were used for interpreting the groundwater flow direction. Screened intervals for each groundwater monitoring well began at 1.5m below grade to ensure that the anticipated shallow aquifer was encountered. Only one aquifer was encountered and investigated during the Phase II ESA.

The was no indication of free flowing product encountered in any of the ten groundwater monitoring wells installed as part of this Phase II ESA.

On May 06, 2013 the depth to groundwater in the monitoring wells were recorded as; BH/MW1 at 3.08 m bgl, BH/MW2 at 0.76 m bgl, BH/MW4 at 1.18 m bgl, BH/MW5 at 0.96 m bgl , BH/MW7 at 1.39 m bgl , BH/MW8 at 0.95 m bgl, BH/MW9 at 1.52 m bgl, BH/MW15 at 0.85 m bgl, BH/MW18 at 1.27 m bgl, BH/MW20 at 0.72 m bgl. The relative elevations for the monitoring wells ranged from 184.05 m asl to 185.25 m asl.

The inferred groundwater flow direction was calculated to be northwest. The groundwater levels were determined by use of a Solinst 101 Water Level Meter with P7 Probe with PVDF flat tape, and were measured from the grade level to the top of the groundwater in the monitoring well water volume. The inferred ground water flow direction was calculated using triangulation of installed monitoring wells, which were developed in compliance with O.Reg. 903 and 153/04 standards. The inferred groundwater flow direction is for the shallow sub-surface groundwater aquifer that was encountered and investigated at depths of 4.6 m below grade level. Refer to Figure 6.

It is anticipated that the potential for temporal variability in groundwater flow direction at the RSC property would be low given the site conditions encountered.

Municipal water service enters the northeast corner of the industrial building off of 32nd Avenue East. A water line branches of the main water line and circles the industrial building which is part of a system of fire hydrants on the RSC property. Municipal sanitary and storm sewers enter on the west side of the industrial building off of East Bayshore Road. Natural gas service runs off of 32nd Avenue East and enters the north, west and east sides of the industrial building and enters the outbuilding along the west side. The main hydro service enters the east side of the industrial building overhead from 9th Avenue East and then branches off underground to service the outbuilding at the southwest corner. Refer to Figure 2.

Based on the depth of groundwater measurements encountered, there is a low potential for interaction between buried utilities across the entire RSC property and the water table.

6.3 Groundwater: Hydraulic Gradients

The horizontal hydraulic gradient of the aquifer investigated was recorded as:

S/N 0.73 / 215m = 0.00339 m/m
E/W 0.99 / 180m = 0.00550 m/m
NE/SW 0.26 / 170m = 0.00152 m/m

The average horizontal hydraulic gradient is approximated at 0.00445 m/m.
No contaminants were present in the groundwater aquifer investigated on the RSC property.

6.4 Fine-Medium Soil Texture

Based on a site conditions encountered during the field observations and grain size analysis completed for the RSC property the medium and fine textured soil is to be used in determining the applicable site condition standards. Due to the consistency of the underlying sub-surface soils encountered in all boreholes advanced on the RSC property, one (1) composite soil sample was submitted for grain size analysis.

The results of the grain size analysis provided by ALS Environmental Laboratory is as follows: Description: Clayey Silt with an estimated Hazen Number of 4.97E-07 cm/s. Refer to Appendix 4 - Laboratory Certificates of Analysis.

6.5 Soil: Field Screening

The headspace vapours of each sample were tested for VOC concentrations using a Gastec TraceTechtor Gas Detection System, calibrated against methane. This preliminary field screening of soil samples was used to assist in determining 'worst' case sample selection. This system is designed to measure organic vapour concentrations and has a detection range of 5 to 500 ppm and 0-100% LEL (lower explosive limit of gasoline). All samples were also examined for olfactory and visual indicators of impairment.

No indication and / or evidence of soil impairment was encountered during the field screening methods.

6.6 Soil Quality

The locations of sampling points, and the depths of soil samples is presented in Figure 5, and Appendix 3 - Borehole Logs.

The RSC property was assessed using the Table 3 Standards for residential / parkland / institutional (RPI) land use, non-potable groundwater, medium / fine textured soil from the Ministry of Environment (MOE) document "Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act" (April 15, 2011), referred to as MOE Table 3 RPI Standards.

None of the potential contaminants of concerns which included; Petroleum Hydrocarbons (PHC F1-F4), Benzene, Toluene, Ethylbenzene and Xylenes (BTEX), Volatile Organic Compounds (VOC's), Polycyclic Aromatic Hydrocarbons (PAH's), Metals and Polychlorinated Biphenyls (PCBs), were present at concentrations greater than the applicable site condition standard at any of the sampling locations. Refer to Tables 2 - 6.

The analytical results do not indicate that soil serves as a source of contaminant mass contributing to ground water and do not indicate the presence of light or dense non-aqueous phase liquids.

6.7 Groundwater Quality

The locations of the monitoring wells and groundwater sample locations are outlined in Figure 5.

Samples selected for laboratory analysis of the metals parameters were field filtered using Watterra HDPE tube with laboratory supplied HCl field filter. No other field filtering was performed during sample preparation.

The RSC property was assessed using the Table 3 Standards for residential / parkland / institutional (RPI) land use, non-potable groundwater, medium / fine textured soil from the Ministry of Environment (MOE) document "Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act" (April 15, 2011), referred to as MOE Table 3 RPI Standards.

None of the potential contaminants of concerns which included; Petroleum Hydrocarbons (PHC F1-F4), Benzene, Toluene, Ethylbenzene and Xylenes (BTEX), Volatile Organic Compounds (VOC's), Polycyclic Aromatic Hydrocarbons (PAH's), Metals and Polychlorinated Biphenyls (PCBs), were present at concentrations greater than the applicable site condition standard at any of the sampling locations. Refer to Tables 7 - 10.

The analytical results do not indicate that soil serves as a source of contaminant mass contributing to ground water and do not indicate the presence of light or dense non-aqueous phase liquids.

6.8 Sediment Quality

Sediment sampling and / or investigation was not part of the Phase II ESA.

6.9 Quality Assurance and Quality Control Results

As part of the quality control samples procedure, of the forty three (43) soil samples submitted for laboratory analysis, six (6) were duplicate soil samples and two (2) were trip blanks. This ensured that sufficient duplicate samples were met (one for every ten samples) and adequate trip blank samples were also submitted. All samples were handled in accordance with analytical protocols with respect to holding times, preservation methods, storage requirements, and container types.

As part of the quality control samples procedure, of the fifteen (15) groundwater samples submitted for laboratory analysis, four (4) were duplicate groundwater samples and one (1) was a trip blank. This ensured that sufficient duplicate samples were met (one for every ten samples) and adequate trip blank samples were also submitted (one for every VOC sample submission.

Exceeding the minimum requirements for quality control sampling ensured that a higher level of accuracy could be developed in determining whether the RSC property meets the applicable site condition standards.

All certificates of analysis or analytical reports received pursuant to clause 47 (2) (b) of the regulation comply with subsection 47(3). A certificate of analysis or analytical report has been received for each sample submitted for analysis. All certificates of analysis or analytical reports received have been included in full in Appendix 4 - Laboratory Certificates of Analysis.

It is the opinion of Rubicon Environmental (2008) Inc. that the overall quality of the field data was adequate and accurately reflected the site conditions in a manner that any decision making was not affected and the overall objectives of the investigation and the assessment were met.

6.10 Phase Two Conceptual Site Model

6.11 Areas of Potentially Contaminating Activity and Concerns

The Phase Two Conceptual Site Model has been prepared based on information and data collected as part of Rubicon Environmental (2008) Inc.'s Phase One ESA and Phase Two ESA completed at the Site.

The subject property is located on the east side of Third Avenue East (also named East Bayshore Road), just south of 32nd Street in Owen Sound, Ontario. The municipal address is 3195 Third Avenue East (also named East Bayshore Road), Owen Sound, Ontario, N4K 5N3.

The subject property was first developed in 1965 by RCA Victor Co. Ltd. The site was developed with one (1) 240,000 ft² industrial building and one (1) 4,000 ft² outbuilding which remains to the present day. The industrial building is separated into multiple units occupied, or formerly occupied, by various commercial and industrial operations and the outbuilding is separated into two (2) units. Refer to Figure 2.

Previous environmental investigations had been conducted on the RSC property prior to Rubicon Environmental (2008) Inc. being retained which includes the following:

Rubicon Environmental Inc. "Phase II ESA, Industrial Property, Former RCA Plant, 3195 East Bayshore Road, Owen Sound, Ont.", dated June 2006.

Rubicon Environmental Inc. "Phase I ESA, Industrial Property, Former RCA Plant, 3195 East Bayshore Road, Owen Sound, Ont.", dated Jan 2006.

Rubicon Environmental Inc. "Phase II ESA, Industrial Property, 3195 East Bayshore Road, Owen Sound, Ont.", dated August 2005.

Rubicon Environmental Inc. "MOE Order Response, Commercial / Industrial Property, 3195 East Bayshore Road, Owen Sound, Ont.", dated August 2005.

Peto MacCallum Ltd. Consulting Engineers. "Phase I ESA, Skyline Estates Ltd.", dated July 1997.

Based on the findings of the Phase One ESA completed by Rubicon Environmental (2008) Inc. potentially contaminating activities (PCA's) have occurred at the Site that are outlined in the following table (refer to Figure 3):

Table 1: Potentially Contaminating Activities Pertaining to the RSC Property

Type of Activity	Location	Comments
Former CP Rail Spur PCA # 46	On site – Outside at the southeast area of southern property boundary	Former Canadian Pacific Railway Spur
Former storage area of wastes related to former operations of a paint manufacturer and former boat manufacturers. PCA # 2 PCA # 39 PCA # 43 PCA # 49 PCA # 51	On site – Outside at the central eastern region of subject property.	Liquid wastes in the form of resins, paints and solvents were formerly stored in sealed drums in the central eastern area of the asphalt groundcover. Solid wastes such as concrete, tires, soils, scrap vehicles and scrap metals were formerly stock-piled in this area of the asphalt groundcover as well. These items were removed under an MOE order issued in 2005. The area was investigated by Rubicon Environmental Inc. in 2005, and met the current guidelines.
Former area of historical boats manufacturing operations and shipping receiving area of products associated with boat manufacturing. PCA # 2 PCA # 7 PCA #39	On site – Outside at the central north eastern area of the building in the area of shipping/receiving docks, outside at the north central area of the building's shipping & receiving area, outside at the northwest corner of the building on the north side of the building, outside at the central west area of the building, and outside at the northwest area of the building on the west side of the building.	Former Doral Boats Inc., Georgian Boat Works, and Lyon's Marine boat manufacturing area, and the area of shipping and receiving of manufacturing products.
Former area of historical plexi-glass windshield manufacturing operation & current engineering tenant's warehouse and parts storage area. PCA #2, 39, 43, & 51	On-site – Outside at the central west area of the building.	Former Marine Windshield Manufacturers Inc. area of operation.
Onsite Hydro Transformer PCA # 18	On site – Outside along the eastern wall of the building in the northeast area of the building	Onsite large scale transformer.
Outbuilding used for minor autobody repair and painting. Former area of paint manufacturer. PCA # 2, 27, 39, & 51	On-site – Outside in the north eastern region of subject property around the area of the outbuilding.	Former location of Nor Var Paints, a paint manufacturing operation. Current location of Tim's Repair, U-Fix-It auto-body and upholstery shop and Vince Goodeve's Artisit's Studio. The outbuilding has a pre-fabricated paint booth with complete ventilation system, manufactured by Atlantic International.

Former area of historical wood cabinet manufacturing processes, and shipping & receiving of products related to the former RCA Victor Co. Ltd. operations. PCA # 2 PCA #39 PCA # 51	On-site – Outside in the southern region of subject property in the area of the industrial building bay doors.	Currently occupied by Heated Boat Storage, Transcontinental Printing/RBW Graphics paper & equipment storage, and Harbour Self Storage.
Former area of historical wood cabinet manufacturing processes, related to the former RCA Victor Co. Ltd. operations. Current area of mould & pattern tenant. PCA # 2 PCA # 33 PCA # 34 PCA # 39 PCA # 43 PCA # 51	On-site – Outside in the south central region on the west side of the industrial building in the area of the current industrial mould manufacturer.	Currently occupied by Thompson Mould & Pattern, an industrial mould manufacturer.

Note: PCA # - as per Clause 16 (2) (a) of Schedule D, Table 2

As part of the Phase One ESA, Rubicon Environmental (2008) Inc.; identified eight (8) general areas of potential environmental concern listed in the Table of Areas of Potential Environmental Concern. Refer to Figure 4.The scope of work for the Phase Two ESA was prepared in order to assess the environmental quality of soil and groundwater at identified APECs, respectively.

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

Area of Potential Environmental Concern	Location of Area of Potential Environmental Concern on Phase One Property	Potentially Contaminating Activity (#) – Table 2 of Schedule D- reference number	Location of PCA (on-site or off-site)	Contaminants of Potential Concern	Media Potentially Impacted (Ground water, soil and/or sediment)
APEC #1 ***Former*** location of CP Rail spur	Outside at the southeast corner of the industrial building	(46) Rail Yards, Tracks, and Spurs	On-site	BTEX PHC's PAH's METALS	Soil Groundwater
APEC #2 ***Former*** storage area of wastes related to the former operations of a paint manufacturer, former boat manufacturers, and stockpiled scrap metal, soils, and waste debris.	Outside in the central east region	(2) Adhesives and Resins Manufacturing, Processing and Bulk Storage (39) Paints Manufacturing, Processing and Bulk Storage (43)Plastics (including Fibreglass) Manufacturing and Processing (49) Salvage Yard, including automobile wrecking (51) Solvent Manufacturing, Processing and Bulk Storage	On-site	METALS PHC's BTEX VOC's PAH's PCB's	Soil Groundwater

APEC #3 ***Former*** area of historical boat manufacturing operations and shipping receiving area of products associated with boat manufacturing. ***Former*** area of RCA Victor Co. Ltd. shipping & receiving and manufacturing processes. ***Currently*** used for miscellaneous storage, gymnasium, warehousing, dance studio & engineering firm.	Outside at the central north eastern area of the building in the area of shipping and receiving docks; outside at the north central area of the building's shipping & receiving area; outside at the northwest corner of the building on the north side of the building; outside at the central west area of the building; outside at the northwest area of the building on the west side of the building.	(2) Adhesives and Resins Manufacturing, Processing and Bulk Storage (7) Boat Manufacturing (39) Paints Manufacturing, Processing and Bulk Storage	On-site	PAH's PHC's BTEX VOC's METALS	Soil Groundwater
APEC #4 ***Former*** area of historical plexi-glass windshield manufacturing operation. ***Former*** area of RCA Victor Co. Ltd. shipping & receiving and manufacturing processes. ***Former*** area of electronics manufacturer, and a machine shop/fabrication. ***Current*** tenant's parts warehouse.	Outside at the central west area of the building.	(2) Adhesives and Resins Manufacturing, Processing and Bulk Storage (39) Paints Manufacturing, Processing and Bulk Storage (43) Plastics (including Fibreglass) Manufacturing and Processing (51)Solvent Manufacturing, Processing and Bulk Storage	On-site	PAH's PHC's BTEX VOC's METALS	Soil Groundwater

APEC #8 ***Former*** RCA Victor Co. Ltd. manufacturing area. ***Currently*** occupied by industrial mould & pattern operation.	Outside in the western south central area of the industrial building.	(2) Adhesives and Resins Manufacturing, Processing and Bulk Storage (33) Metal Treatment, Coating, Plating, and Finishing (34) Metal Fabrication (39)Paints Manufacturing, Processing and Bulk Storage (43) Plastics (including Fibreglass) Manufacturing and Processing (51) Solvent Manufacturing, Processing and Bulk Storage	On-site	PAH's PHC's BTEX VOC's METALS	Soil Groundwater

Six (6) main potential contaminants of concern were identified at the Site: Petroleum Hydrocarbons (PHC F1-F4), Benzene, Toluene, Ethylbenzene and Xylenes (BTEX), Volatile Organic Compounds (VOC's), Polycyclic Aromatic Hydrocarbons (PAH's), Metals and Polychlorinated Biphenyls (PCBs).

The RSC property was assessed using the Table 3 Standards for residential / parkland / institutional (RPI) land use, non-potable groundwater, medium / fine textured soil from the Ministry of Environment (MOE) document "Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act" (April 15, 2011), referred to as MOE Table 3 RPI Standards.

Soil analysis completed during the Phase Two ESA indicated that soil met the MOE Table 3 Standards for all parameters tested which included potential contaminants of concern; Petroleum Hydrocarbons (PHC F1-F4), Benzene, Toluene, Ethylbenzene and Xylenes (BTEX), Volatile Organic Compounds (VOC's), Polycyclic Aromatic Hydrocarbons (PAH's), Metals, Polychlorinated Biphenyls (PCBs) and pH.

Groundwater analysis completed during the Phase Two ESA indicated that groundwater met the MOE Table 3 Standards for all parameters tested which included potential contaminants of concern; ; Petroleum Hydrocarbons (PHC F1-F4), Benzene, Toluene, Ethylbenzene and Xylenes (BTEX), Volatile Organic Compounds (VOC's), Polycyclic Aromatic Hydrocarbons (PAH's), Metals and Polychlorinated Biphenyls (PCBs). Monitoring well sample locations are presented in Figure 5.

Chemical analyses were conducted by ALS Environmental Laboratories of Waterloo, Ontario. ALS Environmental Laboratories is a member of the Canadian Association for Laboratory Accreditation Inc. (CALA) and meets the requirements of Section 47 of O.Reg. 153/04 certifying that the analytical laboratory be accredited in accordance with the International Standard ISO/IEC 17025 and with standards developed by the Standards Council of Canada.

The Phase II Conceptual Site Model includes the following figures / diagrams;

FIGURES / DRAWINGS	DESCRIPTION
Figure 1	Site Survey outlining the Phase I / II ESA and RSC property boundary
Figure 2	Site Plan
Figure 3	Site Plan outlining the location of PCA's on the RSC property
Figure 4	Site Plan outlining the location of APEC's on the RSC property
Figure 5	Site Investigation outlining the borehole and groundwater monitoring well locations as part of the Phase II ESA
Figure 6	Site Plan outlining the groundwater flow direction on the RSC property as part of the Phase II ESA
Figure 7	Drawing depicting a north-south cross sectional diagram of the RSC property
Figure 8	Drawing depicting a east-west cross sectional diagram of the RSC property
Borehole Logs	Borehole Logs as part of Phase II ESA

6.12 Effects of Any Subsurface Structures and Utilities

Municipal water service enters the northeast corner of the industrial building off of 32nd Avenue East. A water line branches of the main water line and circles the industrial building which is part of a system of fire hydrants on the RSC property. Municipal sanitary and storm sewers enter on the west side of the industrial building off of East Bayshore Road. Natural gas service runs off of 32nd Avenue East and enters the north, west and east sides of the industrial building and enters the outbuilding along the west side. The main hydro service enters the east side of the industrial building overhead from 9th Avenue East and then branches off underground to service the outbuilding at the southwest corner. Refer to Figure 2.

No contaminants were present at concentrations greater than the applicable site condition standard.

6.13 Stratigraphy

Based on the findings of various geological maps and resources, native soils on site and with in the within the surrounding area consist of clayey silts. Site stratigraphy from ground surface to deepest point investigated was generally comprised of: gravel from grade to 0.61m and silty soils to the depth explored at a maximum of 4.6 m bgl. Refer to Appendix 3 - Borehole logs which provide stratigraphic information at individual locations investigated.

Map 2556 "Quaternary Geology of Ontario, Southern Sheet" shows the subject property to be within a region of Elma Till (Huron – Georgian Bay lobe) sandy silt to silt matrix, clayey silt along the southern margin, moderately stony, strongly calcareous. This site was characterized by clayey silt soils.

Map P.2715 "Physiography of Southern Ontario" and 2224 "Physiography of the North western Portion Southern Ontario", shows the site to be located on a shale plain in an area referred to as the Cape Rich Steps. Maps 2544 and 2131 show bedrock in the Owen Sound area to be red shale of the Upper Ordovician age, Queenston Formation.

The topography of the subject property is generally flat with a gradual slope to the west.

6.14 Hydrogeological Characteristics

On May 06, 2013 the depth to groundwater in the monitoring wells were recorded as; BH/MW1 at 3.08 m bgl, BH/MW2 at 0.76 m bgl, BH/MW4 at 1.18 m bgl, BH/MW5 at 0.96 m bgl , BH/MW7 at 1.39 m bgl , BH/MW8 at 0.95 m bgl, BH/MW9 at 1.52 m bgl, BH/MW15 at 0.85 m bgl, BH/MW18 at 1.27 m bgl, BH/MW20 at 0.72 m bgl. The relative elevations for the monitoring wells ranged from 184.05 m asl to 185.25 m asl.

The inferred groundwater flow direction was calculated to northwest. Refer to Figure 6.

No contaminants of concern were identified in groundwater.

6.15 Approximate Depth to Bedrock

Bedrock was not encountered during the Phase II ESA. It should be noted that two (BH/MW7 and BH14) of the twenty boreholes encountered auger refusal at a depth of 4.27m bgl. Water well records in the vicinity of the RSC property indicate bedrock to be 15 m bgl. The anticipated depth to bedrock on the RSC property is approximately 15 m below grade. Refer to Figure 7 and Figure 8.

6.16 Approximate Depth to Water Table

The measured depth to groundwater is between 0.76 m to 3.08 m below ground surface (bgs).

6.17 Any respect which section 41 or 43.1 applies to the property

Section 41 does not apply to any area of the RSC property, as there are no environmentally sensitive areas identified on, in, or under the RSC property. Section 43.1 does not apply to the RSC property, as there is more than 2 metres of overburden on the RSC property, and there is no water body located within 30 metres of the RSC property.

6.18 Imported Soil

No imported soil was identified on site.

6.19 Proposed Building and/or Structures

There were no proposed buildings and/or structures at the time of this RSC being completed.

6.2.1 Contaminants Present at Concentrations Greater than the Applicable Site Condition Standard

No contaminants were present at concentrations greater than the applicable site condition standard.

7.0 CONCLUSIONS

Rubicon Environmental (2008) Inc. was retained by Northridge Property Management Inc. to undertake a Phase II ESA investigation in accordance with O. Reg. 153/04 for the purpose of filing a Record of Site Condition (RSC) with the Ontario Ministry of the Environment.

The RSC property was assessed using the Table 3 Standards for residential / parkland / institutional (RPI) land use, non-potable groundwater, medium / fine textured soil from the Ministry of Environment (MOE) document "Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the *Environmental Protection Act*" (April 15, 2011), referred to as MOE Table 3 RPI Standards.

As part of the Phase One ESA completed by Rubicon Environmental (2008) Inc.; eight (8) general areas of potential environmental concern were identified on the RSC property. Six (6) main potential contaminants of concern were identified at the Site: Petroleum Hydrocarbons (PHC F1-F4), Benzene, Toluene, Ethylbenzene and Xylenes (BTEX), Volatile Organic Compounds (VOC's), Polycyclic Aromatic Hydrocarbons (PAH's), Metals and Polychlorinated Biphenyls (PCBs).

Based on the findings of the Phase I ESA investigation, a judgemental sampling approach was implemented based on the potentially contaminating activities and areas of environmental concerns identified on the RSC property. The Phase II ESA investigation completed on the RSC property included the advancement of twenty (20) boreholes (BH) and the installation of ten (10) groundwater monitoring wells. The locations of the boreholes and groundwater monitoring wells were strategically placed to fully investigate and identify any contaminants of concern which may be present on, in or under the Phase II ESA property.

Soil analysis completed during the Phase Two ESA indicated that soil met the MOE Table 3 Standards for all parameters tested which included potential contaminants of concern; Petroleum Hydrocarbons (PHC F1-F4), Benzene, Toluene, Ethylbenzene and Xylenes (BTEX), Volatile Organic Compounds (VOC's), Polycyclic Aromatic Hydrocarbons (PAH's), Metals, Polychlorinated Biphenyls (PCBs) and pH.

Groundwater analysis completed during the Phase Two ESA indicated that groundwater met the MOE Table 3 Standards for all parameters tested which included potential contaminants of concern; ; Petroleum Hydrocarbons (PHC F1-F4), Benzene, Toluene, Ethylbenzene and Xylenes (BTEX), Volatile Organic Compounds (VOC's), Polycyclic Aromatic Hydrocarbons (PAH's), Metals and Polychlorinated Biphenyls (PCBs).

Based on the findings of the Phase II ESA, the RSC property meets the Table 3 Standards for residential / parkland / institutional (RPI) land use, non-potable groundwater, medium / fine textured soil from the Ministry of Environment (MOE) document "Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the *Environmental Protection Act*" (April 15, 2011), referred to as MOE Table 3 RPI Standards.

The completion of this Phase II ESA investigation along with the findings and conclusions of this report was carried out by Mr. Paul Rew, P. Eng., a qualified person (QP) registered with the Ministry of the Environment, as defined by O. Reg. 153/04, amended by O. Reg. 511/09.

Upon the completion of the Phase II investigation of the RSC property, there are no known environmental conditions in the land or the water on, in or under the Phase II property where it is necessary to undertake a risk assessment with respect to contaminants of concern identified.

RUBICON ENVIRONMENTAL (2008) INC.

Paul Rew, P. Eng.

LICENSED PROFESSIONAL ENGINEER
P. D. REW
Sept. 1, 2013
PROVINCE OF ONTARIO

8.0 REFERENCES

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Google Maps URL: http://maps.google.ca/maps

9.0 FIGURES AND TABLES

FIGURES

TABLES

FIGURE 1:
SITE LOCATION
3195 EAST BAYSHORE ROAD
OWEN SOUND, ONTARIO

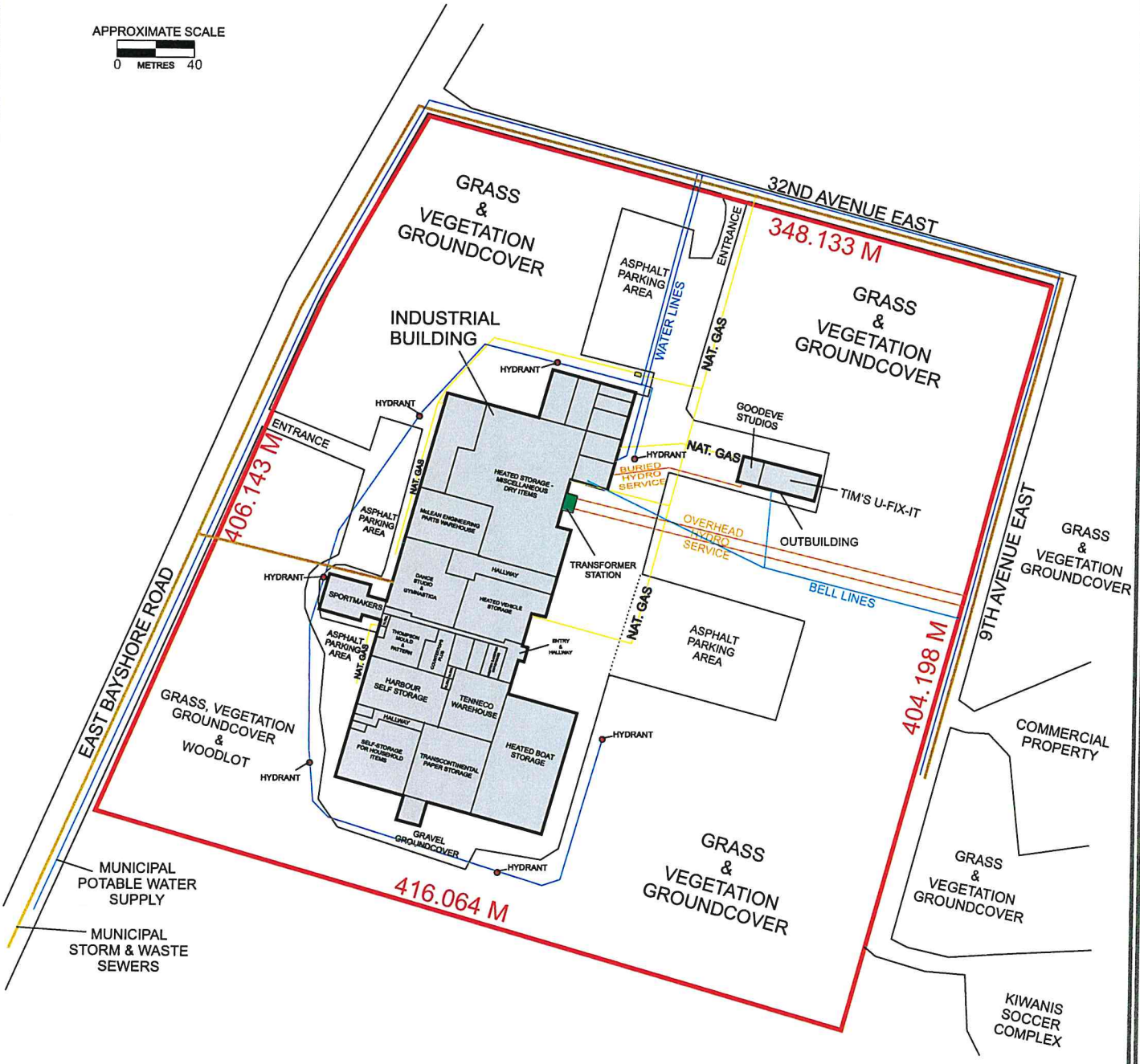
N

PROJECT #:R55001.1	NAME	DATE
DRAWN BY:	NH	MAY 2013
CHECKED BY:	PDR	MAY 2013
REVISIONS:		

Rubicon Environmental (2008) Inc.

FIGURE 1:
SITE LOCATION
3195 EAST BAYSHORE ROAD
OWEN SOUND, ONTARIO

FIGURE 2:
SITE PLAN
3195 EAST BAYSHORE ROAD
OWEN SOUND, ONTARIO



LEGEND

PHASE I AND PHASE II STUDY AREA & RSC BOUNDARY

PROJECT #:R55001.2	NAME	DATE
DRAWN BY:	NH	MAY 2013
CHECKED BY:	PDR	MAY 2013
REVISIONS:		

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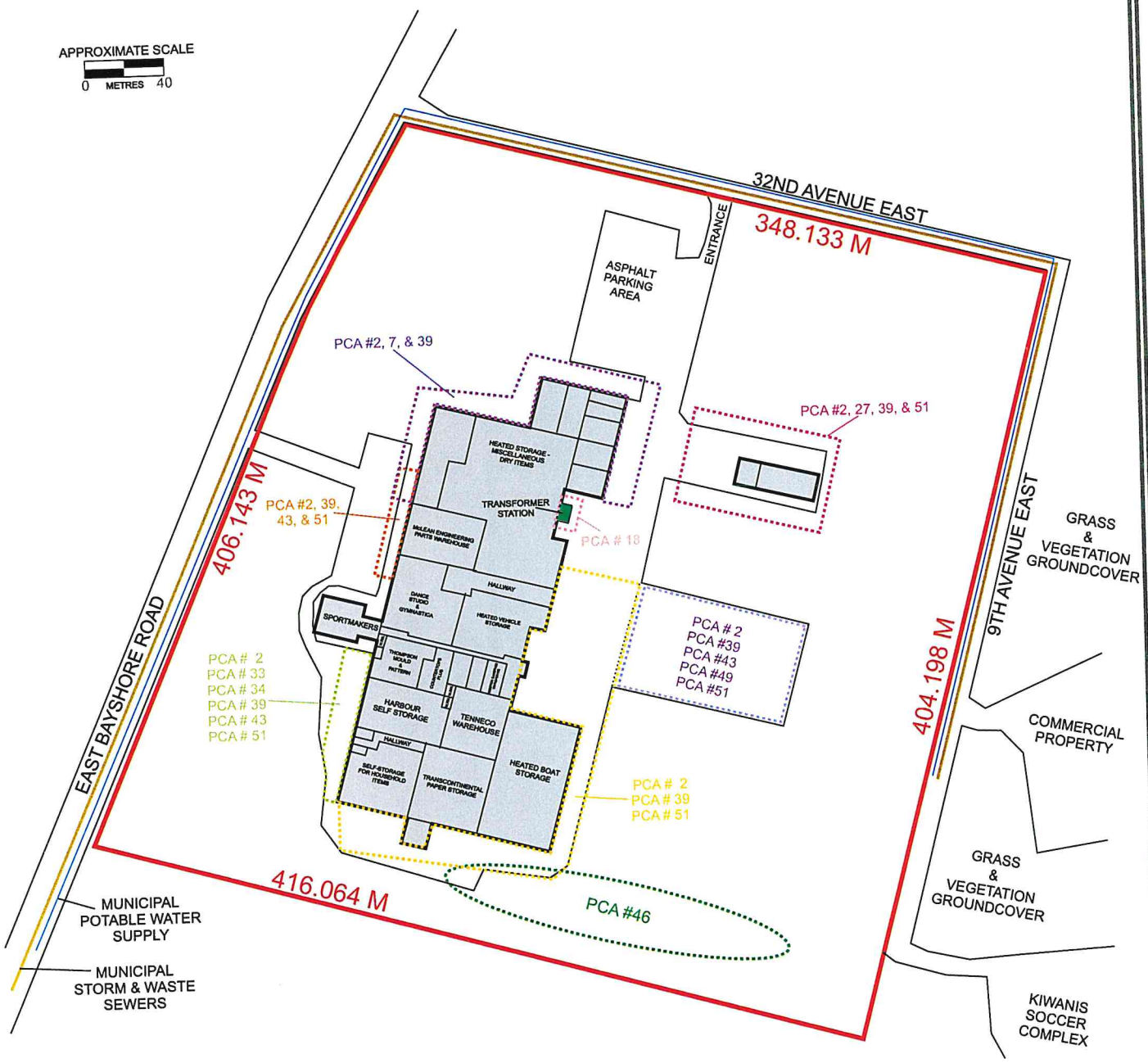
FIGURE 2:
SITE PLAN
3195 EAST BAYSHORE ROAD
OWEN SOUND, ONTARIO

FIGURE 3:
POTENTIALLY CONTAMINATING ACTIVITES
3195 EAST BAYSHORE ROAD
OWEN SOUND, ONTARIO



LEGEND

PHASE I AND PHASE II STUDY AREA & RSC BOUNDARY

	NAME	DATE
PROJECT #:R55001.2		
DRAWN BY:	NH	MAY 2013
CHECKED BY:	PDR	MAY 2013
REVISIONS:		

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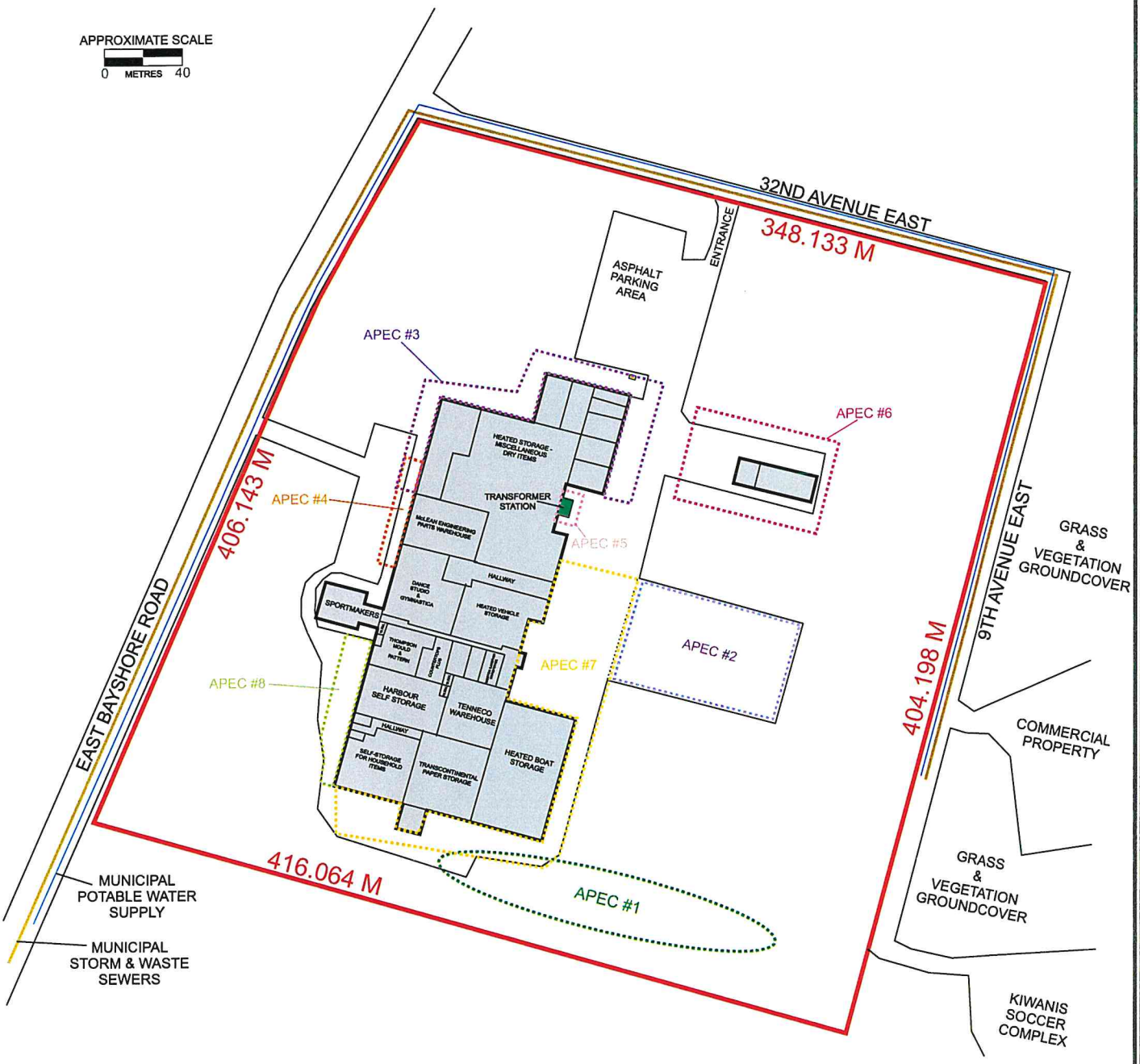
FIGURE 3:
PCA's
3195 EAST BAYSHORE ROAD
OWEN SOUND, ONTARIO

FIGURE 4:
AREAS OF POTENTIAL ENVIRONMENTAL CONCERN
3195 EAST BAYSHORE ROAD
OWEN SOUND, ONTARIO



LEGEND

PHASE I AND PHASE II STUDY AREA & RSC BOUNDARY

PROJECT #:R55001.2	NAME	DATE
DRAWN BY:	NH	MAY 2013
CHECKED BY:	PDR	MAY 2013
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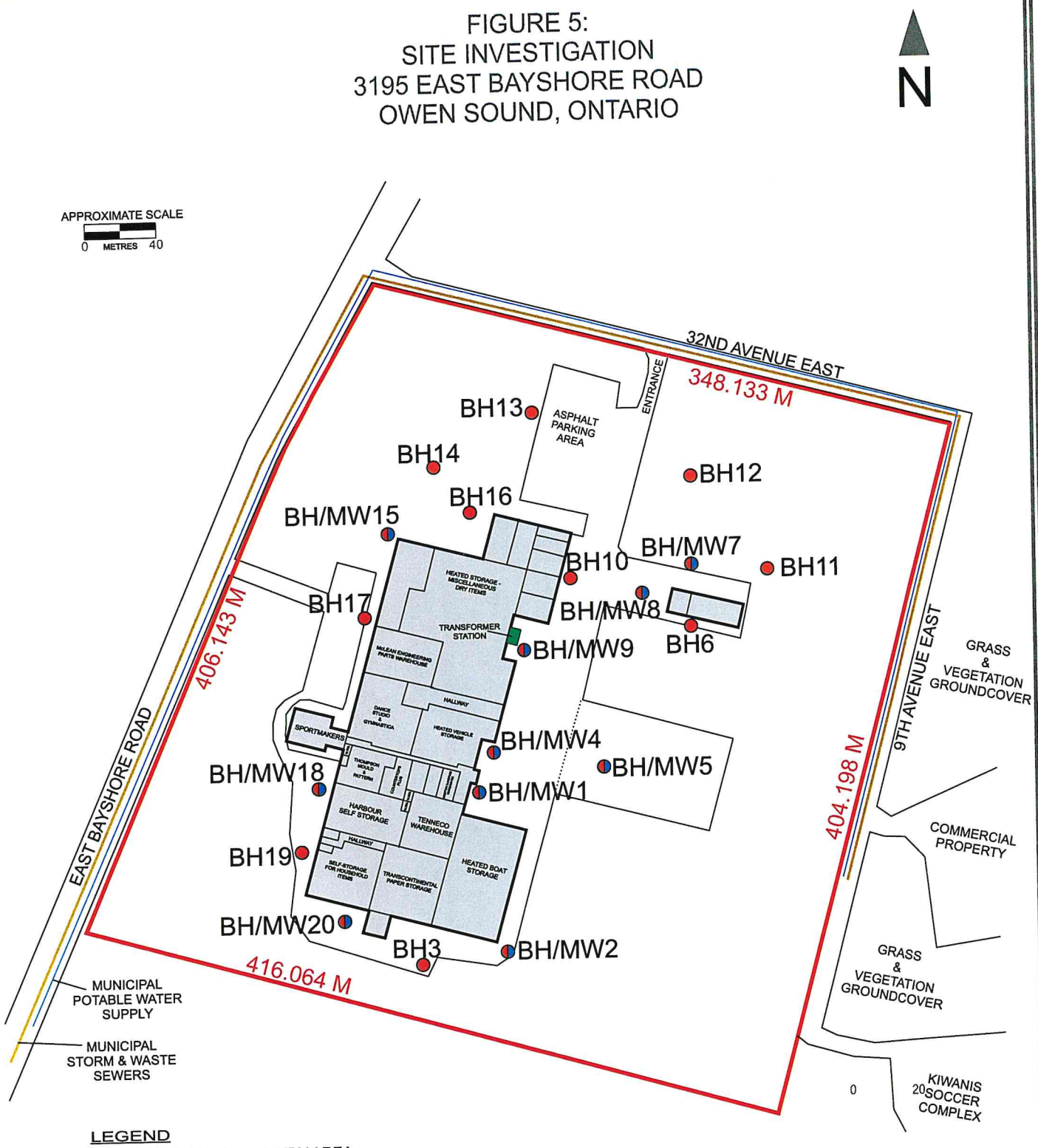
FIGURE 4:
APEC's
3195 EAST BAYSHORE ROAD
OWEN SOUND, ONTARIO

FIGURE 5:
SITE INVESTIGATION
3195 EAST BAYSHORE ROAD
OWEN SOUND, ONTARIO



LEGEND

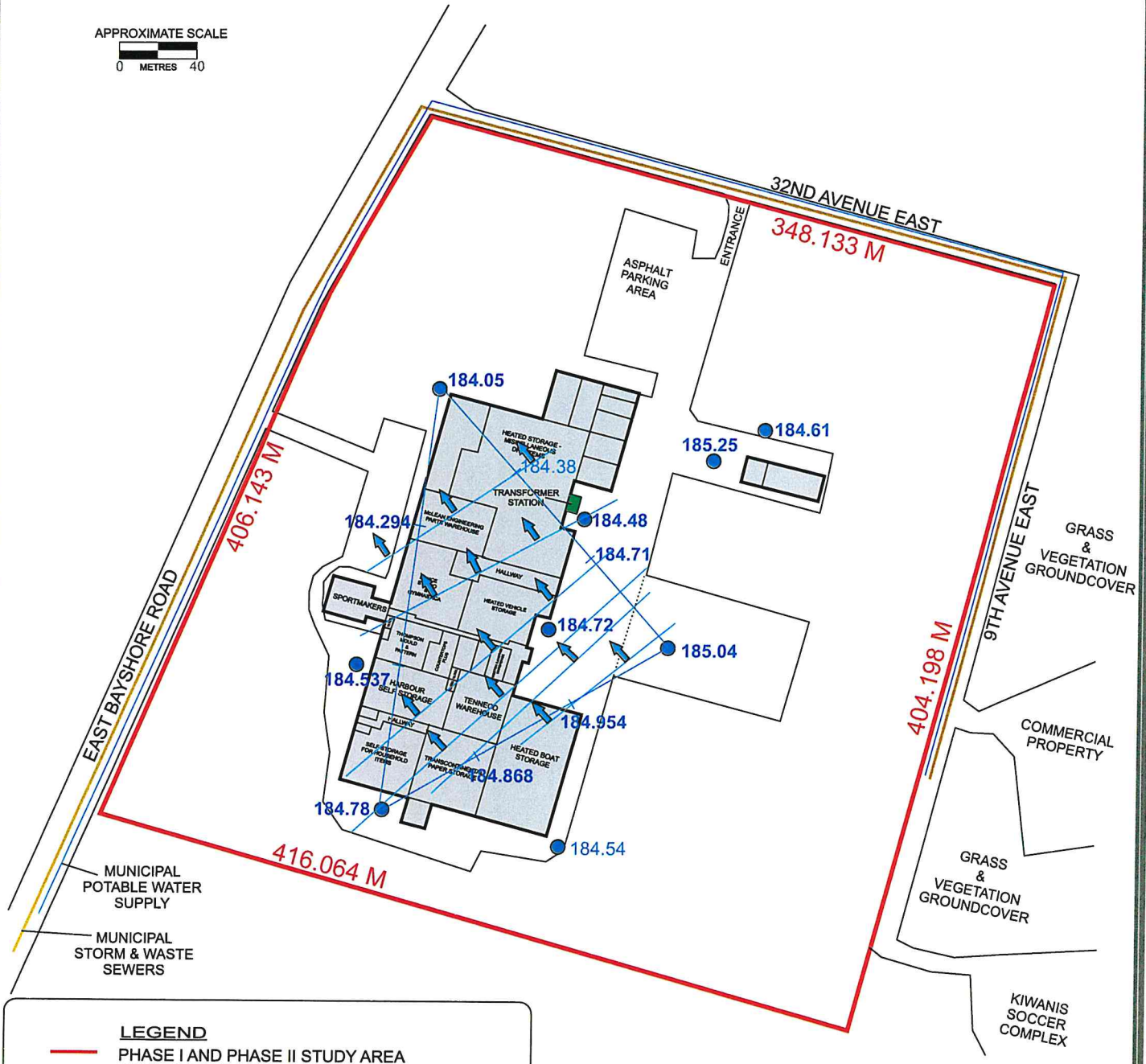
- PHASE I AND PHASE II STUDY AREA & RSC BOUNDARY
- GROUNDWATER MONITORING WELL LOCATION
- RUBICON ENVIRONMENTAL BOREHOLE LOCATION

	NAME	DATE
PROJECT #:R55001.2		
DRAWN BY:	NH	SEPTEMBER 2013
CHECKED BY:	PDR	SEPTEMBER 2013
REVISIONS:		

Rubicon Environmental (2008) Inc.

FIGURE 5:
SITE INVESTIGATION
3195 EAST BAYSHORE ROAD
OWEN SOUND, ONTARIO

FIGURE 6:
INFERRED GROUNDWATER FLOW DIRECTION
3195 EAST BAYSHORE ROAD
OWEN SOUND, ONTARIO



PROJECT #:R55001.2	NAME	DATE
DRAWN BY:	NH	SEPTEMBER 2013
CHECKED BY:	PDR	SEPTEMBER 2013
REVISIONS:		

REI
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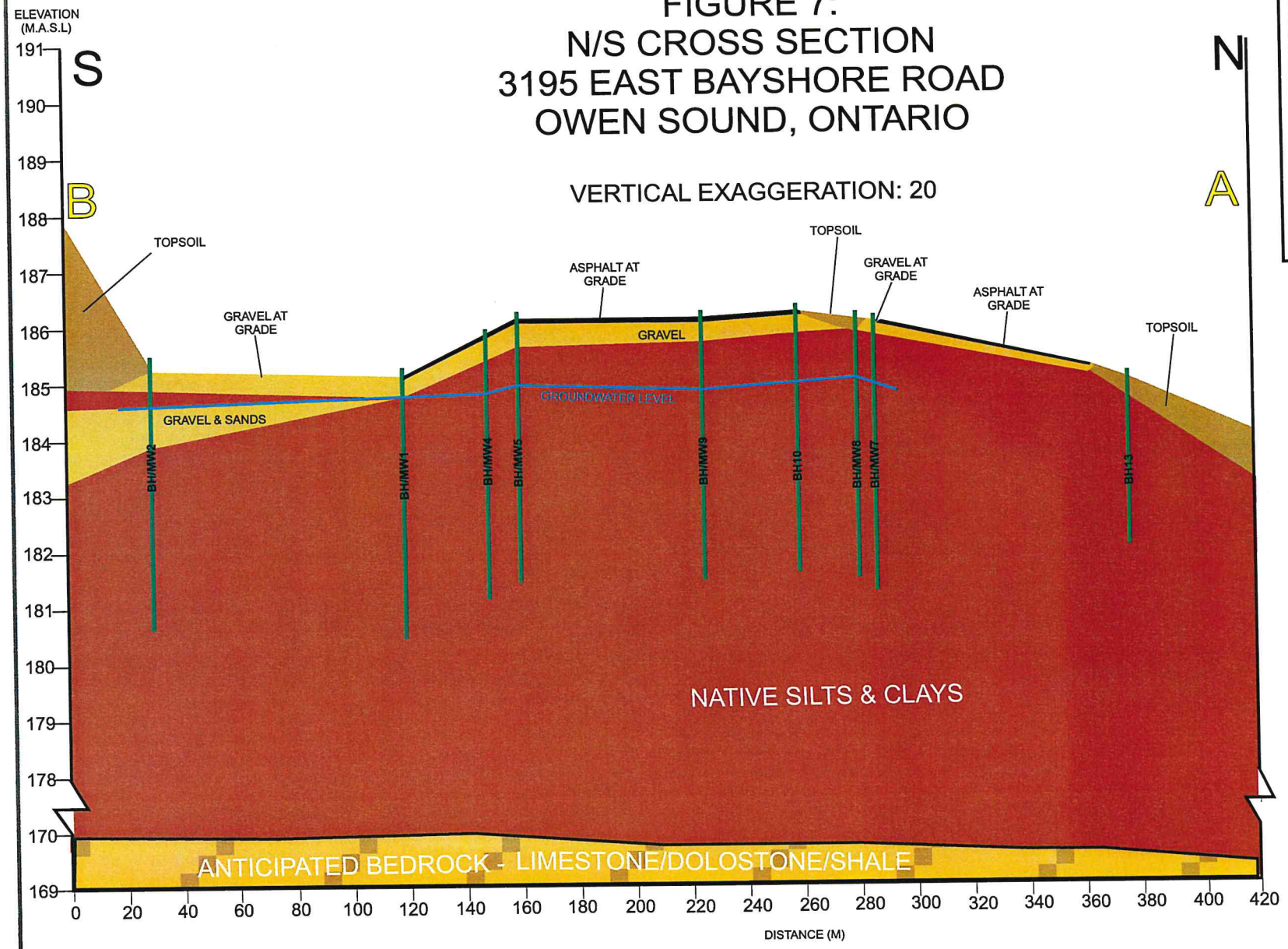
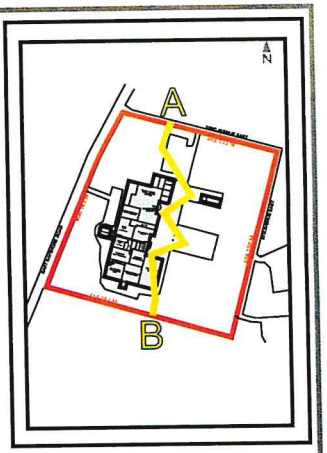
FIGURE 6:
INFERRED GROUNDWATER FLOW DIRECTION

FIGURE 7:
N/S CROSS SECTION
3195 EAST BAYSHORE ROAD
OWEN SOUND, ONTARIO

VERTICAL EXAGGERATION: 20





PROJECT #:R55001.2	NAME	DATE
DRAWN BY:	NH	SEPTEMBER 2013
CHECKED BY:	PR	SEPTEMBER 2013
REVISIONS:		

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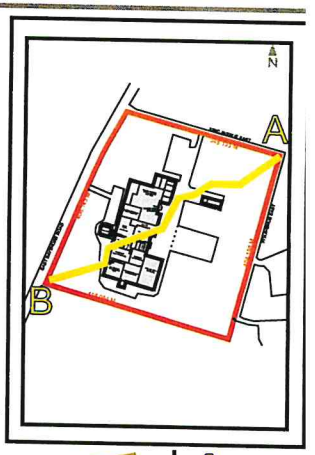
FIGURE 7:
N/S CROSS SECTION
3195 EAST BAYSHORE ROAD
OWEN SOUND, ONTARIO

FIGURE 8:
E/W CROSS SECTION
3195 EAST BAYSHORE ROAD
OWEN SOUND, ONTARIO

VERTICAL EXAGGERATION: 20



PROJECT #:R55001.2	NAME	DATE
DRAWN BY:	NH	SEPTEMBER 2013
CHECKED BY:	PR	SEPTEMBER 2013
REVISIONS:		

Rubicon Environmental (2008) Inc.

FIGURE 8:
E/W CROSS SECTION
3195 EAST BAYSHORE ROAD
OWEN SOUND, ONTARIO

TABLE 1: BOREHOLE & SOIL SAMPLE NOTES

BOREHOLE	DEPTH	COMMENTS
BH/MW1	4.6 m	• Located at eastern lower loading dock • No petroleum odours or soil staining present • No significant hydrocarbon vapours using field instruments • Soil sample BH/MW1 SS2 (0.75-1.5 m) analyzed for PAH parameters • Soil sample BH/MW1 SS3 (1.5-2.25 m) analyzed for BTEX and PHC parameters • Soil sample BH/MW1 SS6 (4.6 m) analyzed for Grain Size (Sieve) parameters • Borehole developed as a monitoring well • Water table measured at 3.08 m bgl • Groundwater sample BH/MW1 analyzed for VOC, PHC, PAH parameters
BH/MW2	4.6 m	• Located at southeastern gravel drive area of the industrial building • No petroleum odours or soil staining present • No significant hydrocarbon vapours using field instruments • Soil sample BH/MW2 SS2 (0.75 -1.5 m) analyzed for Metals and PAH parameters • Borehole developed as a monitoring well • Water table measured at 0.76 m bgl • Groundwater sample BH/MW2 analyzed for BTEX, PHC, PAH, and Metals parameters
BH3	4.6 m	• Located south central of the industrial building at gravel drive area, west of BH/MW2 • No petroleum odours or soil staining present • No significant hydrocarbon vapours using field instruments • Soil sample BH3 SS2 (0.75-1.5 m) analyzed for Metals and PAH parameters • Soil sample BH3 SS6 (4.6 m) analyzed for pH • Borehole not developed as a monitoring well
BH/MW4	4.6 m	• Located at central eastern area of industrial building, north of BH/MW1 • No petroleum odours or soil staining present • No significant hydrocarbon vapours using field instruments • Soil sample BH/MW4 SS2 (0.75-1.5 m) analyzed for PAH parameters • Soil sample BH/MW4 SS3 (1.5-2.25 m) analyzed for BTEX and PHC parameters • Borehole developed as a monitoring well • Water table measured at 1.18 m bgl • Groundwater sample BH/MW4 analyzed for BTEX, PHC, PAH, and Metals parameters
BH/MW5	4.6 m	• Located at eastern asphalt covered storage area, east of the industrial building, and east of BH/MW4 • No petroleum odours or soil staining present • No significant hydrocarbon vapours using field instruments • Soil sample BH/MW5 SS1 (0.0-0.75 m) analyzed for PCB's • Soil sample BH/MW5 SS2 (0.75-1.5 m) analyzed for Metals • Borehole developed as a monitoring well • Water table measured at 0.96 m bgl • Groundwater sample BH/MW4 analyzed for VOC, PHC, PAH, and Metals parameters

BOREHOLE	DEPTH	COMMENTS
BH6	4.6 m	• Located south central of the outbuilding, south of the paint room area • No petroleum odours or soil staining present • No significant hydrocarbon vapours using field instruments • Soil sample BH6 SS2 (0.75-1.5 m) analyzed for Metals and PAH parameters • Soil sample BH6 SS3 (1.5-2.25 m) analyzed for VOC and PHC parameters • Borehole not developed as a monitoring well
BH/MW7	4.6 m	• Located north of outbuilding, north of BH6 • No petroleum odours or soil staining present • No significant hydrocarbon vapours using field instruments • Soil sample BH/MW7 SS2 (0.75-1.5 m) analyzed for Metals • Soil sample BH/MW7 SS3 (1.5-2.25 m) analyzed for VOC and PHC parameters • Borehole developed as a monitoring well • Water table measured at 1.39 m bgl • Groundwater sample BH/MW7 analyzed for VOC, PHC, and PAH parameters
BH/MW8	4.6 m	• Located west of outbuilding, southwest of BH/MW7 • No petroleum odours or soil staining present • No significant hydrocarbon vapours using field instruments • Soil sample BH/MW8 SS2 (0.75-1.5 m) analyzed for Metals, VOC, and PHC parameters • Borehole developed as a monitoring well • Water table measured at 0.95 m bgl • Groundwater sample BH/MW8 analyzed for VOC, PHC, PAH, and Metals parameters
BH/MW9	4.6 m	• Located southeast of on-site transformer located on central east side of the industrial building, north of BH/MW4 • No petroleum odours or soil staining present • No significant hydrocarbon vapours using field instruments • Soil sample BH/MW9 SS1 (0.0-0.75 m) analyzed for PCB's • Soil sample BH/MW9 SS2 (0.75-1.5 m) analyzed for VOC, PHC, and PAH parameters • Borehole developed as a monitoring well • Water table measured at 1.52 m bgl • Groundwater sample BH/MW9 analyzed for VOC, PHC, PAH, Metals, and PCB's parameters
BH10	4.6 m	• Located at north east bay doors of the industrial outbuilding, west of BH/MW8, north of BH/MW9 • No petroleum odours or soil staining present • No significant hydrocarbon vapours using field instruments • Soil sample BH10 SS2 (0.75-1.5 m) analyzed for PAH parameters • Soil sample BH10 SS4 (2.25-3.0 m) analyzed for BTEX and PHC • Borehole not developed as a monitoring well

BOREHOLE	DEPTH	COMMENTS
BH11	4.6 m	• Located northeast of the outbuilding, east of BH/MW7 • No petroleum odours or soil staining present • No significant hydrocarbon vapours using field instruments • Soil sample BH11 SS2 (0.75-1.5 m) analyzed for Metals parameters • Borehole not developed as a monitoring well
BH12	4.6 m	• Located at northeast undeveloped region north of outbuilding, and north of BH/MW7 • No petroleum odours or soil staining present • No significant hydrocarbon vapours using field instruments • Soil sample BH12 SS2 (0.75-1.5 m) analyzed for Metals, VOC, and PHC parameters • Borehole not developed as a monitoring well
BH13	4.6 m	• Located north of the industrial building at undeveloped western area, west of BH12 • No petroleum odours or soil staining present • No significant hydrocarbon vapours using field instruments • Soil sample BH13 SS2 (0.75-1.5 m) analyzed for PAH parameters • Soil sample BH13 SS4 (2.25-3.0 m) analyzed for BTEX and PHC parameters • Borehole not developed as a monitoring well
BH14	4.6 m	• Located at southwest of BH13 in undeveloped northwestern region of site, and north of the industrial building • No petroleum odours or soil staining present • No significant hydrocarbon vapours using field instruments • Soil sample BH12 SS2 (0.75-1.5 m) analyzed for VOC and PHC parameters • Borehole not developed as a monitoring well
BH/MW15	4.6 m	• Located at northwest corner of the industrial building, south of BH14 • No petroleum odours or soil staining present • No significant hydrocarbon vapours using field instruments • Soil sample BH/MW15 SS2 (0.75-1.5 m) analyzed for Metals parameters • Soil sample BH/MW15 SS3 (1.5-2.25 m) analyzed for BTEX and PHC parameters • Borehole developed as a monitoring well • Water table measured at 0.85 m bgl • Groundwater sample BH/MW15 analyzed for VOC, PHC, PAH, and Metals parameters

BOREHOLE	DEPTH	COMMENTS
BH16	4.6 m	• Located at central north parking area of the industrial building, southeast of BH14 • No petroleum odours or soil staining present • No significant hydrocarbon vapours using field instruments • Soil sample BH16 SS1 (0.0-0.75 m) analyzed for PAH • Soil sample BH16 SS3 (1.5-2.25 m) analyzed for BTEX and PHC parameters • Borehole not developed as a monitoring well
BH17	4.6 m	• Located west of the industrial building, south of BH/MW15 • No petroleum odours or soil staining present • No significant hydrocarbon vapours using field instruments • Soil sample BH17 SS2 (0.75-1.5 m) analyzed for VOC and PHC parameters • Borehole not developed as a monitoring well
BH/MW18	4.6 m	• Located west of industrial building, southwestern region of site, south of BH17 • No petroleum odours or soil staining present • No significant hydrocarbon vapours using field instruments • Soil sample BH/MW18 SS2 (0.75-1.5 m) analyzed for Metals • Soil sample BH/MW18 SS3 (1.5-2.25 m) analyzed for BTEX and PHC parameters • Borehole developed as a monitoring well • Water table measured at 1.27 m bgl • Groundwater sample BH/MW8 analyzed for VOC, PHC, PAH, and Metals parameters
BH19	4.6 m	• Located at southwest area of the industrial building, south of BH/MW18 • No petroleum odours or soil staining present • No significant hydrocarbon vapours using field instruments • Soil sample BH19 SS3 (1.5-2.25 m) analyzed for VOC and PHC parameters • Borehole not developed as a monitoring well
BH/MW20	4.6 m	• Located south of industrial building, southwestern region of site, southwest of BH19, west of BH3 • No petroleum odours or soil staining present • No significant hydrocarbon vapours using field instruments • Soil sample BH/MW20 SS2 (0.75-1.5 m) analyzed for PAH parameter • Borehole developed as a monitoring well • Water table measured at 0.72 m bgl • Groundwater sample BH/MW20 analyzed for VOC, PHC, and Metals parameters

TABLE 2: SOIL CHEMICAL ANALYSES – VOC/PHC

PARAMETER			Sample ID	Sample ID	Sample ID	Sample ID	Sample ID	Sample ID	Sample ID	Sample ID	Sample ID
			BH6	BH/MW7	BH/MW8	BH/MW9	BH12	BH14	BH17	BH17	BH19
	Reg 153/04	MDL	SS3	SS3	SS2	SS2	SS2	SS2	SS2	SS2(D)	SS3
Acetone	28	0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Benzene	0.17	0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020
Bromodichloromethane	13	0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Bromoform	0.26	0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Bromomethane	0.05	0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Carbon tetrachloride	0.12	0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Chlorobenzene	2.7	0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Chloroform	0.18	0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Dibromochloromethane	9.4	0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
1,2-Dibromoethane	0.05	0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
1,2-Dichlorobenzene	4.3	0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
1,3-Dichlorobenzene	6	0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
1,4-Dichlorobenzene	0.097	0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Dichlorodifluoromethane	25	0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
1,1-Dichloroethane	11	0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
1,2-Dichloroethane	0.05	0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
1,1-Dichloroethylene	0.05	0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
cis-1,2-Dichloroethylene	30	0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
trans-1,2-Dichloroethylene	0.75	0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
1,3-Dichloropropene (cis & trans)	0.083	0.042	<0.042	<0.042	<0.042	<0.042	<0.042	<0.042	<0.042	<0.042	<0.042
Methylene Chloride	0.96	0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
1,2-Dichloropropane	0.085	0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
cis-1,3-Dichloropropene	-	0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030
trans-1,3-Dichloropropene	-	0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030
Ethyl Benzene	15	0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
n-Hexane	34	0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Methyl Ethyl Ketone	44	0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Methyl Isobutyl Ketone	4.3	0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
MTBE	1.4	0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Styrene	2.2	0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
1,1,1,2-Tetrachloroethane	0.05	0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
1,1,2,2-Tetrachloroethane	0.05	0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Tetrachloroethylene	2.3	0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Toluene	6	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
1,1,1-Trichloroethane	3.4	0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
1,1,2-Trichloroethane	0.05	0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Trichloroethylene	0.52	0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Trichlorofluoromethane	5.8	0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Vinyl chloride	0.022	0.020	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
o-Xylene	-	0.020	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
m+p-Xylenes	-	0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030
Xylenes (Total)	25	0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
PHC:	Reg 153/04	MDL									
F_1 ($C_6 - C_{10}$)	65	5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
F_2 ($C_{10} - C_{16}$)	150	10	<10	<10	<10	<10	<10	<10	<10	<10	<10
F_3 ($C_{16} - C_{34}$)	1300	50	<50	<50	<50	<50	51	<50	<50	<50	<50
F_4 ($C_{34} - C_{50}$)	5600	50	<50	<50	<50	<50	158	<50	<50	<50	<50

TABLE 3: SOIL CHEMICAL ANALYSES – PAH

PARAMETER			Sample ID	Sample ID	Sample ID	Sample ID	Sample ID	Sample ID	Sample ID	Sample ID	Sample ID
			BH/MW1	BH/MW2	BH3	BH/MW4	BH/MW9	BH/MW10	BH/MW13	BH16	BH/MW20
	Reg 153/04	MDL	SS2	SS2	SS2	SS2	SS2	SS2	SS2	SS2	SS2
1-Methylnaphthalene	0.99	0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030
2-Methylnaphthalene	0.99	0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030
1+2-Methylnaphthalenes	0.99	0.042	<0.042	<0.042	<0.042	<0.042	<0.042	<0.042	<0.042	<0.042	<0.042
Acenaphthene	7.9	0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Acenaphthylene	0.15	0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Anthracene	0.67	0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Benzo(a)anthracene	0.5	0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Benzo(a)pyrene	0.3	0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Benzo(b)fluoranthene	0.78	0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Benzo(g,h,i)perylene	6.6	0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Benzo(k)fluoranthene	0.78	0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Chrysene	7.0	0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Dibenzo(ah)anthracene	0.1	0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Fluoranthene	0.69	0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Fluorene	62	0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Indeno(1,2,3-cd)pyrene	0.38	0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Naphthalene	0.6	0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Phenanthrene	6.2	0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Pyrene	78	0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050

All values in ug/g – ppm – parts per million MDL – method detection limit *MOE O.Reg. 153/04(511/09) – Table3 – Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition for Residential Property Use with Fine Textured Soil.

TABLE 4: SOIL CHEMICAL ANALYSES – General Metals

PARAMETER			Sample ID	Sample ID	Sample ID	Sample ID	Sample ID	Sample ID	Sample ID	Sample ID
			BH/MW2	BH3	BH/MW5	BH6	BH6 (D)	BH/MW7	BH/MW8	BH11
	Reg 153/04	MDL	SS2	SS2	SS2	SS2	SS2	SS2	SS2	SS2
SAR	5	0.10	0.39	0.66	0.20	0.18	0.42	0.19	0.77	<0.10
Antimony	7.5	1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Arsenic	18	1.0	3.0	3.0	4.2	3.6	3.5	4.3	4.1	4.6
Barium	390	1.0	17.8	79.9	22.7	29.2	24.6	30.5	26.9	29.5
Beryllium	5	0.50	0.59	0.82	0.85	0.86	0.84	0.88	0.84	0.93
Boron	120	1.0	53.0	71.6	66.2	65.3	79.4	55.4	55.1	58.3
Cadmium	1.2	0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Chromium	160	1.0	17.7	22.4	25.5	24.7	25.9	23.5	24.3	26.6
Cobalt	22	1.0	7.7	9.8	11.7	11.1	10.7	10.4	10.8	11.7
Copper	180	1.0	21.8	7.6	10.5	9.5	9.1	8.0	7.4	9.5
Lead	120	1.0	3.4	3.1	4.0	3.7	3.9	3.7	3.8	4.5
Mercury	1.8	0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Molybdenum	6.9	1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Nickel	130	1.0	18.3	24.4	28.8	26.5	26.9	25.7	26.3	29.5
Selenium	2.4	1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Silver	25	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Thallium	1	0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Uranium	23	1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Vanadium	86	1.0	22.4	30.5	31.6	32.9	33.4	30.8	31	34.2
Zinc	340	1.0	34.5	44.9	50.3	47.5	48.6	45.9	48.2	52.3
Hex. Chromium	8	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20

TABLE 4: SOIL CHEMICAL ANALYSES – General Metals (cont'd)

PARAMETER			Sample ID	Sample ID	Sample ID	Sample ID	Sample ID
			BH12	BH14	BH/MW15	BH/MW18	BH/MW18 (D)
	Reg 153/04	MDL	SS2	SS2	SS2	SS2	SS2
SAR	5	0.10	0.80	0.29	0.13	0.70	0.43
Antimony	7.5	1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Arsenic	18	1.0	3.9	3.7	4.4	2.3	5.5
Barium	390	1.0	34.2	24.8	20.8	8.3	30.1
Beryllium	5	0.50	0.70	0.87	<0.50	<0.50	1.08
Boron	120	1.0	44.1	56.9	66.2	9.9	86.4
Cadmium	1.2	0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Chromium	160	1.0	20.6	24.9	13.0	6.2	32.4
Cobalt	22	1.0	9.6	10.8	6.9	2.2	14.3
Copper	180	1.0	12.8	9.2	29.1	14.4	10.7
Lead	120	1.0	4.7	3.8	4.3	2.3	4.7
Mercury	1.8	0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Molybdenum	6.9	1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Nickel	130	1.0	22.4	27.2	14.0	5.3	35.4
Selenium	2.4	1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Silver	25	0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Thallium	1	0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Uranium	23	1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Vanadium	86	1.0	28.0	31.6	19.1	8.7	42.9
Zinc	340	1.0	43.2	50.3	28.7	9.4	62.0
Hex. Chromium	8	0.20	<0.20	<0.20	<0.20	<0.20	<0.20

All Values in ug/g – ppm – parts per million MDL – method detection limit MOE O.Reg. 153/04(511/09) – Table 3 – Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition for Residential Property Use with Fine Textured Soil.

TABLE 5: SOIL CHEMICAL ANALYSES – BTEX/PHC

PARAMETER			Sample ID	Sample ID	Sample ID	Sample ID	Sample ID	Sample ID	Sample ID	Sample ID	Sample ID
			BH/MW1	BH/MW4	BH10	BH10 (D)	BH13	BH/MW15	BH16	BH/MW18	BH/MW20
	Reg 153/04	MDL	SS3	SS3	SS4	SS4	SS4	SS3	SS3	SS3	SS2
BTEX											
Benzene	0.17	0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020
Ethyl Benzene	15	0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Toluene	6	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Xylenes (total)	25	0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
PHC:	**Reg 153/04**	**MDL**									
F1 (C6 – C10)	65	5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
F2 (C10 – C16)	150	10	<10	<10	<10	<10	<10	<10	<10	<10	<10
F3 (C16 – C34)	1300	50	<50	<50	<50	<50	<50	57	<50	<50	<50
F4 (C34 – C50)	5600	50	<50	<50	<50	<50	<50	<50	<50	<50	<50

All values in ug/g – ppm – parts per million MDL – method detection limit *MOE O.Reg. 153/04(511/09) – Table 3 – Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition for Residential Property Use with Fine Textured Soil.

TABLE 6: SOIL CHEMICAL ANALYSES – PCBs

PARAMETER			Sample ID	Sample ID	Sample ID	Sample ID	Sample ID
			BH/MW5	BH/MW9	BH/MW9(D)	BH10 (D)	BH3
	Reg 153/04	MDL	SS1	SS1	SS1	SS4	SS6
Polychlorinated Biphenyls							
Aroclor 1242	-	0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Aroclor 1248	-	0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Aroclor 1254	-	0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Aroclor 1260	-	0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Total PCB's	0.35	0.020	<0.020	<0.020	<0.020	<0.020	<0.020

All values in ug/g – ppm – parts per million MDL – method detection limit *MOE O.Reg. 153/04(511/09) – Table 3 – Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition for Residential Property Use with Fine Textured Soil.

TABLE 7: GROUNDWATER CHEMICAL ANALYSES – General Metals

PARAMETER	FIELD FILTERED Reg 153/04	Sample ID BH/MW2	Sample ID BH/MW4	Sample ID BH/MW5	Sample ID BH/MW8	Sample ID BH/MW9	Sample ID BH/MW15	Sample ID BH/MW15(D)	Sample ID BH/MW18	Sample ID BH/MW20
Antimony	20000	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<5.0	<0.50
Arsenic	1900	<1.0	2.9	7.5	1.7	2.7	12.9	12.7	<10.0	2.1
Barium	29000	77.0	27.9	28.7	11.4	143	47.0	47.0	100	24.2
Beryllium	67	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<5.0	<0.50
Boron	45000	299	3700	749	979	1390	428	417	2050	1650
Cadmium	2.7	<0.090	<0.090	<0.090	<0.090	<0.090	<0.090	<0.090	<0.90	<0.090
Chromium	810	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<5.0	<0.50
Cobalt	66	2.57	<0.50	<0.50	4.09	<0.50	1.76	1.75	5.5	<0.50
Copper	87	<1.0	<1.0	<1.0	<1.0	1.6	<1.0	<1.0	<10.0	<1.0
Lead	25	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<5.0	<0.50
Molybdenum	9200	1.04	11.3	7.27	17.1	0.75	6.63	6.61	<5.0	4.99
Nickel	490	2.6	1.6	1.1	7.2	<1.0	3.6	3.5	<10.0	<1.0
Selenium	63	0.43	0.23	<0.20	0.45	<0.20	0.34	0.34	<2.0	<0.20
Silver	1.5	<0.020	0.058	<0.020	<0.020	0.068	0.025	<0.020	<0.20	<0.020
Sodium	2300000	4630	283000	13200	95600	48500	36200	37200	611000	47800
Thallium	510	<0.060	<0.060	<0.060	<0.060	<0.060	<0.060	<0.060	<0.60	<0.060
Uranium	420	2.1	5.5	3.6	6.7	1.1	4.4	4.5	<10	2.5
Vanadium	250	1.15	<0.50	<0.50	<0.50	<0.50	<0.50	0.52	<5.0	<0.50
Zinc	1100	14.2	<3.0	<3.0	3.2	3.0	16.9	3.4	<30.0	<3.0

All values in ug/g – ppm – parts per million MDL – method detection limit *MOE O.Reg. 153/04(511/09) – Table 3 – Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition for Residential Property Use with Fine Textured Soil.

TABLE 8: GROUNDWATER CHEMICAL ANALYSES – VOC/PHC

PARAMETER			Sample ID	Sample ID	Sample ID	Sample ID	Sample ID	Sample ID	Sample ID	Sample ID	Sample ID
			BH/MW1	BH/MW5	BH/MW7	BH/MW7(D)	BH/MW8	BH/MW 9	BH/MW1 5	BH/MW1 8	BH/MW2 0
	Reg 153/04	MDL									
Acetone	130000	30	<30	42	<30	<30	<30	<30	<30	<30	<30
Benzene	44	0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Bromodichloromethane	85000	2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Bromoform	770	5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
Bromomethane	56	0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Carbon tetrachloride	8.4	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Chlorobenzene	630	0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Dibromochloromethane	82000	2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Chloroform	22	1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,2-Dibromoethane	0.83	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
1,2-Dichlorobenzene	9600	0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
1,3-Dichlorobenzene	9600	0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
1,4-Dichlorobenzene	67	0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Dichlorodifluoromethane	4400	2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
1,1-Dichloroethane	3100	0. 50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
1,2-Dichloroethane	12	0. 50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
1,1-Dichloroethylene	17	0. 50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
cis-1,2-Dichloroethylene	17	0. 50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	0.58
trans-1,2-Dichloroethylene	17	0. 50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
1,3-Dichloropropene (cis & trans)	45	0. 50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Methylene Chloride	5500	5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
1,2-Dichloropropane	140	0. 50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
cis-1,3-Dichloropropene	-	0. 30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30
trans-1,3-Dichloropropene	-	0. 30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30
Ethyl Benzene	2300	0. 50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
n-Hexane	520	0. 50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Methyl Ethyl Ketone	1500000	20	<20	<20	<20	<20	<20	<20	<20	<20	<20
Methyl Isobutyl Ketone	580000	20	<20	<20	<20	<20	<20	<20	<20	<20	<20
MTBE	1400	2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Styrene	9100	0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
1,1,1,2-Tetrachloroethane	28	0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
1,1,2,2-Tetrachloroethane	15	0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Tetrachloroethylene	17	0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	0.80
Toluene	18000	0.50	<0.50	1.25	<0.50	0.56	<0.50	<0.50	<0.50	<0.50	<0.50
1,1,1-Trichloroethane	6700	0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
1,1,2-Trichloroethane	30	0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Trichloroethylene	17	0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Trichlorofluoromethane	2500	5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
Vinyl chloride	1.7	0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
o-Xylene	-	0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30
m+p-Xylenes	-	0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40
Xylenes (Total)	4200	0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
PHC:	Reg 153/04	MDL									
F_1 ($C_6 - C_{10}$)	750	25	<25	<25	<25	<25	<25	<25	<25	<25	<25
F_2 ($C_{10} - C_{16}$)	150	100	<100	<100	<100	<100	<100	<100	<100	<100	<100
F_3 ($C_{16} - C_{34}$)	500	250	<250	<250	<250	<250	<250	<250	<250	<250	<250
F_4 ($C_{34} - C_{50}$)	500	250	<250	<250	<250	<250	<250	<250	<250	<250	<250

All values in ug/g - ppm - parts per million MDL – method detection limit *MOE O.Reg. 153/04(511/09) – Table3 – Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition for Residential Property Use with Fine Textured Soil

TABLE 9: GROUNDWATER CHEMICAL ANALYSES – PAH

PARAMETER PAH			Sample ID	Sample ID	Sample ID	Sample ID	Sample ID	Sample ID	Sample ID	Sample ID	Sample ID	Sample ID
			BH/MW1	BH/MW2	BH/MW4	BH/MW5	BH/MW7	BH/MW8	BH/MW8(D)	BH/MW9	BH/MW15	BH/MW18
	Reg 153/04											
1-Methylnaphthalene	1800	0.020	<0.020	<0.020	<0.020	<0.20	0.046	<0.020	<0.020	<0.020	0.024	<0.020
2-Methylnaphthalene	1800	0.020	<0.020	<0.020	<0.020	<0.20	<0.086	<0.021	<0.020	<0.020	<0.052	<0.020
1+2-Methylnaphthalenes	1800	0.028	<0.028	<0.028	<0.028	<0.28	<0.088	<0.029	<0.028	<0.028	<0.056	<0.028
Acenaphthene	1700	0.020	<0.020	<0.020	<0.020	<0.20	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020
Acenaphthylene	1.8	0.020	<0.020	<0.020	<0.020	<0.20	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020
Anthracene	2.4	0.020	<0.020	<0.020	<0.020	<0.20	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020
Benzo(a)anthracene	4.7	0.020	<0.020	<0.020	<0.020	<0.20	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020
Benzo(a)pyrene	0.81	0.010	<0.010	<0.010	<0.010	<0.10	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Benzo(b)fluoranthene	0.75	0.020	<0.020	<0.020	<0.020	<0.20	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020
Benzo(g,h,i)perylene	0.20	0.020	<0.020	<0.020	<0.020	<0.20	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020
Benzo(k)fluoranthene	0.40	0.020	<0.020	<0.020	<0.020	<0.20	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020
Chrysene	1.0	0.020	<0.020	<0.020	<0.020	<0.20	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020
Dibenzo(ah)anthracene	0.52	0.020	<0.020	<0.020	<0.020	<0.20	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020
Fluoranthene	130	0.020	<0.020	<0.020	<0.020	<0.20	0.038	0.021	0.021	<0.020	<0.020	<0.020
Fluorene	400	0.020	<0.020	<0.020	<0.020	<0.20	0.121	0.057	<0.042	<0.020	0.049	<0.020
Indeno(1,2,3-cd)pyrene	0.20	0.020	<0.020	<0.020	<0.020	<0.20	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020
Naphthalene	6400	0.020	<0.029	<0.029	<0.049	<0.20	<0.165	<0.117	<0.083	<0.029	<0.063	<0.049
Phenanthrene	580	0.020	0.026	<0.020	0.069	0.036	1.18	0.422	0.232	0.037	0.369	0.049
Pyrene	68	0.020	<0.020	<0.020	<0.020	<0.20	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020

All values in ug/g – ppm – parts per million MDL – method detection limit *MOE O.Reg. 153/04(511/09) – Table 3 – Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition for Residential Property Use with Fine Textured Soil.

TABLE 10: GROUNDWATER CHEMICAL ANALYSES – PCBs

PARAMETER			Sample ID	Sample ID
			BH/MW9	BH/MW9(D)
	Reg 153/04	MDL	SS1	SS1
Polychlorinated Biphenyls				
Aroclor 1242	-	0.020	<0.020	<0.020
Aroclor 1248	-	0.020	<0.020	<0.020
Aroclor 1254	-	0.020	<0.020	<0.020
Aroclor 1260	-	0.020	<0.020	<0.020
Total PCB's	15	0.040	<0.040	<0.040

All values in ug/g – ppm – parts per million MDL – method detection limit *MOE O.Reg. 153/04(511/09) – Table 3 – Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition for Residential Property Use with Fine Textured Soil.

Table 11: Groundwater Monitoring Well Construction Details

Monitoring Well ID	Construction Details	Elevation (m asl.)
BH/MW1	Developed under License # 7488 - using 50 mm, Schedule 40 PVC pipe with slotted screen, Silica sand positioned around the screen with a bentonite seal located above the filter pack to grade to prevent surface water encroachment, as per O.Reg. 903, and O.Reg. 153/04 criteria	185.0
BH/MW2	Developed under License # 7488 - using 50 mm, Schedule 40 PVC pipe with slotted screen, Silica sand positioned around the screen with a bentonite seal located above the filter pack to grade, to prevent surface water encroachment, as per O.Reg. 903, and O.Reg. 153/04 criteria	185.3
BH/MW4	Developed under License # 7488 - using 50 mm, Schedule 40 PVC pipe with slotted screen, Silica sand positioned around the screen with a bentonite seal located above the filter pack to grade, to prevent surface water encroachment, as per O.Reg. 903, and O.Reg. 153/04 criteria	185.9
BH/MW5	Developed under License # 7488 - using 50 mm, Schedule 40 PVC pipe with slotted screen, Silica sand positioned around the screen with a bentonite seal located above the filter pack to grade, to prevent surface water encroachment, as per O.Reg. 903, and O.Reg. 153/04 criteria	186.0
BH/MW7	Developed under License # 7488 - using 50 mm, Schedule 40 PVC pipe with slotted screen, Silica sand positioned around the screen with a bentonite seal located above the filter pack to grade, to prevent surface water encroachment, as per O.Reg. 903, and O.Reg. 153/04 criteria	185.9
BH/MW8	Developed under License # 7488 - using 50 mm, Schedule 40 PVC pipe with slotted screen, Silica sand positioned around the screen with a bentonite seal located above the filter pack to grade, to prevent surface water encroachment, as per O.Reg. 903, and O.Reg. 153/04 criteria	186.2
BH/MW9	Developed under License # 7488 - using 50 mm, Schedule 40 PVC pipe with slotted screen, Silica sand positioned around the screen with a bentonite seal located above the filter pack to grade, to prevent surface water encroachment, as per O.Reg. 903, and O.Reg. 153/04 criteria	186.0
BH/MW15	Developed under License # 7488 - using 50 mm, Schedule 40 PVC pipe with slotted screen, Silica sand positioned around the screen with a bentonite seal located above the filter pack to grade, to prevent surface water encroachment, as per O.Reg. 903, and O.Reg. 153/04 criteria	184.9
BH/MW18	Developed under License # 7488 - using 50 mm, Schedule 40 PVC pipe with slotted screen, Silica sand positioned around the screen with a bentonite seal located above the filter pack to grade, to prevent surface water encroachment, as per O.Reg. 903, and O.Reg. 153/04 criteria	185.8
BH/MW20	Developed under License # 7488 - using 50 mm, Schedule 40 PVC pipe with slotted screen, Silica sand positioned around the screen with a bentonite seal located above the filter pack to grade, to prevent surface water encroachment, as per O.Reg. 903, and O.Reg. 153/04 criteria	185.5

Table 12: Monitoring Well and Groundwater Elevations

Monitoring Well ID	Date of Logging	VOC Concentration, Temperature, and pH	Location Elevation (m asl.)	Groundwater Elevation (m asl.)
BH/MW1	May 6, 2013	0ppm	185.0	181.92
BH/MW2	May 6, 2013	0ppm, 8.2±°C, 7.4	185.3	184.54
BH/MW4	May 6, 2013	0ppm	185.9	184.72
BH/MW5	May 6, 2013	0ppm, 8.1±°C, 7.4	186.0	185.04
BH/MW7	May 6, 2013	0ppm	185.9	184.51
BH/MW8	May 6, 2013	0ppm, 8.1±°C, 7.3	186.2	185.25
BH/MW9	May 6, 2013	0ppm	186.0	184.48
BH/MW15	May 6, 2013	0ppm	184.9	184.05
BH/MW18	May 6, 2013	0ppm	185.8	184.53
BH/MW20	May 6, 2013	0ppm	185.5	184.78

TABLE 13: GROUNDWATER & SOIL MAXIMUM CONCENTRATION DATA

SOIL MAXIMUM CONCENTRATION DATA

METALS

PARAMETER			Sample ID	Sample ID	Sample ID	Sample ID
			BH3	BH12	BH/MW15	BH/MW18 (D)
METALS			SS2	SS2	SS2	SS2
SAR	5			0.80		
Antimony	7.5					
Arsenic	18					5.5
Barium	390		79.9			
Beryllium	5					1.08
Boron	120					86.4
Cadmium	1.2					
Chromium	160					32.4
Cobalt	22					14.3
Copper	180				29.1	
Lead	120			4.7		4.7
Mercury	1.8					
Molybdenum	6.9					
Nickel	130					35.4
Selenium	2.4					
Silver	25					
Thallium	1					
Uranium	23					
Vanadium	86					42.9
Zinc	340					62.0
Hex. Chromium	8					

SOIL MAXIMUM CONCENTRATION DATA

PAHs

PARAMETER			Sample ID	Sample ID	Sample ID	Sample ID	Sample ID	Sample ID	Sample ID	Sample ID	Sample ID
PAH			BH/MW1	BH/MW2	BH3	BH/MW4	BH/MW9	BH/MW10	BH/MW13	BH16	BH/MW20
	Reg 153/04	MDL	SS2	SS2	SS2	SS2	SS2	SS2	SS2	SS2	SS2
1-Methylnaphthalene	0.99	0.030	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL	<MDL
2-Methylnaphthalene	0.99	0.030									
1+2-Methylnaphthalenes	0.99	0.042									
Acenaphthene	7.9	0.050									
Acenaphthylene	0.15	0.050									
Anthracene	0.67	0.050									
Benzo(a)anthracene	0.5	0.050									
Benzo(a)pyrene	0.3	0.050		ALL							
Benzo(b)fluoranthene	0.78	0.050			RESULTS						
Benzo(g,h,i)perylene	6.6	0.050				BELOW					
Benzo(k)fluoranthene	0.78	0.050					DETECTION				
Chrysene	7.0	0.050						LIMITS			
Dibenzo(ah)anthracene	0.1	0.050									
Fluoranthene	0.69	0.050									
Fluorene	62	0.050									
Indeno(1,2,3-cd)pyrene	0.38	0.050									
Naphthalene	0.6	0.050									
Phenanthrene	6.2	0.050									
Pyrene	78	0.050									

SOIL MAXIMUM CONCENTRATION DATA

PHCs

PARAMETER			Sample ID
			BH/MW15
PHC	Reg 153/04	MDL	SS3
F_1 ($C_6 - C_{10}$)	65	5.0	
F_2 ($C_{10} - C_{16}$)	150	10	
F_3 ($C_{16} - C_{34}$)	1300	50	57
F_4 ($C_{34} - C_{50}$)	5600	50	

SOIL MAXIMUM CONCENTRATION DATA

PCBs

PARAMETER			Sample ID	Sample ID	Sample ID	Sample ID
			BH/MW5	BH/MW9	BH/MW9(D)	BH10 (D)
	Reg 153/04	MDL	SS1	SS1	SS1	SS4
Polychlorinated Biphenyls						
Aroclor 1242	-	0.010	RESULTS			
Aroclor 1248	-	0.010		BELOW		
Aroclor 1254	-	0.010			DETECTIO N	
Aroclor 1260	-	0.010				LIMITS
Total PCB's	0.35	0.020				

SOIL MAXIMUM CONCENTRATION DATA – VOC/PHCs

PARAMETER			Sample ID	Sample ID	Sample ID	Sample ID	Sample ID	Sample ID	Sample ID	Sample ID	Sample ID
			BH6	BH/MW7	BH/MW8	BH/MW9	BH12	BH14	BH17	BH17	BH19
	Reg 153/04	MDL	SS3	SS3	SS2	SS2	SS2	SS2	SS2	SS2(D)	SS3
Acetone	28	0.50									
Benzene	0.17	0.020									
Bromodichloromethane	13	0.050									
Bromoform	0.26	0.050									
Bromomethane	0.05	0.050									
Carbon tetrachloride	0.12	0.050									
Chlorobenzene	2.7	0.050									
Chloroform	0.18	0.050									
Dibromochloromethane	9.4	0.050									
1,2-Dibromoethane	0.05	0.050									
1,2-Dichlorobenzene	4.3	0.050									
1,3-Dichlorobenzene	6	0.050		ALL							
1,4-Dichlorobenzene	0.097	0.050			RESULTS						
Dichlorodifluoromethane	25	0.050				BELOW					
1,1-Dichloroethane	11	0.050					DETECTION				
1,2-Dichloroethane	0.05	0.050						LIMITS			
1,1-Dichloroethylene	0.05	0.050									
cis-1,2-Dichloroethylene	30	0.050									
trans-1,2-Dichloroethylene	0.75	0.050									
1,3-Dichloropropene (cis & trans)	0.083	0.042									
Methylene Chloride	0.96	0.050									
1,2-Dichloropropane	0.085	0.050									
cis-1,3-Dichloropropene	-	0.030									
trans-1,3-Dichloropropene	-	0.030									
Ethyl Benzene	15	0.050									
n-Hexane	34	0.050									
Methyl Ethyl Ketone	44	0.50									
Methyl Isobutyl Ketone	4.3	0.50									
MTBE	1.4	0.050									
Styrene	2.2	0.050									
1,1,1,2-Tetrachloroethane	0.05	0.050									
1,1,2,2-Tetrachloroethane	0.05	0.050									
Tetrachloroethylene	2.3	0.050									
Toluene	6	0.20									
1,1,1-Trichloroethane	3.4	0.050									
1,1,2-Trichloroethane	0.05	0.050									
Trichloroethylene	0.52	0.050									
Trichlorofluoromethane	5.8	0.050									
Vinyl chloride	0.022	0.020									
o-Xylene	-	0.020									
m+p-Xylenes	-	0.030									
Xylenes (Total)	25	0.050									
PHC:	Reg 153/04	MDL									
F_1 ($C_6 - C_{10}$)	65	5.0									
F_2 ($C_{10} - C_{16}$)	150	10									
F_3 ($C_{16} - C_{34}$)	1300	50					51				
F_4 ($C_{34} - C_{50}$)	5600	50					158				

GROUNDWATER MAXIMUM CONCENTRATION DATA

METALS

PARAMETER METALS	FIELD FILTERED Reg 153/04	Sample ID BH/MW2	Sample ID BH/MW4	Sample ID BH/MW8	Sample ID BH/MW9	Sample ID BH/MW15	Sample ID BH/MW18
Antimony	20000						
Arsenic	1900					12.9	
Barium	29000				143		
Beryllium	67						
Boron	45000		3700				
Cadmium	2.7						
Chromium	810						
Cobalt	66						5.5
Copper	87						
Lead	25						
Molybdenum	9200			17.1			
Nickel	490			7.2			
Selenium	63			0.45			
Silver	1.5				0.068		
Sodium	2300000						611000
Thallium	510						
Uranium	420			6.7			
Vanadium	250	1.15					
Zinc	1100					16.9	

GROUNDWATER MAXIMUM CONCENTRATION DATA

VOC/PHCs

PARAMETER			Sample ID	Sample ID
			BH/MW5	BH/MW7(D)
VOC/PHC	Reg 153/04	MDL		
Acetone	130000	30	42	
Benzene	44	0.50		
Bromodichloromethane	85000	2.0		
Bromoform	770	5.0		
Bromomethane	56	0.50		
Carbon tetrachloride	8.4	0.20		
Chlorobenzene	630	0.50		
Dibromochloromethane	82000	2.0		
Chloroform	22	1.0		
1,2-Dibromoethane	0.83	0.20		
1,2-Dichlorobenzene	9600	0.50		
1,3-Dichlorobenzene	9600	0.50		
1,4-Dichlorobenzene	67	0.50		
Dichlorodifluoromethane	4400	2.0		
1,1-Dichloroethane	3100	0. 50		
1,2-Dichloroethane	12	0. 50		
1,1-Dichloroethylene	17	0. 50		
cis-1,2-Dichloroethylene	17	0. 50		
trans-1,2-Dichloroethylene	17	0. 50		
1,3-Dichloropropene (cis & trans)	45	0. 50		
Methylene Chloride	5500	5.0		
1,2-Dichloropropane	140	0. 50		
cis-1,3-Dichloropropene	-	0. 30		
trans-1,3-Dichloropropene	-	0. 30		
Ethyl Benzene	2300	0. 50		
n-Hexane	520	0. 50		
Methyl Ethyl Ketone	1500000	20		
Methyl Isobutyl Ketone	580000	20		
MTBE	1400	2.0		
Styrene	9100	0.50		
1,1,1,2-Tetrachloroethane	28	0.50		
1,1,2,2-Tetrachloroethane	15	0.50		
Tetrachloroethylene	17	0.50		
Toluene	18000	0.50	1.25	0.56
1,1,1-Trichloroethane	6700	0.50		
1,1,2-Trichloroethane	30	0.50		
Trichloroethylene	17	0.50		
Trichlorofluoromethane	2500	5.0		
Vinyl chloride	1.7	0.50		
o-Xylene	-	0.30		
m+p-Xylenes	-	0.40		
Xylenes (Total)	4200	0.50		
PHC:	Reg 153/04	MDL		
F_1 ($C_6 - C_{10}$)	750	25		
F_2 ($C_{10} - C_{16}$)	150	100		
F_3 ($C_{16} - C_{34}$)	500	250		
F_4 ($C_{34} - C_{50}$)	500	250		

GROUNDWATER MAXIMUM CONCENTRATION DATA

PAHs

PARAMETER PAH	Reg 153/04		Sample ID BH/MW7
1-Methylnaphthalene	1800	0.020	0.046
2-Methylnaphthalene	1800	0.020	
1+2-Methylnaphthalenes	1800	0.028	
Acenaphthene	1700	0.020	
Acenaphthylene	1.8	0.020	
Anthracene	2.4	0.020	
Benzo(a)anthracene	4.7	0.020	
Benzo(a)pyrene	0.81	0.010	
Benzo(b)fluoranthene	0.75	0.020	
Benzo(g,h,i)perylene	0.20	0.020	
Benzo(k)fluoranthene	0.40	0.020	
Chrysene	1.0	0.020	
Dibenzo(ah)anthracene	0.52	0.020	
Fluoranthene	130	0.020	0.038
Fluorene	400	0.020	0.121
Indeno(1,2,3-cd)pyrene	0.20	0.020	
Naphthalene	6400	0.020	
Phenanthrene	580	0.020	1.18
Pyrene	68	0.020	

GROUNDWATER MAXIMUM CONCENTRATION DATA

PCBs

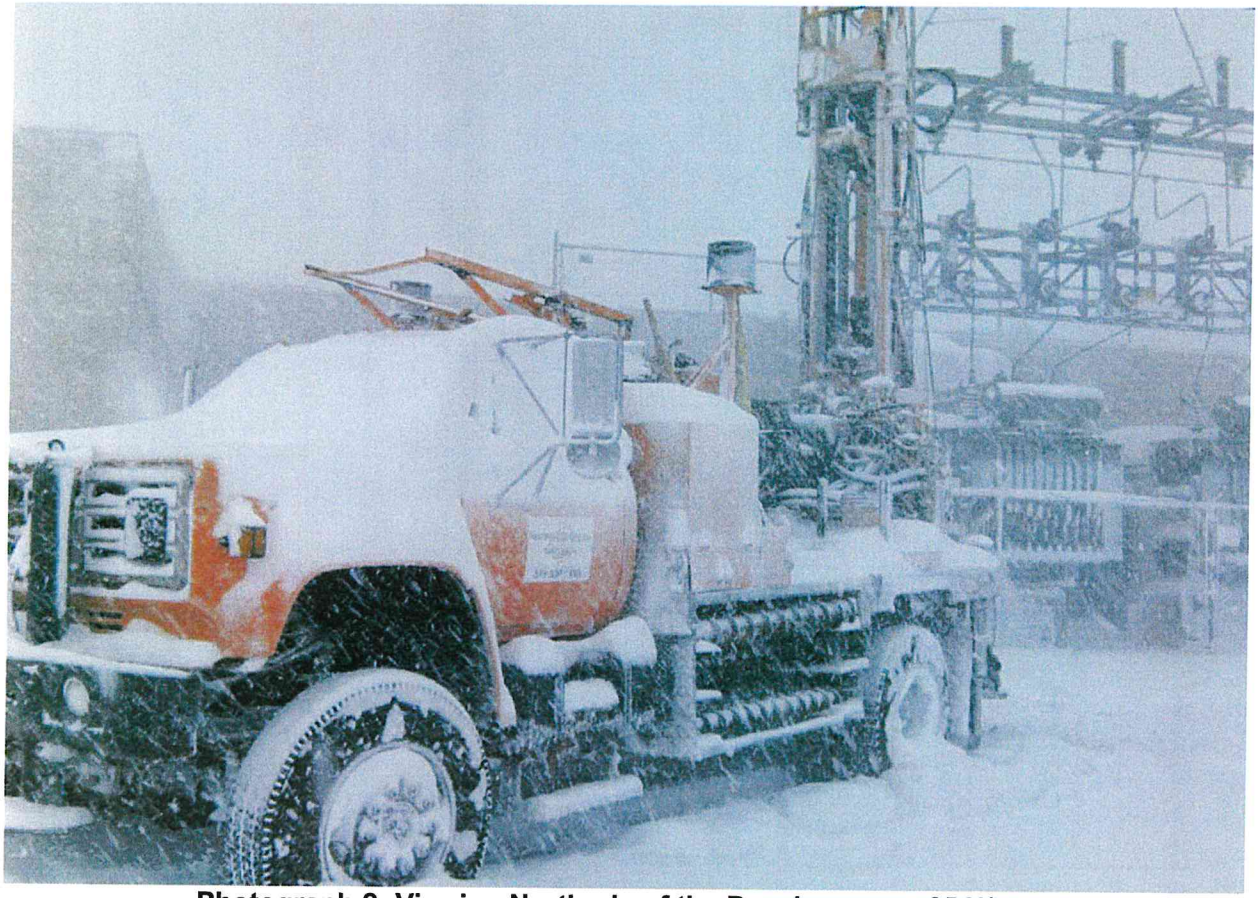
PARAMETER	Reg 153/04	MDL	Sample ID BH/MW9 SS1	Sample ID BH/MW9(D) SS1
Polychlorinated Biphenyls				
Aroclor 1242	-	0.020	RESULTS	
Aroclor 1248	-	0.020	BELOW	
Aroclor 1254	-	0.020		DETECTION
Aroclor 1260	-	0.020		LIMITS
Total PCB's	15	0.040		

10.0 APPENDICES

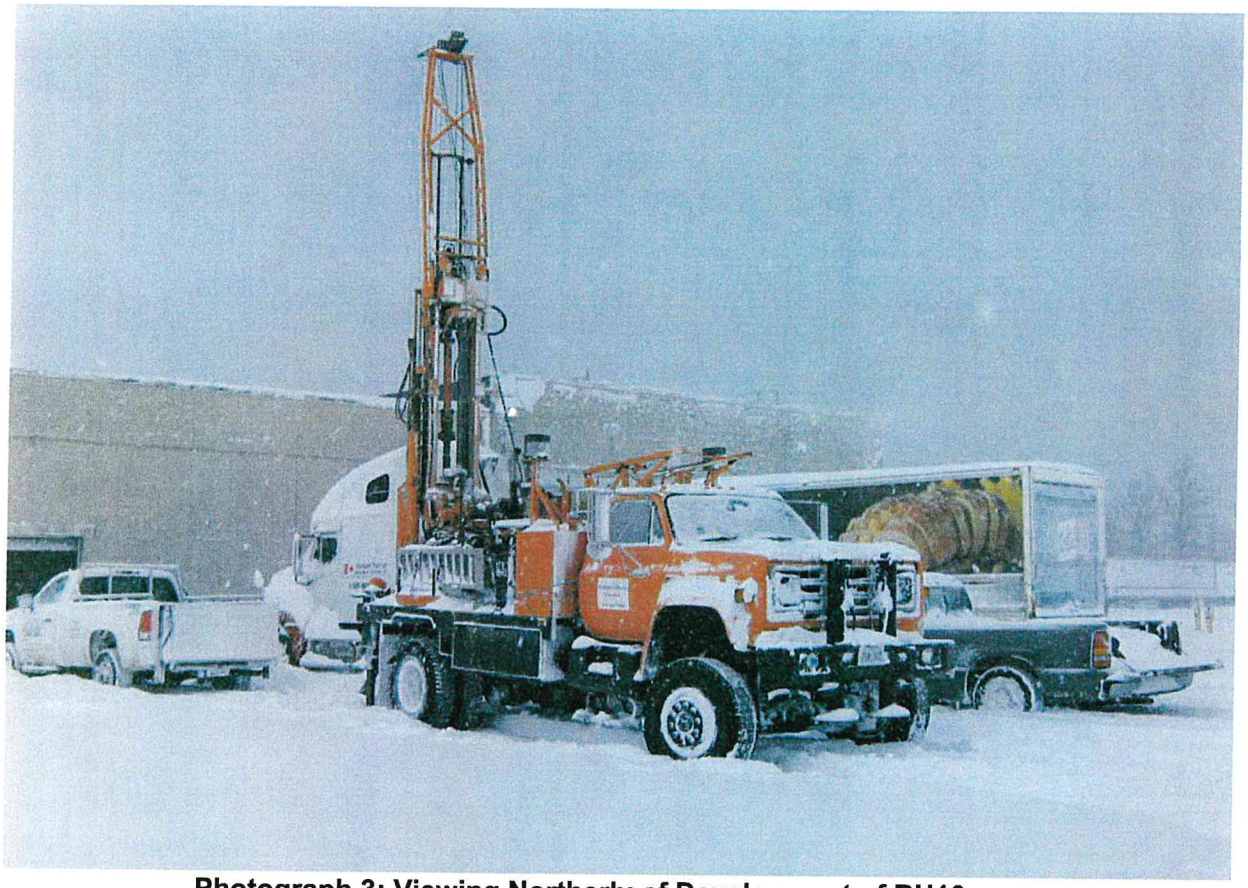
APPENDIX 1 – SITE PHOTOGRAPHS
APPENDIX 2 – MUNICIPAL DOCUMENTATION
APPENDIX 3 – BOREHOLE LOGS
APPENDIX 4 – LABORATORY CERTIFICATES OF ANALYSIS
APPENDIX 5 – TOPOGRAPHICAL/GEOLOGICAL MAPS
APPENDIX 6 – RSC PROPERTY SURVEY
APPENDIX 7 – ANSI MAP
APPENDIX 8 – SAMPLING & ANALYSIS PLAN
APPENDIX 9 – CONCEPTUAL SITE MODEL (CSM)

APPENDIX 1
SITE PHOTOGRAPHS

Photograph 1: View Southeasterly of Development of BH/MW1.



Photograph 2: Viewing Northerly of the Development of BH/MW9.



Photograph 3: Viewing Northerly of Development of BH10.

Photograph 4: Viewing Southeasterly of Development of BH17.

Photograph 5: Viewing Easterly of Development of BH/MW18.

Photograph 6: Viewing Southwesterly of Development of BH19.

Photograph 7: Viewing Northwesterly of Development of BH/MW20.

APPENDIX 2
MUNICIPAL DOCUMENTATION

Rubicon Environmental (2008) Inc.

Owen Sound City Hall
808 2nd Avenue East,
Owen Sound, Ontario,
N4K 2H4

November 20, 2013

Attention: Mr. Brad McRoberts, P. Eng.

Dear Sir,

Notification Letter

Rubicon Environmental (2008) Inc. has been retained to complete a Record of Site Condition for the property located at 3195 East Bayshore Road, Owen Sound, Ontario. As part of the process to file a Record of Site Condition with the Ministry of the Environment, we must notify lower and upper tier municipalities that we have classified the above mentioned property as having non-potable groundwater on site, and we will be comparing the analytical data to the non-potable groundwater criteria (Table 3, O. Reg. 511/09) of the EPA.

Sincerely,
RUBICON ENVIRONMENTAL (2008) INC.

Paul Rew, P.Eng.
Project Manager

T: 519-924-0003
F: 519-924-0004
C: 519-942-7353

PO Box 509,
60 Toronto Road,
Flesherton, Ontario N0C 1E0

Tel: 519 924 0003
Fax: 519 924 0004

From"McRoberts, Brad" <bmcroberts@owensound.ca>
Subject:3195 East Bayshore Road, Owen Sound, ON
Sent date:11/20/2013 10:58:10 AM
To:"Rubicon Environmental(2008) Inc."<paulrew@rubiconenviro.com>
Attachments:2 attachments - Download all attachments [132 KB]
image001.jpg [2 KB], R55001_Lower Tier Notification – November 20_2013.pdf [130 KB]

Dear Mr. Rew,

I will not speak the appropriateness of the use of the non-potable groundwater criteria associated with O. Reg. 511/09 or any other applicable legislation with regards the above referenced property. I will confirm that the above referenced property is serviced by municipal water by the City of Owen Sound and is within a general area of municipal water service along East Bayshore Road. To the west is the Owen Sound Harbour and to the east there is no municipal service beyond 9th Ave East. Service does extend northerly along East Bay Shore Road to the City limits where it continues under the jurisdiction of the Municipality of Meaford.

Yours Truly,

Brad McRoberts, MPA, P. Eng.

Director of Operations

City Of Owen Sound

808 2nd Ave East

Owen Sound, ON

N4K 2H4

Direct #: (519) 376-4440 Ext. 1201

City Hall Fax #: (519) 371-0511

bmcroberts@owensound.ca

Rubicon Environmental (2008) Inc.

November 20, 2013

Grey County Planning & Development Department
595 9th Avenue East
Owen Sound, Ontario
N4K 3E3

Attention: Mr. Randy Scherzer, B.E.S. MCIP, RPP
Director of Planning & Development

Dear Sir,

Notification Letter

Rubicon Environmental (2008) Inc. has been retained to complete a Record of Site Condition for the property located at 3195 East Bayshore Road, Owen Sound, Ontario. As part of the process to file a Record of Site Condition with the Ministry of the Environment, we must notify lower and upper tier municipalities that we have classified the above mentioned property as having non-potable groundwater on site, and we will be comparing the analytical data to the non-potable groundwater criteria (Table 3, O. Reg. 511/09) of the EPA.

Sincerely,
RUBICON ENVIRONMENTAL (2008) INC.

Paul Rew, P.Eng.
Project Manager

T: 519-924-0003
F: 519-924-0004
C: 519-942-7353

PO Box 509,
60 Toronto Road,
Flesherton, Ontario N0C 1E0

Tel: 519 924 0003
Fax: 519 924 0004

Grey County

Planning & Development

595 9th Avenue East, Owen Sound Ontario N4K 3E3
519-376-2205 / 1-800-567-GREY / Fax 519-376-7970

November 21, 2013

Mr. Paul Rew
Rubicon Environmental Inc.
60 Toronto Road
FLESHERTON, Ontario N0C 1E0

Re: Notice of Record of Site Condition
3195 East Bayshore Road (South side)
Owen Sound

Dear Mr. Rew:

This letter is to acknowledge that Grey County planning staff have received the above-noted notice of record of site condition and have no concerns.

If you have any questions or concerns, please do not hesitate to contact me.

Yours truly,

Alisha Buitenhuis, B.E.S.
Planner
(519) 372-0219 ext. 1233
alisha.buitenhuis@grey.ca
www.grey.ca

APPENDIX 3
BOREHOLE LOGS

Project No: R55001.2

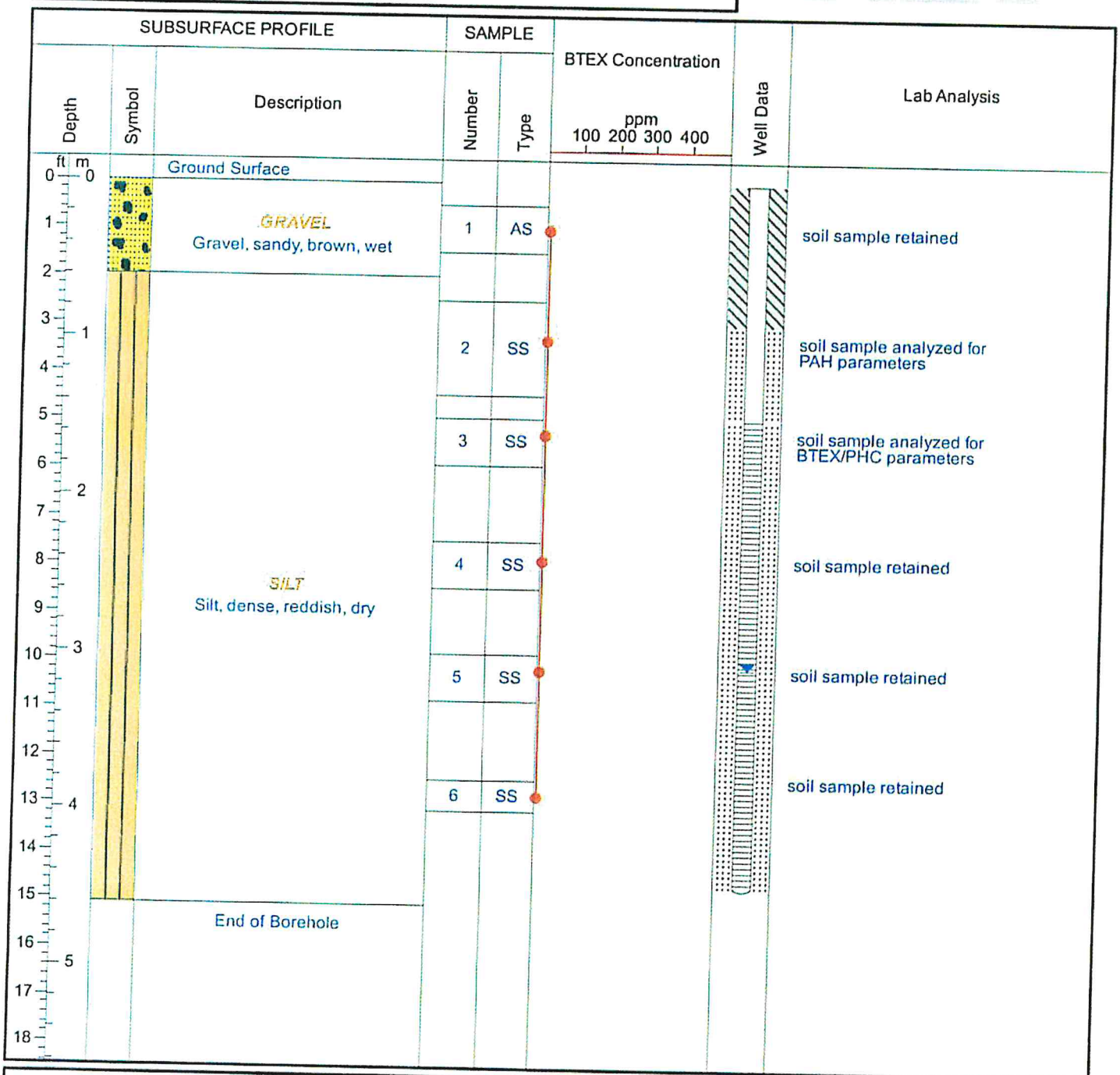
Log of: BH/MW1

Project: Phase II ESA

Client: Northridge Property Management Inc.

Location: 3195 East Bayshore Road, Owen Sound **Logged by:** BW

Rubicon Environmental Inc.



Drill Method: Solid Stem Auger

Drill Date: January 30, 2013

Drilled By: Henderson Drilling Inc.

Datum: Local

Hole Size: 15 cm

Sheet: 1 of 1

Project No: R55001.2

Project: Phase II ESA

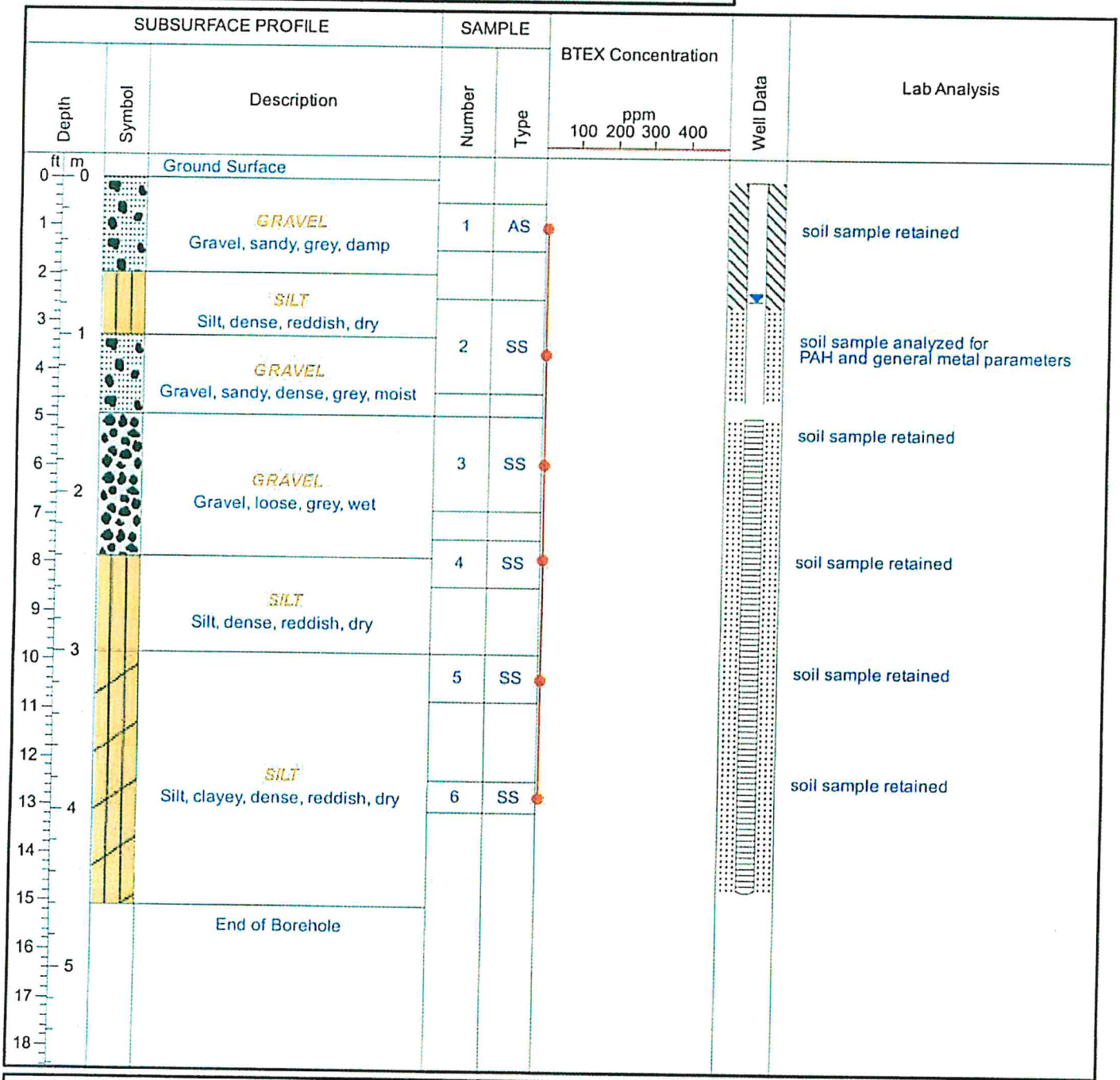
Client: Northridge Property Management Inc.

Location: 3195 East Bayshore Road, Owen Sound

Logged by: BW

Log of: BH/MW2

Rubicon Environmental Inc.



Drill Method: Solid Stem Auger

Drill Date: January 30, 2013

Drilled By: Henderson Drilling Inc.

Datum: Local

Hole Size: 15 cm

Sheet: 1 of 1

Project No: R55001.2

Log of: BH3

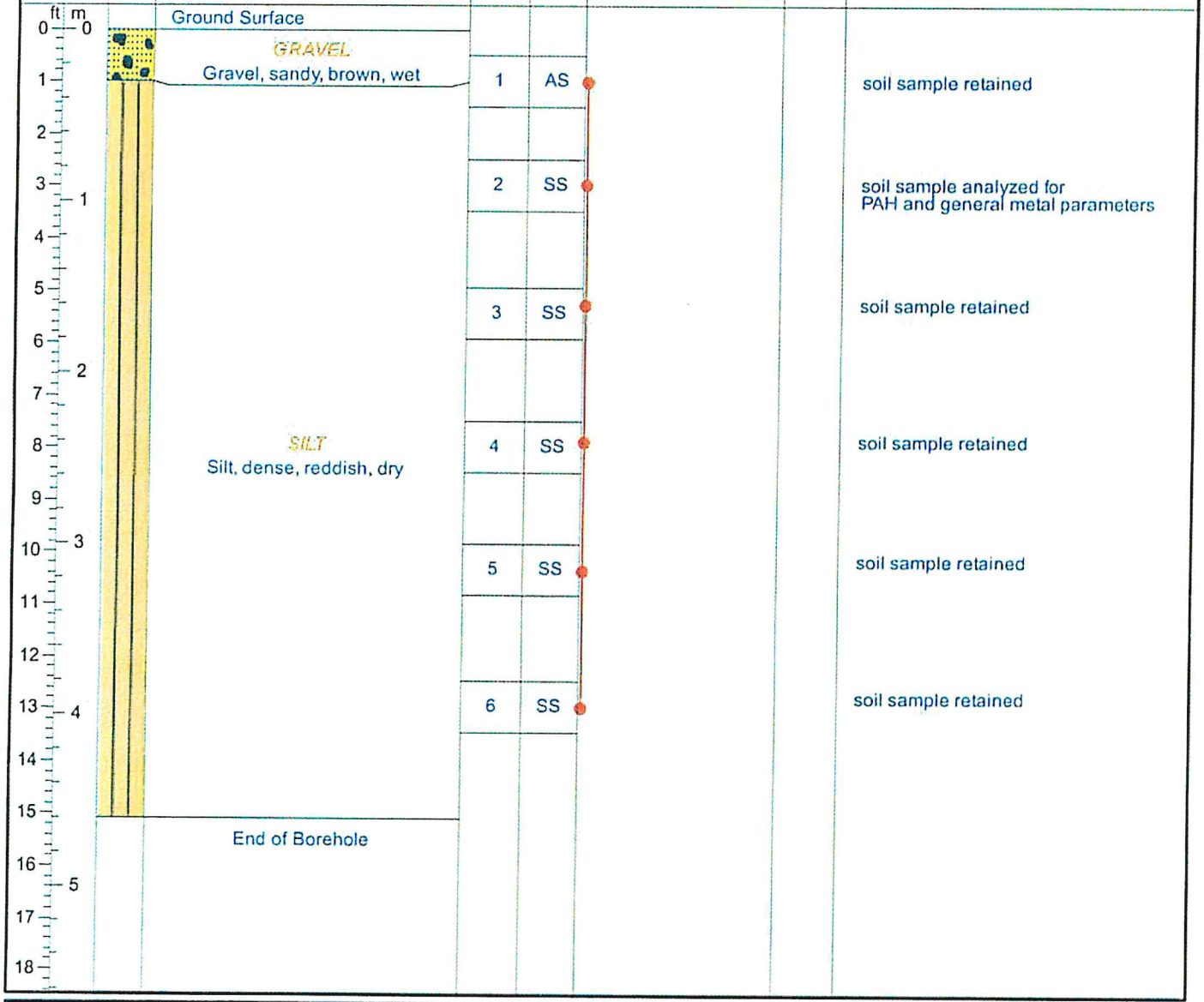
Project: Phase II ESA

Client: Northridge Property Management Inc.

Location: 3195 East Bayshore Road, Owen Sound

Logged by: BW

Rubicon Environmental Inc.



Drill Method: Solid Stem Auger

Drill Date: January 31, 2013

Drilled By: Henderson Drilling Inc.

Datum: Local

Hole Size: 15 cm

Sheet: 1 of 1

Project No: R55001.2

Log of: BH/MW4

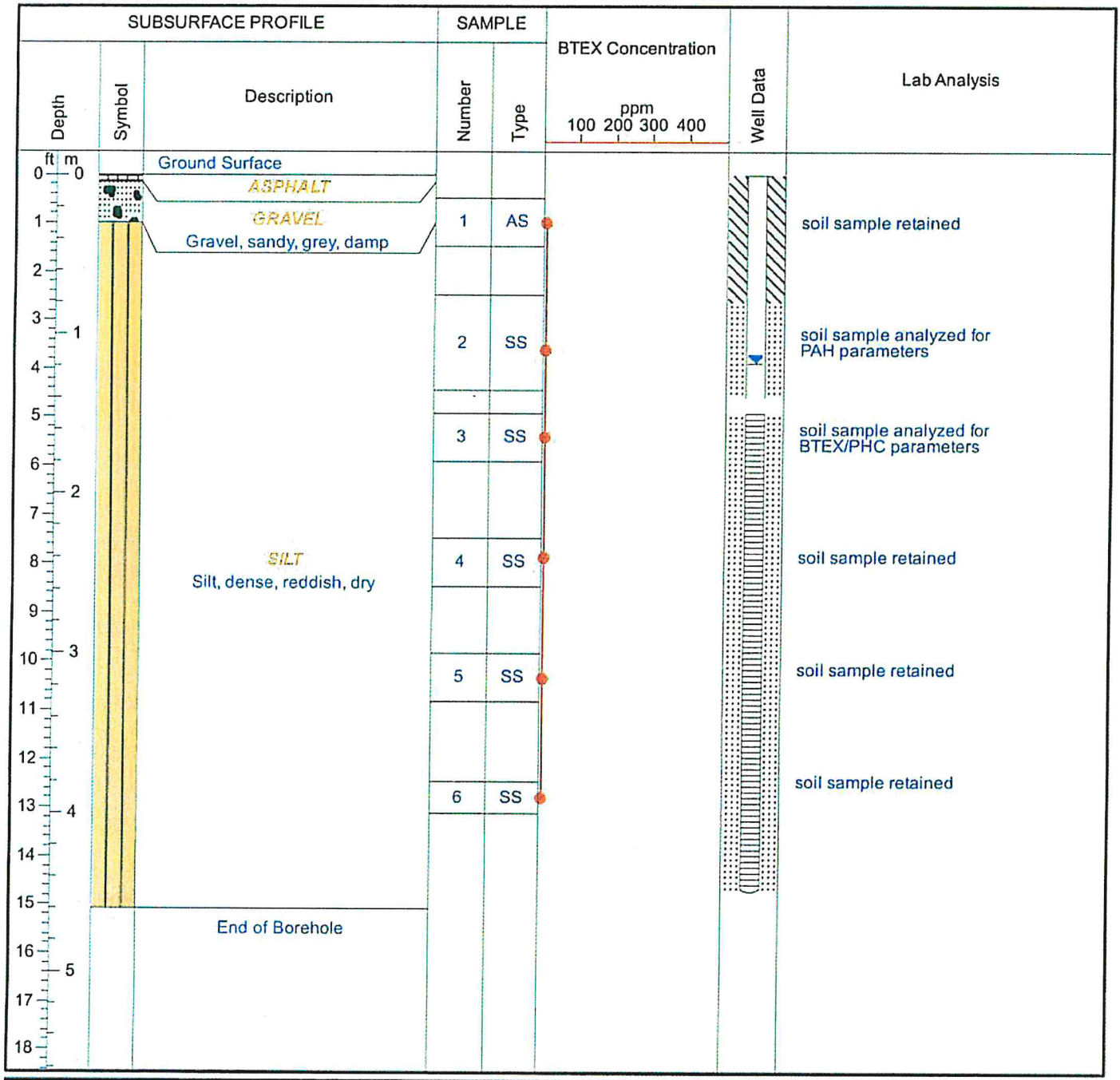
Project: Phase II ESA

Client: Northridge Property Management Inc.

Location: 3195 East Bayshore Road, Owen Sound

Logged by: BW

Rubicon Environmental Inc.



Drill Method: Solid Stem Auger

Drill Date: January 30, 2013

Drilled By: Henderson Drilling Inc.

Datum: Local

Hole Size: 15 cm

Sheet: 1 of 1

Project No: R55001.2

Project: Phase II ESA

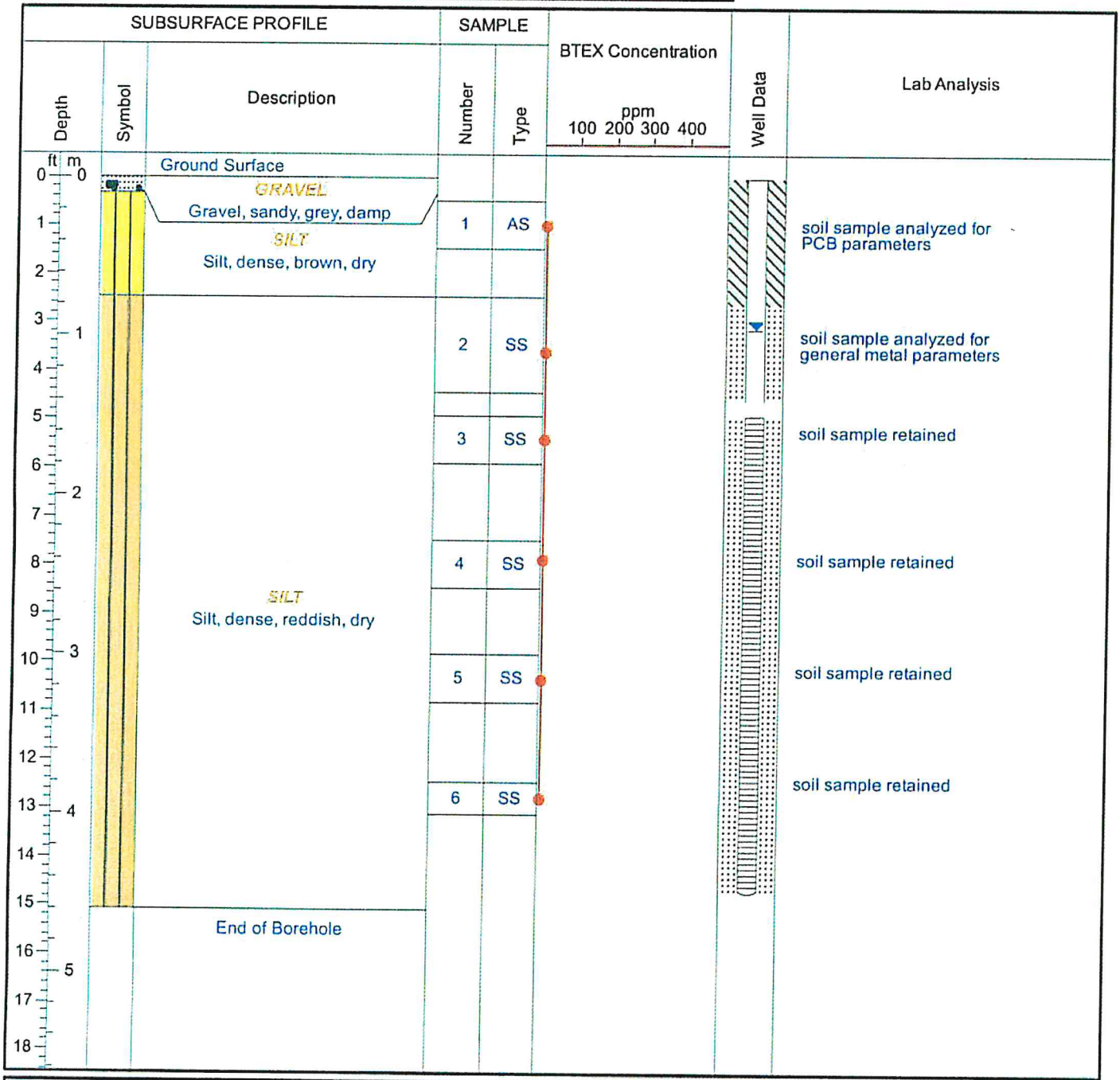
Client: Northridge Property Management Inc.

Location: 3195 East Bayshore Road, Owen Sound

Log of: BH/MW5

Logged by: BW

Rubicon Environmental Inc.



Drill Method: Solid Stem Auger

Drill Date: January 30, 2013

Drilled By: Henderson Drilling Inc.

Datum: Local

Hole Size: 15 cm

Sheet: 1 of 1

Project No: R55001.2

Log of: BH6

Project: Phase II ESA

Client: Northridge Property Management Inc.

Location: 3195 East Bayshore Road, Owen Sound

Logged by: BW

Rubicon Environmental Inc.

SUBSURFACE PROFILE			SAMPLE		BTEX Concentration	Well Data	Lab Analysis
Depth (ft / m)	Symbol	Description	Number	Type	ppm (100 200 300 400)		
0 / 0		Ground Surface					
1	GRAVEL	Gravel, some sand, brown, damp	1	AS			soil sample retained
2							
3 / 1			2	SS			soil sample analyzed for general metal parameters
4							
5			3	SS			soil sample analyzed for VOC /PHC parameters
6 / 2							
7							
8	SILT	Silt, dense, reddish, dry	4	SS			soil sample retained
9							
10 / 3			5	SS			soil sample retained
11							
12							
13 / 4			6	SS			soil sample retained
14							
15		End of Borehole					
16 / 5							
17							
18							

Drill Method: Solid Stem Auger

Drill Date: January 31, 2013

Drilled By: Henderson Drilling Inc.

Datum: Local

Hole Size: 15 cm

Sheet: 1 of 1

Project No: R55001.2

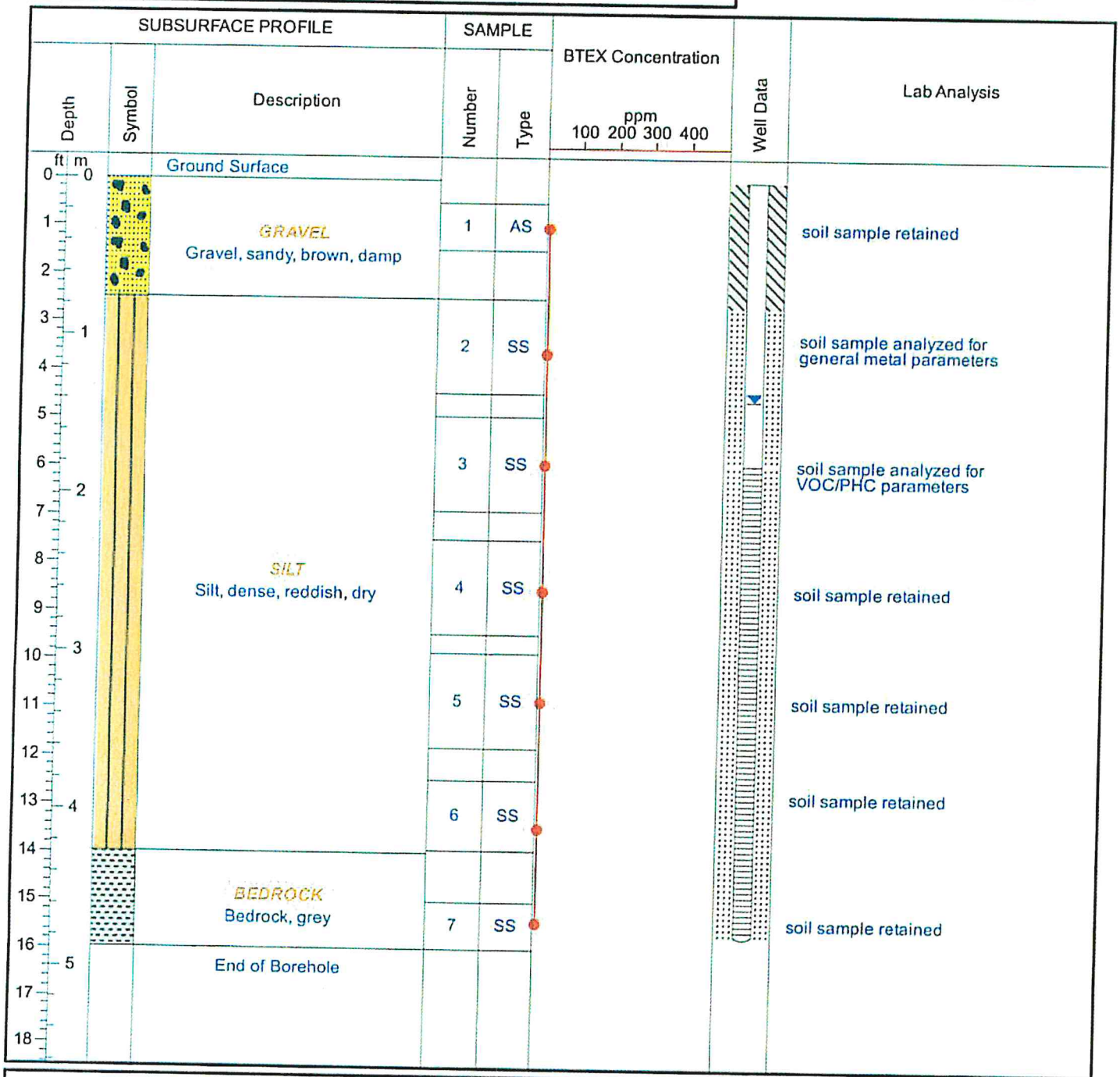
Log of: BH/MW7

Project: Phase II ESA

Client: Northridge Property Management Inc.

Location: 3195 East Bayshore Road, Owen Sound **Logged by:** BW

Rubicon Environmental Inc.



Drill Method: Solid Stem Auger

Drill Date: January 29, 2013

Drilled By: Henderson Drilling Inc.

Datum: Local

Hole Size: 15 cm

Sheet: 1 of 1

Project No: R55001.2

Log of: BH/MW8

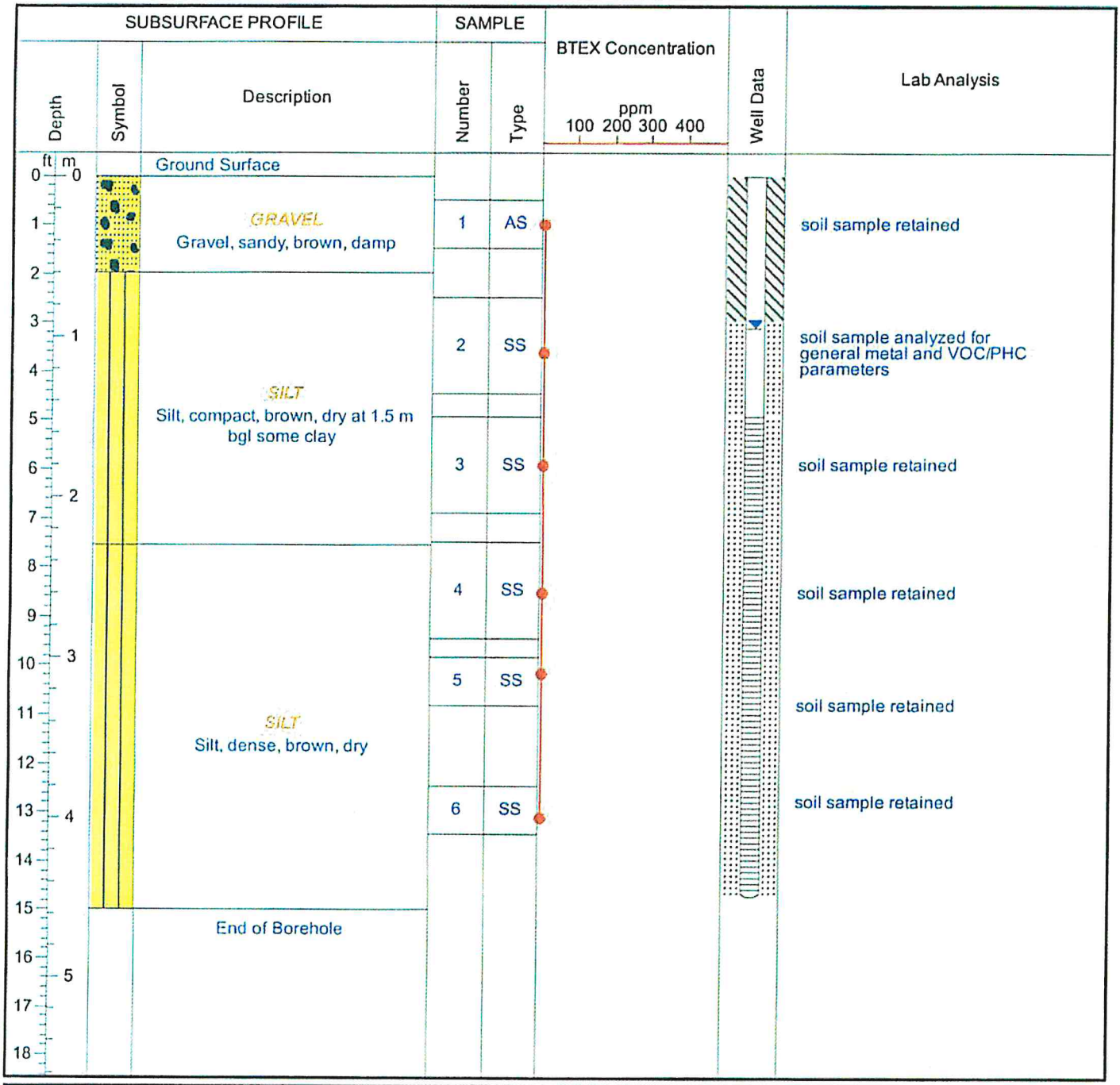
Project: Phase II ESA

Client: Northridge Property Management Inc.

Location: 3195 East Bayshore Road, Owen Sound

Logged by: BW

Rubicon Environmental Inc.



Drill Method: Solid Stem Auger

Drill Date: January 29, 2013

Drilled By: Henderson Drilling Inc.

Datum: Local

Hole Size: 15 cm

Sheet: 1 of 1

Project No: R55001.2

Log of: BH/MW9

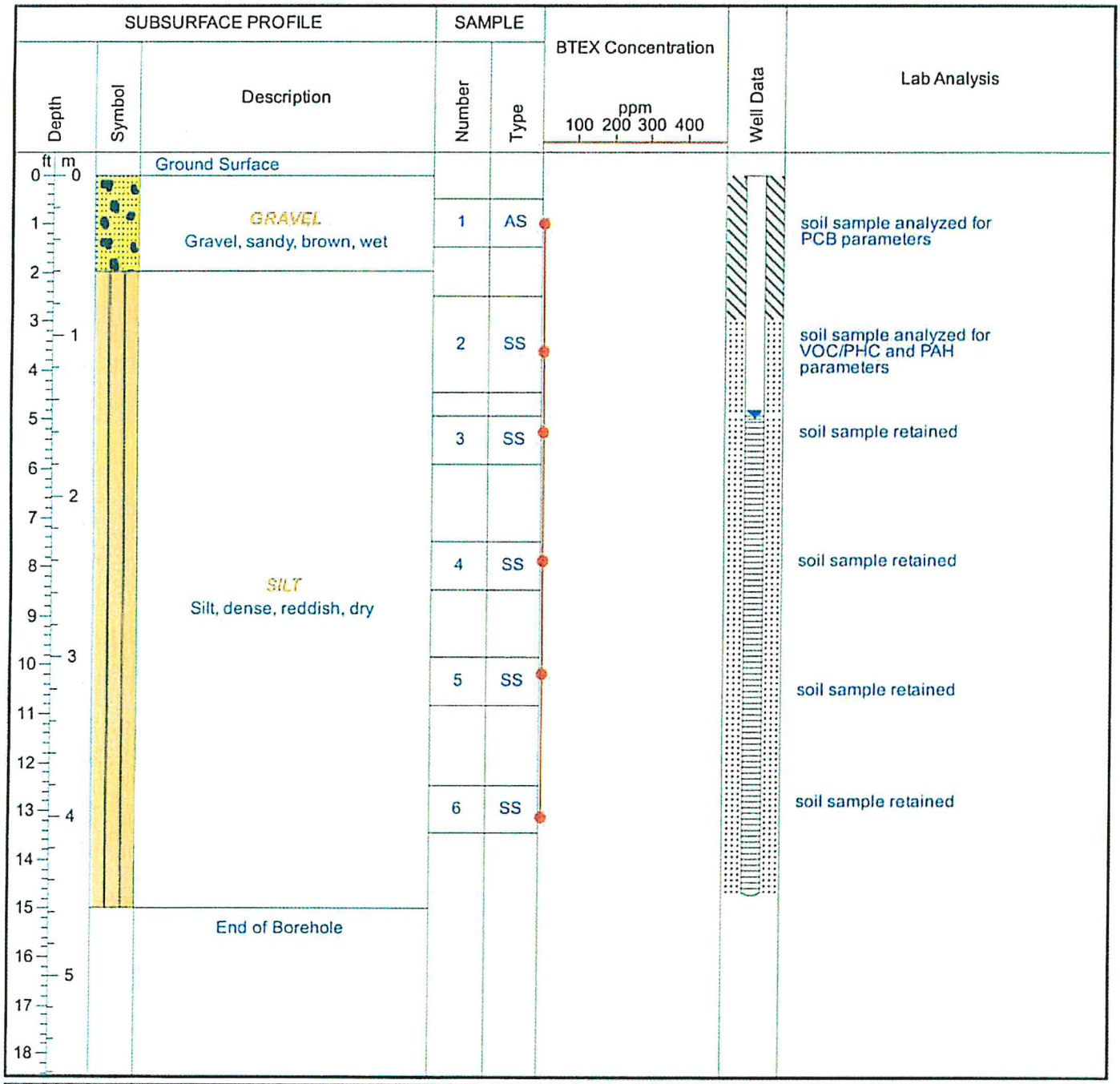
Project: Phase II ESA

Client: Northridge Property Management Inc.

Location: 3195 East Bayshore Road, Owen Sound

Logged by: BW

Rubicon Environmental Inc.



Drill Method: Solid Stem Auger

Drill Date: January 31, 2013

Drilled By: Henderson Drilling Inc.

Datum: Local

Hole Size: 15 cm

Sheet: 1 of 1

Project No: R55001.2

Log of: BH10

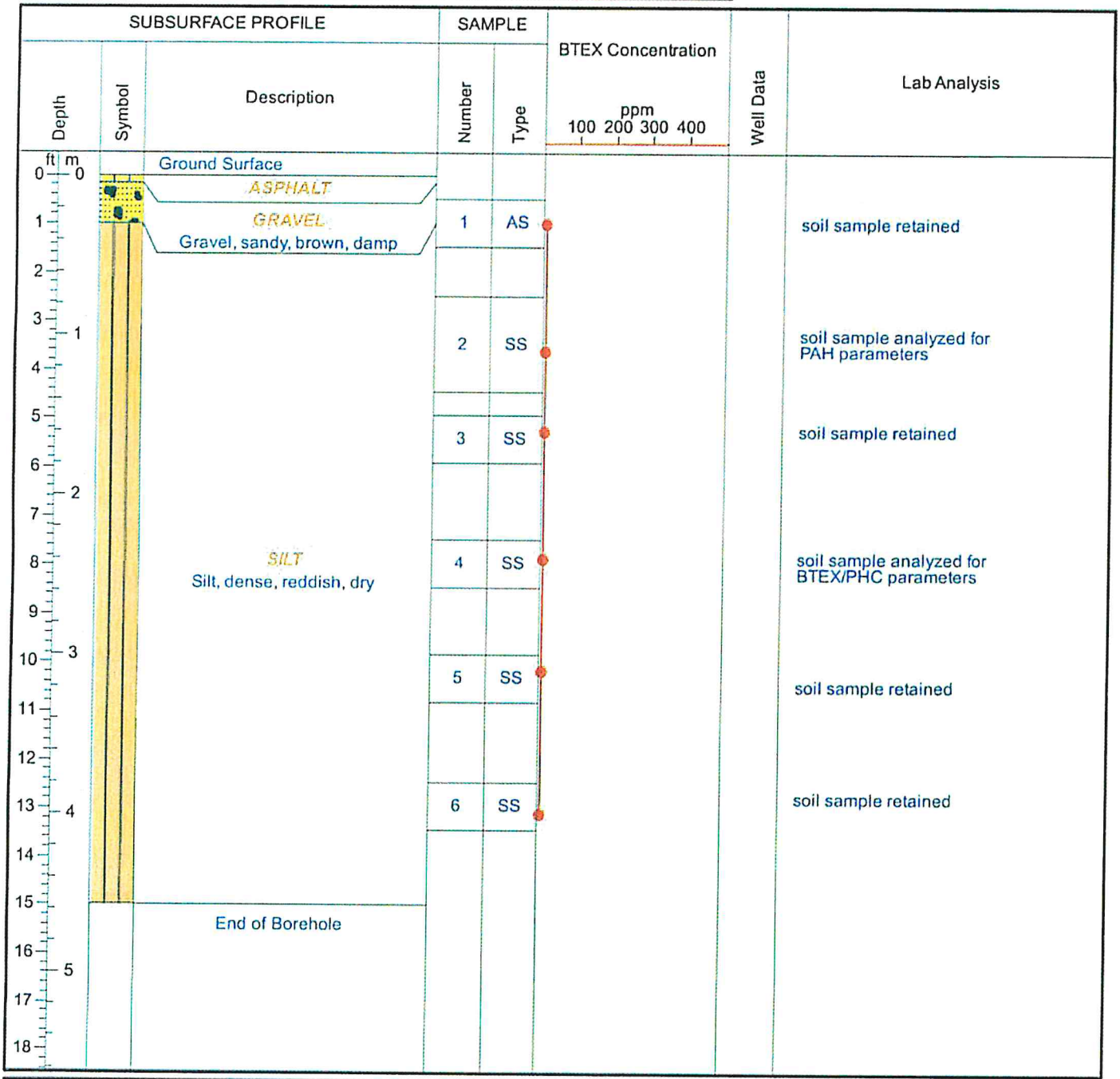
Project: Phase II ESA

Client: Northridge Property Management Inc.

Location: 3195 East Bayshore Road, Owen Sound

Logged by: BW

Rubicon Environmental Inc.



Drill Method: Solid Stem Auger

Drill Date: January 31, 2013

Drilled By: Henderson Drilling Inc.

Datum: Local

Hole Size: 15 cm

Sheet: 1 of 1

Project No: R55001.2

Log of: BH11

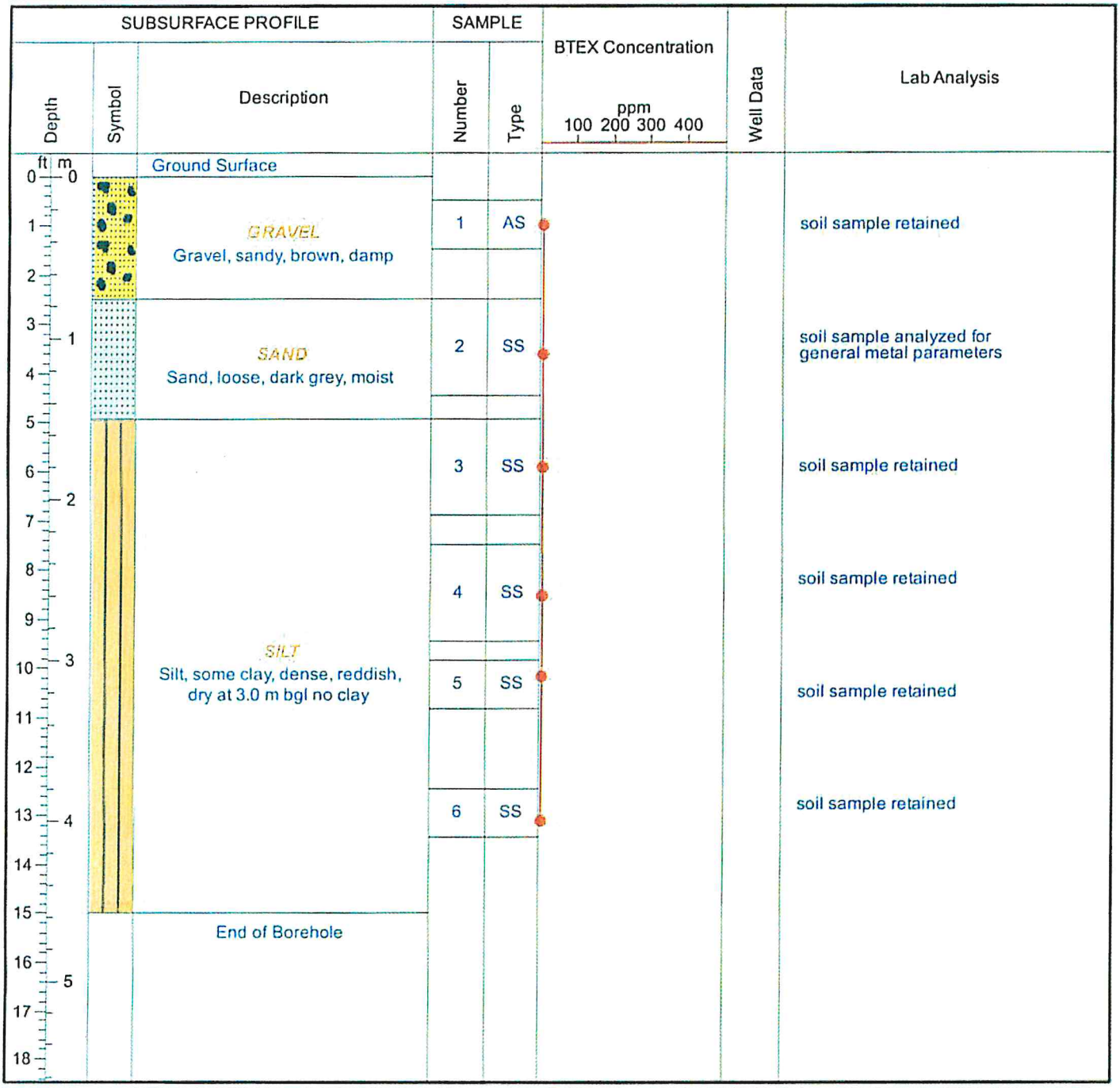
Project: Phase II ESA

Client: Northridge Property Management Inc.

Location: 3195 East Bayshore Road, Owen Sound

Logged by: BW

Rubicon Environmental Inc.



Drill Method: Solid Stem Auger

Drill Date: January 29, 2013

Drilled By: Henderson Drilling Inc.

Datum: Local

Hole Size: 15 cm

Sheet: 1 of 1

Project No: R55001.2

Log of: BH12

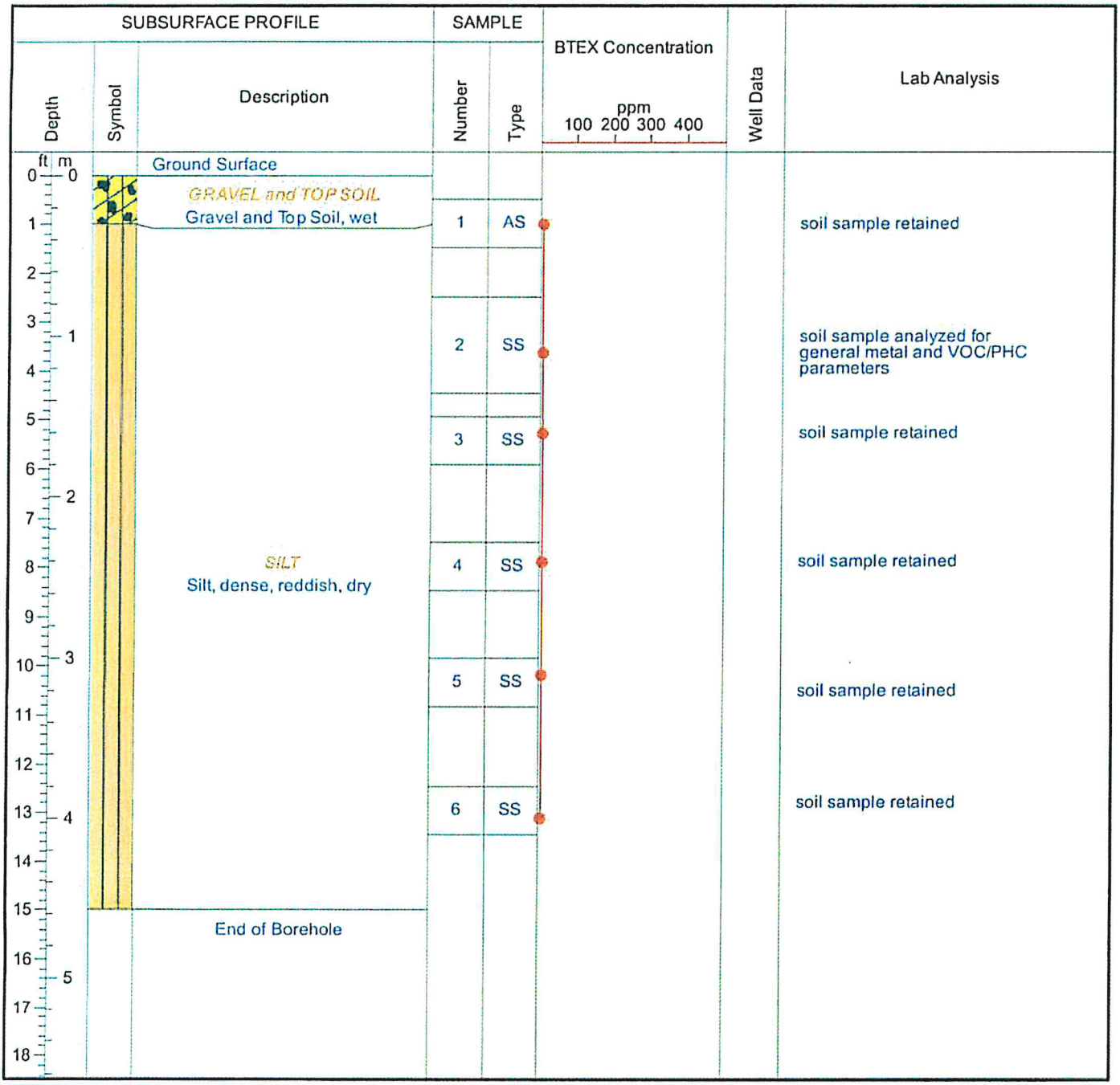
Project: Phase II ESA

Client: Northridge Property Management Inc.

Location: 3195 East Bayshore Road, Owen Sound

Logged by: BW

Rubicon Environmental Inc.



Drill Method: Solid Stem Auger

Drill Date: January 31, 2013

Drilled By: Henderson Drilling Inc.

Datum: Local

Hole Size: 15 cm

Sheet: 1 of 1

Project No: R55001.2

Log of: BH13

Project: Phase II ESA

Client: Northridge Property Management Inc.

Location: 3195 East Bayshore Road, Owen Sound

Logged by: BW

Rubicon Environmental Inc.

SUBSURFACE PROFILE			SAMPLE		BTEX Concentration (ppm)	Well Data	Lab Analysis
Depth (ft / m)	Symbol	Description	Number	Type	100 200 300 400		
0 / 0		Ground Surface					
		GRAVEL Gravel, sandy, brown, damp	1	AS			soil sample retained
3 / 1		SILT Silt, clayey, loose, reddish, dry	2	SS			soil sample analyzed for PAH parameters
6 / 2		SILT Silt, clayey, trace sand and gravel, dense, grey, damp-moist	3	SS			soil sample retained
			4	SS			soil sample analyzed for BTEX/PHC parameters
10 / 3		End of Borehole					

Drill Method: Solid Stem Auger

Drill Date: January 29, 2013

Drilled By: Henderson Drilling Inc.

Datum: Local

Hole Size: 15 cm

Sheet: 1 of 1

Project No: R55001.2

Log of: BH14

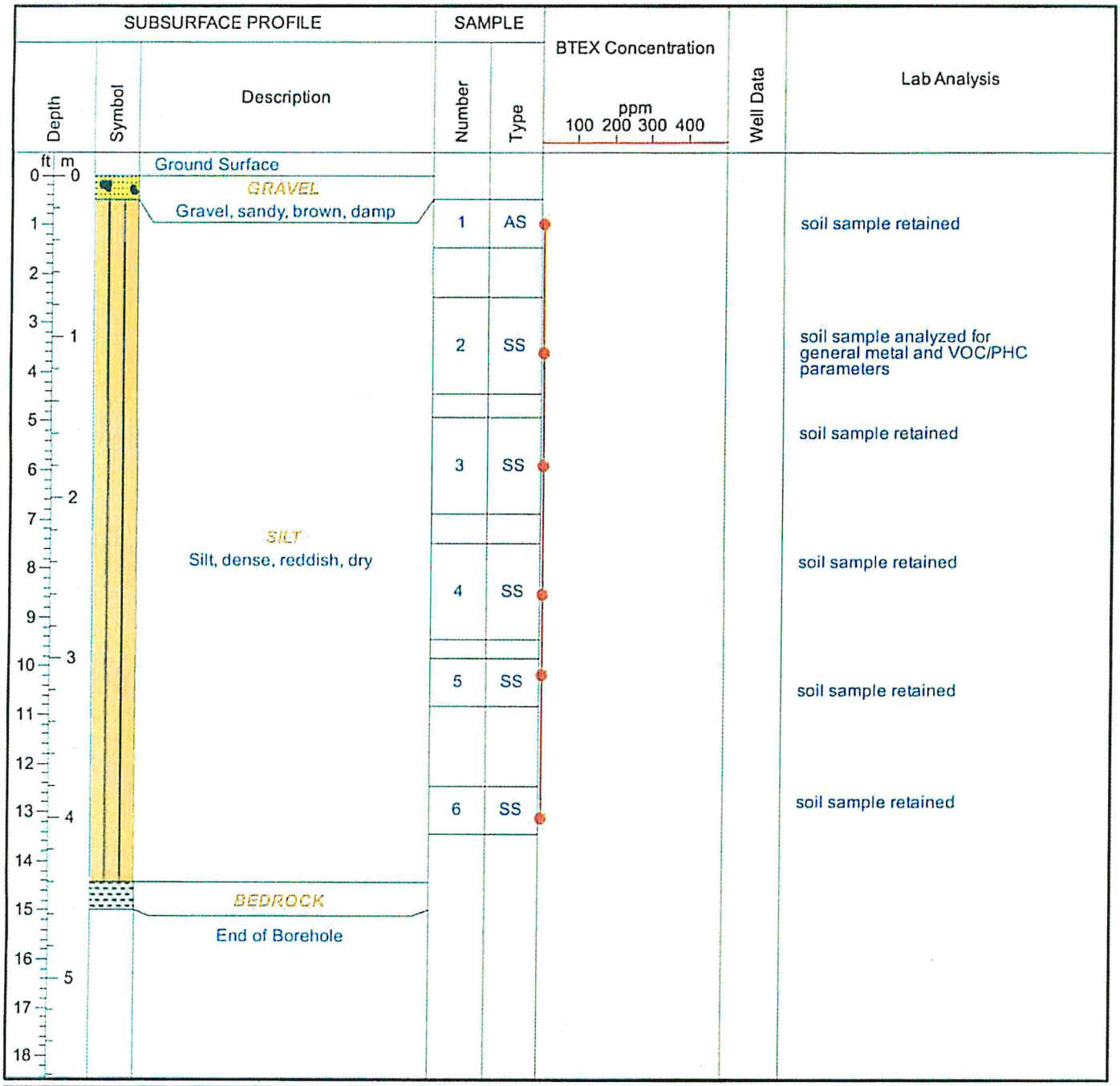
Project: Phase II ESA

Client: Northridge Property Management Inc.

Location: 3195 East Bayshore Road, Owen Sound

Logged by: BW

Rubicon Environmental Inc.



Drill Method: Solid Stem Auger

Drill Date: January 29, 2013

Drilled By: Henderson Drilling Inc.

Datum: Local

Hole Size: 15 cm

Sheet: 1 of 1

Project No: R55001.2

Log of: BH/MW15

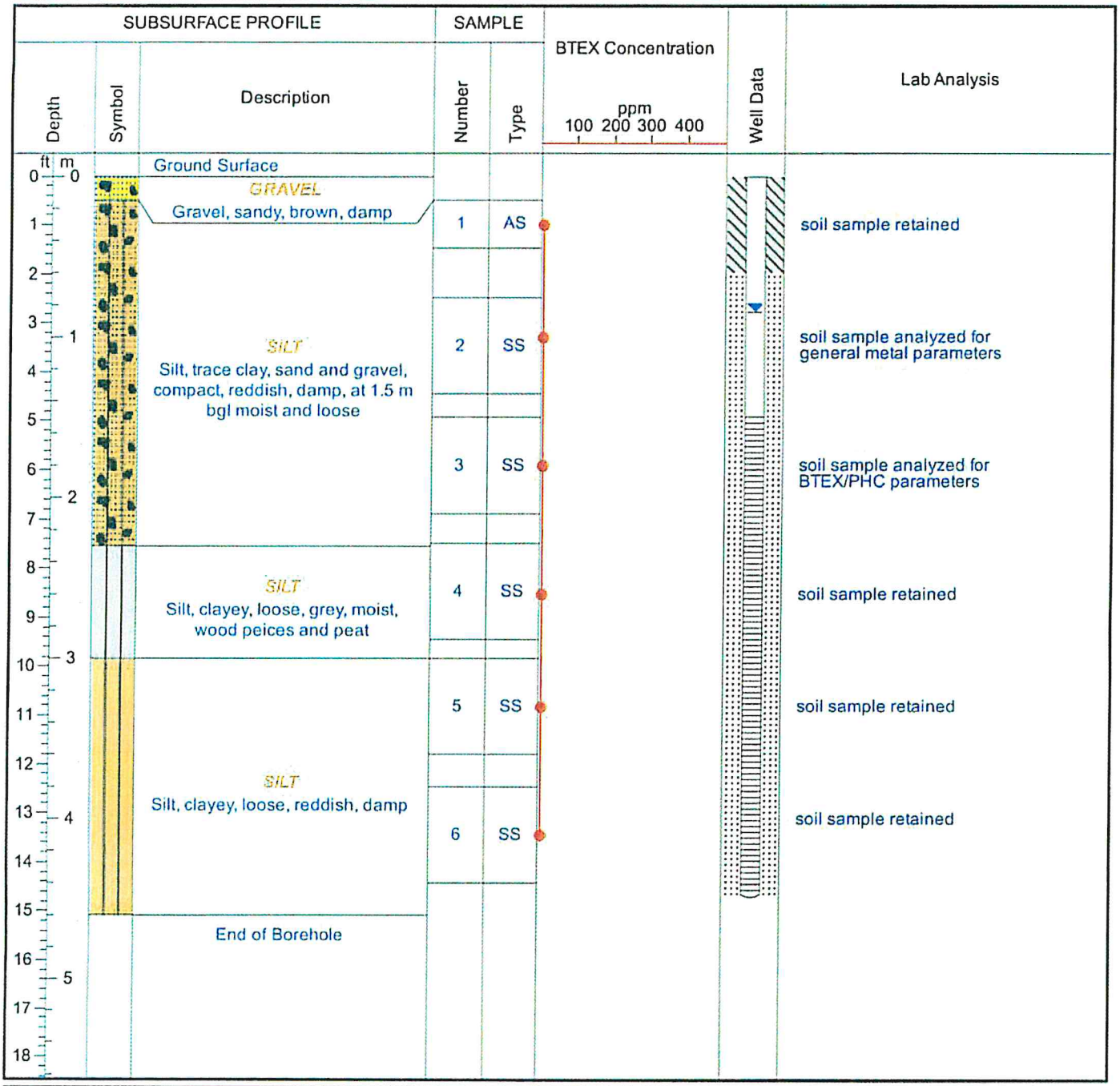
Project: Phase II ESA

Client: Northridge Property Management Inc.

Location: 3195 East Bayshore Road, Owen Sound

Logged by: BW

Rubicon Environmental Inc.



Drill Method: Solid Stem Auger

Drill Date: January 31, 2013

Drilled By: Henderson Drilling Inc.

Datum: Local

Hole Size: 15 cm

Sheet: 1 of 1

Project No: R55001.2

Project: Phase II ESA

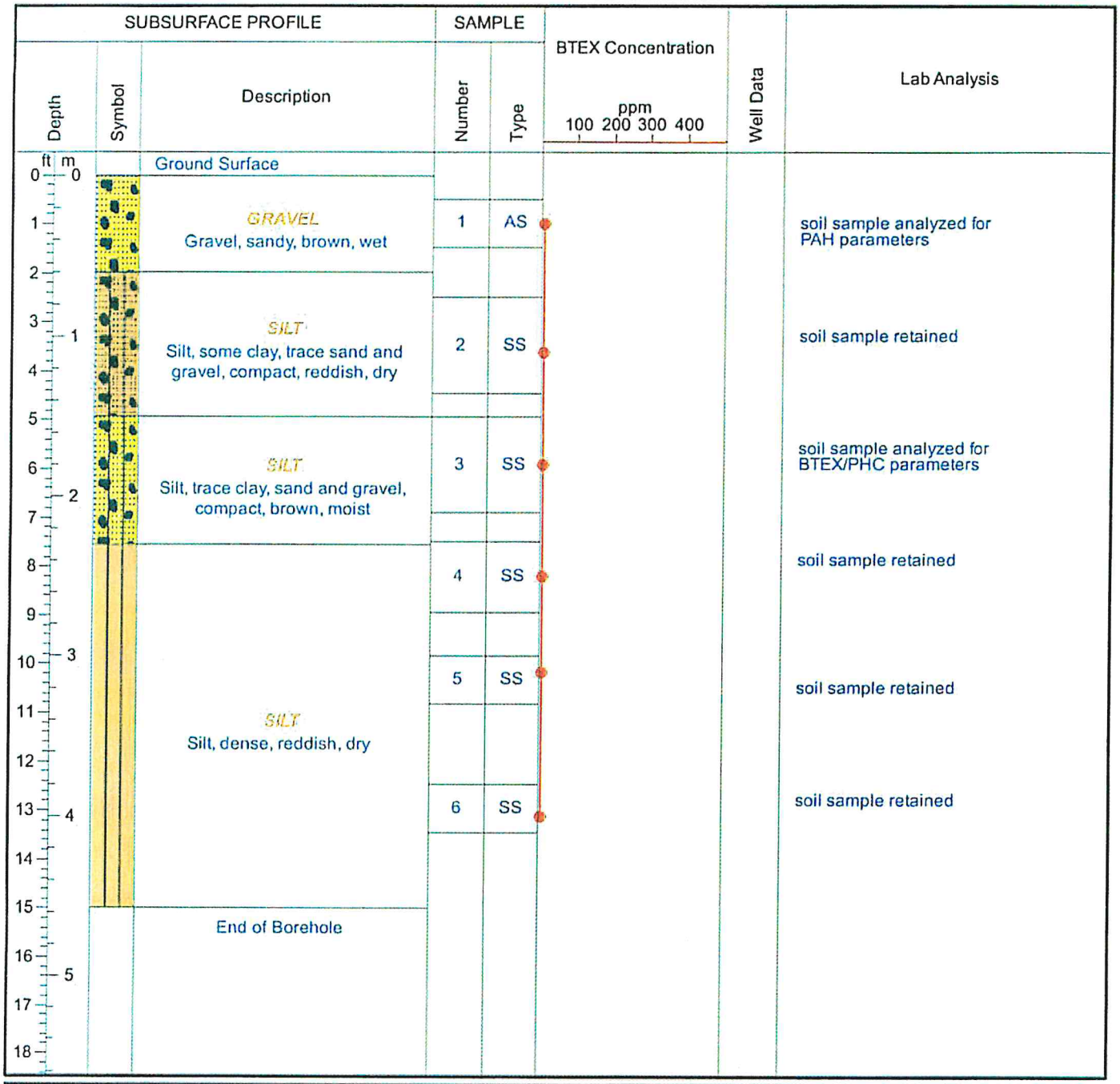
Client: Northridge Property Management Inc.

Location: 3195 East Bayshore Road, Owen Sound

Log of: BH16

Logged by: BW

Rubicon Environmental Inc.



Drill Method: Solid Stem Auger

Drill Date: January 29, 2013

Drilled By: Henderson Drilling Inc.

Datum: Local

Hole Size: 15 cm

Sheet: 1 of 1

Project No: R55001.2

Log of: BH17

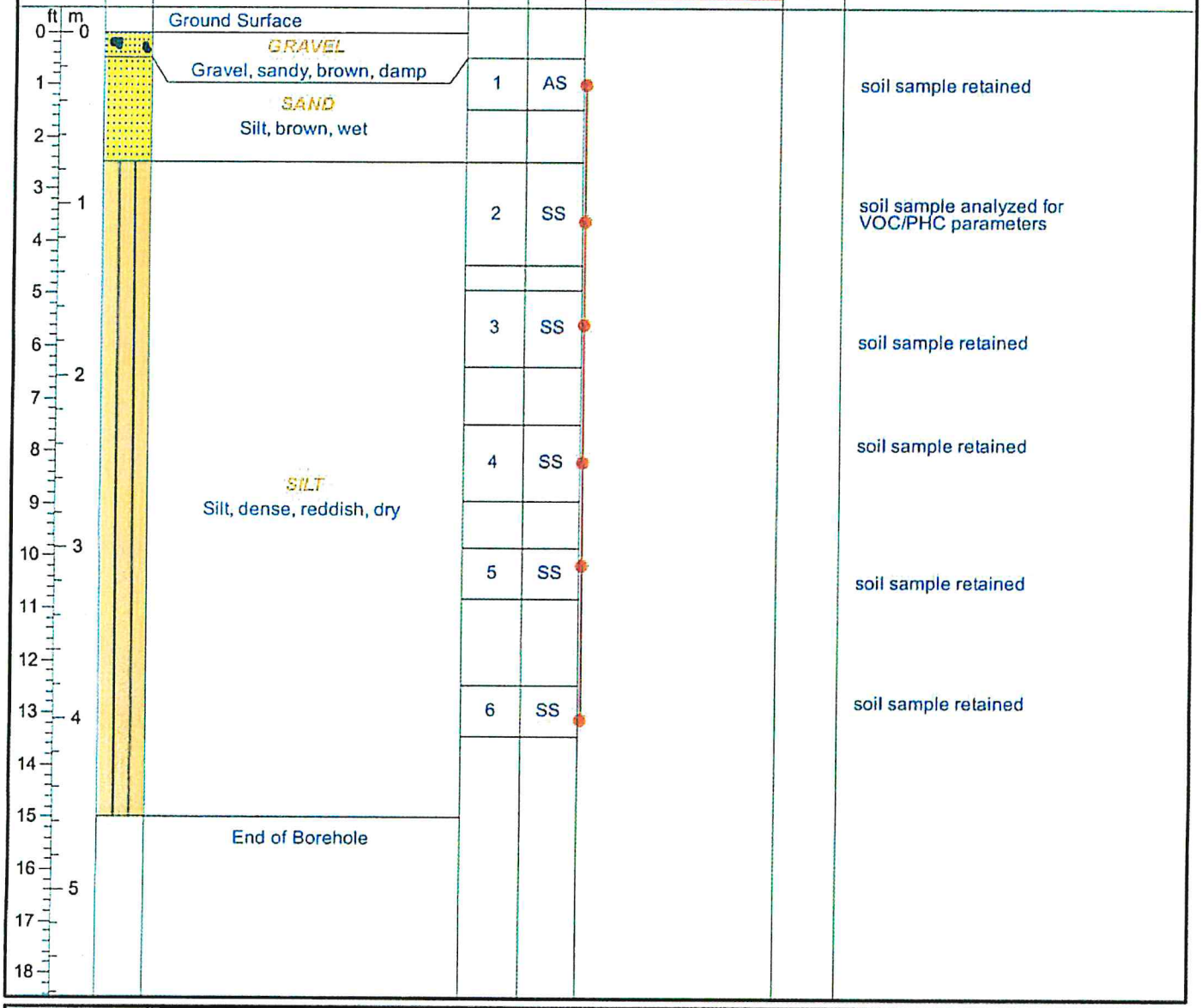
Project: Phase II ESA

Client: Northridge Property Management Inc.

Location: 3195 East Bayshore Road, Owen Sound

Logged by: BW

Rubicon Environmental Inc.



Drill Method: Solid Stem Auger

Drill Date: January 31, 2013

Drilled By: Henderson Drilling Inc.

Datum: Local

Hole Size: 15 cm

Sheet: 1 of 1

Project No: R55001.2

Log of: BH/MW18

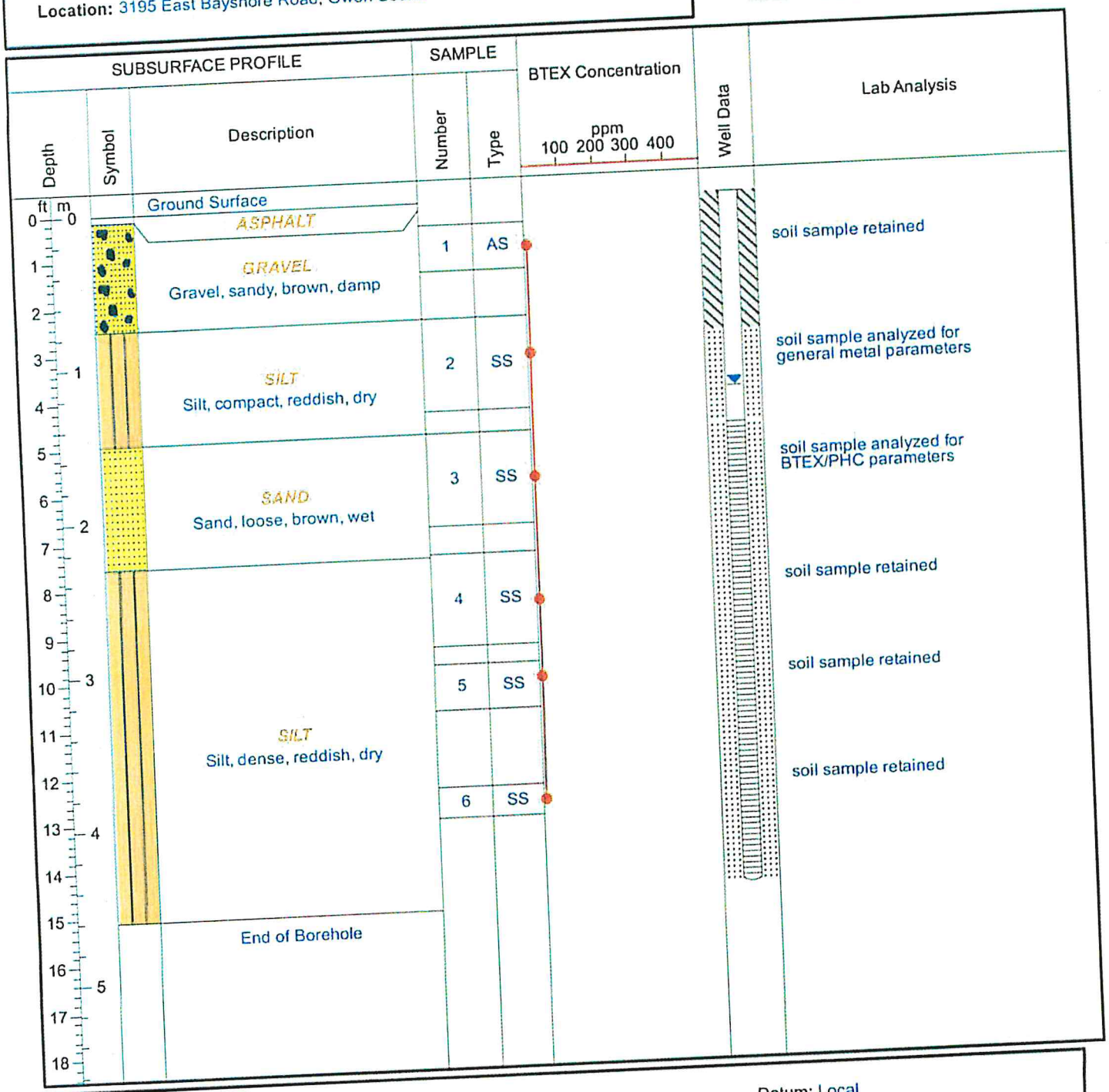
Project: Phase II ESA

Client: Northridge Property Management Inc.

Location: 3195 East Bayshore Road, Owen Sound

Logged by: BW

Rubicon Environmental Inc.



Drill Method: Solid Stem Auger

Drill Date: January 30, 2013

Drilled By: Henderson Drilling Inc.

Datum: Local

Hole Size: 15 cm

Sheet: 1 of 1

Project No: R55001.2

Log of: BH19

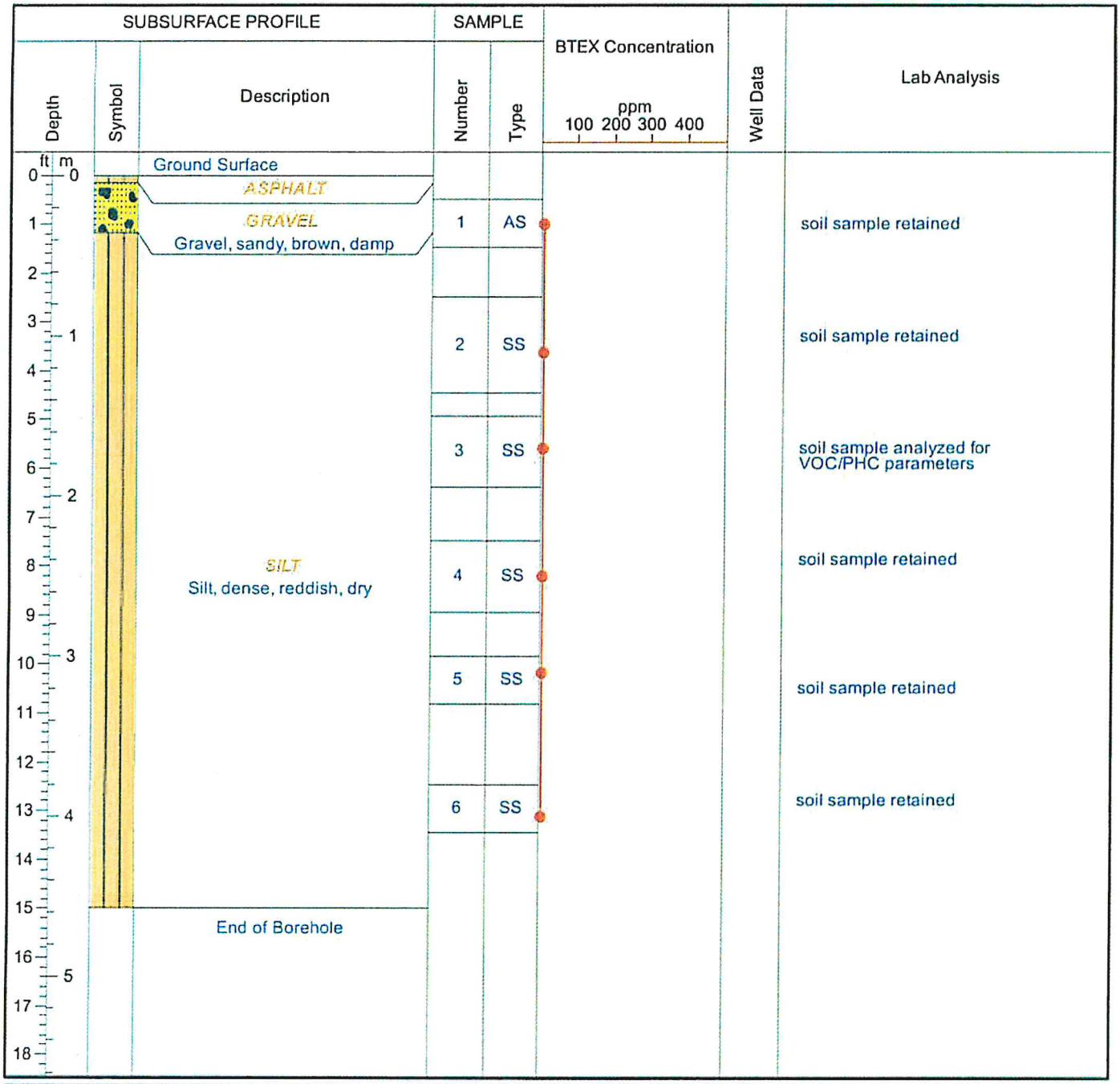
Project: Phase II ESA

Client: Northridge Property Management Inc.

Location: 3195 East Bayshore Road, Owen Sound

Logged by: BW

Rubicon Environmental Inc.



Drill Method: Solid Stem Auger

Drill Date: January 31, 2013

Drilled By: Henderson Drilling Inc.

Datum: Local

Hole Size: 15 cm

Sheet: 1 of 1

Project No: R55001.2

Project: Phase II ESA

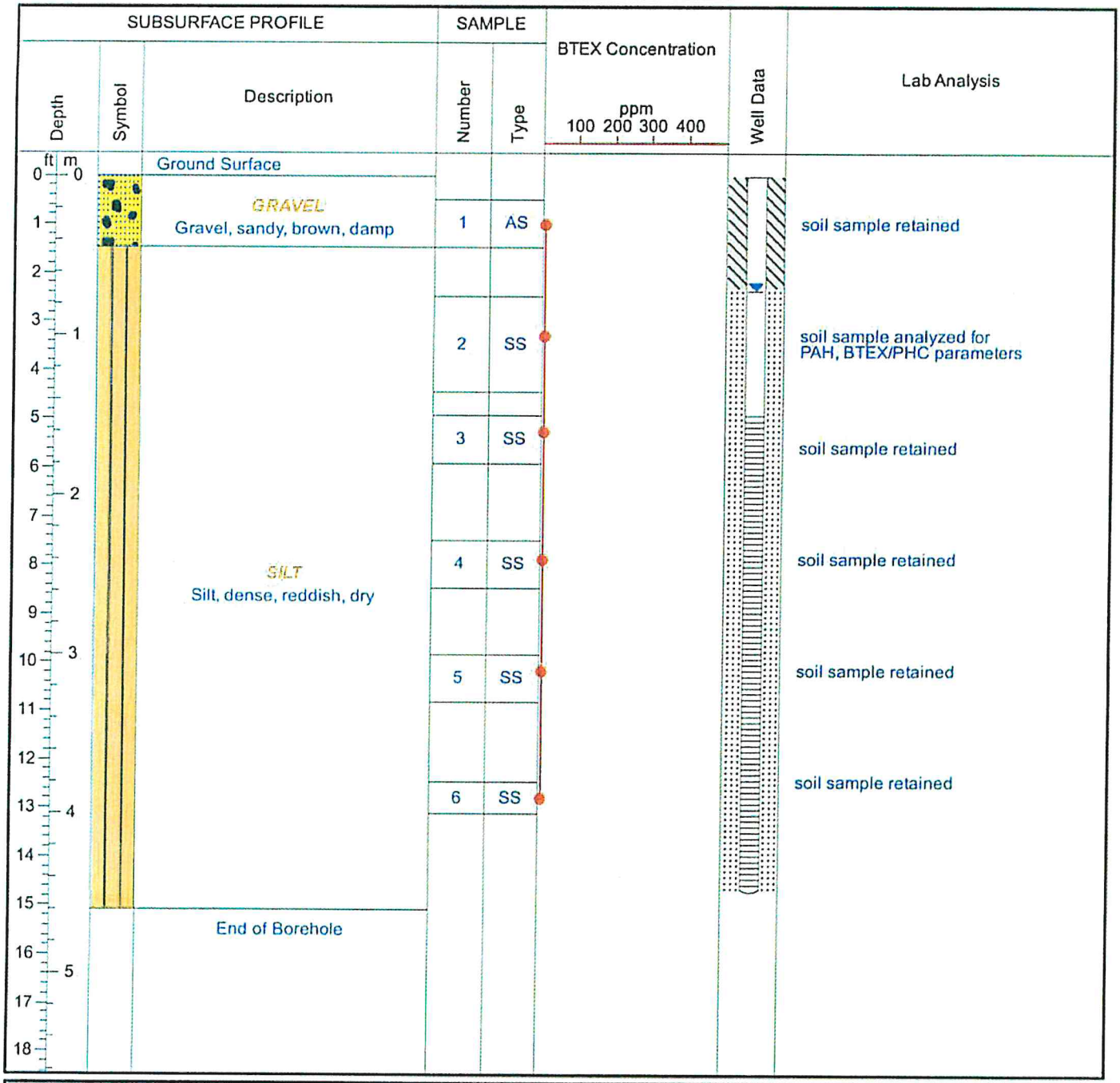
Client: Northridge Property Management Inc.

Location: 3195 East Bayshore Road, Owen Sound

Log of: BH/MW20

Logged by: BW

Rubicon Environmental Inc.



Drill Method: Solid Stem Auger

Drill Date: January 30, 2013

Drilled By: Henderson Drilling Inc.

Datum: Local

Hole Size: 15 cm

Sheet: 1 of 1

APPENDIX 4
LABORATORY CERTIFICATES OF ANALYSIS

RUBICON ENVIRONMENTAL INC.
ATTN: PAUL REW
60 Toronto St
FLESHERTON ON N0C 1E0

Date Received: 05-FEB-13
Report Date: 26-FEB-13 06:51 (MT)
Version: FINAL REV. 2

Client Phone: 519-924-0003

Certificate of Analysis

Lab Work Order #: L1265198
Project P.O. #: NOT SUBMITTED
Job Reference: R55001
C of C Numbers: 127677
Legal Site Desc:

Gayle Braun
Senior Account Manager

SOIL - Ontario Regulation 153/04 - as amended by O.Reg. 511 (JULY, 2011)

			Guide Limits		ALS ID	L1265198-1	L1265198-2	L1265198-3	L1265198-4	L1265198-5	L1265198-6	L1265198-7	L1265198-8	L1265198-9
					Sampled Date	29-JAN-13	29-JAN-13	29-JAN-13	29-JAN-13	29-JAN-13	29-JAN-13	29-JAN-13	30-JAN-13	30-JAN-13
					Sampled Time	11:10	12:15	13:10	13:10	14:05	17:10	18:05	08:05	11:10
					Sample ID	BH11 SS2	BH-MW7 SS2	BH6 SS2	BH6 SS2 (D)	BH-MW8 SS2	BH14 SS2	BH-MW15 SS2	BH-MW5 SS2	BH-MW2 SS2
Grouping	Analyte	Unit	#1	#2										
Physical Tests	Conductivity	mS/cm	0.7	-		0.105	0.112	0.124	0.325	0.128	0.133	0.196	0.156	0.213
	% Moisture	%	-	-		13.4	13.5	10.3	6.10	16.9	11.3	14.5	7.49	10.3
	pH	pH units	-	-		7.72	7.77	7.81	8.15	7.74	7.85	7.60	8.01	8.08
Cyanides	Cyanide, Weak Acid Diss	ug/g	0.051	-		<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Saturated Paste Extractables	SAR	SAR	5	-		<0.10	0.19	0.18	0.42	0.77	0.29	0.13	0.20	0.39
	Calcium (Ca)	mg/L	-	-		26.6	24.8	20.1	21.1	26.5	26.3	39.2	10.1	12.3
	Magnesium (Mg)	mg/L	-	-		5.61	6.98	7.42	6.45	5.24	7.31	10.4	4.03	3.99
	Sodium (Na)	mg/L	-	-		1.76	4.18	3.68	8.61	16.6	6.57	3.52	2.96	6.18
Metals	Antimony (Sb)	ug/g	7.5	-		<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	Arsenic (As)	ug/g	18	-		4.6	4.3	3.6	3.5	4.1	3.7	4.4	4.2	3.0
	Barium (Ba)	ug/g	390	-		29.5	30.5	29.2	24.6	26.9	24.8	20.8	22.7	17.8
	Beryllium (Be)	ug/g	4	-		0.93	0.88	0.86	0.87	0.84	0.87	<0.50	0.85	0.59
	Boron (B)	ug/g	120	-		58.3	55.4	65.3	79.4	55.1	56.9	25.7	66.2	53.0
	Cadmium (Cd)	ug/g	1.2	-		<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
	Chromium (Cr)	ug/g	160	-		26.6	23.5	24.7	25.9	24.3	24.9	13.0	25.5	17.7
	Cobalt (Co)	ug/g	22	-		11.7	10.4	11.1	10.7	10.8	10.8	6.9	11.7	7.7
	Copper (Cu)	ug/g	140	-		9.5	8.0	9.5	9.1	7.4	9.2	29.1	10.5	21.8
	Lead (Pb)	ug/g	120	-		4.5	4.2	3.7	3.9	3.8	3.8	4.3	4.0	3.4
	Mercury (Hg)	ug/g	0.27	-		<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
	Molybdenum (Mo)	ug/g	6.9	-		<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	Nickel (Ni)	ug/g	100	-		29.5	25.7	26.5	26.9	26.3	27.2	14.0	28.8	18.3
	Selenium (Se)	ug/g	2.4	-		<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0

Guide Limit #1: ON511/11-T3-Soil-Res/Park/Inst. Property Use (Coarse)

Detection Limit for result exceeds Guideline Limit. Assessment against Guideline Limit cannot be made.
Analytical result for this parameter exceeds Guide Limits listed. See Summary of Guideline Exceedances.

ALS Environmental

ANALYTICAL REPORT

SOIL - Ontario Regulation 153/04 - as amended by O.Reg. 511 (JULY, 2011)

					ALS ID	L1265198-10	L1265198-11	L1265198-12	L1265198-13
					Sampled Date	30-JAN-13	30-JAN-13	31-JAN-13	31-JAN-13
					Sampled Time	12:15	14:15	20:10	14:15
					Sample ID	BH-MW18 SS2	BH-MW18 SS2 (D)	BH3 SS2	BH12 SS2
Grouping	Analyte	Unit	Guide Limits #1	#2					
Physical Tests	Conductivity	mS/cm	0.7	-		0.256	0.189	0.361	0.262
	% Moisture	%	-	-		18.0	11.0	6.42	15.3
	pH	pH units	-	-		7.81	7.82	8.10	7.55
Cyanides	Cyanide, Weak Acid Diss	ug/g	0.051	-		<0.050	<0.050	<0.050	<0.050
Saturated Paste Extractables	SAR	SAR	5	-		0.70	0.43	0.66	0.80
	Calcium (Ca)	mg/L	-	-		20.5	19.6	13.6	62.5
	Magnesium (Mg)	mg/L	-	-		6.56	5.90	6.41	10.9
	Sodium (Na)	mg/L	-	-		14.2	8.43	11.9	26.0
Metals	Antimony (Sb)	ug/g	7.5	-		<1.0	<1.0	<1.0	<1.0
	Arsenic (As)	ug/g	18	-		2.3	5.5	3.0	3.9
	Barium (Ba)	ug/g	390	-		8.3	30.1	79.9	34.2
	Beryllium (Be)	ug/g	4	-		<0.50	1.08	0.82	0.70
	Boron (B)	ug/g	120	-		9.9	86.4	71.6	44.1
	Cadmium (Cd)	ug/g	1.2	-		<0.50	<0.50	<0.50	<0.50
	Chromium (Cr)	ug/g	160	-		6.2	32.4	22.4	20.6
	Cobalt (Co)	ug/g	22	-		2.2	14.3	9.8	9.6
	Copper (Cu)	ug/g	140	-		14.4	10.7	7.6	12.8
	Lead (Pb)	ug/g	120	-		2.3	4.7	3.1	4.7
	Mercury (Hg)	ug/g	0.27	-		<0.010	<0.010	<0.010	<0.010
	Molybdenum (Mo)	ug/g	6.9	-		<1.0	<1.0	<1.0	<1.0
	Nickel (Ni)	ug/g	100	-		5.3	35.4	24.4	22.4
	Selenium (Se)	ug/g	2.4	-		<1.0	<1.0	<1.0	<1.0

Guide Limit #1: ON511/11-T3-Soil-Res/Park/Inst. Property Use (Coarse)

Detection Limit for result exceeds Guideline Limit. Assessment against Guideline Limit cannot be made.
Analytical result for this parameter exceeds Guide Limits listed. See Summary of Guideline Exceedances.

SOIL - Ontario Regulation 153/04 - as amended by O.Reg. 511 (JULY, 2011)

					ALS ID	L1265198-1	L1265198-2	L1265198-3	L1265198-4	L1265198-5	L1265198-6	L1265198-7	L1265198-8	L1265198-9
					Sampled Date	29-JAN-13	29-JAN-13	29-JAN-13	29-JAN-13	29-JAN-13	29-JAN-13	29-JAN-13	30-JAN-13	30-JAN-13
					Sampled Time	11:10	12:15	13:10	13:10	14:05	17:10	18:05	08:05	11:10
					Sample ID	BH11 SS2	BH-MW7 SS2	BH6 SS2	BH6 SS2 (D)	BH-MW8 SS2	BH14 SS2	BH-MW15 SS2	BH-MW5 SS2	BH-MW2 SS2
Grouping	Analyte	Unit	Guide Limits #1	#2										
Metals	Silver (Ag)	ug/g	20	-		<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
	Thallium (Tl)	ug/g	1	-		<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
	Uranium (U)	ug/g	23	-		<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	Vanadium (V)	ug/g	86	-		34.2	30.8	32.9	33.4	31.0	31.6	19.1	31.6	22.4
	Zinc (Zn)	ug/g	340	-		52.3	45.9	47.5	48.6	48.2	50.3	28.7	50.3	34.5
Speciated Metals	Chromium, Hexavalent	ug/g	8	-		<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20

Guide Limit #1: ON511/11-T3-Soil-Res/Park/Inst. Property Use (Coarse)

Detection Limit for result exceeds Guideline Limit. Assessment against Guideline Limit cannot be made.
Analytical result for this parameter exceeds Guide Limits listed. See Summary of Guideline Exceedances.

ALS Environmental

ANALYTICAL REPORT

SOIL - Ontario Regulation 153/04 - as amended by O.Reg. 511 (JULY, 2011)

					ALS ID	L1265198-10	L1265198-11	L1265198-12	L1265198-13
					Sampled Date	30-JAN-13	30-JAN-13	31-JAN-13	31-JAN-13
					Sampled Time	12:15	14:15	20:10	14:15
					Sample ID	BH-MW18 SS2	BH-MW18 SS2 (D)	BH3 SS2	BH12 SS2
			Guide Limits						
Grouping	Analyte	Unit	#1	#2					
Metals	Silver (Ag)	ug/g	20	-		<0.20	<0.20	<0.20	<0.20
	Thallium (Tl)	ug/g	1	-		<0.50	<0.50	<0.50	<0.50
	Uranium (U)	ug/g	23	-		<1.0	<1.0	<1.0	<1.0
	Vanadium (V)	ug/g	86	-		8.7	42.9	30.5	28.0
	Zinc (Zn)	ug/g	340	-		9.4	62.0	44.9	43.2
Speciated Metals	Chromium, Hexavalent	ug/g	8	-		<0.20	<0.20	<0.20	<0.20

Guide Limit #1: ON511/11-T3-Soil-Res/Park/Inst. Property Use (Coarse)

Detection Limit for result exceeds Guideline Limit. Assessment against Guideline Limit cannot be made.
Analytical result for this parameter exceeds Guide Limits listed. See Summary of Guideline Exceedances.

Summary of Guideline Exceedances

Guideline ALS ID	Client ID	Grouping	Analyte	Result	Guideline Limit	Unit

Ontario Regulation 153/04 - as amended by O.Reg. 511 (JULY, 2011) - ON511/11-T3-Soil-Res/Park/Inst. Property Use (Coarse)

(No parameter exceedances)

Reference Information

Methods Listed (if applicable):

ALS Test Code	Matrix	Test Description	Method Reference**
B-HWS-R511-WT	Soil	Boron-HWE-O.Reg 153/04 (July 2011)	HW EXTR, EPA 6010B

A dried solid sample is extracted with calcium chloride, the sample undergoes a heating process. After cooling the sample is filtered and analyzed by ICP/OES.

Analysis conducted in accordance with the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act (July 1, 2011).

CN-WAD-R511-WT	Soil	Cyanide (WAD)-O.Reg 153/04 (July 2011)	MOE 3015/APHA 4500CN I-WAD

The sample is extracted with a strong base for 16 hours, and then filtered. The filtrate is then distilled where the cyanide is converted to cyanogen chloride by reacting with chloramine-T, the cyanogen chloride then reacts with a combination of barbituric acid and isonicotinic acid to form a highly colored complex.

Analysis conducted in accordance with the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act (July 1, 2011).

CR-CR6-IC-R511-WT	Soil	Hex Chrom-O.Reg 153/04 (July 2011)	SW846 3060A/7199 R511

Soil sample undergoes a alkaline digestion process where the sample is acidified and derivatized with 1,5-diphenylcarbazide (DPC) using ion chromatography.

Analysis conducted in accordance with the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act (July 1, 2011).

EC-R511-WT	Soil	Conductivity-O.Reg 153/04 (July 2011)	MOEE E3138

A representative subsample is tumbled with de-ionized (DI) water. The ratio of water to soil is 2:1 v/w. After tumbling the sample is then analyzed by a conductivity meter.

Analysis conducted in accordance with the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act (July 1, 2011).

HG-R511-WT	Soil	Mercury-O.Reg 153/04 (July 2011)	SW846 3050B/7471

Solid sample is digested with a heated, strong, mixed acid solution to convert all forms of mercury to divalent mercury. The divalent mercury is then reduced to elemental mercury, sparged from solution and analyzed by CVAAS.

Analysis conducted in accordance with the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act (July 1, 2011).

MET-UG/G-CCMS-WT	Soil	Metal Scan Collision Cell ICPMS	EPA 200.2/6020A

Sample is vigorously digested with nitric and hydrochloric acid. Analysis is conducted by ICP/MS.

MOISTURE-WT	Soil	% Moisture	Gravimetric: Oven Dried
PH-R511-WT	Soil	pH-O.Reg 153/04 (July 2011)	MOEE E3137A

A minimum 10g portion of the sample is extracted with 20mL of 0.01M calcium chloride solution by shaking for at least 30 minutes. The aqueous layer is separated from the soil and then analyzed using a pH meter and electrode.

Analysis conducted in accordance with the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act (July 1, 2011).

SAR-R511-WT	Soil	SAR-O.Reg 153/04 (July 2011)	SW846 6010C

A dried, disaggregated solid sample is extracted with deionized water, the aqueous extract is separated from the solid, acidified and then analyzed using a ICP/OES.

Analysis conducted in accordance with the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act (July 1, 2011).

**ALS test methods may incorporate modifications from specified reference methods to improve performance.

Chain of Custody Numbers:

127677

The last two letters of the above test code(s) indicate the laboratory that performed analytical analysis for that test. Refer to the list below:

Reference Information

Laboratory Definition Code	Laboratory Location
WT	ALS ENVIRONMENTAL - WATERLOO, ONTARIO, CANADA

GLOSSARY OF REPORT TERMS

Surrogates are compounds that are similar in behaviour to target analyte(s), but that do not normally occur in environmental samples. For applicable tests, surrogates are added to samples prior to analysis as a check on recovery. In reports that display the D.L. column, laboratory objectives for surrogates are listed there.
mg/kg - milligrams per kilogram based on dry weight of sample
mg/kg wwt - milligrams per kilogram based on wet weight of sample
mg/kg lwt - milligrams per kilogram based on lipid-adjusted weight
mg/L - unit of concentration based on volume, parts per million.
< - Less than.
D.L. - The reporting limit.
N/A - Result not available. Refer to qualifier code and definition for explanation.

Test results reported relate only to the samples as received by the laboratory.
UNLESS OTHERWISE STATED, ALL SAMPLES WERE RECEIVED IN ACCEPTABLE CONDITION.
Analytical results in unsigned test reports with the DRAFT watermark are subject to change, pending final QC review.

Quality Control Report

Workorder: L1265198 Report Date: 26-FEB-13

Client: RUBICON ENVIRONMENTAL INC.
60 Toronto St
FLESHERTON ON N0C 1E0
Contact: PAUL REW

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
CN-WAD-R511-WT	Soil							
Batch R2521664								
WG1623303-3 CVS								
Cyanide, Weak Acid Diss			97.5		%		80-120	06-FEB-13
WG1623108-3 DUP		**L1265198-1**						
Cyanide, Weak Acid Diss		<0.050	<0.050	RPD-NA	ug/g	N/A	35	06-FEB-13
WG1623108-2 LCS								
Cyanide, Weak Acid Diss			97.5		%		80-120	06-FEB-13
WG1623108-1 MB								
Cyanide, Weak Acid Diss			<0.050		ug/g		0.05	06-FEB-13
WG1623108-4 MS		**L1265198-1**						
Cyanide, Weak Acid Diss			86.0		%		70-130	06-FEB-13
CR-CR6-IC-R511-WT	Soil							
Batch R2522193								
WG1623106-4 CRM		**WT-SQC012**						
Chromium, Hexavalent			87.5		%		80-120	06-FEB-13
WG1623106-3 DUP		**L1265198-1**						
Chromium, Hexavalent		<0.20	<0.20	RPD-NA	ug/g	N/A	35	06-FEB-13
WG1623106-2 LCS								
Chromium, Hexavalent			97.4		%		80-120	06-FEB-13
WG1623106-1 MB								
Chromium, Hexavalent			<0.20		ug/g		0.2	06-FEB-13
EC-R511-WT	Soil							
Batch R2521793								
WG1623291-2 DUP		**L1265200-3**						
Conductivity		0.134	0.125		mS/cm	6.9	20	06-FEB-13
WG1623291-3 DUP		**L1265200-1**						
Conductivity		0.411	0.399		mS/cm	3.0	20	06-FEB-13
WG1623352-1 LCS								
Conductivity			99.4		%		90-110	06-FEB-13
WG1623291-1 MB								
Conductivity			<0.0040		mS/cm		0.004	06-FEB-13
HG-R511-WT	Soil							
Batch R2521710								
WG1623268-2 CRM		**WT-SS-1**						
Mercury (Hg)			104.6		%		70-130	06-FEB-13
WG1623268-4 DUP		**WG1623268-3**						
Mercury (Hg)		0.024	0.025		ug/g	2.2	30	06-FEB-13
WG1623268-8 DUP		**L1264754-1**						

Quality Control Report

Workorder: L1265198 Report Date: 26-FEB-13

Client: RUBICON ENVIRONMENTAL INC.
60 Toronto St
FLESHERTON ON N0C 1E0
Contact: PAUL REW

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
HG-R511-WT	Soil							
Batch R2521710								
WG1623268-8 DUP		**L1264754-1**						
Mercury (Hg)		0.027	0.028		ug/g	2.7	30	06-FEB-13
WG1623268-7 LCS								
Mercury (Hg)			98.0		%		80-120	06-FEB-13
WG1623268-1 MB								
Mercury (Hg)			<0.010		ug/g		0.01	06-FEB-13
WG1623268-5 MS		**WG1623268-3**						
Mercury (Hg)			93.7		%		70-130	06-FEB-13
WG1623268-9 MS		**L1264754-1**						
Mercury (Hg)			76.4		%		70-130	06-FEB-13
MET-UG/G-CCMS-WT	Soil							
Batch R2523810								
WG1623311-2 CVS								
Antimony (Sb)			96.0		%		70-130	06-FEB-13
Arsenic (As)			102.9		%		70-130	06-FEB-13
Barium (Ba)			101.9		%		70-130	06-FEB-13
Beryllium (Be)			96.4		%		70-130	06-FEB-13
Boron (B)			95.5		%		70-130	06-FEB-13
Cadmium (Cd)			97.4		%		70-130	06-FEB-13
Chromium (Cr)			97.3		%		70-130	06-FEB-13
Cobalt (Co)			99.7		%		70-130	06-FEB-13
Copper (Cu)			99.6		%		70-130	06-FEB-13
Lead (Pb)			94.3		%		70-130	06-FEB-13
Molybdenum (Mo)			98.3		%		70-130	06-FEB-13
Nickel (Ni)			97.9		%		70-130	06-FEB-13
Selenium (Se)			97.7		%		70-130	06-FEB-13
Silver (Ag)			98.3		%		70-130	06-FEB-13
Thallium (Tl)			92.8		%		70-130	06-FEB-13
Uranium (U)			91.2		%		70-130	06-FEB-13
Vanadium (V)			97.5		%		70-130	06-FEB-13
Zinc (Zn)			93.4		%		70-130	06-FEB-13
WG1623268-4 DUP		**WG1623268-3**						
Antimony (Sb)		<1.0	<1.0	RPD-NA	ug/g	N/A	30	06-FEB-13
Arsenic (As)		4.05	4.23		ug/g	4.4	30	06-FEB-13
Barium (Ba)		94.1	104		ug/g	10	40	06-FEB-13
Beryllium (Be)		0.65	0.68					

ALS Environmental

Quality Control Report

Workorder: L1265198 Report Date: 26-FEB-13

Client: RUBICON ENVIRONMENTAL INC.
60 Toronto St
FLESHERTON ON N0C 1E0

Contact: PAUL REW

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-UG/G-CCMS-WT	Soil							
Batch R2523810								
WG1623268-4 DUP		**WG1623268-3**						
Beryllium (Be)		0.65	0.68		ug/g	4.1	30	06-FEB-13
Boron (B)		13.6	13.4		ug/g	1.5	30	06-FEB-13
Cadmium (Cd)		<0.50	<0.50	RPD-NA	ug/g	N/A	30	06-FEB-13
Chromium (Cr)		24.7	25.2		ug/g	2.1	30	06-FEB-13
Cobalt (Co)		9.3	9.7		ug/g	4.2	30	06-FEB-13
Copper (Cu)		20.5	21.4		ug/g	4.5	30	06-FEB-13
Lead (Pb)		12.5	12.8		ug/g	2.1	40	06-FEB-13
Molybdenum (Mo)		<1.0	<1.0	RPD-NA	ug/g	N/A	40	06-FEB-13
Nickel (Ni)		20.2	21.3		ug/g	5.7	30	06-FEB-13
Selenium (Se)		<1.0	<1.0	RPD-NA	ug/g	N/A	30	06-FEB-13
Silver (Ag)		<0.20	<0.20	RPD-NA	ug/g	N/A	40	06-FEB-13
Thallium (Tl)		<0.50	<0.50	RPD-NA	ug/g	N/A	30	06-FEB-13
Uranium (U)		<1.0	<1.0	RPD-NA	ug/g	N/A	30	06-FEB-13
Vanadium (V)		35.8	37.2		ug/g	3.7	30	06-FEB-13
Zinc (Zn)		62.3	66.9		ug/g	7.1	30	06-FEB-13
WG1623268-8 DUP		**L1264754-1**						
Antimony (Sb)		<1.0	<1.0	RPD-NA	ug/g	N/A	30	06-FEB-13
Arsenic (As)		4.3	4.62		ug/g	7.2	30	06-FEB-13
Barium (Ba)		109	116		ug/g	6.2	40	06-FEB-13
Beryllium (Be)		0.68	0.75		ug/g	10	30	06-FEB-13
Boron (B)		8.7	8.4		ug/g	3.3	30	06-FEB-13
Cadmium (Cd)		<0.50	<0.50	RPD-NA	ug/g	N/A	30	06-FEB-13
Chromium (Cr)		28.1	29.6		ug/g	5.2	30	06-FEB-13
Cobalt (Co)		11.6	12.1		ug/g	4.1	30	06-FEB-13
Copper (Cu)		16.2	17.4		ug/g	6.7	30	06-FEB-13
Lead (Pb)		13.2	14.9		ug/g	12	40	06-FEB-13
Molybdenum (Mo)		<1.0	<1.0	RPD-NA	ug/g	N/A	40	06-FEB-13
Nickel (Ni)		21.0	22.6		ug/g	7.1	30	06-FEB-13
Selenium (Se)		<1.0	<1.0	RPD-NA	ug/g	N/A	30	06-FEB-13
Silver (Ag)		<0.20	<0.20	RPD-NA	ug/g	N/A	40	06-FEB-13
Thallium (Tl)		<0.50	<0.50	RPD-NA	ug/g	N/A	30	06-FEB-13
Uranium (U)		<1.0	<1.0	RPD-NA	ug/g	N/A	30	06-FEB-13
Vanadium (V)		39.9	42.7		ug/g	6.6	30	06-FEB-13

Quality Control Report

Client: RUBICON ENVIRONMENTAL INC.
60 Toronto St
FLESHERTON ON N0C 1E0

Contact: PAUL REW

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-UG/G-CCMS-WT	Soil							
Batch R2523810								
WG1623268-8 DUP		**L1264754-1**						
Zinc (Zn)		65.7	69.4		ug/g	5.6	30	06-FEB-13
WG1623268-6 LCS								
Antimony (Sb)			91.2		%		80-120	06-FEB-13
Arsenic (As)			99.8		%		80-120	06-FEB-13
Barium (Ba)			99.4		%		80-120	06-FEB-13
Beryllium (Be)			93.0		%		80-120	06-FEB-13
Boron (B)			88.6		%		80-120	06-FEB-13
Cadmium (Cd)			97.5		%		80-120	06-FEB-13
Chromium (Cr)			97.2		%		80-120	06-FEB-13
Cobalt (Co)			95.2		%		80-120	06-FEB-13
Copper (Cu)			95.0		%		80-120	06-FEB-13
Lead (Pb)			93.6		%		80-120	06-FEB-13
Molybdenum (Mo)			93.2		%		80-120	06-FEB-13
Nickel (Ni)			94.9		%		80-120	06-FEB-13
Selenium (Se)			97.2		%		80-120	06-FEB-13
Silver (Ag)			98.1		%		80-120	06-FEB-13
Thallium (Tl)			99.6		%		80-120	06-FEB-13
Uranium (U)			95.7		%		80-120	06-FEB-13
Vanadium (V)			97.8		%		80-120	06-FEB-13
Zinc (Zn)			98.4		%		80-120	06-FEB-13
WG1623268-1 MB								
Antimony (Sb)			<1.0		ug/g		1	06-FEB-13
Arsenic (As)			<0.20		ug/g		0.2	06-FEB-13
Barium (Ba)			<1.0		ug/g		1	06-FEB-13
Beryllium (Be)			<0.50		ug/g		0.5	06-FEB-13
Boron (B)			<5.0		ug/g		5	06-FEB-13
Cadmium (Cd)			<0.50		ug/g		0.5	06-FEB-13
Chromium (Cr)			<1.0		ug/g		1	06-FEB-13
Cobalt (Co)			<1.0		ug/g		1	06-FEB-13
Copper (Cu)			<1.0		ug/g		1	06-FEB-13
Lead (Pb)			<1.0		ug/g		1	06-FEB-13
Molybdenum (Mo)			<1.0		ug/g		1	06-FEB-13
Nickel (Ni)			<1.0		ug/g		1	06-FEB-13
Selenium (Se)			<1.0		ug/g		1	06-FEB-13

Quality Control Report

Workorder: L1265198 Report Date: 26-FEB-13

Client: RUBICON ENVIRONMENTAL INC.
60 Toronto St
FLESHERTON ON N0C 1E0
Contact: PAUL REW

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-UG/G-CCMS-WT	Soil							
Batch R2523810								
WG1623268-1 MB								
Silver (Ag)			<0.20		ug/g		0.2	06-FEB-13
Thallium (Tl)			<0.50		ug/g		0.5	06-FEB-13
Uranium (U)			<1.0		ug/g		1	06-FEB-13
Vanadium (V)			<1.0		ug/g		1	06-FEB-13
Zinc (Zn)			<5.0		ug/g		5	06-FEB-13
WG1623268-5 MS		**WG1623268-3**						
Antimony (Sb)			96.8		%		70-130	06-FEB-13
Arsenic (As)			N/A	MS-B	%		-	06-FEB-13
Barium (Ba)			N/A	MS-B	%		-	06-FEB-13
Beryllium (Be)			96.3		%		70-130	06-FEB-13
Boron (B)			N/A	MS-B	%		-	06-FEB-13
Cadmium (Cd)			112.2		%		70-130	06-FEB-13
Chromium (Cr)			N/A	MS-B	%		-	06-FEB-13
Cobalt (Co)			N/A	MS-B	%		-	06-FEB-13
Copper (Cu)			N/A	MS-B	%		-	06-FEB-13
Lead (Pb)			N/A	MS-B	%		-	06-FEB-13
Molybdenum (Mo)			110.5		%		70-130	06-FEB-13
Nickel (Ni)			N/A	MS-B	%		-	06-FEB-13
Selenium (Se)			105.3		%		70-130	06-FEB-13
Silver (Ag)			103.7		%		70-130	06-FEB-13
Thallium (Tl)			99.6		%		70-130	06-FEB-13
Uranium (U)			113.6		%		70-130	06-FEB-13
Vanadium (V)			N/A	MS-B	%		-	06-FEB-13
Zinc (Zn)			N/A	MS-B	%		-	06-FEB-13
MOISTURE-WT	Soil							
Batch R2521642								
WG1623242-3 DUP		**L1265457-2**						
% Moisture		10.6	10.6		%	0.3	30	05-FEB-13
WG1623242-2 LCS								
% Moisture			94.4		%		70-130	05-FEB-13
WG1623242-1 MB								
% Moisture			<0.10		%		0.1	05-FEB-13

Quality Control Report

Workorder: L1265198 Report Date: 26-FEB-13

Client: RUBICON ENVIRONMENTAL INC.
60 Toronto St
FLESHERTON ON N0C 1E0
Contact: PAUL REW

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MOISTURE-WT	Soil							
Batch R2521643								
WG1623049-3 DUP		**L1265245-5**						
% Moisture		9.36	9.38		%	0.2	30	05-FEB-13
WG1623049-2 LCS								
% Moisture			91.7		%		70-130	05-FEB-13
WG1623049-1 MB								
% Moisture			<0.10		%		0.1	05-FEB-13
PH-R511-WT	Soil							
Batch R2522049								
WG1623349-3 DUP		**WG1623349-2**						
pH		7.58	7.62	J	pH units	0.04	0.3	06-FEB-13
WG1623349-1 LCS								
pH			7.03		pH units		6.7-7.3	06-FEB-13
SAR-R511-WT	Soil							
Batch R2521851								
WG1623291-2 DUP		**L1265200-3**						
Calcium (Ca)		16.6	16.4		mg/L	0.9	40	06-FEB-13
Sodium (Na)		6.18	5.60		mg/L	9.8	40	06-FEB-13
Magnesium (Mg)		0.84	0.81		mg/L	3.9	40	06-FEB-13
WG1623291-1 MB								
Calcium (Ca)			<0.10		mg/L		0.1	06-FEB-13
Sodium (Na)			<0.10		mg/L		0.1	06-FEB-13
Magnesium (Mg)			<0.10		mg/L		0.1	06-FEB-13

Quality Control Report

Workorder: L1265198 Report Date: 26-FEB-13

Client: RUBICON ENVIRONMENTAL INC.
60 Toronto St
FLESHERTON ON N0C 1E0
Contact: PAUL REW

Legend:

Limit	ALS Control Limit (Data Quality Objectives)
DUP	Duplicate
RPD	Relative Percent Difference
N/A	Not Available
LCS	Laboratory Control Sample
SRM	Standard Reference Material
MS	Matrix Spike
MSD	Matrix Spike Duplicate
ADE	Average Desorption Efficiency
MB	Method Blank
IRM	Internal Reference Material
CRM	Certified Reference Material
CCV	Continuing Calibration Verification
CVS	Calibration Verification Standard
LCSD	Laboratory Control Sample Duplicate

Sample Parameter Qualifier Definitions:

Qualifier	Description
J	Duplicate results and limits are expressed in terms of absolute difference.
MS-B	Matrix Spike recovery could not be accurately calculated due to high analyte background in sample.
RPD-NA	Relative Percent Difference Not Available due to result(s) being less than detection limit.

Hold Time Exceedances:

All test results reported with this submission were conducted within ALS recommended hold times.

ALS recommended hold times may vary by province. They are assigned to meet known provincial and/or federal government requirements. In the absence of regulatory hold times, ALS establishes recommendations based on guidelines published by the US EPA, APHA Standard Methods, or Environment Canada (where available). For more information, please contact ALS.

The ALS Quality Control Report is provided to ALS clients upon request. ALS includes comprehensive QC checks with every analysis to ensure our high standards of quality are met. Each QC result has a known or expected target value, which is compared against pre-determined data quality objectives to provide confidence in the accuracy of associated test results.

Please note that this report may contain QC results from anonymous Sample Duplicates and Matrix Spikes that do not originate from this Work Order.

60 NORTHLAND ROAD, UNIT 1
WATERLOO, ON N2V 2B8
Phone: (519) 886-6910
Fax: (519) 886-9047
Toll Free: 1-800-668-9878

127677
C of C # 00000

CHAIN OF CUSTODY / ANALYTICAL SERVICES REQUEST FORM

Page 1 of 1

Note: all TAT Quoted material is in business days which exclude statutory holidays and weekends. TAT samples received past 3:00 pm or Saturday/Sunday begin the next day.

Specify date required

Service requested: 5 day (regular) ✓ | 3-4 day (25%) | 2 day TAT (50%) | Next day TAT (100%) | Same day TAT (200%)

COMPANY NAME: Rubicon Environ
OFFICE: Flesherton
PROJECT MANAGER: Paul ReW
PROJECT #: RS5001
PHONE: 924-0063 FAX: 924-0064
ACCOUNT #
QUOTATION #: Q37792 PO #

CRITERIA: Criteria on report YES ✓ NO
Reg 153/04 ☐ Reg 511/09 ☑ residential
Table 1 2 (3) 4 5 6 7 8 9
TCLP _____ MISA _____ PWQO _____
ODWS _____ OTHER _____

REPORT FORMAT/DISTRIBUTION
EMAIL _____ FAX _____ BOTH _____
SELECT: PDF _____ DIGITAL _____ BOTH _____
EMAIL 1 _____
EMAIL 2 _____

ANALYSIS REQUEST

PLEASE INDICATE FILTERED, PRESERVED OR BOTH <----- (F, P, F/P)

SUBMISSION #: L1265198
ENTERED BY: JJ
DATE/TIME ENTERED: 5/2/13 14:15
BIN #: B192

SAMPLING INFORMATION

Date (dd-mm-yy)	Time (24hr) (hh:mm)	TYPE COMP	TYPE GRAB	MATRIX WATER	MATRIX SOIL	MATRIX OTHER	SAMPLE DESCRIPTION TO APPEAR ON REPORT	NUMBER OF CONTAINERS	metals	COMMENTS	LAB ID
Jan 29	11:10				X		BH 11 552	1	X		1
Jan 29	12:15				X		BH-MW7 552	1	X		2
Jan 29	1:10				X		BH6 552	1	X		3
Jan 29	1:10				X		BH6 552 (D)	1	X		4
Jan 29	2:05				X		BH-MW8 552	1	X		5
Jan 29	5:10				X		BH 14 552	1	X		6
Jan 29	6:05				X		BH-MW15 552	1	X		7
Jan 30	8:05am				X		BH-MW5 552	1	X		8
Jan 30	11:10am				X		BH-MW2 552	1	X		9
Jan 30	2:15pm				X		BH-MW18 552	1	X		10
Jan 30	2:15 pm				X		BH-MW19 552 (D)	1	X		11
Jan 31	8:10pm				X		BH 3 ~~552~~ 552	1	X		12
Jan 31	2:15pm				X		BH 12 552	1	X		13

L1265198-COFC

SPECIAL INSTRUCTIONS/COMMENTS

THE QUESTIONS BELOW MUST BE ANSWERED FORWATER SAMPLES (CHECK Yes OR No)
Are any samples taken from a regulated DW System? Yes ☐ No ☐
If yes, an authorized drinking water COC MUST be used for this submission.
Is the water sampled intended to be potable for human consumption? Yes ☐ No ☐

SAMPLE CONDITION
FROZEN ☐ COLD ☑ COOLING INITIATED ☐ AMBIENT ☐
MEAN TEMP 1.7 1.5
OBSERVATIONS Yes ☐ No ☐ If yes add SIF
INIT

SAMPLED BY: Brian W Heath
RELINQUISHED BY: Brian W Heath
DATE & TIME
RECEIVED BY:
DATE & TIME
RECEIVED AT LAB BY:
DATE & TIME: 5/2/13 13:43

Notes
1. Quote number must be provided to ensure proper pricing
2. TAT may vary dependent on complexity of analysis and lab workload at time of submission. Please contact the lab to confirm TATs.
3. Any known or suspected hazards relating to a sample must be noted on the chain of custody in comments section.

RUBICON ENVIRONMENTAL INC.
ATTN: PAUL REW
60 Toronto St
FLESHERTON ON N0C 1E0

Date Received: 05-FEB-13
Report Date: 08-FEB-13 08:41 (MT)
Version: FINAL

Client Phone: 519-924-0003

Certificate of Analysis

Lab Work Order #: L1265221

Project P.O. #: NOT SUBMITTED
Job Reference: R555001
C of C Numbers: 127676
Legal Site Desc:

Gayle Braun
Senior Account Manager

SOIL - Ontario Regulation 153/04 - as amended by O.Reg. 511 (JULY, 2011)

					ALS ID	L1265221-1	L1265221-2	L1265221-3	L1265221-4	L1265221-5	L1265221-6	L1265221-7	L1265221-8	L1265221-9
					Sampled Date	29-JAN-13	29-JAN-13	30-JAN-13	30-JAN-13	30-JAN-13	30-JAN-13	31-JAN-13	31-JAN-13	31-JAN-13
					Sampled Time	15:10	16:15	09:40	11:10	12:40	16:10	08:10	12:15	13:10
					Sample ID	BH13 SS2	BH16 SS1	BH-MW4 SS2	BH-MW2 SS2	BH-MW20 SS2	BH-MW1 SS2	BH3 SS2	BH-MW9 SS2	BH10 SS2
Grouping	Analyte	Unit	Guide Limits #1	#2										
Physical Tests	% Moisture	%	-	-		9.01	9.39	7.16	12.0	7.57	7.44	6.84	12.8	9.27
Polycyclic Aromatic Hydrocarbons	Acenaphthene	ug/g	7.9	-		<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
	Acenaphthylene	ug/g	0.15	-		<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
	Anthracene	ug/g	0.67	-		<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
	Benzo(a)anthracene	ug/g	0.5	-		<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
	Benzo(a)pyrene	ug/g	0.3	-		<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
	Benzo(b)fluoranthene	ug/g	0.78	-		<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
	Benzo(g,h,i)perylene	ug/g	6.6	-		<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
	Benzo(k)fluoranthene	ug/g	0.78	-		<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
	Chrysene	ug/g	7	-		<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
	Dibenzo(ah)anthracene	ug/g	0.1	-		<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
	Fluoranthene	ug/g	0.69	-		<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
	Fluorene	ug/g	62	-		<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
	Indeno(1,2,3-cd)pyrene	ug/g	0.38	-		<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
	1+2-Methylnaphthalenes	ug/g	0.99	-		<0.042	<0.042	<0.042	<0.042	<0.042	<0.042	<0.042	<0.042	<0.042
	1-Methylnaphthalene	ug/g	0.99	-		<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030
	2-Methylnaphthalene	ug/g	0.99	-		<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030
	Naphthalene	ug/g	0.6	-		<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
	Phenanthrene	ug/g	6.2	-		<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
	Pyrene	ug/g	78	-		<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
	Surrogate: 2-Fluorobiphenyl	%	-	-		99.1	101.6	106.8	115.6	102.7	103.4	106.8	102.6	107.8
	Surrogate: p-Terphenyl d14	%	-	-		105.3	109.6	114.2	129.6	107.6	106.9	109.8	104.8	108.8

Guide Limit #1: ON511/11-T3-Soil-Res/Park/Inst. Property Use (Coarse)

Detection Limit for result exceeds Guideline Limit. Assessment against Guideline Limit cannot be made.
Analytical result for this parameter exceeds Guide Limits listed. See Summary of Guideline Exceedances.

SOIL - Ontario Regulation 153/04 - as amended by O.Reg. 511 (JULY, 2011)

					ALS ID	L1265221-10
					Sampled Date	31-JAN-13
					Sampled Time	13:10
					Sample ID	BH10 SS2 (D)
Grouping	Analyte	Unit	Guide Limits #1	#2		
Physical Tests	% Moisture	%	-	-		9.18
Polycyclic Aromatic Hydrocarbons	Acenaphthene	ug/g	7.9	-		<0.050
	Acenaphthylene	ug/g	0.15	-		<0.050
	Anthracene	ug/g	0.67	-		<0.050
	Benzo(a)anthracene	ug/g	0.5	-		<0.050
	Benzo(a)pyrene	ug/g	0.3	-		<0.050
	Benzo(b)fluoranthene	ug/g	0.78	-		<0.050
	Benzo(g,h,i)perylene	ug/g	6.6	-		<0.050
	Benzo(k)fluoranthene	ug/g	0.78	-		<0.050
	Chrysene	ug/g	7	-		<0.050
	Dibenzo(ah)anthracene	ug/g	0.1	-		<0.050
	Fluoranthene	ug/g	0.69	-		<0.050
	Fluorene	ug/g	62	-		<0.050
	Indeno(1,2,3-cd)pyrene	ug/g	0.38	-		<0.050
	1+2-Methylnaphthalenes	ug/g	0.99	-		<0.042
	1-Methylnaphthalene	ug/g	0.99	-		<0.030
	2-Methylnaphthalene	ug/g	0.99	-		<0.030
	Naphthalene	ug/g	0.6	-		<0.050
	Phenanthrene	ug/g	6.2	-		<0.050
	Pyrene	ug/g	78	-		<0.050
	Surrogate: 2-Fluorobiphenyl	%	-	-		110.9
	Surrogate: p-Terphenyl d14	%	-	-		113.2

Guide Limit #1: ON511/11-T3-Soil-Res/Park/Inst. Property Use (Coarse)

Detection Limit for result exceeds Guideline Limit. Assessment against Guideline Limit cannot be made.
Analytical result for this parameter exceeds Guide Limits listed. See Summary of Guideline Exceedances.

Summary of Guideline Exceedances

Guideline ALS ID	Client ID	Grouping	Analyte	Result	Guideline Limit	Unit

Ontario Regulation 153/04 - as amended by O.Reg. 511 (JULY, 2011) - ON511/11-T3-Soil-Res/Park/Inst. Property Use (Coarse)

(No parameter exceedances)

Reference Information

Methods Listed (if applicable):

ALS Test Code	Matrix	Test Description	Method Reference**
METHYLNAPS-CALC-WT	Soil	ABN-Calculated Parameters	SW846 8270
MOISTURE-WT	Soil	% Moisture	Gravimetric: Oven Dried
PAH-511-WT	Soil	PAH-O.Reg 153/04 (July 2011)	SW846 3510/8270

A representative sub-sample of soil is fortified with deuterium-labelled surrogates and a mechanical shaking techniqueis used to extract the sample with a mixture of methanol and toluene. The extracts are concentrated and analyzed by GC/MS. Depending on the analytical GC/MS column used benzo(j)fluoranthene may chromatographically co-elute with benzo(b)fluoranthene or benzo(k)fluoranthene.

Analysis conducted in accordance with the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act (July 1, 2011).

**ALS test methods may incorporate modifications from specified reference methods to improve performance.

Chain of Custody Numbers:

127676

The last two letters of the above test code(s) indicate the laboratory that performed analytical analysis for that test. Refer to the list below:

Laboratory Definition Code	Laboratory Location
WT	ALS ENVIRONMENTAL - WATERLOO, ONTARIO, CANADA

GLOSSARY OF REPORT TERMS

Surrogates are compounds that are similar in behaviour to target analyte(s), but that do not normally occur in environmental samples. For applicable tests, surrogates are added to samples prior to analysis as a check on recovery. In reports that display the D.L. column, laboratory objectives for surrogates are listed there.
mg/kg - milligrams per kilogram based on dry weight of sample
mg/kg wwt - milligrams per kilogram based on wet weight of sample
mg/kg lwt - milligrams per kilogram based on lipid-adjusted weight
mg/L - unit of concentration based on volume, parts per million.
< - Less than.
D.L. - The reporting limit.
N/A - Result not available. Refer to qualifier code and definition for explanation.

Test results reported relate only to the samples as received by the laboratory.
UNLESS OTHERWISE STATED, ALL SAMPLES WERE RECEIVED IN ACCEPTABLE CONDITION.
Analytical results in unsigned test reports with the DRAFT watermark are subject to change, pending final QC review.

Quality Control Report

Workorder: L1265221 Report Date: 08-FEB-13

Client: RUBICON ENVIRONMENTAL INC.
60 Toronto St
FLESHERTON ON N0C 1E0
Contact: PAUL REW

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MOISTURE-WT	Soil							
Batch R2521639								
WG1622840-3 DUP		**L1263807-14**						
% Moisture		7.70	7.50		%	2.6	30	05-FEB-13
WG1622840-2 LCS								
% Moisture			95.7		%		70-130	05-FEB-13
WG1622840-1 MB								
% Moisture			<0.10		%		0.1	05-FEB-13
Batch R2521644								
WG1623044-3 DUP		**L1265236-2**						
% Moisture		10.8	10.1		%	6.3	30	05-FEB-13
WG1623044-2 LCS								
% Moisture			107.3		%		70-130	05-FEB-13
WG1623044-1 MB								
% Moisture			<0.10		%		0.1	05-FEB-13
PAH-511-WT	Soil							
Batch R2521749								
WG1623319-1 CVS								
1-Methylnaphthalene			106.3		%		50-140	06-FEB-13
2-Methylnaphthalene			105.5		%		50-140	06-FEB-13
Acenaphthene			108.1		%		50-140	06-FEB-13
Acenaphthylene			106.5		%		50-140	06-FEB-13
Anthracene			94.8		%		50-140	06-FEB-13
Benzo(a)anthracene			102.5		%		50-140	06-FEB-13
Benzo(a)pyrene			99.7		%		50-140	06-FEB-13
Benzo(b)fluoranthene			116.6		%		50-140	06-FEB-13
Benzo(g,h,i)perylene			101.1		%		50-140	06-FEB-13
Benzo(k)fluoranthene			93.2		%		50-140	06-FEB-13
Chrysene			104.0		%		50-140	06-FEB-13
Dibenzo(ah)anthracene			103.5		%		50-140	06-FEB-13
Fluoranthene			97.7		%		50-140	06-FEB-13
Fluorene			108.2		%		50-140	06-FEB-13
Indeno(1,2,3-cd)pyrene			110.3		%		50-140	06-FEB-13
Naphthalene			102.6		%		50-140	06-FEB-13
Phenanthrene			101.1		%		50-140	06-FEB-13
Pyrene			96.8		%		50-140	06-FEB-13
WG1623052-6 DUP		**L1265221-1**						
1-Methylnaphthalene		<0.030	<0.030	RPD-NA	ug/g	N/A	40	06-FEB-13

Quality Control Report

Workorder: L1265221 Report Date: 08-FEB-13

Client: RUBICON ENVIRONMENTAL INC.
60 Toronto St
FLESHERTON ON N0C 1E0
Contact: PAUL REW

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
PAH-511-WT	Soil							
Batch R2521749								
WG1623052-6 DUP		**L1265221-1**						
2-Methylnaphthalene		<0.030	<0.030	RPD-NA	ug/g	N/A	40	06-FEB-13
Acenaphthene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	06-FEB-13
Acenaphthylene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	06-FEB-13
Anthracene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	06-FEB-13
Benzo(a)anthracene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	06-FEB-13
Benzo(a)pyrene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	06-FEB-13
Benzo(b)fluoranthene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	06-FEB-13
Benzo(g,h,i)perylene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	06-FEB-13
Benzo(k)fluoranthene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	06-FEB-13
Chrysene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	06-FEB-13
Dibenzo(ah)anthracene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	06-FEB-13
Fluoranthene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	06-FEB-13
Fluorene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	06-FEB-13
Indeno(1,2,3-cd)pyrene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	06-FEB-13
Naphthalene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	06-FEB-13
Phenanthrene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	06-FEB-13
Pyrene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	06-FEB-13
WG1623052-2 LCS								
1-Methylnaphthalene			109.4		%		50-140	06-FEB-13
2-Methylnaphthalene			109.6		%		50-140	06-FEB-13
Acenaphthene			109.9		%		50-140	06-FEB-13
Acenaphthylene			108.8		%		50-140	06-FEB-13
Anthracene			106.8		%		50-140	06-FEB-13
Benzo(a)anthracene			108.8		%		50-140	06-FEB-13
Benzo(a)pyrene			105.3		%		50-140	06-FEB-13
Benzo(b)fluoranthene			120.2		%		50-140	06-FEB-13
Benzo(g,h,i)perylene			108.5		%		50-140	06-FEB-13
Benzo(k)fluoranthene			97.0		%		50-140	06-FEB-13
Chrysene			110.6		%		50-140	06-FEB-13
Dibenzo(ah)anthracene			112.5		%		50-140	06-FEB-13
Fluoranthene			111.6		%		50-140	06-FEB-13
Fluorene			111.9		%		50-140	06-FEB-13
Indeno(1,2,3-cd)pyrene			114.8		%		50-140	06-FEB-13

Quality Control Report

Workorder: L1265221 Report Date: 08-FEB-13

Client: RUBICON ENVIRONMENTAL INC.
60 Toronto St
FLESHERTON ON N0C 1E0

Contact: PAUL REW

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
PAH-511-WT	Soil							
Batch R2521749								
WG1623052-2 LCS								
Naphthalene			114.7		%		50-140	06-FEB-13
Phenanthrene			110.5		%		50-140	06-FEB-13
Pyrene			110.6		%		50-140	06-FEB-13
WG1623052-3 LCSD		**WG1623052-2**						
1-Methylnaphthalene		109.4	108.3		%	1.1	50	06-FEB-13
2-Methylnaphthalene		109.6	108.0		%	1.5	50	06-FEB-13
Acenaphthene		109.9	108.4		%	1.4	50	06-FEB-13
Acenaphthylene		108.8	107.6		%	1.2	50	06-FEB-13
Anthracene		106.8	113.9		%	6.4	50	06-FEB-13
Benzo(a)anthracene		108.8	115.5		%	6.0	50	06-FEB-13
Benzo(a)pyrene		105.3	112.5		%	6.6	50	06-FEB-13
Benzo(b)fluoranthene		120.2	118.4		%	1.5	50	06-FEB-13
Benzo(g,h,i)perylene		108.5	114.7		%	5.6	50	06-FEB-13
Benzo(k)fluoranthene		97.0	103.1		%	6.1	50	06-FEB-13
Chrysene		110.6	117.1		%	5.7	50	06-FEB-13
Dibenzo(ah)anthracene		112.5	118.9		%	5.5	50	06-FEB-13
Fluoranthene		111.6	117.4		%	5.0	50	06-FEB-13
Fluorene		111.9	109.4		%	2.2	50	06-FEB-13
Indeno(1,2,3-cd)pyrene		114.8	114.9		%	0.1	50	06-FEB-13
Naphthalene		114.7	107.3		%	6.7	50	06-FEB-13
Phenanthrene		110.5	117.1		%	5.8	50	06-FEB-13
Pyrene		110.6	117.1		%	5.8	50	06-FEB-13
WG1623052-1 MB								
1-Methylnaphthalene			<0.030		ug/g		0.03	06-FEB-13
2-Methylnaphthalene			<0.030		ug/g		0.03	06-FEB-13
Acenaphthene			<0.050		ug/g		0.05	06-FEB-13
Acenaphthylene			<0.050		ug/g		0.05	06-FEB-13
Anthracene			<0.050		ug/g		0.05	06-FEB-13
Benzo(a)anthracene			<0.050		ug/g		0.05	06-FEB-13
Benzo(a)pyrene			<0.050		ug/g		0.05	06-FEB-13
Benzo(b)fluoranthene			<0.050		ug/g		0.05	06-FEB-13
Benzo(g,h,i)perylene			<0.050		ug/g		0.05	06-FEB-13
Benzo(k)fluoranthene			<0.050		ug/g		0.05	06-FEB-13

ALS Environmental

Quality Control Report

Workorder: L1265221 Report Date: 08-FEB-13

Client: RUBICON ENVIRONMENTAL INC.
60 Toronto St
FLESHERTON ON N0C 1E0
Contact: PAUL REW

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
PAH-511-WT	Soil							
Batch R2521749								
WG1623052-1 MB								
Chrysene			<0.050		ug/g		0.05	06-FEB-13
Dibenzo(ah)anthracene			<0.050		ug/g		0.05	06-FEB-13
Fluoranthene			<0.050		ug/g		0.05	06-FEB-13
Fluorene			<0.050		ug/g		0.05	06-FEB-13
Indeno(1,2,3-cd)pyrene			<0.050		ug/g		0.05	06-FEB-13
Naphthalene			<0.050		ug/g		0.05	06-FEB-13
Phenanthrene			<0.050		ug/g		0.05	06-FEB-13
Pyrene			<0.050		ug/g		0.05	06-FEB-13
Surrogate: 2-Fluorobiphenyl			104.9		%		50-140	06-FEB-13
Surrogate: p-Terphenyl d14			98.6		%		50-140	06-FEB-13
WG1623052-7 MS		**L1265221-1**						
1-Methylnaphthalene			97.0		%		50-140	06-FEB-13
2-Methylnaphthalene			97.5		%		50-140	06-FEB-13
Acenaphthene			98.5		%		50-140	06-FEB-13
Acenaphthylene			99.9		%		50-140	06-FEB-13
Anthracene			92.1		%		50-140	06-FEB-13
Benzo(a)anthracene			102.6		%		50-140	06-FEB-13
Benzo(a)pyrene			93.2		%		50-140	06-FEB-13
Benzo(b)fluoranthene			96.4		%		50-140	06-FEB-13
Benzo(g,h,i)perylene			87.2		%		50-140	06-FEB-13
Benzo(k)fluoranthene			85.7		%		50-140	06-FEB-13
Chrysene			92.6		%		50-140	06-FEB-13
Dibenzo(ah)anthracene			90.5		%		50-140	06-FEB-13
Fluoranthene			99.5		%		50-140	06-FEB-13
Fluorene			100.1		%		50-140	06-FEB-13
Indeno(1,2,3-cd)pyrene			93.9		%		50-140	06-FEB-13
Naphthalene			100.4		%		50-140	06-FEB-13
Phenanthrene			93.9		%		50-140	06-FEB-13
Pyrene			97.9		%		50-140	06-FEB-13

Quality Control Report

Workorder: L1265221 Report Date: 08-FEB-13

Client: RUBICON ENVIRONMENTAL INC.
60 Toronto St
FLESHERTON ON N0C 1E0
Contact: PAUL REW

Legend:

Limit	ALS Control Limit (Data Quality Objectives)
DUP	Duplicate
RPD	Relative Percent Difference
N/A	Not Available
LCS	Laboratory Control Sample
SRM	Standard Reference Material
MS	Matrix Spike
MSD	Matrix Spike Duplicate
ADE	Average Desorption Efficiency
MB	Method Blank
IRM	Internal Reference Material
CRM	Certified Reference Material
CCV	Continuing Calibration Verification
CVS	Calibration Verification Standard
LCSD	Laboratory Control Sample Duplicate

Sample Parameter Qualifier Definitions:

Qualifier	Description
RPD-NA	Relative Percent Difference Not Available due to result(s) being less than detection limit.

Hold Time Exceedances:

All test results reported with this submission were conducted within ALS recommended hold times.

ALS recommended hold times may vary by province. They are assigned to meet known provincial and/or federal government requirements. In the absence of regulatory hold times, ALS establishes recommendations based on guidelines published by the US EPA, APHA Standard Methods, or Environment Canada (where available). For more information, please contact ALS.

The ALS Quality Control Report is provided to ALS clients upon request. ALS includes comprehensive QC checks with every analysis to ensure our high standards of quality are met. Each QC result has a known or expected target value, which is compared against pre-determined data quality objectives to provide confidence in the accuracy of associated test results.

Please note that this report may contain QC results from anonymous Sample Duplicates and Matrix Spikes that do not originate from this Work Order.

127676
C of C # 00000

CHAIN OF CUSTODY / ANALYTICAL SERVICES REQUEST FORM

Page 1 of 1

60 NORTHLAND ROAD, UNIT 1
WATERLOO, ON N2V 2B8
Phone: (519) 886-6910
Fax: (519) 886-9047
Toll Free: 1-800-668-9878

ALS

Note: all TAT Quoted material is in business days which exclude statutory holidays and weekends. TAT samples received past 3:00 pm or Saturday/Sunday begin the next day.

Specify date required	Service requested			
	5 day (regular)	✓	2 day TAT (50%)	
	3-4 day (25%)		Next day TAT (100%)	
			Same day TAT (200%)	

COMPANY NAME	Rubicon Environ
OFFICE	Fleshertm
PROJECT MANAGER	Paul Row
PROJECT #	R55061
PHONE	924-0003
FAX	924-0004
ACCOUNT #	
QUOTATION #	Q37992
PO #	

CRITERIA — Criteria on report YES ✓ NO ___

Reg 153/04 ☐ Reg 511/09 ☐ residential

Table 1 2 (3) 4 5 6 7 8 9

TCLP ____ MISA ____ PWQO ____

ODWS ____ OTHER ____

REPORT FORMAT/DISTRIBUTION

EMAIL ____ FAX ____ BOTH ____

SELECT: PDF ____ DIGITAL ____ BOTH ____

EMAIL 1 ____

EMAIL 2 ____

ANALYSIS REQUEST

PLEASE INDICATE FILTERED, PRESERVED OR BOTH <----- (F, P, F/P)

SUBMISSION #: L1265221

ENTERED BY: aj

DATE/TIME ENTERED: 5/2/13 14:31

BIN #: B193

SAMPLING INFORMATION

Sample Date/Time		TYPE		MATRIX			SAMPLE DESCRIPTION TO APPEAR ON REPORT	NUMBER OF CONTAINERS	PAH	COMMENTS	LAB ID
Date (dd-mm-yy)	Time (24hr) (hh:mm)	COMP	GRAB	WATER	SOIL	OTHER					
Jan 29	3:10				✓		BH13 552	1	✓		1
Jan 29	4:15				✓		BH16 551	1	✓		2
Jan 30	9:40				✓		BH-MW4 552	1	✓		3
Jan 30	11:10				✓		BH-MW2 552	1	✓		4
Jan 30	12:40				✓		BH-MW20 552	1	✓		5
Jan 30	4:10				✓		BH-MW1 552	1	✓		6
Jan 31	8:10 am				✓		BH3 552	1	✓		7
Jan 31	12:15 pm				✓		BH-MW9 552	1	✓		8
Jan 31	1:10 pm				✓		BH10 552	1	✓		9
Jan 31	1:10 pm				✓		BH10 552 (01	1	✓		10

L1265221-COFC

SPECIAL INSTRUCTIONS/COMMENTS

THE QUESTIONS BELOW MUST BE ANSWERED FORWATER SAMPLES (CHECK Yes OR No)

Are any samples taken from a regulated DW System? Yes ☐ No ☐

If yes, an authorized drinking water COC MUST be used for this submission.

Is the water sampled intended to be potable for human consumption? Yes ☐ No ☐

SAMPLE CONDITION

FROZEN	☐	MEAN TEMP
COLD	☑	1.7
COOLING INITIATED	☐	1.5
AMBIENT	☐	
OBSERVATIONS Yes ☐ No ☐ If yes add SIF		INIT aj

SAMPLED BY: Brian Wheeler	DATE & TIME	RECEIVED BY:	DATE & TIME
RELINQUISHED BY: Brian Wheeler	DATE & TIME	RECEIVED AT LAB BY: aj	DATE & TIME 4/2/13 13:43

Notes

1. Quote number must be provided to ensure proper pricing
2. TAT may vary dependent on complexity of analysis and lab workload at time of submission. Please contact the lab to confirm TATs.
3. Any known or suspected hazards relating to a sample must be noted on the chain of custody in comments section.

RUBICON ENVIRONMENTAL INC.
ATTN: PAUL REW
60 Toronto St
FLESHERTON ON N0C 1E0

Date Received: 05-FEB-13
Report Date: 12-FEB-13 08:34 (MT)
Version: FINAL

Client Phone: 519-924-0003

Certificate of Analysis

Lab Work Order #: L1265229

Project P.O. #: NOT SUBMITTED
Job Reference: R55001
C of C Numbers: 127679
Legal Site Desc:

Gayle Braun
Senior Account Manager

SOIL - Ontario Regulation 153/04 - as amended by O.Reg. 511 (JULY, 2011)

					ALS ID	L1265229-1	L1265229-2	L1265229-3	L1265229-4	L1265229-5	L1265229-6	L1265229-7	L1265229-8	L1265229-9
					Sampled Date	29-JAN-13	29-JAN-13	29-JAN-13	30-JAN-13	30-JAN-13	30-JAN-13	30-JAN-13	31-JAN-13	31-JAN-13
					Sampled Time	15:15	16:10	18:15	09:45	12:40	14:15	16:15	13:20	13:20
					Sample ID	BH13 SS4	BH16 SS3	BH-MW15 SS3	BH-MW4 SS3	BH-MW20 SS2	BH-MW18 SS3	BH-MW1 SS3	BH10 SS4	BH10 (D) SS4
Grouping	Analyte	Unit	Guide Limits #1	#2										
Physical Tests	% Moisture	%	-	-		7.95	8.97	35.2	8.53	6.75	8.36	6.69	9.73	9.08
Volatile Organic Compounds	Benzene	ug/g	0.21	-		<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020
	Ethyl Benzene	ug/g	2	-		<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
	Toluene	ug/g	2.3	-		<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
	o-Xylene	ug/g	-	-		<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020
	m+p-Xylenes	ug/g	-	-		<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030
	Xylenes (Total)	ug/g	3.1	-		<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
	Surrogate: 4-Bromofluorobenzene	%	-	-		91.5	90.0	95.9	95.2	90.1	90.8	95.1	85.7	94.4
	Surrogate: 1,4-Difluorobenzene	%	-	-		99.2	97.9	97.7	98.8	98.6	98.8	98.9	101.7	99.3
Hydrocarbons	F1 (C6-C10)	ug/g	55	-		<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
	F1-BTEX	ug/g	55	-		<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
	F2 (C10-C16)	ug/g	98	-		<10	<10	<10	<10	<10	<10	<10	<10	<10
	F3 (C16-C34)	ug/g	300	-		<50	<50	57	<50	<50	<50	<50	<50	<50
	F4 (C34-C50)	ug/g	2800	-		<50	<50	<50	<50	<50	<50	<50	<50	<50
	Total Hydrocarbons (C6-C50)	ug/g	-	-		<50	<50	57	<50	<50	<50	<50	<50	<50
	Chrom. to baseline at nC50		-	-		YES	YES	YES	YES	YES	YES	YES	YES	YES
	Surrogate: 2-Bromobenzotrifluoride	%	-	-		85.9	83.5	85.5	85.9	86.1	89.6	84.5	87.2	82.5
	Surrogate: 3,4-Dichlorotoluene	%	-	-		101.5	88.9	98.2	66.5	67.0	64.1	64.2	61.8	69.6
	Surrogate: Octacosane	%	-	-		120.7	111.6	107.4	113.0	111.9	112.4	113.4	112.4	107.8

Guide Limit #1: ON511/11-T3-Soil-Res/Park/Inst. Property Use (Coarse)

Detection Limit for result exceeds Guideline Limit. Assessment against Guideline Limit cannot be made.
Analytical result for this parameter exceeds Guide Limits listed. See Summary of Guideline Exceedances.

SOIL - Ontario Regulation 153/04 - as amended by O.Reg. 511 (JULY, 2011)

					ALS ID	L1265229-10
					Sampled Date	31-JAN-13
					Sampled Time	-
					Sample ID	TRIP BLANK
Grouping	Analyte	Unit	Guide Limits #1	#2		
Physical Tests	% Moisture	%	-	-		<0.10
Volatile Organic Compounds	Benzene	ug/g	0.21	-		<0.020
	Ethyl Benzene	ug/g	2	-		<0.050
	Toluene	ug/g	2.3	-		<0.20
	o-Xylene	ug/g	-	-		<0.020
	m+p-Xylenes	ug/g	-	-		<0.030
	Xylenes (Total)	ug/g	3.1	-		<0.050
	Surrogate: 4-Bromofluorobenzene	%	-	-		83.6
	Surrogate: 1,4-Difluorobenzene	%	-	-		99.1
Hydrocarbons	F1 (C6-C10)	ug/g	55	-		<5.0
	F1-BTEX	ug/g	55	-		<5.0
	F2 (C10-C16)	ug/g	98	-		
	F3 (C16-C34)	ug/g	300	-		
	F4 (C34-C50)	ug/g	2800	-		
	Total Hydrocarbons (C6-C50)	ug/g	-	-		
	Chrom. to baseline at nC50		-	-		
	Surrogate: 2-Bromobenzotrifluoride	%	-	-		
	Surrogate: 3,4-Dichlorotoluene	%	-	-		65.2
	Surrogate: Octacosane	%	-	-		

Guide Limit #1: ON511/11-T3-Soil-Res/Park/Inst. Property Use (Coarse)

Detection Limit for result exceeds Guideline Limit. Assessment against Guideline Limit cannot be made.
Analytical result for this parameter exceeds Guide Limits listed. See Summary of Guideline Exceedances.

Summary of Guideline Exceedances

Guideline ALS ID	Client ID	Grouping	Analyte	Result	Guideline Limit	Unit

Ontario Regulation 153/04 - as amended by O.Reg. 511 (JULY, 2011) - ON511/11-T3-Soil-Res/Park/Inst. Property Use (Coarse)

(No parameter exceedances)

Reference Information

Methods Listed (if applicable):

ALS Test Code	Matrix	Test Description	Method Reference**
BTX-511-HS-WT	Soil	BTEX-O.Reg 153/04 (July 2011)	SW846 8260

BTX is determined by extracting a soil or sediment sample as received with methanol, then analyzing by headspace-GC/MS.

Analysis conducted in accordance with the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act (July 1, 2011).

F1-F4-511-CALC-WT	Soil	F1-F4 Hydrocarbon Calculated Parameters	CCME CWS-PHC DEC-2000 - PUB# 1310-S

Analytical methods used for analysis of CCME Petroleum Hydrocarbons have been validated and comply with the Reference Method for the CWS PHC.

Hydrocarbon results are expressed on a dry weight basis.

In cases where results for both F4 and F4G are reported, the greater of the two results must be used in any application of the CWS PHC guidelines and the gravimetric heavy hydrocarbons cannot be added to the C6 to C50 hydrocarbons.
In samples where BTEX and F1 were analyzed , F1-BTEX represents a value where the sum of Benzene, Toluene, Ethylbenzene and total Xylenes has been subtracted from F1.

In samples where PAHs, F2 and F3 were analyzed, F2-Naphth represents the result where Naphthalene has been subtracted from F2. F3-PAH represents a result where the sum of Benzo(a)anthracene, Benzo(a)pyrene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Dibenzo(a,h)anthracene, Fluoranthene, Indeno(1,2,3-cd)pyrene, Phenanthrene, and Pyrene has been subtracted from F3.

Unless otherwise qualified, the following quality control criteria have been met for the F1 hydrocarbon range:
1. All extraction and analysis holding times were met.
2. Instrument performance showing response factors for C6 and C10 within 30% of the response factor for toluene.
3. Linearity of gasoline response within 15% throughout the calibration range.

Unless otherwise qualified, the following quality control criteria have been met for the F2-F4 hydrocarbon ranges:
1. All extraction and analysis holding times were met.
2. Instrument performance showing C10, C16 and C34 response factors within 10% of their average.
3. Instrument performance showing the C50 response factor within 30% of the average of the C10, C16 and C34 response factors.
4. Linearity of diesel or motor oil response within 15% throughout the calibration range.

F1-HS-511-WT	Soil	F1-O.Reg 153/04 (July 2011)	E3398/CCME TIER 1-HS

Fraction F1 is determined by extracting a soil or sediment sample as received with methanol, then analyzing by headspace-GC/FID.

Analysis conducted in accordance with the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act (July 1, 2011).

F2-F4-511-WT	Soil	F2-F4-O.Reg 153/04 (July 2011)	MOE DECPH-E3398/CCME TIER 1

Fractions F2, F3 and F4 are determined by extracting a soil sample with a solvent mix. The solvent recovered from the extracted soil sample is dried and treated to remove polar material. The extract is analyzed by GC/FID.

Analysis conducted in accordance with the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act (July 1, 2011).

MOISTURE-WT	Soil	% Moisture	Gravimetric: Oven Dried
XYLENES-SUM-CALC-WT	Soil	Sum of Xylene Isomer Concentrations	CALCULATION

Total Trihalomethanes (THMs) represents the sum of bromodichloromethane, bromoform, chlorodibromomethane and chloroform. For the purpose of calculation, results less than the detection limit (DL) are treated as zero.

**ALS test methods may incorporate modifications from specified reference methods to improve performance.

Chain of Custody Numbers:

127679

Reference Information

The last two letters of the above test code(s) indicate the laboratory that performed analytical analysis for that test. Refer to the list below:

Laboratory Definition Code	Laboratory Location
WT	ALS ENVIRONMENTAL - WATERLOO, ONTARIO, CANADA

GLOSSARY OF REPORT TERMS

Surrogates are compounds that are similar in behaviour to target analyte(s), but that do not normally occur in environmental samples. For applicable tests, surrogates are added to samples prior to analysis as a check on recovery. In reports that display the D.L. column, laboratory objectives for surrogates are listed there.
mg/kg - milligrams per kilogram based on dry weight of sample
mg/kg wwt - milligrams per kilogram based on wet weight of sample
mg/kg lwt - milligrams per kilogram based on lipid-adjusted weight
mg/L - unit of concentration based on volume, parts per million.
< - Less than.
D.L. - The reporting limit.
N/A - Result not available. Refer to qualifier code and definition for explanation.

Test results reported relate only to the samples as received by the laboratory.
UNLESS OTHERWISE STATED, ALL SAMPLES WERE RECEIVED IN ACCEPTABLE CONDITION.
Analytical results in unsigned test reports with the DRAFT watermark are subject to change, pending final QC review.

Quality Control Report

Workorder: L1265229 Report Date: 12-FEB-13

Client: RUBICON ENVIRONMENTAL INC.
60 Toronto St
FLESHERTON ON N0C 1E0
Contact: PAUL REW

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
BTX-511-HS-WT	Soil							
Batch R2522250								
WG1622241-1 CVS								
Benzene			109.5		%		75-125	06-FEB-13
Ethyl Benzene			111.1		%		75-125	06-FEB-13
m+p-Xylenes			107.8		%		75-125	06-FEB-13
o-Xylene			106.6		%		75-125	06-FEB-13
Toluene			103.4		%		75-125	06-FEB-13
WG1623150-4 DUP		**WG1623150-3**						
Benzene		<0.080	<0.080	RPD-NA	ug/g	N/A	40	07-FEB-13
Ethyl Benzene		<0.20	<0.20	RPD-NA	ug/g	N/A	40	07-FEB-13
m+p-Xylenes		0.38	0.35		ug/g	8.2	40	07-FEB-13
o-Xylene		0.747	0.684		ug/g	8.8	40	07-FEB-13
Toluene		<0.80	<0.80	RPD-NA	ug/g	N/A	40	07-FEB-13
WG1623150-2 LCS								
Benzene			110.1		%		70-130	06-FEB-13
Ethyl Benzene			104.6		%		70-130	06-FEB-13
m+p-Xylenes			101.3		%		70-130	06-FEB-13
o-Xylene			104.1		%		70-130	06-FEB-13
Toluene			103.2		%		70-130	06-FEB-13
WG1623150-1 MB								
Benzene			<0.020		ug/g		0.02	06-FEB-13
Ethyl Benzene			<0.050		ug/g		0.05	06-FEB-13
m+p-Xylenes			<0.030		ug/g		0.03	06-FEB-13
o-Xylene			<0.020		ug/g		0.02	06-FEB-13
Toluene			<0.20		ug/g		0.2	06-FEB-13
Surrogate: 1,4-Difluorobenzene			108.4		%		70-130	06-FEB-13
Surrogate: 4-Bromofluorobenzene			109.1		%		70-130	06-FEB-13
WG1623150-5 MS		**WG1623150-3**						
Benzene			123.6		%		60-140	07-FEB-13
Ethyl Benzene			115.3		%		60-140	07-FEB-13
m+p-Xylenes			107.0		%		60-140	07-FEB-13
o-Xylene			115.0		%		60-140	07-FEB-13
Toluene			122.1		%		60-140	07-FEB-13
F1-HS-511-WT	Soil							

Quality Control Report

Client: RUBICON ENVIRONMENTAL INC.
60 Toronto St
FLESHERTON ON N0C 1E0

Contact: PAUL REW

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
F1-HS-511-WT	Soil							
Batch R2522250								
WG1622241-1 CVS								
F1 (C6-C10)			96.5		%		80-120	06-FEB-13
WG1623150-4 DUP		**WG1623150-3**						
F1 (C6-C10)		93	92		ug/g	1.2	50	07-FEB-13
WG1623150-2 LCS								
F1 (C6-C10)			88.5		%		80-120	06-FEB-13
WG1623150-1 MB								
F1 (C6-C10)			<5.0		ug/g		5	06-FEB-13
Surrogate: 3,4-Dichlorotoluene			108.5		%		60-140	06-FEB-13
WG1623150-7 MS		**WG1623150-6**						
F1 (C6-C10)			113.8		%		60-140	07-FEB-13
F2-F4-511-WT	Soil							
Batch R2526852								
WG1623316-1 CVS								
F2 (C10-C16)			96.0		%		80-120	11-FEB-13
F3 (C16-C34)			96.7		%		80-120	11-FEB-13
F4 (C34-C50)			103.8		%		80-120	11-FEB-13
WG1622848-5 DUP		**L1263807-14**						
F2 (C10-C16)		40	32		ug/g	22	40	11-FEB-13
F3 (C16-C34)		<50	<50	RPD-NA	ug/g	N/A	40	11-FEB-13
F4 (C34-C50)		<50	<50	RPD-NA	ug/g	N/A	40	11-FEB-13
WG1622848-2 LCS								
F2 (C10-C16)			90.7		%		80-120	11-FEB-13
F3 (C16-C34)			97.3		%		80-120	11-FEB-13
F4 (C34-C50)			105.9		%		80-120	11-FEB-13
WG1622848-3 LCSD		**WG1622848-2**						
F2 (C10-C16)		90.7	95.2		%	4.9	50	11-FEB-13
F3 (C16-C34)		97.3	97.0		%	0.3	50	11-FEB-13
F4 (C34-C50)		105.9	105.7		%	0.2	50	11-FEB-13
WG1622848-1 MB								
F2 (C10-C16)			<10		ug/g		10	11-FEB-13
F3 (C16-C34)			<50		ug/g		50	11-FEB-13
F4 (C34-C50)			<50		ug/g		50	11-FEB-13
Surrogate: Octacosane			102.7		%		60-140	11-FEB-13
Surrogate: 2-Bromobenzotrifluoride			79.9		%		60-140	11-FEB-13
WG1622848-6 MS		**L1263807-14**						

Quality Control Report

Workorder: L1265229 Report Date: 12-FEB-13

Client: RUBICON ENVIRONMENTAL INC.
60 Toronto St
FLESHERTON ON N0C 1E0
Contact: PAUL REW

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
F2-F4-511-WT	Soil							
Batch R2526852								
WG1622848-6 MS		**L1263807-14**						
F2 (C10-C16)			95.6		%		60-140	11-FEB-13
F3 (C16-C34)			94.7		%		60-140	11-FEB-13
F4 (C34-C50)			104.4		%		60-140	11-FEB-13
MOISTURE-WT	Soil							
Batch R2521644								
WG1623044-3 DUP		**L1265236-2**						
% Moisture		10.8	10.1		%	6.3	30	05-FEB-13
WG1623044-2 LCS								
% Moisture			107.3		%		70-130	05-FEB-13
WG1623044-1 MB								
% Moisture			<0.10		%		0.1	05-FEB-13

Quality Control Report

Workorder: L1265229 Report Date: 12-FEB-13

Client: RUBICON ENVIRONMENTAL INC.
60 Toronto St
FLESHERTON ON N0C 1E0
Contact: PAUL REW

Legend:

Limit	ALS Control Limit (Data Quality Objectives)
DUP	Duplicate
RPD	Relative Percent Difference
N/A	Not Available
LCS	Laboratory Control Sample
SRM	Standard Reference Material
MS	Matrix Spike
MSD	Matrix Spike Duplicate
ADE	Average Desorption Efficiency
MB	Method Blank
IRM	Internal Reference Material
CRM	Certified Reference Material
CCV	Continuing Calibration Verification
CVS	Calibration Verification Standard
LCSD	Laboratory Control Sample Duplicate

Sample Parameter Qualifier Definitions:

Qualifier	Description
DLA	Detection Limit Adjusted For required dilution
RPD-NA	Relative Percent Difference Not Available due to result(s) being less than detection limit.

Hold Time Exceedances:

All test results reported with this submission were conducted within ALS recommended hold times.

ALS recommended hold times may vary by province. They are assigned to meet known provincial and/or federal government requirements. In the absence of regulatory hold times, ALS establishes recommendations based on guidelines published by the US EPA, APHA Standard Methods, or Environment Canada (where available). For more information, please contact ALS.

The ALS Quality Control Report is provided to ALS clients upon request. ALS includes comprehensive QC checks with every analysis to ensure our high standards of quality are met. Each QC result has a known or expected target value, which is compared against pre-determined data quality objectives to provide confidence in the accuracy of associated test results.

Please note that this report may contain QC results from anonymous Sample Duplicates and Matrix Spikes that do not originate from this Work Order.

C of C # 00000

CHAIN OF CUSTODY / ANALYTICAL SERVICES REQUEST FORM

Page 1 of 1

60 NORTHLAND ROAD, UNIT 1
WATERLOO, ON N2V 2B8
Phone: (519) 886-6910
Fax: (519) 886-9047
Toll Free: 1-800-668-9878

Note: all TAT Quoted material is in business days which exclude statutory holidays and weekends. TAT samples received past 3:00 pm or Saturday/Sunday begin the next day.

Specify date required	Service requested		2 day TAT (50%)	
	5 day (regular)	☑	Next day TAT (100%)	
	3-4 day (25%)		Same day TAT (200%)	

PLEASE INDICATE FILTERED, PRESERVED OR BOTH <----- (F, P, F/P)

COMPANY NAME	Rubicon Env.
OFFICE	Fleshertan
PROJECT MANAGER	Paul Rew
PROJECT #	R55601
PHONE	924-0003
FAX	924-0004
ACCOUNT #	
QUOTATION #	Q37792
PO #	

CRITERIA — Criteria on report YES ☑ NO ☐

Reg 153/04 ☐ Reg 511/09 ☑

Table 1 2 (3) 4 5 6 7 8 9

TCLP ____ MISA ____ PWQO ____

ODWS ____ OTHER ____

REPORT FORMAT/DISTRIBUTION

EMAIL ____ FAX ____ BOTH ____

SELECT: PDF ____ DIGITAL ____ BOTH ____

EMAIL 1 ____

EMAIL 2 ____

ANALYSIS REQUEST

SUBMISSION #: L1265229

ENTERED BY: aj

DATE/TIME ENTERED: 5/2/13 14:36

BIN #: B193

SAMPLING INFORMATION

Sample Date/Time		TYPE		MATRIX			SAMPLE DESCRIPTION TO APPEAR ON REPORT	NUMBER OF CONTAINERS	BTEX	PHC F1-F4	COMMENTS	LAB ID
Date (dd-mm-yy)	Time (24hr) (hh:mm)	COMP	GRAB	WATER	SOIL	OTHER						
Jan 29	3:15				b		BH13 554	1	x	x		1
Jan 29	4:10				b		BH16 553	1	x	x		2
Jan 29	6:15				b		BH-MW15 553	1	x	x		3
Jan 30	9:45				b		BH-MW4 553	1	x	x		4
Jan 30	12:40				b		BH-MW20 552	1	x	x		5
Jan 30	2:15 pm				b		BH-MW18 553	1	x	x		6
Jan 30	4:[illegible] pm				x		BH-MW1 553	1	x	x		7
Jan 31	1:20 pm				b		BH[illegible]10 554	1	x	x		8
Jan 31	1:20 pm				b		BH-[illegible]10 (01) 554	1	x	x		9
Jan 31					x		trip blank	1	x			10

L1265229-COFC

SAMPLE CONDITION

		MEAN TEMP
FROZEN	☐	
COLD	☑	1.7
COOLING INITIATED	☐	1.5
AMBIENT	☐	

OBSERVATIONS Yes ☐ No ☐ If yes add SIF — INIT: aj

SPECIAL INSTRUCTIONS/COMMENTS

MEOH

THE QUESTIONS BELOW MUST BE ANSWERED FORWATER SAMPLES (CHECK Yes OR No)

Are any samples taken from a regulated DW System? Yes ☐ No ☐

If yes, an authorized drinking water COC MUST be used for this submission.

Is the water sampled intended to be potable for human consumption? Yes ☐ No ☐

SAMPLED BY: Brian Wheeler	DATE & TIME	RECEIVED BY:	DATE & TIME
RELINQUISHED BY: Brian Wheeler	DATE & TIME	RECEIVED AT LAB BY: aj	DATE & TIME 4/2/13 13:43

Notes

1. Quote number must be provided to ensure proper pricing
2. TAT may vary dependent on complexity of analysis and lab workload at time of submission. Please contact the lab to confirm TATs.
3. Any known or suspected hazards relating to a sample must be noted on the chain of custody in comments section.

RUBICON ENVIRONMENTAL INC.
ATTN: PAUL REW
60 Toronto St
FLESHERTON ON N0C 1E0

Date Received: 05-FEB-13
Report Date: 13-FEB-13 14:24 (MT)
Version: FINAL

Client Phone: 519-924-0003

Certificate of Analysis

Lab Work Order #: L1265236

Project P.O. #: NOT SUBMITTED
Job Reference: R55001
C of C Numbers: 127678
Legal Site Desc:

Wayne Smith, C.CHEM., C.E.T.
Account Manager

SOIL - Ontario Regulation 153/04 - as amended by O.Reg. 511 (JULY, 2011)

					ALS ID	L1265236-1	L1265236-2	L1265236-3	L1265236-4	L1265236-5	L1265236-6	L1265236-7	L1265236-8	L1265236-9
					Sampled Date	29-JAN-13	29-JAN-13	29-JAN-13	29-JAN-13	31-JAN-13	31-JAN-13	31-JAN-13	31-JAN-13	31-JAN-13
					Sampled Time	12:10	13:15	14:10	15:15	09:45	11:10	11:10	12:15	14:05
					Sample ID	BH-MW7 SS3	BH6 SS3	BH-MW8 SS2	BH14 SS2	BH19 SS3	BH17 SS2	BH17 SS2 (D)	BH-MW9 SS2	BH12 SS2
Grouping	Analyte	Unit	Guide Limits #1	#2										
Physical Tests	% Moisture	%	-	-		10.9	10.8	10.7	11.9	8.56	10.5	6.92	11.1	16.3
Volatile Organic Compounds	Acetone	ug/g	16	-		<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
	Benzene	ug/g	0.21	-		<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020
	Bromodichloromethane	ug/g	13	-		<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
	Bromoform	ug/g	0.27	-		<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
	Bromomethane	ug/g	0.05	-		<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
	Carbon tetrachloride	ug/g	0.05	-		<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
	Chlorobenzene	ug/g	2.4	-		<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
	Dibromochloromethane	ug/g	9.4	-		<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
	Chloroform	ug/g	0.05	-		<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
	1,2-Dibromoethane	ug/g	0.05	-		<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
	1,2-Dichlorobenzene	ug/g	3.4	-		<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
	1,3-Dichlorobenzene	ug/g	4.8	-		<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
	1,4-Dichlorobenzene	ug/g	0.083	-		<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
	Dichlorodifluoromethane	ug/g	16	-		<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
	1,1-Dichloroethane	ug/g	3.5	-		<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
	1,2-Dichloroethane	ug/g	0.05	-		<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
	1,1-Dichloroethylene	ug/g	0.05	-		<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
	cis-1,2-Dichloroethylene	ug/g	3.4	-		<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
	trans-1,2-Dichloroethylene	ug/g	0.084	-		<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
	1,3-Dichloropropene (cis & trans)	ug/g	0.05	-		<0.042	<0.042	<0.042	<0.042	<0.042	<0.042	<0.042	<0.042	<0.042
	Methylene Chloride	ug/g	0.1	-		<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050

Guide Limit #1: ON511/11-T3-Soil-Res/Park/Inst. Property Use (Coarse)

Detection Limit for result exceeds Guideline Limit. Assessment against Guideline Limit cannot be made.
Analytical result for this parameter exceeds Guide Limits listed. See Summary of Guideline Exceedances.

SOIL - Ontario Regulation 153/04 - as amended by O.Reg. 511 (JULY, 2011)

					ALS ID	L1265236-10
					Sampled Date	31-JAN-13
					Sampled Time	-
					Sample ID	TRIP BLANK
Grouping	Analyte	Unit	Guide Limits #1	#2		
Physical Tests	% Moisture	%	-	-		<0.10
Volatile Organic Compounds	Acetone	ug/g	16	-		<0.50
	Benzene	ug/g	0.21	-		<0.020
	Bromodichloromethane	ug/g	13	-		<0.050
	Bromoform	ug/g	0.27	-		<0.050
	Bromomethane	ug/g	0.05	-		<0.050
	Carbon tetrachloride	ug/g	0.05	-		<0.050
	Chlorobenzene	ug/g	2.4	-		<0.050
	Dibromochloromethane	ug/g	9.4	-		<0.050
	Chloroform	ug/g	0.05	-		<0.050
	1,2-Dibromoethane	ug/g	0.05	-		<0.050
	1,2-Dichlorobenzene	ug/g	3.4	-		<0.050
	1,3-Dichlorobenzene	ug/g	4.8	-		<0.050
	1,4-Dichlorobenzene	ug/g	0.083	-		<0.050
	Dichlorodifluoromethane	ug/g	16	-		<0.050
	1,1-Dichloroethane	ug/g	3.5	-		<0.050
	1,2-Dichloroethane	ug/g	0.05	-		<0.050
	1,1-Dichloroethylene	ug/g	0.05	-		<0.050
	cis-1,2-Dichloroethylene	ug/g	3.4	-		<0.050
	trans-1,2-Dichloroethylene	ug/g	0.084	-		<0.050
	1,3-Dichloropropene (cis & trans)	ug/g	0.05	-		<0.042
	Methylene Chloride	ug/g	0.1	-		<0.050

Guide Limit #1: ON511/11-T3-Soil-Res/Park/Inst. Property Use (Coarse)

Detection Limit for result exceeds Guideline Limit. Assessment against Guideline Limit cannot be made.
Analytical result for this parameter exceeds Guide Limits listed. See Summary of Guideline Exceedances.

SOIL - Ontario Regulation 153/04 - as amended by O.Reg. 511 (JULY, 2011)

					ALS ID	L1265236-1	L1265236-2	L1265236-3	L1265236-4	L1265236-5	L1265236-6	L1265236-7	L1265236-8	L1265236-9
					Sampled Date	29-JAN-13	29-JAN-13	29-JAN-13	29-JAN-13	31-JAN-13	31-JAN-13	31-JAN-13	31-JAN-13	31-JAN-13
					Sampled Time	12:10	13:15	14:10	15:15	09:45	11:10	11:10	12:15	14:05
					Sample ID	BH-MW7 SS3	BH6 SS3	BH-MW8 SS2	BH14 SS2	BH19 SS3	BH17 SS2	BH17 SS2 (D)	BH-MW9 SS2	BH12 SS2
Grouping	Analyte	Unit	Guide Limits #1	#2										
Volatile Organic Compounds	1,2-Dichloropropane	ug/g	0.05	-		<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
	cis-1,3-Dichloropropene	ug/g	-	-		<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030
	trans-1,3-Dichloropropene	ug/g	-	-		<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030
	Ethyl Benzene	ug/g	2	-		<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
	n-Hexane	ug/g	2.8	-		<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
	Methyl Ethyl Ketone	ug/g	16	-		<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
	Methyl Isobutyl Ketone	ug/g	1.7	-		<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
	MTBE	ug/g	0.75	-		<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
	Styrene	ug/g	0.7	-		<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
	1,1,1,2-Tetrachloroethane	ug/g	0.058	-		<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
	1,1,2,2-Tetrachloroethane	ug/g	0.05	-		<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
	Tetrachloroethylene	ug/g	0.28	-		<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
	Toluene	ug/g	2.3	-		<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
	1,1,1-Trichloroethane	ug/g	0.38	-		<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
	1,1,2-Trichloroethane	ug/g	0.05	-		<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
	Trichloroethylene	ug/g	0.061	-		<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
	Trichlorofluoromethane	ug/g	4	-		<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
	Vinyl chloride	ug/g	0.02	-		<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020
	o-Xylene	ug/g	-	-		<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020
	m+p-Xylenes	ug/g	-	-		<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030
	Xylenes (Total)	ug/g	3.1	-		<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
	Surrogate: 4-Bromofluorobenzene	%	-	-		92.4	91.0	89.6	86.4	79.7	87.6	86.1	88.2	73.3

Guide Limit #1: ON511/11-T3-Soil-Res/Park/Inst. Property Use (Coarse)

Detection Limit for result exceeds Guideline Limit. Assessment against Guideline Limit cannot be made.
Analytical result for this parameter exceeds Guide Limits listed. See Summary of Guideline Exceedances.

SOIL - Ontario Regulation 153/04 - as amended by O.Reg. 511 (JULY, 2011)

					ALS ID	L1265236-10
					Sampled Date	31-JAN-13
					Sampled Time	-
					Sample ID	TRIP BLANK
Grouping	Analyte	Unit	Guide Limits #1	#2		
Volatile Organic Compounds	1,2-Dichloropropane	ug/g	0.05	-		<0.050
	cis-1,3-Dichloropropene	ug/g	-	-		<0.030
	trans-1,3-Dichloropropene	ug/g	-	-		<0.030
	Ethyl Benzene	ug/g	2	-		<0.050
	n-Hexane	ug/g	2.8	-		<0.050
	Methyl Ethyl Ketone	ug/g	16	-		<0.50
	Methyl Isobutyl Ketone	ug/g	1.7	-		<0.50
	MTBE	ug/g	0.75	-		<0.050
	Styrene	ug/g	0.7	-		<0.050
	1,1,1,2-Tetrachloroethane	ug/g	0.058	-		<0.050
	1,1,2,2-Tetrachloroethane	ug/g	0.05	-		<0.050
	Tetrachloroethylene	ug/g	0.28	-		<0.050
	Toluene	ug/g	2.3	-		<0.20
	1,1,1-Trichloroethane	ug/g	0.38	-		<0.050
	1,1,2-Trichloroethane	ug/g	0.05	-		<0.050
	Trichloroethylene	ug/g	0.061	-		<0.050
	Trichlorofluoromethane	ug/g	4	-		<0.050
	Vinyl chloride	ug/g	0.02	-		<0.020
	o-Xylene	ug/g	-	-		<0.020
	m+p-Xylenes	ug/g	-	-		<0.030
	Xylenes (Total)	ug/g	3.1	-		<0.050
	Surrogate: 4-Bromofluorobenzene	%	-	-		86.0

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SOIL - Ontario Regulation 153/04 - as amended by O.Reg. 511 (JULY, 2011)

					ALS ID	L1265236-1	L1265236-2	L1265236-3	L1265236-4	L1265236-5	L1265236-6	L1265236-7	L1265236-8	L1265236-9
					Sampled Date	29-JAN-13	29-JAN-13	29-JAN-13	29-JAN-13	31-JAN-13	31-JAN-13	31-JAN-13	31-JAN-13	31-JAN-13
					Sampled Time	12:10	13:15	14:10	15:15	09:45	11:10	11:10	12:15	14:05
					Sample ID	BH-MW7 SS3	BH6 SS3	BH-MW8 SS2	BH14 SS2	BH19 SS3	BH17 SS2	BH17 SS2 (D)	BH-MW9 SS2	BH12 SS2
Grouping	Analyte	Unit	Guide Limits #1	#2										
Volatile Organic Compounds	Surrogate: 1,4-Difluorobenzene	%	-	-		98.2	102.8	104.2	100.1	105.1	106.4	105.9	100.7	104.8
Hydrocarbons	F1 (C6-C10)	ug/g	55	-		<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
	F1-BTEX	ug/g	55	-		<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
	F2 (C10-C16)	ug/g	98	-		<10	<10	<10	<10	<10	<10	<10	<10	<10
	F3 (C16-C34)	ug/g	300	-		<50	<50	<50	<50	<50	<50	<50	<50	51
	F4 (C34-C50)	ug/g	2800	-		<50	<50	<50	<50	<50	<50	<50	<50	158
	F4G-SG (GHH-Silica)	mg/kg	2800	-										660
	Total Hydrocarbons (C6-C50)	ug/g	-	-		<50	<50	<50	<50	<50	<50	<50	<50	209
	Chrom. to baseline at nC50		-	-		YES	YES	YES	YES	YES	YES	YES	YES	NO
	Surrogate: 2-Bromobenzotrifluoride	%	-	-		87.6	89.7	93.3	87.9	83.7	86.8	86.6	89.3	80.9
	Surrogate: 3,4-Dichlorotoluene	%	-	-		101.5	105.8	94.9	85.6	97.0	97.5	82.4	85.1	83.5
	Surrogate: Octacosane	%	-	-		115.0	117.9	120.4	115.3	107.3	110.7	111.9	116.8	106.5
Trihalomethanes	Total THMs	nounits	-	-										

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