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Revised Supplemental Phase II Environmental Site Assessment
Elmdale Public School
49 Iona Street
Ottawa, Ontario

MM1027

August 15, 2019

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1 EXECUTIVE SUMMARY

CM3 Environmental Inc. (CM3) was retained by the Ottawa Carleton District School Board (OCDSB) to carry out a supplemental site investigation at Elmdale Public School, located at 49 Iona Street in Ottawa, Ontario (site or subject property). The purpose of the Supplemental Investigation was to assess the presence of potential contaminants of concern in areas of proposed construction beyond the extents of known petroleum hydrocarbon contamination at the site. The investigation was completed in support of a Site Plan Control Application for the City of Ottawa. The site location is provided on **Figure 1**. A site plan is provided as **Figure 2**.

The Supplemental Investigation was conducted following the methodologies and general procedures outlined in ON. Reg. 153/04, in support of a site control application for proposed construction activities. The Phase II was not completed in support of a Record of Site Condition (RSC).

After evaluating the information collected from the Phase One ESA, CM3 identified two on-site potentially contaminating activities (PCAs) and four off-site PCAs that have the potential for contamination of the subject property by overland or groundwater flow.

The on-site PCAs included:

1. Electricity generation, transformation and power stations, specifically the electrical transformer at the east side of the subject property.
2. Gasoline and associated products storage in fixed tanks, specifically the former bunker C/fuel oil storage tank at the northeast corner of the building and associated piping and heating equipment as well as former coal burners.

The off-site PCAs included:

3. Gasoline and associated products storage in fixed tanks.
    1. 2017 residential furnace oil spill northeast of site.
    2. 2011 fuel oil incident east-southeast of site.
    3. Commercial fuel oil tank (expired 2009) south-southwest of site .
    4. 1992 truck (pipe) leak south-southwest of site.

CM3 identified one Area of Potential Environmental Concern (APEC) associated with the identified PCAs. The APEC is located on the subject property and includes:

1. The areas in and adjacent to the boiler room and UST location;

The APECs and contaminants of concern (COCs) were:

APEC	Location	Cause of Concern	COC
1	Boiler room and former UST location.	Soil and groundwater contamination.	Petroleum hydrocarbons, (PHCs), metals and polycyclic aromatic hydrocarbons, (PAHs).

The Table 3 Site Condition Standards were selected for the property based on the current use as a public school and the municipal water supply. Bedrock is not considered shallow (<2m) and no environmentally sensitive areas are in the vicinity.

The results from previous borehole drilling programs and ongoing contaminant management programs have shown the presence of PAH, PHC F1 to F4 and Metals contamination in soil and groundwater above the MECP Table 3 SCS in the vicinity of the boiler room.

During the Supplemental Investigation, a total of nine (9) boreholes (MW29 to MW37) were advanced around the boundaries of the property and in the proposed areas of construction to assess soil and groundwater conditions. The results of the Supplemental Investigation identified the presence of metals impacts (concentrations above applicable MECP standards) in soil at the northeast property boundary at borehole MW29. Metals impacts were also identified at boreholes MW35, MW36 and MW37 in the areas of the proposed addition and parking lot. The metals impacts were present in soil samples collected from depths of 0.76-1.52 m bg and at 3.05-3.81 m bg. Metals were present in all analysed samples collected at various depths, suggesting that metals impacted soils may be present in other areas of the site.

An additional soil investigation was completed by CM3 to determine the extents of the metals impacts in the work areas. It was presented under separate cover "*Supplemental Site Investigation – Soil Disposal*", dated May 16, 2019.

2 INTRODUCTION

CM3 Environmental Inc. (CM3) was retained by the Ottawa Carleton District School Board (OCDSB) to carry out a Supplemental Environmental Site Investigation at Elmdale Public School, located at 49 Iona Street in Ottawa, Ontario (site or subject property). The purpose of the Supplemental Investigation was to assess the presence of potential contaminants of concern in areas of proposed construction beyond the extents of known soil and groundwater contamination at the site. The investigation was completed in support of a Site Plan Control Application for the City of Ottawa.

2.1 Site Description

The subject property is rectangular in shape and is bounded by Iona Street to the south, Clarendon Avenue to the east, Java Street to the north and residential properties to the west. The total area of the subject property is approximately 1.15 hectares (2.85 acres). The subject property is relatively flat with an elevation of approximately 69-72 m above sea level (m asl) and consists of the school building and seven portables, surrounded by asphalt play areas, driveways and parking areas. The remainder of the subject property included grass covered areas and play structures. Landscaping and trees are present around the school building. Drainage at the site is likely by surface runoff towards storm drains on the bordering streets. No catch basins were observed on the subject property. A site plan is provided as **Figure 2**.

The subject property is located on the north side of Iona Street in Ottawa, Ontario (**Figure 1**). The civic address for the subject property is 49 Iona Street Ottawa, Ontario. The legal description is Plan M48, Lots 2243-53 Java S; Lots 2254-64 Iona N and Lots; 2241-42 2265-66 Clarendon W; known as Elmdale Public School. The property identification number for the subject property is 040280165. The subject property is zoned I1 for minor institutional. The current property owner is the OCDSB and is occupied by Elmdale Public School. A legal survey or R Plan is provided in the Figures section of the report.

2.2 Property Ownership

The property is owned by the Ottawa Carleton District School Board (OCDSB). The district office is located at 133 Greenbank Road, Nepean K2H 6L3. Contact is 613-721-1820 at the time of this report. The Supplemental Environmental Site Investigation was undertaken on behalf of the OCDSB.

2.3 Current and Proposed Future Uses

The current land use is institutional and is currently operating as a public school. The current and proposed land use is institutional and therefore does not require the filing of a record of site condition per section 168.3.1 of the Environmental Protection Act.

2.4 Applicable Site Condition Standards

The results of the soil and groundwater analyses were compared to the Ministry of Environment, Conservation and Parks (MECP) *Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act,* April 15, 2011 (under Ontario Regulation 153/04). The following site conditions were used in the selection of the appropriate site condition standards (SCS):

- No environmentally sensitive areas were located on site or in the immediate vicinity;
- The site was not considered a shallow soil property (i.e. bedrock greater than 2 metres below grade);
- The site was not located within 30 m of a water body;
- Groundwater was not used as a potable water source in the area; and
- The site and surrounding properties were considered primarily residential.

The Table 3 Full Depth Generic Site Condition Standards in a Non-Potable Groundwater Condition with coarse soils and residential land use were selected for evaluation of the analytical results, based on the above.

3 BACKGROUND INFORMATION

3.1 Physical Setting

3.1.1 Water Bodies, Areas of Natural Significance

There are no water bodies present on the subject property. The Ottawa River is located approximately 2.1 km west and 1.9 km north of the site. The Rideau Canal (Dows Lake) and the Rideau River are approximately 2.4 km and 5.0 km east of the site, respectively.

No areas of natural and scientific interest (ANSI) were located within 300 metres of the property.

3.1.2 Topography and Drainage

Topographical maps and observations during the site reconnaissance indicate the topography of the subject property is relatively flat with an elevation of approximately 69-72 m above sea level (m asl).

Municipal roads surrounding the site are equipped with storm drains.

3.1.3 Geology

The surficial geology of the subject property was interpreted from the Ontario Geological Survey Surficial Geology of Southern Ontario (Miscellaneous Releases, 2010) and the EcoLog report. The surficial geology at the subject property consists of a stone-poor sandy silt to silty sand-textured till. The EcoLog Surficial Geology Maps are provided in Appendix H.

The bedrock geology of the subject property was interpreted from the Ontario Geological Survey Bedrock Geology of Ontario (Miscellaneous Releases, 2011) and the EcoLog report. The bedrock at the site consists of limestone, dolostone, shale, arkose and sandstone of the Ottawa Group and Simcoe Group, Shadow Lake Formation. The EcoLog bedrock geology map is provided in Appendix H.

3.1.4 Regional Hydrogeology

The regional groundwater flow direction was inferred based on the topography at the subject property and surrounding area and the presence of local water bodies. The regional groundwater flow is inferred to be northwest-north towards the Ottawa River.

3.2 Past Investigations

In 2009, petroleum impacts were discovered during construction activities in the former coal storage room adjacent to the boiler room. In February of 2009 SLR Consulting Ltd. (SLR) inspected the coal storage room. One soil sample was taken directly below the floor slab where visual and olfactory indications of petroleum hydrocarbon impacts were observed at the time of sampling. The sample collected under the slab (SA1) showed concentrations of benzene, toluene, ethylbenzene, xylenes (BTEX), petroleum hydrocarbons (PHC) and polycylic aromatic hydrocarbons (PAH) compounds in excess of the MECP standards at the time.

Subsequent assessment activities consisted of borehole/monitoring well advancement and groundwater sampling and monitoring. A total of twenty eight (28) boreholes completed as monitoring wells (MW1 to MW28) were advanced in the interior and exterior of the school for the purpose of soil characterization and groundwater sampling. The assessment work completed at the time had indicated that residual PHC, PAH and metals impacts to soil and groundwater in excess of MECP Table 3 standards were present at the site. The impacts were found in the basement in the vicinity of the existing boiler room and former coal storage room. Previous soil and groundwater sample results are included in Tables 2 to 7. Impacts to soil are illustrated on **Figure 5** and groundwater impacts are illustrated on **Figure 6**.

A contaminant management plan is in place for the property which involves bi-annual groundwater monitoring and reporting.

4 SCOPE OF THE INVESTIGATION

4.1 Overview of Site Investigation

The supplemental site investigation was undertaken to satisfy the requirements of the Site Plan Control Application for the City of Ottawa. The purpose of the investigation was to assess the presence of potential contaminants of concern in areas of proposed construction beyond the extents of the known contamination in the vicinity of the boiler room. The site investigation was completed following the Canadian Standards Association (CSA) Standard Z769-00 (R2008) and in general accordance with Ontario Regulation 153/04. The scope of work for the supplemental investigation included:

- The preparation of a site-specific health and safety plan;
- The determination of the locations of all underground utilities by a third-party utility locator;
- The advancement of nine boreholes completed as monitoring wells;
- The continuous collection of soil samples during the drilling for soil logging and on-site field screening;
- The selection of soil samples from each borehole for laboratory analysis of PHCs, PAHs and metals;
- The measurement of the depth to liquid phase hydrocarbons (LPH) and groundwater in all newly installed monitoring wells; and
- The collection of groundwater samples from all newly installed monitoring wells for laboratory analysis of PHCs, PAHs and metals.

4.2 Media Investigated

The Supplemental Investigation included the investigation of soil and groundwater at the site. Sediments were not identified on the property and were therefore not investigated.

4.3 Phase One Conceptual Site Model

The Phase One Conceptual Site Model (CSM) identified the APECs and contaminants of concern (COCs) as follows:

APEC	Location	Cause of Concern	COC
1	Boiler room and UST location.	Soil and groundwater contamination.	Petroleum hydrocarbons, (PHCs), metals and polycyclic aromatic hydrocarbons, (PAHs).

The previously identified soil and groundwater impacts are located deeper than all utilities, with the exception of the sanitary sewer lines.

4.4 Deviations from Sampling and Analysis Plan

The deviations from the sampling plan included:

- No deviations from the original sampling plan were undertaken.

4.5 Impediments

Trees and vegetation, outbuildings, play equipment and utilities did not allow for access to drill in certain locations. There were no other impediments to the completion of the site investigation.

5 INVESTIGATION METHODOLOGY

5.1 General

All work conducted as part of the site investigations was completed following standard operating procedures for environmental drilling and monitoring well installation methods, soil sampling and groundwater monitoring/sampling.

5.2 Drilling

A total of nine boreholes (MW29 through MW37) were completed between March 21 and 22, 2019, under supervision of CM3. Boreholes were advanced by Strata Drilling Group (Strata) from Markham, Ontario. Boreholes MW29 through MW34 were advanced at the east and south property boundaries. Boreholes MW35, MW36 and MW37 were advanced west and northwest of the school, in the areas of the proposed addition and parking areas. All boreholes were advanced to refusal on presumed bedrock at a maximum depth of 5.79 m bg. Bedrock coring was not included in the investigation. The borehole locations are provided on **Figure 3**.

The drilling and sampling equipment were washed and rinsed between each sample interval and borehole location to prevent cross-contamination. All excess soil cuttings from the field investigations were placed in sealed and labeled drums and stored on-site pending disposal off-site.

5.3 Soil Sampling

Boreholes were advanced using the GeoProbe 7822DT direct push drill rig, equipped with 1.52 m x 5.1 cm diameter dual tube sampling equipment. Each 1.52 m tube was divided into two 0.76 m sample intervals at the time of drilling for logging of grain size, colour, moisture content, and visual or olfactory evidence of impacts. A new dual tube liner was used at each sample interval to avoid cross-contamination.

At the time of recovery, a portion of each sample was placed into a polyethylene bag for relative combustible organic vapour analysis. The remainder of each sample was placed into the appropriate laboratory supplied sample containers for the required analyses, following MECP sampling protocols. The sample containers were placed into an iced chilled cooler pending submission to the laboratory for analysis. The bagged samples were used for field screening of relative combustible vapours.

5.4 Field Screening Measurements

The bagged soil samples were allowed to equilibrate to ambient temperature prior to combustible vapour measurements. The vapour concentrations were measured and recorded from the bag sample headspace using an RKI Eagle combustible vapour meter calibrated to hexane and operated in methane elimination mode. The intake probe of the vapour meter was inserted into the plastic bag and the highest vapour reading from each sample was recorded. The results of the vapour analysis and field screening were used in the selection of samples for laboratory

analysis. A total of 13 borehole soil samples were submitted to Paracel Laboratories for laboratory analysis of PHCs F1 to F4 fractions, PAHS and/or metals.

5.5 Ground Water: Monitoring Well Installation

Boreholes MW29 through MW37 were completed as monitoring wells. Monitoring well construction consisted of 50 mm outside diameter, flush-threaded schedule 40 PVC well screens and risers. At each borehole, a 10-slot well screen was placed to intercept the water table to allow for the detection of LPH. A silica sand pack was placed around the outside of the well screen in the annular space of the borehole to a minimum of 0.3 m above the screened interval. A bentonite seal was placed above the sand pack to approximately 0.3 m bg. All monitoring wells were capped with lockable j-plugs and finished below grade in flush-mounted manhole protective casings.

All monitoring wells were developed by CM3 immediately following installation to ensure that subsequent groundwater samples collected were representative of overburden groundwater conditions. Monitoring wells were developed using 3/8" O.D. low density polyethylene (LDPE) tubing and a peristaltic pump. Well development was accomplished by removing water from the wells at a rate fast enough to re-suspend and extract sediment from the bottom of the well, where present. Wells were developed until the purge waters were relatively sediment free or a minimum of three standing water volumes were removed from the monitoring well.

5.6 Ground Water: Field Measurement of Water Quality Parameters

Qualitative observations with respect to the purge water quality were recorded at the time of sampling and included: turbidity; hydrocarbon odour; and hydrocarbon sheen.

5.7 Ground Water: Sampling

5.7.1 LPH and Water Level Measurement

The depth to LPH and groundwater was measured in all monitoring wells on March 26, 2019 using a Solinst® electronic oil/water interface meter. The depth to LPH (if present) and water were measured the nearest millimetre from the highest point of the well riser. The interface probe was cleaned and rinsed with distilled water between each well to prevent cross contamination.

5.7.2 Sample Collection

Groundwater samples were collected from monitoring wells MW29, MW32, MW33, MW34, MW35 and MW36 on March 26, 2019. Samples could not be collected from monitoring wells MW30 and MW37 due to insufficient water. Monitoring well MW31 was not accessible for sampling due to ponding of surface water above the flush-mount casing. Prior to sampling, each well was purged to remove stagnant water from within the well bore and surrounding annulus to obtain samples that were representative of formation groundwater. Groundwater purging and sampling was conducted using 3/8" O.D. low density polyethylene (LDPE) tubing and a peristaltic pump. Purging continued until a minimum of three standing well volumes were removed, or the purge waters were relatively free of sediment.

Groundwater samples were collected directly from the outlet of the LDPE tubing into the appropriate laboratory supplied containers for the required analyses, following MECP sampling protocols. The samples were placed into an iced chilled cooler pending submission to Paracel for analysis of PHCs F1-F4 fractions, PAHs and/or metals.

5.8 Sediment Sampling

Sediment sampling was not conducted as part of this Supplemental Investigation.

5.9 Analytical Testing

Soil samples selected for analysis and all groundwater samples were submitted for to Paracel Laboratories Limited (Paracel) of Ottawa, Ontario. Paracel is a CALA accredited analytical laboratory.

5.10 Residue Management Procedures

All residual soil from the drilling and soil sampling operations, water from the cleaning of the sampling equipment and purge water from well development and sampling were stored on-site in sealed drums pending future disposal during remedial works.

5.11 Elevation Surveying

The locations of all newly installed boreholes/monitoring wells were referenced to existing site buildings and structures. The ground surface and monitoring well top of pipe elevations were referenced to existing monitoring well top of pipe elevations using a TopCon AT-B4 automatic level. The ground surface and top of pipe elevations are included in the borehole logs (**Appendix A**).

5.12 Quality Assurance and Quality Control Measures

The general field QA/QC procedures followed by CM3 included, but were not limited to:

- A new pair of disposable nitrile gloves was used for each sample collected;
- Sampling equipment was dedicated to a specific location (i.e. 3/8” O.D. low density polyethylene (LDPE) tubing), when possible;
- Equipment that came into contact with the environmental media to be collected (interface probe, stainless-steel trowel, etc.) was decontaminated between each monitoring location or sample, by washing with a coarse brush and soapy water followed by rinsing in clean water;
- Clean, laboratory prepared sample containers containing the required preservatives were procured from the laboratory prior to field deployment;
- Sample containers were labelled prior to sample collection;
- Samples were placed in the appropriate sample containers for the selected analyses, following CM3 standard operating procedures and MECP protocols (i.e. soil sample for BTEX, PHC F1 analysis methanol preservation in pre-prepared vials); and

- Immediately following collection, all samples were stored in laboratory supplied coolers with the appropriate packing materials (i.e. bubble wrap) and ice packs, pending shipment to the laboratory. All samples were delivered to the laboratory by CM3 personnel on the same day.

All samples collected by CM3 were given unique sample identification and field staff recorded the location and identification of each sample collected using field logs and/or notebooks. Chain of Custody forms were filled out on site and travelled with all samples placed in coolers delivered to the laboratory for analysis. Each Chain of Custody included the following information: CM3 contact information, date sampled, sample matrix, number and type of containers, and requested analyses.

The field sampling program was enhanced by the in-house QA/QC program used by Paracel; a CALA accredited laboratory that uses Ministry of Environment recognized methods to conduct analyses. Paracel employs method blanks, control standard samples, certified reference material standards, method spikes, replicates, duplicates and instrument blanks as part of their internal QA/QC programs. The results of the laboratory QA/QC are reported in the laboratory certificates. If the internal QA/QC criteria are not met, the laboratory either re-analyses the affected samples or qualifies the results.

6 REVIEW AND EVALUATION

6.1 Geology

The site geology was determined based on the borehole drilling and soil logging. Surface materials included grass/topsoil, asphalt and sand and gravel fills. The overburden soil at the site consisted of silt, sand and gravel underlain by silty clay to clay and silty sand with gravel (possible weathered bedrock) to refusal on bedrock at 2.90-5.79 m bg. Bedrock drilling was not completed as part of the supplemental environmental site investigation. Other investigations have identified the bedrock as limestone. The site stratigraphy is provided on the borehole logs (**Appendix A**).

6.2 Ground Water: Elevations and Flow Direction

The depth to LPH and groundwater was measured in newly installed monitoring wells MW29, MW32, MW33, MW34, MW35 and MW36 on March 26, 2019 (**Table 1**). Monitoring wells MW28, MW31 and MW37 were either not accessible or no water was present in the wells during the monitoring event. LPH was not present in any of the monitoring wells. The water levels were between 96.93 m arl and 98.84 m arl, at average elevation of 97.89 m arl (3.24 m bg). The March 26, 2019 water level elevations are provided on **Figure 4**. The groundwater elevations in the newly installed wells appear to be consistent with historic water levels in the existing exterior wells (**Table 1**).

The groundwater flow at the site may be influenced by the presence of underground utilities beyond the property boundaries.

6.3 Fine-Medium Soil Texture

Soil grain size analyses were not conducted as part of the investigation. The soil texture was conservatively considered to be coarse grained for the evaluation of soil analytical results in comparison to MECP SCS.

6.4 Soil Field Screening

A total of 56 soil samples were collected from the boreholes MW29 through MW37 for field screening and combustible vapour analysis. All samples showed combustible vapour concentrations of 0 parts per million (ppm). The non-detectable vapour concentrations confirm the field observations of no olfactory evidence of petroleum hydrocarbon contamination. The soil combustible vapour concentrations are included on the borehole logs (**Appendix A**).

6.5 Soil Quality

Soil samples MW29 SA5, MW30 SA4, MW31 SA5, MW32 SA5, MW33 SA5, MW34 SA1, MW34 SA5, MW35 SA2, MW35 SA5, MW36 SA2, MW36 SA5, MW37 SA2 and MW37 SA5 were submitted for laboratory analysis of PHCs F1-F4 fractions, PAHs and metals. The soil sample analytical results are summarized in **Table 2** through **Table 4**. The borehole soil sample locations and soil quality are provided on **Figure 5**. The soil sample laboratory reports are provided in **Appendix B**. Historic soil analytical results are included in the tables.

PHCs F1-F4 Fractions

The soil analyses showed the presence of PHCs F3 and F4 fractions in sample MW34 SA1, at concentrations below the MECP Table 3 SCS. PHCs F1 and F2 fractions were not detected in sample MW34 SA1 and all other samples showed non-detect results for PHCs F1-F4 fractions, meeting the Table 3 SCS.

PAHs

The results of the soil PAHs analyses showed benzo(a)pyrene and indeno(1,2,3-cd)pyrene in sample MW34 SA1, at concentrations below the MECP Table 3 SCS. No other PAHs compounds were detected in sample MW34 SA1 and all other samples showed non-detect results for all PAHs, meeting the Table 3 SCS.

Metals

The soil metals analyses showed the presence of several metals in all analysed samples. Cobalt and vanadium were present at concentrations above MECP Table 3 SCS in samples MW29 SA5, MW35 SA2, MW36 SA2, MW36 SA5 and MW37 SA2. Samples MW29 SA5 and MW36 SA5 also showed barium concentrations above the Table 3 SCS. All other metals detected in the above samples and all other analysed samples were at concentrations that met the Table 3 SCS

6.6 Ground Water Quality

Groundwater samples MW29, MW32, MW33, MW34, MW35, and MW36 were collected on March 26, 2019 for laboratory analysis of PHCs F1-F4 fractions, PAHs and metals. The groundwater sample analytical results are summarized in **Table 5** through **Table 7**. The monitoring well locations and groundwater quality are provided on **Figure 6**. The groundwater sample laboratory reports are provided in **Appendix B**. Historic groundwater analytical results are included in the tables.

PHCs F1-F4 Fractions

PHCs F1-F4 fractions were not detected in any of the analysed groundwater samples, meeting the MECP Table 3 SCS.

PAHs

The results of the groundwater analyses showed the presence of several PAHs compounds in samples MW29 and MW36, at concentrations below the MECP Table 3 SCS. PAHs were not detected in samples MW32, MW33, MW34 or MW35, meeting the Table 3 SCS.

Metals

The groundwater analyses showed the presence of several metals in samples MW29, MW32, MW33, MW34, MW35, and MW36. The concentrations of all detected metals in the samples met the MECP Table 3 SCS.

6.7 Sediment Quality

Sediments were not present on the subject property.

6.8 Quality Assurance and Quality Control Results

6.8.1 Soil Sample QA/QC

The analytical laboratory (Paracel) used an internal QA/QC sample program for all analysis including method control blanks, duplicates and spikes. The results of this QA/QC program are provided in the analytical reports in **Appendix B**. In general, the Relative Percent Difference (RPD) and Percent Recovery (%REC) were within acceptable limits with a few minor exceptions that were easily rationalized by the lab, thus ensuring the quality of the data.

6.8.2 Groundwater Sample QA/QC

The analytical laboratory (Paracel) used an internal QA/QC sample program for all analysis including method control blanks, duplicates and spikes. The results of this QA/QC program are provided in the analytical reports in **Appendix B.** In general, the Relative Percent Difference (RPD) and Percent Recovery (%REC) were within acceptable limits with a few minor exceptions that were easily rationalized, thus ensuring the quality of the data.

6.9 Phase II Conceptual Site Model

6.9.1 PCAs, APECs and Utilities

One APECs was identified in the previous Phase I investigation which was the boiler room and UST location. COCs consisted of PHCs, metals and PAHs.

The Supplemental Investigation confirmed the presence of metals impacts in soil.

Given the distribution of metals impacts across the site, it is unlikely that subsurface utilities and structures on the subject site have an influence on metals contaminant transport and distribution.

As part of the proposed UST removal for the proposed building addition and service upgrades, the sanitary sewer lines will be further examined once the UST is removed.

6.9.2 Physical Setting

The overburden soil at the site consisted of silt, sand and gravel underlain by silty clay to clay and silty sand with gravel (possible weathered bedrock) to refusal on bedrock at 2.90-5.79 m bg.

Groundwater was encountered in an unconfined surficial aquifer at an average depth of 3.24 m bgs. Bedrock was not encountered during this investigation.

The subject site is not:

- considered an area of natural significance;

- within 30 metres of an area of natural significance;
- considered a shallow soil property;
- containing a water body; or
- within 30 metres of water body.

No easily identifiable areas of fill deposition were noted on the subject site.

6.9.3 Distribution of Contamination

Soil

The extent of soil impacts from this and previous investigations is summarized on **Figure 5** Soil Quality. Concentrations of PHCs, PAHs and metals were found to exceed the MECP Table 3 Site Condition Standards.

Groundwater

The extent of groundwater impacts from this and previous investigations is summarized **on Figure 6** Groundwater Quality. Concentrations of PHCs, PAHs and metals were found to exceed the MECP Table 3 Site Condition Standards.

The maximum concentrations of the COC in are provided in the tables section of the report.

Climatic and meteorological conditions are not expected to have any influence on the distribution of the contaminants.

6.9.4 Contamination and Exposure

The release mechanisms for PHCs, PAH and to a lesser degree metals is likely through the former use of petroleum products and coal for heating.

Metals impacts may be also attributed to historical activities (prior to 1920s) is the area.

Human receptors are considered valid through direct contact and/or ingestion of soil and/or dust. This would be mainly for short term construction activities below grade.

Indoor air exposure is also a valid pathway.

7 CONCLUSIONS

CM3 Environmental Inc. (CM3) was retained by the Ottawa Carleton District School Board (OCDSB) to carry out a Supplemental Environmental Site Investigation at Elmdale Public School, located at 49 Iona Street in Ottawa, Ontario (site or subject property). The purpose of the Supplemental Investigation was to assess the presence of potential contaminants of concern in areas of proposed construction beyond the extents of known soil and groundwater contamination at the site. The investigation was completed in support of a Site Plan Control Application for the City of Ottawa.

The supplemental investigation included the advancement of nine boreholes completed as monitoring wells to assess the presence of soil and groundwater PHCs F1-F4, PAHs and metals contamination at the site boundaries and in the areas of proposed construction. The results of the supplemental investigation are summarized as follows:

Site Characterization

- The soil at the site varied between borehole locations and included sand and gravel, silty sand, and gravel, silty clay, clay and sandy, gravelly clay to bedrock at 2.9 – 5.79 m bg. Bedrock was not investigated;
- Groundwater was present in the newly installed wells at an elevation of 96.93 m arl to 98.84 m arl, at average elevation of 97.89 m arl (3.24 m bg), during the March 2019 monitoring event;
- The inferred groundwater flow direction was north, based on the 2018 and historic monitoring events; and,
- LPH was not present in any monitoring wells during the investigation.

Soil Impacts

- Thirteen (13) soil samples were submitted for analysis of PHCs F1-F4 fractions, PAHs and metals;
    - PHCs F1-F4 fractions were either not detected or were present at concentrations below the MECP Table 3 SCS in all analysed samples;
    - PAHs were either not detected or were present at concentrations below the MECP Table 3 SCS in all analysed samples;
    - Cobalt and vanadium were present at concentrations above MECP Table 3 SCS in five samples from boreholes MW29, MW35, MW36 and MW37;
    - Barium was present at concentrations above MECP Table 3 SCS in two samples from boreholes MW29 and MW36; and
    - All other metals detected in the analysed samples were present at concentrations that met the MECP Table 3 SCS.

Groundwater Impacts

- All newly installed monitoring wells were sampled for PHCs F1-F4 fractions, PAHs and metals;
- PHCs F1-F4 fractions were not detected in any of the analysed samples, meeting the MECP Table 3 SCS;
- PAHS were either not detected or were present at concentrations below the MECP Table 3 SCS in all analysed samples; and
- Metals were either not detected or were present at concentrations below the MECP Table 3 SCS in all analysed samples.

The results of the supplemental investigation identified the presence of metals impacts (concentrations above applicable MECP standards) in soil at the northeast property boundary at borehole MW29. Metals impacts were also identified at boreholes MW35, MW36 and MW37 in the areas of the proposed addition and parking lot. The metals impacts were present in soil samples collected from depths of 0.76-1.52 m bg and at 3.05-3.81 m bg. Metals were present in all analysed samples collected at various depths, suggesting that metals impacted soils may be present in other areas of the site.

7.1.1 Source of PHC, PAH and Metals Contamination and Recommendations

The presence of PHCs, PAH and to a lesser degree metals is likely through the former use of petroleum products and coal for heating.

Metals impacts may be also attributed to historical activities (prior to 1920s) is the area.

Based on the Supplemental Phase II ESA results and the proposed building addition and service improvement plans, CM3 recommends:

- Soil remediation to the extents of the construction activities in the areas of concern;
- Removal of impacted groundwater as required for the construction activities;
- Removal of the UST;
- Soil sampling in accordance with O.Reg.153/04 at the limits of the excavations;
- Documenting and reporting of the above activities;
- Continuation of the Contaminant Management Plan (CMP).
- Assessment of residual contamination and evaluation of remedial options.

7.2 Signatures

The Supplemental Phase II Investigation was completed by the undersigned. All work completed as part of the Supplemental Phase II Investigation including field activities, review and interpretation of the data and preparation of the report was conducted either by a qualified person or under supervision of a qualified person.

We trust that the above is satisfactory for your purposes at this time. Please feel free to contact the undersigned if you have any questions.

Yours sincerely,

CM3 Environmental Inc.

Prepared by

Sean Parsons
Project Manager

Reviewed by

Marc MacDonald, P.Eng. QP
Principal

7.3 Statement of Limitations

This report has been prepared and the work referred to in this report has been undertaken by CM3 Environmental Inc. for OCDSB. It is intended for the sole and exclusive use of OCDSB, affiliated companies and partners and their respective insurers, agents, employees and advisors. Any use, reliance on, or decision made by any person other than OCDSB based on this report is the sole responsibility of such other person. OCDSB and CM3 Environmental Inc. make no representation or warranty to any other person with regard to this report and the work referred to in this report, and they accept no duty of care to any other person or any liability or responsibility whatsoever for any losses, expenses, damages, fines, penalties or other harm that may be suffered or incurred by any other person as a result of the use of, reliance on, any decision made or any action taken based on this report or the work referred to in this report.

The investigation undertaken by CM3 Environmental Inc. with respect to this report and any conclusions or recommendations made in this report reflect CM3 Environmental Inc.'s judgement based on the site conditions observed at the time of the site inspection on the date(s) set out in this report and on information available at the time of preparation of this report. This report has been prepared for specific application to this site and it is based, in part, upon visual observation of the site, subsurface investigation at discrete locations and depths, and specific analysis of specific chemical parameters and materials during a specific time interval, all as described in this report. Unless otherwise stated, the findings cannot be extended to previous or future site conditions, portions of the site which were unavailable for direct investigation, subsurface locations which were not investigated directly, or chemical parameters, materials or analysis which were not addressed. Substances other than those addressed by the investigation described in this report may exist within the site, substances addressed by the investigation may exist in areas of the site not investigated and concentrations of substances addressed which are different than those reported may exist in areas other than the location from which samples were taken.

If site conditions or applicable standards change or if any additional information becomes available at a future date, modifications to the findings, conclusions and recommendations in this report may be necessary.

Other than by Mr. OCDSB, copying or distribution of this report or use of or reliance on the information contained herein, in whole or in part, is not permitted without the express written permission of CM3 Environmental Inc. Nothing in this report is intended to constitute or provide a legal opinion.

8 REFERENCES

Soil, Groundwater and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act, Ontario Ministry of Environment, April 15, 2011, PIBS#7382e01;

Guide for Completing Phase Two Site Assessments under Ontario Regulation 153/04, Ontario Ministry of Environment, June 2011;

Guide for Completing Phase One Site Assessments under Ontario Regulation 153/04, Ontario Ministry of Environment, June 2011; and

Guidance for Environmental Site Assessments under Ontario Regulation 153/04 (as amended), Association of Professional Geoscientists of Ontario, April 2011.

FIGURES

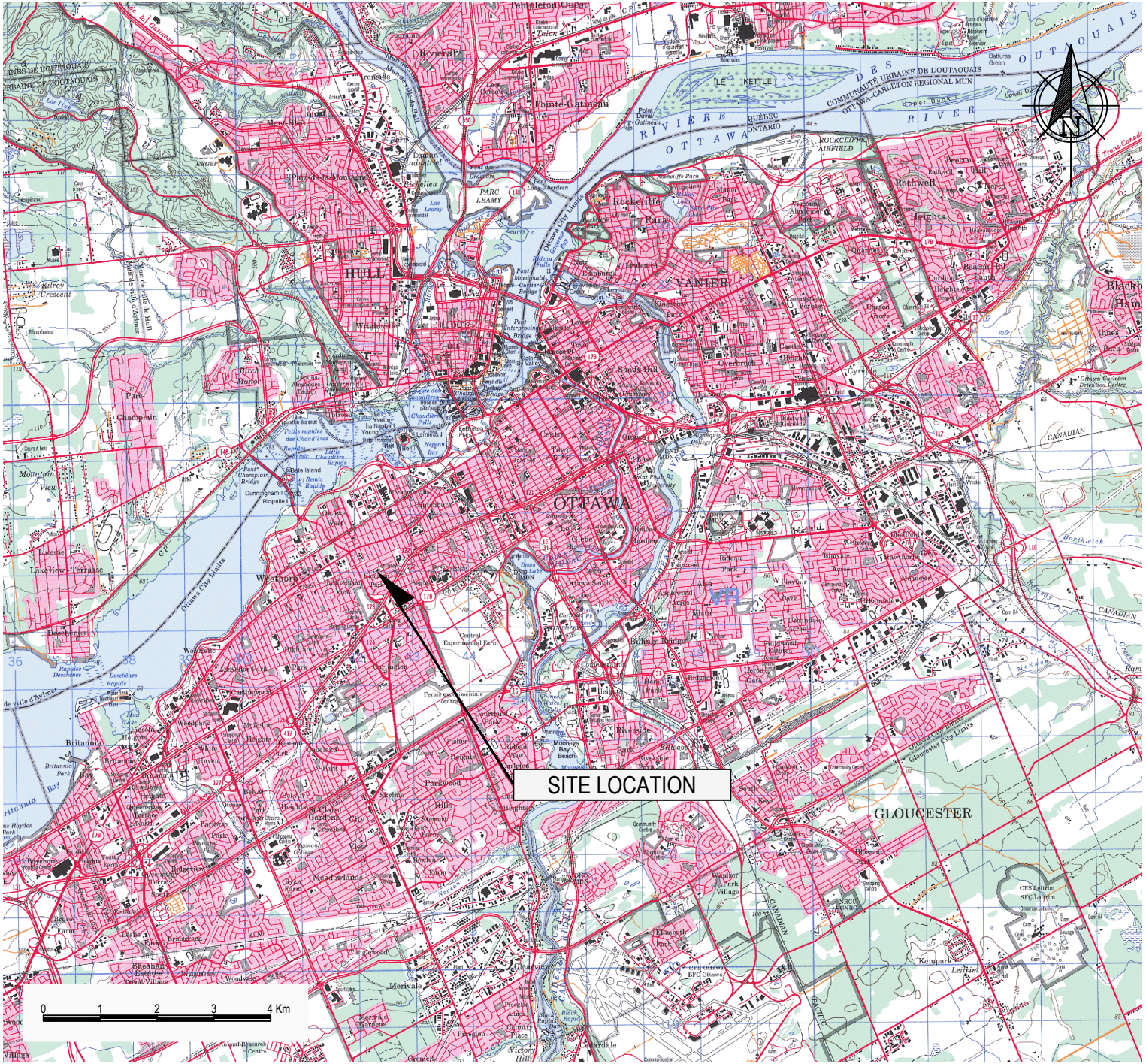
Ottawa Carleton District School Board

Supplemental Environmental Site Investigation

Elmdale Public School

49 Iona Street, Ottawa, Ontario

MM1027



CM3 ENVIRONMENTAL
5710 AKINS ROAD, OTTAWA, ON
K2S 1B8

OCDSB

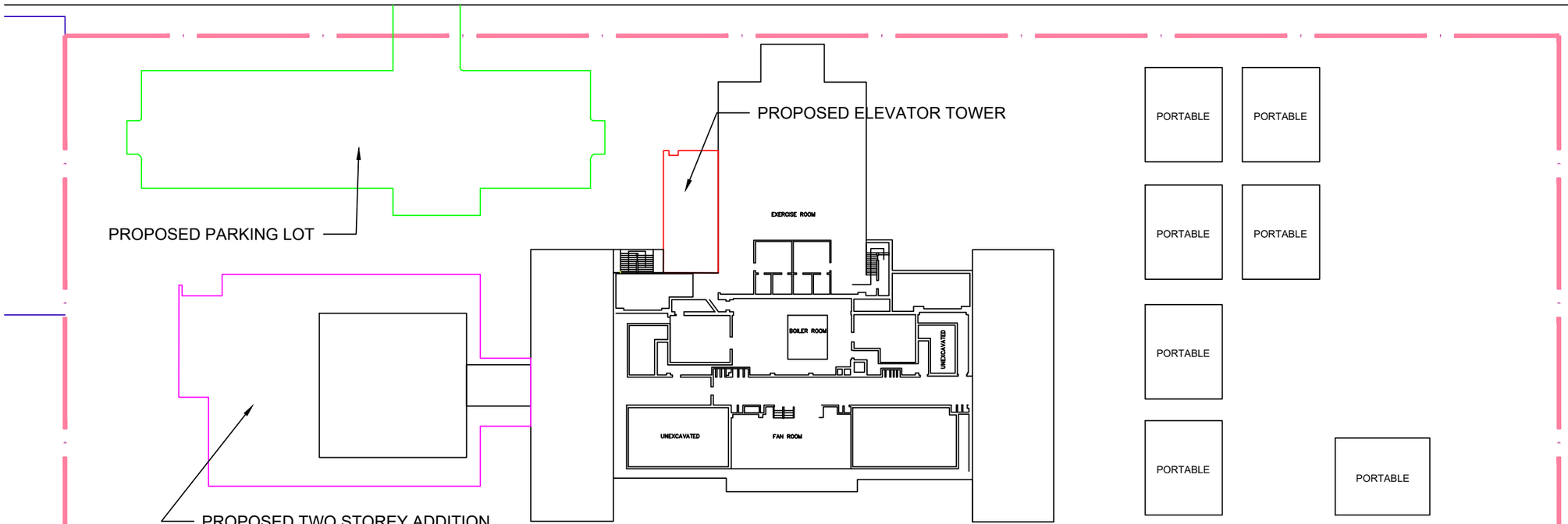
SUPPLEMENTAL ENVIRONMENTAL SITE INVESTIGATION
ELMDALE PUBLIC SCHOOL
49 IONA STREET, OTTAWA, ON

SITE LOCATION

Project: MM1027	Drawn By: MWM
Date: APR 2019	Reviewed By: MM
Scale: AS SHOWN	Figure: 1

RESIDENTIAL

JAVA STREET



IONA STREET

RESIDENTIAL

LEGEND

- PROPERTY BOUNDARY (APPROX.)
- PROPOSED PARKING LOT
- PROPOSED NEW ADDITION
- PROPOSED NEW ELEVATOR ADDITION

Scale 1:600

0 4 8 12 16 20

(Approx. When plotted 11x17)

CM3 ENVIRONMENTAL
5710 AKINS ROAD, OTTAWA, ON
K2S 1B8

OCDSB

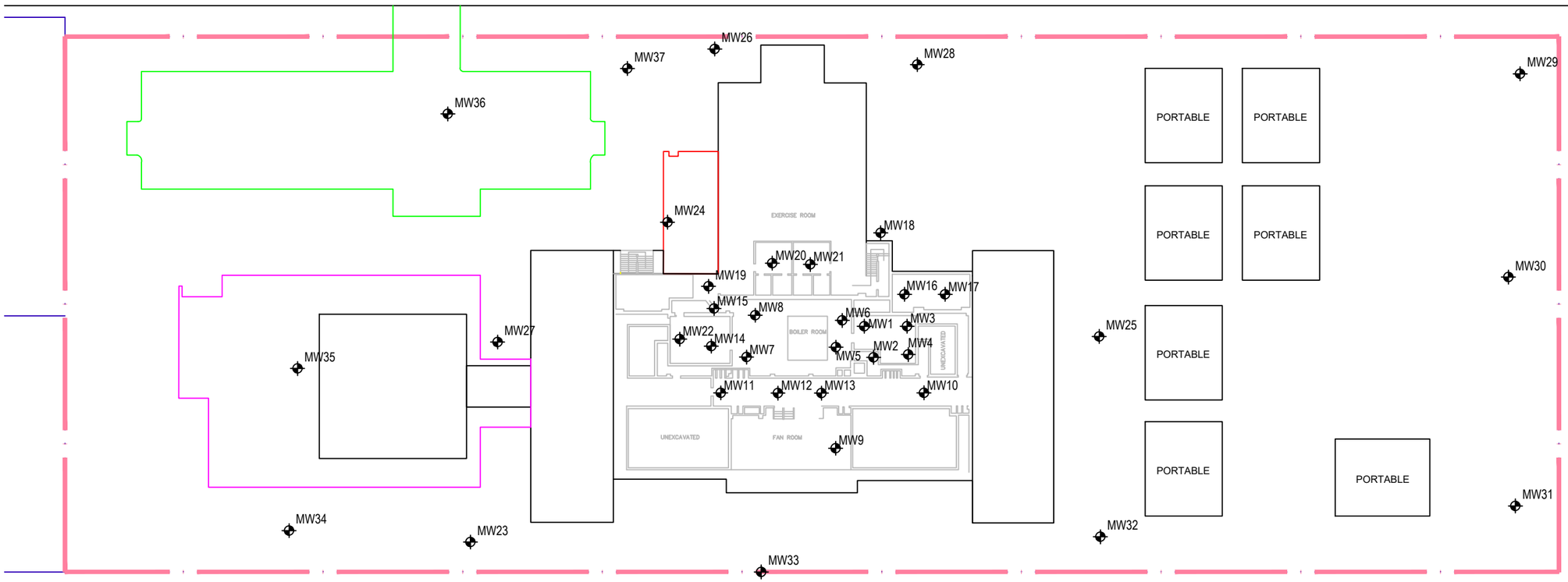
SUPPLEMENTAL ENVIRONMENTAL SITE INVESTIGATION
ELMDALE PUBLIC SCHOOL
49 IONA STREET, OTTAWA, ON

SITE PLAN

Project:	Drawn By:
MM1027	KS
Date:	Reviewed By:
APRIL 2019	MM
Scale:	Figure:
1:600	2

RESIDENTIAL

JAVA STREET



IONA STREET

RESIDENTIAL

LEGEND

- PROPERTY BOUNDARY (APPROX.)
- PROPOSED PARKING LOT
- PROPOSED NEW ADDITION
- PROPOSED NEW ELEVATOR ADDITION
- BOREHOLE
- MONITORING WELL

Scale 1:600

0 4 8 12 16 20

(Approx. When plotted 11x17)

CM3 ENVIRONMENTAL
5710 AKINS ROAD, OTTAWA, ON
K2S 1B8

OTTAWA-CARLETON DISTRICT SCHOOL BOARD

OCDSB

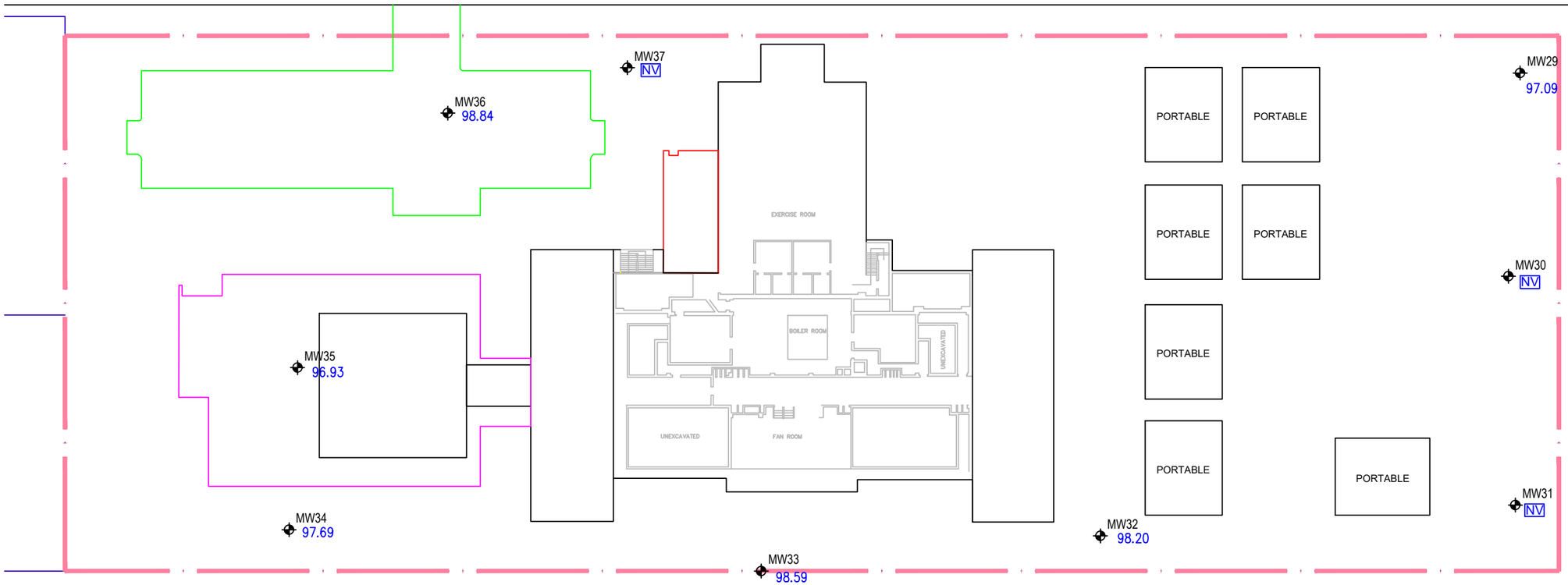
SUPPLEMENTAL ENVIRONMENTAL SITE INVESTIGATION
ELMDALE PUBLIC SCHOOL
49 IONA STREET, OTTAWA, ON

BOREHOLE AND MONITORING WELL LOCATIONS

Project: MM1027	Drawn By: KS
Date: APRIL 2019	Reviewed By: MM
Scale: 1:600	Figure: 3

RESIDENTIAL

JAVA STREET



IONA STREET

RESIDENTIAL

LEGEND

- PROPERTY BOUNDARY (APPROX.)
- PROPOSED PARKING LOT
- PROPOSED NEW ADDITION
- PROPOSED NEW ELEVATOR ADDITION
- MONITORING WELL
- 97.09 GROUNDWATER ELEVATION (m.a.r.l)
- NV NO VALUE GROUNDWATER ELEVATION (m.a.r.l)

Scale 1:600

0 4 8 12 16 20

(Approx. When plotted 11x17)

CM3 ENVIRONMENTAL
5710 AKINS ROAD, OTTAWA, ON
K2S 1B8

OCDSB

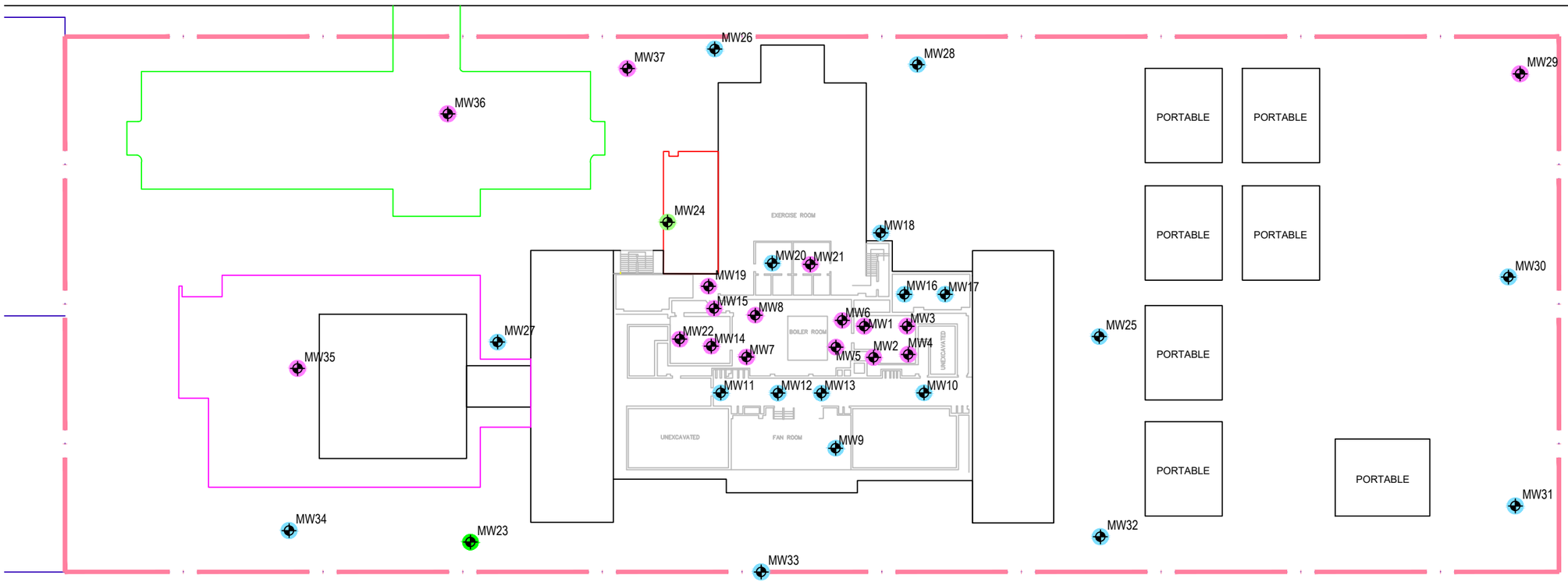
SUPPLEMENTAL ENVIRONMENTAL SITE INVESTIGATION
ELMDALE PUBLIC SCHOOL
49 IONA STREET, OTTAWA, ON

GROUNDWATER ELEVATIONS
MARCH 26, 2019

Project: MM1027	Drawn By: KS
Date: APRIL 2019	Reviewed By: MM
Scale: 1:600	Figure: 4

RESIDENTIAL

JAVA STREET



IONA STREET

RESIDENTIAL

LEGEND

- PROPERTY BOUNDARY (APPROX.)
- PROPOSED PARKING LOT
- PROPOSED NEW ADDITION
- PROPOSED NEW ELEVATOR ADDITION
- MONITORING WELL

SOIL SAMPLES ANALYSED:

- PHCs, PAHs AND OR METALS NOT DETECTED
- PHCs, PAHs AND OR METAL CONCENTRATIONS < MECP TABLE 3 SCS
- PHCs, PAHs AND METAL CONCENTRATIONS > MECP TABLE 3 SCS

*REFER TO TABLES 2-4 FOR SOIL ANALYTICAL RESULTS (INCLUDING HISTORICAL DATA)

Scale 1:600

0 4 8 12 16 20

(Approx. When plotted 11x17)

CM3 ENVIRONMENTAL
5710 AKINS ROAD, OTTAWA, ON
K2S 1B8

OCDSB

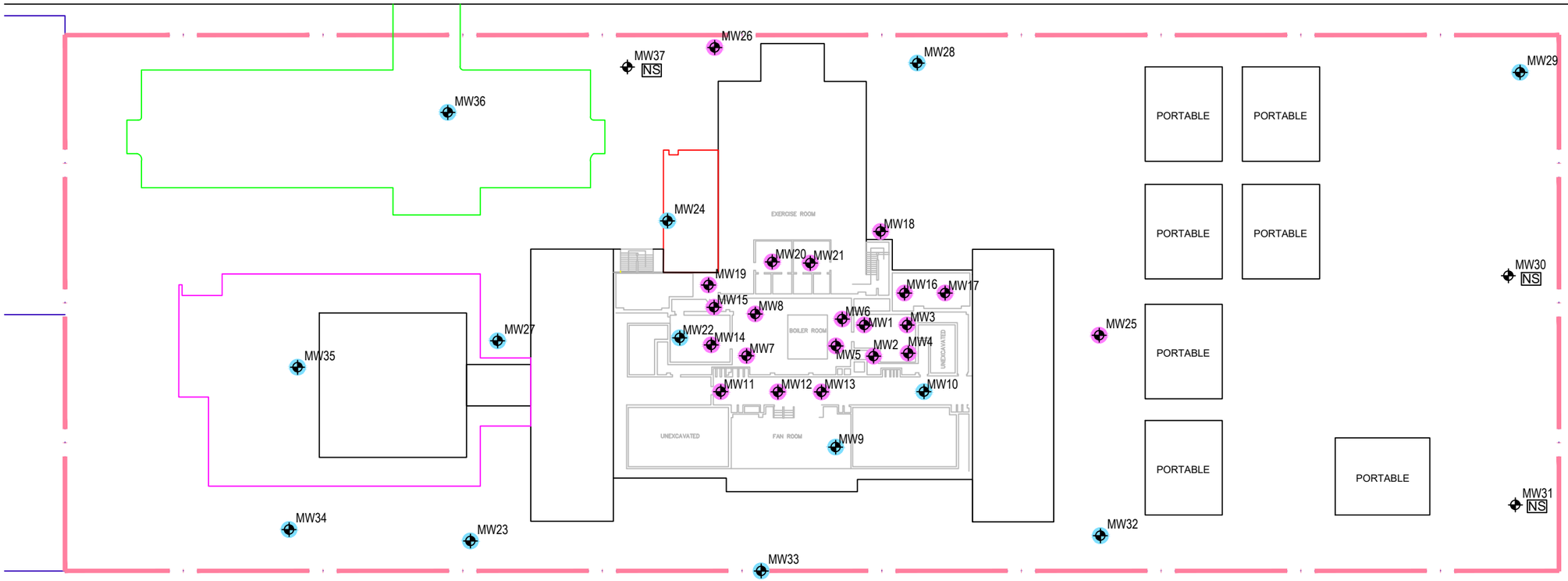
SUPPLEMENTAL ENVIRONMENTAL SITE INVESTIGATION
ELMDALE PUBLIC SCHOOL
49 IONA STREET, OTTAWA, ON

SOIL QUALITY

Project: MM1027	Drawn By: KS
Date: APRIL 2019	Reviewed By: MM
Scale: 1:600	Figure: 5

RESIDENTIAL

JAVA STREET



IONA STREET

RESIDENTIAL

LEGEND

- PROPERTY BOUNDARY (APPROX.)
- PROPOSED PARKING LOT
- PROPOSED NEW ADDITION
- PROPOSED NEW ELEVATOR ADDITION
- MONITORING WELL

GROUNDWATER SAMPLES ANALYSED:

- PHCs, PAHs AND OR METALS NOT DETECTED
- PHCs, PAHs AND OR METAL CONCENTRATIONS < MECP TABLE 3 SCS
- PHCs, PAHs AND OR METAL CONCENTRATIONS > MECP TABLE 3 SCS
- NS NOT SAMPLED

*REFER TO TABLES 5-7 FOR GROUNDWATER ANALYTICAL RESULTS (INCLUDING HISTORICAL DATA)

Scale 1:600

0 4 8 12 16 20

(Approx. When plotted 11x17)

CM3 ENVIRONMENTAL
5710 AKINS ROAD, OTTAWA, ON
K2S 1B8

OCDSB

SUPPLEMENTAL ENVIRONMENTAL SITE INVESTIGATION
ELMDALE PUBLIC SCHOOL
49 IONA STREET, OTTAWA, ON

GROUNDWATER QUALITY
MARCH 26, 2019

Project:	Drawn By:
MM1027	KS
Date:	Reviewed By:
APRIL 2019	MM
Scale:	Figure:
1:600	6

TABLES

Ottawa Carleton District School Board

Supplemental Environmental Site Investigation

Elmdale Public School

49 Iona Street, Ottawa, Ontario

MM1027

Table 1:
LPH and Groundwater Level Measurements
Elmdale P.S.
49 Iona Street Ottawa, Ontario
MM1027

Well ID	Date	TOC (marl)	Grade (marl)	Depth to		Elevation		Comments
				LPH (mbtoc)	GW (mbtoc)	LPH (marl)	GW (marl)	
MW1	11-Nov-09	NS	NS		0.384	--	--	Strong Odour
MW1	25-Mar-10	NS	NS		0.378	--	--	
MW1	20-Dec-12	NS	NS		0.476	--	--	
MW1	24-Jul-13	NS	NS		0.425	--	--	
MW1	19-Aug-14	NS	NS		0.423	--	--	
MW1	14-Jan-15	NS	NS		0.414	--	--	
MW1	21-Aug-15	NS	NS		0.489	--	--	
MW1	18-Nov-15	NS	NS		0.670	--	--	
MW1	29-Nov-16	NS	NS		0.403	--	--	
MW1	27-Jun-17	NS	NS		0.515	--	--	
MW1	18-Dec-17	NS	NS		0.609	--	--	
MW1	10-Jul-18	NS	NS		0.422	--	--	
MW1	16-Nov-18	NS	NS		0.436	--	--	
MW2	11-Nov-09	NS	NS		0.279	--	--	
MW2	25-Mar-10	NS	NS		0.267	--	--	
MW2	20-Dec-12	NS	NS		0.476	--	--	
MW2	24-Jul-13	NS	NS		0.301	--	--	
MW2	19-Aug-14	NS	NS		0.318	--	--	
MW2	14-Jan-15	NS	NS		0.301	--	--	
MW2	21-Aug-15	NS	NS		0.386	--	--	
MW2	18-Nov-15	NS	NS		0.575	--	--	
MW2	12-Aug-16	NS	NS		-	--	--	Dry
MW2	29-Nov-16	NS	NS		0.285	--	--	
MW2	27-Jun-17	NS	NS		0.313	--	--	
MW2	18-Dec-17	NS	NS		0.411	--	--	
MW2	10-Jul-18	NS	NS		0.312	--	--	
MW2	16-Nov-18	NS	NS		0.349	--	--	
MW3	11-Nov-09	NS	NS		0.442	--	--	Strong Odour
MW3	25-Mar-10	NS	NS		0.437	--	--	
MW3	20-Dec-12	NS	NS		0.765	--	--	
MW3	24-Jul-13	NS	NS		0.432	--	--	
MW3	19-Aug-14	NS	NS		0.472	--	--	
MW3	14-Jan-15	NS	NS		0.474	--	--	
MW3	21-Aug-15	NS	NS		0.753	--	--	
MW3	18-Nov-15	NS	NS		0.774	--	--	
MW3	29-Nov-16	NS	NS		0.446	--	--	
MW3	27-Jun-17	NS	NS		0.463	--	--	
MW3	18-Dec-17	NS	NS		0.506	--	--	
MW3	10-Jul-18	NS	NS		0.485	--	--	
MW3	16-Nov-18	NS	NS		0.574	--	--	
MW4	11-Nov-09	NS	NS		0.429	--	--	LPH
MW4	25-Mar-10	NS	NS		0.419	--	--	
MW4	20-Dec-12	NS	NS		0.654	--	--	
MW4	24-Jul-13	NS	NS		0.461	--	--	
MW4	19-Aug-14	NS	NS		0.285	--	--	
MW4	14-Jan-15	NS	NS		0.470	--	--	
MW4	21-Aug-15	NS	NS		-	--	--	Dry
MW4	18-Nov-15	NS	NS		-	--	--	Dry
MW4	12-Aug-16	NS	NS		-	--	--	Dry
MW4	29-Nov-16	NS	NS		0.472	--	--	
MW4	27-Jun-17	NS	NS		0.487	--	--	
MW4	10-Jul-18	NS	NS		0.462	--	--	
MW4	16-Nov-18	NS	NS		0.548	--	--	
MW5	11-Nov-09	NS	NS		0.334	--	--	
MW5	25-Mar-10	NS	NS		0.330	--	--	
MW5	20-Dec-12	NS	NS		0.441	--	--	
MW5	24-Jul-13	NS	NS		0.313	--	--	
MW5	19-Aug-14	NS	NS		0.305	--	--	
MW5	14-Jan-15	NS	NS		0.564	--	--	
MW5	21-Aug-15	NS	NS		0.420	--	--	
MW5	18-Nov-15	NS	NS		0.494	--	--	
MW5	12-Aug-16	NS	NS		0.502	--	--	
MW5	29-Nov-16	NS	NS		0.323	--	--	
MW5	27-Jun-17	NS	NS		0.302	--	--	
MW5	18-Dec-17	NS	NS		0.401	--	--	
MW5	10-Jul-18	NS	NS		0.316	--	--	
MW5	16-Nov-18	NS	NS		0.321	--	--	
MW6	11-Nov-09	NS	NS		0.356	--	--	
MW6	25-Mar-10	NS	NS		0.358	--	--	
MW6	20-Dec-12	NS	NS		0.585	--	--	
MW6	24-Jul-13	NS	NS		0.332	--	--	
MW6	19-Aug-14	NS	NS		0.387	--	--	
MW6	14-Jan-15	NS	NS		0.382	--	--	
MW6	21-Aug-15	NS	NS		0.603	--	--	
MW6	18-Nov-15	NS	NS		0.610	--	--	
MW6	12-Aug-16	NS	NS		0.714	--	--	
MW6	29-Nov-16	NS	NS		0.363	--	--	
MW6	27-Jun-17	NS	NS		0.383	--	--	
MW6	18-Dec-17	NS	NS		0.433	--	--	
MW6	10-Jul-18	NS	NS		0.386	--	--	
MW6	16-Nov-18	NS	NS		0.403	--	--	

Table 1:
LPH and Groundwater Level Measurements
Elmdale P.S.
49 Iona Street Ottawa, Ontario
MM1027

Well ID	Date	TOC (marl)	Grade (marl)	Depth to		Elevation		Comments
				LPH (mbtoc)	GW (mbtoc)	LPH (marl)	GW (marl)	
MW7	25-Mar-10	NS	NS		0.388	--	--	
MW7	20-Dec-12	NS	NS		0.388	--	--	
MW7	24-Jul-13	NS	NS		0.362	--	--	
MW7	19-Aug-14	NS	NS		0.346	--	--	
MW7	14-Jan-15	NS	NS		0.351	--	--	
MW7	21-Aug-15	NS	NS		0.389	--	--	
MW7	18-Nov-15	NS	NS		0.376	--	--	
MW7	12-Aug-16	NS	NS		0.421	--	--	
MW7	29-Nov-16	NS	NS		0.361	--	--	
MW7	27-Jun-17	NS	NS		0.356	--	--	
MW7	18-Dec-17	NS	NS		0.428	--	--	
MW7	10-Jul-18	NS	NS		0.284	--	--	
MW7	16-Nov-18	NS	NS		0.289	--	--	
MW8	25-Mar-10	NS	NS		0.409	--	--	
MW8	20-Dec-12	NS	NS		0.500	--	--	
MW8	19-Aug-14	NS	NS		0.435	--	--	
MW8	14-Jan-15	NS	NS		0.471	--	--	
MW8	21-Aug-15	NS	NS		0.482	--	--	
MW8	18-Nov-15	NS	NS		0.471	--	--	
MW8	12-Aug-16	NS	NS		0.552	--	--	
MW8	29-Nov-16	NS	NS		0.406	--	--	
MW8	27-Jun-17	NS	NS		0.328	--	--	
MW8	18-Dec-17	NS	NS		0.406	--	--	
MW8	10-Jul-18	NS	NS		0.418	--	--	
MW8	16-Nov-18	NS	NS		0.411	--	--	
MW9	25-Mar-10	NS	NS		0.566	--	--	
MW9	20-Dec-12	NS	NS		1.205	--	--	
MW9	24-Jul-13	NS	NS		1.085	--	--	
MW9	19-Aug-14	NS	NS		1.042	--	--	
MW9	14-Jan-15	NS	NS		1.036	--	--	
MW9	21-Aug-15	NS	NS		1.512	--	--	
MW9	18-Nov-15	NS	NS		1.399	--	--	
MW9	12-Aug-16	NS	NS		1.723	--	--	
MW9	29-Nov-16	NS	NS		1.262	--	--	
MW9	27-Jun-17	NS	NS		0.685	--	--	
MW9	18-Dec-17	NS	NS		0.771	--	--	
MW9	10-Jul-18	NS	NS		1.109	--	--	
MW9	16-Nov-18	NS	NS		0.692	--	--	
MW10	25-Mar-10	NS	NS		1.649	--	--	
MW10	20-Dec-12	NS	NS		2.555	--	--	
MW10	24-Jul-13	NS	NS		2.175	--	--	
MW10	19-Aug-14	NS	NS		2.261	--	--	
MW10	14-Jan-15	NS	NS		2.075	--	--	
MW10	21-Aug-15	NS	NS		2.837	--	--	
MW10	18-Nov-15	NS	NS		2.708	--	--	
MW10	12-Aug-16	NS	NS		-	--	--	Dry
MW10	29-Nov-16	NS	NS		2.681	--	--	
MW10	27-Jun-17	NS	NS		1.953	--	--	
MW10	18-Dec-17	NS	NS		2.081	--	--	
MW10	10-Jul-18	NS	NS		2.262	--	--	
MW10	16-Nov-18	NS	NS		2.242	--	--	
MW11	25-Mar-10	NS	NS		1.415	--	--	
MW11	20-Dec-12	NS	NS		2.280	--	--	
MW11	24-Jul-13	NS	NS		1.815	--	--	
MW11	19-Aug-14	NS	NS		1.764	--	--	
MW11	14-Jan-15	NS	NS		1.765	--	--	
MW11	21-Aug-15	NS	NS		2.362	--	--	
MW11	18-Nov-15	NS	NS		2.221	--	--	
MW11	12-Aug-16	NS	NS		2.866	--	--	
MW11	29-Nov-16	NS	NS		1.881	--	--	
MW11	27-Jun-17	NS	NS		1.524	--	--	
MW11	18-Dec-17	NS	NS		1.832	--	--	
MW11	10-Jul-18	NS	NS		1.852	--	--	
MW11	16-Nov-18	NS	NS		1.571	--	--	
MW12	25-Mar-10	NS	NS		1.458	--	--	
MW12	20-Dec-12	NS	NS		-	--	--	Dry
MW12	24-Jul-13	NS	NS		1.832	--	--	
MW12	19-Aug-14	NS	NS		1.834	--	--	
MW12	14-Jan-15	NS	NS		1.795	--	--	
MW12	21-Aug-15	NS	NS		-	--	--	Dry
MW12	18-Nov-15	NS	NS		-	--	--	Dry
MW12	12-Aug-16	NS	NS		-	--	--	Dry
MW12	29-Nov-16	NS	NS		1.951	--	--	
MW12	27-Jun-17	NS	NS		1.656	--	--	
MW12	10-Jul-18	NS	NS		1.849	--	--	
MW12	16-Nov-18	NS	NS		1.546	--	--	
MW13	25-Mar-10	NS	NS		1.726	--	--	
MW13	20-Dec-12	NS	NS		2.436	--	--	
MW13	24-Jul-13	NS	NS		2.172	--	--	
MW13	19-Aug-14	NS	NS		2.198	--	--	

Table 1:
LPH and Groundwater Level Measurements
Elmdale P.S.
49 Iona Street Ottawa, Ontario
MM1027

Well ID	Date	TOC (marl)	Grade (marl)	Depth to LPH (mbtoc)	Depth to GW (mbtoc)	Elevation LPH (marl)	Elevation GW (marl)	Comments
MW13	14-Jan-15	NS	NS		2.030	--	--	
MW13	21-Aug-15	NS	NS		2.601	--	--	
MW13	18-Nov-15	NS	NS		2.515	--	--	
MW13	12-Aug-16	NS	NS		-	--	--	Dry
MW13	27-Jun-17	NS	NS		1.933	--	--	
MW13	18-Dec-17	NS	NS		2.005	--	--	
MW13	10-Jul-18	NS	NS		2.224	--	--	
MW13	16-Nov-18	NS	NS		2.151	--	--	
MW14	25-Mar-10	NS	NS		0.165	--	--	
MW14	20-Dec-12	NS	NS		0.280	--	--	
MW14	24-Jul-13	NS	NS		0.301	--	--	
MW14	19-Aug-14	NS	NS		0.276	--	--	
MW14	Jan 14,1 5	NS	NS		0.291	--	--	
MW14	21-Aug-15	NS	NS		0.293	--	--	
MW14	18-Nov-15	NS	NS		0.225	--	--	
MW14	12-Aug-16	NS	NS		0.506	--	--	
MW14	29-Nov-16	NS	NS		0.269	--	--	
MW14	27-Jun-17	NS	NS		0.150	--	--	
MW14	18-Dec-17	NS	NS		0.272	--	--	
MW14	10-Jul-18	NS	NS		0.225	--	--	
MW14	16-Nov-18	NS	NS		0.155	--	--	
MW15	25-Mar-10	NS	NS		0.205	--	--	
MW15	20-Dec-12	NS	NS		0.642	--	--	
MW15	24-Jul-13	NS	NS		0.432	--	--	
MW15	19-Aug-14	NS	NS		0.461	--	--	
MW15	14-Jan-15	NS	NS		0.564	--	--	
MW15	21-Aug-15	NS	NS		0.567	--	--	
MW15	18-Nov-15	NS	NS		-	--	--	Dry
MW15	12-Aug-16	NS	NS		0.822	--	--	
MW15	29-Nov-16	NS	NS		0.423	--	--	
MW15	27-Jun-17	NS	NS		0.200	--	--	
MW15	18-Dec-17	NS	NS		0.412	--	--	
MW15	10-Jul-18	NS	NS		0.331	--	--	
MW15	16-Nov-18	NS	NS		0.362	--	--	
MW16	25-Mar-10	NS	NS		3.631	--	--	
MW16	20-Dec-12	NS	NS		4.226	--	--	
MW16	24-Jul-13	NS	NS		3.442	--	--	
MW16	19-Aug-14	NS	NS		3.994	--	--	
MW16	14-Jan-15	NS	NS		4.035	--	--	
MW16	21-Aug-15	NS	NS		4.158	--	--	
MW16	18-Nov-15	NS	NS		4.191	--	--	
MW16	12-Aug-16	NS	NS		4.251	--	--	
MW16	29-Nov-16	NS	NS		4.186	--	--	
MW16	27-Jun-17	NS	NS		3.839	--	--	
MW16	18-Dec-17	NS	NS		4.011	--	--	
MW16	10-Jul-18	NS	NS		3.984	--	--	
MW16	16-Nov-18	NS	NS		3.961	--	--	
MW17	25-Mar-10	NS	NS		3.429	--	--	
MW17	20-Dec-12	NS	NS		4.207	--	--	
MW17	24-Jul-13	NS	NS		3.871	--	--	
MW17	19-Aug-14	NS	NS		3.871	--	--	
MW17	14-Jan-15	NS	NS		3.838	--	--	
MW17	21-Aug-15	NS	NS		4.106	--	--	
MW17	18-Nov-15	NS	NS		3.309	--	--	
MW17	12-Aug-16	NS	NS		4.288	--	--	
MW17	29-Nov-16	NS	NS		3.383	--	--	
MW17	27-Jun-17	NS	NS		3.724	--	--	
MW17	18-Dec-17	NS	NS		4.301	--	--	
MW17	10-Jul-18	NS	NS		3.902	--	--	
MW17	16-Nov-18	NS	NS		3.989	--	--	
MW18	25-Mar-10	NS	NS		3.806	--	--	
MW18	24-Jul-13	NS	NS		3.935	--	--	
MW18	19-Aug-14	NS	NS		3.892	--	--	
MW18	21-Aug-15	NS	NS		4.034	--	--	
MW18	18-Nov-15	NS	NS		4.088	--	--	
MW18	12-Aug-16	NS	NS		4.141	--	--	
MW18	29-Nov-16	NS	NS		4.033	--	--	
MW18	27-Jun-17	NS	NS		3.926	--	--	
MW18	18-Dec-17	NS	NS		4.204	--	--	
MW18	10-Jul-18	NS	NS		4.085	--	--	
MW18	16-Nov-18	NS	NS		3.911	--	--	
MW19	20-Jul-10	NS	NS		0.450	--	--	
MW19	20-Dec-12	NS	NS		0.695	--	--	
MW19	19-Aug-14	NS	NS		0.443	--	--	
MW19	14-Jan-15	NS	NS		0.617	--	--	
MW19	21-Aug-15	NS	NS		0.659	--	--	
MW19	18-Nov-15	NS	NS		0.473	--	--	
MW19	12-Aug-16	NS	NS		0.702	--	--	
MW19	29-Nov-16	NS	NS		0.439	--	--	
MW19	27-Jun-17	NS	NS		0.150	--	--	

Table 1:
LPH and Groundwater Level Measurements
Elmdale P.S.
49 Iona Street Ottawa, Ontario
MM1027

Well ID	Date	TOC (marl)	Grade (marl)	Depth to LPH (mbtoc)	Depth to GW (mbtoc)	Elevation LPH (marl)	Elevation GW (marl)	Comments
MW19	18-Dec-17	NS	NS		0.382	--	--	
MW19	10-Jul-18	NS	NS		0.332	--	--	
MW19	16-Nov-18	NS	NS		0.222	--	--	
MW20	20-Jul-10	NS	NS		0.813	--	--	
MW20	20-Dec-12	NS	NS		1.124	--	--	
MW20	19-Aug-14	NS	NS		0.789	--	--	
MW20	14-Jan-15	NS	NS		0.970	--	--	
MW20	21-Aug-15	NS	NS		0.950	--	--	
MW20	18-Nov-15	NS	NS		-	--	--	Dry
MW20	12-Aug-16	NS	NS		1.033	--	--	
MW20	29-Nov-16	NS	NS		0.789	--	--	
MW20	27-Jun-17	NS	NS		0.521	--	--	
MW20	18-Dec-17	NS	NS		0.611	--	--	
MW20	10-Jul-18	NS	NS		0.707	--	--	
MW20	16-Nov-18	NS	NS		0.711	--	--	
MW21	20-Jul-10	NS	NS		0.956	--	--	
MW21	20-Dec-12	NS	NS		1.174	--	--	
MW21	19-Aug-14	NS	NS		0.905	--	--	
MW21	14-Jan-15	NS	NS		1.083	--	--	
MW21	21-Aug-15	NS	NS		0.970	--	--	
MW21	18-Nov-15	NS	NS		0.854	--	--	
MW21	12-Aug-16	NS	NS		1.067	--	--	
MW21	29-Nov-16	NS	NS		0.852	--	--	
MW21	27-Jun-17	NS	NS		0.671	--	--	
MW21	18-Dec-17	NS	NS		0.688	--	--	
MW21	10-Jul-18	NS	NS		0.836	--	--	
MW21	16-Nov-18	NS	NS		0.728	--	--	
MW22	20-Jul-10	NS	NS		0.100	--	--	
MW22	20-Dec-12	NS	NS		0.234	--	--	
MW22	24-Jul-13	NS	NS		0.212	--	--	
MW22	19-Aug-14	NS	NS		0.195	--	--	
MW22	14-Jan-15	NS	NS		0.216	--	--	
MW22	21-Aug-15	NS	NS		0.219	--	--	
MW22	18-Nov-15	NS	NS		0.210	--	--	
MW22	12-Aug-16	NS	NS		0.439	--	--	
MW22	27-Jun-17	NS	NS		0.200	--	--	
MW22	18-Dec-17	NS	NS		0.254	--	--	
MW22	10-Jul-18	NS	NS		0.218	--	--	
MW22	16-Nov-18	NS	NS		0.145	--	--	
MW23	26-Jul-11	100.000	100.110		2.182	--	97.818	
MW23	5-Aug-11	100.000	100.110		2.180	--	97.820	
MW23	20-Dec-12	100.000	100.110		2.015	--	97.985	
MW23	24-Jul-13	100.000	100.110		2.135	--	97.865	
MW23	19-Aug-14	100.000	100.110		2.000	--	98.000	
MW23	21-Aug-15	100.000	100.110		1.990	--	98.010	
MW23	18-Nov-15	100.000	100.110		1.950	--	98.050	
MW23	12-Aug-16	100.000	100.110		2.138	--	97.862	
MW23	29-Nov-16	100.000	100.110		1.834	--	98.166	
MW23	27-Jun-17	100.000	100.110		1.752	--	98.248	
MW23	10-Jul-18	100.000	100.110		2.076	--	97.924	
MW23	16-Nov-18	100.000	100.110		1.746	--	98.254	
MW24	26-Jul-11	100.020	100.120		3.636	--	96.384	
MW24	5-Aug-11	100.020	100.120		3.997	--	96.023	
MW24	20-Dec-12	100.020	100.120		4.022	--	95.998	
MW24	19-Aug-14	100.020	100.120		3.062	--	96.958	
MW24	21-Aug-15	100.020	100.120		3.459	--	96.561	
MW24	18-Nov-15	100.020	100.120		3.085	--	96.935	
MW24	12-Aug-16	100.020	100.120		3.325	--	96.695	
MW24	29-Nov-16	100.020	100.120		2.946	--	97.074	
MW24	27-Jun-17	100.020	100.120		2.756	--	97.264	
MW24	10-Jul-18	100.020	100.120		3.032	--	96.988	
MW24	16-Nov-18	100.020	100.120		2.909	--	97.111	
MW25	26-Jul-11	99.215	99.335		2.597	--	96.618	
MW25	5-Aug-11	99.215	99.335		2.700	--	96.515	
MW25	19-Aug-14	99.215	99.335		2.284	--	96.931	
MW25	21-Aug-15	99.215	99.335		2.467	--	96.748	
MW25	18-Nov-15	99.215	99.335		2.535	--	96.680	
MW25	12-Aug-16	99.215	99.335		2.831	--	96.384	
MW25	29-Nov-16	99.215	99.335		2.567	--	96.648	
MW25	27-Jun-17	99.215	99.335		2.203	--	97.012	
MW25	10-Jul-18	99.215	99.335		2.738	--	96.477	
MW25	16-Nov-18	99.215	99.335		2.211	--	97.004	
MW26	26-Jul-11	99.720	99.815		3.385	--	96.335	
MW26	5-Aug-11	99.720	99.815		3.720	--	96.000	
MW26	20-Dec-12	99.720	99.815		3.668	--	96.052	
MW26	19-Aug-14	99.720	99.815		3.152	--	96.568	
MW26	21-Aug-15	99.720	99.815		3.505	--	96.215	
MW26	18-Nov-15	99.720	99.815		3.270	--	96.450	
MW26	12-Aug-16	99.720	99.815		2.536	--	97.184	

Table 1:
LPH and Groundwater Level Measurements
Elmdale P.S.
49 Iona Street Ottawa, Ontario
MM1027

Well ID	Date	TOC (marl)	Grade (marl)	Depth to		Elevation		Comments
				LPH (mbtoc)	GW (mbtoc)	LPH (marl)	GW (marl)	
MW26	29-Nov-16	99.720	99.815		3.136	--	96.584	
MW26	27-Jun-17	99.720	99.815		2.997	--	96.723	
MW26	10-Jul-18	99.720	99.815		3.378	--	96.342	
MW26	16-Nov-18	99.720	99.815		2.064	--	97.656	
MW27	26-Jul-11	100.475	100.560		2.763	--	97.712	
MW27	5-Aug-11	100.475	100.560		2.940	--	97.535	
MW27	20-Dec-12	100.475	100.560		3.294	--	97.181	
MW27	19-Aug-14	100.475	100.560		2.546	--	97.929	
MW27	21-Aug-15	100.475	100.560		2.879	--	97.596	
MW27	18-Nov-15	100.475	100.560		2.510	--	97.965	
MW27	12-Aug-16	100.475	100.560		3.279	--	97.196	
MW27	29-Nov-16	100.475	100.560		2.842	--	97.633	
MW27	27-Jun-17	100.475	100.560		2.461	--	98.014	
MW27	18-Dec-17	100.475	100.560		3.081	--	97.394	
MW27	10-Jul-18	100.475	100.560		2.871	--	97.604	
MW27	16-Nov-18	100.475	100.560		2.489	--	97.986	
MW28	26-Jul-11	98.675	98.750		-	--	NV	Dry
MW28	5-Aug-11	98.675	98.750		-	--	NV	Dry
MW28	20-Dec-12	98.675	98.750		-	--	NV	Dry
MW28	19-Aug-14	98.675	98.750		3.191	--	95.484	
MW28	14-Jan-15	98.675	98.750		-	--	NV	Dry
MW28	21-Aug-15	98.675	98.750		-	--	NV	Dry
MW28	18-Nov-15	98.675	98.750		-	--	NV	Dry
MW28	12-Aug-16	98.675	98.750		-	--	NV	Dry
MW28	29-Nov-16	98.675	98.750		3.268	--	95.407	
MW28	27-Jun-17	98.675	98.750		3.133	--	95.542	
MW28	10-Jul-18	98.675	98.750		3.506	--	95.169	
MW29	26-Mar-19	99.446	99.544		2.359	--	97.087	
MW30	26-Mar-19	NS	NS		-	--	--	Dry
MW31	26-Mar-19	100.261	100.311		-	--	NV	Surface water in flushmount casing
MW32	26-Mar-19	100.740	100.843		2.542	--	98.198	
MW33	26-Mar-19	101.110	101.296		2.516	--	98.594	
MW34	26-Mar-19	101.184	101.359		3.498	--	97.686	
MW35	26-Mar-19	101.916	102.019		4.983	--	96.933	
MW36	26-Mar-19	101.610	101.736		2.773	--	98.837	
MW37	26-Mar-19	101.293	101.426		-	--	NV	Dry

Notes:
TOC - top of casing
marl - metres above reference level
mbtoc - metres below top of casing
LPH - liquid phase hydrocarbons
GW - groundwater
NM - not measured
NS - not surveyed
NV / -- - no value/LPH not present

TABLE 2:
Summary of Soil Analytical Results - BTEX and PHCs F1-F4 Fractions
Elmdale P.S.
49 Iona Street Ottawa, Ontario
MM1027

Sample ID	Sample Date	Depth (m bg)	Benzene	Ethylbenzene	Toluene	m,p-Xylene	o-Xylene	Xylene (Total)	PHC F1 (C6-C10)	PHC F2 (C10-C16)	PHC F3 (C16-C34)	PHC F4 (>C34)
		MDL >	0.03	0.05	0.05	0.05	0.05	0.10	7	4	8	6
		MECP Table 3 SCS >	0.21	2	2.3	NV	NV	3.1	55	98	300	2800
Boreholes/Monitoring wells												
SA1 Grab	24-Feb-09	0.2	NA	NA	NA	NA	NA	NA	***149***	***8340***	***5690***	<100
MW1 SA1	2-Nov-09	0.3 - 0.5	NA	NA	NA	NA	NA	NA	14	***1640***	***1490***	<10
MW2 SA1	2-Nov-09	0.3 - 0.6	<0.002	<0.002	<0.002	-	-	<0.004	<10	***882***	***1220***	<10
MW3 SA1	2-Nov-09	0.3 - 0.43	0.09	0.4	0.3	-	-	1.5	***85***	***5370***	<10	<10
MW3 SA3	2-Nov-09	1.2 - 1.73	<0.002	<0.002	<0.002	-	-	<0.004	<10	<10	<10	<10
MW4 SA1	2-Nov-09	0.3 - 0.6	NA	NA	NA	NA	NA	NA	<10	***821***	***956***	<10
MW5 SA1	2-Nov-09	0.3 - 0.43	<0.002	<0.002	<0.002	-	-	<0.004	<10	41	214	37
MW6 SA1	2-Nov-09	0.3 - 0.6	NA	NA	NA	NA	NA	NA	<10	***146***	***1040***	121
MW7 SA1	12-Feb-10	0.25 - 0.61	<0.03	<0.05	<0.05	-	-	<0.1	<10	***170***	***1910***	358
MW8 SA1	12-Feb-10	0.25 - 0.61	<0.03	<0.05	<0.05	-	-	<0.1	<10	<100	***1030***	127
MW9 SA2	12-Feb-10	1.22 - 1.83	<0.03	<0.05	<0.05	-	-	<0.1	<10	<10	<10	<10
MW10 SA5	12-Feb-10	2.13 - 2.74	<0.03	<0.05	<0.05	-	-	<0.1	<10	<10	<10	<10
MW11 SA4	16-Mar-10	2.13 - 2.74	<0.03	<0.05	<0.05	-	-	<0.1	<10	<10	43	17
MW12 SA2	16-Mar-10	1.83 - 2.29	<0.03	<0.05	<0.05	-	-	<0.1	<10	<10	54	15
MW13 SA4	16-Mar-10	2.13 - 2.74	<0.03	<0.05	<0.05	-	-	<0.1	<10	<10	10	<10
MW14 SA1	16-Mar-10	0.15 - 0.61	***0.22***	<0.05	0.4	-	-	0.18	<10	14	***503***	192
MW15 SA1	16-Mar-10	0.15 - 0.61	<0.03	<0.05	<0.05	-	-	<0.1	<10	34	***1490***	407
MW16 SA6	16-Mar-10	3.66 - 4.27	<0.03	<0.05	<0.05	-	-	<0.1	<10	<10	11	<10
MW17 SA6	16-Mar-10	3.66 - 4.27	<0.03	<0.05	<0.05	-	-	<0.1	<10	17	40	12
MW18 SA7	17-Mar-10	3.66 - 4.27	<0.03	<0.05	<0.05	-	-	<0.1	<10	<10	<10	<10
MW19 SA1	5-Jul-10	0.15 - 0.76	<0.03	<0.05	<0.05	-	-	<0.1	<10	***351***	***925***	18
MW20 SA1	5-Jul-10	0.15 - 0.76	<0.03	<0.05	<0.05	-	-	<0.1	<10	<10	<10	13
MW21 SA1	5-Jul-10	0.15 - 0.76	<0.03	<0.05	<0.05	-	-	<0.1	<10	<10	<10	<10
MW22 SA1	5-Jul-10	0.15 - 0.76	<0.03	<0.05	<0.05	-	-	<0.1	<10	28	***300***	52

TABLE 2:
Summary of Soil Analytical Results - BTEX and PHCs F1-F4 Fractions
Elmdale P.S.
49 Iona Street Ottawa, Ontario
MM1027

Sample ID	Sample Date	Depth (m bg)	Benzene	Ethylbenzene	Toluene	m,p-Xylene	o-Xylene	Xylene (Total)	PHC F1 (C6-C10)	PHC F2 (C10-C16)	PHC F3 (C16-C34)	PHC F4 (>C34)
		MDL >	0.03	0.05	0.05	0.05	0.05	0.10	7	4	8	6
		MECP Table 3 SCS >	0.21	2	2.3	NV	NV	3.1	55	98	300	2800
MW23 SA5	13-Jul-11	3.05- 3.66	NA	NA	NA	NA	NA	NA	<10	<10	<10	<10
MW24 SA5	13-Jul-11	3.05- 3.66	NA	NA	NA	NA	NA	NA	<10	<10	<10	<10
MW25 SA5	13-Jul-11	3.05- 3.66	NA	NA	NA	NA	NA	NA	<10	<10	45	22
MW26 SA6	13-Jul-11	3.66-4.27	NA	NA	NA	NA	NA	NA	<10	<10	<10	<10
MW27 SA6	13-Jul-11	3.05- 3.66	NA	NA	NA	NA	NA	NA	<10	<10	<10	<10
MW29 SA5	21-Mar-19	2.74 - 3.5	NA	NA	NA	NA	NA	NA	<7	<4	<8	<6
MW30 SA4	21-Mar-19	1.98 - 2.74	NA	NA	NA	NA	NA	NA	<7	<4	<8	<6
MW31 SA5	21-Mar-19	2.74 - 3.05	NA	NA	NA	NA	NA	NA	<7	<4	<8	<6
MW32 SA5	21-Mar-19	3.05 - 3.66	NA	NA	NA	NA	NA	NA	<7	<4	<8	<6
MW33 SA5	22-Mar-19	2.74 - 3.5	NA	NA	NA	NA	NA	NA	<7	<4	<8	<6
MW34 SA1	21-Mar-19	0 - 0.76	NA	NA	NA	NA	NA	NA	<7	<4	14	28
MW34 SA5	21-Mar-19	3.05 - 3.81	NA	NA	NA	NA	NA	NA	<7	<4	<8	<6
MW35 SA2	22-Mar-19	0.76 - 1.52	NA	NA	NA	NA	NA	NA	<7	<4	<8	<6
MW35 SA5	22-Mar-19	3.05 - 3.81	NA	NA	NA	NA	NA	NA	<7	<4	<8	<6
MW36 SA2	22-Mar-19	0.76 - 1.52	NA	NA	NA	NA	NA	NA	<7	<4	<8	<6
MW36 SA5	22-Mar-19	3.05 - 3.81	NA	NA	NA	NA	NA	NA	<7	<4	<8	<6
MW37 SA2	22-Mar-19	0.76 - 1.52	NA	NA	NA	NA	NA	NA	<7	<4	<8	<6
MW37 SA5	22-Mar-19	3.05 - 3.66	NA	NA	NA	NA	NA	NA	<7	<4	<8	<6

Notes:

mg/kg - all concentrations provided in milligrams per kilogram (parts per million)
MDL - reported analytical method detection limit
HSVL - headspace vapour level (combustible vapour meter, calibrated to hexane)
m bg - metres below grade
ppm - parts per million
NV - no standard listed
"<" or "ND ( )" - less than detection limits indicated (refer to laboratory report)
"NA" or "-" - not applicable or not analysed
MECP Table 3 SCS - Ontario Ministry of Environment, Conservation and Parks (MECP) Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act. April, 2011. Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition, institutional land use, coarse textured soil.
Bold / Italic - indicates concentration above applicable MECP Table 3 SCS
0.5 - MDL above applicable MECP Table 3 SCS (refer to laboratory reports)

TABLE 3:
Summary of Soil Analytical Results - PAHs
Elmdale P.S.
49 Iona Street Ottawa, Ontario
MM1027

Sample ID	Sample Date	Depth (m bg)	Acenaphthene	Acenaphthylene	Anthracene	Benzo[a]anthracene	Benzo[a]pyrene	Benzo[b]fluoranthene	Benzo[g,h,i]perylene	Benzo[k]fluoranthene	1,1-Biphenyl	Chrysene	Dibenzo[a,h]anthracene	Fluoranthene	Fluorene	Indeno[1,2,3-cd]pyrene	1-Methylnaphthalene	2-Methylnaphthalene	Methylnaphthalene (1&2)	Naphthalene	Phenanthrene	Pyrene
		MDL >	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.04	0.01	0.02	0.02
		MECP Table 3 SCS >	7.9	0.15	0.67	0.5	0.3	0.78	6.6	0.78	0.31	7	0.1	0.69	62	0.38	0.99	0.99	0.99	0.6	6.2	78
											Boreholes/Monitoring wells											
SA1 Grab	24-Feb-09	0.2	4.82	***2.11***	***4.55***	***3.38***	***2.15***	***3.11***	0.93	***1.52***	***3.16***	3.15	<0.2	***8.89***	7.06	***0.83***	***11.5***	***10.4***	***21.9***	***41***	***17.6***	7.08
MW1 SA1	2-Nov-09	0.3 - 0.5	4.6	***6.39***	***15.5***	***16.8***	***14.3***	***26.3***	***8.61***	***9.92***	<2	***18.4***	<2	***45.2***	5.88	***8.11***	***2.52***	<2	***4.52***	***12***	***31.3***	36.9
MW2 SA1	2-Nov-09	0.3 - 0.6	<2	***13.3***	***13.4***	***41.5***	***37.1***	***60.5***	***20.3***	***37.2***	<2	***43.2***	***6.24***	***95.1***	<2	***19.8***	<2	<2	<4	<2	***14.1***	***86.9***
MW3 SA1	2-Nov-09	0.3 - 0.43	***29.4***	***8.73***	***31.5***	***11.8***	***6.05***	***9.75***	3.11	***5.86***	***11.9***	***13***	<2	***56***	43.4	***2.92***	***66.3***	***57***	***123.3***	***141***	***107***	41.5
MW3 SA3	2-Nov-09	1.2 - 1.73	0.27	0.09	0.23	0.06	0.02	0.03	<0.02	0.02	0.13	0.07	<0.02	0.37	0.52	<0.02	0.73	0.64	***1.37***	***1.52***	1.08	0.27
MW4 SA1	2-Nov-09	0.3 - 0.6	4.07	***1.8***	***8.83***	***5.17***	***3.38***	***5.05***	2.09	***3.55***	<1	5.88	<1	***18.6***	6.6	***1.76***	***3.74***	***2.97***	***6.71***	***24.5***	***20.2***	14.9
MW5 SA1	2-Nov-09	0.3 - 0.43	6.56	***4.11***	***27***	***30***	***20.4***	***29.5***	***11.5***	***17.3***	<2	***32.3***	<2	***99.9***	12.8	***10.5***	<2	<2	<4	<2	***62.2***	76.4
MW6 SA1	2-Nov-09	0.3 - 0.6	***112***	***59.8***	***272***	***273***	***204***	***287***	***107***	***190***	***9.21***	***268***	***35.8***	***795***	***161***	***107***	***29.4***	***32.9***	***62.3***	***52.8***	***732***	***629***
MW7 SA1	12-Feb-10	0.25 - 0.61	***18.5***	***15.5***	***44.8***	***68.5***	***51.9***	***85.7***	***26.1***	***41.6***	<2	***68.7***	***9.2***	***175***	22.5	***26.1***	***4.43***	***3.31***	***7.74***	***7.48***	***130***	***141***
MW8 SA1	12-Feb-10	0.25 - 0.61	0.59	***1.45***	***2.6***	***5.97***	***4.92***	***8.55***	2.63	***4.45***	<0.4	6.16	***1.18***	***14.3***	0.53	***2.59***	<0.4	<0.4	<0.8	<0.4	5.44	12.5
MW11 SA4	16-Mar-10	2.13 - 2.74	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.04	<0.02	<0.02	<0.02
MW12 SA2	16-Mar-10	1.83 - 2.29	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.04	0.1	<0.02	<0.02
MW13 SA4	16-Mar-10	2.13 - 2.74	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.04	<0.02	<0.02	<0.02
MW14 SA1	16-Mar-10	0.15 - 0.61	<0.4	***5.92***	***4.94***	***9.81***	***9.61***	***12.8***	5.06	***8.44***	<0.4	***9.78***	***1.76***	***19.4***	0.45	***5.47***	***1.16***	***1.56***	***2.72***	***5.44***	4.79	18
MW15 SA1	16-Mar-10	0.15 - 0.61	3.39	***2.03***	***7.86***	***24***	***21.6***	***29.3***	***12.9***	***17.3***	<0.4	***25.6***	***3.47***	***60.1***	2.64	***13.1***	<0.4	<0.4	<0.8	***1.01***	***32.6***	49.4
MW16 SA6	16-Mar-10	3.66 - 4.27	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.04	<0.02	<0.02	<0.02
MW17 SA6	16-Mar-10	3.66 - 4.27	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.04	<0.02	<0.02	<0.02
MW18 SA7	17-Mar-10	3.66 - 4.27	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.04	<0.02	<0.02	0.02
MW19 SA1	5-Jul-10	0.15 - 0.76	***175***	***6.81***	***275***	***466***	***377***	***406***	***162***	***270***	***11.4***	***506***	***34.8***	***1260***	***162***	***171***	***36.1***	***52.8***	***88.9***	***95.7***	***1380***	***952***
MW20 SA1	5-Jul-10	0.15 - 0.76	3.43	***5.27***	***9.64***	***31.4***	***25.2***	***32.2***	***13.2***	***19.7***	<0.8	***34.1***	***2.59***	***75.2***	1.75	***12.5***	<0.8	<0.8	<1.6	***0.85***	***31.4***	62.2
MW21 SA1	5-Jul-10	0.15 - 0.76	***9.6***	<2	***11***	***15.1***	***11.6***	***14.2***	5.23	***9.36***	<2	***21.6***	<2	***49.3***	7.36	***4.61***	***2.1***	***3.46***	***5.56***	***16.4***	***54.7***	38
MW22 SA1	5-Jul-10	0.15 - 0.76	1.1	***5.97***	***5.81***	***17***	***15.1***	***19.8***	***7.67***	***10.6***	<0.8	***18.8***	***1.25***	***34.6***	1.28	***7.26***	<0.8	<0.8	<1.6	***2.67***	***10.2***	31.8
MW24 SA5	13-Jul-11	3.05- 3.66	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.04	<0.02	<0.02	0.02
MW25 SA5	13-Jul-11	3.05- 3.66	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.04	<0.02	<0.02	0.02
MW26 SA6	13-Jul-11	3.66-4.27	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.04	<0.02	<0.02	0.02
MW27 SA6	13-Jul-11	3.05- 3.66	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.04	<0.02	<0.02	0.02
MW28 SA5	14-Jul-11	2.44- 3.05	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.04	<0.02	<0.02	0.02
MW29 SA5	21-Mar-19	2.74 - 3.5	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	NA	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.04	<0.01	<0.02	<0.02
MW30 SA4	21-Mar-19	1.98 - 2.74	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	NA	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.04	<0.01	<0.02	<0.02
MW31 SA5	21-Mar-19	2.74 - 3.05	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	NA	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.04	<0.01	<0.02	<0.02
MW32 SA5	21-Mar-19	3.05 - 3.66	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	NA	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.04	<0.01	<0.02	<0.02
MW33 SA5	22-Mar-19	2.74 - 3.5	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	NA	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.04	<0.01	<0.02	<0.02
MW34 SA1	21-Mar-19	0 - 0.76	<0.02	<0.02	<0.02	<0.02	0.02	<0.02	<0.02	<0.02	NA	<0.02	<0.02	<0.02	<0.02	0.02	<0.02	<0.02	<0.04	<0.01	<0.02	<0.02
MW34 SA5	21-Mar-19	3.05 - 3.81	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	NA	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.04	<0.01	<0.02	<0.02
MW35 SA2	22-Mar-19	0.76 - 1.52	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	NA	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.04	<0.01	<0.02	<0.02
MW35 SA5	22-Mar-19	3.05 - 3.81	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	NA	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.04	<0.01	<0.02	<0.02
MW36 SA2	22-Mar-19	0.76 - 1.52	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	NA	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.04	<0.01	<0.02	<0.02

TABLE 3:
Summary of Soil Analytical Results - PAHs
Elmdale P.S.
49 Iona Street Ottawa, Ontario
MM1027

Sample ID	Sample Date	Depth (m bg)	Acenaphthene	Acenaphthylene	Anthracene	Benzo[a]anthracene	Benzo[a]pyrene	Benzo[b]fluoranthene	Benzo[g,h,i]perylene	Benzo[k]fluoranthene	1,1-Biphenyl	Chrysene	Dibenzo[a,h]anthracene	Fluoranthene	Fluorene	Indeno[1,2,3-cd]pyrene	1-Methylnaphthalene	2-Methylnaphthalene	Methylnaphthalene (1&2)	Naphthalene	Phenanthrene	Pyrene
		MDL >	**0.02**	**0.02**	**0.02**	**0.02**	**0.02**	**0.02**	**0.02**	**0.02**	**0.02**	**0.02**	**0.02**	**0.02**	**0.02**	**0.02**	**0.02**	**0.02**	**0.04**	**0.01**	**0.02**	**0.02**
		MECP Table 3 SCS >	**7.9**	**0.15**	**0.67**	**0.5**	**0.3**	**0.78**	**6.6**	**0.78**	**0.31**	**7**	**0.1**	**0.69**	**62**	**0.38**	**0.99**	**0.99**	**0.99**	**0.6**	**6.2**	**78**
MW36 SA5	22-Mar-19	3.05 - 3.81	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	NA	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.04	<0.01	<0.02	<0.02
MW37 SA2	22-Mar-19	0.76 - 1.52	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	NA	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.04	<0.01	<0.02	<0.02
MW37 SA5	22-Mar-19	3.05 - 3.66	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	NA	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.04	<0.01	<0.02	<0.02

Notes:
mg/kg - all concentrations provided in milligrams per kilogram (parts per million)
MDL - reported analytical method detection limit
HSVL - headspace vapour level (combustible vapour meter, calibrated to hexane)
m bg - metres below grade
ppm - parts per million
NV - no standard listed
"<" or "ND ( )" - less than detection limits indicated (refer to laboratory report)
"NA" or "-" - not applicable or not analysed
MECP Table 3 SCS - Ontario Ministry of Environment, Conservation and Parks (MECP) Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act. April, 2011. Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition, institutional land use, coarse textured soil.
Bold / Italic - indicates concentration above applicable MECP Table 3 SCS
0.5 - MDL above applicable MECP Table 3 SCS (refer to laboratory reports)

TABLE 4:
Summary of Soil Analytical Results - Metals
Elmdale P.S.
49 Iona Street Ottawa, Ontario
MM1027

Sample ID	Sample Date	Depth (m bg)	Antimony	Arsenic	Barium	Beryllium	Boron	Cadmium	Chromium	Chromium (VI)	Cobalt	Copper	Lead	Mercury	Molybdenum	Nickel	Selenium	Silver	Thallium	uranium	Vanadium	Zinc
		MDL >	1.0	1.0	10	0.5	0.5	0.5	5	0.4	1.0	5	1.0	0.1	1.0	5	1.0	0.3	1.0	1.0	10	20
		MECP Table 3 SCS >	7.5	18	390	4	120	1.2	160	8	22	140	120	0.27	6.9	100	2.4	20	1	23	86	340
		Boreholes/Monitoring wells																				
MW5 SA1	2-Nov-09	0.3 - 0.43	<1	***47***	358	1.6	<0.5	<0.5	19	<0.4	***260***	***242***	***194***	***0.4***	***8***	26	1	8	<1	NA	30	162
MW7 SA1	12-Feb-10	0.25 - 0.61	3	***39***	356	1.2	<0.5	0.5	22	<0.4	15	67	103	***0.4***	***7***	31	2	0.4	<1	NA	22	81
MW8 SA1	12-Feb-10	0.25 - 0.61	2	***86***	361	<0.5	<0.5	0.6	21	<0.4	***35***	***141***	***264***	***0.5***	***17***	30	<1	0.5	<1	NA	33	212
MW9 SA2	12-Feb-10	1.22 - 1.83	<1	<1	238	0.5	<0.5	<0.5	40	<0.4	11	28	5	<0.1	<1	23	<1	<0.3	<1	NA	54	56
MW10 SA5	12-Feb-10	2.13 - 2.74	<1	<1	82	<0.5	<0.5	<0.5	16	<0.4	6	12	3	<0.1	<1	13	<1	<0.3	<1	NA	25	21
MW11 SA4	16-Mar-10	2.13 - 2.74	<1	<1	339	0.5	<0.5	<0.5	60	<0.4	15	30	6	<0.1	<1	35	<1	<0.3	<1	NA	74	82
MW12 SA2	16-Mar-10	1.83 - 2.29	<1	<1	152	<0.5	<0.5	<0.5	51	<0.4	12	20	6	<0.1	<1	26	<1	<0.3	<1	NA	59	50
MW13 SA4	16-Mar-10	2.13 - 2.74	<1	<1	107	<0.5	<0.5	<0.5	18	<0.4	7	12	4	<0.1	<1	13	<1	<0.3	<1	NA	28	23
MW14 SA1	16-Mar-10	0.15 - 0.61	<1	***108***	***397***	<0.5	<0.5	0.5	19	<0.4	14	49	60	***0.4***	***10***	29	1	<0.3	***1***	NA	30	47
MW15 SA1	16-Mar-10	0.15 - 0.61	<1	2	92	<0.5	<0.5	<0.5	30	<0.4	9	17	73	0.1	<1	13	<1	<0.3	<1	NA	22	84
MW16 SA6	16-Mar-10	3.66 - 4.27	<1	<1	100	<0.5	<0.5	<0.5	16	<0.4	6	10	4	<0.1	<1	12	<1	<0.3	<1	NA	27	20
MW17 SA6	16-Mar-10	3.66 - 4.27	<1	<1	59	<0.5	<0.5	<0.5	12	<0.4	4	8	3	<0.1	<1	9	<1	<0.3	<1	NA	21	<20
MW18 SA7	17-Mar-10	3.66 - 4.27	<1	<1	280	0.5	<0.5	<0.5	38	<0.4	11	22	5	<0.1	<1	22	<1	<0.3	<1	NA	54	51
MW19 SA1	5-Jul-10	0.15 - 0.76	<1	2	143	<0.5	0.5	<0.5	14	<0.4	***22***	11	110	<0.1	<1	13	<1	<0.3	<1	NA	20	43
MW20 SA1	5-Jul-10	0.15 - 0.76	<1	3	158	<0.5	<0.5	<0.5	32	<0.4	***23***	24	15	<0.1	1	23	<1	0.4	<1	NA	36	38
MW21 SA1	5-Jul-10	0.15 - 0.76	<1	2	61	<0.5	<0.5	<0.5	11	<0.4	***23***	14	6	<0.1	1	11	<1	0.3	<1	NA	19	24
MW22 SA1	5-Jul-10	0.15 - 0.76	2	***31***	338	1	<0.5	<0.5	16	<0.4	20	***284***	72	***0.3***	4	19	<1	0.6	<1	NA	23	35
MW27 SA6	5-Jul-10	0.15 - 0.61	<1	<1	294	0.6	<5.0	<0.5	53	<0.4	14	27	6	<0.1	<1	30	<1	<0.3	<1	<1	68	63
MW29 SA5	21-Mar-19	2.74 - 3.5	0	3	***502***	0.9	7.1	<0.5	141	NA	***30.3***	71.3	6.8	<0.1	<1	81.2	<1	<0.3	<1	<1	***136***	161
MW30 SA4	21-Mar-19	1.98 - 2.74	<1	2	174	0.6	7.4	<0.5	55.4	NA	12.7	31.1	4.6	<0.1	<1	31.9	<1	<0.3	<1	<1	64.6	67
MW31 SA5	21-Mar-19	2.74 - 3.05	<1	2	86.4	<0.5	10.3	<0.5	22.8	NA	7.3	15.4	4.9	<0.1	<1	14.9	<1	<0.3	<1	<1	34.1	28.8
MW32 SA5	21-Mar-19	3.05 - 3.66	<1	1.9	238	0.6	7.6	<0.5	51.1	NA	12.6	30.3	4.6	<0.1	<1	29.2	<1	<0.3	<1	<1	64.4	69.7
MW33 SA5	22-Mar-19	2.74 - 3.5	<1	1.7	201	0.6	<5	<0.5	48.6	NA	12.3	24.2	4.1	<0.1	<1	28	<1	<0.3	<1	<1	60.7	73.6
MW34 SA1	21-Mar-19	0 - 0.76	<1	1.5	84.7	<0.5	5.6	0.7	35.8	NA	5.7	23.9	6.7	<0.1	<1	18.3	1	<0.3	<1	1.4	34.3	64.3
MW34 SA5	21-Mar-19	3.05 - 3.81	<1	1.3	86.5	<0.5	8.5	<0.5	20.5	NA	7	14.2	4.1	<0.1	<1	13.1	<1	<0.3	<1	<1	30.9	28.2
MW35 SA2	22-Mar-19	0.76 - 1.52	<1	2.4	313	0.9	<5	<0.5	120	NA	***24.1***	41.9	6.2	<0.1	<1.0	59.9	<1.0	<0.3	<1.0	<1.0	***109***	117
MW35 SA5	22-Mar-19	3.05 - 3.81	<1	1.8	254	0.7	5.9	<0.5	61	NA	15	33	5.2	<0.1	<1.0	34.5	<1.0	<0.3	<1.0	<1.0	76.1	88.6
MW36 SA2	22-Mar-19	0.76 - 1.52	<1	2.4	317	0.9	5.1	<0.5	124	NA	***23.8***	53.3	7	<0.1	<1.0	68.3	<1.0	<0.3	<1.0	<1.0	***101***	120
MW36 SA5	22-Mar-19	3.05 - 3.81	<1	2.7	***459***	0.9	<5	<0.5	127	NA	***26.3***	62.3	6.3	<0.1	<1.0	70.7	<1.0	<0.3	<1.0	<1.0	***124***	148
MW37 SA2	22-Mar-19	0.76 - 1.52	<1	2.6	342	1	5.1	<0.5	134	NA	***25.4***	57.4	7.2	<0.1	<1.0	73.1	<1.0	<0.3	<1.0	<1.0	***114***	136
MW37 SA5	22-Mar-19	3.05 - 3.66	<1	2	263	0.7	5.3	<0.5	75.8	NA	17.3	37.4	5.1	<0.1	<1.0	43	<1.0	<0.3	<1.0	<1.0	80.1	93.7

Notes:

mg/kg - all concentrations provided in milligrams per kilogram (parts per million)
MDL - reported analytical method detection limit
HSVL - headspace vapour level (combustible vapour meter, calibrated to hexane)
m bg - metres below grade
ppm - parts per million
NV - no standard listed
"<" or "ND ( )" - less than detection limits indicated (refer to laboratory report)
"NA" or "-" - not applicable or not analysed
MECP Table 3 SCS - Ontario Ministry of Environment, Conservation and Parks (MECP) Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act. April, 2011. Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition, institutional land use, coarse textured soil.
Bold / Italic - indicates concentration above applicable MECP Table 3 SCS
0.5 - MDL above applicable MECP Table 3 SCS (refer to laboratory reports)

TABLE 5:
Summary of Groundwater Analytical Results- BTEX and PHCs F1-F4 Fractions
Elmdale P.S.
49 Iona Street Ottawa, Ontario
MM1027

Sample ID	Sample Date	Benzene	Ethylbenzene	Toluene	m,p-Xylene	o-Xylene	Xylene (Total)	PHC F1 (C6-C10)	PHC F2 (C10-C16)	PHC F3 (C16-C34)	PHC F4 (>C34)
	MDL >	0.5	0.5	0.5	0.5	0.5	0.5	25	100	100	100
	MECP Table 3 SCS >	44	2300	18000	NV	NV	4200	750	150	500	500
	Monitoring Wells										
MW1	11-Nov-09	<0.5	<0.5	<0.5	-	-	<1	<200	***221***	226	<100
MW1	18-Oct-11	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	***522***	***799***	<100
MW1	18-Jul-12	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	<100	<100
MW1	20-Dec-12	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	177	<100
MW1	24-Jul-13	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	<100	<100
MW1	19-Aug-14	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	<100	<100
MW1	14-Jan-15	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	<100	<100
MW1	21-Aug-15	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	<100	<100
MW1	18-Nov-15	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	<100	<100
MW1	29-Nov-16	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	<100	<100
MW1	27-Jun-17	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	<100	<100
MW1	18-Dec-17	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	426	<100
MW1	10-Jul-18	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	<100	<100
MW1	16-Nov-18	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	<100	<100
MW2	11-Nov-09	-	-	-	-	-	-	<200	***697***	***777***	<100
MW2	18-Oct-11	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	***2470***	***3800***	<100
MW2	18-Jul-12	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	<100	<100
MW2	20-Dec-12	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	<100	<100
MW2	24-Jul-13	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	<100	<100
MW2	26-May-14	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	Dry		
MW2	19-Aug-14	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	<100	<100
MW2	14-Jan-15	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	<100	<100
MW2	21-Aug-15	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	<100	<100
MW2	18-Nov-15	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	<100	<100
MW2	29-Nov-16	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	<100	<100
MW2	27-Jun-17	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	<100	<100
MW2	18-Dec-17	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	***569***	<100
MW2	10-Jul-18	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	<100	<100
MW2	16-Nov-18	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	<100	<100
MW3	11-Nov-09	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<200	***328***	260	<100
MW3	18-Oct-11	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	***488***	461	<100
MW3	18-Jul-12	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	242	<100
MW3	20-Dec-12	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	<100	<100
MW3	24-Jul-13	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	<100	<100
MW3	26-May-14	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	Dry		
MW3	19-Aug-14	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	<100	<100
MW3	14-Jan-15	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	<100	<100
MW3	21-Aug-15	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	***660***	160
MW3	18-Nov-15	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	<100	<100
MW3	29-Nov-16	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	<100	<100
MW3	27-Jun-17	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	<100	<100
MW3	18-Dec-17	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	***566***	<100
MW3	10-Jul-18	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	<100	<100
MW3	16-Nov-18	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	<100	<100
MW4	11-Nov-09	-	-	-	-	-	-	<200	***1980***	***1710***	<100

TABLE 5:
Summary of Groundwater Analytical Results- BTEX and PHCs F1-F4 Fractions
Elmdale P.S.
49 Iona Street Ottawa, Ontario
MM1027

Sample ID	Sample Date	Benzene	Ethylbenzene	Toluene	m,p-Xylene	o-Xylene	Xylene (Total)	PHC F1 (C6-C10)	PHC F2 (C10-C16)	PHC F3 (C16-C34)	PHC F4 (>C34)
	MDL >	0.5	0.5	0.5	0.5	0.5	0.5	25	100	100	100
	MECP Table 3 SCS >	44	2300	18000	NV	NV	4200	750	150	500	500
MW4	18-Jul-12	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	285	<100
MW4	20-Dec-12	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<284 [1]	<284 [1]	<284 [1]
MW4	24-Jul-13	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	<100	<100
MW4	19-Aug-14	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	***153***	266	<100
MW4	14-Jan-15	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	Dry		
MW4	29-Nov-16	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	120	431	<100
MW4	27-Jun-17	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	120	<100	<100
MW5	11-Nov-09	-	-	-	-	-	-	<200	118	128	<100
MW5	18-Oct-11	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	<100	<100
MW5	18-Jul-12	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	<100	<100
MW5	20-Dec-12	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	<100	<100
MW5	24-Jul-13	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	<100	<100
MW5	26-May-14	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	Dry		
MW5	19-Aug-14	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	<100	<100
MW5	14-Jan-15	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	<100	<100
MW5	21-Aug-15	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	340	<100
MW5	18-Nov-15	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	<100	<100
MW5	12-Aug-16	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	<100	<100
MW5	29-Nov-16	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	<100	<100
MW5	27-Jun-17	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	<100	<100
MW5	18-Dec-17	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	220	<100
MW5	10-Jul-18	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	<100	<100
MW5	16-Nov-18	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	<100	<100
MW6	11-Nov-09	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<200	<100	<100	<100
MW6	18-Oct-11	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	183	<100
MW6	18-Jul-12	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	<100	<100
MW6	20-Dec-12	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	<100	<100
MW6	26-May-14	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	Dry		
MW6	19-Aug-14	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	<100	<100
MW6	14-Jan-15	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	<100	<100
MW6	21-Aug-15	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	<100	<100
MW6	18-Nov-15	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	<100	<100
MW6	29-Nov-16	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	<100	<100
MW6	27-Jun-17	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	<100	<100
MW6	18-Dec-17	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	162	<100
MW6	10-Jul-18	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	<100	<100
MW6	16-Nov-18	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	<100	<100
MW7	25-Mar-10	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<200	<100	<100	<100
MW7	18-Oct-11	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	<100	<100
MW7	18-Jul-12	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	<100	<100
MW7	20-Dec-12	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	<100	<100
MW7	24-Jul-13	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	<100	<100
MW7	19-Aug-14	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	<100	<100
MW7	14-Jan-15	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	<100	<100
MW7	21-Aug-15	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	<100	<100
MW7	18-Nov-15	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	267	<100

TABLE 5:
Summary of Groundwater Analytical Results- BTEX and PHCs F1-F4 Fractions
Elmdale P.S.
49 Iona Street Ottawa, Ontario
MM1027

Sample ID	Sample Date	Benzene	Ethylbenzene	Toluene	m,p-Xylene	o-Xylene	Xylene (Total)	PHC F1 (C6-C10)	PHC F2 (C10-C16)	PHC F3 (C16-C34)	PHC F4 (>C34)
	MDL >	0.5	0.5	0.5	0.5	0.5	0.5	25	100	100	100
	MECP Table 3 SCS >	44	2300	18000	NV	NV	4200	750	150	500	500
MW7	12-Aug-16	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	<100	<100
MW7	29-Nov-16	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	<100	<100
MW7	27-Jun-17	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	<100	<100
MW7	18-Dec-17	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	<100	<100
MW7	10-Jul-18	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	<100	<100
MW7	16-Nov-18	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	<100	<100
MW8	25-Mar-10	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<200	<100	<100	<100
MW8	18-Oct-11	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	<100	<100
MW8	18-Jul-12	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	<100	<100
MW8	20-Dec-12	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	<100	<100
MW8	24-Jul-13	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	<100	<100
MW8	26-May-14	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	Dry		
MW8	19-Aug-14	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	<100	<100
MW8	14-Jan-15	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	269	<100
MW8	21-Aug-15	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	<100	<100
MW8	18-Nov-15	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	<100	<100
MW8	12-Aug-16	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	<100	<100
MW8	29-Nov-16	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	349	<100
MW8	27-Jun-17	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	<100	<100
MW8	18-Dec-17	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	433	<100
MW8	10-Jul-18	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	<100	<100
MW8	16-Nov-18	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	***672***	154
MW9	25-Mar-10	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<200	<100	<100	<100
MW9	18-Oct-11	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	<100	<100
MW9	18-Jul-12	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	<100	<100
MW9	20-Dec-12	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	<100	<100
MW9	24-Jul-13	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	<100	<100
MW9	26-May-14	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	Dry		
MW9	19-Aug-14	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	<100	<100
MW9	14-Jan-15	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	<100	<100
MW9	21-Aug-15	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	<100	<100
MW9	18-Nov-15	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	<100	<100
MW9	12-Aug-16	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	<100	<100
MW9	29-Nov-16	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	<100	<100
MW9	27-Jun-17	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	<100	<100
MW9	18-Dec-17	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	295	<100
MW9	10-Jul-18	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	<100	<100
MW9	16-Nov-18	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	<100	<100
MW10	25-Mar-10	<5 [1]	7.8 [1]	<5 [1]	<0.5 [1]	<0.5 [1]	20.6 [1]	<2000 [1]	<217 [1]	<217 [1]	<217 [1]
MW10	18-Oct-11	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	<100	<100
MW10	18-Jul-12	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	<100	<100
MW10	20-Dec-12	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	<100	<100
MW10	24-Jul-13	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	<100	<100
MW10	26-May-14	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	Dry		
MW10	19-Aug-14	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	<100	<100

TABLE 5:
Summary of Groundwater Analytical Results- BTEX and PHCs F1-F4 Fractions
Elmdale P.S.
49 Iona Street Ottawa, Ontario
MM1027

Sample ID	Sample Date	Benzene	Ethylbenzene	Toluene	m,p-Xylene	o-Xylene	Xylene (Total)	PHC F1 (C6-C10)	PHC F2 (C10-C16)	PHC F3 (C16-C34)	PHC F4 (>C34)
	MDL >	0.5	0.5	0.5	0.5	0.5	0.5	25	100	100	100
	MECP Table 3 SCS >	44	2300	18000	NV	NV	4200	750	150	500	500
MW10	14-Jan-15	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	338	<100
MW10	21-Aug-15	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	<100	<100
MW10	18-Nov-15	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	427	<100
MW10	27-Jun-17	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	<100	<100
MW10	18-Dec-17	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	<100	<100
MW10	10-Jul-18	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	<100	<100
MW10	16-Nov-18	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	<100	<100
MW11	25-Mar-10	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<200	<100	<100	<100
MW11	18-Oct-11	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	***539***	<100
MW11	18-Jul-12	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	<100	<100
MW11	20-Dec-12	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	<100	<100
MW11	24-Jul-13	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	<100	<100
MW11	26-May-14	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	Dry		
MW11	19-Aug-14	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	<100	<100
MW11	14-Jan-15	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	<100	<100
MW11	21-Aug-15	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	<100	<100
MW11	18-Nov-15	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	<100	<100
MW11	12-Aug-16	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	***1580***	420
MW11	29-Nov-16	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	<100	<100
MW11	27-Jun-17	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	<100	<100
MW11	18-Dec-17	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	117	<100
MW11	10-Jul-18	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	<100	<100
MW11	16-Nov-18	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	<100	<100
MW12	25-Mar-10	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<200	<100	<100	<100
MW12	24-Jul-13	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	318	<100
MW12	26-May-14	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	Dry		
MW12	14-Jan-15	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	<100	<100
MW12	27-Jun-17	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	<100	<100
MW13	25-Mar-10	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<200	<100	<100	<100
MW13	18-Oct-11	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	380	130
MW13	20-Dec-12	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	<100	<100
MW13	24-Jul-13	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	***755***	120
MW13	26-May-14	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	Dry		
MW13	19-Aug-14	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	<100	<100
MW13	14-Jan-15	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	220	<100
MW13	21-Aug-15	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<207 [1]	<207 [1]	<207 [1]
MW13	18-Nov-15	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	<100	<100
MW13	27-Jun-17	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	***883***	166
MW13	18-Dec-17	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	***634***	126
MW13	10-Jul-18	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	***1050***	152
MW13	16-Nov-18	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	<100	<100
MW14	25-Mar-10	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<200	<100	<100	<100
MW14	18-Oct-11	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	<100	<100
MW14	18-Jul-12	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	<100	<100
MW14	20-Dec-12	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	<100	<100

TABLE 5:
Summary of Groundwater Analytical Results- BTEX and PHCs F1-F4 Fractions
Elmdale P.S.
49 Iona Street Ottawa, Ontario
MM1027

Sample ID	Sample Date	Benzene	Ethylbenzene	Toluene	m,p-Xylene	o-Xylene	Xylene (Total)	PHC F1 (C6-C10)	PHC F2 (C10-C16)	PHC F3 (C16-C34)	PHC F4 (>C34)
	MDL >	0.5	0.5	0.5	0.5	0.5	0.5	25	100	100	100
	MECP Table 3 SCS >	44	2300	18000	NV	NV	4200	750	150	500	500
MW14	24-Jul-13	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	<100	<100
MW14	26-May-14	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	Dry		
MW14	19-Aug-14	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	<100	<100
MW14	14-Jan-15	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	<100	<100
MW14	21-Aug-15	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	<100	<100
MW14	18-Nov-15	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	<100	<100
MW14	12-Aug-16	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	<100	<100
MW14	29-Nov-16	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	***1330***	241
MW14	27-Jun-17	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	<100	<100
MW14	18-Dec-17	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	<100	<100
MW14	10-Jul-18	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	<100	<100
MW14	16-Nov-18	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	<100	<100
MW15	25-Mar-10	<5 [1]	<5 [1]	<5 [1]	<0.5 [1]	<0.5 [1]	<10 [1]	<2000 [1]	<100	<100	<100
MW15	18-Oct-11	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	120	***1040***	160
MW15	18-Jul-12	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	<100	<100
MW15	20-Dec-12	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100 [1]	***631 [1]***	145 [1]
MW15	24-Jul-13	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	323	<100
MW15	26-May-14	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	Dry		
MW15	19-Aug-14	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	<100	<100
MW15	14-Jan-15	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	<100	<100
MW15	21-Aug-15	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	<100	<100
MW15	12-Aug-16	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	212	<100
MW15	29-Nov-16	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	<100	<100
MW15	27-Jun-17	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	<100	<100
MW15	18-Dec-17	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	<100	<100
MW15	10-Jul-18	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	<100	<100
MW16	25-Mar-10	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<200	<100	<100	<100
MW16	18-Jul-12	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	<100	<100
MW16	20-Dec-12	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	<100	<100
MW16	24-Jul-13	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	<100	<100
MW16	26-May-14	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	Dry		
MW16	19-Aug-14	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	***1380***	277
MW16	20-Jan-15	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	<100	<100
MW16	21-Aug-15	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	<100	<100
MW16	18-Nov-15	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	<100	<100
MW16	29-Nov-16	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	266	<100
MW16	27-Jun-17	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	<100	<100
MW16	18-Dec-17	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	***651***	113
MW16	10-Jul-18	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	<100	<100
MW16	16-Nov-18	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	<100	<100
MW17	25-Mar-10	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<200	<100	<100	<100
MW17	18-Jul-12	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	<100	<100
MW17	20-Dec-12	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	<100	<100
MW17	24-Jul-13	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	<100	<100
MW17	26-May-14	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	Dry		
MW17	20-Jan-15	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	<100	<100

TABLE 5:
Summary of Groundwater Analytical Results- BTEX and PHCs F1-F4 Fractions
Elmdale P.S.
49 Iona Street Ottawa, Ontario
MM1027

Sample ID	Sample Date	Benzene	Ethylbenzene	Toluene	m,p-Xylene	o-Xylene	Xylene (Total)	PHC F1 (C6-C10)	PHC F2 (C10-C16)	PHC F3 (C16-C34)	PHC F4 (>C34)
	MDL >	0.5	0.5	0.5	0.5	0.5	0.5	25	100	100	100
	MECP Table 3 SCS >	44	2300	18000	NV	NV	4200	750	150	500	500
MW17	21-Aug-15	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	<100	<100
MW17	18-Nov-15	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<168 [1]	<168 [1]	<168 [1]
MW17	29-Nov-16	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	<100	<100
MW17	27-Jun-17	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	***1180***	126
MW17	10-Jul-18	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	275	<100
MW18	25-Mar-10	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<200	<100	<100	<100
MW18	19-Oct-11	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	297	170
MW18	18-Jul-12	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	152	<100
MW18	24-Jul-13	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	<100	<100
MW18	26-May-14	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	Dry		
MW18	19-Aug-14	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	<100	<100
MW18	20-Jan-15	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	<100	<100
MW18	21-Aug-15	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	<100	<100
MW18	18-Nov-15	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	<100	<100
MW18	12-Aug-16	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	<100	<100
MW18	29-Nov-16	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	<100	<100
MW18	27-Jun-17	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	<100	<100
MW18	10-Jul-18	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	<100	<100
MW18	16-Nov-18	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	<100	<100
MW19	20-Jul-10	<0.5 [1]	<0.5 [1]	<0.5 [1]	<0.5 [1]	<0.5 [1]	<1 [1]	<200 [1]	<186	<186	<186
MW19	18-Oct-11	-	-	-	-	-	-	<25	<100	420	200
MW19	18-Jul-12	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	<100	<100
MW19	20-Dec-12	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	<100	<100
MW19	24-Jul-13	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	<100	<100
MW19	26-May-14	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	Dry		
MW19	19-Aug-14	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	<100	<100
MW19	14-Jan-15	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	<100	<100
MW19	21-Aug-15	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	<100	<100
MW19	18-Nov-15	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	<100	<100
MW19	12-Aug-16	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	<100	<100
MW19	29-Nov-16	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	<100	<100
MW19	27-Jun-17	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	<100	<100
MW19	10-Jul-18	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	<100	<100
MW19	16-Nov-18	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	<100	<100
MW20	20-Jul-10	<0.5 [1]	<0.5 [1]	<0.5 [1]	<0.5 [1]	<0.5 [1]	<1 [1]	<200 [1]	<100	<100	<100
MW20	18-Oct-11	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	<100	<100
MW20	18-Jul-12	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	<100	<100
MW20	20-Dec-12	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	<100	<100
MW20	24-Jul-13	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	<100	<100
MW20	26-May-14	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	Dry		
MW20	19-Aug-14	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	***1370***	286
MW20	14-Jan-15	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	***1050***	187
MW20	21-Aug-15	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	125	<100
MW20	12-Aug-16	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	360	<100
MW20	29-Nov-16	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	377	<100
MW20	27-Jun-17	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	231	<100

TABLE 5:
Summary of Groundwater Analytical Results- BTEX and PHCs F1-F4 Fractions
Elmdale P.S.
49 Iona Street Ottawa, Ontario
MM1027

Sample ID	Sample Date	Benzene	Ethylbenzene	Toluene	m,p-Xylene	o-Xylene	Xylene (Total)	PHC F1 (C6-C10)	PHC F2 (C10-C16)	PHC F3 (C16-C34)	PHC F4 (>C34)
	MDL >	0.5	0.5	0.5	0.5	0.5	0.5	25	100	100	100
	MECP Table 3 SCS >	44	2300	18000	NV	NV	4200	750	150	500	500
MW20	18-Dec-17	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	***1220***	299
MW20	10-Jul-18	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	<100	<100
MW20	16-Nov-18	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	<100	<100
MW21	20-Jul-10	<0.5 [1]	<0.5 [1]	<0.5 [1]	<0.5 [1]	<0.5 [1]	<1 [1]	<200 [1]	<100	<100	<100
MW21	19-Oct-11	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	<100	<100
MW21	18-Jul-12	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	<100	<100
MW21	20-Dec-12	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	<100	<100
MW21	24-Jul-13	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	<100	<100
MW21	19-Aug-14	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	<100	<100
MW21	14-Jan-15	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	<100	<100
MW21	21-Aug-15	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	237	<100
MW21	18-Nov-15	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	<100	<100
MW21	12-Aug-16	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	<100	<100
MW21	29-Nov-16	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	445	<100
MW21	27-Jun-17	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	<100	<100
MW21	18-Dec-17	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	<100	<100
MW21	10-Jul-18	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	<100	<100
MW21	16-Nov-18	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	<100	<100
MW22	20-Jul-10	<0.5 [1]	<0.5 [1]	<0.5 [1]	<0.5 [1]	<0.5 [1]	<1 [1]	<200 [1]	<407	<407	<407
MW22	18-Oct-11	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	<100	<100
MW22	18-Jul-12	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	<100	<100
MW22	20-Dec-12	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	<100	<100
MW22	24-Jul-13	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	<100	<100
MW22	19-Aug-14	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	<100	<100
MW22	14-Jan-15	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	<100	<100
MW22	21-Aug-15	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	<100	<100
MW22	18-Nov-15	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	<100	<100
MW22	12-Aug-16	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	<100	<100
MW22	29-Nov-16	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	<100	<100
MW22	27-Jun-17	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	<100	<100
MW22	18-Dec-17	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	<100	<100
MW22	10-Jul-18	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	<100	<100
MW22	16-Nov-18	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	<100	<100
MW23	26-Jul-11	<0.5	<0.5	1.4	-	-	2.1	<25	<100	<100	<100
MW23	18-Jul-12	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	<100	<100
MW23	20-Dec-12	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	<100	<100
MW23	24-Jul-13	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	<100	<100
MW23	26-May-14	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	Dry		
MW23	19-Aug-14	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	<100	<100
MW23	14-Jan-15	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	<100	<100
MW23	21-Aug-15	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100 [1]	<100 [1]	<100 [1]
MW23	18-Nov-15	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	***565***	230
MW23	12-Aug-16	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	<100	<100
MW23	29-Nov-16	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	<100	<100
MW23	27-Jun-17	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	352	<100
MW23	10-Jul-18	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	<100	<100

TABLE 5:
Summary of Groundwater Analytical Results- BTEX and PHCs F1-F4 Fractions
Elmdale P.S.
49 Iona Street Ottawa, Ontario
MM1027

Sample ID	Sample Date	Benzene	Ethylbenzene	Toluene	m,p-Xylene	o-Xylene	Xylene (Total)	PHC F1 (C6-C10)	PHC F2 (C10-C16)	PHC F3 (C16-C34)	PHC F4 (>C34)
	MDL >	0.5	0.5	0.5	0.5	0.5	0.5	25	100	100	100
	MECP Table 3 SCS >	44	2300	18000	NV	NV	4200	750	150	500	500
MW23	16-Nov-18	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	<100	<100
MW24	20-Jul-10	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	<100	<100
MW24	18-Jul-12	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	<100	<100
MW24	20-Dec-12	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	<100	<100
MW24	24-Jul-13	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	<100	<100
MW24	26-May-14	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	Dry		
MW24	19-Aug-14	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	<100	<100
MW24	20-Jan-15	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	<100	<100
MW24	21-Aug-15	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	<100	<100
MW24	18-Nov-15	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	170	<100
MW24	12-Aug-16	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	<100	<100
MW24	29-Nov-16	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	<100	<100
MW24	27-Jun-17	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	<100	<100
MW24	10-Jul-18	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	<100	<100
MW24	16-Nov-18	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	<100	<100
MW25	20-Jul-10	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	<100	<100
MW25	18-Jul-12	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	<100	<100
MW25	24-Jul-13	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	***2920***	***580***
MW25	26-May-14	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	Dry		
MW25	19-Aug-14	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	<100	<100
MW25	14-Jan-15	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	<100	<100
MW25	21-Aug-15	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	<100	<100
MW25	18-Nov-15	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	375	104
MW25	29-Nov-16	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	<100	<100
MW25	27-Jun-17	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	***594***	122
MW25	10-Jul-18	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	***1110***	275
MW25	16-Nov-18	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	***1710***	***1080***
MW26	20-Jul-10	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	137	<100
MW26	18-Jul-12	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	358	203
MW26	20-Dec-12	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	<100	<100
MW26	24-Jul-13	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	<100	<100
MW26	26-May-14	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	Dry		
MW26	19-Aug-14	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	<100	<100
MW26	20-Jan-15	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	<100	<100
MW26	21-Aug-15	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	<100	<100
MW26	18-Nov-15	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	<100	<100
MW26	12-Aug-16	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	<100	<100
MW26	29-Nov-16	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	<100	<100
MW26	27-Jun-17	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	232	<100
MW26	10-Jul-18	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	<100	<100
MW26	16-Nov-18	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	<100	<100
MW27	20-Jul-10	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	<100	<100
MW27	18-Jul-12	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	<100	<100
MW27	20-Dec-12	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	<100	<100
MW27	24-Jul-13	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	<100	<100

TABLE 5:
Summary of Groundwater Analytical Results- BTEX and PHCs F1-F4 Fractions
Elmdale P.S.
49 Iona Street Ottawa, Ontario
MM1027

Sample ID	Sample Date	Benzene	Ethylbenzene	Toluene	m,p-Xylene	o-Xylene	Xylene (Total)	PHC F1 (C6-C10)	PHC F2 (C10-C16)	PHC F3 (C16-C34)	PHC F4 (>C34)
	MDL >	0.5	0.5	0.5	0.5	0.5	0.5	25	100	100	100
	MECP Table 3 SCS >	44	2300	18000	NV	NV	4200	750	150	500	500
MW27	26-May-14	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	Dry		
MW27	19-Aug-14	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	<100	<100
MW27	20-Jan-15	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	<100	<100
MW27	21-Aug-15	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	<100	<100
MW27	18-Nov-15	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	<100	<100
MW27	12-Aug-16	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	<100	<100
MW27	29-Nov-16	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	<100	<100
MW27	27-Jun-17	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	<100	<100
MW27	18-Dec-17	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	237	<100
MW27	10-Jul-18	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	<100	<100
MW27	16-Nov-18	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	<100	<100
MW28	27-Jun-17	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<25	<100	<100	<100
MW29	26-Mar-19	NA	NA	NA	NA	NA	NA	<25	<100	<100	<100
MW33	26-Mar-19	NA	NA	NA	NA	NA	NA	<25	<100	<100	<100
MW34	26-Mar-19	NA	NA	NA	NA	NA	NA	<25	<100	<100	<100
MW35	26-Mar-19	NA	NA	NA	NA	NA	NA	<25	<100	<100	<100
MW36	26-Mar-19	NA	NA	NA	NA	NA	NA	<25	<100	<100	<100

Notes:
µg/L - all concentrations provided in micrograms per litre (parts per billion)
MDL - reported analytical method detection limit
ppm - parts per million
NV - no standard listed
"<" or "ND ( )" - less than detection limits indicated (refer to laboratory report)
NA - not applicable
MECP Table 3 SCS - Ontario Ministry of Environment, Conservation and Parks (MECP) Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act. April, 2011. Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition, institutional land use, coarse textured soil.
Bold / Italic - indicates concentration above applicable MECP Table 3 SCS
0.5 - MDL above applicable MECP Table 3 SCS (refer to laboratory reports)
[1] - elevated detection/reporting limits and/or modified analytical protocol (refer to laboratory reports)

TABLE 6:
Summary of Groundwater Analytical Results - PAHs
Elmdale P.S.
49 Iona Street Ottawa, Ontario
MM1027

Sample ID	Sample Date	Acenaphthene	Acenaphthylene	Anthracene	Benzo[a]anthracene	Benzo[a]pyrene	Benzo[b]fluoranthene	Benzo[g,h,i]perylene	Benzo[k]fluoranthene	1,1-Biphenyl	Chrysene	Dibenzo[a,h]anthracene	Fluoranthene	Fluorene	Indeno[1,2,3-cd]pyrene	1-Methylnaphthalene	2-Methylnaphthalene	Methylnaphthalene (1&2)	Naphthalene	Phenanthrene	Pyrene
MDL >		**0.05**	**0.05**	**0.01**	**0.01**	**0.01**	**0.05**	**0.05**	**0.05**	**0.05**	**0.05**	**0.05**	**0.01**	**0.05**	**0.05**	**0.05**	**0.05**	**0.1**	**0.05**	**0.05**	**0.01**
MECP Table 3 SCS >		**600**	**1.8**	**2.4**	**4.7**	**0.81**	**0.75**	**0.2**	**0.4**	**1000**	**1**	**0.52**	**130**	**400**	**0.2**	**1800**	**1800**	**1800**	**1400**	**580**	**68**
Monitoring Wells																					
MW1	11-Nov-09	2.39	0.43	0.78	0.61	0.47	0.62	***0.26***	0.24	0.53	0.58	<0.05	2.1	2.11	***0.23***	4.29	<0.05	4.29	2.12	2.35	1.61
MW1	18-Oct-11	0.91	***2.59***	2.09	***5.33***	***6.06***	***9.81***	***3.99***	***3.65***	0.3	***5.42***	***1.07***	6.86	0.72	***3.67***	0.42	0.26	0.68	2.23	1.79	6.7
MW1	18-Jul-12	0.18	0.12	0.12	0.2	0.18	0.22	0.14	0.23	<0.05	0.22	<0.05	0.42	0.13	0.11	0.07	<0.05	0.12	0.24	0.11	0.49
MW1	20-Dec-12	<0.05	<0.05	0.06	0.06	0.04	0.09	<0.05	<0.05	<0.05	0.05	<0.05	0.13	<0.05	<0.05	<0.05	<0.05	<0.10	0.1	<0.05	0.12
MW1	26-May-14	Not Accessible																			
MW1	19-Aug-14	<0.05	***2.2***	1.66	1.54	***0.89***	***2.39***	***0.76***	***1***	NA	***1.64***	0.21	3.41	0.4	***0.79***	<0.05	<0.05	<0.10	1.89	2.02	2.9
MW1	14-Jan-15	<0.05	<0.05	<0.01	<0.01	<0.01	<0.05	<0.05	<0.05	NA	<0.05	<0.05	0.05	<0.05	<0.05	<0.05	<0.05	<0.10	<0.05	<0.05	0.04
MW1	21-Aug-15	<0.05	<0.05	0.04	0.12	0.09	0.19	0.13	0.09	NA	0.15	<0.05	0.25	<0.05	0.11	<0.05	<0.05	<0.10	0.07	0.11	0.21
MW1	18-Nov-15	<0.05	<0.05	0.06	0.1	0.07	0.18	0.13	0.13	NA	0.16	<0.05	0.24	<0.05	0.13	<0.05	<0.05	<0.10	0.06	<0.05	0.19
MW1	29-Nov-16	<0.05	<0.05	<0.01	<0.01	<0.01	<0.05	<0.05	<0.05	NA	<0.05	<0.05	<0.01	<0.05	<0.05	<0.05	<0.05	<0.10	<0.05	<0.05	<0.01
MW2	11-Nov-09	2.16	1.61	***2.53***	3.89	***3.18***	***4.09***	***1.68***	***1.97***	0.34	***3.65***	0.43	11.1	2.32	***1.53***	0.7	0.65	1.35	2.44	5.91	9.77
MW2	18-Oct-11	0.61	***5.95***	***5.47***	***15.8***	***16.6***	***23.4***	***10.2***	***9.37***	0.11	***14.9***	***3.94***	36.9	0.87	***10.3***	0.1	0.12	0.22	0.47	3.98	32.3
MW2	18-Jul-12	0.05	1.57	1.31	3.5	***3.79***	***4.4***	***2.37***	***4.22***	<0.05	***3.66***	0.45	5.55	0.1	***2.1***	<0.05	<0.05	<0.1	0.22	0.81	5.4
MW2	20-Dec-12	0.07	0.76	0.58	1.25	***1.41***	***2.05***	***0.89***	***0.85***	<0.05	***1.23***	0.28	2.99	0.07	***0.88***	<0.05	0.07	0.11	0.43	0.45	2.82
MW2	24-Jul-13	0.07	1.61	1.14	3.16	***2.99***	***3.12***	***1.71***	***1.16***	<0.05	***2.81***	***0.54***	4.96	<0.05	***1.75***	<0.05	<0.05	<0.10	0.14	0.68	4.93
MW2	26-May-14	0.07	0.86	0.8	2.44	***2.25***	***3.6***	***1.35***	***2.15***	<0.05	***2.65***	0.44	4.29	0.07	***1.33***	<0.05	<0.05	<0.10	0.21	0.73	4.24
MW2	19-Aug-14	<0.05	0.56	0.46	1.27	***1.26***	***1.75***	***0.55***	***0.64***	NA	***1.13***	<0.05	1.89	<0.05	***0.58***	<0.05	<0.05	<0.10	<0.05	0.31	1.89
MW2	14-Jan-15	<0.05	0.22	0.13	0.44	0.44	0.74	***0.32***	0.35	NA	0.42	<0.05	0.75	<0.05	***0.27***	<0.05	<0.05	<0.10	0.05	0.11	0.75
MW2	21-Aug-15	<0.05	0.64	0.39	1.71	***2.19***	***3.01***	***1.53***	***1.21***	NA	***1.89***	0.31	3.49	<0.05	***1.39***	<0.05	<0.05	<0.10	0.08	0.56	3.3
MW2	18-Nov-15	0.06	0.91	0.54	1.51	***2.01***	***2.6***	***1.35***	***1.91***	NA	***1.57***	0.27	3.32	<0.05	***1.41***	<0.05	<0.05	<0.10	0.13	0.41	3.17
MW2	29-Nov-16	<0.05	0.1	<0.01	0.18	0.24	0.28	0.18	0.25	NA	0.16	0.05	0.34	<0.05	0.18	<0.05	<0.05	<0.10	<0.05	<0.05	0.33
MW2	18-Dec-17	0.11	0.22	0.14	0.21	0.24	0.08	0.17	0.08	NA	0.21	0.05	0.51	<0.05	0.16	<0.05	<0.05	<0.10	0.23	0.11	0.5
MW2	16-Nov-18	<0.05	0.75	0.27	1.44	***1.56***	***1.71***	***1.15***	***1.69***	NA	***1.4***	0.26	1.95	<0.05	***1.02***	<0.05	<0.05	<0.05	0.17	0.27	1.97
MW3	11-Nov-09	1.59	0.49	0.57	0.62	0.31	0.21	0.12	0.17	0.16	0.51	<0.05	3.02	0.64	0.11	0.27	0.17	0.44	0.78	1.75	2.64
MW3	18-Oct-11	0.22	0.19	0.22	0.43	0.4	0.55	***0.24***	***0.41***	0.11	0.37	<0.05	0.6	0.25	***0.22***	0.15	0.21	0.36	0.93	0.2	0.58
MW3	20-Dec-12	<0.05	<0.05	0.02	<0.01	<0.01	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.02	<0.05	<0.05	0.07	0.17	0.24	0.8	0.06	0.02
MW3	24-Jul-13	<0.05	<0.05	0.03	0.05	0.04	0.07	<0.05	<0.05	0.09	<0.05	<0.05	<0.04	<0.05	<0.05	0.12	0.29	0.41	1.45	0.09	0.04
MW3	26-May-14	0.18	0.41	0.24	0.9	***0.85***	***1.72***	***0.73***	***0.86***	0.57	0.92	0.19	1.2	0.2	***0.62***	0.77	2.12	2.89	12.6	0.82	1.1
MW3	19-Aug-14	<0.05	0.11	<0.01	0.09	<0.01	0.27	0.08	0.09	NA	0.12	<0.05	0.18	<0.05	0.09	0.19	0.51	0.7	3.34	0.24	0.18
MW3	14-Jan-15	<0.05	<0.05	<0.01	<0.01	<0.01	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.01	<0.05	<0.05	<0.05	<0.05	<0.10	0.57	<0.05	0.01
MW3	21-Aug-15	<0.05	<0.05	<0.01	<0.01	<0.01	<0.05	<0.05	<0.05	NA	<0.05	<0.05	0.03	<0.05	<0.05	0.07	0.17	0.24	0.73	<0.05	0.03
MW3	18-Nov-15	<0.05	<0.05	<0.01	<0.01	<0.01	<0.05	<0.05	<0.05	NA	<0.05	<0.05	<0.01	<0.05	<0.05	<0.05	0.12	0.12	0.47	<0.05	0.02
MW3	29-Nov-16	<0.05	<0.05	0.04	0.07	0.1	<0.05	0.09	<0.05	NA	0.07	<0.05	0.13	<0.05	0.09	0.09	0.18	0.27	0.9	0.08	0.12
MW3	18-Dec-17	<0.05	0.07	0.11	0.05	0.06	0.07	0.05	0.06	NA	0.06	<0.05	0.08	<0.05	<0.05	0.11	0.26	0.26	1.4	0.11	0.08
MW4	11-Nov-09	11.4	***2.61***	***6.92***	3.71	***2.26***	***3.09***	***1.07***	***1.23***	2.82	***3.16***	0.3	16.7	12.9	***1***	11.6	4.17	15.77	31.4	21.7	13.4
MW4	24-Jul-13	0.57	0.71	0.69	0.91	***0.97***	***1.17***	***0.78***	***0.42***	1.25	0.78	<0.05	1.38	0.64	***0.71***	2.67	7.08	9.74	31.2	2.05	1.24
MW4	19-Aug-14	0.28	0.44	0.49	0.78	0.78	***1.13***	***0.39***	***0.43***	NA	<0.05	0.08	2.02	0.39	***0.41***	0.82	2.25	3.07	15.9	0.98	2.02
MW4	29-Nov-16	0.8	1.46	1.08	3.56	***5.12***	***6.01***	***4.06***	***3.18***	NA	***3.3***	***1.16***	5.82	0.85	***3.79***	3.51	9.76	13.3	46.5	2.83	5.48
MW5	11-Nov-09	0.06	0.07	0.07	0.19	0.13	0.17	0.07	0.08	0.11	0.2	<0.05	0.37	0.09	0.06	0.09	0.11	0.2	0.15	0.27	0.85
MW5	18-Oct-11	0.48	1.21	1.99	***6.27***	***5.58***	***8.42***	***3.41***	***4.53***	0.08	***5.8***	***0.86***	13.6	0.52	***3.31***	0.06	0.06	0.12	0.3	6.19	11.5
MW5	18-Jul-12	<0.05	0.1	0.11	0.37	0.35	0.32	***0.21***	0.38	0.06	0.38	0.07	0.75	0.07	0.17	0.12	0.19	0.31	0.34	0.34	0.67
MW5	20-Dec-12	<0.05	<0.05	<0.01	<0.01	<0.01	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.03	<0.05	<0.05	<0.05	<0.05	<0.10	0.23	<0.05	0.03
MW5	24-Jul-13	<0.05	<0.05	<0.01	<0.01	<0.01	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.03	<0.05	<0.05	<0.05	<0.05	<0.10	0.23	<0.05	0.03
MW5	26-May-14	<0.05	<0.05	<0.01	<0.01	<0.01	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.01	<0.05	<0.05	<0.05	<0.05	<0.10	<0.05	<0.05	<0.01
MW5	19-Aug-14	<0.05	<0.05	<0.01	<0.01	<0.01	<0.05	<0.05	<0.05	NA	<0.05	<0.05	0.25	<0.05	<0.05	<0.05	<0.05	<0.10	<0.05	<0.05	0.22
MW5	14-Jan-15	<0.05	<0.05	<0.01	<0.01	<0.01	<0.05	<0.05	<0.05	NA	<0.05	<0.05	0.07	<0.05	<0.05	<0.05	<0.05	<0.10	0.14	<0.05	0.07
MW5	21-Aug-15	<0.05	<0.05	<0.01	<0.01	<0.01	<0.05	<0.05	<0.05	NA	<0.05	<0.05	<0.01	<0.05	<0.05	<0.05	<0.05	<0.10	<0.05	<0.05	<0.01
MW5	18-Nov-15	<0.05	<0.05	<0.01	<0.01	<0.01	<0.05	<0.05	<0.05	NA	<0.05	<0.05	<0.01	<0.05	<0.05	<0.05	<0.05	<0.10	<0.05	<0.05	<0.01
MW5	29-Nov-16	<0.05	0.08	0.08	0.34	0.36	0.4	***0.27***	0.33	NA	0.31	0.07	0.79	<0.05	***0.25***	<0.05	<0.05	<0.10	0.26	0.22	0.66
MW6	11-Nov-09	<0.05	0.66	0.05	0.09	0.05	0.07	<0.05	<0.05	0.09	0.08	<0.05	0.27	0.1	<0.05	0.09	0.11	0.2	0.15	0.2	0.71
MW6	18-Oct-11	1.41	***3.65***	***5.9***	***17.7***	***16.3***	***22.7***	***9.54***	***10.4***	0.14	***16.4***	***3.13***	51.3	1.84	***9.51***	0.17	0.14	0.31	0.49	15.5	41.3
MW6	20-Dec-12	0.06	0.25	0.39	0.87	***0.86***	***1.22***	***0.52***	***0.53***	<0.05	0.88	0.15	2.53	0.08	***0.49***	<0.05	<0.05	<0.10	0.1	0.82	2.21
MW6	26-May-14	<0.05	<0.05	0.01	0.05	0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.02	<0.05	<0.05	<0.05	<0.05	<0.10	<0.05	<0.05	0.02
MW6	19-Aug-14	<0.05	<0.05	<0.01	0.33	0.21	0.18	0.1	0.14	NA	0.25	<0.05	0.5	<0.05	0.1	<0.05	<0.05	<0.10	<0.05	<0.05	0.73
MW6	14-Jan-15	<0.05	<0.05	<0.01	<0.01	<0.01	<0.05	<0.05	<0.05	NA	<0.05	<0.05	<0.01	<0.05	<0.05	<0.05	<0.05	<0.10	<0.05	<0.05	<0.01
MW6	21-Aug-15	0.19	0.45	0.69	2.25	***2.52***	***3.86***	***1.66***	***1.47***	NA	***2.27***	0.35	4.77	0.26	***1.54***	0.06	0.06	<0.10	0.17	1.94	3.28
MW6	18-Nov-15	<0.05	0.07	0.16	0.23	0.23	0.33	0.17	0.24	NA	0.23	<0.05	0.55	<0.05	0.16	<0.05	<0.05	<0.10	<0.05	0.15	0.46
MW6	29-Nov-16	<0.05	0.11	0.13	0.45	0.49	0.63	***0.34***	0.32	NA	0.43	0.1	1.02	<0.05	***0.32***	<0.05	<0.05	<0.10	0.12	0.28	0.88
MW6	18-Dec-17	<0.05	<0.05	<0.01	<0.01	<0.01	<0.05	<0.05	<0.05	NA	<0.05	<0.05	<0.01	<0.05	<0.05	<0.05	<0.05	<0.10	<0.05	<0.05	<0.01
MW7	25-Mar-10	0.92	0.41	1.13	0.93	0.7	***0.99***	***0.37***	***0.59***	0.1	0.97	0.06	3.8	0.88	***0.35***	0.21	0.17	0.38	0.38	2.72	3.09
MW7	18-Oct-11	0.87	***2.92***	***4.95***	***12.5***	***11.6***	***16.8***	***7.03***	***10.8***	0.12	***11.8***	***2.24***	28.9	1.06	***7.05***	0.1	0.09	0.19	0.17	11.2	23.7
MW7	18-Jul-12	<0.05	0.24	0.28	0.73	0.72	0.74	***0.42***	***0.84***	<0.05	0.79	0.13	1.54	0.07	***0.35***	0.07	0.11	0.18	0.11	0.5	1.39
MW7	20-Dec-12	<0.05	<0.05	0.04	0.15	0.16	0.17	0.09	0.09	<0.05	0.14	<0.05	0.23	<0.05	0.08	<0.05	<0.05	<0.10	<0.05	0.08	0.2
MW7	24-Jul-13	<0.05	<0.05	0.02	0.07	0.05	0.08	0.05	<0.05	<0.05	0.06	<0.05	0.11	<0.05	<0.05	<0.05	<0.05	<0.10	0.05	0.05	0.12

TABLE 6:
Summary of Groundwater Analytical Results - PAHs
Elmdale P.S.
49 Iona Street Ottawa, Ontario
MM1027

Sample ID	Sample Date	Acenaphthene	Acenaphthylene	Anthracene	Benzo[a]anthracene	Benzo[a]pyrene	Benzo[b]fluoranthene	Benzo[g,h,i]perylene	Benzo[k]fluoranthene	1,1-Biphenyl	Chrysene	Dibenzo[a,h]anthracene	Fluoranthene	Fluorene	Indeno[1,2,3-cd]pyrene	1-Methylnaphthalene	2-Methylnaphthalene	Methylnaphthalene (1&2)	Naphthalene	Phenanthrene	Pyrene
MDL >		**0.05**	**0.05**	**0.01**	**0.01**	**0.01**	**0.05**	**0.05**	**0.05**	**0.05**	**0.05**	**0.05**	**0.01**	**0.05**	**0.05**	**0.05**	**0.05**	**0.1**	**0.05**	**0.05**	**0.01**
MECP Table 3 SCS >		**600**	**1.8**	**2.4**	**4.7**	**0.81**	**0.75**	**0.2**	**0.4**	**1000**	**1**	**0.52**	**130**	**400**	**0.2**	**1800**	**1800**	**1800**	**1400**	**580**	**68**
MW7	26-May-14	Not Accessible																			
MW7	19-Aug-14	<0.05	0.41	0.54	1.2	***0.88***	***3.08***	***0.42***	***1.23***	NA	***1.19***	<0.05	1.89	<0.05	***0.45***	<0.05	<0.05	<0.10	<0.05	0.53	1.65
MW7	14-Jan-15	<0.05	0.14	0.12	0.45	0.41	0.66	***0.28***	0.26	NA	0.42	<0.05	0.94	<0.05	***0.25***	<0.05	<0.05	<0.10	0.07	0.31	0.82
MW7	21-Aug-15	<0.05	0.06	<0.01	0.16	0.15	0.26	0.12	0.11	NA	0.16	<0.05	0.29	<0.05	0.11	<0.05	<0.05	<0.10	<0.05	0.08	0.27
MW7	18-Nov-15	<0.05	0.28	0.28	0.75	***0.85***	***1.09***	***0.55***	***0.71***	NA	0.82	0.11	1.72	<0.05	***0.55***	<0.05	<0.05	<0.10	0.07	0.53	1.44
MW7	29-Nov-16	<0.05	<0.05	<0.01	0.09	0.11	0.11	0.08	0.1	NA	0.08	<0.05	0.18	<0.05	0.08	<0.05	<0.05	<0.10	<0.05	<0.05	0.17
MW7	18-Dec-17	<0.05	<0.05	<0.01	0.04	0.04	<0.05	<0.05	<0.05	NA	<0.05	0.11	<0.01	<0.05	<0.05	<0.05	<0.05	<0.10	<0.05	<0.05	0.09
MW7	16-Nov-18	<0.05	<0.05	<0.01	<0.01	<0.01	<0.05	<0.05	<0.05	NA	<0.05	<0.05	0.08	<0.05	<0.05	<0.05	<0.05	<0.10	<0.05	<0.05	0.07
MW8	25-Mar-10	0.48	0.24	0.89	0.66	0.49	0.74	***0.27***	***0.43***	0.05	0.69	0.05	3.47	0.55	***0.25***	0.12	0.13	0.25	0.24	3.42	2.71
MW8	18-Oct-11	<0.05	0.2	0.23	0.76	0.73	***0.99***	***0.42***	***0.68***	<0.05	0.68	<0.05	1.21	<0.05	***0.38***	<0.05	<0.05	<0.1	<0.05	0.38	1.29
MW8	18-Jul-12	<0.05	0.24	0.24	0.76	0.67	***0.75***	***0.45***	***0.84***	<0.05	0.83	0.15	1.46	<0.05	***0.39***	<0.05	<0.05	<0.1	0.19	0.38	1.42
MW8	20-Dec-12	<0.05	<0.05	0.04	0.15	0.16	0.2	0.1	0.1	<0.05	0.14	<0.05	0.19	<0.05	0.09	<0.05	<0.05	<0.10	0.05	<0.05	0.19
MW8	24-Jul-13	<0.05	0.14	0.13	0.47	0.41	0.67	***0.23***	0.29	<0.05	0.43	<0.05	0.69	<0.05	***0.22***	<0.05	<0.05	<0.10	<0.05	<0.05	0.06
MW8	26-May-14	Dry																			
MW8	19-Aug-14	0.15	***2.17***	1.65	***5.83***	***5.58***	***8.55***	***1.41***	***3.05***	NA	***4.88***	***0.88***	9.27	<0.05	***3.21***	<0.05	<0.05	<0.10	0.21	1.34	17.2
MW8	14-Jan-15	<0.05	0.09	0.07	0.24	0.22	0.36	0.17	0.16	NA	0.2	<0.05	0.39	<0.05	0.15	<0.05	<0.05	<0.10	<0.05	0.1	0.39
MW8	21-Aug-15	<0.05	<0.05	0.03	0.14	0.17	0.23	0.14	0.09	NA	0.16	<0.05	0.27	<0.05	0.12	<0.05	<0.05	<0.10	<0.05	0.07	0.27
MW8	18-Nov-15	<0.05	0.07	0.04	0.16	0.19	0.25	0.15	0.21	NA	0.18	<0.05	0.3	<0.05	0.16	<0.05	<0.05	<0.10	<0.05	0.06	0.31
MW8	29-Nov-16	<0.05	<0.05	<0.01	0.06	0.09	0.09	0.07	<0.05	NA	0.06	<0.05	0.11	<0.05	0.07	<0.05	<0.05	<0.10	<0.05	<0.05	0.12
MW8	18-Dec-17	<0.05	<0.05	<0.01	<0.01	<0.01	<0.05	<0.05	<0.05	NA	<0.05	<0.05	<0.01	<0.05	<0.05	<0.05	<0.05	<0.10	<0.05	<0.05	<0.01
MW9	25-Mar-10	<0.05	<0.05	<0.01	<0.01	<0.01	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.01	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.01
MW9	18-Oct-11	<0.05	<0.05	0.03	0.12	<0.01	0.1	<0.05	0.07	0.07	0.09	<0.05	0.13	<0.05	<0.05	<0.05	<0.05	<0.1	0.07	0.11	0.16
MW9	18-Jul-12	<0.05	<0.05	<0.01	0.03	0.03	0.08	<0.05	0.08	<0.05	<0.05	<0.05	0.08	<0.05	<0.05	<0.05	<0.05	<0.1	0.13	0.06	0.08
MW9	20-Dec-12	<0.05	<0.05	<0.01	<0.01	<0.01	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.01	<0.05	<0.05	<0.05	<0.05	<0.10	<0.05	<0.05	<0.01
MW9	24-Jul-13	<0.05	<0.05	<0.01	<0.01	<0.01	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.03	<0.05	<0.05	<0.05	<0.05	<0.10	0.23	<0.05	0.03
MW9	26-May-14	<0.05	<0.05	<0.01	0.04	<0.01	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.02	<0.05	<0.05	<0.05	<0.05	<0.10	<0.05	<0.05	0.02
MW9	19-Aug-14	<0.05	<0.05	<0.01	<0.01	<0.01	<0.05	<0.05	<0.05	NA	<0.05	<0.05	0.02	<0.05	<0.05	<0.05	<0.05	<0.10	0.25	<0.05	<0.01
MW9	14-Jan-15	<0.10 [1]	<0.10 [1]	<0.02 [1]	<0.02 [1]	<0.02 [1]	<0.10 [1]	<0.10 [1]	<0.10 [1]	NA	<0.10 [1]	<0.10 [1]	<0.02 [1]	<0.10 [1]	<0.10 [1]	<0.10 [1]	<0.10 [1]	<0.20 [1]	<0.10 [1]	<0.10 [1]	<0.02 [1]
MW9	21-Aug-15	<0.05	<0.05	<0.01	<0.01	<0.01	<0.05	<0.05	<0.05	NA	<0.05	<0.05	<0.01	<0.05	<0.05	<0.05	<0.05	<0.10	<0.05	<0.05	<0.01
MW9	18-Nov-15	<0.05	<0.05	<0.01	<0.01	<0.01	<0.05	<0.05	<0.05	NA	<0.05	<0.05	<0.01	<0.05	<0.05	<0.05	<0.05	<0.10	<0.05	<0.05	<0.01
MW9	29-Nov-16	<0.05	<0.05	<0.01	<0.01	<0.01	<0.05	<0.05	<0.05	NA	<0.05	<0.05	<0.01	<0.05	<0.05	<0.05	<0.05	<0.10	<0.05	<0.05	<0.01
MW9	16-Nov-18	<0.05	<0.05	<0.01	<0.01	<0.01	<0.05	<0.05	<0.05	NA	<0.05	<0.05	<0.01	<0.05	<0.05	<0.05	<0.05	<0.10	<0.05	<0.05	<0.01
MW10	25-Mar-10	0.35	<0.15 [1]	0.18	0.15	0.05	<0.15 [1]	<0.15 [1]	<0.15 [1]	0.19	<0.15	<0.15 [1]	0.47	0.37	<0.15 [1]	0.32	0.4	0.72	0.78	1	0.51
MW10	18-Oct-11	<0.05	<0.05	0.03	0.12	<0.01	0.1	<0.05	0.05	0.05	0.08	<0.05	0.17	<0.05	<0.05	<0.05	<0.05	<0.1	0.07	0.1	0.15
MW10	20-Dec-12	<0.05	<0.05	<0.01	<0.01	<0.01	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.01	<0.05	<0.05	<0.05	<0.05	<0.10	<0.05	<0.05	<0.01
MW10	24-Jul-13	<0.05	<0.05	<0.01	<0.01	<0.01	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.03	<0.05	<0.05	<0.05	<0.05	<0.10	0.05	<0.05	0.03
MW10	26-May-14	<0.05	<0.05	<0.01	0.04	0.01	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.03	<0.05	<0.05	<0.05	<0.05	<0.10	0.05	<0.05	0.02
MW10	19-Aug-14	<0.05	<0.05	<0.01	<0.01	<0.01	<0.05	<0.05	<0.05	NA	<0.05	<0.05	0.02	<0.05	<0.05	<0.05	<0.05	<0.10	<0.05	<0.05	<0.01
MW10	14-Jan-15	<0.05	<0.05	<0.01	<0.01	<0.01	<0.05	<0.05	<0.05	NA	<0.05	<0.05	<0.01	<0.05	<0.05	<0.05	<0.05	<0.10	<0.05	<0.05	<0.01
MW10	21-Aug-15	<0.05	<0.05	<0.01	<0.01	<0.01	<0.05	<0.05	<0.05	NA	<0.05	<0.05	<0.01	<0.05	<0.05	<0.05	<0.05	<0.10	<0.05	<0.05	<0.01
MW10	18-Nov-15	<0.05	<0.05	<0.01	<0.01	<0.01	<0.05	<0.05	<0.05	NA	<0.05	<0.05	<0.01	<0.05	<0.05	<0.05	<0.05	<0.10	<0.05	<0.05	<0.01
MW10	18-Dec-17	<0.05	<0.05	<0.01	<0.01	<0.01	<0.05	<0.05	<0.05	NA	<0.05	<0.05	<0.01	<0.05	<0.05	<0.05	<0.05	<0.10	0.11	<0.05	<0.01
MW11	25-Mar-10	0.06	0.09	0.08	0.07	0.07	0.07	<0.05	0.05	0.07	0.12	<0.05	0.77	0.07	<0.05	0.07	0.08	0.15	0.16	0.66	0.99
MW11	18-Oct-11	<0.05	<0.05	<0.01	<0.01	<0.01	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.01	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.01
MW11	18-Jul-12	<0.05	<0.05	<0.01	0.03	<0.01	<0.05	<0.05	<0.05	<0.05	0.06	<0.05	0.08	<0.05	<0.05	<0.05	<0.05	<0.1	0.08	0.06	0.09
MW11	20-Dec-12	<0.05	<0.05	<0.01	<0.01	<0.01	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.01	<0.05	<0.05	<0.05	<0.05	<0.10	<0.05	<0.05	<0.01
MW11	24-Jul-13	<0.05	<0.05	<0.01	0.05	0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.06	<0.05	<0.05	<0.05	<0.05	<0.10	0.05	<0.05	0.03
MW11	26-May-14	<0.05	<0.05	<0.01	<0.01	<0.01	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.01	<0.05	<0.05	<0.05	<0.05	<0.10	<0.05	<0.05	<0.01
MW11	19-Aug-14	<0.05	<0.05	<0.01	<0.01	<0.01	<0.05	<0.05	<0.05	NA	<0.05	<0.05	0.02	<0.05	<0.05	<0.05	<0.05	<0.10	<0.05	<0.05	<0.01
MW11	14-Jan-15	<0.05 [1]	<0.05 [1]	<0.01 [1]	<0.01 [1]	<0.01 [1]	<0.05 [1]	<0.05 [1]	<0.05 [1]	NA	<0.05 [1]	<0.05 [1]	<0.01 [1]	<0.05 [1]	<0.05 [1]	<0.05 [1]	<0.05 [1]	<0.10 [1]	<0.05 [1]	<0.05 [1]	<0.01 [1]
MW11	21-Aug-15	<0.05	<0.05	<0.01	<0.01	<0.01	<0.05	<0.05	<0.05	NA	<0.05	<0.05	<0.01	<0.05	<0.05	<0.05	<0.05	<0.10	<0.05	<0.05	<0.01
MW11	18-Nov-15	<0.05	<0.05	<0.01	<0.01	<0.01	<0.05	<0.05	<0.05	NA	<0.05	<0.05	<0.01	<0.05	<0.05	<0.05	<0.05	<0.10	<0.05	<0.05	<0.01
MW11	29-Nov-16	<0.05	<0.05	<0.01	<0.01	<0.01	<0.05	<0.05	<0.05	NA	<0.05	<0.05	<0.01	<0.05	<0.05	<0.05	<0.05	<0.10	<0.05	<0.05	<0.01
MW11	18-Dec-17	<0.05	<0.05	<0.01	<0.01	<0.01	<0.05	<0.05	<0.05	NA	<0.05	<0.05	<0.01	<0.05	<0.05	<0.05	<0.05	<0.10	<0.05	<0.05	<0.01
MW11	16-Nov-18	<0.05	<0.05	<0.01	<0.01	<0.01	<0.05	<0.05	<0.05	NA	<0.05	<0.05	<0.01	<0.05	<0.05	<0.05	<0.05	<0.10	<0.05	<0.05	<0.01
MW12	25-Mar-10	1.21	0.23	0.99	0.54	0.31	0.72	0.19	***0.68***	0.3	0.52	<0.1	2.43	1.57	0.17	0.79	0.87	1.66	4.15	4.25	1.89
MW12	24-Jul-13	<0.05	<0.05	<0.01	<0.01	<0.01	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.03	<0.05	<0.05	<0.05	<0.05	<0.10	0.05	<0.05	0.03
MW12	26-May-14	0.17	<0.05	0.03	0.14	0.05	0.12	<0.05	0.07	<0.05	0.09	<0.05	0.22	0.06	<0.05	0.07	<0.05	<0.10	0.74	0.2	0.18
MW12	19-Aug-14	Dry																			
MW12	21-Aug-15	Dry																			
MW13	25-Mar-10	<0.05	<0.05	<0.01	<0.01	<0.01	<0.05	<0.05	<0.05	0.06	<0.05	<0.05	<0.01	<0.05	<0.05	0.07	0.08	0.15	0.1	<0.05	<0.01
MW13	18-Oct-11	<0.05	<0.05	<0.01	<0.01	<0.01	<0.05	<0.05	<0.05	0.2	<0.05	<0.05	<0.01	<0.05	<0.05	<0.05	<0.05	<0.1	0.39	<0.05	<0.01
MW13	20-Dec-12	<0.05	<0.05	<0.01	<0.01	<0.01	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.01	<0.05	<0.05	<0.05	<0.05	<0.10	<0.05	<0.05	<0.01
MW13	26-May-14	<0.05	<0.05	<0.01	<0.01	<0.01	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.01	<0.05	<0.05	<0.05	<0.05	<0.10	0.18	<0.05	<0.01
MW13	19-Aug-14	Dry																			

TABLE 6:
Summary of Groundwater Analytical Results - PAHs
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MM1027

Sample ID	Sample Date	Acenaphthene	Acenaphthylene	Anthracene	Benzo[a]anthracene	Benzo[a]pyrene	Benzo[b]fluoranthene	Benzo[g,h,i]perylene	Benzo[k]fluoranthene	1,1-Biphenyl	Chrysene	Dibenzo[a,h]anthracene	Fluoranthene	Fluorene	Indeno[1,2,3-cd]pyrene	1-Methylnaphthalene	2-Methylnaphthalene	Methylnaphthalene (1&2)	Naphthalene	Phenanthrene	Pyrene
MDL >		**0.05**	**0.05**	**0.01**	**0.01**	**0.01**	**0.05**	**0.05**	**0.05**	**0.05**	**0.05**	**0.05**	**0.01**	**0.05**	**0.05**	**0.05**	**0.05**	**0.1**	**0.05**	**0.05**	**0.01**
MECP Table 3 SCS >		**600**	**1.8**	**2.4**	**4.7**	**0.81**	**0.75**	**0.2**	**0.4**	**1000**	**1**	**0.52**	**130**	**400**	**0.2**	**1800**	**1800**	**1800**	**1400**	**580**	**68**
MW13	14-Jan-15	<0.05	<0.05	<0.01	<0.01	<0.01	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.01	<0.05	<0.05	<0.05	<0.05	<0.10	<0.05	<0.05	<0.01
MW13	21-Aug-15	<0.05 [1]	<0.05 [1]	<0.01 [1]	<0.01 [1]	<0.01 [1]	<0.05 [1]	<0.05 [1]	<0.05 [1]	NA	<0.05 [1]	<0.05 [1]	<0.01 [1]	<0.05 [1]	<0.05 [1]	<0.05 [1]	<0.05 [1]	<0.10 [1]	<0.05 [1]	<0.05 [1]	<0.01 [1]
MW13	18-Nov-15	<0.10 [1]	<0.10 [1]	<0.02 [1]	<0.02 [1]	<0.02 [1]	<0.10 [1]	<0.10 [1]	<0.10 [1]	NA	<0.10 [1]	<0.10 [1]	<0.02 [1]	<0.10 [1]	<0.10 [1]	<0.10 [1]	<0.10 [1]	<0.20 [1]	0.23 [1]	<0.10 [1]	<0.02 [1]
MW13	18-Dec-17	<0.05	<0.05	<0.01	<0.01	<0.01	<0.05	<0.05	<0.05	NA	<0.05	<0.05	0.01	<0.05	<0.05	<0.05	<0.05	<0.10	0.08	<0.05	<0.01
MW14	25-Mar-10	<0.05	<0.05	<0.01	<0.01	<0.01	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.05	<0.05	<0.05	0.08	0.09	0.17	0.12	<0.05	0.04
MW14	18-Oct-11	<0.05	0.08	0.06	0.18	<0.01	0.26	0.07	0.26	0.09	0.15	<0.05	0.19	<0.05	0.05	<0.05	<0.05	<0.1	0.12	0.07	0.19
MW14	18-Jul-12	<0.05	<0.05	0.03	0.1	0.06	0.08	<0.05	0.09	<0.05	0.09	<0.05	0.14	<0.05	<0.05	<0.05	<0.05	<0.1	0.14	<0.05	0.14
MW14	20-Dec-12	<0.05	<0.05	0.02	0.06	0.06	0.09	<0.05	<0.05	<0.05	0.05	<0.05	0.09	<0.05	<0.05	<0.05	<0.05	<0.10	0.07	<0.05	0.09
MW14	24-Jul-13	<0.05	<0.05	<0.01	<0.01	<0.01	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.03	<0.05	<0.05	<0.05	<0.05	<0.10	0.05	<0.05	0.02
MW14	26-May-14	<0.05	<0.05	<0.01	<0.01	<0.01	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.03	<0.05	<0.05	<0.05	<0.05	<0.10	0.05	<0.05	<0.01
MW14	19-Aug-14	<0.05	<0.05	<0.01	<0.01	<0.01	<0.05	<0.05	<0.05	NA	<0.05	<0.05	0.02	<0.05	<0.05	<0.05	<0.05	<0.10	<0.05	<0.05	<0.01
MW14	14-Jan-15	<0.05	<0.05	<0.01	<0.01	<0.01	<0.05	<0.05	<0.05	NA	<0.05	<0.05	0.06	<0.05	<0.05	<0.05	<0.05	<0.10	0.09	<0.05	0.04
MW14	21-Aug-15	<0.05	<0.05	<0.01	<0.01	<0.01	<0.05	<0.05	<0.05	NA	<0.05	<0.05	<0.01	<0.05	<0.05	<0.05	<0.05	<0.10	<0.05	<0.05	<0.01
MW14	18-Nov-15	<0.05	<0.05	<0.01	<0.01	<0.01	<0.05	<0.05	<0.05	NA	<0.05	<0.05	<0.01	<0.05	<0.05	<0.05	<0.05	<0.10	<0.05	<0.05	<0.01
MW14	29-Nov-16	<0.05	<0.05	<0.01	<0.01	<0.01	<0.05	<0.05	<0.05	NA	<0.05	<0.05	<0.01	<0.05	<0.05	<0.05	<0.05	<0.10	<0.05	<0.05	<0.01
MW15	25-Mar-10	27.3	1.24	***10.1***	***7.09***	***6.45***	***7.88***	***3.59***	***5.04***	2	***7.9***	***0.95***	24.5	18.6	***3.69***	8.93	10	18.93	41.2	39.6	18.9
MW15	19-Oct-11	9.96	<0.05 [1]	***17.7***	***64.3***	***51.3***	***70.4***	***25***	***45.6***	<0.05 [1]	***67.1***	<0.05 [1]	128	8.01	***22.2***	<0.05 [1]	<0.05 [1]	<0.1 [1]	5.09	70.4	***114***
MW15	18-Jul-12	3.17	0.69	***3.38***	***11***	***12.3***	***14.6***	***7.76***	***10.5***	0.27	***11.8***	***2.71***	21.1	2.24	***7.82***	0.84	0.51	1.35	3.74	12.1	18.9
MW15	20-Dec-12	0.90 [1]	0.36 [1]	2.07 [1]	***10.3 [1]***	***7.10 [1]***	***15.4 [1]***	***4.18 [1]***	***6.83 [1]***	0.14 [1]	***11.1 [1]***	***1.51 [1]***	22.5 [1]	0.89 [1]	***4.47 [1]***	0.47 [1]	0.39 [1]	0.86 [1]	1.06 [1]	8.47 [1]	18.3 [1]
MW15	24-Jul-13	0.39	<0.25 [1]	0.81	3	***2.16***	***3.85***	***1.18***	***1.44***	<0.25 [1]	***2.7***	<0.25 [1]	3.58	0.31	***1.09***	<0.25 [1]	<0.25 [1]	<0.50 [1]	<0.25 [1]	4.14	2.47
MW15	26-May-14	0.24	0.13	0.23	1.64	***1.59***	***2.71***	***1.14***	***1.53***	<0.05	***2.05***	0.3	4.07	<0.05	***0.98***	<0.05	<0.05	<0.10	0.14	1.67	3.61
MW15	19-Aug-14	1.01	0.26	0.92	4.35	***3.59***	***5.91***	***1.9***	***2.1***	NA	***4.09***	0.39	9.27	0.53	***1.84***	0.21	<0.05	0.21	1.11	4.09	7.75
MW15	14-Jan-15	0.34	0.09	0.31	1.13	***1.1***	***1.87***	***0.76***	***0.77***	NA	***1.45***	0.17	3.06	0.16	***0.69***	0.11	<0.05	0.11	0.39	1.62	2.57
MW15	21-Aug-15	0.11	<0.05	0.03	0.13	0.12	0.17	0.11	0.08	NA	0.14	<0.05	0.29	<0.05	0.09	<0.05	<0.05	<0.10	<0.05	0.12	0.25
MW15	29-Nov-16	0.76	0.06	0.13	0.5	0.7	***0.83***	***0.54***	***0.52***	NA	0.52	0.15	1.23	0.2	***0.52***	0.19	<0.05	0.19	0.9	0.43	1.06
MW15	18-Dec-17	0.05	<0.05	0.08	0.08	0.09	0.11	0.07	0.1	NA	0.1	<0.05	0.2	<0.05	0.06	<0.05	<0.05	<0.10	<0.05	0.08	0.18
MW16	31-Mar-10	<0.05	<0.05	<0.01	<0.01	<0.01	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.01	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	0.04
MW16	24-Jul-13	<0.05	<0.05	<0.01	<0.01	0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.03	<0.05	<0.05	<0.05	<0.05	<0.10	0.08	0.08	0.02
MW16	26-May-14	<0.05	<0.05	0.01	0.09	0.05	0.1	<0.05	0.06	<0.05	0.09	<0.05	0.18	<0.05	<0.05	<0.05	<0.05	<0.10	<0.05	0.15	0.15
MW16	19-Aug-14	<0.10	<0.10	<0.02	<0.02	<0.02	<0.10	<0.10	<0.10	NA	<0.10	<0.10	<0.02	<0.10	<0.10	<0.10	<0.10	<0.20	<0.10	<0.10	<0.02
MW16	20-Jan-15	<0.05	<0.05	<0.01	<0.01	<0.01	<0.05	<0.05	<0.05	NA	<0.05	<0.05	0.05	<0.05	<0.05	<0.05	<0.05	<0.10	<0.05	<0.05	0.05
MW16	21-Aug-15	<0.05	<0.05	0.03	0.09	0.07	0.12	0.06	0.06	NA	0.1	<0.05	0.27	<0.05	<0.05	<0.05	<0.05	<0.10	0.2	0.28	0.2
MW16	18-Nov-15	<0.05 [1]	<0.05 [1]	<0.01 [1]	<0.01 [1]	<0.01 [1]	<0.05 [1]	<0.05 [1]	<0.05 [1]	NA	<0.05 [1]	<0.05 [1]	<0.01 [1]	<0.05 [1]	<0.05 [1]	<0.05 [1]	<0.05 [1]	<0.01 [1]	<0.05 [1]	<0.05 [1]	<0.1 [1]
MW17	31-Mar-10	<0.05	<0.05	<0.01	<0.01	<0.01	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.01	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.01
MW17	24-Jul-13	<0.05	<0.05	<0.01	<0.01	0.01	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.06	<0.05	<0.05	<0.05	<0.05	<0.10	0.05	0.1	0.05
MW17	26-May-14	<0.05	<0.05	<0.01	0.01	0.05	0.1	<0.05	0.06	<0.05	0.1	<0.05	0.17	<0.05	<0.05	<0.05	<0.05	<0.10	0.05	0.15	0.15
MW17	19-Aug-14	Dry																			
MW17	20-Jan-15	<0.10 [1]	<0.10 [1]	<0.10 [1]	<0.10 [1]	<0.10 [1]	<0.10 [1]	<0.10 [1]	<0.10 [1]	<0.10 [1]	<0.10 [1]	<0.10 [1]	0.06 [1]	<0.05 [1]	<0.05 [1]	<0.05 [1]	<0.05 [1]	<0.10 [1]	0.05 [1]	0.1 [1]	0.05 [1]
MW17	21-Aug-15	<0.05	<0.05	<0.01	<0.01	<0.01	<0.05	<0.05	<0.05	NA	<0.05	<0.05	<0.01	<0.05	<0.05	<0.05	<0.05	<0.1	0.16	<0.05	<0.01
MW17	18-Nov-15	<0.10 [1]	<0.10 [1]	0.04 [1]	0.13 [1[	0.10 [1]	0.13 [1]	<0.10 [1]	<0.10 [1]	NA	0.14 [1]	<0.10 [1]	0.28 [1]	<0.10 [1]	<0.10 [1]	<0.10 [1]	<0.10 [1]	<0.20 [1]	<0.10 [1]	0.24 [1]	0.22 [1]
MW18	31-Mar-10	<0.05	<0.05	<0.01	<0.01	<0.01	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.01	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.01
MW18	24-Jul-13	<0.10 [1]	<0.10 [1]	<0.02 [1]	<0.02 [1]	<0.02 [1]	<0.10 [1]	<0.10 [1]	<0.10 [1]	<0.10 [1]	<0.10 [1]	<0.10 [1]	0.21	<0.10 [1]	<0.10 [1]	<0.10 [1]	<0.10 [1]	<0.10 [1]	<0.20 [1]	<0.10 [1]	0.18
MW18	26-May-14	<0.05	<0.05	<0.01	0.06	0.02	0.06	<0.05	<0.05	<0.05	0.06	<0.05	0.11	<0.05	<0.05	<0.05	<0.05	<0.10	<0.05	0.08	0.09
MW18	19-Aug-14	<0.10	<0.10	0.13	0.26	<0.02	0.31	<0.10	0.11	NA	0.26	<0.10	<0.6	<0.10	<0.10	<0.10	<0.10	<0.20	0.21	0.51	0.48
MW18	20-Jan-15	<0.15 [1]	<0.15 [1]	<0.03 [1]	<0.03 [1]	<0.03 [1]	<0.15 [1]	<0.15 [1]	<0.15 [1]	NA	<0.15 [1]	<0.15 [1]	<0.03 [1]	<0.15 [1]	<0.15 [1]	<0.15 [1]	<0.15 [1]	<0.30 [1]	<0.15 [1]	<0.15 [1]	<0.03 [1]
MW18	21-Aug-15	<0.05 [1]	0.06 [1]	0.07 [1]	0.31 [1]	0.42 [1]	0.53 [1]	***0.34 [1]***	0.27 [1]	NA	0.47 [1]	<0.05 [1]	1.03 [1]	<0.05 [1]	***0.32 [1]***	<0.05 [1]	<0.05 [1]	<0.10 [1]	<0.05 [1]	0.64 [1]	0.84 [1]
MW18	18-Nov-15	<0.10 [1]	<0.10 [1]	0.09 [1]	0.31 [1]	0.37 [1]	0.63 [1]	***0.33 [1]***	***0.42 [1]***	NA	0.44 [1]	0.13 [1]	0.93 [1]	<0.10 [1]	***0.30 [1]***	<0.10 [1]	<0.10 [1]	<0.20 [1]	<0.10 [1]	0.64 [1]	0.76 [1]
MW19	20-Jul-10	18.9	<0.15 [1]	***7.41***	***12.3***	***11.2***	***14.5***	***6.37***	***5.23***	0.99	***12.5***	***1.93***	31.8	11.7	***6.34***	5.72	5.62	11.34	24.1	43.9	24.8
MW19	18-Oct-11	28.5	<0.05 [1]	***84.4***	***270***	***202***	***274***	***93.1***	***162***	<0.05 [1]	***272***	<0.05	***572***	26.7	***93.5***	<0.05 [1]	<0.05 [1]	<0.1 [1]	<0.05 [1]	394	***482***
MW19	18-Jul-12	2.47	0.14	***6.25***	***15.3***	***16.7***	***18.3***	***10.2***	***14.7***	0.1	***16.3***	***3.78***	27	2.6	***10.1***	0.2	0.21	0.41	0.44	21	26
MW19	20-Dec-12	0.51	<0.05	1.14	***9.52***	***6.63***	***13.9***	***3.8***	***5.63***	<0.05	***9.52***	***1.37***	10.8	0.51	***4.07***	0.14	0.17	0.31	0.28	6.44	8.69
MW19	24-Jul-13	0.69	<0.05	1.51	***6.27***	***5.4***	***8.73***	2,85	***3.29***	<0.05	***6.01***	***0.71***	15.3	0.58	***2.94***	0.14	0.1	0.24	0.12	9.01	0.19
MW19	26-May-14	0.12	<0.05	0.19	1.34	***1.12***	***1.69***	***0.87***	***1.22***	<0.5	***1.53***	0.18	3.22	<0.5	***0.7***	<0.5	<0.5	<0.1	<0.0.5	1.28	3.05
MW19	19-Aug-14	2.58	0.21	***4.6***	***22.3***	***20.3***	***25.5***	***14.4***	***12.7***	NA	***18.3***	***3.49***	76.5	2.19	***15.2***	0.14	<0.05	0.14	0.28	40.9	66.7
MW19	14-Jan-15	0.59 [1]	<0.10 [1]	0.92 [1]	4.19 [1]	***4.03 [1]***	***6.39 [1]***	***2.47 [1]***	***2.56 [1]***	NA	***4.8 [1]***	***0.53 [1]***	12.2 [1]	0.4 [1]	***2.3 [1]***	<0.10 [1]	<0.10 [1]	<0.20 [1]	<0.10 [1]	7.06 [1]	10.2 [1]
MW19	21-Aug-15	0.1	<0.05	0.17	0.83	***0.96***	***1.4***	***0.67***	***0.56***	NA	0.95	<0.05	2.54	0.07	***0.62***	<0.05	<0.05	<0.1	<0.05	1.1	2.11
MW19	18-Nov-15	0.24 [1]	<0.10 [1]	0.53 [1]	1.90 [1]	***2.02 [1]***	***2.66 [1]***	***1.24 [1]***	***2.21 [1]***	NA	***2.06 [1]***	0.24 [1]	5.15 [1]	0.20 [1]	***1.29 [1]***	<0.10 [1]	<0.10 [1]	<0.20 [1]	<0.10 [1]	2.71 [1]	4.20 [1]
MW19	29-Nov-16	0.13	<0.05	0.27	1.55	***1.84***	***2.15***	***1.28***	***1.15***	NA	***1.49***	0.35	4.31	<0.05	***1.32***	<0.05	<0.05	<0.1	<0.05	1.44	3.53
MW19	18-Dec-17	0.05	<0.05	0.13	0.53	0.56	***0.79***	***0.44***	0.35	NA	0.64	0.12	1.4	<0.05	***0.4***	<0.05	<0.05	<0.1	<0.05	0.57	1.16
MW19	16-Nov-18	<0.05	<0.05	0.05	0.25	0.26	0.28	0.16	0.24	NA	0.22	<0.05	0.49	<0.05	0.15	<0.05	<0.05	<0.10	<0.05	0.18	0.43
MW20	20-Jul-10	38.8	<0.05	***11.4***	2.54	***1.79***	***2.34***	***0.99***	***0.84***	3.6	***2.48***	<0.15	13.9	21.9	***0.91***	15.4	23.5	38.9	146	62.3	9.96
MW20	24-Jul-13	<0.10 [1]	0.31	0.34	1.59	***1.41***	***2.51***	***0.86***	***0.95***	<0.10 [1]	***1.67***	<0.10 [1]	0.91	<0.10 [1]	***0.77***	<0.10 [1]	<0.10 [1]	<0.20 [1]	0.12	0.63	0.9
MW20	26-May-14	<0.05	<0.05	0.02	0.11	0.07	0.12	0.07	0.09	<0.05	0.14	<0.05	0.09	<0.05	0.06	<0.05	<0.05	<0.10	0.21	0.11	0.08
MW20	19-Aug-14	<0.15	0.59	0.7	3.9	***3.21***	***5.85***	***0.92***	***2.1***	NA	***3.36***	0.43	5.93	<0.15	***1.69***	<0.15	<0.15	<0.30	<0.15	1.37	5.39

TABLE 6:
Summary of Groundwater Analytical Results - PAHs
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MM1027

Sample ID	Sample Date	Acenaphthene	Acenaphthylene	Anthracene	Benzo[a]anthracene	Benzo[a]pyrene	Benzo[b]fluoranthene	Benzo[g,h,i]perylene	Benzo[k]fluoranthene	1,1-Biphenyl	Chrysene	Dibenzo[a,h]anthracene	Fluoranthene	Fluorene	Indeno[1,2,3-cd]pyrene	1-Methylnaphthalene	2-Methylnaphthalene	Methylnaphthalene (1&2)	Naphthalene	Phenanthrene	Pyrene
	MDL >	0.05	0.05	0.01	0.01	0.01	0.05	0.05	0.05	0.05	0.05	0.05	0.01	0.05	0.05	0.05	0.05	0.1	0.05	0.05	0.01
	MECP Table 3 SCS >	600	1.8	2.4	4.7	0.81	0.75	0.2	0.4	1000	1	0.52	130	400	0.2	1800	1800	1800	1400	580	68
MW20	14-Jan-15	<0.05	<0.05	0.01	0.08	0.07	0.12	0.06	<0.05	NA	0.08	<0.05	0.14	<0.05	0.05	<0.05	<0.05	<0.10	0.21	0.13	0.14
MW20	21-Aug-15	<0.05	<0.05	0.04	0.27	0.3	0.42	***0.24***	0.17	NA	0.31	<0.05	0.48	<0.05	***0.21***	<0.05	<0.05	<0.10	0.07	0.19	0.43
MW20	29-Nov-16	<0.05	<0.05	0.12	0.71	***0.94***	***1.16***	***0.73***	***0.91***	NA	0.76	0.21	1.3	<0.05	***0.72***	<0.05	<0.05	<0.10	0.14	0.29	1.1
MW20	16-Nov-18	<0.05	<0.05	0.1	0.71	0.66	***1.01***	***0.41***	***0.79***	NA	0.71	0.12	1.2	<0.05	***0.39***	<0.05	<0.05	<0.10	<0.05	0.4	1.08
MW21	20-Jul-10	<0.15	<0.15	<0.03	<0.03	<0.03	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	<0.03	<0.15	<0.15	<0.15	<0.15	<0.1	<0.15	<0.15	<0.03
MW21	24-Jul-13	<0.40 [1]	<0.40 [1]	0.3	1.18	***0.87***	***1.29***	***0.49***	***0.71***	<0.40 [1]	***1.1***	<0.40 [1]	2.54	<0.40 [1]	***0.44***	2.54	<0.40 [1]	>0.80 [1]	<0.40 [1]	0.92	2.44
MW21	26-May-14	Dry																			
MW21	19-Aug-14	<0.05	<0.05	<0.01	0.2	<0.01	0.26	<0.05	0.13	NA	0.19	<0.05	0.4	<0.05	<0.05	<0.05	<0.05	<0.10	<0.05	0.23	0.38
MW21	14-Jan-15	<0.05	<0.05	0.03	0.17	0.12	0.2	0.08	0.1	NA	0.15	<0.05	0.31	<0.05	0.07	<0.05	<0.05	<0.10	0.09	0.16	0.28
MW21	21-Aug-15	<0.05	<0.05	<0.01	<0.01	<0.01	<0.05	<0.05	<0.05	NA	<0.05	<0.05	<0.01	<0.05	<0.05	<0.05	<0.05	<0.10	<0.05	<0.05	<0.01
MW21	18-Nov-15	<0.05	<0.05	<0.01	<0.01	<0.01	<0.05	<0.05	<0.05	NA	<0.05	<0.05	<0.01	<0.05	<0.05	<0.05	<0.05	<0.10	<0.05	<0.05	<0.01
MW22	20-Jul-10	1.1	***8.89***	***7.71***	***19***	***20***	***25.5***	***11.6***	***9.63***	0.19	***17.6***	***4.25***	29.9	1.16	***11.4***	0.49	0.52	1.01	1.59	7.06	27.8
MW22	18-Oct-11	1.26	***23***	***18.8***	***46.9***	***49.2***	***64***	***23.3***	***43.3***	<1.00 [1]	***45.2***	***5.82***	82	1.39	***23.2***	<1.00 [1]	<1.00 [1]	<0.15 [1]	2.29	12.6	***76.3***
MW22	18-Jul-12	<0.05	0.22	0.18	0.47	0.52	0.45	***0.26***	***0.5***	<0.05	0.49	0.08	0.82	<0.05	***0.23***	<0.05	<0.05	<0.1	0.12	0.11	0.86
MW22	20-Dec-12	<0.05	0.17	0.15	0.53	0.61	***0.84***	***0.41***	0.39	<0.05	0.51	0.12	0.66	<0.05	***0.41***	<0.05	<0.05	<0.10	0.13	0.09	0.67
MW22	24-Jul-13	<0.05	0.23	0.15	0.49	0.41	***0.75***	***0.24***	0.31	<0.05	0.42	<0.05	0.73	<0.05	***0.22***	<0.05	<0.05	<0.10	0.13	0.09	0.67
MW22	26-May-14	Dry																			
MW22	19-Aug-14	<0.05	0.21	0.15	0.35	0.38	0.47	***0.22***	0.2	NA	0.35	<0.05	0.86	<0.05	0.19	<0.05	<0.05	<0.10	<0.05	0.11	0.87
MW22	14-Jan-15	<0.05	0.09	0.05	0.17	0.18	0.28	0.14	0.14	NA	0.17	<0.05	0.29	<0.05	0.11	<0.05	<0.05	<0.10	0.1	0.05	0.29
MW22	21-Aug-15	<0.05	<0.05	<0.01	<0.01	<0.01	<0.05	<0.05	<0.05	NA	<0.05	<0.05	<0.01	<0.05	<0.05	<0.05	<0.05	<0.10	<0.05	<0.05	<0.01
MW22	18-Nov-15	<0.05	0.06	0.04	0.12	0.14	0.18	0.1	0.13	NA	0.13	<0.05	0.18	<0.05	0.1	<0.05	<0.05	<0.10	<0.05	<0.05	0.18
MW22	29-Nov-16	<0.05	0.05	<0.01	0.1	0.14	<0.05	0.1	<0.05	NA	0.11	<0.05	0.2	<0.05	0.1	<0.05	<0.05	<0.10	<0.05	<0.05	0.19
MW23	18-Jul-12	<0.05	<0.05	<0.01	<0.01	<0.01	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.01	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.01
MW23	20-Dec-12	<0.05	<0.05	<0.01	<0.01	<0.01	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.01	<0.05	<0.05	<0.05	<0.05	<0.10	<0.05	<0.05	<0.01
MW23	24-Jul-13	<0.05	<0.05	<0.01	<0.01	<0.01	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.01	<0.05	<0.05	<0.05	<0.05	<0.10	<0.05	<0.05	<0.01
MW23	26-May-14	<0.05	<0.05	<0.01	<0.01	<0.01	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.01	<0.05	<0.05	<0.05	<0.05	<0.10	<0.05	<0.05	<0.01
MW23	19-Aug-14	<0.05	<0.05	<0.01	<0.01	<0.01	<0.05	<0.05	<0.05	NA	<0.05	<0.05	<0.01	<0.05	<0.05	<0.05	<0.05	<0.10	<0.05	<0.05	<0.01
MW23	20-Jan-15	<0.05	<0.05	<0.01	<0.01	<0.01	<0.05	<0.05	<0.05	NA	<0.05	<0.05	<0.01	<0.05	<0.05	<0.05	<0.05	<0.10	<0.05	<0.05	<0.01
MW23	21-Aug-15	<1.00 [1]	<1.00 [1]	<0.20 [1]	<0.20 [1]	<0.20 [1]	<1.00 [1]	<1.00 [1]	<1.00 [1]	NA	<1.00 [1]	<1.00 [1]	1.22 [1]	<1.00 [1]	<1.00 [1]	<1.00 [1]	<1.00 [1]	<0.20 [1]	<1.00 [1]	<1.00 [1]	1.05 [1]
MW23	18-Nov-15	<0.05	<0.05	0.03	0.06	0.08	0.14	0.09	0.14	NA	0.09	<0.05	0.16	<0.05	0.09	<0.05	<0.05	<0.10	<0.05	0.08	0.14
MW23	29-Nov-16	<0.05	<0.05	<0.01	<0.01	<0.01	<0.05	<0.05	<0.05	NA	<0.05	<0.05	<0.01	<0.05	<0.05	<0.05	<0.05	<0.10	<0.05	<0.05	<0.01
MW23	16-Nov-18	<0.05	<0.05	<0.01	<0.01	<0.01	<0.05	<0.05	<0.05	NA	<0.05	<0.05	<0.01	<0.05	<0.05	<0.05	<0.05	<0.10	<0.05	<0.05	<0.01
MW24	5-Aug-11	<0.05	<0.05	<0.01	<0.01	<0.01	<0.05	<0.05	<0.05	0.07	<0.05	<0.05	<0.01	<0.05	<0.05	<0.05	<0.05	<0.1	0.12	<0.05	<0.01
MW24	18-Jul-12	<0.05	<0.05	<0.01	<0.01	<0.01	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.01	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.01
MW24	20-Dec-12	<0.05	<0.05	<0.01	<0.01	<0.01	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.01	<0.05	<0.05	<0.05	<0.05	<0.10	<0.05	<0.05	<0.01
MW24	24-Jul-13	<0.05	<0.05	<0.01	<0.01	<0.01	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.01	<0.05	<0.05	<0.05	<0.05	<0.10	<0.05	<0.05	<0.01
MW24	26-May-14	<0.05	<0.05	<0.01	<0.01	<0.01	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.02	<0.05	<0.05	<0.05	<0.05	<0.10	<0.05	<0.05	0.02
MW24	19-Aug-14	<0.05	<0.05	<0.01	<0.01	<0.01	<0.05	<0.05	<0.05	NA	<0.05	<0.05	0.02	<0.05	<0.05	<0.05	<0.05	<0.10	<0.05	<0.05	<0.01
MW24	20-Jan-15	<0.05	<0.05	<0.01	<0.01	<0.01	<0.05	<0.05	<0.05	NA	<0.05	<0.05	<0.01	<0.05	<0.05	<0.05	<0.05	<0.10	<0.05	<0.05	<0.01
MW24	21-Aug-15	<0.05	<0.05	<0.01	<0.01	<0.01	<0.05	<0.05	<0.05	NA	<0.05	<0.05	<0.01	<0.05	<0.05	<0.05	<0.05	<0.10	<0.05	<0.05	<0.01
MW24	18-Nov-15	<0.05	<0.05	<0.01	<0.01	<0.01	<0.05	<0.05	<0.05	NA	<0.05	<0.05	<0.01	<0.05	<0.05	<0.05	<0.05	<0.10	<0.05	<0.05	<0.01
MW24	29-Nov-16	<0.05	<0.05	<0.01	<0.01	<0.01	<0.05	<0.05	<0.05	NA	<0.05	<0.05	<0.01	<0.05	<0.05	<0.05	<0.05	<0.10	<0.05	<0.05	<0.01
MW24	22-Nov-18	<0.05	<0.05	<0.01	<0.01	<0.01	<0.05	<0.05	<0.05	NA	<0.05	<0.05	<0.01	<0.05	<0.05	<0.05	<0.05	<0.10	<0.05	<0.05	<0.01
MW25	5-Aug-11	<0.05	<0.05	<0.01	<0.01	<0.01	<0.05	<0.05	<0.05	0.07	<0.05	<0.05	<0.01	<0.05	<0.05	<0.05	<0.05	<0.1	1.41	<0.05	<0.01
MW25	18-Jul-12	<0.05	<0.05	<0.01	<0.01	<0.01	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.01	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.01
MW25	24-Jul-13	<0.20 [1]	<0.20 [1]	<0.04 [1]	<0.04 [1]	<0.04 [1]	<0.20 [1]	<0.20 [1]	<0.20 [1]	<0.20 [1]	<0.20 [1]	<0.20 [1]	<0.04 [1]	<0.20 [1]	<0.20 [1]	<0.20 [1]	<0.40 [1]	<0.20 [1]	<0.20 [1]	<0.20 [1]	<0.04 [1]
MW25	26-May-14	<0.05	<0.05	<0.01	0.06	0.02	0.06	<0.05	<0.05	<0.05	0.06	<0.05	0.11	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	0.08	0.09
MW25	19-Aug-14	<0.05	<0.05	<0.01	<0.01	<0.01	<0.05	<0.05	<0.05	NA	<0.05	<0.05	0.02	<0.05	<0.05	<0.05	<0.05	<0.10	<0.05	<0.05	<0.01
MW25	20-Jan-15	<0.05	<0.05	0.01	0.1	0.07	0.15	0.06	0.05	NA	0.1	<0.05	0.15	<0.05	0.05	<0.05	<0.05	<0.10	<0.05	0.11	0.11
MW25	21-Aug-15	<0.05	<0.05	0.2	0.09	0.08	0.15	0.07	0.06	NA	0.12	<0.05	0.22	<0.05	0.07	<0.05	<0.05	<0.10	<0.05	0.19	0.17
MW25	18-Nov-15	<0.05	<0.05	0.02	0.06	0.07	0.006	0.09	<0.05	NA	0.11	<0.05	0.2	<0.05	0.07	<0.05	<0.05	<0.10	<0.05	0.14	0.16
MW25	29-Nov-16	<0.05	<0.05	0.04	0.22	0.3	0.43	***0.27***	0.28	NA	0.31	<0.05	0.79	<0.05	***0.23***	<0.05	<0.05	<0.10	<0.05	0.41	0.62
MW25	16-Nov-18	<0.05	<0.05	0.05	0.18	0.17	0.31	0.12	0.24	NA	0.29	<0.05	0.53	<0.05	0.11	<0.05	<0.05	<0.10	<0.05	0.36	0.43
MW26	5-Aug-11	<0.05	<0.05	<0.01	<0.01	<0.01	<0.05	<0.05	<0.05	0.28	<0.05	<0.05	<0.01	<0.05	<0.05	<0.05	0.1	<0.15	0.9	0.14	<0.01
MW26	18-Jul-12	<0.05	<0.05	<0.01	<0.01	<0.01	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.01	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.01
MW26	20-Dec-12	<0.05	<0.05	<0.01	<0.01	<0.01	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.01	<0.05	<0.05	<0.05	<0.05	<0.10	<0.05	<0.05	<0.01
MW26	24-Jul-13	<0.05	<0.05	<0.01	0.11	0.09	0.17	<0.05	0.08	<0.05	0.12	<0.05	0.12	<0.05	0.15	<0.05	<0.05	<0.10	<0.05	0.09	0.14
MW26	26-May-14	<0.05	<0.05	0.05	0.16	0.14	0.28	0.16	0.17	<0.05	0.24	<0.05	0.32	<0.05	0.12	<0.05	<0.05	<0.10	<0.05	0.18	0.28
MW26	19-Aug-14	<0.05	<0.05	<0.01	0.43	0.27	0.63	***0.21***	0.38	NA	0.48	<0.05	1.16	<0.05	0.19	<0.05	<0.05	<0.10	<0.05	0.72	0.93
MW26	20-Jan-15	<0.05	<0.05	<0.01	<0.01	<0.01	<0.05	<0.05	<0.05	NA	<0.05	<0.05	0.05	<0.05	<0.05	<0.05	<0.05	<0.10	<0.05	<0.05	0.05
MW26	21-Aug-15	0.13	0.17	0.25	0.98	***1.2***	***2.43***	***1.07***	***0.98***	NA	***1.38***	0.22	2.65	0.14	***1***	<0.05	<0.05	<0.10	0.11	1.83	2.28
MW26	18-Nov-15	<0.05	<0.05	0.02	0.07	0.09	0.18	0.09	0.11	NA	0.1	<0.05	0.2	<0.05	0.08	<0.05	<0.05	<0.10	<0.05	0.1	0.18
MW26	29-Nov-16	<0.05	<0.05	0.05	0.15	0.18	0.21	0.14	0.19	NA	0.19	<0.05	0.49	<0.05	0.14	<0.05	<0.05	<0.10	<0.05	0.27	0.37
MW26	16-Nov-18	<0.05	<0.05	0.08	0.37	0.4	0.5	***0.28***	***0.45***	NA	0.51	<0.05	0.92	<0.05	***0.24***	<0.05	<0.05	<0.10	<0.05	0.43	0.79

TABLE 6:
Summary of Groundwater Analytical Results - PAHs
Elmdale P.S.
49 Iona Street Ottawa, Ontario
MM1027

Sample ID	Sample Date	Acenaphthene	Acenaphthylene	Anthracene	Benzo[a]anthracene	Benzo[a]pyrene	Benzo[b]fluoranthene	Benzo[g,h,i]perylene	Benzo[k]fluoranthene	1,1-Biphenyl	Chrysene	Dibenzo[a,h]anthracene	Fluoranthene	Fluorene	Indeno[1,2,3-cd]pyrene	1-Methylnaphthalene	2-Methylnaphthalene	Methylnaphthalene (1&2)	Naphthalene	Phenanthrene	Pyrene
	MDL >	**0.05**	**0.05**	**0.01**	**0.01**	**0.01**	**0.05**	**0.05**	**0.05**	**0.05**	**0.05**	**0.05**	**0.01**	**0.05**	**0.05**	**0.05**	**0.05**	**0.1**	**0.05**	**0.05**	**0.01**
	MECP Table 3 SCS >	**600**	**1.8**	**2.4**	**4.7**	**0.81**	**0.75**	**0.2**	**0.4**	**1000**	**1**	**0.52**	**130**	**400**	**0.2**	**1800**	**1800**	**1800**	**1400**	**580**	**68**
MW27	18-Jul-12	<0.05	<0.05	<0.01	<0.01	<0.01	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.01	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.01
MW27	20-Dec-12	<0.05	<0.05	<0.01	<0.01	<0.01	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.01	<0.05	<0.05	<0.05	<0.05	<0.10	<0.05	<0.05	<0.01
MW27	24-Jul-13	<0.05	<0.05	<0.01	<0.01	<0.01	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.01	<0.05	<0.05	<0.05	<0.05	<0.10	<0.05	<0.05	<0.01
MW27	26-May-14	<0.05	<0.05	<0.01	<0.01	<0.01	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.01	<0.05	<0.05	<0.05	<0.05	<0.10	<0.05	<0.05	<0.01
MW27	19-Aug-14	<0.05	<0.05	<0.01	<0.01	<0.01	<0.05	<0.05	<0.05	NA	<0.05	<0.05	0.02	<0.05	<0.05	<0.05	<0.05	<0.10	<0.05	<0.05	<0.01
MW27	21-Aug-15	<0.05	<0.05	<0.01	<0.01	<0.01	<0.05	<0.05	<0.05	NA	<0.05	<0.05	<0.01	<0.05	<0.05	<0.05	<0.05	<0.10	<0.05	<0.05	<0.01
MW27	18-Nov-15	<0.05	<0.05	<0.01	<0.01	<0.01	<0.05	<0.05	<0.05	NA	<0.05	<0.05	<0.01	<0.05	<0.05	<0.05	<0.05	<0.10	<0.05	<0.05	<0.01
MW27	29-Nov-16	<0.05	<0.05	<0.01	<0.01	<0.01	<0.05	<0.05	<0.05	NA	<0.05	<0.05	<0.01	<0.05	<0.05	<0.05	<0.05	<0.10	<0.05	<0.05	<0.01
MW27	18-Dec-17	<0.05	<0.05	<0.01	<0.01	<0.01	<0.05	<0.05	<0.05	NA	<0.05	<0.05	<0.01	<0.05	<0.05	<0.05	<0.05	<0.10	<0.05	<0.05	<0.01
MW27	16-Nov-18	<0.05	<0.05	<0.01	<0.01	<0.01	<0.05	<0.05	<0.05	NA	<0.05	<0.05	<0.01	<0.05	<0.05	<0.05	<0.05	<0.10	<0.05	<0.05	<0.01
MW29	26-Mar-19	<0.05	<0.05	<0.01	<0.01	<0.01	<0.05	<0.05	<0.05	NA	<0.05	<0.05	<0.01	0.05	<0.05	0.07	0.11	0.17	0.09	<0.05	<0.01
MW32	26-Mar-19	<0.05	<0.05	<0.01	<0.01	<0.01	<0.05	<0.05	<0.05	NA	<0.05	<0.05	<0.01	<0.05	<0.05	<0.05	<0.05	<0.10	<0.05	<0.05	<0.01
MW33	26-Mar-19	<0.05	<0.05	<0.01	<0.01	<0.01	<0.05	<0.05	<0.05	NA	<0.05	<0.05	<0.01	<0.05	<0.05	<0.05	<0.05	<0.10	<0.05	<0.05	<0.01
MW34	26-Mar-19	<0.05	<0.05	<0.01	<0.01	<0.01	<0.05	<0.05	<0.05	NA	<0.05	<0.05	<0.01	<0.05	<0.05	<0.05	<0.05	<0.10	<0.05	<0.05	<0.01
MW35	26-Mar-19	<0.05	<0.05	<0.01	<0.01	<0.01	<0.05	<0.05	<0.05	NA	<0.05	<0.05	<0.01	<0.05	<0.05	<0.05	<0.05	<0.10	<0.05	<0.05	<0.01
MW36	26-Mar-19	<0.05	<0.05	0.03	0.08	0.07	0.11	0.05	0.08	NA	0.1	<0.05	0.19	0.06	<0.05	<0.05	<0.05	<0.10	0.08	0.1	0.16

Notes:

µg/L - all concentrations provided in micrograms per litre (parts per billion)
MDL - reported analytical method detection limit
ppm - parts per million
NV - no standard listed
"<" or "ND ( )" - less than detection limits indicated (refer to laboratory report)
NA - not applicable
MECP Table 3 SCS - Ontario Ministry of Environment, Conservation and Parks (MECP) Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act. April, 2011. Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition, institutional land use, coarse textured soil.
Bold / Italic - indicates concentration above applicable MECP Table 3 SCS
0.5 - MDL above applicable MECP Table 3 SCS (refer to laboratory reports)
[1] - elevated detection/reporting limits and/or modified analytical protocol (e.g. limited sample volume, sediment in sample, etc.);(refer to laboratory reports

TABLE 7:
Summary of Groundwater Analytical Results - Metals
Elmdale P.S.
49 Iona Street Ottawa, Ontario
MM1027

Sample ID	Sample Date	Mercury	Antimony	Arsenic	Barium	Beryllium	Boron	Cadmium	Chromium	Cobalt	Copper	Lead	Molybdenum	Nickel	Selenium	Silver	Sodium	Thallium	Uranium	Vanadium	Zinc
MDL >		**0.05**	**0.05**	**0.01**	**0.01**	**0.01**	**0.05**	**0.05**	**0.05**	**0.05**	**0.05**	**0.05**	**0.01**	**0.05**	**0.05**	**0.05**	**0.05**	**0.1**	**0.05**	**0.05**	**0.01**
MECP Table 3 SCS >		**0.29**	**20000**	**1900**	**29000**	**67**	**45000**	**2.7**	**810**	**66**	**87**	**25**	**9200**	**490**	**63**	**1.5**	**2300000**	**510**	**420**	**250**	**1100**
Monitoring Wells																					
MW29	26-Mar-19	<0.1	<0.5	<1	133	<0.5	112	<0.1	<1	1.8	1.7	<0.1	7	5	1	<0.1	67400	<0.1	2.8	0.7	6
MW32	26-Mar-19	<0.1	<0.5	<1	124	<0.5	70	<0.1	<1	4.1	2.2	<0.1	18	12	2	<0.1	144000	<0.1	4.9	0.8	6
MW33	26-Mar-19	<0.1	0.6	<1	172	<0.5	29	<0.1	<1	1.2	2.4	<0.1	33.1	2	<1	<0.1	63900	<0.1	0.9	1.1	9
MW34	26-Mar-19	<0.1	<0.5	<1	1590	<0.5	34	<0.1	<1	2.2	1.8	<0.1	13.5	4	<1	<0.1	104000	<0.1	1.4	<0.5	9
MW35	26-Mar-19	<0.1	<0.5	<1	695	<0.5	30	<0.1	<1	0.7	1.4	<0.1	51	4	<1	<0.1	43600	<0.1	1.7	0.5	<5
MW36	26-Mar-19	<0.1	<0.5	<1	249	<0.5	15	<0.1	109	<0.5	6.4	0.2	32.5	1	<1	<0.1	198000	<0.1	<0.1	1.2	<5

Notes:
µg/L - all concentrations provided in micrograms per litre (parts per billion)
MDL - reported analytical method detection limit
ppm - parts per million
NV - no standard listed
"<" or "ND ( )" - less than detection limits indicated (refer to laboratory report)
NA - not applicable
MECP Table 3 SCS - Ontario Ministry of Environment, Conservation and Parks (MECP) Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act. April, 2011. Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition, institutional land use, coarse textured soil.
Bold / Italic - indicates concentration above applicable MECP Table 3 SCS
0.5 - MDL above applicable MECP Table 3 SCS (refer to laboratory reports)

APPENDIX A

BOREHOLE LOGS

Ottawa Carleton District School Board

Supplemental Environmental Site Investigation

Elmdale Public School

49 Iona Street, Ottawa, Ontario

MM1027

CM³ JOB NO: MM1027

CLIENT: **Ottawa Carleton District School Board**
PROJECT: **Elmdale Public School**
49 Iona Street
Ottawa, ON

BOREHOLE LOG

BOREHOLE NO: MW29
SURFACE ELEVATION: 99.54 m

DEPTH (m)	SAMPLE TYPE	SAMPLE ID	SPT COUNT	SOIL TYPE	SOIL DESCRIPTION	FIELD TEST DATA: ORGANIC VAPOUR LEVEL (ppmv) 1 / 10 / 100 / 1000	WELL COMPLETION	WATER LEVEL	WELL COMPLETION NOTES	ELEVATION (m)
					Ground Surface					
0					**WOODCHIPS**				roadbox, jplug, cement	
		SA1			**GRAVEL**				bentonite seal	99
					SAND medium, brown					
1		SA2			**SILT, SAND and GRAVEL** dark brown				50 mm solid PVC pipe	
					silty CLAY brown					
		SA3			**CLAY** grey, moist					98
2									silica sand	
		SA4						▼	GW = 2.46 mbg (March 26, 2019)	97
3		SA5								
									50 mm 010 slot PVC pipe	96
		SA6								
4					**SILT, SAND and GRAVEL** trace clay, pieces of rock, grey, wet				end cap	
					End of borehole at 4.27 m					

Well Completion Details:
Screened interval from 1.22 m to 4.27 m below surface
Elevation at top of pipe (TOP) = 99.45 m

Groundwater Information:
Depth to groundwater from TOP = 2.36 m (March 26, 2019)

DRILLING METHOD: Direct Push
BOREHOLE DIAMETER: 0.06 m (OD)

DRILL DATE: 2019 March 21 LOGGED BY: SP

Notes: ◧ CONTINUOUS SAMPLE

CM³ JOB NO: MM1027

CLIENT: **Ottawa Carleton District School Board**
PROJECT: **Elmdale Public School**
49 Iona Street
Ottawa, ON

BOREHOLE LOG

BOREHOLE NO: MW30
SURFACE ELEVATION:

DEPTH (m)	SAMPLE TYPE	SAMPLE ID	SPT COUNT	SOIL TYPE	SOIL DESCRIPTION	FIELD TEST DATA: ORGANIC VAPOUR LEVEL (ppmv) 1 / 10 / 100 / 1000	WELL COMPLETION	WATER LEVEL	WELL COMPLETION NOTES	DEPTH (m)
					Ground Surface					
0					**TOPSOIL**				roadbox, jplug, cement	0.0
		SA1			**SAND** medium, brown				bentonite seal	
					SILT, SAND and GRAVEL					
1		SA2			**silty CLAY** grey				50 mm solid PVC pipe	1.0
		SA3							silica sand	
2										2.0
		SA4							50 mm 010 slot PVC pipe	
					SILT, SAND and GRAVEL broken rock in tip of spoon, grey				end cap	

End of borehole at 2.90 m

Well Completion Details:
Screened interval from 1.37 m to 2.90 m below surface
Elevation at top of pipe (TOP) = m

Well dry on March 26, 2019

DRILLING METHOD: Direct Push
BOREHOLE DIAMETER: 0.06 m (OD)

DRILL DATE: 2019 March 21 LOGGED BY: SP

Notes: CONTINUOUS SAMPLE

BOREHOLE LOG

CLIENT: **Ottawa Carleton District School Board**
PROJECT: **Elmdale Public School**
49 Iona Street
Ottawa, ON

CM³ JOB NO: MM1027

BOREHOLE NO: MW31
SURFACE ELEVATION: 100.31 m

DEPTH (m)	SAMPLE TYPE	SAMPLE ID	SPT COUNT	SOIL TYPE	SOIL DESCRIPTION	FIELD TEST DATA: ORGANIC VAPOUR LEVEL (ppmv) 1 / 10 / 100 / 1000	WELL COMPLETION	WATER LEVEL	WELL COMPLETION NOTES	ELEVATION (m)
					Ground Surface					
0					**SAND and GRAVEL**				roadbox, jplug, cement	
		SA1			**silty CLAY** trace gravel, brown				bentonite seal	100
					SILT, SAND and GRAVEL					
1		SA2							50 mm solid PVC pipe	
		SA3								99
									silica sand	
2		SA4							50 mm 010 slot PVC pipe	98
					SILT, SAND and GRAVEL grey, wet					
3		SA5							end cap	

End of borehole at 3.05 m

Well Completion Details:
Screened interval from 1.52 m to 3.05 m below surface
Elevation at top of pipe (TOP) = 100.26 m

DRILLING METHOD: Direct Push
BOREHOLE DIAMETER: 0.06 m (OD)

DRILL DATE: 2019 March 21 LOGGED BY: SP

Notes: CONTINUOUS SAMPLE

CLIENT: **Ottawa Carleton District School Board**
PROJECT: **Elmdale Public School**
49 Iona Street
Ottawa, ON

BOREHOLE LOG

BOREHOLE NO: MW32
SURFACE ELEVATION: 100.84 m

CM³ JOB NO: MM1027

DEPTH (m)	SAMPLE TYPE	SAMPLE ID	SPT COUNT	SOIL TYPE	SOIL DESCRIPTION	FIELD TEST DATA: ORGANIC VAPOUR LEVEL (ppmv) 1 10 100 1000	WELL COMPLETION	WATER LEVEL	WELL COMPLETION NOTES	ELEVATION (m)
					Ground Surface					101
0					**SAND and GRAVEL**				roadbox, jplug, cement	
		SA1			**silty CLAY** grey				bentonite seal	
1		SA2			**CLAY** grey, moist				50 mm solid PVC pipe	100
2		SA3							silica sand	99
		SA4						▼	GW = 2.65 mbg (March 26, 2019)	
3		SA5							50 mm 010 slot PVC pipe	98
		SA6			**gravelly CLAY** grey, wet					97
4									end cap	

End of borehole at 4.27 m

Well Completion Details:
Screened interval from 1.22 m to 4.27 m below surface
Elevation at top of pipe (TOP) = 100.74 m

Groundwater Information:
Depth to groundwater from TOP = 2.54 m (March 26, 2019)

DRILLING METHOD: Direct Push
BOREHOLE DIAMETER: 0.06 m (OD)

DRILL DATE: 2019 March 21 LOGGED BY: SP

Notes: ◧ CONTINUOUS SAMPLE

BOREHOLE LOG

CM³ JOB NO: MM1027

CLIENT: **Ottawa Carleton District School Board**
PROJECT: **Elmdale Public School**
49 Iona Street
Ottawa, ON

BOREHOLE NO: MW33
SURFACE ELEVATION: 101.30 m

DEPTH (m)	SAMPLE TYPE	SAMPLE ID	SPT COUNT	SOIL TYPE	SOIL DESCRIPTION	FIELD TEST DATA: ORGANIC VAPOUR LEVEL (ppmv) 1 / 10 / 100 / 1000	WELL COMPLETION	WATER LEVEL	WELL COMPLETION NOTES	ELEVATION (m)
					Ground Surface					
0					**TOPSOIL**				roadbox, jplug, cement	
		SA1			**SAND and GRAVEL**				bentonite seal	101
		SA2			**silty CLAY**				50 mm solid PVC pipe	
1										100
		SA3			**CLAY** grey, moist				silica sand	
2										
		SA4								99
								▼	GW = 2.70 mbg (March 26, 2019)	
3		SA5								98
									50 mm 010 slot PVC pipe	
4		SA6								
					sandy CLAY some gravel, grey, wet					97
		SA7								
5									end cap	

End of borehole at 5.03 m

Well Completion Details:
Screened interval from 1.98 m to 5.03 m below surface
Elevation at top of pipe (TOP) = 101.11 m

Groundwater Information:
Depth to groundwater from TOP = 2.52 m (March 26, 2019)

DRILLING METHOD: Direct Push
BOREHOLE DIAMETER: 0.06 m (OD)

DRILL DATE: 2019 March 22 LOGGED BY: SP

Notes: ■□ CONTINUOUS SAMPLE

BOREHOLE LOG

CM³ JOB NO: MM1027

CLIENT: **Ottawa Carleton District School Board**
PROJECT: **Elmdale Public School**
49 Iona Street
Ottawa, ON

BOREHOLE NO: MW34
SURFACE ELEVATION: 101.36 m

DEPTH (m)	SAMPLE TYPE	SAMPLE ID	SPT COUNT	SOIL TYPE	SOIL DESCRIPTION	FIELD TEST DATA: ORGANIC VAPOUR LEVEL (ppmv) 1 / 10 / 100 / 1000	WELL COMPLETION	WATER LEVEL	WELL COMPLETION NOTES	ELEVATION (m)
					Ground Surface					
0					**ASPHALT**				roadbox, jplug, cement	
		SA1			**GRAVEL**					101
					TOPSOIL organics, silt and sand				bentonite seal	
1		SA2			**SAND** medium, grey				50 mm solid PVC pipe	
					silty CLAY grey					100
2		SA3			**CLAY** grey, moist				silica sand	
		SA4								99
3					**sandy CLAY** some gravel, grey, wet					
		SA5						▼	GW = 3.67 mbg (March 26, 2019)	98
4		SA6								
									50 mm 010 slot PVC pipe	97
5		SA7								
										96
									end cap	

End of borehole at 5.64 m

Well Completion Details:
Screened interval from 2.59 m to 5.64 m below surface
Elevation at top of pipe (TOP) = 101.18 m

Groundwater Information:
Depth to groundwater from TOP = 3.50 m (March 26, 2019)

DRILLING METHOD: Direct Push
BOREHOLE DIAMETER: 0.06 m (OD)

DRILL DATE: 2019 March 21 LOGGED BY: SP

Notes: ◧ CONTINUOUS SAMPLE

BOREHOLE LOG

CM³ JOB NO: MM1027

CLIENT: **Ottawa Carleton District School Board**
PROJECT: **Elmdale Public School**
49 Iona Street
Ottawa, ON

BOREHOLE NO: MW35
SURFACE ELEVATION: 102.02 m

DEPTH (m)	SAMPLE TYPE	SAMPLE ID	SPT COUNT	SOIL TYPE	SOIL DESCRIPTION	FIELD TEST DATA: ORGANIC VAPOUR LEVEL (ppmv) 1 10 100 1000	WELL COMPLETION	WATER LEVEL	WELL COMPLETION NOTES	ELEVATION (m)
					Ground Surface					
0					**ASPHALT**				roadbox, jplug, cement	102
		SA1			**SAND and GRAVEL**				bentonite seal	
					silty CLAY					
1		SA2			**CLAY** grey				50 mm solid PVC pipe	101
2		SA3							silica sand	100
		SA4								
3		SA5								99
					gravelly CLAY					
4		SA6			**sandy CLAY** some gravel, grey, wet				50 mm 010 slot PVC pipe	98
5		SA7						▼	GW = 5.09 mbg (March 26, 2019)	97
		SA8							end cap	

End of borehole at 5.79 m

Well Completion Details:
Screened interval from 2.74 m to 5.79 m below surface
Elevation at top of pipe (TOP) = 101.92 m

Groundwater Information:
Depth to groundwater from TOP = 4.98 m (March 26, 2019)

DRILLING METHOD: Direct Push
BOREHOLE DIAMETER: 0.06 m (OD)

DRILL DATE: 2019 March 22 LOGGED BY: SP

Notes: ■□ CONTINUOUS SAMPLE

BOREHOLE LOG

CLIENT: **Ottawa Carleton District School Board**
PROJECT: **Elmdale Public School**
49 Iona Street
Ottawa, ON

CM³ JOB NO: MM1027

BOREHOLE NO: MW36
SURFACE ELEVATION: 101.74 m

DEPTH (m)	SAMPLE TYPE	SAMPLE ID	SPT COUNT	SOIL TYPE	SOIL DESCRIPTION	FIELD TEST DATA: ORGANIC VAPOUR LEVEL (ppmv)	WELL COMPLETION	WATER LEVEL	WELL COMPLETION NOTES	ELEVATION (m)
					Ground Surface	1 10 100 1000				102
0					**ASPHALT**				roadbox, jplug, cement	
		SA1			**SAND** medium, brown				bentonite seal	
					silty CLAY					101
1		SA2			**CLAY** grey, moist				50 mm solid PVC pipe	
		SA3							silica sand	100
2		SA4						▼	GW = 2.90 mbg (March 26, 2019)	99
3		SA5								
					trace sand, gravel, grey, wet					98
4		SA6							50 mm 010 slot PVC pipe	
					gravelly CLAY some sand, pieces of rock, grey, wet					97
5		SA7								
		SA8							end cap	

End of borehole at 5.64 m

Well Completion Details:
Screened interval from 2.95 m to 5.64 m below surface
Elevation at top of pipe (TOP) = 101.61 m

Groundwater Information:
Depth to groundwater from TOP = 2.77 m (March 26, 2019)

DRILLING METHOD: Direct Push
BOREHOLE DIAMETER: 0.06 m (OD)

DRILL DATE: 2019 March 22 LOGGED BY: SP

Notes: ■□ CONTINUOUS SAMPLE

CLIENT: **Ottawa Carleton District School Board**
PROJECT: **Elmdale Public School**
49 Iona Street
Ottawa, ON

BOREHOLE LOG

BOREHOLE NO: MW37

CM³ JOB NO: MM1027

SURFACE ELEVATION: 101.43 m

DEPTH (m)	SAMPLE TYPE	SAMPLE ID	SPT COUNT	SOIL TYPE	SOIL DESCRIPTION	FIELD TEST DATA: ORGANIC VAPOUR LEVEL (ppmv) 1 10 100 1000	WELL COMPLETION	WATER LEVEL	WELL COMPLETION NOTES	ELEVATION (m)
					Ground Surface					
0					**ASPHALT**				roadbox, jplug, cement	
		SA1			**silty CLAY** grey				bentonite seal 50 mm solid PVC pipe	101
1		SA2			**CLAY** grey					100
2		SA3							silica sand	
		SA4								99
3		SA5			**gravelly CLAY** some sand, grey, moist to wet				50 mm 010 slot PVC pipe end cap	98

End of borehole at 3.66 m

Well Completion Details:
Screened interval from 1.22 m to 3.66 m below surface
Elevation at top of pipe (TOP) = 101.29 m

Well dry on March 26, 2019

DRILLING METHOD: Direct Push
BOREHOLE DIAMETER: 0.06 m (OD)

DRILL DATE: 2019 March 22 LOGGED BY: SP

Notes: CONTINUOUS SAMPLE

APPENDIX B

LABORATORY REPORTS

Ottawa Carleton District School Board

Supplemental Environmental Site Investigation

Elmdale Public School

49 Iona Street, Ottawa, Ontario

MM1027

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Certificate of Analysis

CM3 Environmental Inc.

5710 Akins Road
Ottawa, ON K2S 1B8
Attn: Marc MacDonald

Client PO: Elmdale
Project: MM1027
Custody: 46548

Report Date: 28-Mar-2019
Order Date: 22-Mar-2019

Order #: 1912731

This Certificate of Analysis contains analytical data applicable to the following samples as submitted:

Paracel ID	Client ID
1912731-01	MW34 SA1
1912731-02	MW35 SA2
1912731-03	MW36 SA2
1912731-04	MW37 SA2

Approved By:

Mark Foto, M.Sc.
Lab Supervisor

Certificate of Analysis
Client: CM3 Environmental Inc.
Client PO: Elmdale

Report Date: 28-Mar-2019
Order Date: 22-Mar-2019
Project Description: MM1027

Analysis Summary Table

Analysis	Method Reference/Description	Extraction Date	Analysis Date
Mercury by CVAA	EPA 7471B - CVAA, digestion	27-Mar-19	27-Mar-19
PHC F1	CWS Tier 1 - P&T GC-FID	25-Mar-19	27-Mar-19
PHCs F2 to F4	CWS Tier 1 - GC-FID, extraction	24-Mar-19	26-Mar-19
REG 153: Metals by ICP/MS, soil	EPA 6020 - Digestion - ICP-MS	27-Mar-19	27-Mar-19
REG 153: PAHs by GC-MS	EPA 8270 - GC-MS, extraction	25-Mar-19	27-Mar-19
Solids, %	Gravimetric, calculation	27-Mar-19	27-Mar-19

PARACEL LABORATORIES LTD.

Order #: 1912731

Certificate of Analysis

Client: CM3 Environmental Inc.

Client PO: Elmdale

Report Date: 28-Mar-2019

Order Date: 22-Mar-2019

Project Description: MM1027

	Client ID:	MW34 SA1	MW35 SA2	MW36 SA2	MW37 SA2
	Sample Date:	03/21/2019 09:00	03/22/2019 09:00	03/22/2019 09:00	03/22/2019 09:00
	Sample ID:	1912731-01	1912731-02	1912731-03	1912731-04
	MDL/Units	Soil	Soil	Soil	Soil
Physical Characteristics					
% Solids	0.1 % by Wt.	73.1	70.8	72.5	70.5
Metals					
Antimony	1.0 ug/g dry	<1.0	<1.0	<1.0	<1.0
Arsenic	1.0 ug/g dry	1.5	2.4	2.4	2.6
Barium	1.0 ug/g dry	84.7	313	317	342
Beryllium	0.5 ug/g dry	<0.5	0.9	0.9	1.0
Boron	5.0 ug/g dry	5.6	<5.0	5.1	5.1
Cadmium	0.5 ug/g dry	0.7	<0.5	<0.5	<0.5
Chromium	5.0 ug/g dry	35.8	120	124	134
Cobalt	1.0 ug/g dry	5.7	24.1	23.8	25.4
Copper	5.0 ug/g dry	23.9	41.9	53.3	57.4
Lead	1.0 ug/g dry	6.7	6.2	7.0	7.2
Mercury	0.1 ug/g dry	<0.1	<0.1	<0.1	<0.1
Molybdenum	1.0 ug/g dry	<1.0	<1.0	<1.0	<1.0
Nickel	5.0 ug/g dry	18.3	59.9	68.3	73.1
Selenium	1.0 ug/g dry	1.0	<1.0	<1.0	<1.0
Silver	0.3 ug/g dry	<0.3	<0.3	<0.3	<0.3
Thallium	1.0 ug/g dry	<1.0	<1.0	<1.0	<1.0
Uranium	1.0 ug/g dry	1.4	<1.0	<1.0	<1.0
Vanadium	10.0 ug/g dry	34.3	109	101	114
Zinc	20.0 ug/g dry	64.3	117	120	136
Hydrocarbons					
F1 PHCs (C6-C10)	7 ug/g dry	<7	<7	<7	<7
F2 PHCs (C10-C16)	4 ug/g dry	<4	<4	<4	<4
F3 PHCs (C16-C34)	8 ug/g dry	14	<8	<8	<8
F4 PHCs (C34-C50)	6 ug/g dry	28	<6	<6	<6
Semi-Volatiles					
Acenaphthene	0.02 ug/g dry	<0.02	<0.02	<0.02	<0.02
Acenaphthylene	0.02 ug/g dry	<0.02	<0.02	<0.02	<0.02
Anthracene	0.02 ug/g dry	<0.02	<0.02	<0.02	<0.02
Benzo [a] anthracene	0.02 ug/g dry	<0.02	<0.02	<0.02	<0.02
Benzo [a] pyrene	0.02 ug/g dry	0.02	<0.02	<0.02	<0.02
Benzo [b] fluoranthene	0.02 ug/g dry	<0.02	<0.02	<0.02	<0.02
Benzo [g,h,i] perylene	0.02 ug/g dry	<0.02	<0.02	<0.02	<0.02
Benzo [k] fluoranthene	0.02 ug/g dry	<0.02	<0.02	<0.02	<0.02

Certificate of Analysis
Client: CM3 Environmental Inc.
Client PO: Elmdale

Report Date: 28-Mar-2019
Order Date: 22-Mar-2019
Project Description: MM1027

	Client ID:	MW34 SA1	MW35 SA2	MW36 SA2	MW37 SA2
	Sample Date:	03/21/2019 09:00	03/22/2019 09:00	03/22/2019 09:00	03/22/2019 09:00
	Sample ID:	1912731-01	1912731-02	1912731-03	1912731-04
	MDL/Units	Soil	Soil	Soil	Soil
Chrysene	0.02 ug/g dry	<0.02	<0.02	<0.02	<0.02
Dibenzo [a,h] anthracene	0.02 ug/g dry	<0.02	<0.02	<0.02	<0.02
Fluoranthene	0.02 ug/g dry	<0.02	<0.02	<0.02	<0.02
Fluorene	0.02 ug/g dry	<0.02	<0.02	<0.02	<0.02
Indeno [1,2,3-cd] pyrene	0.02 ug/g dry	0.02	<0.02	<0.02	<0.02
1-Methylnaphthalene	0.02 ug/g dry	<0.02	<0.02	<0.02	<0.02
2-Methylnaphthalene	0.02 ug/g dry	<0.02	<0.02	<0.02	<0.02
Methylnaphthalene (1&2)	0.04 ug/g dry	<0.04	<0.04	<0.04	<0.04
Naphthalene	0.01 ug/g dry	<0.01	<0.01	<0.01	<0.01
Phenanthrene	0.02 ug/g dry	<0.02	<0.02	<0.02	<0.02
Pyrene	0.02 ug/g dry	<0.02	<0.02	<0.02	<0.02
2-Fluorobiphenyl	Surrogate	128%	57.2%	90.6%	71.5%
Terphenyl-d14	Surrogate	110%	87.6%	121%	104%

Certificate of Analysis
Client: CM3 Environmental Inc.
Client PO: Elmdale

Report Date: 28-Mar-2019
Order Date: 22-Mar-2019
Project Description: MM1027

Method Quality Control: Blank

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
Hydrocarbons									
F1 PHCs (C6-C10)	ND	7	ug/g						
F2 PHCs (C10-C16)	ND	4	ug/g						
F3 PHCs (C16-C34)	ND	8	ug/g						
F4 PHCs (C34-C50)	ND	6	ug/g						
Metals									
Antimony	ND	1.0	ug/g						
Arsenic	ND	1.0	ug/g						
Barium	ND	1.0	ug/g						
Beryllium	ND	0.5	ug/g						
Boron	ND	5.0	ug/g						
Cadmium	ND	0.5	ug/g						
Chromium	ND	5.0	ug/g						
Cobalt	ND	1.0	ug/g						
Copper	ND	5.0	ug/g						
Lead	ND	1.0	ug/g						
Mercury	ND	0.1	ug/g						
Molybdenum	ND	1.0	ug/g						
Nickel	ND	5.0	ug/g						
Selenium	ND	1.0	ug/g						
Silver	ND	0.3	ug/g						
Thallium	ND	1.0	ug/g						
Uranium	ND	1.0	ug/g						
Vanadium	ND	10.0	ug/g						
Zinc	ND	20.0	ug/g						
Semi-Volatiles									
Acenaphthene	ND	0.02	ug/g						
Acenaphthylene	ND	0.02	ug/g						
Anthracene	ND	0.02	ug/g						
Benzo [a] anthracene	ND	0.02	ug/g						
Benzo [a] pyrene	ND	0.02	ug/g						
Benzo [b] fluoranthene	ND	0.02	ug/g						
Benzo [g,h,i] perylene	ND	0.02	ug/g						
Benzo [k] fluoranthene	ND	0.02	ug/g						
Chrysene	ND	0.02	ug/g						
Dibenzo [a,h] anthracene	ND	0.02	ug/g						
Fluoranthene	ND	0.02	ug/g						
Fluorene	ND	0.02	ug/g						
Indeno [1,2,3-cd] pyrene	ND	0.02	ug/g						
1-Methylnaphthalene	ND	0.02	ug/g						
2-Methylnaphthalene	ND	0.02	ug/g						
Methylnaphthalene (1&2)	ND	0.04	ug/g						
Naphthalene	ND	0.01	ug/g						
Phenanthrene	ND	0.02	ug/g						
Pyrene	ND	0.02	ug/g						
Surrogate: 2-Fluorobiphenyl	*1.12*		*ug/g*		*83.7*	*50-140*			
Surrogate: Terphenyl-d14	*1.85*		*ug/g*		*138*	*50-140*			

Method Quality Control: Duplicate

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
Hydrocarbons									
F1 PHCs (C6-C10)	450	7	ug/g dry	448			0.3	40	
F2 PHCs (C10-C16)	463	4	ug/g dry	372			21.8	30	
F3 PHCs (C16-C34)	2010	8	ug/g dry	1520			27.4	30	
F4 PHCs (C34-C50)	275	6	ug/g dry	459			50.3	30	QR-04
Metals									
Antimony	ND	1.0	ug/g dry	ND			0.0	30	
Arsenic	1.5	1.0	ug/g dry	1.5			1.6	30	
Barium	84.8	1.0	ug/g dry	84.7			0.1	30	
Beryllium	ND	0.5	ug/g dry	ND			0.0	30	
Boron	6.2	5.0	ug/g dry	5.6			10.6	30	
Cadmium	0.7	0.5	ug/g dry	0.7			2.1	30	
Chromium	36.6	5.0	ug/g dry	35.8			2.1	30	
Cobalt	6.1	1.0	ug/g dry	5.7			6.5	30	
Copper	25.3	5.0	ug/g dry	23.9			5.8	30	
Lead	7.3	1.0	ug/g dry	6.7			9.4	30	
Mercury	ND	0.1	ug/g dry	ND			0.0	30	
Molybdenum	ND	1.0	ug/g dry	ND			0.0	30	
Nickel	19.3	5.0	ug/g dry	18.3			5.6	30	
Selenium	ND	1.0	ug/g dry	1.0			0.0	30	
Silver	ND	0.3	ug/g dry	ND			0.0	30	
Thallium	ND	1.0	ug/g dry	ND			0.0	30	
Uranium	1.5	1.0	ug/g dry	1.4			8.1	30	
Vanadium	35.3	10.0	ug/g dry	34.3			3.0	30	
Zinc	67.6	20.0	ug/g dry	64.3			5.0	30	
Physical Characteristics									
% Solids	84.4	0.1	% by Wt.	85.6			1.3	25	
Semi-Volatiles									
Acenaphthene	0.337	0.02	ug/g dry	13.3			190.0	40	QR-04
Acenaphthylene	0.132	0.02	ug/g dry	0.621			130.0	40	QR-04
Anthracene	1.11	0.02	ug/g dry	43.7			190.0	40	QR-04
Benzo [a] anthracene	1.17	0.02	ug/g dry	0.259			128.0	40	QR-04
Benzo [a] pyrene	0.727	0.02	ug/g dry	16.5			183.0	40	QR-04
Benzo [b] fluoranthene	1.11	0.02	ug/g dry	39.4			189.0	40	QR-04
Benzo [g,h,i] perylene	0.379	0.02	ug/g dry	0.030			171.0	40	QR-04
Benzo [k] fluoranthene	0.668	0.02	ug/g dry	36.6			193.0	40	QR-04
Chrysene	0.951	0.02	ug/g dry	0.767			21.5	40	
Dibenzo [a,h] anthracene	0.150	0.02	ug/g dry	0.278			59.5	40	QR-04
Fluoranthene	3.00	0.02	ug/g dry	84.0			186.0	40	QR-04
Fluorene	0.904	0.02	ug/g dry	36.1			190.0	40	QR-04
Indeno [1,2,3-cd] pyrene	0.375	0.02	ug/g dry	8.67			183.0	40	QR-04
1-Methylnaphthalene	0.532	0.02	ug/g dry	7.80			174.0	40	QR-04
2-Methylnaphthalene	0.520	0.02	ug/g dry	14.6			186.0	40	QR-04
Naphthalene	0.848	0.01	ug/g dry	17.9			182.0	40	QR-04
Phenanthrene	3.58	0.02	ug/g dry	135			190.0	40	QR-04
Pyrene	2.14	0.02	ug/g dry	55.0			185.0	40	QR-04
Surrogate: 2-Fluorobiphenyl	*1.43*		*ug/g dry*		*86.8*	*50-140*			
Surrogate: Terphenyl-d14	*1.75*		*ug/g dry*		*107*	*50-140*			

Method Quality Control: Spike

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
Hydrocarbons									
F1 PHCs (C6-C10)	193	7	ug/g		96.7	80-120			
F2 PHCs (C10-C16)	68	4	ug/g		84.4	80-120			
F3 PHCs (C16-C34)	202	8	ug/g		103	80-120			
F4 PHCs (C34-C50)	138	6	ug/g		111	80-120			
Metals									
Antimony	50.7		ug/L	ND	101	70-130			
Arsenic	54.1		ug/L	ND	107	70-130			
Barium	92.6		ug/L	33.9	117	70-130			
Beryllium	56.9		ug/L	ND	114	70-130			
Boron	53.1		ug/L	ND	102	70-130			
Cadmium	53.0		ug/L	ND	106	70-130			
Chromium	65.2		ug/L	14.3	102	70-130			
Cobalt	52.5		ug/L	2.3	100	70-130			
Copper	58.3		ug/L	9.6	97.4	70-130			
Lead	50.6		ug/L	2.7	95.8	70-130			
Mercury	1.51	0.1	ug/g	ND	101	70-130			
Molybdenum	53.6		ug/L	ND	107	70-130			
Nickel	61.8		ug/L	7.3	109	70-130			
Selenium	51.6		ug/L	ND	102	70-130			
Silver	48.0		ug/L	ND	96.0	70-130			
Thallium	48.5		ug/L	ND	96.9	70-130			
Uranium	50.8		ug/L	ND	100	70-130			
Vanadium	71.1		ug/L	13.7	115	70-130			
Zinc	79.4		ug/L	25.7	107	70-130			
Semi-Volatiles									
Acenaphthene	0.141	0.02	ug/g		84.9	50-140			
Acenaphthylene	0.127	0.02	ug/g		76.0	50-140			
Anthracene	0.128	0.02	ug/g		76.8	50-140			
Benzo [a] anthracene	0.122	0.02	ug/g		73.2	50-140			
Benzo [a] pyrene	0.099	0.02	ug/g		59.5	50-140			
Benzo [b] fluoranthene	0.168	0.02	ug/g		101	50-140			
Benzo [g,h,i] perylene	0.096	0.02	ug/g		57.6	50-140			
Benzo [k] fluoranthene	0.125	0.02	ug/g		75.0	50-140			
Chrysene	0.129	0.02	ug/g		77.4	50-140			
Dibenzo [a,h] anthracene	0.102	0.02	ug/g		60.9	50-140			
Fluoranthene	0.127	0.02	ug/g		76.4	50-140			
Fluorene	0.125	0.02	ug/g		74.8	50-140			
Indeno [1,2,3-cd] pyrene	0.091	0.02	ug/g		54.4	50-140			
1-Methylnaphthalene	0.092	0.02	ug/g		55.3	50-140			
2-Methylnaphthalene	0.113	0.02	ug/g		67.5	50-140			
Naphthalene	0.121	0.01	ug/g		72.5	50-140			
Phenanthrene	0.129	0.02	ug/g		77.4	50-140			
Pyrene	0.126	0.02	ug/g		75.5	50-140			
Surrogate: 2-Fluorobiphenyl	*1.04*		*ug/g*		*78.3*	*50-140*			

Qualifier Notes:

QC Qualifiers :

QR-04 : Duplicate results exceeds RPD limits due to non-homogeneous matrix.

Sample Data Revisions

None

Work Order Revisions / Comments:

None

Other Report Notes:

n/a: not applicable
ND: Not Detected
MDL: Method Detection Limit
Source Result: Data used as source for matrix and duplicate samples
%REC: Percent recovery.
RPD: Relative percent difference.

Soil results are reported on a dry weight basis when the units are denoted with 'dry'.
Where %Solids is reported, moisture loss includes the loss of volatile hydrocarbons.

CCME PHC additional information:

- The method for the analysis of PHCs complies with the Reference Method for the CWS PHC and is validated for use in the laboratory. All prescribed quality criteria identified in the method has been met.
- F1 range corrected for BTEX.
- F2 to F3 ranges corrected for appropriate PAHs where available.
- The gravimetric heavy hydrocarbons (F4G) are not to be added to C6 to C50 hydrocarbons.
- In the case where F4 and F4G are both reported, the greater of the two results is to be used for comparison to CWS PHC criteria.

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Certificate of Analysis

CM3 Environmental Inc.

5710 Akins Road
Ottawa, ON K2S 1B8
Attn: Marc MacDonald

Client PO: Elmdale
Project: MM1027
Custody: 46547

Report Date: 28-Mar-2019
Order Date: 22-Mar-2019

Order #: 1912733

This Certificate of Analysis contains analytical data applicable to the following samples as submitted:

Paracel ID	Client ID
1912733-01	MW29 SA5
1912733-02	MW30 SA4
1912733-03	MW31 SA5
1912733-04	MW32 SA5
1912733-05	MW33 SA5
1912733-06	MW34 SA5
1912733-07	MW35 SA5
1912733-08	MW36 SA5
1912733-09	MW37 SA5

Approved By: Mark Foto

Mark Foto, M.Sc.
Lab Supervisor

Certificate of Analysis
Client: CM3 Environmental Inc.
Client PO: Elmdale

Report Date: 28-Mar-2019
Order Date: 22-Mar-2019
Project Description: MM1027

Analysis Summary Table

Analysis	Method Reference/Description	Extraction Date	Analysis Date
Mercury by CVAA	EPA 7471B - CVAA, digestion	27-Mar-19	27-Mar-19
PHC F1	CWS Tier 1 - P&T GC-FID	25-Mar-19	27-Mar-19
PHCs F2 to F4	CWS Tier 1 - GC-FID, extraction	24-Mar-19	26-Mar-19
REG 153: Metals by ICP/MS, soil	EPA 6020 - Digestion - ICP-MS	27-Mar-19	27-Mar-19
REG 153: PAHs by GC-MS	EPA 8270 - GC-MS, extraction	25-Mar-19	27-Mar-19
Solids, %	Gravimetric, calculation	27-Mar-19	27-Mar-19

Certificate of Analysis

Client: CM3 Environmental Inc.

Client PO: Elmdale

Report Date: 28-Mar-2019

Order Date: 22-Mar-2019

Project Description: MM1027

	Client ID:	MW29 SA5	MW30 SA4	MW31 SA5	MW32 SA5
	Sample Date:	03/21/2019 16:03	03/21/2019 16:03	03/21/2019 16:03	03/21/2019 16:03
	Sample ID:	1912733-01	1912733-02	1912733-03	1912733-04
	MDL/Units	Soil	Soil	Soil	Soil
Physical Characteristics					
% Solids	0.1 % by Wt.	55.9	83.3	88.1	68.4
Metals					
Antimony	1.0 ug/g dry	<1.0	<1.0	<1.0	<1.0
Arsenic	1.0 ug/g dry	3.0	2.0	2.0	1.9
Barium	1.0 ug/g dry	502	174	86.4	238
Beryllium	0.5 ug/g dry	0.9	0.6	<0.5	0.6
Boron	5.0 ug/g dry	7.1	7.4	10.3	7.6
Cadmium	0.5 ug/g dry	<0.5	<0.5	<0.5	<0.5
Chromium	5.0 ug/g dry	141	55.4	22.8	51.1
Cobalt	1.0 ug/g dry	30.3	12.7	7.3	12.6
Copper	5.0 ug/g dry	71.3	31.1	15.4	30.3
Lead	1.0 ug/g dry	6.8	4.6	4.9	4.6
Mercury	0.1 ug/g dry	<0.1	<0.1	<0.1	<0.1
Molybdenum	1.0 ug/g dry	<1.0	<1.0	<1.0	<1.0
Nickel	5.0 ug/g dry	81.2	31.9	14.9	29.2
Selenium	1.0 ug/g dry	<1.0	<1.0	<1.0	<1.0
Silver	0.3 ug/g dry	<0.3	<0.3	<0.3	<0.3
Thallium	1.0 ug/g dry	<1.0	<1.0	<1.0	<1.0
Uranium	1.0 ug/g dry	<1.0	<1.0	<1.0	<1.0
Vanadium	10.0 ug/g dry	136	64.6	34.1	64.4
Zinc	20.0 ug/g dry	161	67.0	28.8	69.7
Hydrocarbons					
F1 PHCs (C6-C10)	7 ug/g dry	<7	<7	<7	<7
F2 PHCs (C10-C16)	4 ug/g dry	<4	<4	<4	<4
F3 PHCs (C16-C34)	8 ug/g dry	<8	<8	<8	<8
F4 PHCs (C34-C50)	6 ug/g dry	<6	<6	<6	<6
Semi-Volatiles					
Acenaphthene	0.02 ug/g dry	<0.02	<0.02	<0.02	<0.02
Acenaphthylene	0.02 ug/g dry	<0.02	<0.02	<0.02	<0.02
Anthracene	0.02 ug/g dry	<0.02	<0.02	<0.02	<0.02
Benzo [a] anthracene	0.02 ug/g dry	<0.02	<0.02	<0.02	<0.02
Benzo [a] pyrene	0.02 ug/g dry	<0.02	<0.02	<0.02	<0.02
Benzo [b] fluoranthene	0.02 ug/g dry	<0.02	<0.02	<0.02	<0.02
Benzo [g,h,i] perylene	0.02 ug/g dry	<0.02	<0.02	<0.02	<0.02
Benzo [k] fluoranthene	0.02 ug/g dry	<0.02	<0.02	<0.02	<0.02

Certificate of Analysis

Client: CM3 Environmental Inc.

Client PO: Elmdale

Report Date: 28-Mar-2019

Order Date: 22-Mar-2019

Project Description: MM1027

	Client ID:	MW29 SA5	MW30 SA4	MW31 SA5	MW32 SA5
	Sample Date:	03/21/2019 16:03	03/21/2019 16:03	03/21/2019 16:03	03/21/2019 16:03
	Sample ID:	1912733-01	1912733-02	1912733-03	1912733-04
	MDL/Units	Soil	Soil	Soil	Soil
Chrysene	0.02 ug/g dry	<0.02	<0.02	<0.02	<0.02
Dibenzo [a,h] anthracene	0.02 ug/g dry	<0.02	<0.02	<0.02	<0.02
Fluoranthene	0.02 ug/g dry	<0.02	<0.02	<0.02	<0.02
Fluorene	0.02 ug/g dry	<0.02	<0.02	<0.02	<0.02
Indeno [1,2,3-cd] pyrene	0.02 ug/g dry	<0.02	<0.02	<0.02	<0.02
1-Methylnaphthalene	0.02 ug/g dry	<0.02	<0.02	<0.02	<0.02
2-Methylnaphthalene	0.02 ug/g dry	<0.02	<0.02	<0.02	<0.02
Methylnaphthalene (1&2)	0.04 ug/g dry	<0.04	<0.04	<0.04	<0.04
Naphthalene	0.01 ug/g dry	<0.01	<0.01	<0.01	<0.01
Phenanthrene	0.02 ug/g dry	<0.02	<0.02	<0.02	<0.02
Pyrene	0.02 ug/g dry	<0.02	<0.02	<0.02	<0.02
2-Fluorobiphenyl	Surrogate	79.2%	72.2%	85.3%	80.2%
Terphenyl-d14	Surrogate	122%	104%	121%	112%

Certificate of Analysis

Client: CM3 Environmental Inc.

Client PO: Elmdale

Report Date: 28-Mar-2019

Order Date: 22-Mar-2019

Project Description: MM1027

	Client ID:	MW33 SA5	MW34 SA5	MW35 SA5	MW36 SA5
	Sample Date:	03/22/2019 16:03	03/21/2019 16:03	03/22/2019 16:03	03/22/2019 16:03
	Sample ID:	1912733-05	1912733-06	1912733-07	1912733-08
	MDL/Units	Soil	Soil	Soil	Soil
Physical Characteristics					
% Solids	0.1 % by Wt.	69.1	89.4	69.5	62.0
Metals					
Antimony	1.0 ug/g dry	<1.0	<1.0	<1.0	<1.0
Arsenic	1.0 ug/g dry	1.7	1.3	1.8	2.7
Barium	1.0 ug/g dry	201	86.5	254	459
Beryllium	0.5 ug/g dry	0.6	<0.5	0.7	0.9
Boron	5.0 ug/g dry	<5.0	8.5	5.9	<5.0
Cadmium	0.5 ug/g dry	<0.5	<0.5	<0.5	<0.5
Chromium	5.0 ug/g dry	48.6	20.5	61.0	127
Cobalt	1.0 ug/g dry	12.3	7.0	15.0	26.3
Copper	5.0 ug/g dry	24.2	14.2	33.0	62.3
Lead	1.0 ug/g dry	4.1	4.1	5.2	6.3
Mercury	0.1 ug/g dry	<0.1	<0.1	<0.1	<0.1
Molybdenum	1.0 ug/g dry	<1.0	<1.0	<1.0	<1.0
Nickel	5.0 ug/g dry	28.0	13.1	34.5	70.7
Selenium	1.0 ug/g dry	<1.0	<1.0	<1.0	<1.0
Silver	0.3 ug/g dry	<0.3	<0.3	<0.3	<0.3
Thallium	1.0 ug/g dry	<1.0	<1.0	<1.0	<1.0
Uranium	1.0 ug/g dry	<1.0	<1.0	<1.0	<1.0
Vanadium	10.0 ug/g dry	60.7	30.9	76.1	124
Zinc	20.0 ug/g dry	73.6	28.2	88.6	148
Hydrocarbons					
F1 PHCs (C6-C10)	7 ug/g dry	<7	<7	<7	<7
F2 PHCs (C10-C16)	4 ug/g dry	<4	<4	<4	<4
F3 PHCs (C16-C34)	8 ug/g dry	<8	<8	<8	<8
F4 PHCs (C34-C50)	6 ug/g dry	<6	<6	<6	<6
Semi-Volatiles					
Acenaphthene	0.02 ug/g dry	<0.02	<0.02	<0.02	<0.02
Acenaphthylene	0.02 ug/g dry	<0.02	<0.02	<0.02	<0.02
Anthracene	0.02 ug/g dry	<0.02	<0.02	<0.02	<0.02
Benzo [a] anthracene	0.02 ug/g dry	<0.02	<0.02	<0.02	<0.02
Benzo [a] pyrene	0.02 ug/g dry	<0.02	<0.02	<0.02	<0.02
Benzo [b] fluoranthene	0.02 ug/g dry	<0.02	<0.02	<0.02	<0.02
Benzo [g,h,i] perylene	0.02 ug/g dry	<0.02	<0.02	<0.02	<0.02
Benzo [k] fluoranthene	0.02 ug/g dry	<0.02	<0.02	<0.02	<0.02

Certificate of Analysis
Client: CM3 Environmental Inc.
Client PO: Elmdale

Report Date: 28-Mar-2019
Order Date: 22-Mar-2019
Project Description: MM1027

	Client ID:	MW33 SA5	MW34 SA5	MW35 SA5	MW36 SA5
	Sample Date:	03/22/2019 16:03	03/21/2019 16:03	03/22/2019 16:03	03/22/2019 16:03
	Sample ID:	1912733-05	1912733-06	1912733-07	1912733-08
	MDL/Units	Soil	Soil	Soil	Soil
Chrysene	0.02 ug/g dry	<0.02	<0.02	<0.02	<0.02
Dibenzo [a,h] anthracene	0.02 ug/g dry	<0.02	<0.02	<0.02	<0.02
Fluoranthene	0.02 ug/g dry	<0.02	<0.02	<0.02	<0.02
Fluorene	0.02 ug/g dry	<0.02	<0.02	<0.02	<0.02
Indeno [1,2,3-cd] pyrene	0.02 ug/g dry	<0.02	<0.02	<0.02	<0.02
1-Methylnaphthalene	0.02 ug/g dry	<0.02	<0.02	<0.02	<0.02
2-Methylnaphthalene	0.02 ug/g dry	<0.02	<0.02	<0.02	<0.02
Methylnaphthalene (1&2)	0.04 ug/g dry	<0.04	<0.04	<0.04	<0.04
Naphthalene	0.01 ug/g dry	<0.01	<0.01	<0.01	<0.01
Phenanthrene	0.02 ug/g dry	<0.02	<0.02	<0.02	<0.02
Pyrene	0.02 ug/g dry	<0.02	<0.02	<0.02	<0.02
2-Fluorobiphenyl	Surrogate	77.7%	69.5%	96.0%	91.4%
Terphenyl-d14	Surrogate	110%	107%	130%	121%

Certificate of Analysis
Client: CM3 Environmental Inc.
Client PO: Elmdale

Report Date: 28-Mar-2019
Order Date: 22-Mar-2019
Project Description: MM1027

	Client ID:	MW37 SA5	-	-	-
	Sample Date:	03/22/2019 16:03	-	-	-
	Sample ID:	1912733-09	-	-	-
	MDL/Units	Soil	-	-	-
Physical Characteristics					
% Solids	0.1 % by Wt.	75.2	-	-	-
Metals					
Antimony	1.0 ug/g dry	<1.0	-	-	-
Arsenic	1.0 ug/g dry	2.0	-	-	-
Barium	1.0 ug/g dry	263	-	-	-
Beryllium	0.5 ug/g dry	0.7	-	-	-
Boron	5.0 ug/g dry	5.3	-	-	-
Cadmium	0.5 ug/g dry	<0.5	-	-	-
Chromium	5.0 ug/g dry	75.8	-	-	-
Cobalt	1.0 ug/g dry	17.3	-	-	-
Copper	5.0 ug/g dry	37.4	-	-	-
Lead	1.0 ug/g dry	5.1	-	-	-
Mercury	0.1 ug/g dry	<0.1	-	-	-
Molybdenum	1.0 ug/g dry	<1.0	-	-	-
Nickel	5.0 ug/g dry	43.0	-	-	-
Selenium	1.0 ug/g dry	<1.0	-	-	-
Silver	0.3 ug/g dry	<0.3	-	-	-
Thallium	1.0 ug/g dry	<1.0	-	-	-
Uranium	1.0 ug/g dry	<1.0	-	-	-
Vanadium	10.0 ug/g dry	80.1	-	-	-
Zinc	20.0 ug/g dry	93.7	-	-	-
Hydrocarbons					
F1 PHCs (C6-C10)	7 ug/g dry	<7	-	-	-
F2 PHCs (C10-C16)	4 ug/g dry	<4	-	-	-
F3 PHCs (C16-C34)	8 ug/g dry	<8	-	-	-
F4 PHCs (C34-C50)	6 ug/g dry	<6	-	-	-
Semi-Volatiles					
Acenaphthene	0.02 ug/g dry	<0.02	-	-	-
Acenaphthylene	0.02 ug/g dry	<0.02	-	-	-
Anthracene	0.02 ug/g dry	<0.02	-	-	-
Benzo [a] anthracene	0.02 ug/g dry	<0.02	-	-	-
Benzo [a] pyrene	0.02 ug/g dry	<0.02	-	-	-
Benzo [b] fluoranthene	0.02 ug/g dry	<0.02	-	-	-
Benzo [g,h,i] perylene	0.02 ug/g dry	<0.02	-	-	-
Benzo [k] fluoranthene	0.02 ug/g dry	<0.02	-	-	-

Certificate of Analysis
Client: CM3 Environmental Inc.
Client PO: Elmdale

Report Date: 28-Mar-2019
Order Date: 22-Mar-2019
Project Description: MM1027

	Client ID:	MW37 SA5	-	-	-
	Sample Date:	03/22/2019 16:03	-	-	-
	Sample ID:	1912733-09	-	-	-
	MDL/Units	Soil	-	-	-
Chrysene	0.02 ug/g dry	<0.02	-	-	-
Dibenzo [a,h] anthracene	0.02 ug/g dry	<0.02	-	-	-
Fluoranthene	0.02 ug/g dry	<0.02	-	-	-
Fluorene	0.02 ug/g dry	<0.02	-	-	-
Indeno [1,2,3-cd] pyrene	0.02 ug/g dry	<0.02	-	-	-
1-Methylnaphthalene	0.02 ug/g dry	<0.02	-	-	-
2-Methylnaphthalene	0.02 ug/g dry	<0.02	-	-	-
Methylnaphthalene (1&2)	0.04 ug/g dry	<0.04	-	-	-
Naphthalene	0.01 ug/g dry	<0.01	-	-	-
Phenanthrene	0.02 ug/g dry	<0.02	-	-	-
Pyrene	0.02 ug/g dry	<0.02	-	-	-
2-Fluorobiphenyl	Surrogate	90.6%	-	-	-
Terphenyl-d14	Surrogate	119%	-	-	-

Method Quality Control: Blank

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
Hydrocarbons									
F1 PHCs (C6-C10)	ND	7	ug/g						
F2 PHCs (C10-C16)	ND	4	ug/g						
F3 PHCs (C16-C34)	ND	8	ug/g						
F4 PHCs (C34-C50)	ND	6	ug/g						
Metals									
Antimony	ND	1.0	ug/g						
Arsenic	ND	1.0	ug/g						
Barium	ND	1.0	ug/g						
Beryllium	ND	0.5	ug/g						
Boron	ND	5.0	ug/g						
Cadmium	ND	0.5	ug/g						
Chromium	ND	5.0	ug/g						
Cobalt	ND	1.0	ug/g						
Copper	ND	5.0	ug/g						
Lead	ND	1.0	ug/g						
Mercury	ND	0.1	ug/g						
Molybdenum	ND	1.0	ug/g						
Nickel	ND	5.0	ug/g						
Selenium	ND	1.0	ug/g						
Silver	ND	0.3	ug/g						
Thallium	ND	1.0	ug/g						
Uranium	ND	1.0	ug/g						
Vanadium	ND	10.0	ug/g						
Zinc	ND	20.0	ug/g						
Semi-Volatiles									
Acenaphthene	ND	0.02	ug/g						
Acenaphthylene	ND	0.02	ug/g						
Anthracene	ND	0.02	ug/g						
Benzo [a] anthracene	ND	0.02	ug/g						
Benzo [a] pyrene	ND	0.02	ug/g						
Benzo [b] fluoranthene	ND	0.02	ug/g						
Benzo [g,h,i] perylene	ND	0.02	ug/g						
Benzo [k] fluoranthene	ND	0.02	ug/g						
Chrysene	ND	0.02	ug/g						
Dibenzo [a,h] anthracene	ND	0.02	ug/g						
Fluoranthene	ND	0.02	ug/g						
Fluorene	ND	0.02	ug/g						
Indeno [1,2,3-cd] pyrene	ND	0.02	ug/g						
1-Methylnaphthalene	ND	0.02	ug/g						
2-Methylnaphthalene	ND	0.02	ug/g						
Methylnaphthalene (1&2)	ND	0.04	ug/g						
Naphthalene	ND	0.01	ug/g						
Phenanthrene	ND	0.02	ug/g						
Pyrene	ND	0.02	ug/g						
Surrogate: 2-Fluorobiphenyl	*1.12*		*ug/g*		*83.7*	*50-140*			
Surrogate: Terphenyl-d14	*1.85*		*ug/g*		*138*	*50-140*			

Method Quality Control: Duplicate

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
Hydrocarbons									
F1 PHCs (C6-C10)	450	7	ug/g dry	448			0.3	40	
F2 PHCs (C10-C16)	463	4	ug/g dry	372			21.8	30	
F3 PHCs (C16-C34)	2010	8	ug/g dry	1520			27.4	30	
F4 PHCs (C34-C50)	275	6	ug/g dry	459			50.3	30	QR-04
Metals									
Antimony	ND	1.0	ug/g dry	ND			0.0	30	
Arsenic	1.5	1.0	ug/g dry	1.5			1.6	30	
Barium	84.8	1.0	ug/g dry	84.7			0.1	30	
Beryllium	ND	0.5	ug/g dry	ND			0.0	30	
Boron	6.2	5.0	ug/g dry	5.6			10.6	30	
Cadmium	0.7	0.5	ug/g dry	0.7			2.1	30	
Chromium	36.6	5.0	ug/g dry	35.8			2.1	30	
Cobalt	6.1	1.0	ug/g dry	5.7			6.5	30	
Copper	25.3	5.0	ug/g dry	23.9			5.8	30	
Lead	7.3	1.0	ug/g dry	6.7			9.4	30	
Mercury	ND	0.1	ug/g dry	ND			0.0	30	
Molybdenum	ND	1.0	ug/g dry	ND			0.0	30	
Nickel	19.3	5.0	ug/g dry	18.3			5.6	30	
Selenium	ND	1.0	ug/g dry	1.0			0.0	30	
Silver	ND	0.3	ug/g dry	ND			0.0	30	
Thallium	ND	1.0	ug/g dry	ND			0.0	30	
Uranium	1.5	1.0	ug/g dry	1.4			8.1	30	
Vanadium	35.3	10.0	ug/g dry	34.3			3.0	30	
Zinc	67.6	20.0	ug/g dry	64.3			5.0	30	
Physical Characteristics									
% Solids	84.4	0.1	% by Wt.	85.6			1.3	25	
Semi-Volatiles									
Acenaphthene	0.337	0.02	ug/g dry	13.3			190.0	40	QR-04
Acenaphthylene	0.132	0.02	ug/g dry	0.621			130.0	40	QR-04
Anthracene	1.11	0.02	ug/g dry	43.7			190.0	40	QR-04
Benzo [a] anthracene	1.17	0.02	ug/g dry	0.259			128.0	40	QR-04
Benzo [a] pyrene	0.727	0.02	ug/g dry	16.5			183.0	40	QR-04
Benzo [b] fluoranthene	1.11	0.02	ug/g dry	39.4			189.0	40	QR-04
Benzo [g,h,i] perylene	0.379	0.02	ug/g dry	0.030			171.0	40	QR-04
Benzo [k] fluoranthene	0.668	0.02	ug/g dry	36.6			193.0	40	QR-04
Chrysene	0.951	0.02	ug/g dry	0.767			21.5	40	
Dibenzo [a,h] anthracene	0.150	0.02	ug/g dry	0.278			59.5	40	QR-04
Fluoranthene	3.00	0.02	ug/g dry	84.0			186.0	40	QR-04
Fluorene	0.904	0.02	ug/g dry	36.1			190.0	40	QR-04
Indeno [1,2,3-cd] pyrene	0.375	0.02	ug/g dry	8.67			183.0	40	QR-04
1-Methylnaphthalene	0.532	0.02	ug/g dry	7.80			174.0	40	QR-04
2-Methylnaphthalene	0.520	0.02	ug/g dry	14.6			186.0	40	QR-04
Naphthalene	0.848	0.01	ug/g dry	17.9			182.0	40	QR-04
Phenanthrene	3.58	0.02	ug/g dry	135			190.0	40	QR-04
Pyrene	2.14	0.02	ug/g dry	55.0			185.0	40	QR-04
Surrogate: 2-Fluorobiphenyl	*1.43*		*ug/g dry*		*86.8*	*50-140*			
Surrogate: Terphenyl-d14	*1.75*		*ug/g dry*		*107*	*50-140*			

Method Quality Control: Spike

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
Hydrocarbons									
F1 PHCs (C6-C10)	193	7	ug/g		96.7	80-120			
F2 PHCs (C10-C16)	68	4	ug/g		84.4	80-120			
F3 PHCs (C16-C34)	202	8	ug/g		103	80-120			
F4 PHCs (C34-C50)	138	6	ug/g		111	80-120			
Metals									
Antimony	50.7		ug/L	ND	101	70-130			
Arsenic	54.1		ug/L	ND	107	70-130			
Barium	92.6		ug/L	33.9	117	70-130			
Beryllium	56.9		ug/L	ND	114	70-130			
Boron	53.1		ug/L	ND	102	70-130			
Cadmium	53.0		ug/L	ND	106	70-130			
Chromium	65.2		ug/L	14.3	102	70-130			
Cobalt	52.5		ug/L	2.3	100	70-130			
Copper	58.3		ug/L	9.6	97.4	70-130			
Lead	50.6		ug/L	2.7	95.8	70-130			
Mercury	1.51	0.1	ug/g	ND	101	70-130			
Molybdenum	53.6		ug/L	ND	107	70-130			
Nickel	61.8		ug/L	7.3	109	70-130			
Selenium	51.6		ug/L	ND	102	70-130			
Silver	48.0		ug/L	ND	96.0	70-130			
Thallium	48.5		ug/L	ND	96.9	70-130			
Uranium	50.8		ug/L	ND	100	70-130			
Vanadium	71.1		ug/L	13.7	115	70-130			
Zinc	79.4		ug/L	25.7	107	70-130			
Semi-Volatiles									
Acenaphthene	0.141	0.02	ug/g		84.9	50-140			
Acenaphthylene	0.127	0.02	ug/g		76.0	50-140			
Anthracene	0.128	0.02	ug/g		76.8	50-140			
Benzo [a] anthracene	0.122	0.02	ug/g		73.2	50-140			
Benzo [a] pyrene	0.099	0.02	ug/g		59.5	50-140			
Benzo [b] fluoranthene	0.168	0.02	ug/g		101	50-140			
Benzo [g,h,i] perylene	0.096	0.02	ug/g		57.6	50-140			
Benzo [k] fluoranthene	0.125	0.02	ug/g		75.0	50-140			
Chrysene	0.129	0.02	ug/g		77.4	50-140			
Dibenzo [a,h] anthracene	0.102	0.02	ug/g		60.9	50-140			
Fluoranthene	0.127	0.02	ug/g		76.4	50-140			
Fluorene	0.125	0.02	ug/g		74.8	50-140			
Indeno [1,2,3-cd] pyrene	0.091	0.02	ug/g		54.4	50-140			
1-Methylnaphthalene	0.092	0.02	ug/g		55.3	50-140			
2-Methylnaphthalene	0.113	0.02	ug/g		67.5	50-140			
Naphthalene	0.121	0.01	ug/g		72.5	50-140			
Phenanthrene	0.129	0.02	ug/g		77.4	50-140			
Pyrene	0.126	0.02	ug/g		75.5	50-140			
Surrogate: 2-Fluorobiphenyl	*1.04*		*ug/g*		*78.3*	*50-140*			

Qualifier Notes:

QC Qualifiers :

QR-04 : Duplicate results exceeds RPD limits due to non-homogeneous matrix.

Sample Data Revisions

None

Work Order Revisions / Comments:

None

Other Report Notes:

n/a: not applicable
ND: Not Detected
MDL: Method Detection Limit
Source Result: Data used as source for matrix and duplicate samples
%REC: Percent recovery.
RPD: Relative percent difference.

Soil results are reported on a dry weight basis when the units are denoted with 'dry'.
Where %Solids is reported, moisture loss includes the loss of volatile hydrocarbons.

CCME PHC additional information:

- The method for the analysis of PHCs complies with the Reference Method for the CWS PHC and is validated for use in the laboratory. All prescribed quality criteria identified in the method has been met.
- F1 range corrected for BTEX.
- F2 to F3 ranges corrected for appropriate PAHs where available.
- The gravimetric heavy hydrocarbons (F4G) are not to be added to C6 to C50 hydrocarbons.
- In the case where F4 and F4G are both reported, the greater of the two results is to be used for comparison to CWS PHC criteria.

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Certificate of Analysis

CM3 Environmental Inc.

5710 Akins Road
Ottawa, ON K2S 1B8
Attn: Marc MacDonald

Client PO: Elmdale
Project: MM1027
Custody: 46557

Report Date: 1-Apr-2019
Order Date: 26-Mar-2019

Order #: 1913276

This Certificate of Analysis contains analytical data applicable to the following samples as submitted:

Paracel ID	Client ID
1913276-01	MW29
1913276-02	MW32
1913276-03	MW33
1913276-04	MW34
1913276-05	MW35
1913276-06	MW36

Approved By:

Mark Foto, M.Sc.
Lab Supervisor

Analysis Summary Table

Analysis	Method Reference/Description	Extraction Date	Analysis Date
Mercury by CVAA	EPA 245.2 - Cold Vapour AA	27-Mar-19	28-Mar-19
Metals, ICP-MS	EPA 200.8 - ICP-MS	29-Mar-19	29-Mar-19
PHC F1	CWS Tier 1 - P&T GC-FID	27-Mar-19	28-Mar-19
PHCs F2 to F4	CWS Tier 1 - GC-FID, extraction	31-Mar-19	1-Apr-19
REG 153: PAHs by GC-MS	EPA 625 - GC-MS, extraction	28-Mar-19	28-Mar-19

Certificate of Analysis

Client: CM3 Environmental Inc.

Client PO: Elmdale

Report Date: 01-Apr-2019

Order Date: 26-Mar-2019

Project Description: MM1027

	Client ID:	MW29	MW32	MW33	MW34
	Sample Date:	03/26/2019 09:00	03/26/2019 09:00	03/26/2019 09:00	03/26/2019 09:00
	Sample ID:	1913276-01	1913276-02	1913276-03	1913276-04
	MDL/Units	Water	Water	Water	Water
Metals					
Mercury	0.1 ug/L	<0.1	<0.1	<0.1	<0.1
Antimony	0.5 ug/L	<0.5	<0.5	0.6	<0.5
Arsenic	1 ug/L	<1	<1	<1	<1
Barium	1 ug/L	133	124	172	1590
Beryllium	0.5 ug/L	<0.5	<0.5	<0.5	<0.5
Boron	10 ug/L	112	70	29	34
Cadmium	0.1 ug/L	<0.1	<0.1	<0.1	<0.1
Chromium	1 ug/L	<1	<1	<1	<1
Cobalt	0.5 ug/L	1.8	4.1	1.2	2.2
Copper	0.5 ug/L	1.7	2.2	2.4	1.8
Lead	0.1 ug/L	<0.1	<0.1	<0.1	<0.1
Molybdenum	0.5 ug/L	7.0	18.0	33.1	13.5
Nickel	1 ug/L	5	12	2	4
Selenium	1 ug/L	1	2	<1	<1
Silver	0.1 ug/L	<0.1	<0.1	<0.1	<0.1
Sodium	200 ug/L	67400	144000	63900	104000
Thallium	0.1 ug/L	<0.1	<0.1	<0.1	<0.1
Uranium	0.1 ug/L	2.8	4.9	0.9	1.4
Vanadium	0.5 ug/L	0.7	0.8	1.1	<0.5
Zinc	5 ug/L	6	6	9	9
Hydrocarbons					
F1 PHCs (C6-C10)	25 ug/L	<25	<25	<25	<25
F2 PHCs (C10-C16)	100 ug/L	<100	<100	<100	<100
F3 PHCs (C16-C34)	100 ug/L	<100	<100	<100	<100
F4 PHCs (C34-C50)	100 ug/L	<100	<100	<100	<100
Semi-Volatiles					
Acenaphthene	0.05 ug/L	<0.05	<0.05	<0.05	<0.05
Acenaphthylene	0.05 ug/L	<0.05	<0.05	<0.05	<0.05
Anthracene	0.01 ug/L	<0.01	<0.01	<0.01	<0.01
Benzo [a] anthracene	0.01 ug/L	<0.01	<0.01	<0.01	<0.01
Benzo [a] pyrene	0.01 ug/L	<0.01	<0.01	<0.01	<0.01
Benzo [b] fluoranthene	0.05 ug/L	<0.05	<0.05	<0.05	<0.05
Benzo [g,h,i] perylene	0.05 ug/L	<0.05	<0.05	<0.05	<0.05
Benzo [k] fluoranthene	0.05 ug/L	<0.05	<0.05	<0.05	<0.05
Chrysene	0.05 ug/L	<0.05	<0.05	<0.05	<0.05

Certificate of Analysis
Client: CM3 Environmental Inc.
Client PO: Elmdale

Report Date: 01-Apr-2019
Order Date: 26-Mar-2019
Project Description: MM1027

	Client ID:	MW29	MW32	MW33	MW34
	Sample Date:	03/26/2019 09:00	03/26/2019 09:00	03/26/2019 09:00	03/26/2019 09:00
	Sample ID:	1913276-01	1913276-02	1913276-03	1913276-04
	MDL/Units	Water	Water	Water	Water
Dibenzo [a,h] anthracene	0.05 ug/L	<0.05	<0.05	<0.05	<0.05
Fluoranthene	0.01 ug/L	<0.01	<0.01	<0.01	<0.01
Fluorene	0.05 ug/L	0.05	<0.05	<0.05	<0.05
Indeno [1,2,3-cd] pyrene	0.05 ug/L	<0.05	<0.05	<0.05	<0.05
1-Methylnaphthalene	0.05 ug/L	0.07	<0.05	<0.05	<0.05
2-Methylnaphthalene	0.05 ug/L	0.11	<0.05	<0.05	<0.05
Methylnaphthalene (1&2)	0.10 ug/L	0.17	<0.10	<0.10	<0.10
Naphthalene	0.05 ug/L	0.09	<0.05	<0.05	<0.05
Phenanthrene	0.05 ug/L	<0.05	<0.05	<0.05	<0.05
Pyrene	0.01 ug/L	<0.01	<0.01	<0.01	<0.01
2-Fluorobiphenyl	Surrogate	70.1%	69.1%	74.9%	75.4%
Terphenyl-d14	Surrogate	113%	109%	118%	119%

Certificate of Analysis

Client: CM3 Environmental Inc.

Client PO: Elmdale

Report Date: 01-Apr-2019

Order Date: 26-Mar-2019

Project Description: MM1027

	Client ID:	MW35	MW36	-	-
	Sample Date:	03/26/2019 09:00	03/26/2019 09:00	-	-
	Sample ID:	1913276-05	1913276-06	-	-
	MDL/Units	Water	Water	-	-
Metals					
Mercury	0.1 ug/L	<0.1	<0.1	-	-
Antimony	0.5 ug/L	<0.5	<0.5	-	-
Arsenic	1 ug/L	<1	<1	-	-
Barium	1 ug/L	695	249	-	-
Beryllium	0.5 ug/L	<0.5	<0.5	-	-
Boron	10 ug/L	30	15	-	-
Cadmium	0.1 ug/L	<0.1	<0.1	-	-
Chromium	1 ug/L	<1	109	-	-
Cobalt	0.5 ug/L	0.7	<0.5	-	-
Copper	0.5 ug/L	1.4	6.4	-	-
Lead	0.1 ug/L	<0.1	0.2	-	-
Molybdenum	0.5 ug/L	51.0	32.5	-	-
Nickel	1 ug/L	4	1	-	-
Selenium	1 ug/L	<1	<1	-	-
Silver	0.1 ug/L	<0.1	<0.1	-	-
Sodium	200 ug/L	43600	198000	-	-
Thallium	0.1 ug/L	<0.1	<0.1	-	-
Uranium	0.1 ug/L	1.7	<0.1	-	-
Vanadium	0.5 ug/L	0.5	1.2	-	-
Zinc	5 ug/L	<5	<5	-	-
Hydrocarbons					
F1 PHCs (C6-C10)	25 ug/L	<25	<25	-	-
F2 PHCs (C10-C16)	100 ug/L	<100	<100	-	-
F3 PHCs (C16-C34)	100 ug/L	<100	<100	-	-
F4 PHCs (C34-C50)	100 ug/L	<100	<100	-	-
Semi-Volatiles					
Acenaphthene	0.05 ug/L	<0.05	<0.05	-	-
Acenaphthylene	0.05 ug/L	<0.05	<0.05	-	-
Anthracene	0.01 ug/L	<0.01	0.03	-	-
Benzo [a] anthracene	0.01 ug/L	<0.01	0.08	-	-
Benzo [a] pyrene	0.01 ug/L	<0.01	0.07	-	-
Benzo [b] fluoranthene	0.05 ug/L	<0.05	0.11	-	-
Benzo [g,h,i] perylene	0.05 ug/L	<0.05	0.05	-	-
Benzo [k] fluoranthene	0.05 ug/L	<0.05	0.08	-	-
Chrysene	0.05 ug/L	<0.05	0.10	-	-

Certificate of Analysis
Client: CM3 Environmental Inc.
Client PO: Elmdale

Report Date: 01-Apr-2019
Order Date: 26-Mar-2019
Project Description: MM1027

	Client ID:	MW35	MW36	-	-
	Sample Date:	03/26/2019 09:00	03/26/2019 09:00	-	-
	Sample ID:	1913276-05	1913276-06	-	-
	MDL/Units	Water	Water	-	-
Dibenzo [a,h] anthracene	0.05 ug/L	<0.05	<0.05	-	-
Fluoranthene	0.01 ug/L	<0.01	0.19	-	-
Fluorene	0.05 ug/L	<0.05	0.06	-	-
Indeno [1,2,3-cd] pyrene	0.05 ug/L	<0.05	<0.05	-	-
1-Methylnaphthalene	0.05 ug/L	<0.05	<0.05	-	-
2-Methylnaphthalene	0.05 ug/L	<0.05	<0.05	-	-
Methylnaphthalene (1&2)	0.10 ug/L	<0.10	<0.10	-	-
Naphthalene	0.05 ug/L	<0.05	0.08	-	-
Phenanthrene	0.05 ug/L	<0.05	0.10	-	-
Pyrene	0.01 ug/L	<0.01	0.16	-	-
2-Fluorobiphenyl	Surrogate	73.7%	70.4%	-	-
Terphenyl-d14	Surrogate	115%	110%	-	-

Certificate of Analysis
Client: CM3 Environmental Inc.
Client PO: Elmdale

Report Date: 01-Apr-2019
Order Date: 26-Mar-2019
Project Description: MM1027

Method Quality Control: Blank

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
Hydrocarbons									
F1 PHCs (C6-C10)	ND	25	ug/L						
F2 PHCs (C10-C16)	ND	100	ug/L						
F3 PHCs (C16-C34)	ND	100	ug/L						
F4 PHCs (C34-C50)	ND	100	ug/L						
Metals									
Mercury	ND	0.1	ug/L						
Antimony	ND	0.5	ug/L						
Arsenic	ND	1	ug/L						
Barium	ND	1	ug/L						
Beryllium	ND	0.5	ug/L						
Boron	ND	10	ug/L						
Cadmium	ND	0.1	ug/L						
Chromium	ND	1	ug/L						
Cobalt	ND	0.5	ug/L						
Copper	ND	0.5	ug/L						
Lead	ND	0.1	ug/L						
Molybdenum	ND	0.5	ug/L						
Nickel	ND	1	ug/L						
Selenium	ND	1	ug/L						
Silver	ND	0.1	ug/L						
Sodium	ND	200	ug/L						
Thallium	ND	0.1	ug/L						
Uranium	ND	0.1	ug/L						
Vanadium	ND	0.5	ug/L						
Zinc	ND	5	ug/L						
Semi-Volatiles									
Acenaphthene	ND	0.05	ug/L						
Acenaphthylene	ND	0.05	ug/L						
Anthracene	ND	0.01	ug/L						
Benzo [a] anthracene	ND	0.01	ug/L						
Benzo [a] pyrene	ND	0.01	ug/L						
Benzo [b] fluoranthene	ND	0.05	ug/L						
Benzo [g,h,i] perylene	ND	0.05	ug/L						
Benzo [k] fluoranthene	ND	0.05	ug/L						
Chrysene	ND	0.05	ug/L						
Dibenzo [a,h] anthracene	ND	0.05	ug/L						
Fluoranthene	ND	0.01	ug/L						
Fluorene	ND	0.05	ug/L						
Indeno [1,2,3-cd] pyrene	ND	0.05	ug/L						
1-Methylnaphthalene	ND	0.05	ug/L						
2-Methylnaphthalene	ND	0.05	ug/L						
Methylnaphthalene (1&2)	ND	0.10	ug/L						
Naphthalene	ND	0.05	ug/L						
Phenanthrene	ND	0.05	ug/L						
Pyrene	ND	0.01	ug/L						
Surrogate: 2-Fluorobiphenyl	*14.6*		*ug/L*		*72.9*	*50-140*			
Surrogate: Terphenyl-d14	*23.0*		*ug/L*		*115*	*50-140*			

Method Quality Control: Duplicate

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
Hydrocarbons									
F1 PHCs (C6-C10)	ND	25	ug/L	ND				30	
Metals									
Mercury	5.00	0.1	ug/L	5.38			7.2	20	
Antimony	0.52	0.5	ug/L	ND			0.0	20	
Arsenic	ND	1	ug/L	ND			0.0	20	
Barium	23.1	1	ug/L	22.9			0.9	20	
Beryllium	ND	0.5	ug/L	ND			0.0	20	
Boron	24	10	ug/L	23			3.9	20	
Cadmium	ND	0.1	ug/L	ND			0.0	20	
Chromium	ND	1	ug/L	ND			0.0	20	
Cobalt	ND	0.5	ug/L	ND			0.0	20	
Copper	1.42	0.5	ug/L	1.45			2.5	20	
Lead	ND	0.1	ug/L	ND			0.0	20	
Molybdenum	1.70	0.5	ug/L	1.64			3.6	20	
Nickel	ND	1	ug/L	ND			0.0	20	
Selenium	ND	1	ug/L	ND			0.0	20	
Silver	ND	0.1	ug/L	ND			0.0	20	
Sodium	15400	200	ug/L	16900			9.6	20	
Thallium	ND	0.1	ug/L	ND			0.0	20	
Uranium	ND	0.1	ug/L	ND			0.0	20	
Vanadium	ND	0.5	ug/L	ND			0.0	20	
Zinc	6	5	ug/L	7			12.4	20	

Method Quality Control: Spike

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
Hydrocarbons									
F1 PHCs (C6-C10)	1620	25	ug/L		81.2	68-117			
F2 PHCs (C10-C16)	1500	100	ug/L		94.0	60-140			
F3 PHCs (C16-C34)	3930	100	ug/L		100	60-140			
F4 PHCs (C34-C50)	2280	100	ug/L		91.9	60-140			
Metals									
Mercury	7.75	0.1	ug/L	5.38	79.0	70-130			
Antimony	49.6		ug/L	ND	98.8	80-120			
Arsenic	52.8		ug/L	ND	105	80-120			
Barium	72.8		ug/L	22.9	99.9	80-120			
Beryllium	56.4		ug/L	ND	113	80-120			
Boron	74		ug/L	23	102	80-120			
Cadmium	48.1		ug/L	ND	96.1	80-120			
Chromium	54.7		ug/L	ND	109	80-120			
Cobalt	46.4		ug/L	ND	92.8	80-120			
Copper	51.7		ug/L	1.45	100	80-120			
Lead	45.5		ug/L	ND	90.9	80-120			
Molybdenum	50.7		ug/L	1.64	98.2	80-120			
Nickel	52.8		ug/L	ND	104	80-120			
Selenium	47.1		ug/L	ND	93.8	80-120			
Silver	47.9		ug/L	ND	95.7	80-120			
Sodium	23800		ug/L	16900	68.3	80-120			QM-07
Thallium	44.5		ug/L	ND	89.1	80-120			
Uranium	46.3		ug/L	ND	92.5	80-120			
Vanadium	55.2		ug/L	ND	110	80-120			
Zinc	55		ug/L	7	96.4	80-120			
Semi-Volatiles									
Acenaphthene	4.40	0.05	ug/L		88.0	50-140			
Acenaphthylene	3.90	0.05	ug/L		78.0	50-140			
Anthracene	3.86	0.01	ug/L		77.3	50-140			
Benzo [a] anthracene	3.87	0.01	ug/L		77.5	50-140			
Benzo [a] pyrene	3.19	0.01	ug/L		63.8	50-140			
Benzo [b] fluoranthene	5.30	0.05	ug/L		106	50-140			
Benzo [g,h,i] perylene	3.21	0.05	ug/L		64.1	50-140			
Benzo [k] fluoranthene	4.44	0.05	ug/L		88.7	50-140			
Chrysene	4.43	0.05	ug/L		88.5	50-140			
Dibenzo [a,h] anthracene	3.33	0.05	ug/L		66.5	50-140			
Fluoranthene	4.00	0.01	ug/L		80.0	50-140			
Fluorene	3.81	0.05	ug/L		76.2	50-140			
Indeno [1,2,3-cd] pyrene	3.04	0.05	ug/L		60.9	50-140			
1-Methylnaphthalene	3.68	0.05	ug/L		73.7	50-140			
2-Methylnaphthalene	4.17	0.05	ug/L		83.5	50-140			
Naphthalene	4.27	0.05	ug/L		85.4	50-140			
Phenanthrene	3.86	0.05	ug/L		77.2	50-140			
Pyrene	3.94	0.01	ug/L		78.8	50-140			
Surrogate: 2-Fluorobiphenyl	*15.5*		*ug/L*		*77.5*	*50-140*			

Qualifier Notes:

Login Qualifiers :

Container(s) - Bottle and COC sample ID don't match -
Applies to samples: MW35

QC Qualifiers :

QM-07 : The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on other acceptable QC.

QS-02 : Spike level outside of control limits. Analysis batch accepted based on other QC included in the batch.

Sample Data Revisions

None

Work Order Revisions / Comments:

None

Other Report Notes:

n/a: not applicable
ND: Not Detected
MDL: Method Detection Limit
Source Result: Data used as source for matrix and duplicate samples
%REC: Percent recovery.
RPD: Relative percent difference.

CCME PHC additional information:

- The method for the analysis of PHCs complies with the Reference Method for the CWS PHC and is validated for use in the laboratory. All prescribed quality criteria identified in the method has been met.
- F1 range corrected for BTEX.
- F2 to F3 ranges corrected for appropriate PAHs where available.
- The gravimetric heavy hydrocarbons (F4G) are not to be added to C6 to C50 hydrocarbons.
- In the case where F4 and F4G are both reported, the greater of the two results is to be used for comparison to CWS PHC criteria.