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Canadian Association for Laboratory Accreditation Inc.

PHASE II ENVIRONMENTAL SITE ASSESSMENT

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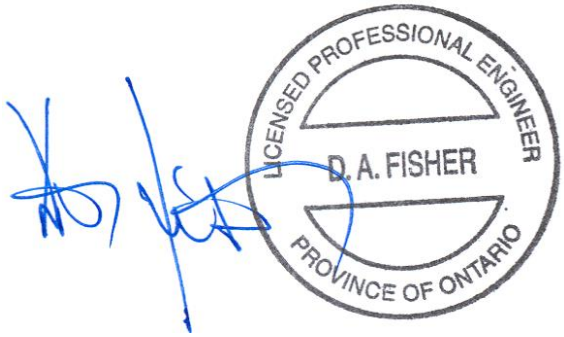

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GLOSSARY OF ACRONYMS

APEC:	Area of Potential Environmental Concern
asl:	Above Sea Level
AST:	Aboveground Storage Tank
BH:	Borehole
BOD:	Biological Oxygen Demand
bgs:	Below Ground Surface
BTEX:	Benzene, Toluene, Ethylbenzene and Xylenes
COD:	Chemical Oxygen Demand
CPC:	Contaminants of Potential Concern
CSA:	Canadian Standards Association
CTC:	Canadian Tire Corporation
DO:	Dissolved Oxygen
EC:	Electrical Conductivity
EMW:	Existing Monitoring Well
ESA:	Environmental Site Assessment
FIP:	Fire Insurance Plan
MOE:	Ministry of the Environment
MOECC:	Ministry of the Environment and Climate Change
MW:	Monitoring Well
OHSA:	Occupational Health and Safety Act
PAH:	Polycyclic Aromatic (Polyaromatic) Hydrocarbons
PCA:	Potentially Contaminating Activity
PCB:	Polychlorinated Biphenyls
pH:	potential of Hydrogen
PHC (F1-F4):	Petroleum Hydrocarbons (Fractions 1 to 4)
ppb:	Parts per Billion
ppm:	Parts per Million
RSC:	Record of Site Condition
SAR:	Sodium Absorption Ratio
UST:	Underground Storage Tank
VOC:	Volatile Organic Compounds

1. EXECUTIVE SUMMARY

Fisher Environmental Limited (Fisher) was commissioned by Dymon Group of Companies to carry out a Phase Two Environmental Site Assessment (Phase II ESA) of the property located at 1375 Clyde Avenue, Nepean, Ontario, hereinafter referred to as the 'Site'. The subsurface soil and groundwater investigation was carried out on October 24 and October 25, 2016.

The Site is located on the east side of Clyde Avenue approximately 65 m east from the intersection of Baseline Road and Clyde Avenue. The Site is bounded by commercial buildings to the north and south, vacant land to the east and Clyde Avenue to the west.

The southern portion of the Site is occupied by a one-storey commercial building. The remaining portions of the Site are asphalt paved parking/driving areas. There are access driveways from both Baseline Road and Clyde Avenue. The west side of the building and a portion of the north end of the Site are grass-covered.

Fisher reviewed existing reports for the Site that were prepared by Winchurch Environmental Inc. The reports indicate that the Site had historically been occupied by Canadian Tire Corporation (CTC) with a retail sales center (store #258), vehicle service center, gas bar and oil change facility (pit stop). The reports generally documented environmental site conditions with respect to the closure of CTC operations on site, and in the vicinity of a neighbouring Petro Canada gas station. The latest report, dated April 2001, prepared for Value Village Stores Inc., the current site occupants, concluded that "there are no outstanding environmental issues for the subject property with respect to MOE Guideline soil and groundwater quality criteria or selected designated substances (asbestos insulation)."

In the current investigation, fourteen (14) boreholes were advanced on the investigated property to depths of up to 4.0 m bgs., and in two (2) of them, monitoring wells were installed to facilitate groundwater level monitoring and sampling. Four (4) onsite existing monitoring wells were also sampled for analysis.

On the basis of the boreholes completed, the stratigraphy at the investigated areas of the Site generally consists of a layer of fill, extending up to 3.8 m bgs. The fill generally consisted of brown/grey sand or silty sand or clayey silt with gravel. Underlying the fill is weathered bedrock ranging from depths of 0.3m bgs to 4m bgs.

A total of eight (8) soil and six (6) groundwater samples were submitted to the laboratory for Metals, PHC (F1-F4) and/or VOC analysis.

For the purpose of this Phase II ESA, the results of analysis were compared to the: Table 3 (Full Depth Generic Site Condition Standards in a Non-Potable Groundwater Condition – Industrial/ Commercial/Community Property Use for soil samples and All Types of Property Use for groundwater samples, medium to fine textured soil) as contained in the MOECC Soil, Groundwater and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act, April 15, 2011.

Findings - Soil

The results of chemical analysis for all eight (8) soil samples were found to be in compliance with the applicable MOECC standards.

Findings - Groundwater

The results of chemical analysis for four (4) of the six (6) analyzed groundwater samples were found to exceed the applicable MOECC Standards. The following exceedances were found:

MW 5 – Former tank nest of CTC Gas Bar	Lead 58 ppb vs 25 ppb
MW 11 – South of neighbouring Petro Canada	Lead 139 ppb vs 25 ppb
EMW B – South of neighbouring Petro Canada	PHC (F1) 30,010 ppb vs 750 ppb PHC (F2) 215 ppb vs 150ppb
EMW C – West of former CTC Gas Bar	Lead 82 ppb vs 25 ppb Xylenes 13,056 ppb vs 4,200 ppb PHC (F1) 5,675,850 ppb vs 750 ppb PHC (F2) 17,630 ppb vs 150 ppb

Recommendations

Results of soil analysis also revealed indications of hydrocarbon impacts within BH10, and BH11, located to the south of the neighbouring Petro Canada. While the impacts were noted to be below the Table 3 standards, a PHC(F1) value of 52 ppm was identified in BH 11 (2.4m-2.7m), which approached the 65 ppm criterion (medium to fine textured soil).

Additionally, for purposes of current assessment the MOECC Table 3 standards have been applied, however it is noted that shallow bedrock (less than 2m of overburden soil) was encountered at several borehole locations. In instances where more than 1/3 of a property is deemed to contain less than 2m of soil to bedrock, the more sensitive Table 7 (shallow soil) standards would be applicable. Confirmation of depths to bedrock across the property as a whole could not be conducted in the current works, however it is noted that further exceedances of the MOECC standards would be realized relative to the Table 7 standards.

Based on the works conducted it is expected that the historic operations of CTC, and or the neighboring properties have resulted in impacts to the sites underlying soil and groundwater conditions. For purposes of fully determining the extents of the identified impacts it would be recommended that additional delineation investigations be undertaken. An evaluation of depths to bedrock across the site and any potential groundwater impacts within the underlying bedrock is also recommended.

2. INTRODUCTION

Fisher Environmental Limited (Fisher) was commissioned by Dymon Group of Companies to carry out a Phase Two Environmental Site Assessment (Phase II ESA) of the property located at 1375 Clyde Avenue, Nepean, Ontario, hereinafter referred to as the 'Site'. The subsurface soil and groundwater investigation was carried out on October 24, 2016.

3. PROPERTY DESCRIPTION

The Site is located on the east side of Clyde Avenue approximately 65 m east from the intersection of Baseline Road and Clyde Avenue. The Site is bounded by commercial buildings to the north and south, vacant land to the east and Clyde Avenue to the west.

The southern portion of the Site is occupied by a one-storey commercial building. The remaining portions of the Site are asphalt paved parking/driving areas. There are access driveways from both Baseline Road and Clyde Avenue. The west side of the building and a portion of the north end of the Site are grass-covered.

4. EXISTING REPORTS REVIEW

The following previous report was reviewed by Fisher and used as a source of background information:

TABLE 1: PREVIOUS REPORTS

Report Title:	Environmental Site Inspection, Former CTC Store #258, 1375 Clyde Avenue, Nepean, ON
Prepared For/By:	Value Village Stores Inc./ Winchurch Environmental Inc., Project W1111
Report Date:	April 2001
Findings and Conclusions	
This report reviewed existing reports for the Site and indicated that the Site had historically been occupied by Canadian Tire Corporation (CTC) with a retail sales center (store #258), vehicle service center, gas bar and oil change facility (pit stop). The reports generally documented environmental site conditions with respect to the closure of CTC operations on site, and in the vicinity of a neighbouring Petro Canada gas station. The report concluded that "there are no outstanding environmental issues for the subject property with respect to MOE Guideline soil and groundwater quality criteria or selected designated substances (asbestos insulation)."	

5. SCOPE OF WORK

The current Phase II ESA was conducted in accordance with the CAN/CSA-Z769-00 standards, as published in March 2000 and reaffirmed in 2013, by the CSA Group.

A Phase II ESA involves sampling and testing of materials considered, usually by the outcome of a Phase I ESA or other investigation, to be possible instances of environmental contamination. The project, as carried out, fulfills the scope of a 'Reconnaissance' type investigation in which conditions are previously unknown, and the aim is to establish whether any environmental contamination is present. Normal environmental assessment protocol reserves a detailed investigation for a subsequent phase if the reconnaissance survey indicates a requirement for further contaminant delineation.

The scope of this work generally consisted of the following:

- **Field Program -** Clearance of underground utilities and advancement of fourteen (14) boreholes to depths of up to 4.0 m or resistance, and installation of two (2) groundwater monitoring wells.
- **Laboratory Testing Program -** Recovery and analysis of selected soil and groundwater samples for Metals, PHC (F1-F4) and/or VOC.
- **Data Evaluation -** Comparison of results of chemical analyses with the applicable MOECC Standards.
- **Reporting -** Provision of final engineering report detailing findings of performed works, and any further recommendations.

As conducted, the present investigation may lack information or analytical work that are specific requirements for filing a Record of Site Condition (RSC) under Part XV.1 of the EPA and Amended O. Reg. 153/04, therefore, if a RSC is necessary, the property owner or its agent should undertake complementary investigations required under the RSC filing process.

6. FIELD PROGRAM

The subsurface soil and groundwater investigation (Phase II ESA) was carried out on October 24, 2016. The field work was conducted by Sean Fisher of Fisher Environmental Ltd. who directed drilling and sampling operations, and assured proper chain of custody procedures for the recovered soil and groundwater samples.

Fourteen (14) boreholes were advanced in the investigated property to depths of up to 4.0 m bgs., and in two (2) of them, monitoring wells were installed to facilitate groundwater level monitoring and sampling. Four (4) existing monitoring wells were also sampled for analysis.

6.1. Site Preparation

Site preparation included the location of public and private underground services by referring to the respective utilities: Hydro, Gas, Bell Canada, Public Works, water, sewer and light cables to avoid potential disruptions to the utilities during the drilling. Soil drilling was scheduled following receipt of clearance from all utilities for the given borehole locations.

6.2. Boreholes, Soil and Groundwater Sampling

The borehole locations were selected by an initial rationale as being the most likely locations of contamination. Refer to the attached Site Plan with Borehole and Monitoring Well Locations (Figure 1 in Appendix A) and Table 2 for description of borehole locations rationale.

Fourteen (14) boreholes were advanced in the investigated property. Borehole drilling was carried out using a CME-75. The boreholes were extended to depths of up to 4.0 m, at which point native material had been reached.

TABLE 2: BOREHOLE LOCATION RATIONALE

Borehole #	Borehole Location and Reason
BH1, BH2, BH3, BH4 and BH5(MW)	Evaluate sub-surface soil and groundwater condition in the vicinity of the former CTC gas station in relation to potential impacts that may have historically originated from on-Site or neighbouring operations.
BH6, BH7, BH8 and BH9	Evaluate sub-surface soil condition along the east boundary of the Site in relation to potential impacts that may have historically and/or currently originated from on-Site or neighbouring operations.
BH10, BH11(MW), BH12, BH13 and BH14	Evaluate sub-surface soil and groundwater condition in the vicinity of the Petro Canada gas station in relation to potential impacts that may have historically and/or currently originated from neighbouring operations.

Fisher Environmental retains OGS Inc. as our drilling contractor. OGS Inc. maintains licensure for drilling (Water Well Drillers, Environmental Protection Act, Well Contractor License No. 6946) as required by the MOECC, and conducted drilling and soil sampling works in accordance with CSA Standard Z769-00 (updated 2004) and MOE Guidance on Sampling and Analytical Methods for Use at Contaminated Sites in Ontario, and in compliance with Occupational Health and Safety regulations.

The intrusive subsurface investigation was conducted by means of solid auger boreholes advancement through the pavement, and a 50 mm diameter spoon sampler driven 600 mm into subsoil by a 65 kg hammer, falling 760 mm, collecting soil samples at a maximum of 0.76 m interval and at stratigraphic boundaries.

Soil and groundwater samples were collected and handled in accordance with generally accepted sampling and handling procedures used by the environmental consulting industry. For guidance, these practices rely on the 1996 MOE publication “Guidance on Sampling and Analytical Methods for Use at Contaminated Sites in Ontario”. To minimize the potential for cross contamination between soil samples, the split spoon sampler used to collect soil samples from the boreholes was brushed clean of soil and then washed in municipal water containing phosphate free detergent, rinsed in municipal water and then rinsed with distilled water. As well, new disposable latex gloves and stainless steel spatula were used during each sampling event to remove the soil cores from the sampler and to transfer the samples into plastic bags and/or glass jars.

Through each soil sample, the lithology and esthetic evidence of impacts (debris, staining and odours) were recorded as part of field QC procedures. Additionally each sample was screened in the field for headspace vapour concentration (combustible soil vapour and total organic vapour) using the 10.6 eV lamp Mini Rae 2000 PID calibrated to 100 ppm Isobutylene. The samples were kept out of direct sunlight during field storage and the headspace measurements were made after at least two hours had elapsed since the sample *was bagged and the sample had reached a minimum of 15ºC temperature*. The headspace monitoring was performed on the samples as a preliminary screening for PHC (F1-F4) or VOC analysis.

Selection of samples to be submitted for laboratory analysis is based on the headspace vapour concentration and/or physical evidence of odours/staining. If no odours/staining are noted in the soil samples, the samples with the highest field screening measurement (i.e. highest headspace vapour concentration) are selected for laboratory analysis. Soil samples from the boreholes

selected for potential chemical analysis of organic parameters were placed directly into pre-preserved laboratory supplied glass jars at the time of sampling, labeled and packed with minimal headspace. Samples were kept in coolers provided with ice/cold packs during field storage and transportation to Fisher Environmental Laboratories for PHC (F1-F4), and VOC analysis. Following sampling, monitoring wells were installed in two (2) boreholes, in accordance to O. Reg. 903.

6.3. Monitoring Wells Program

Two (2) monitoring wells were installed on the subject property. The wells were constructed of 52 mm ID diameter PVC pipes, which were pre-cleaned at the factory and delivered to the Site in sealed plastic bags. Further construction details of the monitoring wells are provided on the 'Log of Boreholes' attached in Appendix B.

Groundwater sampling in the installed monitoring wells was conducted using bailers, where single-use (disposable) bailers are slowly lowered into the water column, allowed to fill, and removed. Installed monitoring wells were sampled on October 25, 2016. Prior to sampling, three well volumes of groundwater were purged from each well to ensure the sampling of “fresh” formation water. Pre-preserved sample containers were used to collect groundwater samples which were labeled, stored in coolers provided with ice/cold packs during field storage and transportation to Fisher Environmental Laboratories for PHC (F1-F4), and VOC analysis.

Groundwater static level measurement was conducted prior to sampling. The groundwater static level measurements are summarized in Table 3 below.

TABLE 3: GROUNDWATER STATIC LEVEL MEASUREMENTS

Location	Well Depth, m bgs	Groundwater Static Level, m bgs
BH5(MW)	3.81	3.71
BH11(MW)	2.75	2.40

Based on surface topography of the site and surrounding areas, the groundwater flow direction is predicted to be southwest.

The localized shallow groundwater flow direction may be influenced by the presence of underground utilities, building foundation, and variations in vertical and horizontal stratigraphy, depth of wells’ screened intervals and/or well trauma.

6.4. Well Record Filed with the MOECC

The groundwater monitoring installations for this project are regulated under Regulation 903 of the Ontario Water Resources Act. The regulation reveals certain responsibilities on Fisher Environmental and the property owner. As a condition to Fisher Environmental providing groundwater monitoring installation services, our client has accepted responsibility for ensuring that the property owner accepts the following conditions:

1. The name and address of the property owner have been provided to Fisher Environmental.
2. Fisher Environmental has permission to submit well records to the Ministry and to the owner and to report multiple installations on a single well record.
3. Unless otherwise agreed to by Fisher Environmental, installations will be decommissioned by the owner within 180 days of installation. Note that installations greater than 180 days require more costly seals.
4. Well tags on installations must not be removed or destroyed.
5. The owner is responsible for future decommissioning of all installations in accordance with the regulation.
6. The owner is responsible for any expenses associated with controlling and decommissioning installations that have, or may have in the future, artesian conditions.
7. Maintenance of well installations in accordance with the regulation will be by the owner. This includes ensuring that seals remain adequate for preventing water or gas migration between formations and to/from surface, seals do not deteriorate and wells are decommissioned.
8. The client and owner accept responsibility for the inherent risk associated with industry standard installations, and acknowledge that conditions and materials do not remain constant with time nor that they can be completely quantified or predicted in advance.

6.5. Site Topography and Geology

An elevation map of the area was obtained from Google Earth. The map for the Site indicates that the ground surface elevation in the vicinity of the property ranges from approximately 98 m asl at the north boundary, 96 m asl at the south boundary and 95 m asl at the west boundary. Based on surface topography, the local groundwater flow direction is predicted to be southwest.

According to the Ontario Geological Survey (2003) Surficial Geology of Southern Ontario, the subject Site is situated in an area characterized as till: clay to silt-textured till (derived from glaciolacustrine deposits or shale). According to the Bedrock Geology of Ontario, Southern Sheet, 1991 - Ministry of Northern Development and Mines, map 2544, the subject Site is situated in an bedrock area characterized as Lower Ordovician – dolostone, sandstone.

On the basis of the boreholes completed, the stratigraphy at the investigated areas of the Site generally consists of a layer of fill, extending up to 3.8 m bgs. The fill generally consisted of brown/grey sand or silty sand or clayey silt with gravel. Underlying the fill is weathered bedrock ranging from depths of 0.3m bgs to 4m bgs. A description of the subsurface conditions encountered at the boreholes locations is presented in Appendix B - Log of Boreholes.

6.6. Head Space Combustible Vapours

A 10.6 eV lamp MiniRae 2000 PID calibrated to 100 ppm Isobutylene was used to measure combustible vapours in the soil samples. Vapour concentrations were read during the soil sampling and all soil samples had concentrations of 50 ppm or less.

6.7. Visual Olfactory Soil / Groundwater Quality

During the borehole-drilling program, the following visual/olfactory observations were made:

- Fill materials were encountered in all boreholes at depths of up to 3.8 m bgs.
- No odours were noted in any of the collected soil samples.
- Free product or sheen was observed on the surface of all groundwater collected.

6.8. Selection of Analytical Samples and Parameters

Selection of samples for environmental analysis was based on appearance, headspace vapour concentrations, odour, expectations of Site conditions, and proximity of potential contaminant sources.

Eight (8) soil and six (6) groundwater samples were submitted to the laboratory for Metals, PHC (F1-F4) and/or VOC analysis.

TABLE 4: RATIONALE FOR ANALYTICAL PARAMETER

Parameter	Description
Metals	Various metallic elements can cause adverse environmental effects at relatively low concentrations. Such metals are associated with industrial activities and/or the use of fill materials of unknown quality, both historic and current, and it is common practice to include Metals analysis in subsurface soil investigations. Eight (8) soil and six (6) groundwater samples collected at the Site were submitted for Metals analysis.
PHC(F1-F4)	PHC are components of gasoline, diesel and other petroleum products for which soil quality guidelines have been developed. These compounds are widely utilized and often included in the evaluation of a Site's overall subsurface condition. Eight (8) soil and four (4) groundwater samples collected at the Site were submitted for PHC (F1-F4) analysis.
VOC	VOC are any volatile compound of carbon, excluding methane, carbon monoxide, carbon dioxide, carbonic acid, metallic carbides or carbonates, ammonium carbonate, and exempt compounds. VOC are included in gasoline, diesel, crude oil, lubricant, waste oil, adhesive, paint, stain, solvents, resin, monomer, and/or any other material containing VOC. Note that VOC analysis includes Benzene, Toluene, Ethylbenzene, Xylene (BTEX) parameters. Eight (8) soil and six (6) groundwater samples collected at the Site were submitted for VOC analysis.

7. LABORATORY PROGRAM

7.1. General

Recovered soil and groundwater samples were submitted to Fisher Environmental Laboratories for analysis. As CALA (Canadian Association for Laboratory Accreditation) registered analytical facility, QA/QC (Quality Assurance/Quality Control) procedures were maintained consistent with CALA requirements and standard laboratory practices. The laboratories ensured that analytical sub-samples were, by appearance, representative of the whole sample as collected in the field.

7.2. Data Evaluation

7.2.1. Soil and Groundwater Standards

The MOE presents Soil and Groundwater Standards, under the Publication "Soil, Groundwater and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act" April 15, 2011. These standards present soil and groundwater criteria, which have been developed with

regard to toxicological data. They are levels at and below which no environmental or safety concerns, or adverse conditions, are anticipated for environments or persons with average sensitivity.

The subject property has been used for commercial purposes, and it is our understanding that the property will maintain its current commercial land use.

With regards to the potability status of the groundwater, it is understood that the surrounding area relies on municipally supplied water as a source of drinking water. For the purpose of assessing the soil and groundwater quality at the subject site in accordance to the requirements for site assessment, under Part XV.1 of the EPA and Ontario Regulation 153/04, it is our intention to utilize a non-potable groundwater condition standard.

As specified by O. Reg. 153/04, "coarse textured soil is defined as material having more than 50 percent (by mass) of particles that are 75 μm or larger in mean diameter. Materials having more than 50 percent (by mass) of particles that are smaller than 75 μm in mean diameter are medium and fine textured soils." “When at least 1/3 of the soil at the property, measured by volume, consists of coarse textured soil, the standard for coarse textured soil shall apply. In any other case, the standard for medium and fine textured soil may be applied”. Based on previous site investigations and soil stratigraphy encountered within the current works, the native site soils are primarily comprised of medium to fine textured silts and clays, such that the medium to fine site classification would apply.

For the purpose of this Phase II ESA, the results of analysis were compared to the: Table 3 (Full Depth Generic Site Condition Standards in a Non-Potable Groundwater Condition – Industrial/ Commercial/Community Property Use for soil samples and All Types of Property Use for groundwater samples, medium to fine textured soil) as contained in the MOECC Soil, Groundwater and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act, April 15, 2011. However it is noted that shallow bedrock (less than 2m of overburden soil) was encountered at several borehole locations. In instances where more than 1/3 of a property is deemed to contain less than 2m of soil to bedrock, the more sensitive Table 7 (shallow soil) standards would be applicable. Confirmation of depths to bedrock across the property as a whole could not be conducted in the current works and further site investigation would need to be conducted to confirm the applicability of a Table 7 standard.

The criteria values are presented with the results of analysis in the last column of the Certificates of Analysis (Appendix C).

7.2.2. Soil and Groundwater Quality

Eight (8) soil and six (6) groundwater samples were submitted to the laboratory for Metals, PHC (F1-F4) and/or VOC analysis. Copies of the Laboratory Certificates of Analysis are provided in Appendix C. Results of the chemical analyses are summarized in Table 5.

TABLE 5: EXCEEDANCES OF APPLICABLE SITE CONDITION STANDARDS

Borehole	Sample Depth	Sample #	Parameters Analyzed	Exceedances of April 15, 2011 Table 3 MOECC Standards, Industrial/Commercial/ Community Property Use (I/C/C) Non-Potable Groundwater condition
BH1	7.55-8.20 m	16-5090-1	Metals PHC (F1-F4) VOC	No Exceedances No Exceedances No Exceedances
BH5(MW)	0.00-0.60 m	16-5090-2	Metals PHC (F1-F4) VOC	No Exceedances No Exceedances No Exceedances
BH6	7.55-8.20 m	16-5090-3	Metals PHC (F1-F4) VOC	No Exceedances No Exceedances No Exceedances
BH9	6.05-6.65 m	16-5090-4	Metals PHC (F1-F4) VOC	No Exceedances No Exceedances No Exceedances
BH10	6.05-6.65 m	16-5090-5	Metals PHC (F1-F4) VOC	No Exceedances No Exceedances No Exceedances
BH11	4.55-5.15 m	16-5090-6	Metals PHC (F1-F4) VOC	No Exceedances No Exceedances No Exceedances
BH13	4.55-5.15 m	16-5090-7	Metals PHC (F1-F4) VOC	No Exceedances No Exceedances No Exceedances
BH14	2.25-2.85 m	16-5090-8	Metals PHC (F1-F4) VOC	No Exceedances No Exceedances No Exceedances
EMW-A	Groundwater	16-5090-9	Metals VOC	No Exceedances No Exceedances

Borehole	Sample Depth	Sample #	Parameters Analyzed	Exceedances of April 15, 2011 Table 3 MOECC Standards, Industrial/Commercial/ Community Property Use (I/C/C) Non-Potable Groundwater condition
EMW-B	Groundwater	16-5090-10	Metals PHC (F1-F4) VOC	No Exceedances **F1: 30,010 ppb vs. 750 ppb** **F2: 215 ppb vs. 150 ppb** No Exceedances
EMW-C	Groundwater	16-5090-11	Metals PHC (F1-F4) VOC	**Lead: 82 ppb vs. 25 ppb** **F1: 5,675,850 ppb vs. 750 ppb** **F2: 17,630 ppb vs. 150 ppb** **Xylenes: 13,056 ppb vs. 4,200 ppb**
EMW-D	Groundwater	16-5090-12	Metals PHC (F1-F4) VOC	No Exceedances No Exceedances No Exceedances
BH5(MW)	Groundwater	16-5090-13	Metals PHC (F1-F4) VOC	**Lead: 58 ppb vs. 25 ppb** No Exceedances No Exceedances
BH11(MW)	Groundwater	16-5090-14	Metals VOC	**Lead: 139 ppb vs. 25 ppb** No Exceedances

NOTES: PHC (F1-F4)*: Petroleum Hydrocarbons fractions (F1-F4)
F1 (C6-C10) Gasoline less BTEX
F2 (C10-C16) Diesel
F3 (C16-C34) Diesel
F4 (C34-C50) Heavy Oil
VOC: Volatile Organic Compounds
Bold: Exceeds the MOE Standards

7.2.3. Metals

Eight (8) soil and six (6) groundwater samples were submitted for Metals analysis.

Soil

The results of chemical analysis for Metals parameters in the submitted soil samples were found to be in compliance with the applicable MOECC Standards.

Groundwater

The results of chemical analysis for Metals parameters in three (3) of the six (6) submitted groundwater samples were found to exceed the applicable MOECC Standards. The following exceedances were found:

- EMW-C - Lab. # 16-5090-11 - Lead: 82 ppb vs. 25 ppb.

- BH5 (MW) - Lab. # 16-5090-13 - Lead: 58 ppb vs. 25 ppb.
- BH11 (MW) - Lab. # 16-5090-14 - Lead: 139 ppb vs. 25 ppb.

7.2.4. Petroleum Hydrocarbons (PHC)

Eight (8) soil and four (4) groundwater samples were submitted for PHC (F1-F4) analysis.

Soil

The results of chemical analysis for PHC (F1-F4) parameters in the submitted soil samples were found to be in compliance with the applicable MOECC Standards.

Groundwater

The results of chemical analysis for PHC (F1-F4) parameters in two (2) of the four (4) submitted groundwater samples were found to exceed the applicable MOECC Standards. The following exceedances were found:

- EMW-B - Lab. # 16-5090-10 - PHC: F1 – 30,010 ppb vs. 750 ppb.
  PHC: F2 - 215 ppb vs. 150 ppb.
- EMW-C - Lab. # 16-5090-11 - PHC: F1 – 5,675,850 ppb vs. 750 ppb.
  PHC: F2 – 17,630 ppb vs. 150 ppb.

7.2.5. Volatile Organic Compounds (VOC)

Eight (8) soil and six (6) groundwater samples were submitted for VOC analysis.

Soil

The results of chemical analysis for VOC parameters in the submitted soil samples were found to be in compliance with the applicable MOECC Standards.

Groundwater

The results of chemical analysis for VOC parameters in one (1) of the six (6) submitted groundwater samples were found to exceed the applicable MOECC Standards. The following exceedances were found:

- EMW-C - Lab. # 16-5090-11 - Xylenes: 13,056 ppb vs. 4,200 ppb.

7.3. Quality Assurance/Quality Control

A chain of custody form was filled out for all samples prior to submitting to the laboratory. The chain of custody documented movement from selection of the sample to receipt at the laboratory and provided sample identification, requested analysis, and condition of samples upon arrival at the laboratory.

The laboratory checks randomly selected samples for Quality Assurance. Generally, one sample for every twenty samples submitted is selected for Quality Assurance checks. For each parameter, there is an acceptable upper and lower limit for the measured concentration of the parameter. Measured concentrations of analyzed samples must fall within the upper and lower acceptable limits in order for the sample to be valid. If the result exceeds the upper or lower acceptable limits, the sample must be re-analyzed.

Based on Quality Assurance Reports provided by 'Fisher', measured concentrations in soil samples were within the acceptable limits for quality control. Copies of the QA/QC Reports for Metals, PHC (F1-F4) and/or VOC in soil and groundwater are included with the Certificates of Analysis in Appendix C.

8. SUMMARY AND CONCLUSIONS

- Fisher Environmental carried out a Phase II Environmental Site Assessment of the property located at 1375 Clyde Avenue, Nepean, ON. The subsurface soil and groundwater investigation was carried out on October 24, 2016.

- Fourteen (14) boreholes were advanced in the investigated property to depths of up to 4.0 m bgs, and in two (2) of them, monitoring wells were installed to facilitate groundwater level monitoring and sampling.

- On the basis of the boreholes completed, the stratigraphy at the investigated areas of the Site generally consists of a layer of fill, extending up to 3.8 m bgs. The fill generally consisted of brown/grey sand or silty sand or clayey silt with gravel. Underlying the fill is weathered bedrock ranging from depths of 0.3m to 2.2m bgs.

- Eight (8) soil and six (6) groundwater samples were submitted to the laboratory for Metals, PHC (F1-F4) and/or VOC analysis.

- The results of chemical analysis for all eight (8) analyzed soil samples were found to be in compliance the applicable MOECC standards.

- The results of chemical analysis for four (4) of the six (6) analyzed groundwater samples were found to exceed the applicable MOECC Standards. The following exceedances were found:

➢ MW 5 – Former tank nest of CTC Gas Bar	Lead 58 ppb vs 25 ppb
➢ MW 11 – South of Petro Canada	Lead 139 ppb vs 25 ppb
➢ EMW B – South of Petro Canada	PHC (F1) 30,010 ppb vs 750 ppb PHC (F2) 215 ppb vs 150ppb
➢ EMW C – West of former CTC Gas Bar	Lead 82 ppb vs 25 ppb Xylenes 13,056 ppb vs 4,200 ppb PHC (F1) 5,675,850 ppb vs 750 ppb PHC (F2) 17,630 ppb vs 150 ppb

Results of soil analysis also revealed indications of hydrocarbon impacts within BH10, and BH11, located to the south of the neighbouring Petro Canada. While the impacts were noted to be below the Table 3 standards, a PHC(F1) value of 52 ppm was identified in BH 11 (2.4m-2.7m), which approached the 65 ppm criterion (medium to fine textured soil).

Additionally, for purposes of current assessment the MOECC Table 3 standards have been applied, however it is noted that shallow bedrock (less than 2m of overburden soil) was encountered at several borehole locations. In instances where more than 1/3 of a property is deemed to contain less than 2m of soil to bedrock, the more sensitive Table 7 (shallow soil) standards would be applicable. Confirmation of depths to bedrock across the property as a whole could not be conducted in the current works, however it is noted that further exceedances of the MOECC standards would be realized relative to the Table 7 standards.

Based on the works conducted it is expected that the historic operations of CTC, and or the neighboring properties have resulted in impacts to the sites underlying soil and groundwater conditions. For purposes of fully determining the extents of the identified impacts it would be recommended that additional delineation investigations be undertaken. An evaluation of depths to bedrock across the site and any potential groundwater impacts within the underlying bedrock is also recommended.

9. LIMITATIONS

This report was prepared for use by Dymon Group of Companies, and is based on the work as described in the Scope of Work. The conclusions presented in this report reflect existing Site conditions within the scope of this assignment.

No investigation method can completely eliminate the possibility of obtaining partially imprecise or incomplete information. It can only reduce the possibility to an acceptable level. Professional judgment was exercised in gathering and analyzing the information obtained and the formulation of the conclusions and recommendations. Like all professional persons rendering advice, we do not act as absolute insurers of the conclusions reached, but commit ourselves to care and competence in reaching those conclusions. No warranty, whether expressed or implied, is included or intended in this report.

The scope of services performed may not be appropriate for the purposes of other users. This report should not be used in contexts other than pertaining to the evaluation of the property at the current time. Written authorization must be obtained from Fisher Environmental Ltd. prior to use by any other parties, or any future use of this document or its findings, conclusions, or recommendations represented herein. Any use which a third party makes of this report, or any reliance on or decisions made on the basis of it, are the responsibility of the third parties. Fisher Environmental Limited accepts no responsibility for damages, if any, suffered by any third party as a result of decisions made or actions based on this report.

Fisher Environmental notes that the work conducted at the Site may not fully satisfy the MOECC requirements for the purpose of filling a Record of Site Condition (RSC). Should a RSC be required, then additional investigations should be conducted at the Site.

10. QUALIFICATIONS OF ASSESSOR

The field works and report preparation for this assessment were conducted by Mr. Sean Fisher, M.Sc. Eng. Mr. Fisher has been trained and has 20 years' experience in conducting Phase II ESAs in accordance with the CSA Standard. Mr. Fisher has conducted more than 200 Phase II ESAs for commercial/industrial/residential clients and government agencies and is routinely engaged in this field.

As a Qualified Person who conducts and supervises Phase II ESAs, Mr. David Fisher, president of Fisher Environmental Ltd., is a senior Managerial and Environmental Engineering Specialist with over 30 years of progressive, innovative experience in the Petrochemical and Environmental Engineering Industry. Mr. Fisher is responsible for the development and management of a progressive environmental consulting engineering company specializing in environmental site assessments and remediation, geotechnical and hydrogeological investigations, tank removals, PCB waste treatment, land reclamation, recycling, hazardous waste disposal, and associated laboratory analytical practices.

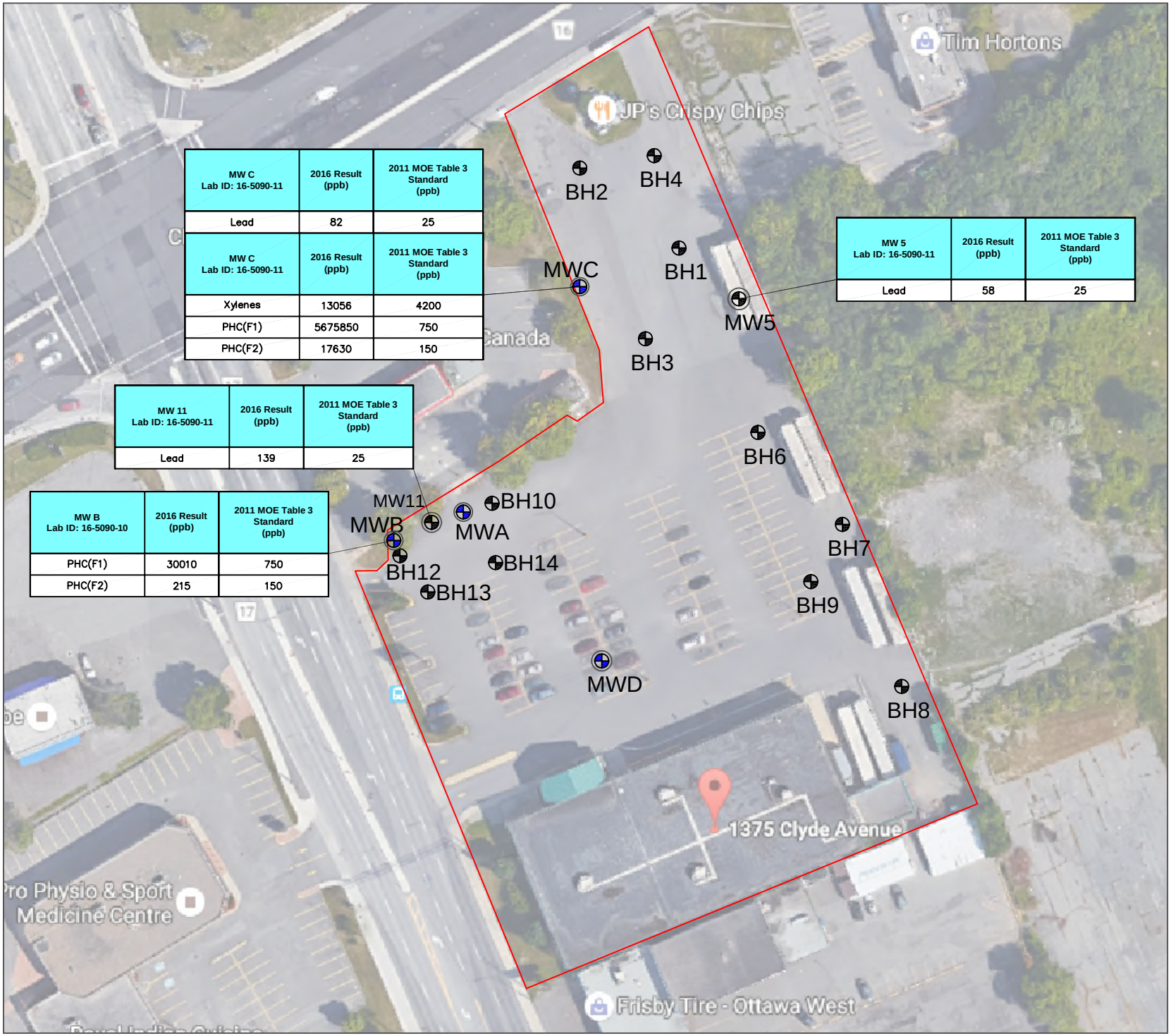
Fisher Environmental Ltd. has been established as a team of engineers and consultants since 1989, and continues to develop a strong, wide client base. The company is staffed with personnel holding graduate or postgraduate qualifications at the Markham headquarters, as well as specialist associates offering a broad range of expertise and knowledge in environmental consulting. With a background in the petroleum industry, extensive experience has been gained in the prevention and cleanup of contamination in air, water and soil.

11. REFERENCES

The Phase II ESA was conducted in accordance with the applicable Regulations, Guidelines, Policies, Standards, Protocols and Objectives administrated by the Ontario Ministry of the Environment. Specific reference is made to the following:

- CAN/CSA Standard Z769-00 (updated 2004, reaffirmed 2012), Phase II Environmental Site Assessment, A National Standard of Canada;
- "Guidance on Sampling and Analytical Methods for Use at Contaminated Sites in Ontario" Ministry of the Environment of Ontario, December 1996;
- Environmental Protection Act, RSO 1990, Charter E. 19, as amended, September 2004;
- Soil, Ground Water and Sediment Standards for Use under Part XV.1 of the Environmental Protection Act, dated April 15, 2011;
- The Ontario Water Resources Act – R.R.O. 1990, Regulation 903 – Amended to O .Reg. 128.03, August 2003;
- The Ontario Geological Survey. 2003. Surficial Geology of Southern Ontario;
- Bedrock Geology of Ontario, Southern Sheet, 1991 - Ministry of Northern Development and Mines, map 2544;
- Environmental Site Inspection, Former CTC Store #258, 1375 Clyde Avenue, Nepean, ON, dated April 2001, prepared for Value Village Stores Inc., prepared by Winchurch Environmental Inc., Project W1111;
- Google Earth.

APPENDIX A – SITE PLAN WITH BOREHOLE AND MONITORING WELL LOCATIONS



MW C Lab ID: 16-5090-11	2016 Result (ppb)	2011 MOE Table 3 Standard (ppb)
Lead	82	25

MW C Lab ID: 16-5090-11	2016 Result (ppb)	2011 MOE Table 3 Standard (ppb)
Xylenes	13056	4200
PHC(F1)	5675850	750
PHC(F2)	17630	150

MW 5 Lab ID: 16-5090-11	2016 Result (ppb)	2011 MOE Table 3 Standard (ppb)
Lead	58	25

MW 11 Lab ID: 16-5090-11	2016 Result (ppb)	2011 MOE Table 3 Standard (ppb)
Lead	139	25

MW B Lab ID: 16-5090-10	2016 Result (ppb)	2011 MOE Table 3 Standard (ppb)
PHC(F1)	30010	750
PHC(F2)	215	150

Fisher Environmental Ltd.

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Markham, Ontario
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Tel: 905 475-7755
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KEY PLAN

N

LEGEND:

- Monitoring Well
- Borehole
- Existing Monitoring Well

PROJECT NAME AND ADDRESS

Proposed Townhouse Development

1375 Clyde Avenue, NEPEAN, ON

FIGURE 1:

Site Plan with Borehole and Monitoring Well Locations

PROJECT NO.	SHEET NO.
FE-P 16-7972	1
DATE: 24 OCTOBER 2016	
SCALE: NTS	

APPENDIX B – LOG OF BOREHOLES

FISHER ENVIRONMENTAL LTD.

LOG OF BOREHOLE NO. BH 1 SHEET. 1 of 14

PROJECT NO.: FE-P 16-7971

PROJECT NAME: Proposed Townhouse Development

LOCATION: 1375 Clyde Avenue, Nepean, Ontario

DRILLING METHOD: Hollow Stem

DRILLING DATE: 24 October 2016

DEPTH (feet)	DEPTH (metres)	SOIL PROFILE: DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	SAMPLES: NUMBER	TYPE	"N" VALUE	PENETRATION TESTING (SPT) ▲ 20 40 60 80 / SHEAR STRENGTH (Kpa) ✚ 40 80 120 160	VAPOUR READING (ppm) □ 20 40 60 80 / MOISTURE CONTENT (%) ○ 10 20 30 40	PIEZOMETER OR WELL CONSTRUCTION
		GROUND SURFACE (m asl)		102.5						
0	0	100 mm Asphalt FILL: Sand and gravel. Brown, Moist.								
3	1	FILL: Gravel and sand Dark grey, Moist. Compact.			1	SS	22			
6	2				2	SS	10			
7		Auger refusal @ 7' on suspected bedrock.		100.4						
10	3									
13	4									
16	5									

Groundwater Depth (m): On Completion: DRY

LOGGED: HU

CHECKED: FF

FISHER ENVIRONMENTAL LTD.

LOG OF BOREHOLE NO. BH 2 SHEET. 2 of 14

PROJECT NO.: FE-P 16-7971

PROJECT NAME: Proposed Townhouse Development

LOCATION: 1375 Clyde Avenue, Nepean, Ontario

DRILLING METHOD: Hollow Stem

DRILLING DATE: 24 October 2016

DEPTH (feet)	DEPTH (metres)	SOIL PROFILE: DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	SAMPLES: NUMBER	SAMPLES: TYPE	SAMPLES: "N" VALUE	PENETRATION TESTING (SPT) ▲ 20 40 60 80 / SHEAR STRENGTH (Kpa) ✚ 40 80 120 160	VAPOUR READING (ppm) □ 20 40 60 80 / MOISTURE CONTENT (%) ○ 10 20 30 40	PIEZOMETER OR WELL CONSTRUCTION
		GROUND SURFACE (m asl)		102.45						
0	0	100 mm Asphalt FILL: Sand and gravel, trace clay. Black to dark brown, Moist.								
2				101.85						
		Auger refusal @ 2' on suspected bedrock.								
16	5									

Groundwater Depth (m): On Completion: DRY

LOGGED: HU

CHECKED: FF

FISHER ENVIRONMENTAL LTD.

LOG OF BOREHOLE NO. BH 3 SHEET. 3 of 14

PROJECT NO.: FE-P 16-7971

PROJECT NAME: Proposed Townhouse Development

LOCATION: 1375 Clyde Avenue, Nepean, Ontario

DRILLING METHOD: Hollow Stem

DRILLING DATE: 24 October 2016

DEPTH (feet)	DEPTH (metres)	SOIL PROFILE: DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	SAMPLES: NUMBER	SAMPLES: TYPE	SAMPLES: "N" VALUE	PENETRATION TESTING (SPT) ▲ 20 40 60 80 / SHEAR STRENGTH (Kpa) ✚ 40 80 120 160	VAPOUR READING (ppm) □ 20 40 60 80 / MOISTURE CONTENT (%) ○ 10 20 30 40	PIEZOMETER OR WELL CONSTRUCTION
		GROUND SURFACE (m asl)		102.08						
0	0	75 mm Asphalt FILL: Sand and gravel. Dark brown, Moist.								
1				101.63						
2		Auger refusal @ 1'4" on suspected bedrock.								
3	1									
4										
5										
6	2									
7										
8										
9										
10	3									
11										
12										
13	4									
14										
15										
16	5									

Groundwater Depth (m): On Completion: DRY

LOGGED: HU

CHECKED: FF

FISHER ENVIRONMENTAL LTD.

LOG OF BOREHOLE NO. BH 4 SHEET. 5 of 14

PROJECT NO.: FE-P 16-7971

PROJECT NAME: Proposed Townhouse Development

LOCATION: 1375 Clyde Avenue, Nepean, Ontario

DRILLING METHOD: Hollow Stem

DRILLING DATE: 24 October 2016

DEPTH (feet)	DEPTH (metres)	SOIL PROFILE: DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	SAMPLES: NUMBER	SAMPLES: TYPE	SAMPLES: "N" VALUE	PENETRATION TESTING (SPT) ▲ 20 40 60 80 / SHEAR STRENGTH (Kpa) ✚ 40 80 120 160	VAPOUR READING (ppm) □ 20 40 60 80 / MOISTURE CONTENT (%) ○ 10 20 30 40	PIEZOMETER OR WELL CONSTRUCTION
		GROUND SURFACE (m asl)		102.53						
0	0	100 mm Asphalt								
1		FILL: Silty sand, trace gravel. Brown, Moist.		102.23						
2		Auger refusal @ 1' on suspected bedrock.								
3	1									
4										
5										
6	2									
7										
8										
9										
10	3									
11										
12										
13	4									
14										
15										
16	5									

Groundwater Depth (m): On Completion: DRY

LOGGED: HU

CHECKED: FF

FISHER ENVIRONMENTAL LTD.

LOG OF BOREHOLE NO. BH 5 SHEET. 5 of 14

PROJECT NO.: FE-P 16-7971

PROJECT NAME: Proposed Townhouse Development

LOCATION: 1375 Clyde Avenue, Nepean, Ontario

DRILLING METHOD: Hollow Stem

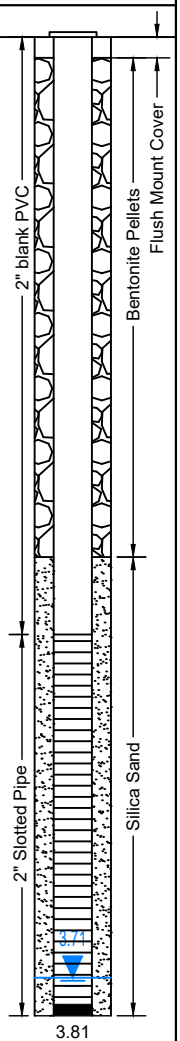
DRILLING DATE: 24 October 2016

DEPTH (feet)	DEPTH (metres)	DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	SAMPLES NUMBER	SAMPLES TYPE	SAMPLES "N" VALUE
0	0	GROUND SURFACE (m asl)		102.32			
		100 mm Asphalt FILL: Sand and gravel			1	SS	26
					2	SS	66
					3	SS	27
		Wet @10'.			4	SS	10
		Spoon refusal @ 13' on suspected bedrock.		98.32	5	SS	100+

PENETRATION TESTING (SPT) ▲ 20 40 60 80
SHEAR STRENGTH (Kpa) ✚ 40 80 120 160

VAPOUR READING (ppm) □ 20 40 60 80
MOISTURE CONTENT (%) ○ 10 20 30 40

PIEZOMETER OR WELL CONSTRUCTION



Groundwater Depth (m): on October 25, 2016: 3.21m.

LOGGED: HU

CHECKED: FF

FISHER ENVIRONMENTAL LTD.

LOG OF BOREHOLE NO. BH 6 SHEET. 6 of 14

PROJECT NO.: FE-P 16-7971

PROJECT NAME: Proposed Townhouse Development

LOCATION: 1375 Clyde Avenue, Nepean, Ontario

DRILLING METHOD: Hollow Stem

DRILLING DATE: 24 October 2016

DEPTH (feet)	DEPTH (metres)	SOIL PROFILE: DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	SAMPLES: NUMBER	SAMPLES: TYPE	SAMPLES: "N" VALUE	PENETRATION TESTING (SPT) ▲ 20 40 60 80 / SHEAR STRENGTH (Kpa) ✚ 40 80 120 160	VAPOUR READING (ppm) □ 20 40 60 80 / MOISTURE CONTENT (%) ○ 10 20 30 40	PIEZOMETER OR WELL CONSTRUCTION
		GROUND SURFACE (m asl)		101.16						
0	0	100 mm Asphalt FILL: Sand, some to trace gravel Brown, Moist, Compact.								
1										
2										
3	1				1	SS	29			
4				99.96						
5		Auger refusal @ 4' on suspected bedrock.								
6	2									
7										
8										
9										
10	3									
11										
12										
13	4									
14										
15										
16	5									

Groundwater Depth (m): On Completion: DRY

LOGGED: HU

CHECKED: FF

FISHER ENVIRONMENTAL LTD.

LOG OF BOREHOLE NO. BH 7 SHEET. 7 of 14

PROJECT NO.: FE-P 16-7971

PROJECT NAME: Proposed Townhouse Development

LOCATION: 1375 Clyde Avenue, Nepean, Ontario

DRILLING METHOD: Hollow Stem

DRILLING DATE: 24 October 2016

DEPTH (feet)	DEPTH (metres)	SOIL PROFILE: DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	SAMPLES: NUMBER	TYPE	"N" VALUE	PENETRATION TESTING (SPT) ▲ 20 40 60 80 / SHEAR STRENGTH (Kpa) ✚ 40 80 120 160	VAPOUR READING (ppm) □ 20 40 60 80 / MOISTURE CONTENT (%) ○ 10 20 30 40	PIEZOMETER OR WELL CONSTRUCTION
		GROUND SURFACE (m asl)		100.49						
0	0	100 mm Asphalt FILL: Gravel and sand, trace clay rootlets. light brown, Dry, Compact.			1	SS	25			
3	1				2	SS	+100			
4		Spoon refusal @ 3'8" on suspected bedrock.		99.35						
5	2									
10	3									
13	4									
16	5									

Groundwater Depth (m): On Completion: DRY

LOGGED: HU

CHECKED: FF

FISHER ENVIRONMENTAL LTD.

LOG OF BOREHOLE NO. BH 8 SHEET. 8 of 14

PROJECT NO.: FE-P 16-7971

PROJECT NAME: Proposed Townhouse Development

LOCATION: 1375 Clyde Avenue, Nepean, Ontario

DRILLING METHOD: Hollow Stem

DRILLING DATE: 24 October 2016

DEPTH (feet)	DEPTH (metres)	SOIL PROFILE: DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	SAMPLES: NUMBER	TYPE	"N" VALUE	PENETRATION TESTING (SPT) ▲ 20 40 60 80 / SHEAR STRENGTH (Kpa) ✚ 40 80 120 160	VAPOUR READING (ppm) □ 20 40 60 80 / MOISTURE CONTENT (%) ○ 10 20 30 40	PIEZOMETER OR WELL CONSTRUCTION
		GROUND SURFACE (m asl)		99.92						
0	0	100 mm Asphalt FILL: Sand and gravel, some clay, trace gravel, brick, trace organic inclusions. Dark brown to brown, Moist, Compact.			1	SS	22			
2					2	SS	+100			
3	1	Spoon refusal @ 3' on suspected bedrock.		99.01						
4										
5										
6	2									
7										
8										
9										
10	3									
11										
12										
13	4									
14										
15										
16	5									

Groundwater Depth (m): On Completion: DRY

LOGGED: HU

CHECKED: FF

FISHER ENVIRONMENTAL LTD.

LOG OF BOREHOLE NO. BH 9 SHEET. 9 of 14

PROJECT NO.: FE-P 16-7971

PROJECT NAME: Proposed Townhouse Development

LOCATION: 1375 Clyde Avenue, Nepean, Ontario

DRILLING METHOD: Hollow Stem

DRILLING DATE: 24 October 2016

DEPTH (feet)	DEPTH (metres)	SOIL PROFILE: DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	SAMPLES: NUMBER	SAMPLES: TYPE	SAMPLES: "N" VALUE	PENETRATION TESTING (SPT) ▲ 20 40 60 80 / SHEAR STRENGTH (Kpa) ✚ 40 80 120 160	VAPOUR READING (ppm) □ 20 40 60 80 / MOISTURE CONTENT (%) ○ 10 20 30 40	PIEZOMETER OR WELL CONSTRUCTION
0	0	GROUND SURFACE (m asl)		100.06						
		100 mm Asphalt FILL: Sand and gravel Dark brown, Moist.								
3	1	Sandy silt, trace gravel, clay rootlets, organic inclusions.			1	SS	23			
4				98.80						
		Auger refusal @ 4'2" on suspected bedrock.								
16	5									

Groundwater Depth (m): On Completion: DRY

LOGGED: HU

CHECKED: FF

FISHER ENVIRONMENTAL LTD.

LOG OF BOREHOLE NO. BH 10 SHEET. 10 of 14

PROJECT NO.: FE-P 16-7971

PROJECT NAME: Proposed Townhouse Development

LOCATION: 1375 Clyde Avenue, Nepean, Ontario

DRILLING METHOD: Hollow Stem

DRILLING DATE: 24 October 2016

DEPTH (feet)	DEPTH (metres)	SOIL PROFILE: DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	SAMPLES: NUMBER	TYPE	"N" VALUE	PENETRATION TESTING (SPT) ▲ 20 40 60 80 / SHEAR STRENGTH (Kpa) ✚ 40 80 120 160	VAPOUR READING (ppm) □ 20 40 60 80 / MOISTURE CONTENT (%) ○ 10 20 30 40	PIEZOMETER OR WELL CONSTRUCTION
		GROUND SURFACE (m asl)		99.72						
0	0	100 mm Asphalt FILL: Gravel and sand, trace Asphalt. Dark brown, Moist. Compact to dense. Some clay pockets Organics inclusions.								
3	1				1	SS	43			
5		Clayey silt, trace gravel Bluish grey, Moist.			2	SS	10			
7	2			97.44						
8		Auger refusal @ 7'6" on suspected bedrock.								
10	3									
13	4									
16	5									

Groundwater Depth (m): On Completion: DRY

LOGGED: HU

CHECKED: FF

FISHER ENVIRONMENTAL LTD.

LOG OF BOREHOLE NO. BH 11 SHEET. 11 of 14

PROJECT NO.: FE-P 16-7971

PROJECT NAME: Proposed Townhouse Development

LOCATION: 1375 Clyde Avenue, Nepean, Ontario

DRILLING METHOD: Hollow Stem

DRILLING DATE: 24 October 2016

DEPTH (feet)	DEPTH (metres)	DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	SAMPLES NUMBER	SAMPLES TYPE	SAMPLES "N" VALUE
0	0	GROUND SURFACE (m asl)		99.70			
		100 mm Asphalt FILL: Gravel and sand light brown, Dry. dense.			1	SS	46
3	1	Clayey silt, trace gravel, organic inclusions bluish grey, Moist, Compact.			2	SS	11
6	2	Some organics @7½' Dark grey @7½' Hydrocarbon Odour @7½'			3	SS	11
8					4	SS	+100
9				96.95			
10	3	Spoon refusal @ 9' on suspected bedrock.					
13	4						
16	5						

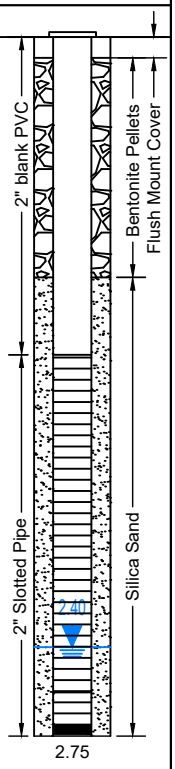
PENETRATION TESTING (SPT) ▲ 20 40 60 80

SHEAR STRENGTH (Kpa) ✚ 40 80 120 160

VAPOUR READING (ppm) □ 20 40 60 80

MOISTURE CONTENT (%) ○ 10 20 30 40

PIEZOMETER OR WELL CONSTRUCTION



Groundwater Depth (m): on 25 October 2016: 2.40m.

LOGGED: HU

CHECKED: FF

FISHER ENVIRONMENTAL LTD.

LOG OF BOREHOLE NO. BH 12 SHEET. 12 of 14

PROJECT NO.: FE-P 16-7971

PROJECT NAME: Proposed Townhouse Development

LOCATION: 1375 Clyde Avenue, Nepean, Ontario

DRILLING METHOD: Hollow Stem

DRILLING DATE: 24 October 2016

DEPTH (feet)	DEPTH (metres)	SOIL PROFILE: DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	SAMPLES: NUMBER	TYPE	"N" VALUE	PENETRATION TESTING (SPT) ▲ 20 40 60 80 / SHEAR STRENGTH (Kpa) ✚ 40 80 120 160	VAPOUR READING (ppm) □ 20 40 60 80 / MOISTURE CONTENT (%) ○ 10 20 30 40	PIEZOMETER OR WELL CONSTRUCTION
		GROUND SURFACE (m asl)		99.67						
0	0	100 mm Asphalt FILL: Gravel and sand, brown, Moist. Trace clay pockets.								
1		organic inclusion, compact.			1	SS	30			
2										
3	1	Spoon Refusal @3'8".			2	SS	24 50 5			
4										
5		SANDY SILT: Trace gravel, grey, Moist.			3	AS				
6	2									
7				97.62						
		Auger refusal @ 6'9" on suspected bedrock.								
8										
9										
10	3									
11										
12										
13	4									
14										
15										
16	5									

Groundwater Depth (m): On Completion: DRY

LOGGED: HU

CHECKED: FF

FISHER ENVIRONMENTAL LTD.

LOG OF BOREHOLE NO. BH 13 SHEET. 13 of 14

PROJECT NO.: FE-P 16-7971

PROJECT NAME: Proposed Townhouse Development

LOCATION: 1375 Clyde Avenue, Nepean, Ontario

DRILLING METHOD: Hollow Stem

DRILLING DATE: 24 October 2016

DEPTH (feet)	DEPTH (metres)	SOIL PROFILE: DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	SAMPLES: NUMBER	TYPE	"N" VALUE	PENETRATION TESTING (SPT) ▲ 20 40 60 80 / SHEAR STRENGTH (Kpa) ✚ 40 80 120 160	VAPOUR READING (ppm) □ 20 40 60 80 / MOISTURE CONTENT (%) ○ 10 20 30 40	PIEZOMETER OR WELL CONSTRUCTION
0	0	GROUND SURFACE (m asl)		99.62						
		100 mm Asphalt FILL: Gravel, some sand, dark brown, Dry, Dense.			1	SS	36			
3	1	SANDY SILT: Trace gravel, grey, Moist.			2	SS	21 +100			
4				98.52						
		Spoon refusal @ 3'4". on suspected bedrock.								
5										
6	2									
7										
8										
9										
10	3									
11										
12										
13	4									
14										
15										
16	5									

Groundwater Depth (m): On Completion: DRY

LOGGED: HU

CHECKED: FF

FISHER ENVIRONMENTAL LTD.

LOG OF BOREHOLE NO. BH 14 SHEET. 14 of 14

PROJECT NO.: FE-P 16-7971

PROJECT NAME: Proposed Townhouse Development

LOCATION: 1375 Clyde Avenue, Nepean, Ontario

DRILLING METHOD: Hollow Stem

DRILLING DATE: 24 October 2016

DEPTH (feet)	DEPTH (metres)	SOIL PROFILE: DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	SAMPLES: NUMBER	TYPE	"N" VALUE	PENETRATION TESTING (SPT) ▲ 20 40 60 80 / SHEAR STRENGTH (Kpa) ✚ 40 80 120 160	VAPOUR READING (ppm) □ 20 40 60 80 / MOISTURE CONTENT (%) ○ 10 20 30 40	PIEZOMETER OR WELL CONSTRUCTION
0	0	GROUND SURFACE (m asl)		97.14						
1		100 mm Asphalt FILL: Gravel, some sand, brown.								
2		Clayey silt, trace gravel, some organics Dark grey, Moist, Loose.								
3	1				1	SS	8			
4										
5										
6					2	SS	11 +100			
	2	Spoon refusal @ 6'3" on suspected bedrock.		95.24						
7										
8										
9										
10	3									
11										
12										
13	4									
14										
15										
16	5									

Groundwater Depth (m): On Completion: DRY

LOGGED: HU

CHECKED: FF

APPENDIX C – CERTIFICATES OF ANALYSIS

FISHER ENVIRONMENTAL LABORATORIES

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400 ESNA PARK DRIVE #15
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Client: Dymon Capital Corp
Address: 2-1830 Walkley Rd.
Ottawa, Ontario
K1H 8K3
Tel.: (613) 247-0888 ext. 222
Email: gluckman@dymon.ca
Attn.: Mr. Glen Luckman

F.E. Job #: 16-5090
Project Name: Phase II ESA
Project ID: FE-P-16-7972
Date Sampled: 24-Oct-16
Date Received: 26-Oct-16
Date Reported: 4-Nov-16
Location: 1375 Clyde Avenue
Nepean, ON

Certificate of Analysis

Analyses	Matrix	Quantity	Date Extracted	Date Analyzed	Lab SOP	Method Reference
Metals	Soil	8	2-Nov-16	3-Nov-16	Metals F-18	SM 3120-B
VOCs	Soil	8	27-Oct-16	31-Oct-16	VOCs F-14	SW-846, 8260C
PHCs (F1 & BTEX)	Soil	8	27-Oct-16	31-Oct-16	PHCs F-7	CCME CWS
PHCs (F2 - F4)	Soil	8	27-Oct-16	3-Nov-16	PHCs F-7	CCME CWS
Moisture Content	Soil	8	N/A	2-Nov-16	Support Procedures F-99	Carter (1993)
Metals	Water	6	N/A	31-Oct-16	Metals F-1	SM 3120-B
VOCs	Water	6	N/A	3-Nov-16	VOCs F-6	SM 6200-B
PHCs (F1 & BTEX)	Water	4	N/A	3-Nov-16	PHCs F-7	CCME CWS
PHCs (F2 - F4)	Water	4	27-Oct-16	31-Oct-16	PHCs F-7	CCME CWS

Fisher Environmental Laboratories is accredited by CALA (the Canadian Association for Laboratory Accreditation Inc.) for specific parameters as required by Ontario Regulation 153/04. All analytical testing has been performed in accordance with ISO 17025 and the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act published by Ontario Ministry of the Environment.

Authorized by:

Roger Lin, Ph. D., C. Chem.
Laboratory Manager

Results related only to the items tested

Certificate of Analysis

Analysis Requested:	Metals, VOCs, PHCs
Sample Description:	8 Soil and 6 Water Samples

Parameter	***16-5090-1*** BH1 1.50-1.95m	***16-5090-2*** BH5 3.00-3.45m	***16-5090-3*** BH6 0.15-0.60m	***16-5090-4*** BH9 1.50-1.95m	**Soil Standards [1] Table 3**	
					R/P/I	**I/C/C**
	Concentration (µg/g)					
Metals in Soil						
Antimony	<1	<1	<1	<1	7.5	(50) 40
Arsenic	2.3	1.3	<1	1.0	18	18
Barium	45	151	48	129	390	670
Beryllium	<2	<2	<2	<2	(5) 4	(10) 8
Boron	<5	7.7	<5	<5	120	120
Cadmium	<1	<1	<1	<1	1.2	1.9
Chromium	<5	<5	<5	16	160	160
Cobalt	3.7	3.1	3.3	5.2	22	(100) 80
Copper	8.5	7.9	11	12	(180) 140	(300) 230
Lead	13	<10	<10	<10	120	120
Molybdenum	<2	<2	<2	<2	6.9	40
Nickel	16	14	9.1	14	(130) 100	(340) 270
Selenium	<1	<1	<1	<1	2.4	5.5
Silver	<0.5	<0.5	<0.5	<0.5	(25) 20	(50) 40
Thallium	<1	<1	<1	<1	1	3.3
Uranium	<1	<1	<1	<1	23	33
Vanadium	<10	<10	11	22	86	86
Zinc	<30	<30	<30	32	340	340

< result obtained was below RL (Reporting Limit).

[1] MOE - Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act, April 15, 2011.

Table 3: Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition.

Residential/Parkland/Institutional Property Use (**R/P/I**); Industrial/Commercial/Community Property use (**I/C/C**).

( ) Standard value in brackets applies to medium and fine textured soils.

Certificate of Analysis

Analysis Requested:	Metals, VOCs, PHCs
Sample Description:	8 Soil and 6 Water Samples

Parameter	***16-5090-5*** BH10 1.80-2.10m	***16-5090-6*** BH11 2.40-2.70m	***16-5090-7*** BH13 0.75-1.20m	***16-5090-8*** BH14 1.50-1.95m	**Soil Standards [1] Table 3**	
					R/P/I	**I/C/C**
	Concentration (µg/g)					
Metals in Soil						
Antimony	<1	<1	<1	<1	7.5	(50) 40
Arsenic	2.2	2.9	3.3	3.4	18	18
Barium	603	236	111	211	390	670
Beryllium	<2	<2	<2	<2	(5) 4	(10) 8
Boron	<5	<5	5.2	<5	120	120
Cadmium	<1	<1	<1	<1	1.2	1.9
Chromium	25	15	9.4	14	160	160
Cobalt	8.4	5.6	4.2	8.1	22	(100) 80
Copper	23	17	13	25	(180) 140	(300) 230
Lead	10	<10	<10	18	120	120
Molybdenum	<2	<2	<2	<2	6.9	40
Nickel	23	13	12	14	(130) 100	(340) 270
Selenium	<1	<1	<1	<1	2.4	5.5
Silver	<0.5	<0.5	<0.5	<0.5	(25) 20	(50) 40
Thallium	<1	<1	<1	<1	1	3.3
Uranium	<1	<1	<1	<1	23	33
Vanadium	33	19	12	20	86	86
Zinc	82	40	<30	194	340	340

< result obtained was below RL (Reporting Limit).

[1] MOE - Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act, April 15, 2011.

Table 3: Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition.

Residential/Parkland/Institutional Property Use (**R/P/I**); Industrial/Commercial/Community Property use (**I/C/C**).

( ) Standard value in brackets applies to medium and fine textured soils.

QA/QC Report

Parameter	Blank	RL	LCS	AR	MS	AR
	(µg/g)		Recovery (%)		Recovery (%)	
Metals in Soil						
Antimony	<1	1	104	80-120	104	70-130
Arsenic	<1	1	92	80-120	126	70-130
Barium	<5	5	97	80-120	91	70-130
Beryllium	<2	2	102	80-120	110	70-130
Boron	<5	5	103	80-120	106	70-130
Cadmium	<1	1	94	80-120	103	70-130
Chromium	<5	5	90	80-120	90	70-130
Cobalt	<2	2	90	80-120	95	70-130
Copper	<5	5	106	80-120	105	70-130
Lead	<10	10	90	80-120	110	70-130
Molybdenum	<2	2	103	80-120	112	70-130
Nickel	<5	5	82	80-120	91	70-130
Selenium	<1	1	104	80-120	120	70-130
Silver	<0.5	0.5	93	80-120	105	70-130
Thallium	<1	1	98	80-120	106	70-130
Uranium	<1	1	97	80-120	81	70-130
Vanadium	<10	10	100	80-120	103	70-130
Zinc	<30	30	88	80-120	117	70-130

LEGEND:

RL - Reporting Limit
LCS - Laboratory Control Sample
MS - Matrix Spike
AR - Acceptable Range

QA/QC Report

Parameter	Duplicate	AR				
	RPD (%)					
Metals in Soil						
Antimony	0.0	0-30				
Arsenic	27	0-30				
Barium	11	0-30				
Beryllium	0.0	0-30				
Boron	0.0	0-30				
Cadmium	0.0	0-30				
Chromium	6.1	0-30				
Cobalt	7.0	0-30				
Copper	5.1	0-30				
Lead	19	0-30				
Molybdenum	0.0	0-30				
Nickel	6.5	0-30				
Selenium	0.0	0-30				
Silver	0.0	0-30				
Thallium	0.0	0-30				
Uranium	0.0	0-30				
Vanadium	0.4	0-30				
Zinc	10	0-30				

LEGEND:

AR - Acceptable Range

RPD - Relative Percent Difference

Client: Dymon Capital Corp ***F.E. Job #:*** 16-5090

Certificate of Analysis

Analysis Requested:	Metals, VOCs, PHCs
Sample Description:	8 Soil and 6 Water Samples

Parameter	***16-5090-1*** BH1 1.50-1.95m	***16-5090-2*** BH5 3.00-3.45m	***16-5090-3*** BH6 0.15-0.60m	***16-5090-4*** BH9 1.50-1.95m	**Soil Standards [1] Table 3**	
					R/P/I	**I/C/C**
	Concentration (µg/g)					
VOCs in Soil						
Acetone	<0.5	<0.5	<0.5	<0.5	(28) 16	(28) 16
Benzene	<0.02	<0.02	<0.02	<0.02	(0.17) 0.21	(0.4) 0.32
Bromodichloromethane	<0.05	<0.05	<0.05	<0.05	13	18
Bromoform	<0.05	<0.05	<0.05	<0.05	(0.26) 0.27	(1.7) 0.61
Bromomethane	<0.05	<0.05	<0.05	<0.05	0.05	0.05
Carbon Tetrachloride	<0.05	<0.05	<0.05	<0.05	(0.12) 0.05	(1.5) 0.21
Chlorobenzene	<0.05	<0.05	<0.05	<0.05	(2.7) 2.4	(2.7) 2.4
Chloroform	<0.05	<0.05	<0.05	<0.05	(0.18) 0.05	(0.18) 0.47
Dibromochloromethane	<0.05	<0.05	<0.05	<0.05	9.4	13
1,2-Dichlorobenzene	<0.05	<0.05	<0.05	<0.05	(4.3) 3.4	(8.5) 6.8
1,3-Dichlorobenzene	<0.05	<0.05	<0.05	<0.05	(6) 4.8	(12) 9.6
1,4-Dichlorobenzene	<0.05	<0.05	<0.05	<0.05	(0.097) 0.083	(0.84) 0.2
Dichlordifluoromethane	<0.05	<0.05	<0.05	<0.05	(25) 16	(25) 16
1,1-Dichloroethane	<0.05	<0.05	<0.05	<0.05	(11) 3.5	(21) 17
1,2-Dichloroethane	<0.05	<0.05	<0.05	<0.05	0.05	0.05
1,1-Dichloroethylene	<0.05	<0.05	<0.05	<0.05	0.05	(0.48) 0.064
c-1,2-Dichloroethylene	<0.05	<0.05	<0.05	<0.05	(30) 3.4	(37) 55
t-1,2-Dichloroethylene	<0.05	<0.05	<0.05	<0.05	(0.75) 0.084	(9.3) 1.3
1,2-Dichloropropane	<0.05	<0.05	<0.05	<0.05	(0.085) 0.05	(0.68) 0.16
1,3-Dichloropropene (cis-+trans-)	<0.05	<0.05	<0.05	<0.05	(0.083) 0.05	(0.21) 0.18
Ethylbenzene	<0.05	<0.05	<0.05	<0.05	(15) 2	(19) 9.5
Ethylene Dibromide	<0.05	<0.05	<0.05	<0.05	0.05	0.05
Hexane (n)	<0.05	<0.05	<0.05	<0.05	(34) 2.8	(88) 46
Methyl Ethyl Ketone	<0.5	<0.5	<0.5	<0.5	(44) 16	(88) 70
Methyl Isobutyl Ketone	<0.5	<0.5	<0.5	<0.5	(4.3) 1.7	(210) 31
Methyl tert-butyl Ether	<0.05	<0.05	<0.05	<0.05	(1.4) 0.75	(3.2) 11
Methylene Chloride	<0.05	<0.05	<0.05	<0.05	(0.96) 0.1	(2) 1.6
Styrene	<0.05	<0.05	<0.05	<0.05	(2.2) 0.7	(43) 34
1,1,1,2-Tetrachloroethane	<0.05	<0.05	<0.05	<0.05	(0.05) 0.058	(0.11) 0.087
1,1,2,2-Tetrachloroethane	<0.05	<0.05	<0.05	<0.05	0.05	(0.094) 0.05
Tetrachloroethylene	<0.05	<0.05	<0.05	<0.05	(2.3) 0.28	(21) 4.5
Toluene	<0.2	<0.2	<0.2	<0.2	(6) 2.3	(78) 68
1,1,1-Trichloroethane	<0.05	<0.05	<0.05	<0.05	(3.4) 0.38	(12) 6.1
1,1,2-Trichloroethane	<0.05	<0.05	<0.05	<0.05	0.05	(0.11) 0.05
Trichloroethylene	<0.05	<0.05	<0.05	<0.05	(0.52) 0.061	(0.61) 0.91
Trichlorofluoromethane	<0.05	<0.05	<0.05	<0.05	(5.8) 4	(5.8) 4
Vinyl Chloride	<0.02	<0.02	<0.02	<0.02	(0.022) 0.02	(0.25) 0.032
Xylenes	0.12	<0.05	<0.05	<0.05	(25) 3.1	(30) 26
Surrogate Recovery (%)						
1,2-Dichloroethane-d4	98	99	68	102	50-140	
Toluene-d8	93	100	72	109	50-140	
4-Bromofluorobenzene	90	102	68	68	50-140	

< result obtained was below RL (Reporting Limit).

[1] MOE - Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act, April 15, 2011.

Table 3: Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition.

Residential/Parkland/Institutional Property Use (**R/P/I**); Industrial/Commercial/Community Property use (**I/C/C**).

( ) Standard value in brackets applies to medium and fine textured soils.

Certificate of Analysis

Analysis Requested:	Metals, VOCs, PHCs
Sample Description:	8 Soil and 6 Water Samples

Parameter	***16-5090-5*** BH10 1.80-2.10m	***16-5090-6*** BH11 2.40-2.70m	***16-5090-7*** BH13 0.75-1.20m	***16-5090-8*** BH14 1.50-1.95m	**Soil Standards [1] Table 3** R/P/I	**Soil Standards [1] Table 3** I/C/C
	Concentration (µg/g)					
VOCs in Soil						
Acetone	<0.5	<0.5	<0.5	<0.5	(28) 16	(28) 16
Benzene	<0.02	<0.02	<0.02	<0.02	(0.17) 0.21	(0.4) 0.32
Bromodichloromethane	<0.05	<0.05	<0.05	<0.05	13	18
Bromoform	<0.05	<0.05	<0.05	<0.05	(0.26) 0.27	(1.7) 0.61
Bromomethane	<0.05	<0.05	<0.05	<0.05	0.05	0.05
Carbon Tetrachloride	<0.05	<0.05	<0.05	<0.05	(0.12) 0.05	(1.5) 0.21
Chlorobenzene	<0.05	<0.05	<0.05	<0.05	(2.7) 2.4	(2.7) 2.4
Chloroform	<0.05	<0.05	<0.05	<0.05	(0.18) 0.05	(0.18) 0.47
Dibromochloromethane	<0.05	<0.05	<0.05	<0.05	9.4	13
1,2-Dichlorobenzene	<0.05	<0.05	<0.05	<0.05	(4.3) 3.4	(8.5) 6.8
1,3-Dichlorobenzene	<0.05	<0.05	<0.05	<0.05	(6) 4.8	(12) 9.6
1,4-Dichlorobenzene	<0.05	<0.05	<0.05	<0.05	(0.097) 0.083	(0.84) 0.2
Dichlordifluoromethane	<0.05	<0.05	<0.05	<0.05	(25) 16	(25) 16
1,1-Dichloroethane	<0.05	<0.05	<0.05	<0.05	(11) 3.5	(21) 17
1,2-Dichloroethane	<0.05	<0.05	<0.05	<0.05	0.05	0.05
1,1-Dichloroethylene	<0.05	<0.05	<0.05	<0.05	0.05	(0.48) 0.064
c-1,2-Dichloroethylene	<0.05	<0.05	<0.05	<0.05	(30) 3.4	(37) 55
t-1,2-Dichloroethylene	<0.05	<0.05	<0.05	<0.05	(0.75) 0.084	(9.3) 1.3
1,2-Dichloropropane	<0.05	<0.05	<0.05	<0.05	(0.085) 0.05	(0.68) 0.16
1,3-Dichloropropene (cis-+trans-)	<0.05	<0.05	<0.05	<0.05	(0.083) 0.05	(0.21) 0.18
Ethylbenzene	0.42	0.39	<0.05	<0.05	(15) 2	(19) 9.5
Ethylene Dibromide	<0.05	<0.05	<0.05	<0.05	0.05	0.05
Hexane (n)	<0.05	<0.05	<0.05	<0.05	(34) 2.8	(88) 46
Methyl Ethyl Ketone	<0.5	<0.5	<0.5	<0.5	(44) 16	(88) 70
Methyl Isobutyl Ketone	<0.5	<0.5	<0.5	<0.5	(4.3) 1.7	(210) 31
Methyl tert-butyl Ether	<0.05	<0.05	<0.05	<0.05	(1.4) 0.75	(3.2) 11
Methylene Chloride	<0.05	<0.05	<0.05	<0.05	(0.96) 0.1	(2) 1.6
Styrene	<0.05	<0.05	<0.05	<0.05	(2.2) 0.7	(43) 34
1,1,1,2-Tetrachloroethane	<0.05	<0.05	<0.05	<0.05	(0.05) 0.058	(0.11) 0.087
1,1,2,2-Tetrachloroethane	<0.05	<0.05	<0.05	<0.05	0.05	(0.094) 0.05
Tetrachloroethylene	<0.05	<0.05	<0.05	<0.05	(2.3) 0.28	(21) 4.5
Toluene	<0.2	<0.2	<0.2	<0.2	(6) 2.3	(78) 68
1,1,1-Trichloroethane	<0.05	<0.05	<0.05	<0.05	(3.4) 0.38	(12) 6.1
1,1,2-Trichloroethane	<0.05	<0.05	<0.05	<0.05	0.05	(0.11) 0.05
Trichloroethylene	<0.05	<0.05	<0.05	<0.05	(0.52) 0.061	(0.61) 0.91
Trichlorofluoromethane	<0.05	<0.05	<0.05	<0.05	(5.8) 4	(5.8) 4
Vinyl Chloride	<0.02	<0.02	<0.02	<0.02	(0.022) 0.02	(0.25) 0.032
Xylenes	<0.05	0.21	<0.05	<0.05	(25) 3.1	(30) 26
Surrogate Recovery (%)						
1,2-Dichloroethane-d4	89	107	116	98	50-140	
Toluene-d8	88	120	129	102	50-140	
4-Bromofluorobenzene	77	70	96	82	50-140	

< result obtained was below RL (Reporting Limit).

[1] MOE - Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act, April 15, 2011.

Table 3: Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition.

Residential/Parkland/Institutional Property Use (**R/P/I**); Industrial/Commercial/Community Property use (**I/C/C**).

( ) Standard value in brackets applies to medium and fine textured soils.

QA/QC Report

Parameter	Blank	RL	LCS	AR	MS	AR
	(µg/g)		Recovery (%)		Recovery (%)	
VOCs in Soil						
Acetone	<0.5	0.5	78	50-140	130	50-140
Benzene	<0.02	0.02	98	60-130	114	50-140
Bromodichloromethane	<0.05	0.05	86	50-140	127	50-140
Bromoform	<0.05	0.05	83	60-130	136	50-140
Bromomethane	<0.05	0.05	89	50-140	107	50-140
Carbon Tetrachloride	<0.05	0.05	91	60-130	103	50-140
Chlorobenzene	<0.05	0.05	85	60-130	125	50-140
Chloroform	<0.05	0.05	96	60-130	116	50-140
Dibromochloromethane	<0.05	0.05	83	60-130	133	50-140
1,2-Dichlorobenzene	<0.05	0.05	100	60-130	91	50-140
1,3-Dichlorobenzene	<0.05	0.05	90	60-130	77	50-140
1,4-Dichlorobenzene	<0.05	0.05	100	60-130	90	50-140
Dichlordifluoromethane	<0.05	0.05	75	50-140	111	50-140
1,1-Dichloroethane	<0.05	0.05	92	60-130	104	50-140
1,2-Dichloroethane	<0.05	0.05	100	60-130	118	50-140
1,1-Dichloroethylene	<0.05	0.05	95	60-130	96	50-140
c-1,2-Dichloroethylene	<0.05	0.05	96	60-130	108	50-140
t-1,2-Dichloroethylene	<0.05	0.05	78	60-130	122	50-140
1,2-Dichloropropane	<0.05	0.05	95	60-130	133	50-140
1,3-Dichloropropene (cis-+trans-)	<0.05	0.05	83	60-130	135	50-140
Ethylbenzene	<0.05	0.05	97	60-130	115	50-140
Ethylene Dibromide	<0.05	0.05	90	60-130	104	50-140
Hexane (n)	<0.05	0.05	82	60-130	93	50-140
Methyl Ethyl Ketone	<0.5	0.5	96	50-140	119	50-140
Methyl Isobutyl Ketone	<0.5	0.5	80	50-140	120	50-140
Methyl tert-butyl Ether	<0.05	0.05	74	60-130	83	50-140
Methylene Chloride	<0.05	0.05	81	60-130	127	50-140
Styrene	<0.05	0.05	63	60-130	105	50-140
1,1,1,2-Tetrachloroethane	<0.05	0.05	100	60-130	94	50-140
1,1,2,2-Tetrachloroethane	<0.05	0.05	106	60-130	90	50-140
Tetrachloroethylene	<0.05	0.05	77	60-130	120	50-140
Toluene	<0.2	0.2	81	60-130	124	50-140
1,1,1-Trichloroethane	<0.05	0.05	96	60-130	100	50-140
1,1,2-Trichloroethane	<0.05	0.05	92	60-130	133	50-140
Trichloroethylene	<0.05	0.05	90	60-130	121	50-140
Trichlorofluoromethane	<0.05	0.05	107	50-140	105	50-140
Vinyl Chloride	<0.02	0.02	76	50-140	113	50-140
Xylenes	<0.05	0.05	84	60-130	118	50-140
Surrogates						
Parameter	**Recovery (%)**	**AR**	**Recovery (%)**	**AR**	**Recovery (%)**	**AR**
1,2-Dichloroethane-d4	103	60-140	83	60-140	107	60-140
Toluene-d8	79	60-140	86	60-140	107	60-140
4-Bromofluorobenzene	70	60-140	78	60-140	65	60-140

LEGEND:

RL - Reporting Limit
LCS - Laboratory Control Sample
MS - Matrix Spike
AR - Acceptable Range

QA/QC Report

Parameter	Duplicate	AR				
	RPD (%)					
VOCs in Soil						
Acetone	0.0	0-50				
Benzene	0.0	0-50				
Bromodichloromethane	0.0	0-50				
Bromoform	0.0	0-50				
Bromomethane	0.0	0-50				
Carbon Tetrachloride	0.0	0-50				
Chlorobenzene	0.0	0-50				
Chloroform	0.0	0-50				
Dibromochloromethane	0.0	0-50				
1,2-Dichlorobenzene	0.0	0-50				
1,3-Dichlorobenzene	0.0	0-50				
1,4-Dichlorobenzene	0.0	0-50				
Dichlordifluoromethane	0.0	0-50				
1,1-Dichloroethane	0.0	0-50				
1,2-Dichloroethane	0.0	0-50				
1,1-Dichloroethylene	0.0	0-50				
c-1,2-Dichloroethylene	0.0	0-50				
t-1,2-Dichloroethylene	0.0	0-50				
1,2-Dichloropropane	0.0	0-50				
1,3-Dichloropropene (cis-+trans-)	0.0	0-50				
Ethylbenzene	17	0-50				
Ethylene Dibromide	0.0	0-50				
Hexane (n)	0.0	0-50				
Methyl Ethyl Ketone	0.0	0-50				
Methyl Isobutyl Ketone	0.0	0-50				
Methyl tert-butyl Ether	0.0	0-50				
Methylene Chloride	0.0	0-50				
Styrene	0.0	0-50				
1,1,1,2-Tetrachloroethane	0.0	0-50				
1,1,2,2-Tetrachloroethane	0.0	0-50				
Tetrachloroethylene	0.0	0-50				
Toluene	0.0	0-50				
1,1,1-Trichloroethane	0.0	0-50				
1,1,2-Trichloroethane	0.0	0-50				
Trichloroethylene	0.0	0-50				
Trichlorofluoromethane	0.0	0-50				
Vinyl Chloride	0.0	0-50				
Xylenes	14	0-50				
Surrogates						
Parameter	**Recovery (%)**	**AR**				
1,2-Dichloroethane-d4	100	60-140				
Toluene-d8	110	60-140				
4-Bromofluorobenzene	69	60-140				

LEGEND:

AR - Acceptable Range

RPD - Relative Percent Difference

Certificate of Analysis

Analysis Requested:	Metals, VOCs, PHCs
Sample Description:	8 Soil and 6 Water Samples

Parameter	***16-5090-1*** BH1 1.50-1.95m	***16-5090-2*** BH5 3.00-3.45m	***16-5090-3*** BH6 0.15-0.60m	***16-5090-4*** BH9 1.50-1.95m	**Soil Standards [1] Table 3**	
					R/P/I	**I/C/C**
	Concentration (µg/g)					
BTEX in Soil						
Benzene	<0.02	<0.02	<0.02	<0.02	(0.17) 0.21	(0.4) 0.32
Toluene	<0.2	<0.2	<0.2	<0.2	(6) 2.3	(78) 68
Ethylbenzene	<0.05	<0.05	<0.05	<0.05	(15) 2	(19) 9.5
Xylenes	0.12	<0.05	<0.05	<0.05	(25) 3.1	(30) 26
PHCs (F_1-F_4) in Soil						
$F1_{-BTEX}$ (C_6 - C_{10})	<10	<10	<10	<10	(65) 55	(65) 55
F2 (C_{10} - C_{16})	<10	<10	<10	<10	(150) 98	(250) 230
F3 (C_{16} - C_{34})	<50	<50	<50	<50	(1300) 300	(2,500) 1,700
F4 (C_{34}-C_{50})	<50	<50	<50	<50	(5600) 2800	(6,600) 3,300
Chromatogram descends to baseline by nC50 ? (Yes/No)	Yes	Yes	Yes	Yes		
Surrogate Recovery (%)						
1,2-Dichloroethane-d4	98	99	68	102	60-140	
Toluene-d8	93	100	72	109	60-140	
4-Bromoflurobenzene	90	102	68	68	60-140	

F_{4G} (gravimetric heavy hydrocarbons) cannot be added to the C_6 to C_{50} hydrocarbons.

< result obtained was below RL (Reporting Limit).

[1] MOE - Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act, April 15, 2011.

Table 3: Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition.

Residential/Parkland/Institutional Property Use (**R/P/I**); Industrial/Commercial/Community Property use (**I/C/C**).

( ) Standard value in brackets applies to medium and fine textured soils.

Certificate of Analysis

Analysis Requested:	Metals, VOCs, PHCs
Sample Description:	8 Soil and 6 Water Samples

Parameter	***16-5090-5*** BH10 1.80-2.10m	***16-5090-6*** BH11 2.40-2.70m	***16-5090-7*** BH13 0.75-1.20m	***16-5090-8*** BH14 1.50-1.95m	**Soil Standards [1] Table 3** R/P/I	**Soil Standards [1] Table 3** I/C/C
	Concentration (µg/g)					
BTEX in Soil						
Benzene	<0.02	<0.02	<0.02	<0.02	(0.17) 0.21	(0.4) 0.32
Toluene	<0.2	<0.2	<0.2	<0.2	(6) 2.3	(78) 68
Ethylbenzene	0.42	0.39	<0.05	<0.05	(15) 2	(19) 9.5
Xylenes	<0.05	0.21	<0.05	<0.05	(25) 3.1	(30) 26
PHCs (F_1-F_4) in Soil						
$F1_{-BTEX}$ (C_6 - C_{10})	19	52	<10	<10	(65) 55	(65) 55
F2 (C_{10} - C_{16})	<10	122	<10	<10	(150) 98	(250) 230
F3 (C_{16} - C_{34})	<50	<50	<50	<50	(1300) 300	(2,500) 1,700
F4 (C_{34}-C_{50})	<50	<50	<50	<50	(5600) 2800	(6,600) 3,300
Chromatogram descends to baseline by nC50 ? (Yes/No)	Yes	Yes	Yes	Yes		
Surrogate Recovery (%)						
1,2-Dichloroethane-d4	89	107	116	98	60-140	
Toluene-d8	88	120	129	102	60-140	
4-Bromoflurobenzene	77	70	96	82	60-140	

F_{4G} (gravimetric heavy hydrocarbons) cannot be added to the C_6 to C_{50} hydrocarbons.

< result obtained was below RL (Reporting Limit).

[1] MOE - Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act, April 15, 2011.

Table 3: Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition.

Residential/Parkland/Institutional Property Use (**R/P/I**); Industrial/Commercial/Community Property use (**I/C/C**).

( ) Standard value in brackets applies to medium and fine textured soils.

QA/QC Report

Parameter	Blank	RL	LCS	AR	MS	AR
	(µg/g)		Recovery (%)		Recovery (%)	
BTEX in Soil						
Benzene	<0.02	0.02	98	60-130	114	50-140
Toluene	<0.2	0.2	81	60-130	124	50-140
Ethylbenzene	<0.05	0.05	97	60-130	115	50-140
Xylenes	<0.05	0.05	84	60-130	118	50-140
PHCs (F_1-F_4) in Soil						
$F1_{-BTEX}$ (C_6 - C_{10})	<10	10	81	80-120	124	60-140
F2 (C_{10} - C_{16})	<10	10	95	80-120	116	60-140
F3 (C_{16} - C_{34})	<50	50	89	80-120	92	60-140
F4 (C_{34}-C_{50})	<50	50	98	80-120	102	60-140
Surrogates						
Parameter	**Recovery (%)**	**AR**	**Recovery (%)**	**AR**	**Recovery (%)**	**AR**
1,2-Dichloroethane-d4	103	60-140	83	60-140	107	60-140
Toluene-d8	79	60-140	86	60-140	107	60-140
4-Bromofluorobenzene	70	60-140	78	60-140	65	60-140

LEGEND:

RL - Reporting Limit

LCS - Laboratory Control Sample

MS - Matrix Spike

AR - Acceptable Range

BTEX should be subtracted from F_1, Naphthalene from F_2 and selected PAHs from F_3 if BTEX/PAHs are analyzed, then report $F_{1\text{-BTEX}}$, $F_{2\text{-Naph.}}$ and $F_{3\text{-PAH}}$. nC_{50} response factor was within 70% of nC_{10}+nC_{16}+nC_{34} average.

QA/QC Report

Parameter	Duplicate	AR				
	RPD (%)					
BTEX in Soil						
Benzene	0.0	0-50				
Toluene	0.0	0-50				
Ethylbenzene	17	0-50				
Xylenes	14	0-50				
PHCs (F_1-F_4) in Soil						
$F1_{-BTEX}$ (C_6 - C_{10})	19	0-30				
F2 (C_{10} - C_{16})	18	0-30				
F3 (C_{16} - C_{34})	7.0	0-30				
F4 (C_{34}-C_{50})	21	0-30				
Surrogates						
Parameter	**Recovery (%)**	**AR**				
1,2-Dichloroethane-d4	100	60-140				
Toluene-d8	110	60-140				
4-Bromofluorobenzene	69	60-140				

LEGEND:

AR - Acceptable Range

RPD - Relative Percent Difference

Certificate of Analysis

Analysis Requested:	Metals, VOCs, PHCs
Sample Description:	8 Soil and 6 Water Samples

Parameter	***16-5090-1*** BH1 1.50-1.95m	***16-5090-2*** BH5 3.00-3.45m	***16-5090-3*** BH6 0.15-0.60m	***16-5090-4*** BH9 1.50-1.95m	***16-5090-5*** BH10 1.80-2.10m	***16-5090-6*** BH11 2.40-2.70m
Moisture Content (%)	10	5.5	7.2	7.5	14	14

Parameter	***16-5090-7*** BH13 0.75-1.20m	***16-5090-8*** BH14 1.50-1.95m				
Moisture Content (%)	9.1	10				

QA/QC Report

Parameter	**Blank**	**RL**	**LCS**	**AR**	**Duplicate**	**AR**
			Recovery (%)		**RPD (%)**	
Moisture Content (%)	<0.1	0.1	99	70-130	6.6	0-20

LEGEND:

RL - Reporting Limit
LCS - Laboratory Control Sample
AR - Acceptable Range
RPD - Relative Percent Difference

Certificate of Analysis

Analysis Requested:	Metals, VOCs, PHCs
Sample Description:	8 Soil and 6 Water Samples

Parameter	***16-5090-9*** MW A	***16-5090-10*** MW B	***16-5090-11*** MW C	***16-5090-12*** MW D	***16-5090-13*** MW 5	**Ground Water Standards** [2]
	Concentration (ug/L)					
Metals in Water						
Antimony	4.5	<0.5	<0.5	<0.5	<0.5	20,000
Arsenic	12	4.9	14	5.1	5.3	1,900
Barium	552	438	63	61	28	29,000
Beryllium	<0.5	<0.5	<0.5	<0.5	<0.5	67
Boron	183	160	225	63	240	45,000
Cadmium	<0.5	<0.5	<0.5	<0.5	<0.5	2.7
Chromium	<10	<10	<10	<10	<10	810
Cobalt	2.7	<1	<1	<1	9.3	66
Copper	<5	<5	<5	<5	6.2	87
Lead	<1	11	**82**	3.3	**58**	25
Molybdenum	27	<0.5	3.3	0.69	4.5	9,200
Nickel	13	5.4	3.6	7.0	30	490
Selenium	<5	<5	<5	<5	<5	63
Silver	<0.3	<0.3	<0.3	<0.3	<0.3	1.5
Thallium	<0.5	<0.5	<0.5	<0.5	<0.5	510
Uranium	64	<2	<2	2.7	5.1	420
Vanadium	0.93	<0.5	<0.5	<0.5	<0.5	250
Zinc	9.3	<5	9.8	6.6	5.7	1,100

< result obtained was below RL (Reporting Limit).

Bold: Result exceeds limit noted in Ground Water Standards.

[2] MOE - Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act, April 15, 2011.

Table 3: Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition.

All Types of Property Use.

Certificate of Analysis

Analysis Requested:	Metals, VOCs, PHCs
Sample Description:	8 Soil and 6 Water Samples

Parameter	***16-5090-14*** MW 11					**Ground Water Standards** [2]
	Concentration (ug/L)					
Metals in Water						
Antimony	0.55					20,000
Arsenic	7.2					1,900
Barium	524					29,000
Beryllium	<0.5					67
Boron	204					45,000
Cadmium	<0.5					2.7
Chromium	<10					810
Cobalt	2.1					66
Copper	<5					87
Lead	**139**					25
Molybdenum	19					9,200
Nickel	11					490
Selenium	<5					63
Silver	<0.3					1.5
Thallium	<0.5					510
Uranium	3.7					420
Vanadium	<0.5					250
Zinc	7.3					1,100

< result obtained was below RL (Reporting Limit).

Bold: Result exceeds limit noted in Ground Water Standards.

[2] MOE - Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act, April 15, 2011.

Table 3: Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition.

All Types of Property Use.

QA/QC Report

Parameter	Blank	RL	LCS	AR	MS	AR
	(µg/L)		Recovery (%)		Recovery (%)	
Metals in Water						
Antimony	<0.5	0.5	112	80-120	93	70-130
Arsenic	<1	1	103	80-120	123	70-130
Barium	<2	2	102	80-120	90	70-130
Beryllium	<0.5	0.5	111	80-120	86	70-130
Boron	<10	10	99	80-120	71	70-130
Cadmium	<0.5	0.5	101	80-120	85	70-130
Chromium	<10	10	109	80-120	84	70-130
Cobalt	<1	1	116	80-120	84	70-130
Copper	<5	5	100	80-120	77	70-130
Lead	<1	1	97	80-120	98	70-130
Molybdenum	<0.5	0.5	110	80-120	87	70-130
Nickel	<1	1	112	80-120	112	70-130
Selenium	<5	5	105	80-120	121	70-130
Silver	<0.3	0.3	112	80-120	70	70-130
Thallium	<0.5	0.5	118	80-120	103	70-130
Uranium	<2	2	93	80-120	124	70-130
Vanadium	<0.5	0.5	116	80-120	87	70-130
Zinc	<5	5	112	80-120	97	70-130

LEGEND:

RL - Reporting Limit
LCS - Laboratory Control Sample
MS - Matrix Spike
AR - Acceptable Range

QA/QC Report

Parameter	Duplicate	AR				
	RPD (%)					
Metals in Water						
Antimony	0.0	0-20				
Arsenic	0.0	0-20				
Barium	10	0-20				
Beryllium	0.0	0-20				
Boron	2.1	0-20				
Cadmium	0.0	0-20				
Chromium	2.7	0-20				
Cobalt	2.0	0-20				
Copper	6.6	0-20				
Lead	5.4	0-20				
Molybdenum	8.7	0-20				
Nickel	1.9	0-20				
Selenium	0.0	0-20				
Silver	0.0	0-20				
Thallium	0.0	0-20				
Uranium	4.8	0-20				
Vanadium	2.4	0-20				
Zinc	11	0-20				

LEGEND:
AR - Acceptable Range
RPD - Relative Percent Difference

Certificate of Analysis

Analysis Requested:	Metals, VOCs, PHCs
Sample Description:	8 Soil and 6 Water Samples

Parameter	***16-5090-9*** MW A	***16-5090-10*** MW B	***16-5090-11*** MW C	***16-5090-12*** MW D	***16-5090-13*** MW 5	**Ground Water Standards** [2]
	Concentration (µg/L)					
VOCs in Water						
Acetone	<30	<30	<30	<30	<30	130000
Benzene	6.3	21	27	<0.5	0.55	(430) 44
Bromodichloromethane	<2	<2	<2	<2	<2	85000
Bromoform	<5	<5	<5	<5	<5	(770) 380
Bromomethane	<0.5	<0.5	<0.5	<0.5	<0.5	(56) 5.6
Carbon Tetrachloride	<0.2	<0.2	<0.2	<0.2	<0.2	(8.4) 0.79
Chlorobenzene	<0.5	<0.5	<0.5	<0.5	<0.5	630
Chloroform	<1	<1	<1	<1	<1	(22) 2.4
Dibromochloromethane	<2	<2	<2	<2	<2	82000
1,2-Dichlorobenzene	<0.5	<0.5	<0.5	<0.5	<0.5	(9600) 4600
1,3-Dichlorobenzene	<0.5	<0.5	<0.5	<0.5	<0.5	9600
1,4-Dichlorobenzene	<0.5	<0.5	<0.5	<0.5	<0.5	(67) 8
Dichlordifluoromethane	<2	<2	<2	<2	<2	4400
1,1-Dichloroethane	<0.5	<0.5	<0.5	<0.5	<0.5	(3100) 320
1,2-Dichloroethane	<0.5	<0.5	<0.5	<0.5	<0.5	(12) 1.6
1,1-Dichloroethylene	<0.5	<0.5	<0.5	<0.5	<0.5	(17) 1.6
c-1,2-Dichloroethylene	<0.5	<0.5	<0.5	<0.5	<0.5	(17) 1.6
t-1,2-Dichloroethylene	<0.5	<0.5	<0.5	<0.5	<0.5	(17) 1.6
1,2-Dichloropropane	<0.5	<0.5	<0.5	<0.5	<0.5	(140) 16
1,3-Dichloropropene (cis-+trans-)	<0.5	<0.5	<0.5	<0.5	<0.5	(45) 5.2
Ethylbenzene	<0.5	26	304	0.65	0.68	2300
Ethylene Dibromide	<0.2	<0.2	<0.2	<0.2	<0.2	(0.83) 0.25
Hexane (n)	<5	<5	<5	<5	<5	(520) 51
Methyl Ethyl Ketone	<20	<20	<20	<20	<20	(1500000)470000
Methyl Isobutyl Ketone	<20	<20	<20	<20	<20	(580000)140000
Methyl tert-butyl Ether	<2	<2	<2	<2	<2	(1400) 190
Methylene Chloride	<5	<5	<5	<5	<5	(5500) 610
Styrene	<0.5	<0.5	<0.5	<0.5	<0.5	(9100) 1300
1,1,1,2-Tetrachloroethane	<0.5	<0.5	<0.5	<0.5	<0.5	(28) 3.3
1,1,2,2-Tetrachloroethane	<0.5	<0.5	<0.5	<0.5	<0.5	(15) 3.2
Tetrachloroethylene	<0.5	<0.5	<0.5	<0.5	<0.5	(17) 1.6
Toluene	17	21	71	3.6	0.74	18000
1,1,1-Trichloroethane	<0.5	<0.5	<0.5	<0.5	<0.5	(6700) 640
1,1,2-Trichloroethane	<0.5	<0.5	<0.5	<0.5	<0.5	(30) 4.7
Trichloroethylene	<0.5	<0.5	<0.5	<0.5	<0.5	(17) 1.6
Trichlorofluoromethane	<5	<5	<5	<5	<5	2500
Vinyl Chloride	<0.5	<0.5	<0.5	<0.5	<0.5	(1.7) 0.5
Xylenes	9.8	17	**13056**	<0.5	<0.5	4200
Surrogate Recovery (%)						
Bromochloromethane	115	109	115	87	101	60-140
1,4-Difluorobenzene	107	111	130	78	101	60-140
1,4-Dichlorobutane	108	71	86	88	109	60-140

< result obtained was below RL (Reporting Limit).

Bold: Result exceeds limit noted in Ground Water Standards.

[2] MOE - Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act, April 15, 2011.

Table 3: Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition.

All Types of Property Use. ( ) Standard value in brackets applies to medium and fine textured soils.

Client: Dymon Capital Corp ***F.E. Job #:*** 16-5090

Certificate of Analysis

Analysis Requested:	Metals, VOCs, PHCs
Sample Description:	8 Soil and 6 Water Samples

Parameter	***16-5090-14*** MW 11					**Ground Water Standards** [2]
	Concentration (µ g/L)					
VOCs in Water						
Acetone	<30					130000
Benzene	42					(430) 44
Bromodichloromethane	<2					85000
Bromoform	<5					(770) 380
Bromomethane	<0.5					(56) 5.6
Carbon Tetrachloride	<0.2					(8.4) 0.79
Chlorobenzene	<0.5					630
Chloroform	<1					(22) 2.4
Dibromochloromethane	<2					82000
1,2-Dichlorobenzene	<0.5					(9600) 4600
1,3-Dichlorobenzene	<0.5					9600
1,4-Dichlorobenzene	<0.5					(67) 8
Dichlordifluoromethane	<2					4400
1,1-Dichloroethane	<0.5					(3100) 320
1,2-Dichloroethane	<0.5					(12) 1.6
1,1-Dichloroethylene	<0.5					(17) 1.6
c-1,2-Dichloroethylene	<0.5					(17) 1.6
t-1,2-Dichloroethylene	<0.5					(17) 1.6
1,2-Dichloropropane	<0.5					(140) 16
1,3-Dichloropropene (cis-+trans-)	<0.5					(45) 5.2
Ethylbenzene	238					2300
Ethylene Dibromide	<0.2					(0.83) 0.25
Hexane (n)	<5					(520) 51
Methyl Ethyl Ketone	<20					(1500000)470000
Methyl Isobutyl Ketone	<20					(580000)140000
Methyl tert-butyl Ether	<2					(1400) 190
Methylene Chloride	<5					(5500) 610
Styrene	<0.5					(9100) 1300
1,1,1,2-Tetrachloroethane	<0.5					(28) 3.3
1,1,2,2-Tetrachloroethane	<0.5					(15) 3.2
Tetrachloroethylene	<0.5					(17) 1.6
Toluene	73					18000
1,1,1-Trichloroethane	<0.5					(6700) 640
1,1,2-Trichloroethane	<0.5					(30) 4.7
Trichloroethylene	<0.5					(17) 1.6
Trichlorofluoromethane	<5					2500
Vinyl Chloride	<0.5					(1.7) 0.5
Xylenes	152					4200
Surrogate Recovery (%)						
Bromochloromethane	121					60-140
1,4-Difluorobenzene	123					60-140
1,4-Dichlorobutane	106					60-140

< result obtained was below RL (Reporting Limit).

[2] MOE - Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act, April 15, 2011.

Table 3: Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition.

All Types of Property Use. ( ) Standard value in brackets applies to medium and fine textured soils.

QA/QC Report

Parameter	Blank	RL	LCS	AR	MS	AR
	(ug/L)		Recovery (%)		Recovery (%)	
VOCs in Water						
Acetone	<30	30	114	50-140	81	50-140
Benzene	<0.5	0.5	85	60-130	120	50-140
Bromodichloromethane	<2	2	86	50-140	117	50-140
Bromoform	<5	5	93	60-130	125	50-140
Bromomethane	<0.5	0.5	91	50-140	95	50-140
Carbon Tetrachloride	<0.2	0.2	102	60-130	111	50-140
Chlorobenzene	<0.5	0.5	126	60-130	107	50-140
Chloroform	<1	1	88	60-130	112	50-140
Dibromochloromethane	<2	2	84	60-130	117	50-140
1,2-Dichlorobenzene	<0.5	0.5	83	60-130	91	50-140
1,3-Dichlorobenzene	<0.5	0.5	114	60-130	119	50-140
1,4-Dichlorobenzene	<0.5	0.5	109	60-130	99	50-140
Dichlordifluoromethane	<2	2	69	50-140	89	50-140
1,1-Dichloroethane	<0.5	0.5	93	60-130	95	50-140
1,2-Dichloroethane	<0.5	0.5	110	60-130	79	50-140
1,1-Dichloroethylene	<0.5	0.5	91	60-130	117	50-140
c-1,2-Dichloroethylene	<0.5	0.5	110	60-130	77	50-140
t-1,2-Dichloroethylene	<0.5	0.5	84	60-130	77	50-140
1,2-Dichloropropane	<0.5	0.5	111	60-130	131	50-140
1,3-Dichloropropene (cis-+trans-)	<0.5	0.5	104	60-130	79	50-140
Ethylbenzene	<0.5	0.5	81	60-130	114	50-140
Ethylene Dibromide	<0.2	0.2	100	60-130	96	50-140
Hexane (n)	<5	5	82	60-130	91	50-140
Methyl Ethyl Ketone	<20	20	114	50-140	111	50-140
Methyl Isobutyl Ketone	<20	20	102	50-140	98	50-140
Methyl tert-butyl Ether	<2	2	74	60-130	85	50-140
Methylene Chloride	<5	5	91	60-130	127	50-140
Styrene	<0.5	0.5	87	60-130	87	50-140
1,1,1,2-Tetrachloroethane	<0.5	0.5	98	60-130	74	50-140
1,1,2,2-Tetrachloroethane	<0.5	0.5	92	60-130	103	50-140
Tetrachloroethylene	<0.5	0.5	112	60-130	111	50-140
Toluene	<0.5	0.5	87	60-130	114	50-140
1,1,1-Trichloroethane	<0.5	0.5	92	60-130	108	50-140
1,1,2-Trichloroethane	<0.5	0.5	112	60-130	123	50-140
Trichloroethylene	<0.5	0.5	84	60-130	92	50-140
Trichlorofluoromethane	<5	5	83	50-140	109	50-140
Vinyl Chloride	<0.5	0.5	114	50-140	110	50-140
Xylenes	<0.5	0.5	80	60-130	100	50-140
Surrogates						
Parameter	**Recovery (%)**	**AR**	**Recovery (%)**	**AR**	**Recovery (%)**	**AR**
Bromocholoromethane	91	60-140	73	60-140	76	60-140
1,4-Difluorobenzene	64	60-140	72	60-140	73	60-140
1,4-Dichlorobutane	68	60-140	86	60-140	83	60-140

LEGEND:

RL - Reporting Limit
LCS - Laboratory Control Sample
MS - Matrix Spike
AR - Acceptable Range

QA/QC Report

Parameter	Duplicate	AR				
	RPD (%)					
VOCs in Water						
Acetone	0.0	0-30				
Benzene	15	0-30				
Bromodichloromethane	0.0	0-30				
Bromoform	0.0	0-30				
Bromomethane	0.0	0-30				
Carbon Tetrachloride	0.0	0-30				
Chlorobenzene	0.0	0-30				
Chloroform	0.0	0-30				
Dibromochloromethane	0.0	0-30				
1,2-Dichlorobenzene	0.0	0-30				
1,3-Dichlorobenzene	0.0	0-30				
1,4-Dichlorobenzene	0.0	0-30				
Dichlordifluoromethane	0.0	0-30				
1,1-Dichloroethane	0.0	0-30				
1,2-Dichloroethane	0.0	0-30				
1,1-Dichloroethylene	0.0	0-30				
c-1,2-Dichloroethylene	0.0	0-30				
t-1,2-Dichloroethylene	0.0	0-30				
1,2-Dichloropropane	0.0	0-30				
1,3-Dichloropropene (cis-+trans-)	0.0	0-30				
Ethylbenzene	2.0	0-30				
Ethylene Dibromide	0.0	0-30				
Hexane (n)	0.0	0-30				
Methyl Ethyl Ketone	0.0	0-30				
Methyl Isobutyl Ketone	0.0	0-30				
Methyl tert-butyl Ether	0.0	0-30				
Methylene Chloride	0.0	0-30				
Styrene	0.0	0-30				
1,1,1,2-Tetrachloroethane	0.0	0-30				
1,1,2,2-Tetrachloroethane	0.0	0-30				
Tetrachloroethylene	0.0	0-30				
Toluene	21	0-30				
1,1,1-Trichloroethane	0.0	0-30				
1,1,2-Trichloroethane	0.0	0-30				
Trichloroethylene	0.0	0-30				
Trichlorofluoromethane	0.0	0-30				
Vinyl Chloride	0.0	0-30				
Xylenes	15	0-30				
Surrogates						
Parameter	**Recovery (%)**	**AR**				
Bromocholoromethane	128	60-140				
1,4-Difluorobenzene	110	60-140				
1,4-Dichlorobutane	118	60-140				

LEGEND:

AR - Acceptable Range

RPD - Relative Percent Difference

Certificate of Analysis

Analysis Requested:	Metals, VOCs, PHCs
Sample Description:	8 Soil and 6 Water Samples

Parameter	***16-5090-10*** MW B	***16-5090-11*** MW C	***16-5090-12*** MW D	***16-5090-13*** MW 5		**Ground Water Standards** [2]
	Concentration (ug/L)					
BTEX in Water						
Benzene	21	27	<0.5	0.55		(430) 44
Toluene	21	71	3.6	0.74		18000
Ethylbenzene	26	304	0.65	0.68		2300
Xylenes	17	**13056**	<0.5	<0.5		4200
PHCs (F1-F4) in Water						
$F1_{-BTEX}$ (C_6 - C_{10})	**30010**	**5675850**	<25	<25		750
F2 (C_{10} - C_{16})	**215**	**17630**	<100	<100		150
F3 (C_{16} - C_{34})	150	445	<100	<100		500
F4 (>C_{34})	<100	<100	<100	<100		500
Chromatogram descends to baseline by nC50 ? (Yes/No)	Yes	Yes	Yes	Yes		
Surrogate Recovery (%)						
Bromochloromethane	109	115	87	101		60-140
1,4-Difluorobenzene	111	130	78	101		60-140
1,4-Dichlorobutane	71	86	88	109		60-140

F_{4G} (gravimetric heavy hydrocarbons) cannot be added to the C_6 to C_{50} hydrocarbons.

< result obtained was below RL (Reporting Limit).

Bold: Result exceeds limit noted in Ground Water Standards.

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QA/QC Report

Parameter	Blank	RL	LCS	AR	MS	AR
	(ug/L)		Recovery (%)		Recovery (%)	
BTEX in Water						
Benzene	<0.5	0.5	85	60-130	120	50-140
Toluene	<0.5	0.5	87	60-130	114	50-140
Ethylbenzene	<0.5	0.5	81	60-130	114	50-140
Xylenes	<0.5	0.5	80	60-130	100	50-140
PHC (F1-F4) in Water						
$F1_{-BTEX}$ (C_6 - C_{10})	<25	25	88	60-140	121	60-140
F2 (C_{10} - C_{16})	<100	100	95	60-140	116	60-140
F3 (C_{16} - C_{34})	<100	100	89	60-140	92	60-140
F4 (>C_{34})	<100	100	98	60-140	102	60-140
Surrogates						
Parameter	**Recovery (%)**	**AR**	**Recovery (%)**	**AR**	**Recovery (%)**	**AR**
Bromochloromethane	91	60-140	73	60-140	76	60-140
1,4-Difluorobenzene	64	60-140	72	60-140	73	60-140
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LEGEND:

RL - Reporting Limit
LCS - Laboratory Control Sample
MS - Matrix Spike
AR - Acceptable Range

QA/QC Report

Parameter	Duplicate	AR				
	RPD (%)					
BTEX in Water						
Benzene	15	0-30				
Toluene	21	0-30				
Ethylbenzene	2.0	0-30				
Xylenes	15	0-30				
PHC (F1-F4) in Water						
$F1_{-BTEX}$ (C_6 - C_{10})	17	0-30				
F2 (C_{10} - C_{16})	5.0	0-30				
F3 (C_{16} - C_{34})	10	0-30				
F4 (>C_{34})	27	0-30				
Surrogates						
Parameter	**Recovery (%)**	**AR**				
Bromochloromethane	128	60-140				
1,4-Difluorobenzene	110	60-140				
1,4-Dichlorobutane	118	60-140				

LEGEND:

AR - Acceptable Range

RPD - Relative Percent Difference