



SUNCOR ENERGY PRODUCTS PARTNERSHIP

**PHASE TWO ENVIRONMENTAL
SITE ASSESSMENT**

**121 HUME STREET,
COLLINGWOOD, ONTARIO**

FINAL REPORT

October 11, 2016

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PROJECT # CB644.02

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1.0 EXECUTIVE SUMMARY

Terrapex Environmental Ltd. (Terrapex) was retained by Suncor Energy Products Partnership (Suncor), to conduct a Phase Two Environmental Site Assessment (ESA) of the property located at 121 Hume Street in Collingwood, Ontario (referenced as the “Phase Two property” or the “site”). It is understood that the study documented herein is being undertaken for the purposes of filing a Record of Site Condition (RSC). Based on a Phase One ESA study of the Site, the Phase Two ESA was undertaken to assess Contaminants of Concern (COC) at four Areas of Potential Environmental Concern (APECs) identified in the Phase One ESA (issued September 26, 2016).

The site currently consists of approximately 2,464.8 m² of land with no buildings currently on the site. The site was operated as a retail fuel outlet and service garage from 1949 to 2007, at which time it was decommissioned. The site has been vacant since 2007.

The generic Site Condition Standards listed in Table 3 of the April 15, 2011 *Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act* (MOE, 2011) that are applicable to Residential/Parkland/Institutional (R/P/I) land use, coarse soils, in a non-potable groundwater condition (MOE Table 3 SCS) were selected for evaluating laboratory analytical results

The Phase Two ESA comprises a combination of past and more current investigations including, drilling of boreholes and installation of monitoring wells in 2007, 2012, 2015, and 2016, groundwater sampling events in 2015 and 2016, and a test-pitting program in 2012. During these investigations soil and groundwater sampling and analysis was conducted to assess COCs at the site including benzene, toluene, ethylbenzene, and xylenes (BTEX), petroleum hydrocarbons (PHC) F1 to F4 fractions parameters, volatile organic compounds (VOCs), polycyclic aromatic hydrocarbons (PAHs), and metals and Inorganic parameters.

The Phase Two ESA identified concentrations of xylenes, and petroleum hydrocarbon parameters in the soil and groundwater, resulting from the on-site activities, at concentrations in excess of MOE Table 3 Site Condition Standards. These impacts were situated in the vicinity of the former fuel storage and distribution facilities and service garage area and were characterized by a layer of impacted media situated along the surface of the bedrock. Concentrations of all other COCs in soil and groundwater were less than the applicable Table 3 SCS

Sediment is not present at the site, and therefore contaminants of concern are not present within sediment.

These impacts were subsequently removed during remedial excavation activities completed at the site. The report of these activities is appended to this Phase Two ESA report. Following the remediation activities, no petroleum hydrocarbons, or any other COCs, are known to be in the soils or groundwater at the site.

2.0 INTRODUCTION

Terrapex Environmental Ltd. (Terrapex) was retained by Suncor Energy Products Partnership (Suncor), to conduct a Phase Two Environmental Site Assessment (ESA) of the property located at 121 Hume Street in Collingwood, Ontario (referenced as the “Phase Two property” or the “site”). It is understood that the study documented herein is being undertaken for the purposes of filing a Record of Site Condition (RSC).

The objective of the investigation was to assess Areas of Potential Environmental Concern (APECs) identified during a previous Phase One ESA work program at the site in order to identify the location and concentration of contaminants in the land or water on, in, or under the Phase Two property.

The findings of the Phase One ESA are documented in Terrapex's report entitled *Phase One Environmental Site Assessment, 121 Hume Street, Collingwood, Ontario, Final Report*, dated September 26, 2016.

2.1 SITE DESCRIPTION

The site area is approximately 2,464.8 m². It is located on the northwest corner of Market Street and Hume Street in Collingwood, Ontario. There are commercial buildings to the south and west, a retail fuel outlet to the east, and residential subdivisions to the north.

The site is bordered with concrete barrier blocks along Market Street and Hume Street to restrict vehicular access and was a gravel-topped vacant lot at the time of inspection. The site was formerly a retail fuel outlet and a car wash since approximately 1949.

A site location plan is provided as Figure 1. Figure 2 shows the layout of the property, Figures 17 and 18 show the Phase One ESA Conceptual Site Model (CSM), and identified PCAs and APECs (see Section 4.3).

A registered plan of survey for the Phase Two property is attached in Appendix I.

2.2 PROPERTY OWNERSHIP

The registered owner of the site is Suncor Energy Inc. (3275 Rebecca Street, Oakville, Ontario, L6L 6N5). Written authorization to proceed with the study was provided by Mr. Ken Tedder, Senior Environmental Advisor at Suncor Energy Products Partnership., whose office is located at 3275 Rebecca Street, Oakville, Ontario, L6L 6N5.

2.3 CURRENT AND PROPOSED FUTURE USES

The site is a corner lot and consists of approximately 2,464.8 m² of land with no buildings currently on the site. There are commercial buildings to the south and west, a retail fuel outlet to the east and residential subdivisions to the north. The property has historically been used as a retail fuel outlet and service centre, which was decommissioned in 2007 under the supervision of Terrapex. Therefore the current land use as per O. Reg. 153/04 is considered to be industrial/commercial. The proposed future use of the site is expected to be residential and the conclusion of this report are based on this use.

2.4 APPLICABLE SITE CONDITION STANDARDS

Generic Ministry of the Environment Site (MOE) Site Condition Standards (SCS) were selected for evaluating laboratory analytical results from the April 15, 2011 *Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act* (MOE, 2011) using the criteria specified in the *Ontario Records of Site Condition – Part XV.1 of the Act* regulation (O. Reg. 153/04).

The site specific details which influenced the soil and groundwater standards selection are summarized below:

- more than 2 m of overburden was observed during the work program;
- the pH determined for the site ranged from 7.93 to 8.09 (August 23, 2016), which is between the prescribed values of 5 and 9;
- the site does not include land within 30 m of an area of natural significance and is not otherwise considered potentially sensitive;
- stratified site conditions will not be used when evaluating laboratory analytical results;
- future use of the site is expected to be residential;
- the site and surrounding properties within 250 m of the site are serviced with a municipal drinking supply derived from a non-groundwater well sources; and,
- grain size analysis was not conducted at the site as part of this work program; Based on previous environmental site assessments by Terrapex, the soil at the site was determined to be coarse textured based on field observations.

Based on the above, full depth generic MOE Site Condition Standards corresponding to Residential/Parkland/Institutional (R/P/I) land use, coarse-textured soil, in a non-potable groundwater condition that are listed in Table 3 of the April 15, 2011 *Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act* document have been selected for soil and groundwater laboratory analytical results.

3.0 BACKGROUND INFORMATION

3.1 PHYSICAL SETTING

3.1.1 WATER BODIES & AREAS OF NATURAL SIGNIFICANCE

The closest water bodies are Georgian Bay and the Pretty River, which are approximately 1 km north and east of the site, respectively.

The site is not within, or immediately adjacent to, any Areas of Natural and Scientific Interest (ANSIs), provincial parks, national parks, conservation reserves, Aboriginal reservations, wooded areas, or wetlands. The MNR has not responded to Terrapex's request, but any pertinent information provided by them will be forwarded upon its receipt.

3.1.2 TOPOGRAPHY & SURFACE WATER DRAINAGE

Review of a Natural Resources Canada topographic map (published in 2013) and a 1:22,000 OBM (published in 2010) shows that the site is at an elevation of approximately 184 m above sea level. The OBM and topographic map both show the site with mixed residential and commercial properties around the site. There is a gradual increase in elevation going south and west of site. The general topography of the area slopes down to the north, towards Georgian Bay.

There are no surface water drainage features (e.g., swales, storm water ponds) at the site, and it is anticipated that storm waters infiltrate into the ground or flow off-site to storm drains along the municipal road allowance.

3.2 PAST INVESTIGATIONS

During decommissioning of the retail fuel outlet and service garage facilities in 2007, Terrapex identified petroleum hydrocarbon impacts in soils associated with these facilities. On August 7 and 8, 2007, Terrapex conducted a Phase II ESA to further investigate the soil and groundwater conditions at the site. Seven exterior boreholes (100 series) were drilled using a truck mount CME 75, and one interior borehole using a pionjar sampler were advanced to the depths ranging from 2.9 m to 6.5 m. Monitoring wells were installed in all exterior boreholes. During the investigation, evidence of petroleum hydrocarbons was identified and observed to extend from 2.0 m to 3.0 m in seven of the eight boreholes, including the single interior borehole (BH108). The stratigraphy observed was fine to medium sand, with traces of gravel. Competent bedrock was encountered at a depth of 3.0 m. Worst-case samples were collected from each borehole and submitted to Maxxam Analytics for the analysis of BTEX, and PHC. Soil samples analyzed did not exceed the applicable standards with the exception of MW101-3B, and BH108-4; which had concentrations of PHC F1 and F2 fractions exceeding the applicable table 3 SCS. Both

of these sampling locations were within the vicinity of the fuel storage and distribution facilities and service garage.

On August 15, 2007, all 100 series monitoring wells were monitored and groundwater samples collected for BTEX and PHC analysis. Headspace vapours in monitoring wells ranged from 15 ppm in MW102 to 5% LEL in MW106. The depth to groundwater in monitoring wells ranged from 1.94 m below top of pipe (btop) in MW105 to 2.41 m btop in MW106. All samples collected and submitted for analysis, had concentrations of all analytes less than the Table 3 SCS with the exception of PHC F2 fraction in the sample from monitoring well MW107.

A Phase II ESA was conducted at the site by Terrapex on behalf of Suncor in 2012. On August 22 to 23, 2012, 10 boreholes (200 series) were advanced to depths of approximately 2.4 m to 4.6 m bg. Nine of the 10 boreholes were advanced using a truck mounted CME-75 with direct push hollow augers, and one borehole was advanced into the bedrock using a down-the-hole hammer (MW201). Monitoring wells constructed of 50-mm diameter PVC pipe were installed in seven of the boreholes, in order to facilitate soil and groundwater sampling and analysis of BTEX, PHC F1 to F4 fractions parameters, VOC, PAH, and metals and inorganic parameters. Additional samples were also collected and submitted for pH, and grain size analysis.

On August 24, 2012, groundwater samples were collected from the existing 100 series, and newly installed 200 series monitoring wells for analysis of BTEX, PHC, VOC, PAH, and metals and inorganic parameters. The results of the Phase II ESA indicated that concentrations of PHCs F1 and/or F2 fractions in soil samples MW202-3, and BH208-3 exceeded Table 3 SCS. Furthermore, concentrations of one or more PHCs parameters exceeded the Table 3 SCS in groundwater samples collected from MW107, MW202, and MW207. A concentration of dichloroethane, 1,2 marginally exceeding the Table 3 SCS was also reported in the groundwater sample from monitoring well MW205, however, subsequent sampling and analysis proved this initial result to be anomalous.

An additional groundwater sampling event was conducted on December 12, 2012 to confirm the concentrations of BTEX, PHC F1-F4 fractions, and VOCs. The results indicated concentrations of PHCs similar to the August 2012 event in samples from monitoring wells MW107 and MW202. Concentrations of BTEX, PHC F1-F4 and VOCs were less than the Table 3 SCS in samples from the remaining sampled wells.

The 2012 Phase II ESA report is attached in Appendix VII.

4.0 SCOPE OF INVESTIGATION

4.1 OVERVIEW OF SITE INVESTIGATION

The scope of Terrapex's current Phase Two ESA comprised the following:

Test Pitting Program - December 2012

- preparing a test pit program and sampling and analysis plan to identify and delineate PHC impacts (and other COCs) at the site;
- supervising the completion of 44 test pits (TP201 to TP244) to depths of between 2.6 and 3.2 m below grade (bg);
- collecting soil samples during excavation of the test pits, and logging visual and tactile soil characteristics, and evidence of petroleum hydrocarbon or other chemical impacts, if any;
- measuring soil vapour (SV) concentrations in soil samples; and,
- analysis of 89 soil samples (including five QA/QC samples) for BTEX and PHC F1 to F4 fractions and 17 soils samples (Including 1 QA/QC sample) for VOC.

Groundwater Sampling Program – November 2015

- monitoring head space vapours and depth to water in all existing 100 & 200 series wells previously installed by Terrapex in 2007 and 2012;
- groundwater sampling of all wells using low-flow sampling techniques; and,
- analysis of 8 water samples (Including 1 QA/QC sample) for BTEX and PHC F1 to F4 and VOC.

Monitoring Well Installation (300 series) - December 2015

- preparing a drilling and monitoring well installation program and sampling and analysis plan to vertically delineate PHC impacts in groundwater at the site;
- supervising the completion of three monitoring wells (MW301 to MW303) to depths of between 7.0 m below grade (bg);
- collecting soil samples during drilling, and logging visual and tactile soil characteristics, and evidence of petroleum hydrocarbon or other chemical impacts, if any;
- measuring soil vapour (SV) concentrations in soil samples; and,
- analysis of 4 soil samples (including 1 QA/QC samples) for BTEX and PHC F1 to F4 fractions and VOC.
- groundwater sampling of all newly installed wells using low-flow sampling techniques; and
- analysis of 4 water samples (including 1 QA/QC samples) for BTEX and PHC F1 to F4 fractions and VOC.

Remedial Excavation – January to March 2016

The remedial excavation program completed at the site to address petroleum hydrocarbon impacts in soil and groundwater at the site is documented under separate cover and is attached as Appendix VI to this report. However, some data from the remedial excavation program have been used to augment the Phase Two ESA.

Post-Remediation Monitoring Well Installation (400 series) – May 2016

While the post-drilling program was primarily focused on confirming groundwater quality following remedial activities, selected groundwater sampling was also conducted at this time to assess specific COCs associated with APECs not previously assessed during prior investigations.

- preparing a drilling and monitoring well installation program and sampling and analysis plan to provide confirmation of post-remediation conditions and assess groundwater quality in specific areas of the site not already investigated;
- supervising the completion of four monitoring wells (MW401 to MW404) to depths of between 2.3 to 3.7 m below grade (bg);
- collecting soil samples during drilling, and logging visual and tactile soil characteristics, and evidence of petroleum hydrocarbon or other chemical impacts, if any;
- measuring soil vapour (SV) concentrations in soil samples; and,
- analysis of 1 soil sample for VOC, PAH, and metals and inorganics.
- groundwater sampling of all newly installed wells using low-flow sampling techniques; and
- analysis of 3 water samples (including 1 QA/QC samples) for PAH and 5 for metals and inorganics. Please note that additional water samples were collected from these wells for post-remediation confirmation of water quality, but these data are presented in the Remediation Report in Appendix VI.

The soil and groundwater sampling locations are shown on Figures 2 through 10.

The sampling procedures are documented in detail in Section 5.0.

4.2 MEDIA INVESTIGATED

Based on the findings of the Phase Two ESA, and Phase One ESA work program by Terrapex, the Phase Two ESA work program documented herein includes investigation of the environmental quality of soil and groundwater at the site.

The environmental quality of sediment was not investigated as sediment is not present at the site.

Soil and groundwater were investigated by soil and groundwater sampling as described above, and in Section 4.1.

4.3 PHASE ONE CONCEPTUAL SITE MODEL

The identified PCAs and APECs associated with the CSM developed during the 2016 Terrapex Phase One ESA are illustrated on Figures 17 and 18. A summary of the CSM is provided below.

Site Features: The site is located on the northwest corner of Hume Street and Market Street in Collingwood, Ontario. There are mixture of commercial office/stores and residential buildings to the west and east, and more residential buildings to the north and south of the site. The site comprises approximately 2,464.8 m² of land. The property was developed in 1949 and used as a bulk retail fuel outlet from 1955 until 2008. There are currently no on-site buildings.

Geology/Hydrogeology: According to well and borehole records in the EcoLog ERIS report, subsurface materials sand, silt and gravel until bedrock. Limestone bedrock was encountered around 3.0 mbg. The static water level encountered in one of the wells was listed at 2.0 m bg.

The general topography of the area slopes to the north, towards Georgian Bay. Based on topography, the direction of regional groundwater flow is assumed to be generally northerly. Surface runoff at the site most likely infiltrates into the ground as no catch basins were observed on the site. However, catch basins were observed along Hume Street south of the site.

Potentially Contaminating Activities (PCAs) / Areas of Potential Environmental Concern (APECs): Eighteen PCAs have been identified relating to activities within the phase one study area that may be contributing to an APEC. Thirteen (13) of the off-site PCAs do not result in APECs as they were determined to be unlikely to impact the site. Four APECs were identified, of which two were associated with the former on-site operations:

APEC 1 – historical use of the property as an automotive service centre

APEC 2 – historical use of the property for storage of gasoline and/or associate products

APEC 3 – historical use of offsite property as an automotive service center and for storage of gasoline and/or associate products

APEC 4 – historical use of offsite property for storage paint and/or associate products

Contaminants of Potential Concern: The contaminants of potential concern (COPCs) associated with the on-site and off-site PCAs comprise BTEX, PHCs, metals and inorganics parameters, PAHs, VOCs and PCBs. PCBs typically have low mobility in soil and groundwater and were therefore not considered as COPC for off-site PCAs.

Migration Pathways: In general, potential preferential migration pathways for sub-surface contaminants at a site comprise buried utilities, naturally occurring sand seams, or other subsurface areas of increased permeability. Therefore, the granular fill within the former UST nest (as identified in the previous investigations), as well as, historical site infrastructure could act as potential migration pathways.

Uncertainty: The main uncertainty in the CSM is the lack of information regarding the previous storage and operation records of the site and neighbouring commercial / industrial properties. However, this uncertainty is offset by the considerable historical investigation of the site.

4.4 DEVIATIONS FROM THE SAMPLING AND ANALYSIS PLAN

There were no deviations from the sampling and analysis plan.

4.5 IMPEDIMENTS

Access to and throughout site was not impeded at any time during the Phase Two ESA work program.

5.0 INVESTIGATION METHOD

5.1 GENERAL

Prior to test pitting and borehole/monitoring wells installation at the site, local utility companies were contacted by Clarkway Construction Ltd. (Clarkway) or Terrapex, in order to obtain stake-outs and clearance with respect to buried services. According to the utility locates there were no on-site utilities or subsurface structures remaining on the site with the exception of a buried Bell telephone line running east to west along the north of the site.

A site-specific health and safety plan (HASP), Job Safety Analysis (JSA), and Daily Safe Work Permit (DSWP) were also prepared by Terrapex and/or Clarkway prior to commencing all field work. All team members for work supervised by Terrapex, including sub-contractors, read and signed the HASP, JSA, and DSWP before completing intrusive work at the site.

Low-flow purging and sampling methods were used to ensure the collection of representative groundwater samples. All methods used during the investigation were completed as per Terrapex's associated standard operating procedure (SOP). Copies of the relevant Terrapex SOPs are included in Appendix III.

5.2 SOIL

5.2.1 SOIL SAMPLING

Soil samples from the test pit locations were generally collected at regular depth intervals (0.5 - 0.6 m) using the excavator bucket and sampling at the base of the teeth, from the undisturbed material removed from the base of the test pit. During test pitting, excess soil was removed from the interior and exterior of the bucket prior to collecting a new sample. Samples were only collected from undisturbed material present within the bucket to mitigate cross-contamination between samples. Fresh nitrile gloves were donned for the handling of each sample. Soil samples were handled and logged as described above.

Boreholes/monitoring wells were drilled by Pontil drilling using a track-mounted CME 75 auger rig and standard hollow-stem augers. Samples were generally collected using a 0.6 m split spoon sampler at 0.75 m intervals to a maximum depth of investigation.

Detailed drilling procedures and measures to minimize potential cross-contamination or other potential bias are described in Terrapex's SOPs (Appendix III) and in Section 5.9. There were no material deviations from the Standard Operating Procedures regarding borehole drilling during this investigation.

Each recovered sample was divided into two portions. One portion was placed in a clear sampling bag for field screening/logging. The second portion was placed into laboratory

supplied containers for analysis. Samples considered to be “worst-case” samples based on field screening were submitted for analysis and extracted at the laboratory within the required 7 days of sampling. Soil descriptions were recorded based on the Unified Soil Classification System (USCS).

Samples for analysis were placed in a cooler with ice packs and delivered with signed chain of custody to the project laboratory for analysis.

5.2.2 FIELD SCREENING MEASUREMENTS

Soil vapour concentrations were measured in each soil sample using an RKI EAGLE 2 hydrocarbon surveyor (RKI Eagle) calibrated to n-hexane and operated in methane elimination mode. The RKI Eagle can measure combustible organic compounds to a nominal detection level of 5 ppm, with an accuracy of $\pm 10\%$. The RKI Eagle was calibrated according to the manufacturer's instructions before the field investigation.

“Worst-case” soil samples were selected on the basis of vapour screening, visual and olfactory evidence of contamination, and sample location in relation to potential point sources of impact.

5.3 GROUNDWATER

5.3.1 MONITORING WELL DEVELOPMENT METHOD

The monitoring wells sampled as part of the current work program, were developed prior to the first sampling event to remove any stagnant water in the well annulus.

Prior to development, the wells were monitored for combustible vapours in the well headspace. Depth to water and depth to the bottom of the well were also measured prior to well development. The volume of water in the well and its annulus were calculated based on the depth measurements, diameter of the well standpipe and annulus, and assumed annulus porosity of 30%.

Development of the wells was conducted using a dedicated inertial sampler comprising low density polyethylene (LDPE) tubing and a LDPE foot valve. Each well was purged 10 times the well volume or until dry.

5.3.2 FIELD MEASUREMENTS OF WATER QUALITY PARAMETERS

Water quality parameters; temperature, pH, specific conductivity, dissolved oxygen (DO), and oxygen reducing potential (ORP), were measured during the low-flow sampling of wells. Sampling of groundwater was conducted using a peristaltic pump and a YSI 556 MPS water quality meter. Prior to sampling, Terrapex recorded the water quality parameters over 3 minute intervals. When the parameters had stabilized to within

requirements outlined in the Terrapex SOP, the well was deemed appropriate for sampling.

Further explanation is provided in the Terrapex SOP attached in Appendix III.

5.3.3 GROUNDWATER SAMPLING

Prior to sampling, monitoring activities included the measurement of combustible vapours within the headspace of the well immediately upon removal of the well standpipe cap, using an EAGLE RKI calibrated to n-hexane and operated in methane elimination mode. The depth to water in the well was measured using a Heron interface probe. The presence, and apparent thickness (if applicable), of any light non-aqueous phase liquids (LNAPL) in the well was also assessed using the interface probe.

To mitigate cross-contamination, the interface probe was washed with a liquid solution of Alconox detergent and rinsed with fresh water between each monitoring well. A fresh pair of latex or nitrile gloves was donned at each well location.

Sampling was conducted using a peristaltic pump as per Terrapex's SOP. Groundwater samples were collected directly into pre-cleaned, laboratory supplied bottles, placed in a cooler with ice, and shipped within one day of collection with chain of custody to the laboratory for analysis.

5.4 ANALYTICAL TESTING

Laboratory analytical services for this work program involving soil and groundwater media were provided by Maxxam Analytics Inc. (Maxxam) in Mississauga, Ontario. At the time of the assessment, Maxxam was accredited by Standards Council of Canada (SCC) to International Standard ISO/IEC 17025:2005.

A total of 113 soil samples, including blind field duplicates (selected on the basis of field screening), were submitted for laboratory analysis of BTEX and PHC F1 to F4 fractions. Twenty-seven soil samples, including blind field duplicates, were submitted for VOCs, five soil samples were submitted for PAHs, and four additional soil samples submitted for inorganics. All samples were collected to provide coverage of APECs at the site.

Multiple groundwater sampling events have occurred between 2007 and 2016. During the sampling events, a total of 44 groundwater samples including four field duplicates were submitted for BTEX, and PHC F1 to F4. Thirty-two groundwater samples, including three field duplicates were submitted for VOCs; nine groundwater samples, including one field duplicate, were submitted for metals and inorganics; and seven groundwater samples and one corresponding duplicate were submitted for PAHs.

The specific sample locations and parameters analyzed at each location are shown in Figures 3 through 10.

Additional soil sampling was completed during the subsequent remedial excavation (report attached in Appendix VI) and soil samples analyzed for PHCs, VOCs, PAHs, and inorganic parameters.

5.5 RESIDUE MANAGEMENT PROCEDURES

There was no residue generated during the test pitting process. However, during the subsequent remediation activities, conducted between January 11 and March 16, 2016, a total of approximately 3,288 metric tonnes of soil that was impacted with concentrations of petroleum hydrocarbons exceeding the applicable Table 3 SCS, was removed off-site for disposal at Green For Life Landfill in North York, Ontario. Purge water from the monitoring wells was removed off-site with the impacted soil.

5.6 ELEVATION SURVEYING

The 100-series and 200-series monitoring wells (including ground surface and top of pipe elevation) were surveyed during the 2012 Phase II ESA using a rod and level. The temporary site benchmark used for the survey was given an arbitrary elevation of 100.00 m.

5.7 QUALITY ASSURANCE AND QUALITY CONTROL MEASURES

During test pitting, soil was removed from the interior and exterior of the bucket prior to collecting a new sample. Samples were collected from undisturbed material present within the bucket to mitigate cross-contamination from excavating activities. Fresh nitrile gloves were donned for the handling of each sample.

During groundwater sampling, dedicated sampling tubing was used at each monitoring well location. To mitigate cross-contamination, the interface probe was washed with a liquid solution of Alconox detergent and rinsed with fresh municipal water between each monitoring well. A fresh pair of nitrile gloves was donned at each well location.

Pre-cleaned soil and groundwater sample containers for the site's specific parameters were provided by Maxxam laboratory and used at each borehole, test pit, and monitoring well location for the collection of soil and groundwater.

Samples for analyses were placed in a cooler with loose ice and shipped with signed chain of custody and custody seals to Maxxam for analysis.

Maxxam's Quality Assurance/Quality Control (QA/QC) program consisted of the analysis of laboratory replicates, process and method blanks, method duplicates, method spikes and surrogate percent recoveries, as appropriate for the particular analysis protocol.

Six “blind” field duplicates from soil samples taken during the drilling and test pitting activities, were submitted to the laboratory for chemical analysis for QA/QC purposes during the Phase Two ESA work program. MW211-2 (duplicate of MW206-3), MW301-40 (duplicate of MW301-4) TP001 (duplicate of TP208-5), TP002 (duplicate of TP213-5), TP003 (duplicate of TP215-4), and TP004 (duplicate of TP228-5) were submitted for analysis of BTEX and PHC F1 to F4 fractions. MW301-40 and TP002 were submitted for VOCs as well.

Over the course of the Phase II ESA work program, there was a total of four “blind” groundwater field duplicate submitted for BTEX and PHC F1 to F4, three blind field duplicate for the analysis of VOCs, one for the analysis of Inorganics, and one for the analysis of PAHs, All nine duplicate samples were submitted to the laboratory for chemical analysis for QA/QC purposes during the Phase Two ESA work program. MW5000 (duplicate of MW205), MW210 and MW208 (duplicate of MW207), MW1000 (duplicate of MW302 and MW404), MW5000 (duplicate of MW302), and MW2000 (duplicate of MW401)

The laboratory was not informed of the nature or number of field QA/QC samples.

6.0 REVIEW AND EVALUATION

6.1 GEOLOGY

Quaternary geology mapping confirms that the geologic setting of the site is classified as gravelly sand and gravel. Ontario Geological Survey indicates that the surficial geology of the site is sandy silt till, which consist of nearshore and beach deposits. The site is situated in the Shadow Lake Formation within the physiographic region known as the upper and middle ordovician.

Substrate encountered during the test pitting program was generally silty sand and fine sand with gravel. Bedrock was encountered in depth between 2.4 m bg and 3.5 mbg at the site during the Phase Two ESA. Overburden at the site is greater than 2 m bg. Stratigraphic cross-sections are shown in Figures 13A to 14D.

Saturated conditions (i.e., the apparent water table) were observed at depths of 2.4 m bg to 3.2 m bg during the test pitting activities. The depth to groundwater was measured in the monitoring wells at 1.55 to 6.71 m below grade.

Copies of the test pit logs are included in Appendix IV.

6.2 GROUNDWATER ELEVATIONS AND FLOW DIRECTION

Groundwater was encountered in the test pits.

The monitoring wells were screened at depths extending between:

- 4.5 m and 1.5 m bg at MW201
- 3.0 m and 1.5 m bg at MW202
- 2.6 m and 1.2 m bg at MW203
- 2.7 m and 1.2 m bg at MW204 and MW205
- 2.9 m and 1.2 m bg at MW206
- 3.3 m and 1.5 m bg at MW207
- 7.0 m and 6.1 m bg at MW301, MW302, and MW303

Depths to groundwater within the monitoring wells measured on November 5, 2015 ranged between 1.67 m bg at MW205 to 2.59 m bg at MW106. Monitoring data is shown in Table 1.

LNAPL was not observed during monitoring, purging, or sampling of the monitoring wells during this work program.

Groundwater elevations were calculated based on the water level data from August, 2012 and the survey data gathered previously by Terrapex on 2012.

Groundwater contours were electronically generated using Surfer™ Surface Mapping System with Point Kriging geostatistical gridding method to interpolate the data points. Interpreted groundwater contours based on these calculations are shown on Figure 12. The direction of groundwater flow was interpreted to be to the northwest.

As the water table is relatively shallow and situated atop the bedrock, the direction of groundwater flow is likely influenced by seasonal factors and/or the contours of the bedrock surface.

6.3 GROUNDWATER HYDRAULIC GRADIENTS AND CONDUCTIVITY

Based on the measured groundwater elevations on November 5, 2015, the average horizontal hydraulic gradient over the area assessed was calculated as approximately 0.00379 m/m. The minimum gradient was observed between MW207 and MW203 (0.00213 m/m). The maximum gradient was observed between MW101 and MW205 (0.00545 m/m). The average vertical gradient was calculated as approximately 0.0587 up.

Hydraulic conductivity is estimated to be between 1×10^{-1} m/s to 1×10^{-4} m/s, based on published values for silt to fine sand with some gravel.

6.4 COARSE SOIL TEXTURE

Field observations indicated that native soil consisted primarily of sand and silty sand with some gravel, therefore, comparison criteria for coarse textured soil was applied at the site (Section 17(4) of the *Standards*).

6.5 SOIL FIELD SCREENING

Visual (staining) evidence of impacted soil was observed in the soil samples collected from 20 of the test pits at the site. The SV concentration measured in recovered samples from sampling locations ranged from <10 ppm to a maximum of >100% LEL at test pit sample TP232-5. Evidence of impact and SV readings are detailed in the test pit and borehole/monitoring well logs in Appendix IV.

6.6 SOIL QUALITY

The laboratory results from investigations completed from 2007 to 2016 indicates that the concentrations of COCs at the site were less than the applicable MOE Table 3 standards at the locations tested, except at boreholes BH101, BH108, MW202, BH208, MW302, test pits TP208, TP215, TP216, TP217, TP220, TP221, TP222, TP223, TP224, TP226, TP228, TP229, TP230, TP231, TP232, and TP233, where the concentrations of one or more of petroleum hydrocarbon parameters was greater than the Table 3 standards. The analytical results for BTEX/ PHC, metals, VOC, and PAH analyses are shown in Tables 2 through 7.

The SV concentration measured for each soil sample, the soil conditions, sample depths and chemical parameters analysed at each borehole and test pit are presented in the test pit and borehole/monitoring well logs in Appendix IV. Copies of the Laboratory Certificates of Analyses are attached in Appendix V.

Impacted soils were situated in the vicinity of the former fuel storage and distribution facilities and service garage area and were characterized by a layer of impacted media situated along the surface of the bedrock. A summary of all the soil sampling results is shown in Figures 3 through 6 and on the cross-sections in Figures 13A to 14D. The estimated area of PHC impacted soil at the site is shown in Figure 11A and in the cross-sections. The report for the 2012 Phase ESA is attached in Appendix VII.

6.7 GROUNDWATER QUALITY

All groundwater samples collected at the site from 2007 to 2016 had concentrations of all analytes less than the applicable MOE Table 3 SCS, with the exception of samples from MW107, MW202, and MW207 which had PHC F1 and/or F2 fractions exceeding the Table 3 SCS on one or more occasion. The analytical results for BTEX/ PHC, PAH, VOC, and metals analyses from all the sampling events are shown in Tables 8 through 11.

The headspace vapour concentrations measured in the monitoring wells prior to sampling are shown in Table 1. Copies of the Laboratory Certificates of Analyses are attached in Appendix V.

A summary of the water sampling results is shown in Figure 7 through 10 and on the cross-sections in Figures 13A to 14D. The estimated area of PHC impacted groundwater at the site is shown in Figure 11A and in the cross-sections. The estimated area of PHC impacted groundwater at the site is shown in Figure 11B.

6.8 SEDIMENT QUALITY

The environmental quality of sediment was not investigated as sediment is not present at the site.

6.9 QUALITY ASSURANCE AND QUALITY CONTROL RESULTS

QA/QC Control Limits: A review of the quality assurance reports attached to the laboratory certificates of analyses indicate that the laboratory QA/QC samples were within the quality control limits.

Lab Duplicate Samples: Acceptable correlation was observed between the lab duplicate and its corresponding sampling pair for each of the tested parameters.

Matrix Spike Recoveries: No issues regarding matrix spike recoveries were outlined in any of the laboratory certificates of analysis with the exception of:

- the recovery of Zinc and Barium in the Matrix spike in Maxxam QA/QX batch for the maxxam job # B2D0786 was not calculated due to relative difference between the concentration in the parent sample and spike amount was not sufficient.
- The recovery of Sodium in Matrix spike in Maxxam QA/QX batch for the maxxam job # B2D0356 was not calculated due to relative difference between the concentration in the parent sample and spike amount was not sufficient.

This may represent a low bias in some results for flagged analytes.

Detection Limits: There were no instances in the laboratory reports wherein the detection limits were adjusted due to the high recovery of analytes in the samples, with the exception of:

- detection limits were raised when analysing soil sample MW204-1 for Nickel, and;
- detection limits were raised when analysing soil sample BH208-3 for 1,1,2,2-Tetrachloroethane, and;
- detection limits were raised when analysing soil sample TP216-5 for F1-BTEX; and,
- detection limits were raised when analysing soil sample TP217-6 for F1-BTEX; and,
- detection limits were raised when analysing soil sample TP220-5 for F1-BTEX; and,
- detection limits were raised when analysing soil sample TP222-5 for F1-BTEX; and,
- detection limits were raised when analysing soil sample TP226-5 for F1-BTEX; and,
- detection limits were raised when analysing soil sample TP004 for F1-BTEX; and,
- detection limits were raised when analysing soil sample TP229-5 for F1-BTEX; and,
- detection limits were raised when analysing soil sample TP231-5 for F1-BTEX; and,
- detection limits were raised when analysing soil sample TP232-5 for F1-BTEX; and,
- detection limits were raised when analysing soil sample TP232-6 for F1-BTEX
- detection limits were raised when analysing groundwater sample MW207 for Chloroform;
- detection limits were raised when analysing soil sample MW301-40 for Methylene chloride;
- detection limits were raised when analysing soil sample MW302-3 for ethylene dibromide.

All detection limits were below the applicable standards outlined in the amended O.Reg 153/04 Table 3 SCS.

Field Duplicate Samples: Field duplicate sample results are presented in the soil and groundwater analytical results tables. Acceptable correlation was observed between the duplicate sample and its corresponding sampling pair for each of the tested parameters.

6.10 PHASE TWO CONCEPTUAL SITE MODEL

A preliminary conceptual site model was developed as part of the Phase One ESA. Following the completion of the Phase Two ESA, the CSM has been updated to present the site characteristics and identify actual or potential sources of contamination, pathways, release mechanisms, receptors, and exposure routes existing at the time of completion of the Phase Two ESA.

Please note that, in addition to the Phase Two ESA, a remedial excavation was completed to address impacts identified during the Phase One and Two assessments. The Record of Site Conditions to be filed for the site will incorporate the results of the remedial program, and in some cases data from the remedial program has been used to augment the Phase Two ESA.

Site Overview: The site is located at the northwest corner of Hume Street and Market Street, in an area of mainly mixed commercial and residential development as shown on Figure 17. At the time of the Phase Two ESA inspection, the site was vacant. The site was stripped of surface structures resulting in a gravel-topped vacant lot. The retail fuel outlet and the former car wash building was decommissioned in November 2007. There are currently no on-site buildings.

Investigations at the site included:

Drilling Program – August 2007

- preparing a drilling program and sampling and analysis plan to identify and delineate PHC impacts (and other COCs) at the site;
- supervising the completion of 8 boreholes/with 7 monitoring wells test pits (100 series) to depths of between 2.9 and 6.5 m bg;
- collecting soil samples during excavation of the boreholes, and logging visual and tactile soil characteristics, and evidence of petroleum hydrocarbon or other chemical impacts, if any;
- measuring soil SV concentrations in soil samples; and,
- analysis of soil samples for BTEX and PHC F1 to F4 fractions and VOC.

Groundwater Sampling Program – August 2007

- monitoring head space vapours and depth to water in all existing 100 series wells installed by Terrapex in 2007;
- groundwater sampling of all wells using low-flow sampling techniques; and, analysis of water samples for BTEX and PHC F1 to F4 and VOC.

Drilling Program – August 2012

- preparing a drilling program and sampling and analysis plan to identify and delineate PHC impacts (and other COCs) at the site;
- supervising the completion of 10 boreholes/with 7 monitoring wells test pits (200 series) to depths of between 2.4 and 4.6 m bg;
- collecting soil samples during excavation of the boreholes, and logging visual and tactile soil characteristics, and evidence of petroleum hydrocarbon or other chemical impacts, if any;
- measuring SV concentrations in soil samples; and,
- analysis of soil samples for BTEX and PHC F1 to F4 fractions, VOC, PAH, and metals and inorganic parameters, grain size, and pH.

Groundwater Sampling Program – August 2012

- monitoring head space vapours and depth to water in all existing 100 and 200 series wells installed by Terrapex in 2007 and 2012;
- groundwater sampling of all wells using low-flow sampling techniques; and, analysis of water samples for BTEX, PHC, VOC, PAH, and metals and inorganic parameters.

Groundwater Sampling Program – December 2012

- monitoring head space vapours and depth to water in all existing 100 and 200 series wells installed by Terrapex in 2007 and 2012;
- groundwater sampling of all wells using low-flow sampling techniques; and, analysis of water samples for BTEX, PHC, and VOC.

Test Pitting Program - December 2012

- preparing a test pit program and sampling and analysis plan to identify and delineate PHC impacts (and other COCs) at the site;
- supervising the completion of 44 test pits (TP201 to TP244) to depths of between 2.6 and 3.2 m below grade (bg);
- collecting soil samples during excavation of the test pits, and logging visual and tactile soil characteristics, and evidence of petroleum hydrocarbon or other chemical impacts, if any;
- measuring soil vapour (SV) concentrations in soil samples; and,
- analysis of 89 soil samples (including five QA/QC samples) for BTEX and PHC F1 to F4 fractions and 17 soils samples (Including 1 QA/QC sample) for VOC.

Groundwater Sampling Program – November 2015

- monitoring head space vapours and depth to water in all existing 100 & 200 series wells previously installed by Terrapex in 2007 and 2012;
- groundwater sampling of all wells using low-flow sampling techniques; and,

- analysis of 8 water samples (Including 1 QA/QC sample) for BTEX and PHC F1 to F4 and VOC.

Monitoring Well Installation (300 series) - December 2015

- preparing a drilling and monitoring well installation program and sampling and analysis plan to vertically delineate PHC impacts in groundwater at the site;
- supervising the completion of three monitoring wells (MW301 to MW303) to depths of between 7.0 m below grade (bg);
- collecting soil samples during drilling, and logging visual and tactile soil characteristics, and evidence of petroleum hydrocarbon or other chemical impacts, if any;
- measuring soil vapour (SV) concentrations in soil samples; and,
- analysis of 4 soil samples (including 1 QA/QC samples) for BTEX and PHC F1 to F4 fractions and VOC.
- groundwater sampling of all newly installed wells using low-flow sampling techniques; and
- analysis of 4 water samples (including 1 QA/QC samples) for BTEX and PHC F1 to F4 fractions and VOC.

Remedial Excavation – January to March 2016

The remedial excavation program completed at the site to address petroleum hydrocarbon impacts in soil and groundwater at the site is documented under separate cover and is attached as Appendix VI to this report. However, some data from the remedial excavation program have been used to augment the Phase Two ESA.

Post-Remediation Monitoring Well Installation (400 series) – May 2016

While the post drilling program was primarily focused on confirming groundwater quality following remedial activities, selected groundwater sampling was also conducted at this time to assess specific COCs associated with APECs not previously assessed during prior investigations.

- preparing a drilling and monitoring well installation program and sampling and analysis plan to provide confirmation of post-remediation conditions and assess groundwater quality in specific areas of the site not already investigated;
- supervising the completion of four monitoring wells (MW401 to MW404) to depths of between 2.3 to 3.7 m below grade (bg);
- collecting soil samples during drilling, and logging visual and tactile soil characteristics, and evidence of petroleum hydrocarbon or other chemical impacts, if any;
- measuring soil vapour (SV) concentrations in soil samples; and,
- analysis of 1 soil sample for VOC, PAH, and metals and inorganics.
- groundwater sampling of all newly installed wells using low-flow sampling techniques; and
- analysis of 3 water samples (including 1 QA/QC samples) for PAH and 5 for metals and inorganics. Please note that additional water samples were collected from these wells

for post-remediation confirmation of water quality, but these data are presented in the Remediation Report in Appendix VI.

The Phase Two ESA identified concentrations of xylenes, and petroleum hydrocarbon parameters in the soil and groundwater, resulting from the on-site activities, at concentrations in excess of MOE Table 3 Site Condition Standards. These impacts were situated in the vicinity of the former fuel storage and distribution facilities and service garage area and were characterized by a layer of impacted media situated along the surface of the bedrock. Concentrations of all other COCs in soil and groundwater were less than the applicable Table 3 SCS

Assessment Criteria: The full depth generic MOE Site Condition Standards corresponding to Residential/Parkland/Institutional (R/P/I) land use, coarse, in a non-potable groundwater condition that are listed in Table 3 of the April 15, 2011 *Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act* document have been selected for soil and groundwater laboratory analytical results.

Section 1 PCAs and APECs

Potentially Contaminating Activities (PCAs)

During the Phase One ESA, 18 Potentially Contaminating Activities (PCAs) were identified within the Phase One Study Area. The PCAs are shown on Figure 17 and are summarized in the following Table.

POTENTIALLY CONTAMINATING ACTIVITIES IDENTIFIED WITHIN THE PHASE I STUDY AREA (TERRAPEX, 2016)

PCA	Address and Proximity To Site	Company and Description	Potential Environmental Concern	Data Source	Potentially Contaminating Activity (As Set Out In Column A Of Table 2 In Schedule D Of O. Reg. 153/04)	Uncertainty	Likelihood To Affect The Site
PCA 1	121 Hume Street (site)	- John's Car Wash (Sunoco) - Ultramar Canada Inc. - Suncor Energy Products Inc.	Historical use of the property as an automotive service centre.	ERIS report City Directory FIPs	52 – Storage, maintenance fueling and repair equipment, vehicles and material used to maintain transportation systems	None	Likely
PCA2		(retail fuel outlet and automotive garage)	Historical use of the property for storage of gasoline and/or associate products.	ERIS report City Directory FIPs	28 – Gasoline and Associated Products Storage in Fixed Tanks	None	Likely
PCA 3	143 Hume Street (48 m East)	- 2299546 Ontario Inc O/A Hasty Market (Fuel outlet) - Weir of Collingwood Motor Sales - Petro Canada - 2142578 Ontario Inc O/A Malina Arabzadah - 1101649 Ontario Inc. - The Oil Shop (Retail fuel outlet and convenience store)	Historical use of the property for storage of gasoline and/or associate products. Spills were noted at the property	ERIS report City Directory FIPs	28 – Gasoline and Associated Products Storage in Fixed Tanks	No details regarding the nature of operations and materials used/stored.	Possible, due to close proximity to the Phase I property

PCA	Address and Proximity To Site	Company and Description	Potential Environmental Concern	Data Source	Potentially Contaminating Activity (As Set Out In Column A Of Table 2 In Schedule D Of O. Reg. 153/04)	Uncertainty	Likelihood To Affect The Site
PCA 4	143 Hume Street (48 m East)	- 2299546 Ontario Inc O/A Hasty Market (Fuel outlet) - Weir of Collingwood Motor Sales - Petro Canada - 2142578 Ontario Inc O/A Malina Arabzadah - 1101649 Ontario Inc. - The Oil Shop (Retail fuel outlet and convenience store)	Historical use of the property as an automotive service centre.	ERIS report City Directory FIPs	52 – Storage, maintenance fueling and repair equipment, vehicles and material used to maintain transportation systems	No details regarding the nature of operations and materials used/stored.	Possible, due to close proximity to the Phase I property
PCA 5	247 Hurontario Street (139 m northwest)	- SMS Petroleum's Division of Sunoco, Nancy NG (Gasoline Service Station)	Historical use of the property for storage of gasoline and/or associate products.	ERIS report FIPs	28 – Gasoline and Associated Products Storage in Fixed Tanks	No details regarding the nature of operations and materials used/stored.	Unlikely due to distance from the site and down-gradient location. No Documented spills
PCA 6	231 Hurontario Street (265 m northwest)	- Lyons Dry Cleaner	Historical use of the property for dry cleaning operations	ERIS report	37 – Operation of Dry Cleaning Equipment	No details regarding the nature of operations and materials used/stored	Unlikely, no documented spills. Down-gradient location
PCA 7	236 Hurontario Street (251 m northwest)	- MAC's Convenience Stores Inc - The Becker Milk Co Ltd. - Automotive repair shop	Historical use of the property for storage of gasoline and/or associate products.	ERIS report FIPs	28 – Gasoline and Associated Products Storage in Fixed Tanks	No details regarding the nature of operations and materials used/stored	Unlikely due to distance from the site and down-gradient location, no documented spills
PCA 8			Historical use of the property as an automotive service centre.	FIPs	52 – Storage, maintenance fueling and repair equipment, vehicles and material used to maintain transportation systems	No details regarding the nature of operations and materials used/stored	Unlikely due to distance from the site and down-gradient location, no documented spills

PCA	Address and Proximity To Site	Company and Description	Potential Environmental Concern	Data Source	Potentially Contaminating Activity (As Set Out In Column A Of Table 2 In Schedule D Of O. Reg. 153/04)	Uncertainty	Likelihood To Affect The Site
PCA 9	190 St. Marie Street (218 m northwest)	- J. Wright Coal and Wood Yard	Historical use of the property for bulk coal storage	FIPs	9 – Coal Gasification	No details regarding the nature of operations and materials used/stored	Unlikely due to distance from the site and cross-gradient location
PCA 10			Historical use of the property for bulk wood storage	FIPs	59 – Wood Treating and Preservative Facility and Bulk Storage of Treated and Preserved Wood	No details regarding the nature of operations and materials used/stored	Unlikely due to distance from the site and cross-gradient location
PCA 11	279 St. Marie Street (5 m northwest)	- Company name not listed (Commercial Paint Shop)	Historical use of a property as a paint shop	FIPs	39 – Paints Manufacturing, Processing and Bulk Storage	No details regarding the nature of operations and materials used/stored.	Possible, due to close proximity to the Phase One property
PCA 12	55 Hume Street (currently joint with 182 St. Marie Street, 50 m west)	- Admiral Collingwood Public School - Simcoe County District School - Collingwood Senior Public School	It was identified historically as an institutional facility where coal were stored.	Eris report City Directory FIPs	9 – Coal Gasification	No details regarding the nature of operations and materials used/stored	Unlikely due to distance from the site and cross-gradient location
PCA 13	50 Hume Street (104 m southwest)	- Company name not listed (Automotive garage)	Historical use of the property as an automotive service centre.	FIPs	52 – Storage, maintenance fueling and repair equipment, vehicles and material used to maintain transportation systems	No details regarding the nature of operations and materials used/stored	Unlikely due to distance from the site and cross-gradient location
PCA 14			Historical use of the property for storage of gasoline and/or associate products	FIPs	28 – Gasoline and Associated Products Storage in Fixed Tanks	No details regarding the nature of operations and materials used/stored	Unlikely due to distance from the site and cross-gradient location
PCA 15	311 Hurontario Street (149 m southwest)	- Company name not listed (Gasoline Service Station)	Historical use of the property for storage of gasoline and/or associate products	FIPs	28 – Gasoline and Associated Products Storage in Fixed Tanks	No details regarding the nature of operations and materials used/stored	Unlikely due to distance from the site and cross-gradient location

PCA	Address and Proximity To Site	Company and Description	Potential Environmental Concern	Data Source	Potentially Contaminating Activity (As Set Out In Column A Of Table 2 In Schedule D Of O. Reg. 153/04)	Uncertainty	Likelihood To Affect The Site
PCA 16	280 Hurontario Street (216 m west)	- Company name not listed (Automotive garage/ dealership)	Historical use of the property for storage of gasoline and/or associate products	FIPs	28 – Gasoline and Associated Products Storage in Fixed Tanks	No details regarding the nature of operations and materials used/stored	Unlikely due to distance from the site and cross-gradient location
PCA 17			Historical use of the property as an automotive service centre.	FIPs	52 – Storage, maintenance fueling and repair equipment, vehicles and material used to maintain transportation systems	No details regarding the nature of operations and materials used/stored	Unlikely due to distance from the site and cross-gradient location
PCA 18	209 Hurontario Street (currently 207 Hurontario Street, 231 northwest)	- Rumble Motors Collingwood Ltd.	Historical use of the property as an automotive service centre.	FIPs	52 – Storage, maintenance fueling and repair equipment, vehicles and material used to maintain transportation systems	No details regarding the nature of operations and materials used/stored.	Unlikely due to distance from the site and down-gradient location

Areas of Potential Environmental Concern (APECs)

An area of potential environmental concern, as defined in O. Reg. 153/04, is the area on, in, or under a phase one property where one or more contaminants are potentially present, as determined through the phase one ESA, including through, (a) identification of past or present uses on, in or under the phase one property and (b) identification of potentially contaminating activity. APECs are summarized in the table below, and shown on Figure 18.

AREAS OF POTENTIAL ENVIRONMENTAL CONCERN

APEC	Location Of APEC On Phase One Property	Potentially Contaminating Activity (As Set Out In Column A Of Table 2 In Schedule D Of O. Reg. 153/04)	Location Of PCA (On-Site Or Off-Site)	Contaminants Of Potential Concern	Media Potentially Impacted (Groundwater, Soil, and/or Sediment)
APEC 1	Area surrounding the former automotive garage building	52 – Storage, maintenance fueling and repair equipment, vehicles and material used to maintain transportation systems	On-site (PCA 1)	- PHCs - VOCs - PAHs - Metals	- Soil - Groundwater
APEC 2	Areas surrounding the former tank nest and pump island	28 – Gasoline and Associated Products Storage in Fixed Tanks	On-Site (PCA2)	- PHCs - VOCs	- Soil - Groundwater
APEC 3	Eastern portion of the site	28 – Gasoline and Associated Products Storage in Fixed Tanks 52 – Storage, maintenance fueling and repair equipment, vehicles and material used to maintain transportation systems	Off-site (PCA 3 and 4)	- PHCs - VOCs - PAHs - Metals	- Groundwater - Soil
APEC 4	Northwestern portion of the site	39 – Paints Manufacturing, Processing and Bulk Storage	Off-site (PCA 11)	- Metals - VOCs	- Soil - Groundwater

VOCs: volatile organic compounds

PAHs: polycyclic aromatic hydrocarbons

PHCs: petroleum hydrocarbons (Fractions F1 to F4), including benzene, toluene, ethylbenzene, xylenes (BTEX)

Accordingly, two APECs were determined to exist for the two PCAs identified on the site. In addition, three of the PCAs identified on surrounding properties within the Phase One Study Area were considered to represent a potential concern for the environmental quality of soil and/or groundwater at the site. This resulted in the determination of two more APECs on the site. The APECs are shown on Figure 18.

Subsurface Structures and Utilities Affecting Contaminant Distribution and Transport

Since there were no underground utility installation plans of the former building available for review during the Phase One ESA, information pertaining to on-site utilities was determined through public and private utility locates performed as part of the Phase Two ESA test pitting and drilling program. According to the utility locates performed in December 2015, there are no on-site utilities or subsurface structures remaining on the site with the exception of a bell line running east to west located on the north side of the property. Offsite, immediately adjacent to the site, there are existing utilities running east to west along the south east side of the site.

There were no subsurface utilities identified which would have provided likely preferred migration routes for contaminants from off-site PCAs to impact the site. Any impacts to native or fill material at the site from off-site sources would have potentially resulted through diffusion through native soils or migration through groundwater.

As determined by the Phase One ESA, there were former USTs, pump islands, and infrastructure which would have provided likely preferred migration routes for contaminants from on-site PCAs to impact the site. It is possible that any impacts to native material at the site could have used these preferential routes for contaminant distribution and transport.

Section 2 Physical Setting of the Phase II ESA Property

Stratigraphy

Substrate encountered during the test pitting program was generally silty sand and fine sand with gravel. Bedrock was encountered at the site during the Phase Two ESA at depths between 2.4 m and 3.6 m bg. Overburden at the site is greater than 2 m bg. Stratigraphic cross-sections are shown on Figures 13A through 14D.

Saturated conditions (i.e., the apparent water table) were observed at depths of 2.4 m bg to 3.2 m bg during the test pitting activities.

Hydrogeology

Depths to groundwater within the monitoring wells measured during the project ranged between 1.55 to 6.71 m bg.

Groundwater elevations were calculated based on the water level data from the survey data gathered previously by Terrapex in August 2012. Interpreted groundwater contours based on these calculations are shown in Figure 12. The direction of groundwater flow was interpreted to be to northwest.

Based on the measured groundwater elevations on November 5, 2015 the average horizontal hydraulic gradient over the area assessed was calculated as approximately 0.00379 m/m. The minimum gradient was observed between MW207 and MW203 (0.00213 m/m). The maximum gradient was observed between MW101 and MW205 (0.00545 m/m). The average Vertical gradient was calculated as approximately 0.0587 up.

Hydraulic conductivity is estimated to be between 1×10^{-1} m/s to 1×10^{-4} m/s, based on published values for silt to fine sand with some gravel.

Depth to Bedrock

Bedrock was encountered during the current Phase Two ESA or during prior work by Terrapex at depths of between 2.4 m and 3.5 m bg.

Approximate Depth to Water Table

Depths to groundwater within the monitoring wells measured during the project ranged between 1.55 m bg to 6.71 m bg. On average, the water table was observed to be situated atop the bedrock. This was later confirmed during the subsequent remedial excavation.

Applicability of Section 41 or Section 43.1

O.Reg. 153/04 describes conditions, which when present, can constitute an “environmentally sensitive site”. They include the presence of areas of natural significance (such as wetlands, provincial parks, nature reserves and valuable animal habitats) within 30 m of the site, and sites where soil pH lies outside the range of 5 to 9.

The Phase Two site does not contain any areas of natural significance, nor are there any within 30 m of site. The pH of the soil is between 5 and 9, which is within the acceptable range. The site does not display any conditions of an environmentally sensitive site.

O.Reg. 153/04 also specifies SCS for properties that have more than one-third of the area with less than 2 m of soil. Overburden depths at the site were greater than 2 m across the majority of the site.

O.Reg. 153/04 also specifies SCS for properties where there is a water body within 30 m of the site. There is no water body within 30 m of the site.

Fill Areas

Subsurface investigations conducted by Terrapex revealed that no on-site fill was present, with the exception of pea stone gravel within the former tank nest, which is not considered a soil in accordance with O.Reg. 153/04, and therefore, is not of environmental concern.

Proposed Structures

The proposed use of the site is expected to comprise residential land use.

Section 3 Contamination

Areas of Contamination

The COCs identified for the site were petroleum hydrocarbons, VOCs, PAHs, and inorganic parameters. However, only petroleum hydrocarbons, specifically PHC F1 and F2 fractions and xylenes, impacts were identified in soil and groundwater at concentrations exceeding the applicable Table 3 SCS during the Phase Two ESA activities.

As shown in Figures 11A and 11B, the petroleum hydrocarbon impacted zone in soil and groundwater was found to be in the vicinity of the former tank nest and building.

Contaminants of Concern

The potential COCs associated with on-site and off-site PCAs included BTEX, PHC, VOCs, PAHs, and inorganic parameters. However, during the Phase Two ESA activities only xylenes and PHC F1 and F2 fractions were actually found to be present at levels exceeding the applicable Table 3 SCS.

Media of Concern

Petroleum hydrocarbon impacts in soil and groundwater were present at the site (shown on Figures 11A and 11B).

Details of Contaminated Areas

The PHC contaminated area is located in the lower west portion of the property and is consistent with the location of the former tank nest and building. A “worst-case” estimate was used to calculate a maximum amount of impacted soil present at the site. The maximum estimated PHC impacted area in soil was calculated to be approximately 1225 m². Evidence of groundwater impact was found on the west portion of site during the sampling of onsite monitoring wells. The maximum estimated PHC impacted area in groundwater was calculated to be approximately 860 m².

The contaminated areas are assumed to extend to the next sampling location which passed the Table 3 SCS. The depth of the contaminated area ranged from approximately 3.5 m bg at the west portion of the site, and to 3.0 m bg at the south and central portions of the site. Note that bedrock was encountered around depths of 2.4 to 3.5 m bg. Generally, near-surface soils were not impacted and the contaminated zone was limited to a layer of soil immediately overlying the bedrock,

Vertical representations of the contaminated areas are also shown in the cross-sections in Figures 13A through 14D. It should be noted that subsequent remedial excavations were completed which further delineated the soil impacts. The actual extent of soil impact removed during the subsequent remedial effort is shown on the cross-section and detailed in the remediation report attached in Appendix VI.

Distribution of Contaminants

The concentrations of contaminants at sampling points within the contaminated areas are shown in Figure 3 soil and Figure 7 for groundwater. The estimated volume of media impacted is discussed in the previous section. Please note that, the estimated area of impacts was considered to be “worst-case”, where impacts were assumed extended to the next sampling location where concentrations of COCs were less than the SCS. The actual volume of impacted material may be more or less than estimated.

Origin of Contaminants

Based on the investigative programs conducted at the site (and further during the subsequent remedial activities), it is apparent that the petroleum hydrocarbon impacts characterized at the site originated solely from on-site PCAs, namely, the storage and distribution of petroleum fuels and the operation of a service garage. It is expected that these impacts were a result of point source fuel releases due to equipment malfunction or spills over several years of site operation as a fuel outlet and a car wash, historic leaks in equipment, and/or housekeeping practices within the former service facility.

The data collected during the Phase Two ESA did not suggest any actual contaminants resulting from any of the off-site PCAs identified in the Phase One ESA.

Migration of Contaminants

Based on the aerial and vertical distribution of contaminants shown during the Phase Two ESA (and subsequently the remedial activities) it is apparent that primary migration/dispersion mechanism for contaminants at the site was diffusion through soils. It is possible that near surface historic infrastructure may have influenced migration of impacts in these zones.

Climatic or Meteorological Impacts on Contaminant Migration

While slight fluctuations in water table elevation have undoubtedly occurred over time due to climatic or meteorological changes, it is expected that these fluctuations would have been regional in nature. Given that the stratigraphy at the site is primarily fine sand, it is not expected that climatic changes would have significantly impacted migration of contaminants at the site.

Soil Vapour Intrusion of Contaminants Into Buildings

All buildings and subsurface structures were removed from the site in 2007. Therefore, there is no concern for soil vapour intrusion into buildings. Furthermore, as all impacted media were subsequently removed off-site, there is no potential concern for vapour intrusion into building which may be constructed in the future.

Section 4 Cross Sections

Lateral and Vertical Distribution of Contaminants

As shown on Figures 11A and 11B and in the cross-sections in figure 13A through 14D a petroleum hydrocarbon impacted zone in soil and groundwater was found to be present at the site.

The contaminated area is assumed to extend to the next test pit or borehole sample which passed the Table 3 SCS. The depth of the contaminated area ranged from approximately 3.5 m bg at the west portion of the site, and to 3.0 m bg at the south and central portions of the site. Note that bedrock was encountered around depths of 2.4 to 3.5 m bg. Generally, near-surface soils were not impacted and the contaminated zone was limited to a layer of soil immediately overlying the bedrock,

Vertical representations of the contaminated areas are also shown in the cross-sections in Figures 13A through 14D. It should be noted that a subsequent remedial excavation was completed which further delineated the soil impacts. It should be noted that subsequent remedial excavations were completed which further delineated the soil impacts. The actual extent of soil impact removed during the subsequent remedial effort is shown on the cross-section and detailed in the remediation report attached in Appendix VI.

The maximum estimated PHC impacted area in soil was calculated to be approximately 1225 m².

Evidence of groundwater impact was found on the west portion of site during the sampling of onsite monitoring wells. The maximum estimated PHC impacted area in groundwater was calculated to be approximately 860 m².

Depth to Water in Contaminated Areas

The depth to groundwater was measured to range between 1.55 m and 6.71 m bg at the site. Evidence of groundwater impact was found during the sampling of onsite monitoring wells MW107, MW207, and MW202; which are all situated in the vicinity of the former tank nest and building. Groundwater impacts were vertically delineated and limited to groundwater atop the bedrock within the overburden. Groundwater quality within the underlying bedrock met the Table 3 SCS.

Stratigraphy in Contaminated Areas

The stratigraphy encountered in contaminated areas during the Phase Two ESA comprised sand and silty sand with gravel to depths of at least 3.6 m below grade.

Subsurface Structures and Utilities in Contaminated Areas

There are no subsurface structures or utilities located in contaminated areas.

Section 5 Risk Analysis

Release Mechanisms

Based on the investigative programs conducted at the site, it is apparent that the petroleum hydrocarbon impacts characterized at the site originated solely from the on-site PCA, namely, the storage and distribution of petroleum fuels. It is expected that the petroleum hydrocarbon impacts were a result of point source fuel releases due to equipment malfunction or spills over several years of site operation as a retail fuel outlet, historic leaks in equipment, and/or housekeeping practices within the former service facility.

The data collected during the Phase Two ESA did not suggest any actual contaminants resulting from any of the off-site PCAs identified in the Phase One ESA.

Contaminant Transport Pathways

Based on the aerial and vertical distribution of contaminants shown during the Phase Two ESA (and subsequently the remedial activities) it is apparent that primary migration/dispersion mechanism for contaminants at the site was diffusion through soils. It is possible that near surface historic infrastructure may have influenced migration of impacts in these zones.

With respect to receptor transport pathways, these are conceptually represented in Figures 15 and 16, and may potentially include:

- ingestion of contaminated soil
- skin contact with contaminated soil

- inhalation of contaminant vapours from contaminated soil

Human and Ecological Receptors

As shown conceptually on Figure 16, human receptors could potentially include:

- future workers at the site (assuming landscape or maintenance worker);
- construction/excavation workers at the site (short term); and,
- recreational users of the site.

As shown in Figure 16, subsurface workers and outdoor workers at the site are considered potential receptors at the site, assuming the intended future residential land use.

As shown conceptually on Figure 15, ecological receptors could potentially include:

- plants and soil invertebrates; and,
- birds and mammals

As shown on Figure 15, soil invertebrates, and terrestrial plants are considered potential receptors at the site, as there are no water bodies on or adjacent to the site.

Receptor Exposure Points

Human receptor exposure points may potentially include:

- direct interaction with in-situ soils and wind-borne particulates;
- vapour from soils through exposure to indoor or outdoor air;
- ingestion of soils;
- vapour from groundwater through exposure to indoor or outdoor air

As shown in Figure 16, soil and groundwater exposure pathways are valid for various human receptors at the site. The depth of contaminants at the site significantly influences the likelihood of exposure for most receptors.

Ecological receptor exposure points typically include:

- direct interaction with in-situ soils and wind-borne particulates;
- vapour from soils through exposure outdoor air;
- direct interaction with groundwater;
- vapour from groundwater through exposure to outdoor air;
- direct interaction with sediment; and,
- ingestion of terrestrial biota as food or prey.

As shown on Figure 15, while some of these receptor exposure points are potentially valid for various ecological receptors potentially associated with the site, the lack of surface water bodies or sediment represent incomplete or negligible exposure points. The depth of contaminants at the site also influences the likelihood of exposure for most receptors such as birds, mammals, reptiles, and amphibians.

Routes of Exposure

Exposure pathways for humans typically include:

- dermal contact;
- ingestion; and,
- inhalation.

As shown on Figure 16, all of these potential pathways potentially exist at this site for at least one receptor type.

Typical exposure pathways for ecological receptors include:

- dermal contact;
- ingestion;
- inhalation;
- stem, foliar, or root uptake; and,
- ingestion of food or prey.

As shown in Figure 15, these pathways exist with limited effect on several potential receptors mostly due to the depth of contamination at the site. Only soil invertebrates, birds and mammals and deep rooted terrestrial plants are considered to have direct or inhalation based exposures.

Please note that Generic Site Condition Standards developed by the Ministry of Environment were considered applicable for assessment of this site and its subsequent remediation, and were selected based on procedures outlined in Ontario Regulation 153/04 and its amendments. The MOE generic standards were created on risk-based models which supersede the previous qualitative risk analysis.

Subsequent Remedial Activities and Current Site Conditions

The preceding CSM has been prepared to reflect investigations and site conditions that were conducted prior to remediation of impacts at the site. Following completion of the Phase Two ESA investigations, remediation activities were conducted to remove impacted soils encountered at the site. Some data collected during the remedial activities was used to augment the Phase Two ESA.

Between January 11 and March 16, 2016, Terrapex completed a remediation program based on the Phase Two ESA data. Four post remediation groundwater wells were installed at the site. A Remedial Excavation Report was completed outlining remediation activities and the removal of impacted media from the site. The report completed by Terrapex is included in Appendix VI of this Phase Two ESA report.

Upon completion of the remedial program, concentrations of all contaminants of concern in soil and groundwater were less than the applicable Table 3 SCS.

7.0 CONCLUSIONS

The Phase Two ESA investigation of the site, as documented in this report, identified concentrations of petroleum hydrocarbon parameters in soil at concentrations in excess of MOE Table 2 Site Condition Standards.

Sediment is not present at the site, and therefore contaminants of concern are not present within sediment.

Petroleum hydrocarbon impacts at the site were removed during the remediation activities outlined in the Terrapex 2016 Remedial Excavation Report (Appendix VI). Following the remediation activities, no petroleum hydrocarbon, or any other, impacts are known to be present at the site.

7.1 SIGNATURES

The environmental assessment described herein was conducted in accordance with the terms of reference for this project, agreed upon by Suncor Energy Products Partnership and Terrapex Environmental Ltd.

The Phase Two Environmental Site Assessment of the property located at 121 Hume Street, Collingwood, Ontario was conducted in accordance with O. Reg. 153/04 by, or under the supervision of a qualified person as required by the regulation.

Terrapex Environmental Ltd. has exercised due care, diligence, and judgement in the performance of this Phase Two ESA; however, studies of this nature have inherent limitations. The reported information is believed to provide a reasonable representation of the general environmental conditions at the site, at the time the assessment was conducted. However, the data were collected at discrete locations and conditions may vary at other locations or with the passage of time. The assessment was also limited to a study of those chemical parameters specifically addressed in this report.

In addition, our comments, conclusions, and recommendations are based in part on the observations and data documented by third parties. By necessity, except where explicitly noted, we have relied upon the accuracy and completeness of information presented by said third parties, regardless of any disclaimers regarding reliance provided in the documentation subjected to peer review. Terrapex Environmental Ltd. does not assume any responsibility for errors, omissions, or other limitations pertaining to third party work programs.

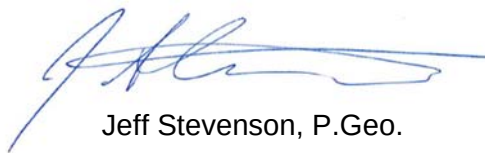
This report has been prepared for the sole use of Suncor Energy Products Partnership. Terrapex Environmental Ltd. accepts no liability for claims arising from the use of this report, or from actions taken or decisions made as a result of this report, by parties other than the Suncor Energy Products Partnership.

Sincerely,

TERRAPEX ENVIRONMENTAL LTD.



Philip John Arlos, B.Sc.,
Environmental Scientist



Jeff Stevenson, P.Geo.
Senior Project Manager
Qualified Person (QP_{ESA})

8.0 REFERENCES

Bedrock Geology of Ontario, Ontario Geological Survey, Map 2544, Ministry of Northern Development and Mines, 1991;

Ministry of the Environment (MOE), 2011. *Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act*. April 15, 2011;

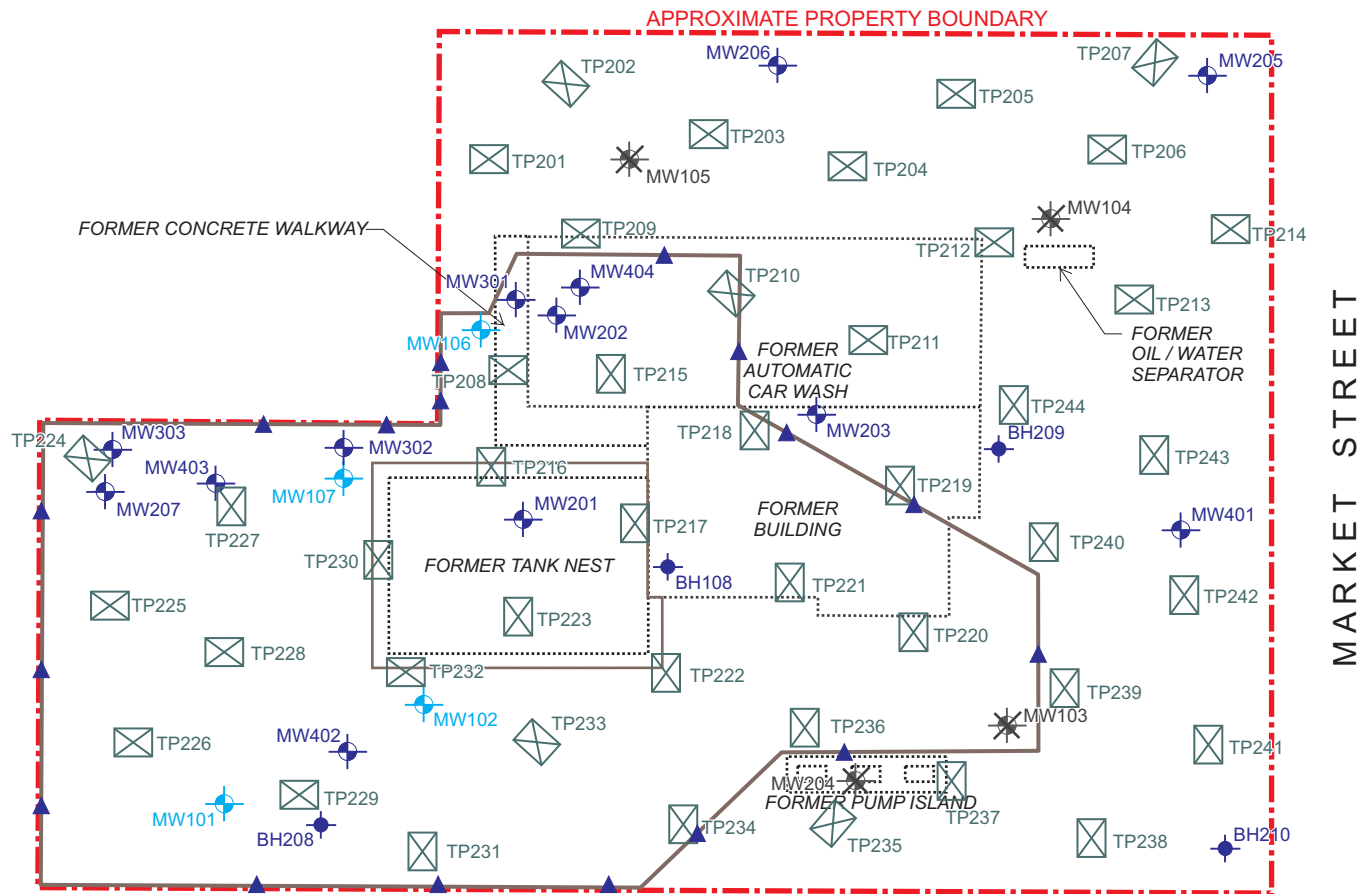
Ontario Base Map (OBM) of Collingwood: Ministry of Natural Resources Ontario, based on 2010 aerial photography (1:22 000);

Quaternary Geology of Ontario, Southern Sheet, Ontario Geological Survey, Map 2556, Ministry of Natural Resources, 1991;

Topographic Map: Toporama 1:50K by Natural Resource Canada, Publication date: July 19, 2013

FIGURES

FIGURE 1



LEGEND

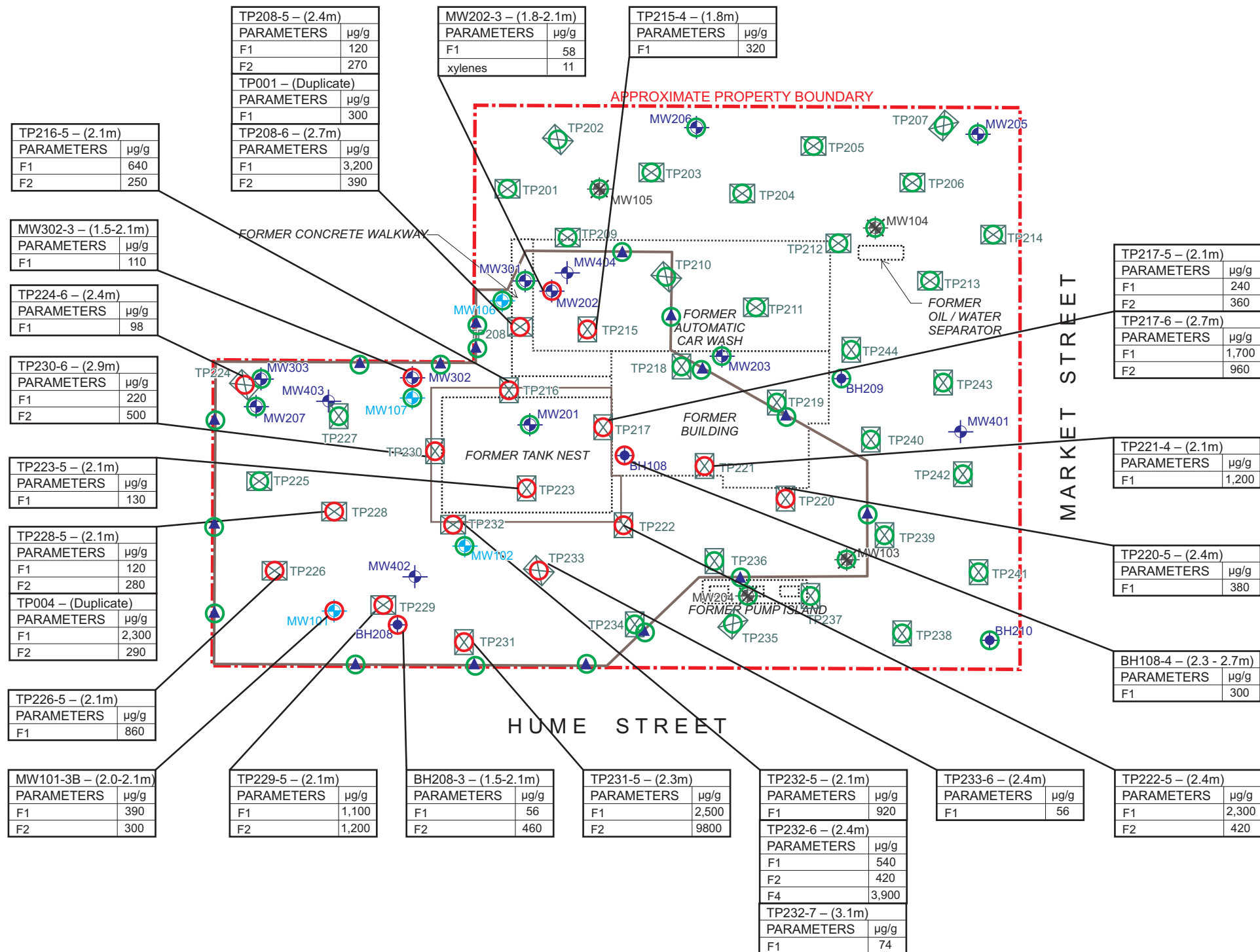
-  BOREHOLE
-  MONITORING WELL (2012 / 2015)
-  EXISTING MONITORING WELL (2007)
-  DESTROYED MONITORING WELL
-  TEST PIT
-  CONFIRMATORY SOIL SAMPLE
-  EXCAVATION

HUME STREET



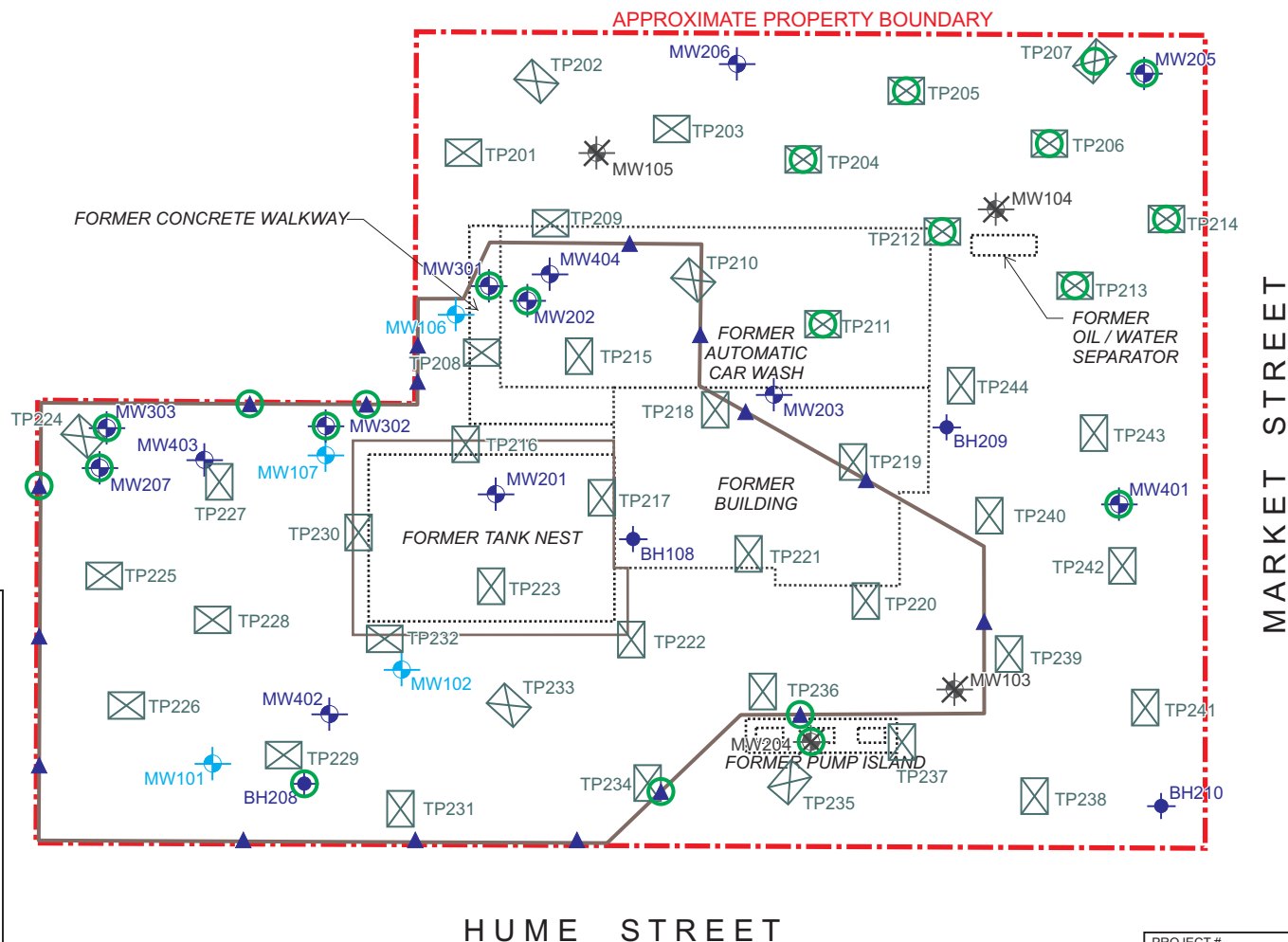
NOTE: DRAWING TAKEN FROM SITE PLAN PROVIDED BY CLIENT, AND FROM FIELD MEASUREMENTS AND OBSERVATIONS.

PROJECT #	CB644.02
SCALE	AS SHOWN
DATE	JULY 2016
DRAWN	ECV/SF
CHECKED	JS
DRAWING #	FIGURE 2



NOTE: DRAWING TAKEN FROM SITE PLAN PROVIDED BY CLIENT, AND FROM FIELD MEASUREMENTS AND OBSERVATIONS.

PROJECT #	CB644.02
SCALE	AS SHOWN
DATE	JULY 2016
DRAWN	ECV/SF
CHECKED	JS
DRAWING #	FIGURE 3



LEGEND

- BOREHOLE
- MONITORING WELL (2012 / 2015)
- EXISTING MONITORING WELL (2007)
- DESTROYED MONITORING WELL AFTER 2012
- TEST PIT
- CONFIRMATORY SOIL SAMPLE
- EXCAVATION

ANALYSIS INFORMATION

- Less than or equal to Table 3 SCS
- Greater than Table 3 SCS

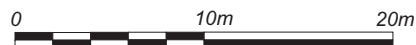
Sample I.D. Sample depth

MW103-4 - (depth)	
PARAMETERS	µg/g
F1	0.4

Concentration

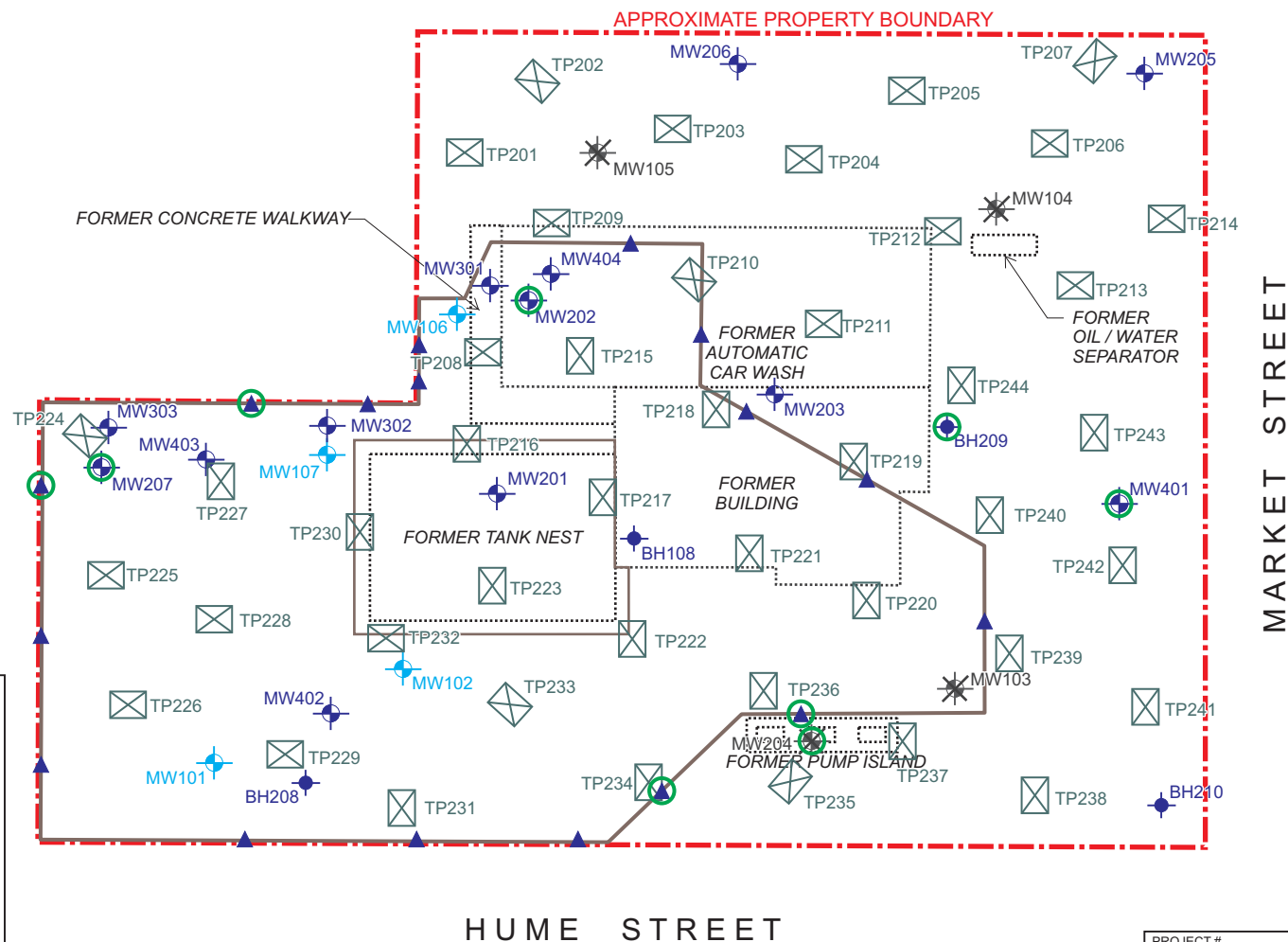
TABLE 3 SCS
55

SCS (Site Conditions Standards) refer to Standards from Table 3 of April 15, 2011 Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act; Residential/Parkland / Institutional land use, coarse textured soil



NOTE: DRAWING TAKEN FROM SITE PLAN PROVIDED BY CLIENT, AND FROM FIELD MEASUREMENTS AND OBSERVATIONS.

PROJECT #	CB644.02
SCALE	AS SHOWN
DATE	JULY 2016
DRAWN	ECV/SF
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DRAWING #	FIGURE 4



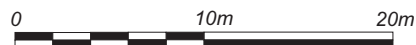
LEGEND

-  BOREHOLE
-  MONITORING WELL (2012 / 2015)
-  EXISTING MONITORING WELL (2007)
-  DESTROYED MONITORING WELL AFTER 2012
-  TEST PIT
-  CONFIRMATORY SOIL SAMPLE
-  EXCAVATION

ANALYSIS INFORMATION

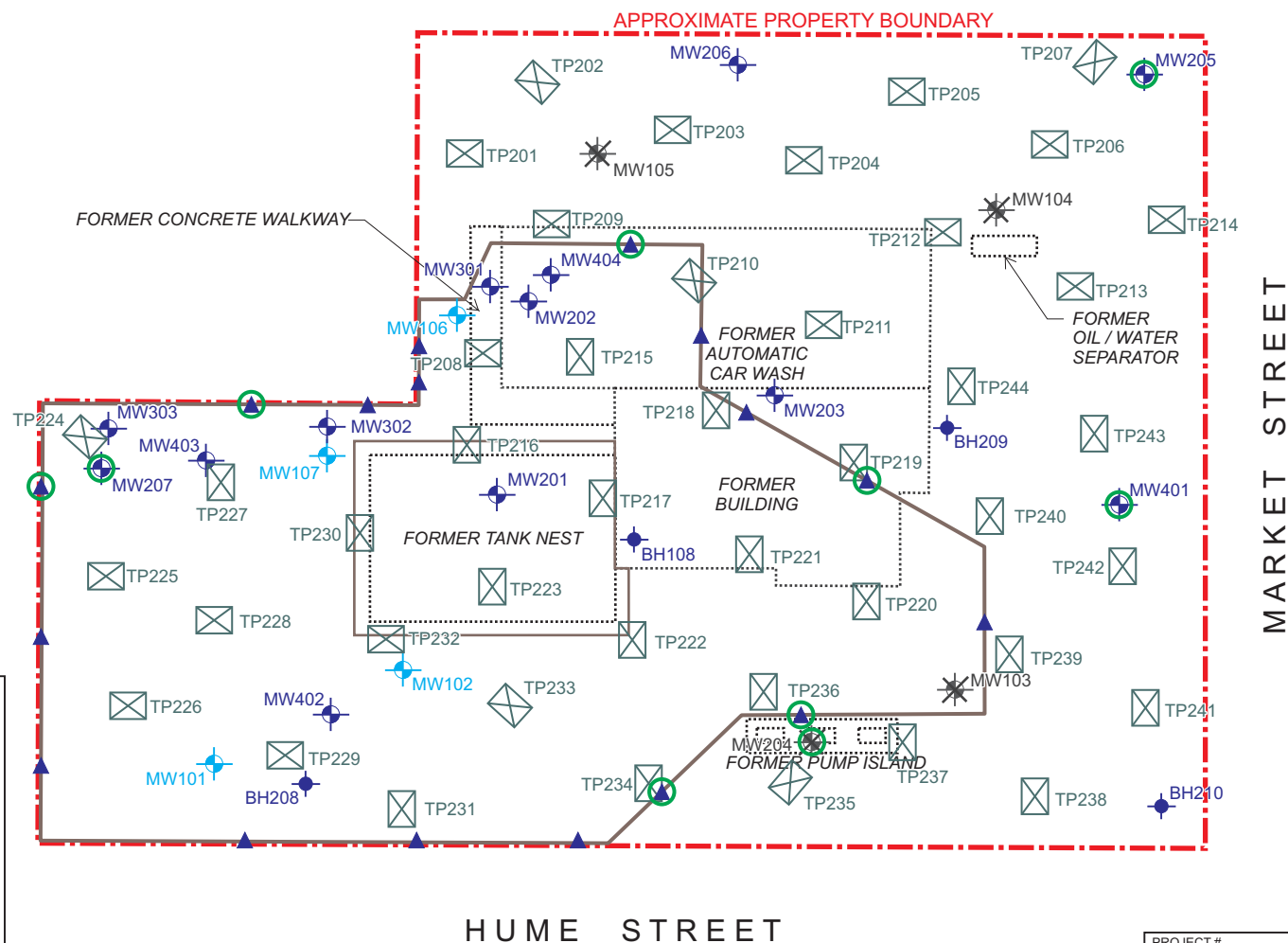
-  Less than or equal to Table 3 SCS
-  Greater than Table 3 SCS

SCS (Site Conditions Standards) refer to Standards from Table 3 of April 15, 2011 Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act; Residential/Parkland / Institutional land use, coarse textured soil



NOTE: DRAWING TAKEN FROM SITE PLAN PROVIDED BY CLIENT, AND FROM FIELD MEASUREMENTS AND OBSERVATIONS.

PROJECT #	CB644.02
SCALE	AS SHOWN
DATE	JULY 2016
DRAWN	ECV/SF
CHECKED	JS
DRAWING #	FIGURE 5



LEGEND

-  BOREHOLE
-  MONITORING WELL (2012 / 2015)
-  EXISTING MONITORING WELL (2007)
-  DESTROYED MONITORING WELL AFTER 2012
-  TEST PIT
-  CONFIRMATORY SOIL SAMPLE
-  EXCAVATION

ANALYSIS INFORMATION

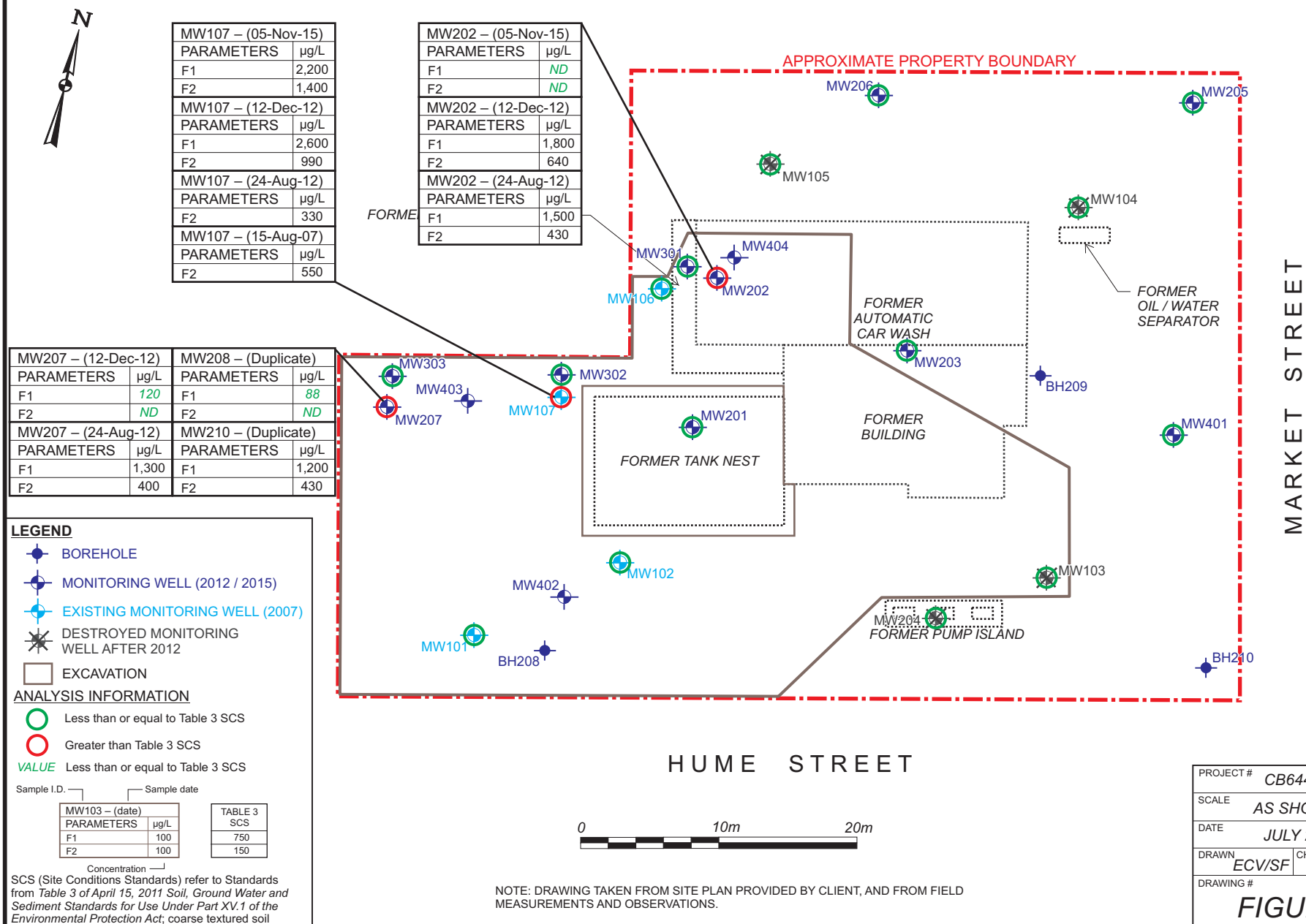
-  Less than or equal to Table 3 SCS
-  Greater than Table 3 SCS

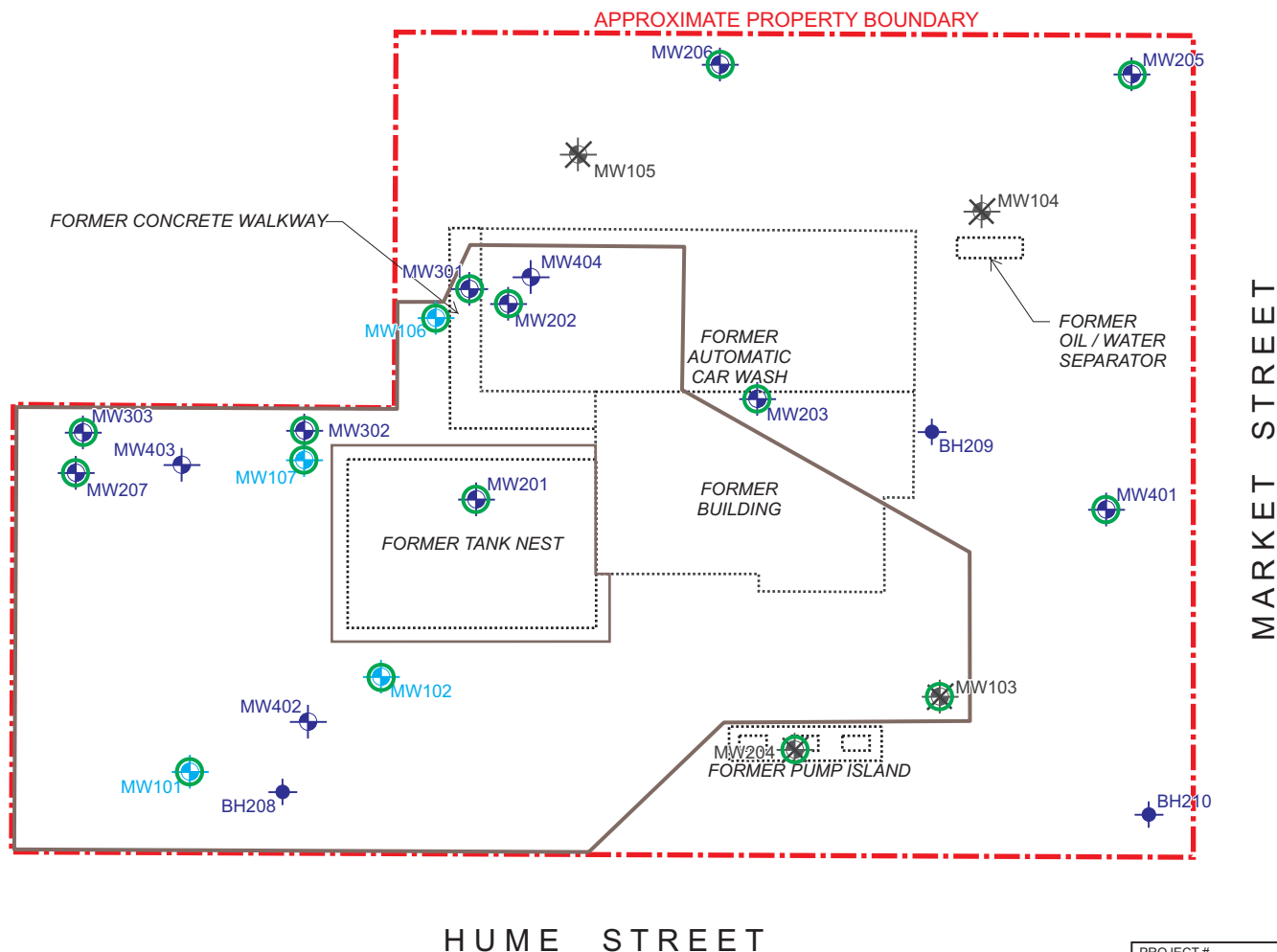
SCS (Site Conditions Standards) refer to Standards from Table 3 of April 15, 2011 Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act; Residential/Parkland / Institutional land use, coarse textured soil



NOTE: DRAWING TAKEN FROM SITE PLAN PROVIDED BY CLIENT, AND FROM FIELD MEASUREMENTS AND OBSERVATIONS.

PROJECT #	CB644.02
SCALE	AS SHOWN
DATE	JULY 2016
DRAWN	ECV/SF
CHECKED	JS
DRAWING #	FIGURE 6





LEGEND

- BOREHOLE
- MONITORING WELL (2012 / 2015)
- EXISTING MONITORING WELL (2007)
- DESTROYED MONITORING WELL AFTER 2012
- EXCAVATION

ANALYSIS INFORMATION

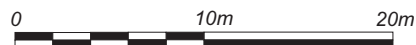
- Less than or equal to Table 3 SCS
- Greater than Table 3 SCS
- VALUE** Less than or equal to Table 3 SCS

Sample I.D. Sample date

MW103 - (date)	
PARAMETERS	µg/L
Dichloroethane, 1,2-	0.50
Concentration	

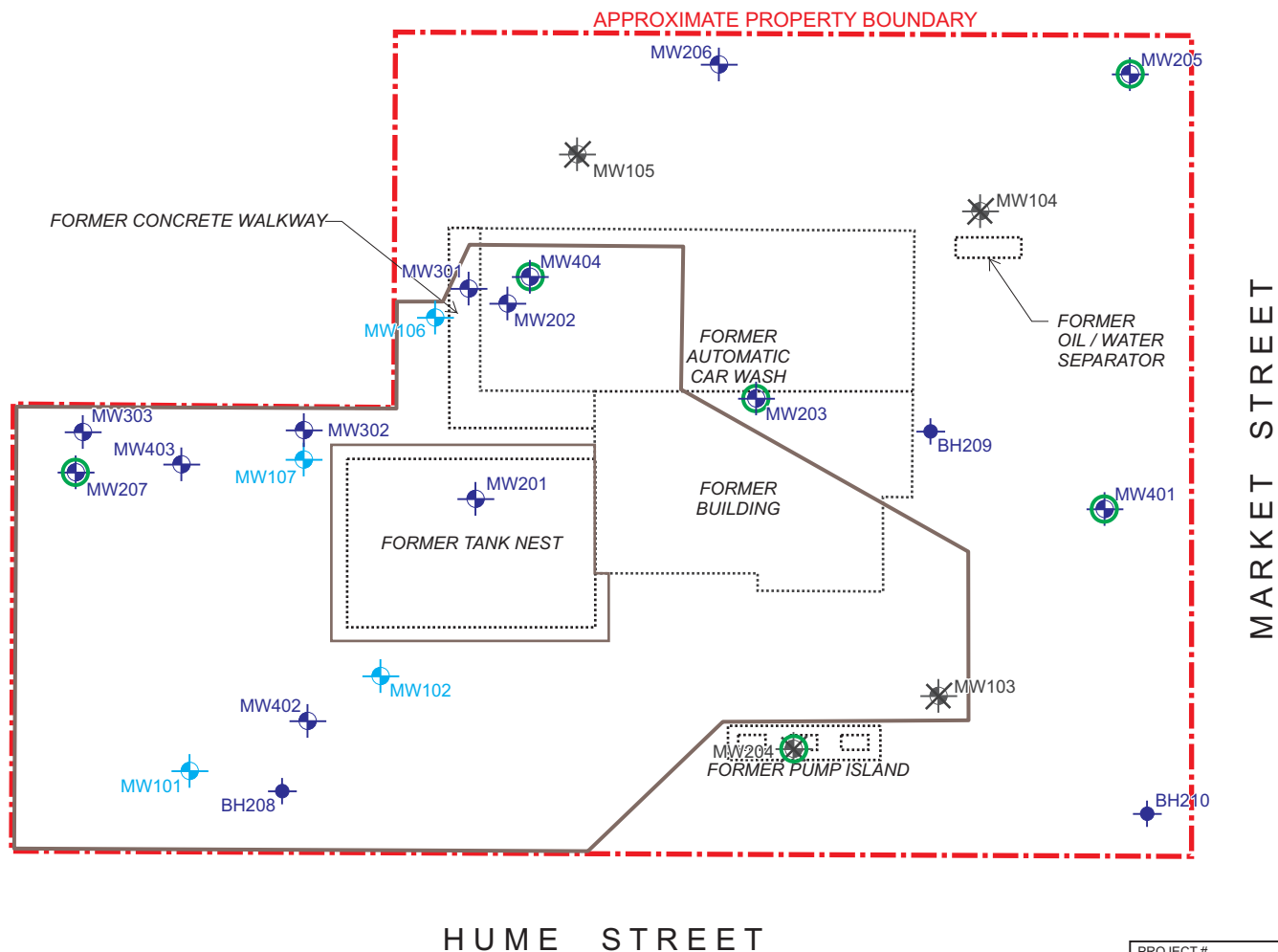
TABLE 3 SCS
1.6

SCS (Site Conditions Standards) refer to Standards from Table 3 of April 15, 2011 Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act; coarse textured soil



NOTE: DRAWING TAKEN FROM SITE PLAN PROVIDED BY CLIENT, AND FROM FIELD MEASUREMENTS AND OBSERVATIONS.

PROJECT #	CB644.02
SCALE	AS SHOWN
DATE	JULY 2016
DRAWN	ECV/SF
CHECKED	JS
DRAWING #	FIGURE 8



LEGEND

-  BOREHOLE
-  MONITORING WELL (2012 / 2015)
-  EXISTING MONITORING WELL (2007)
-  DESTROYED MONITORING WELL AFTER 2012
-  EXCAVATION

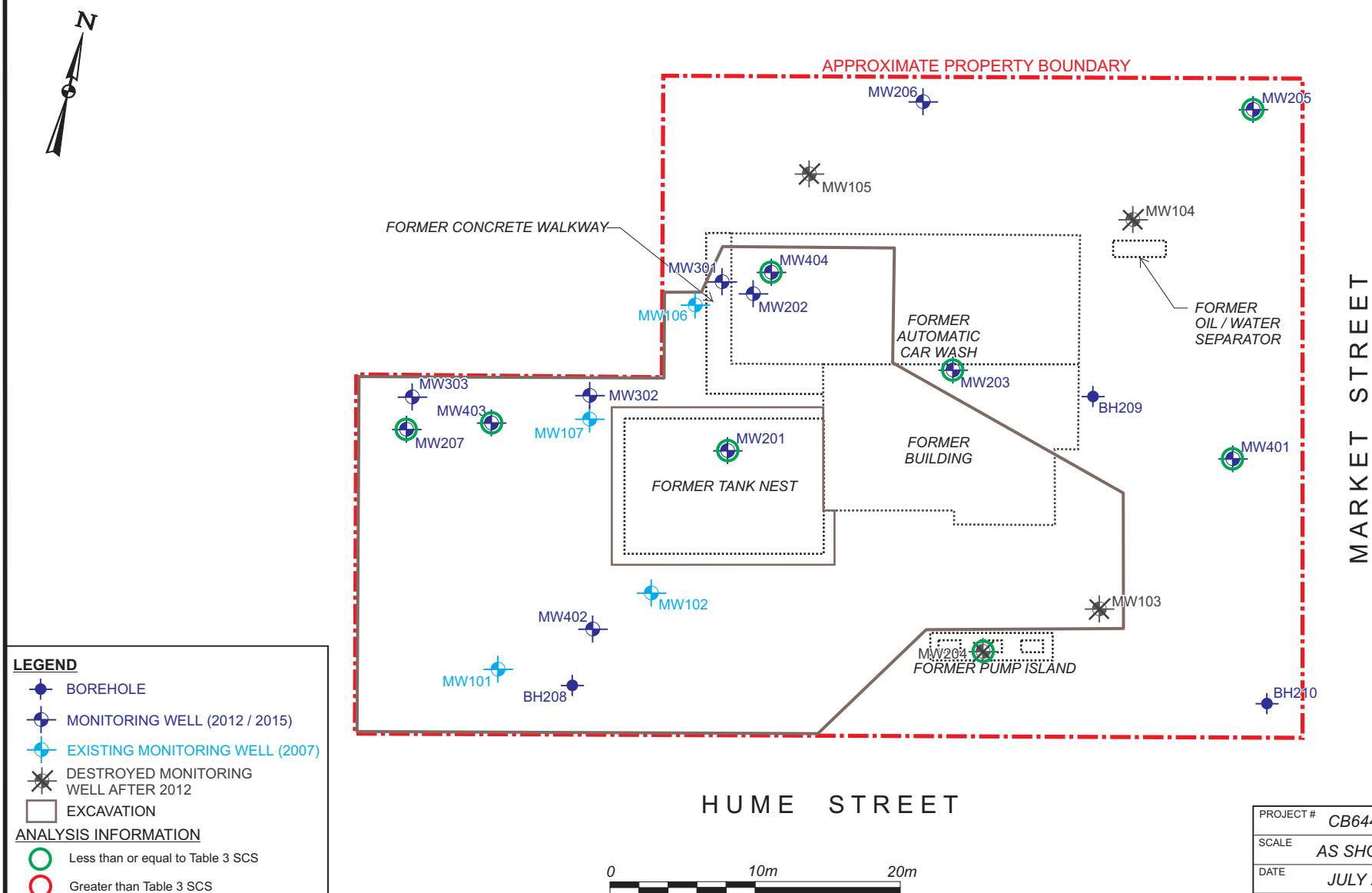
ANALYSIS INFORMATION

-  Less than or equal to Table 3 SCS
-  Greater than Table 3 SCS

SCS (Site Conditions Standards) refer to Standards from Table 3 of April 15, 2011 Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act; coarse textured soil

NOTE: DRAWING TAKEN FROM SITE PLAN PROVIDED BY CLIENT, AND FROM FIELD MEASUREMENTS AND OBSERVATIONS.

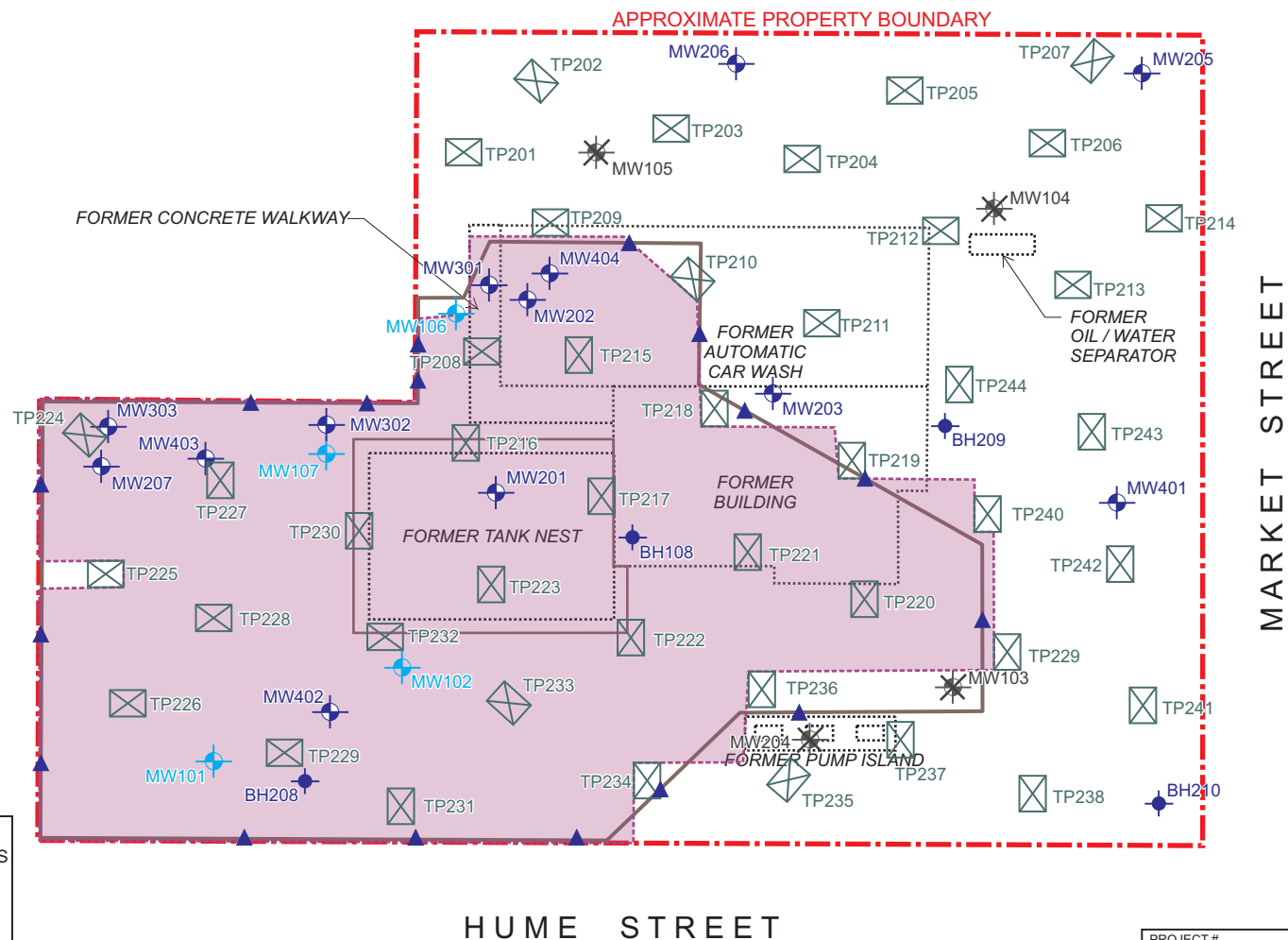
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DATE	JULY 2016		
DRAWN	ECV/SF	CHECKED	JS
DRAWING #	FIGURE 9		



SCS (Site Conditions Standards) refer to Standards from Table 3 of April 15, 2011 Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act; coarse textured soil

NOTE: DRAWING TAKEN FROM SITE PLAN PROVIDED BY CLIENT, AND FROM FIELD MEASUREMENTS AND OBSERVATIONS.

PROJECT #		CB644.02	
SCALE		AS SHOWN	
DATE		JULY 2016	
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DRAWING #			
FIGURE 10			



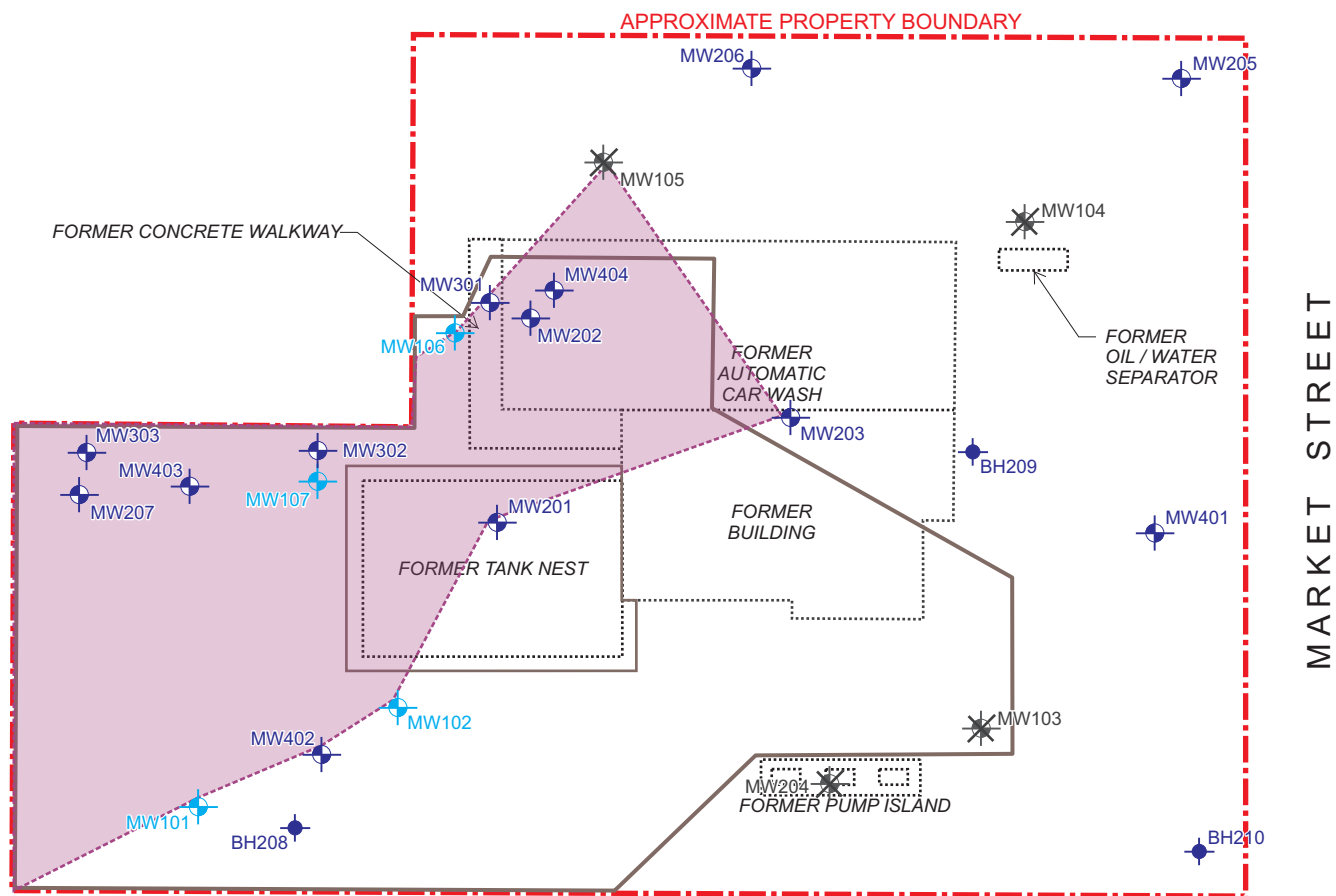
LEGEND

-  ESTIMATED EXTENT OF PHC IMPACTS IN SOIL
-  BOREHOLE
-  MONITORING WELL (2012 / 2015)
-  EXISTING MONITORING WELL (2007)
-  DESTROYED MONITORING WELL AFTER 2012
-  TEST PIT
-  CONFIRMATORY SOIL SAMPLE
-  EXCAVATION

0 10m 20m

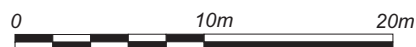
NOTE: DRAWING TAKEN FROM SITE PLAN PROVIDED BY CLIENT, AND FROM FIELD MEASUREMENTS AND OBSERVATIONS.

PROJECT #	CB644.02
SCALE	AS SHOWN
DATE	JULY 2016
DRAWN	ECV/SF
CHECKED	JS
DRAWING #	
FIGURE 11A	



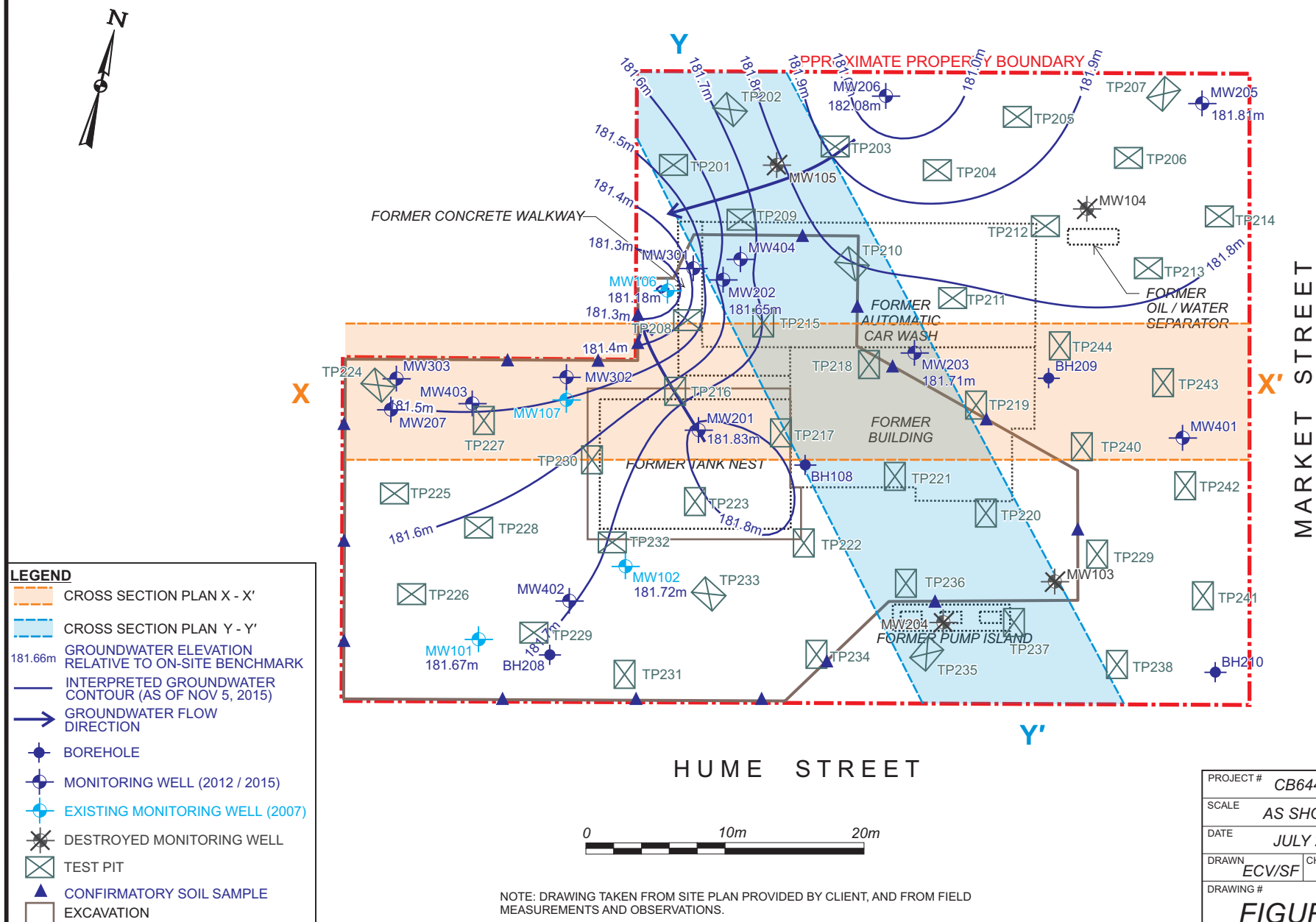
LEGEND

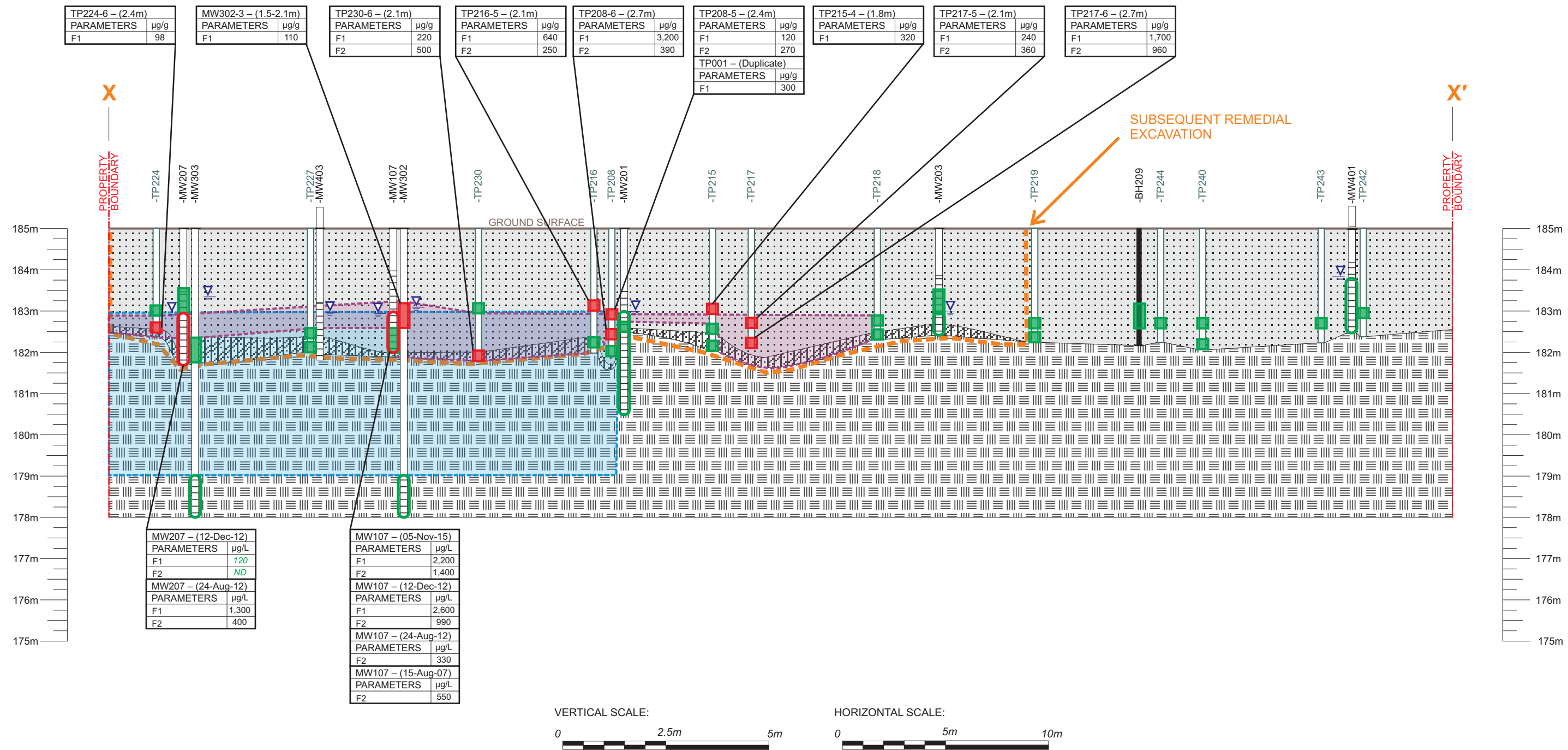
-  ESTIMATED EXTENT OF PHC IMPACTS IN GROUNDWATER
-  BOREHOLE
-  MONITORING WELL (2012 / 2015)
-  EXISTING MONITORING WELL (2007)
-  DESTROYED MONITORING WELL AFTER 2012
-  EXCAVATION



NOTE: DRAWING TAKEN FROM SITE PLAN PROVIDED BY CLIENT, AND FROM FIELD MEASUREMENTS AND OBSERVATIONS.

PROJECT #	CB644.02
SCALE	AS SHOWN
DATE	JULY 2016
DRAWN	ECV/SF
CHECKED	JS
DRAWING #	
FIGURE 11B	





LEGEND

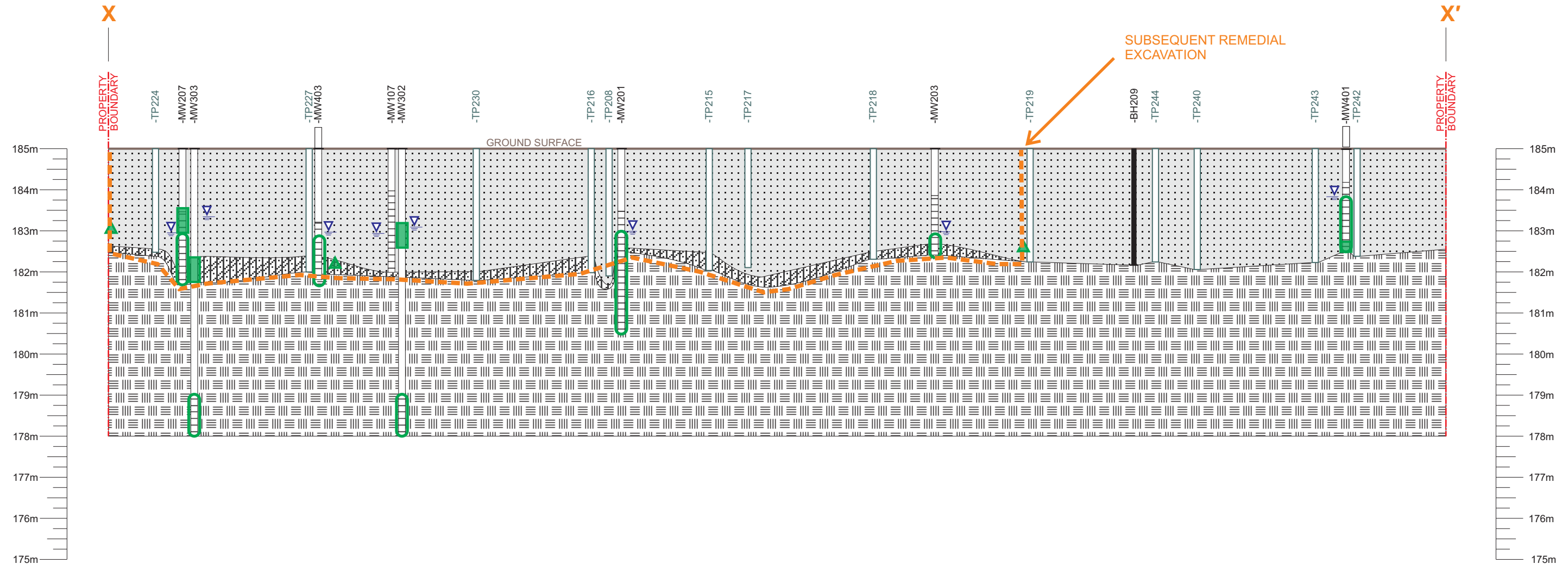
- FINE SAND AND COARSE GRAVEL
- CLAY WITH SILT AND GRAVEL WITH COBBLES
- BEDROCK
- GROUNDWATER LEVEL (AS OF NOVEMBER 5, 2015)
- ESTIMATED EXTENT OF PHC IMPACTS IN SOIL
- ESTIMATED EXTENT OF PHC IMPACTS IN GROUNDWATER
- MONITORING WELL
- BOREHOLE
- TEST PIT
- SCREENED LEVEL

SOIL ANALYSIS INFORMATION

- Less than or equal to Table 3 SCS
 - Greater than Table 3 SCS
- Sample I.D. Sample depth
- | Sample I.D. | Sample depth |
|-------------------|--------------|
| MW103-4 – (depth) | |
| PARAMETERS | µg/g |
| F1 | 10 |
| F2 | 10 |
| F4 | 10 |
- Concentration
- | TABLE 3 SCS |
|-------------|
| 55 |
| 98 |
| 2,800 |
- SCS (Site Conditions Standards) refer to Standards from Table 3 of April 15, 2011 Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act; Residential/Parkland / Institutional land use, coarse textured soil

GROUNDWATER ANALYSIS INFORMATION

- Less than or equal to Table 3 SCS
 - Greater than Table 3 SCS
 - VALUE Less than or equal to Table 3 SCS
- Sample I.D. Sample date
- | Sample I.D. | Sample date |
|----------------|-------------|
| MW103 – (date) | |
| PARAMETERS | µg/L |
| F1 | 100 |
| F2 | 100 |
- Concentration
- | TABLE 3 SCS |
|-------------|
| 750 |
| 150 |
- SCS (Site Conditions Standards) refer to Standards from Table 3 of April 15, 2011 Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act; coarse textured soil



VERTICAL SCALE:



HORIZONTAL SCALE:



LEGEND

- FINE SAND AND COARSE GRAVEL
- CLAY WITH SILT AND GRAVEL WITH COBBLES
- BEDROCK
- GROUNDWATER LEVEL (AS OF NOVEMBER 5, 2015)

- MONITORING WELL

- BOREHOLE

- TEST PIT

- SCREENED LEVEL

SOIL ANALYSIS INFORMATION

- Less than or equal to Table 3 SCS
- Greater than Table 3 SCS
- CSS from subsequent remedial excavation Less than or equal to Table 3 SCS

SCS (Site Conditions Standards) refer to Standards from Table 3 of April 15, 2011 Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act; Residential/Parkland / Institutional land use, coarse textured soil

GROUNDWATER ANALYSIS INFORMATION

- Less than or equal to Table 3 SCS
- Greater than Table 3 SCS

SCS (Site Conditions Standards) refer to Standards from Table 3 of April 15, 2011 Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act; coarse textured soil

PROJECT # CB644.02

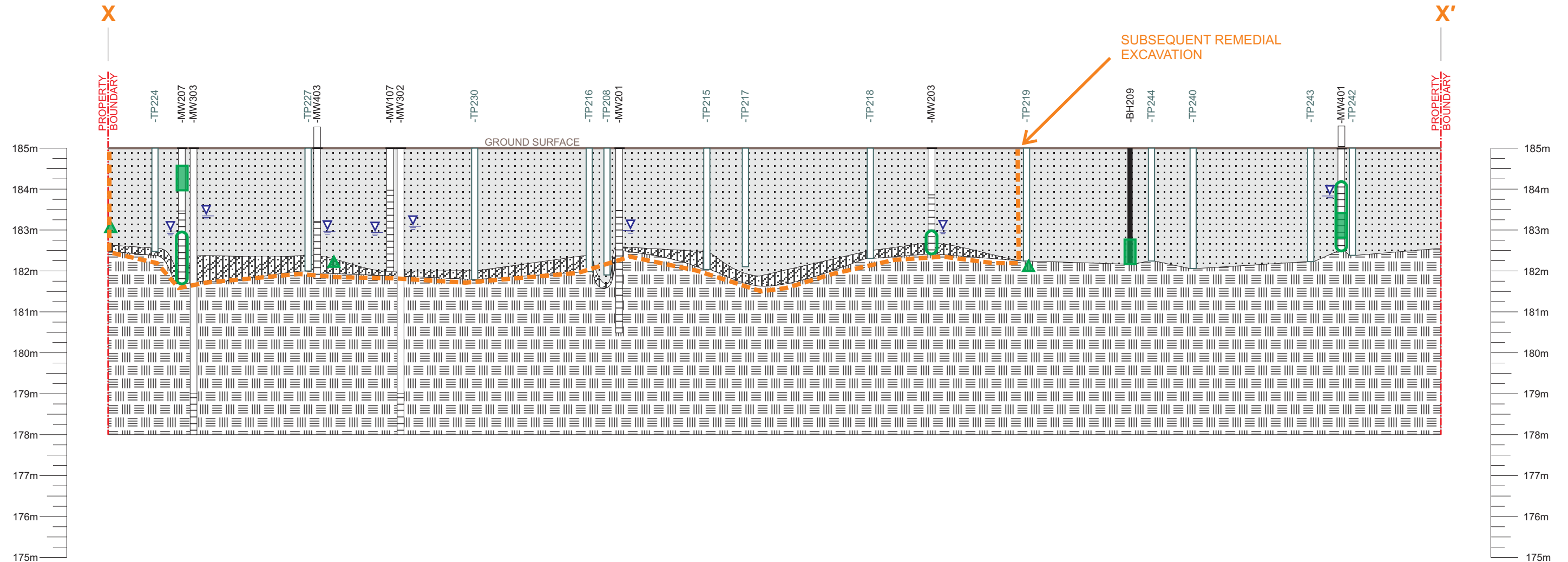
SCALE AS SHOWN

DATE JULY 2016

DRAWN SF CHECKED JS

DRAWING #

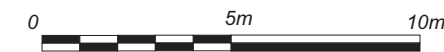
FIGURE 13B



VERTICAL SCALE:



HORIZONTAL SCALE:



LEGEND

- FINE SAND AND COARSE GRAVEL
- CLAY WITH SILT AND GRAVEL WITH COBBLES
- BEDROCK
- GROUNDWATER LEVEL (AS OF NOVEMBER 5, 2015)
- MONITORING WELL
- BOREHOLE
- TEST PIT
- SCREENED LEVEL

SOIL ANALYSIS INFORMATION

- Less than or equal to Table 3 SCS
- Greater than Table 3 SCS
- CSS from subsequent remedial excavation Less than or equal to Table 3 SCS

SCS (Site Conditions Standards) refer to Standards from Table 3 of April 15, 2011 Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act; Residential/Parkland / Institutional land use, coarse textured soil

GROUNDWATER ANALYSIS INFORMATION

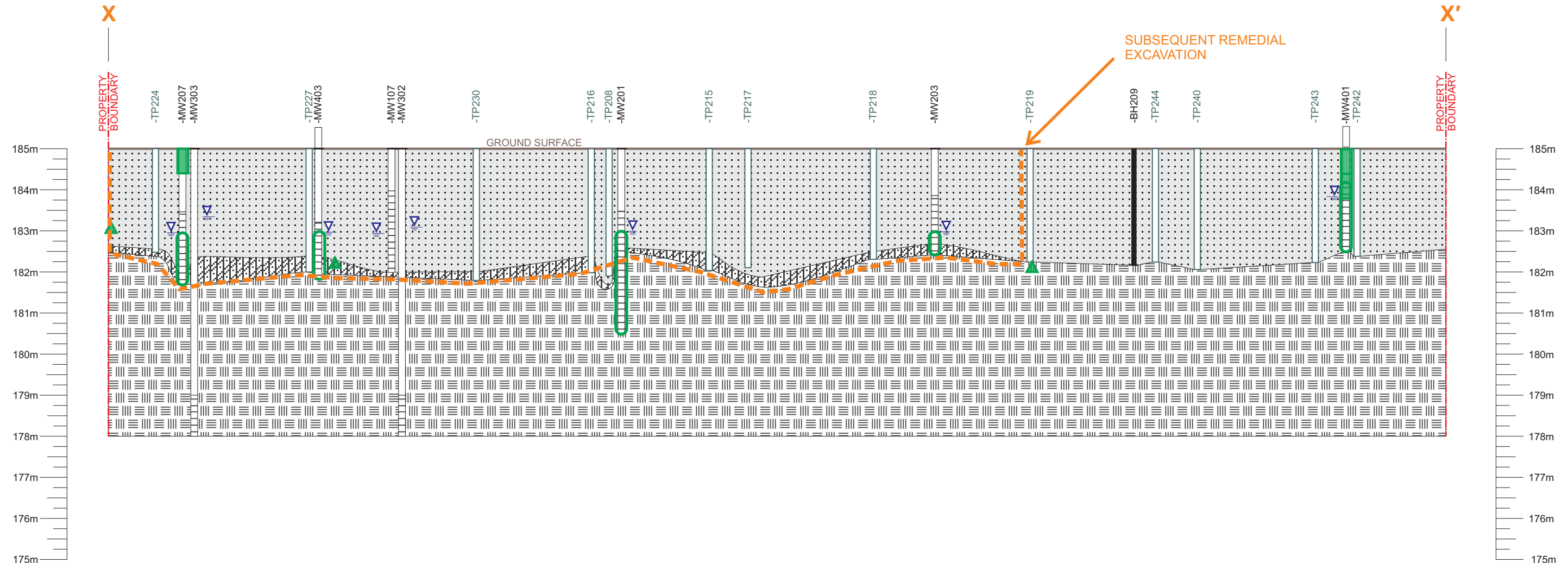
- Less than or equal to Table 3 SCS
- Greater than Table 3 SCS

Sample I.D.	Sample date
MW103 - (date)	
PARAMETERS	µg/L
F1	100
F2	100
Concentration	

SCS (Site Conditions Standards) refer to Standards from Table 3 of April 15, 2011 Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act; coarse textured soil

PROJECT #	CB644.02
SCALE	AS SHOWN
DATE	JULY 2016
DRAWN	SF
CHECKED	JS
DRAWING #	

FIGURE 13C



VERTICAL SCALE:



HORIZONTAL SCALE:



LEGEND

- FINE SAND AND COARSE GRAVEL
- CLAY WITH SILT AND GRAVEL WITH COBBLES
- BEDROCK
- GROUNDWATER LEVEL (AS OF NOVEMBER 5, 2015)
- MONITORING WELL
- BOREHOLE
- TEST PIT
- SCREENED LEVEL

SOIL ANALYSIS INFORMATION

- Less than or equal to Table 3 SCS
- Greater than Table 3 SCS
- CSS from subsequent remedial excavation Less than or equal to Table 3 SCS

SCS (Site Conditions Standards) refer to Standards from Table 3 of April 15, 2011 Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act; Residential/Parkland / Institutional land use, coarse textured soil

GROUNDWATER ANALYSIS INFORMATION

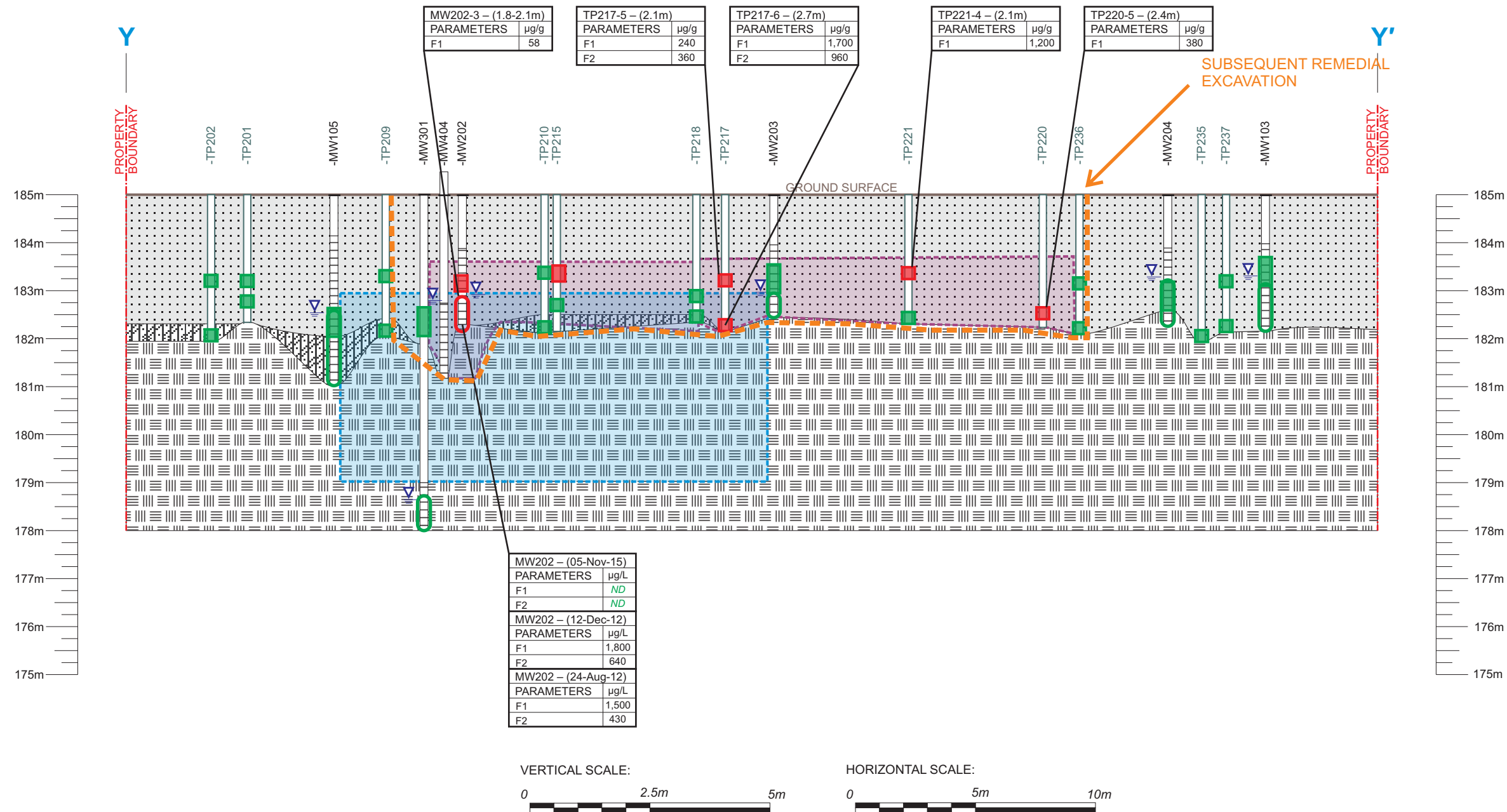
- Less than or equal to Table 3 SCS
- Greater than Table 3 SCS

Sample I.D. Sample date

PARAMETERS	µg/L	TABLE 3 SCS
F1	100	750
F2	100	150

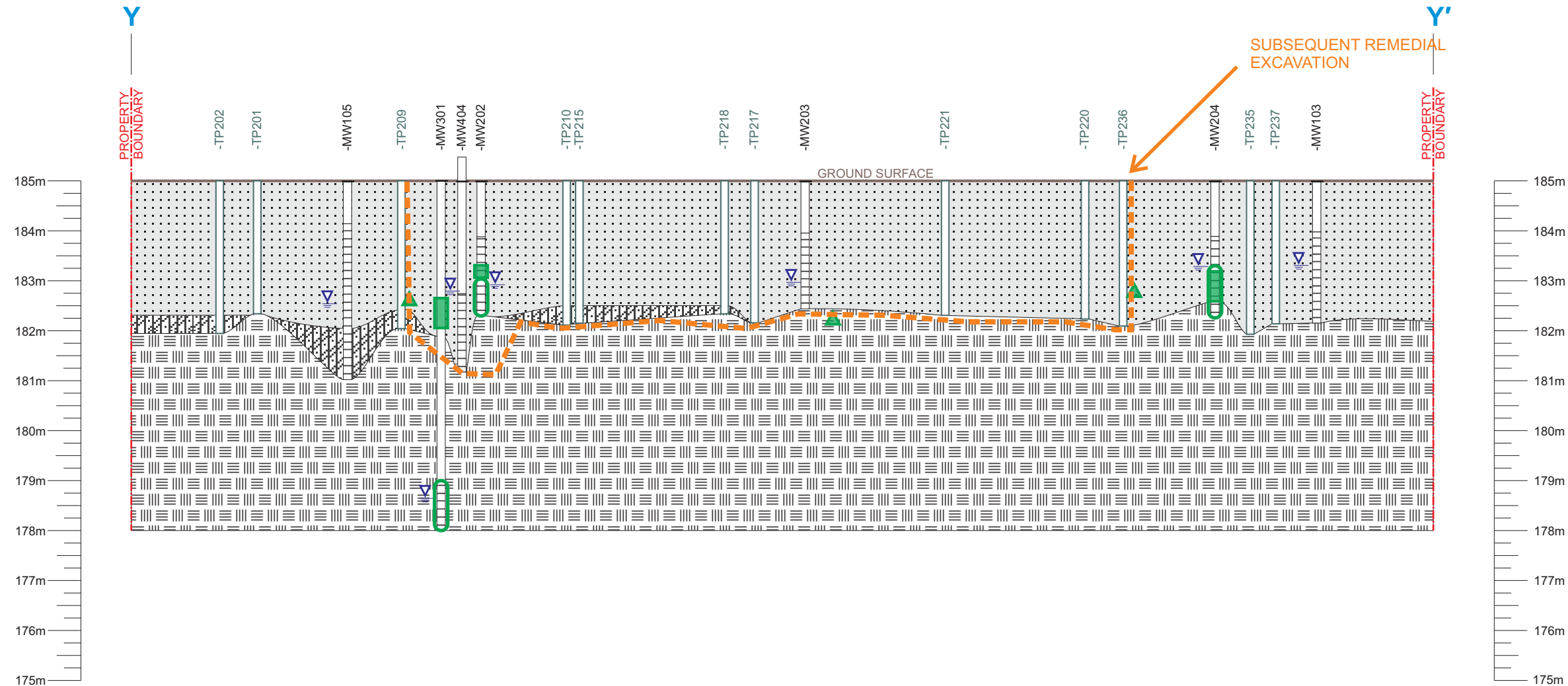
SCS (Site Conditions Standards) refer to Standards from Table 3 of April 15, 2011 Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act; coarse textured soil

PROJECT #	CB644.02
SCALE	AS SHOWN
DATE	JULY 2016
DRAWN	SF
CHECKED	JS
DRAWING #	FIGURE 13D



LEGEND

- FINE SAND AND COARSE GRAVEL
- CLAY WITH SILT AND GRAVEL WITH COBBLES
- BEDROCK
- GROUNDWATER LEVEL (AS OF NOVEMBER 5, 2015)
- ESTIMATED EXTENT OF PHC IMPACTS IN SOIL
- ESTIMATED EXTENT OF PHC IMPACTS IN GROUNDWATER
- MONITORING WELL
- BOREHOLE
- TEST PIT
- SCREENED LEVEL



VERTICAL SCALE:



HORIZONTAL SCALE:



LEGEND

- FINE SAND AND COARSE GRAVEL
- CLAY WITH SILT AND GRAVEL WITH COBBLES
- BEDROCK
- GROUNDWATER LEVEL (AS OF NOVEMBER 5, 2015)

- MONITORING WELL
- SCREENED LEVEL

- BOREHOLE

- TEST PIT

SOIL ANALYSIS INFORMATION

- Less than or equal to Table 3 SCS
- Greater than Table 3 SCS
- CSS from subsequent remedial excavation Less than or equal to Table 3 SCS

SCS (Site Conditions Standards) refer to Standards from Table 3 of April 15, 2011 Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act; Residential/Parkland / Institutional land use, coarse textured soil

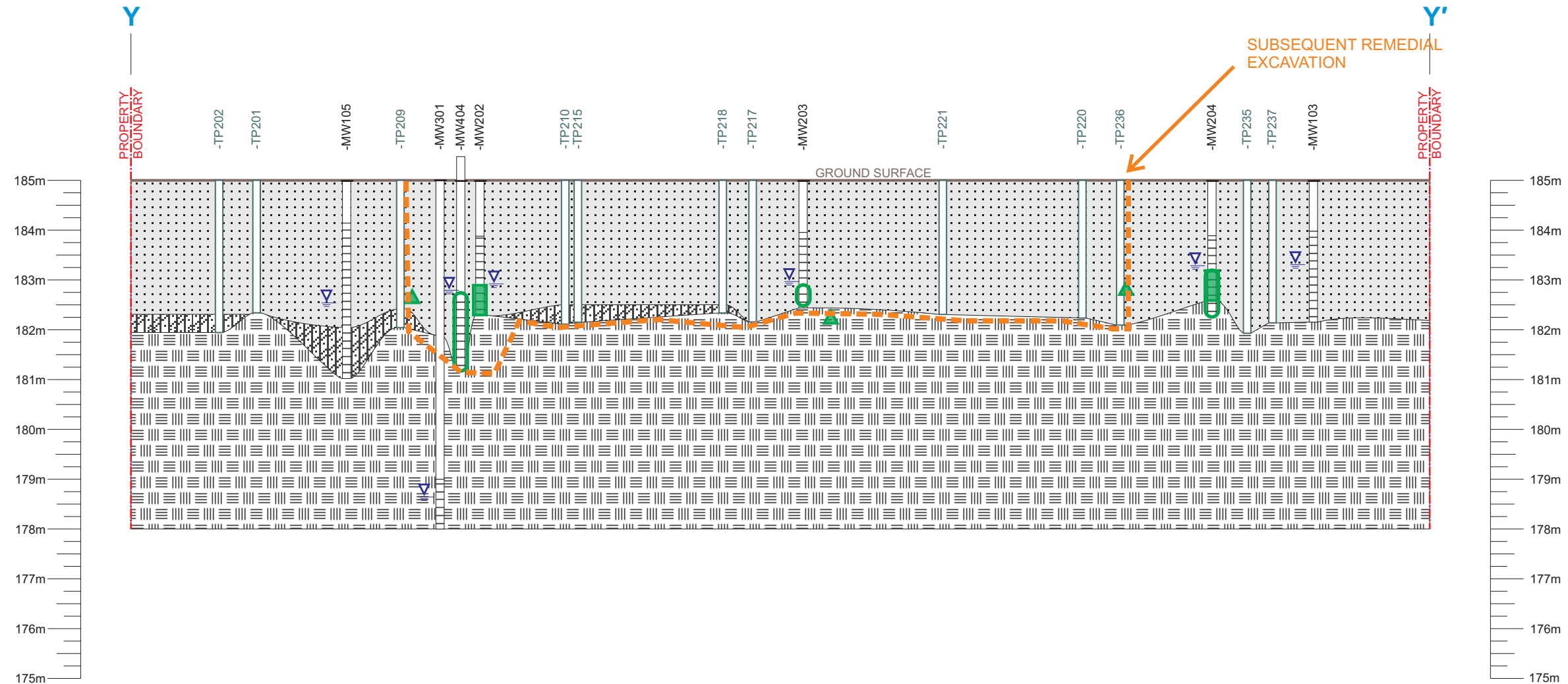
GROUNDWATER ANALYSIS INFORMATION

- Less than or equal to Table 3 SCS
- Greater than Table 3 SCS

SCS (Site Conditions Standards) refer to Standards from Table 3 of April 15, 2011 Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act; coarse textured soil

PROJECT #	CB644.02
SCALE	AS SHOWN
DATE	JULY 2016
DRAWN	SF
CHECKED	JS
DRAWING #	

FIGURE 14B



VERTICAL SCALE:



HORIZONTAL SCALE:



LEGEND

- FINE SAND AND COARSE GRAVEL
- CLAY WITH SILT AND GRAVEL WITH COBBLES
- BEDROCK
- GROUNDWATER LEVEL (AS OF NOVEMBER 5, 2015)

- MONITORING WELL
- BOREHOLE
- TEST PIT
- SCREENED LEVEL

SOIL ANALYSIS INFORMATION

- Less than or equal to Table 3 SCS
- Greater than Table 3 SCS
- CSS from subsequent remedial excavation Less than or equal to Table 3 SCS

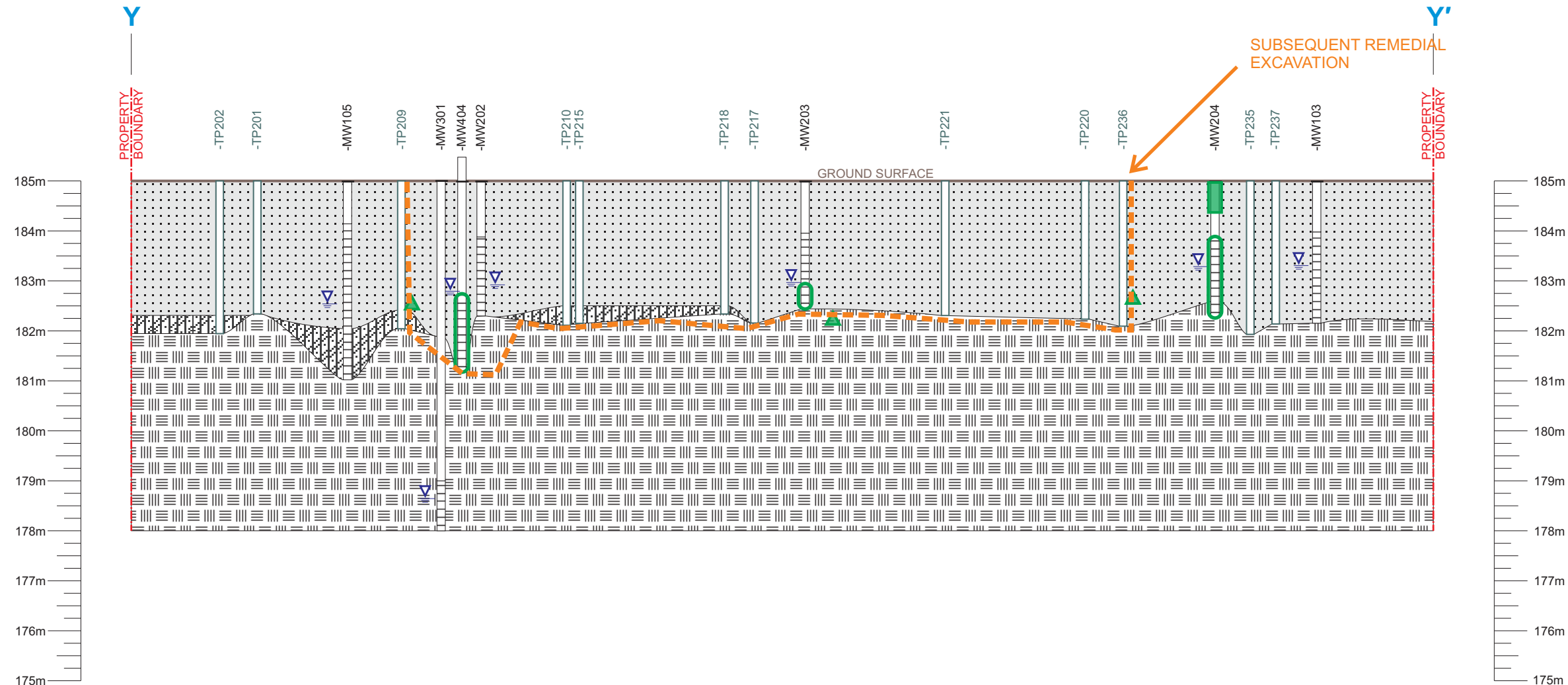
SCS (Site Conditions Standards) refer to Standards from Table 3 of April 15, 2011 Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act; Residential/Parkland / Institutional land use, coarse textured soil

GROUNDWATER ANALYSIS INFORMATION

- Less than or equal to Table 3 SCS
- Greater than Table 3 SCS

SCS (Site Conditions Standards) refer to Standards from Table 3 of April 15, 2011 Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act; coarse textured soil

PROJECT #	CB644.02
SCALE	AS SHOWN
DATE	JULY 2016
DRAWN	SF
CHECKED	JS
DRAWING #	FIGURE 14C



VERTICAL SCALE:



HORIZONTAL SCALE:



LEGEND

- FINE SAND AND COARSE GRAVEL
- CLAY WITH SILT AND GRAVEL WITH COBBLES
- BEDROCK
- GROUNDWATER LEVEL (AS OF NOVEMBER 5, 2015)

- MONITORING WELL
- SCREENED LEVEL

- BOREHOLE

- TEST PIT

SOIL ANALYSIS INFORMATION

- Less than or equal to Table 3 SCS
- Greater than Table 3 SCS
- CSS from subsequent remedial excavation Less than or equal to Table 3 SCS

SCS (Site Conditions Standards) refer to Standards from Table 3 of April 15, 2011 Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act; Residential/Parkland / Institutional land use, coarse textured soil

GROUNDWATER ANALYSIS INFORMATION

- Less than or equal to Table 3 SCS
- Greater than Table 3 SCS

SCS (Site Conditions Standards) refer to Standards from Table 3 of April 15, 2011 Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act; coarse textured soil

PROJECT #	CB644.02		
SCALE	AS SHOWN		
DATE	JULY 2016		
DRAWN	SF	CHECKED	JS
DRAWING #	FIGURE 14D		

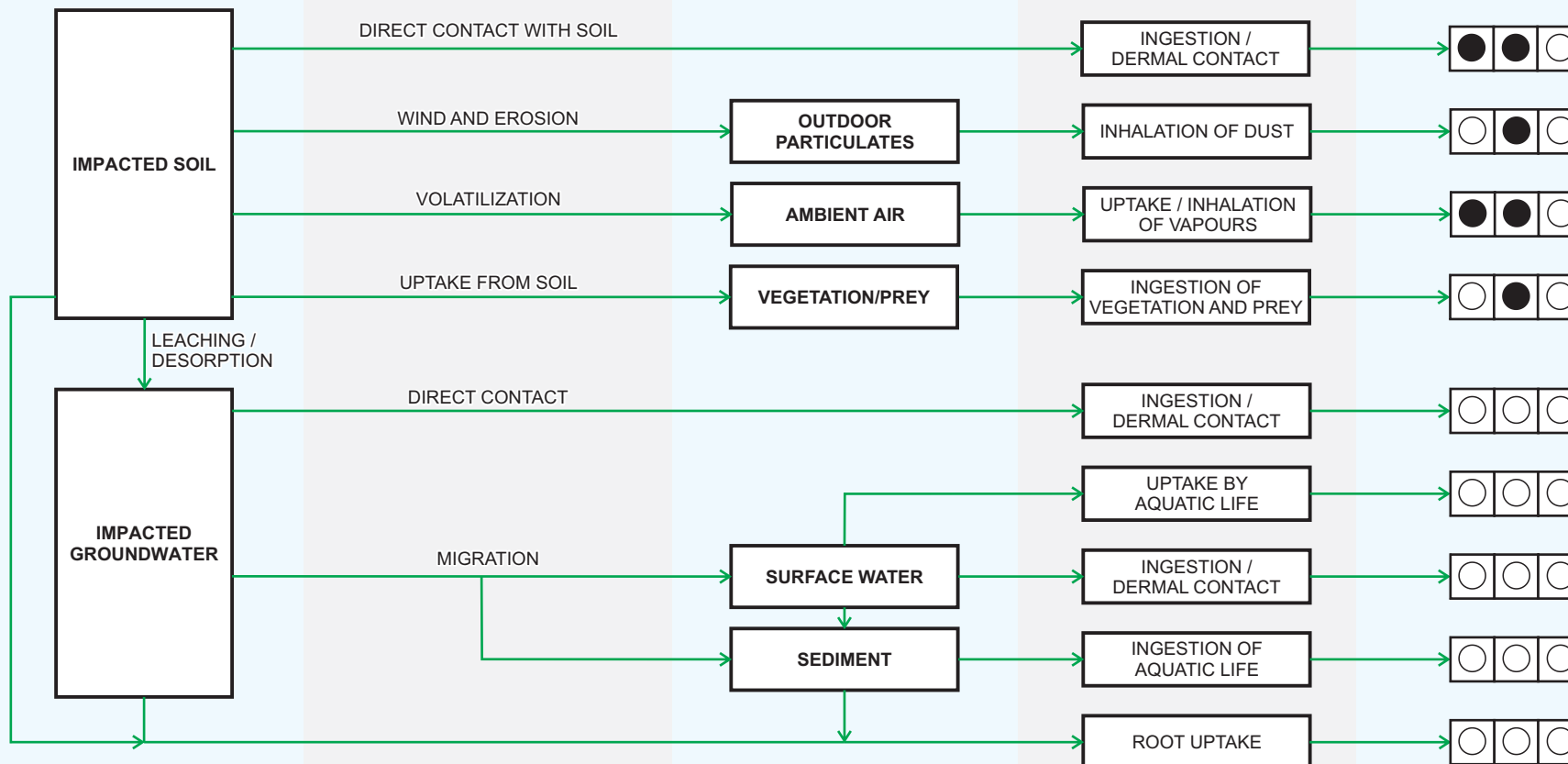
SOURCE

TRANSPORT MECHANISMS

SECONDARY SOURCES

EXPOSURE PATHWAY

Plants and Soil Invertebrates	Birds and Mammals	Aquatic Receptors



LEGEND



Exposure pathway is considered complete; further evaluation in ERA



Exposure pathway considered incomplete; further evaluation not required

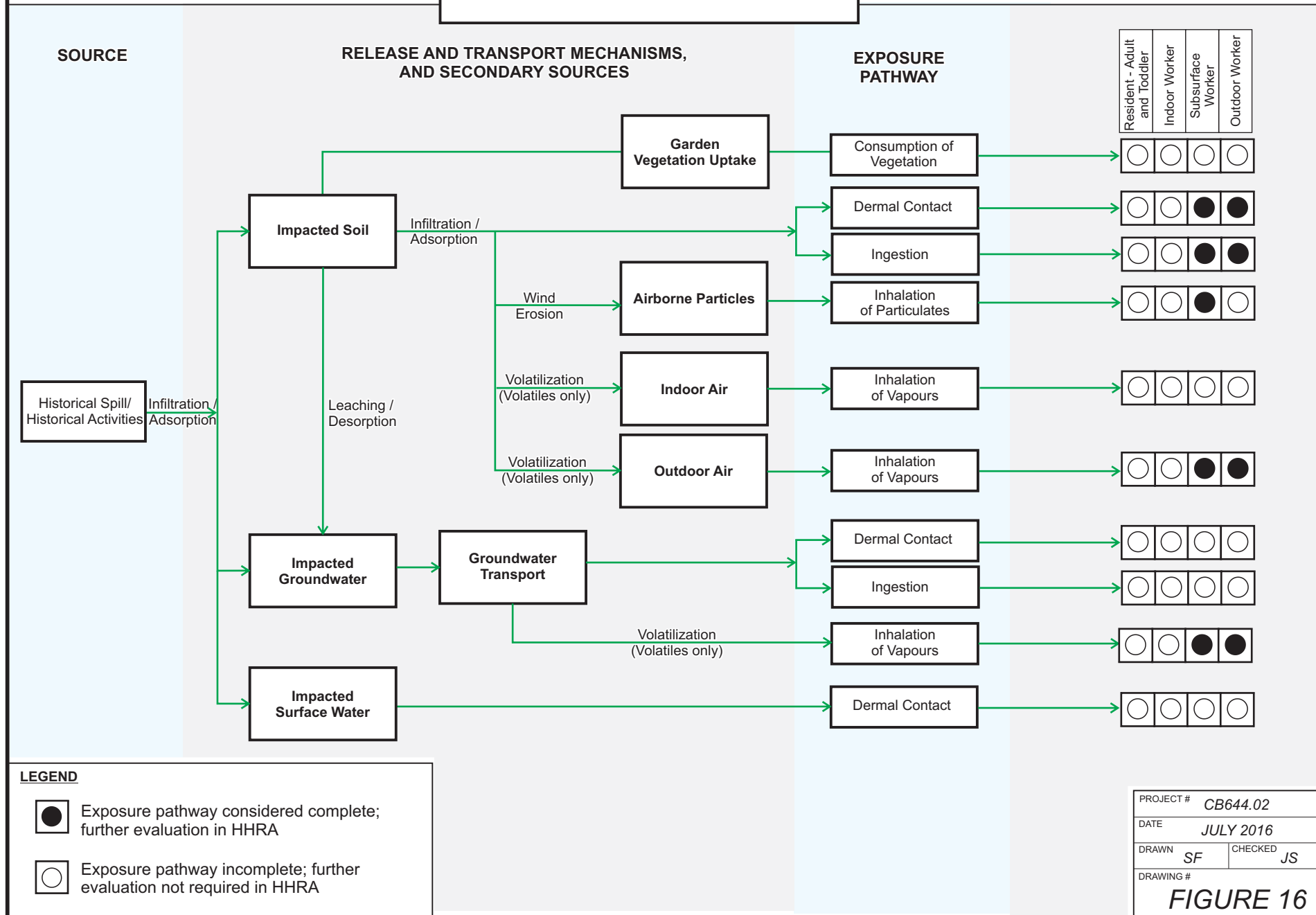
PROJECT # CB644.02

DATE JULY 2016

DRAWN SF CHECKED JS

DRAWING #

FIGURE 15





LEGEND

● POTENTIALLY CONTAMINATING ACTIVITIES (PCA)

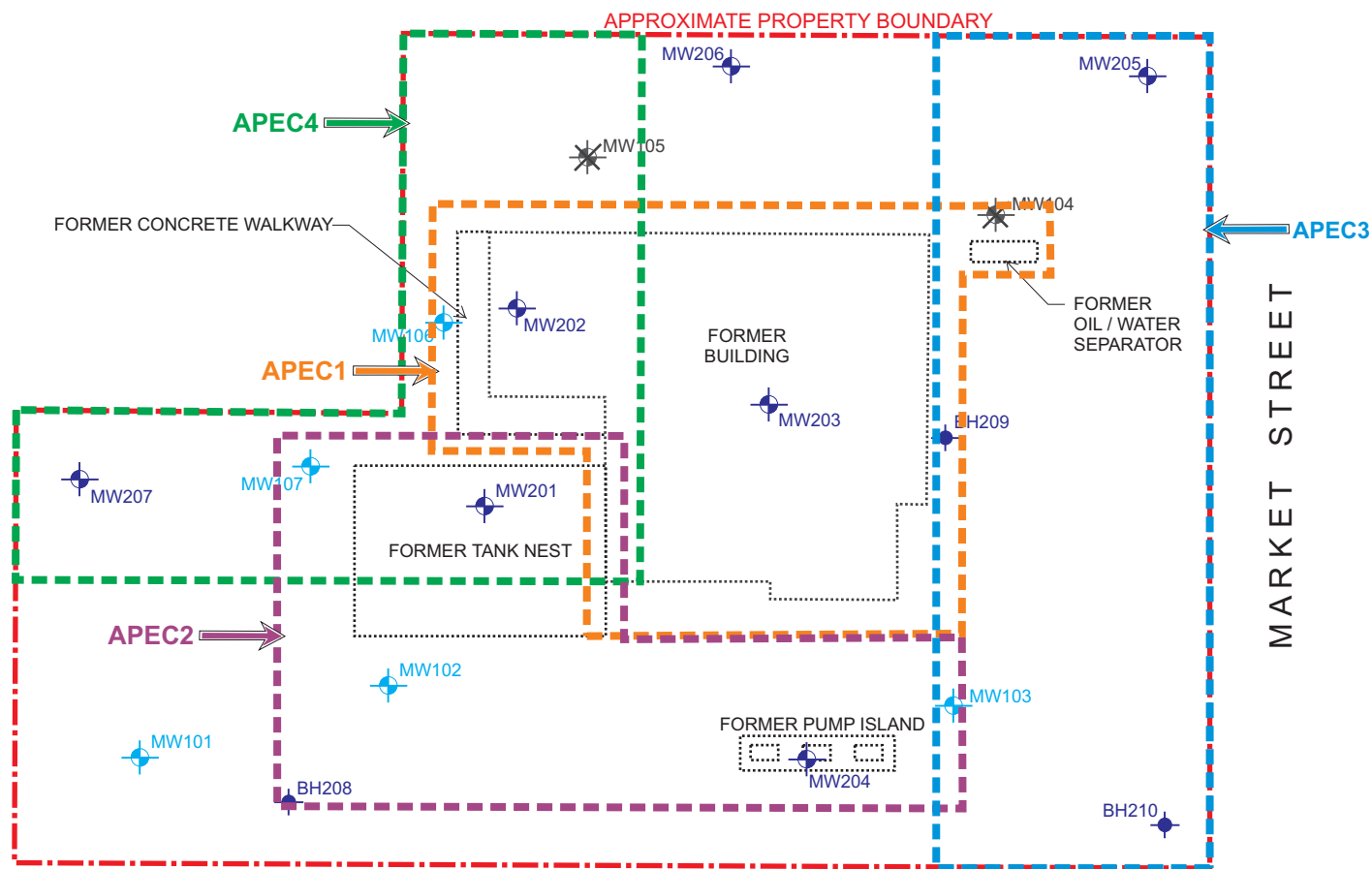
NOTE: PCA LOCATIONS SHOWN ARE FOR ILLUSTRATION PURPOSES, THESE ARE APPROXIMATE LOCATIONS AND DO NOT REPRESENT AREA OF STORAGE / OPERATIONS.

SOURCE: GOOGLE EARTH, 2015 IMAGERY.

0 100m 200m
(APPROXIMATE)

PROJECT #	CB644.02
SCALE	AS SHOWN
DATE	MAY 2016
DRAWN	SF
CHECKED	JS
DRAWING #	

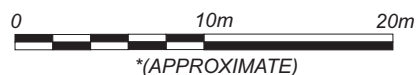
FIGURE 17



LEGEND

-  AREAS OF POTENTIAL ENVIRONMENTAL CONCERN (APEC)
-  BOREHOLE
-  MONITORING WELL (2012)
-  EXISTING MONITORING WELL (2007)
-  DESTROYED MONITORING WELL

HUME STREET



*NOTE: DRAWING TAKEN FROM SITE PLAN PROVIDED BY CLIENT, AND FROM FIELD MEASUREMENTS AND OBSERVATIONS. SCALE IS APPROXIMATE.

PROJECT #	CB644.02
SCALE	AS SHOWN
DATE	MAY 2016
DRAWN	ECV/SF
CHECKED	JS
DRAWING #	FIGURE 18

TABLES

TABLE 1 GROUNDWATER MONITORING DATA
121 Hume Street, Collingwood, ON

WELL NUMBER	DATE	GROUND ELEVATION ¹	T.O.P. ELEVATION ²	CV ³	DEPTH TO WATER FROM T.O.P. ⁴	DEPTH TO WATER FROM GROUND ⁵	GROUNDWATER ELEVATION ⁶	LPH THICKNESS ⁷
MW101	24-Aug-12	183.86	183.69	15 ppm	2.02	2.18	181.68	None
	12-Dec-12			<10 ppm	1.93	2.09	181.77	None
	5-Nov-15			<5 ppm	2.03	2.19	181.67	None
MW102	24-Aug-12	183.91	183.81	50 ppm	2.15	2.24	181.67	None
	12-Dec-12			25 ppm	2.04	2.13	181.78	None
	5-Nov-15			<5 ppm	2.10	2.20	181.72	None
MW103	24-Aug-12	184.05	183.96	75 ppm	2.18	2.27	181.78	None
	12-Dec-12			35 ppm	2.13	2.22	181.83	None
	5-Nov-15			-	Destroyed	-	-	-
MW106	24-Aug-12	183.84	183.77	80 ppm	2.49	2.55	181.29	None
	12-Dec-12			55 ppm	2.42	2.49	181.35	None
	5-Nov-15			<5 ppm	2.60	2.66	181.18	None
MW107	24-Aug-12	183.85	183.69	75 ppm	2.14	2.30	181.55	None
	12-Dec-12			50 ppm	2.00	2.15	181.69	None
	5-Nov-15			<5 ppm	-	-	-	-
MW201	24-Aug-12	183.73	183.58	5% LEL	2.03	2.17	181.55	None
	12-Dec-12			25 ppm	1.84	1.99	181.74	None
	5-Nov-15			<5 ppm	1.95	2.01	181.83	None
MW202	24-Aug-12	183.65	183.51	275 ppm	2.03	2.17	181.48	None
	12-Dec-12			45 pm	1.86	1.99	181.66	None
	5-Nov-15			<5 ppm	2.04	2.20	181.65	None
MW203	24-Aug-12	183.61	183.48	115 ppm	1.86	1.99	181.62	None
	12-Dec-12			25 ppm	1.75	1.88	181.73	None
	5-Nov-15			<5 ppm	1.88	2.02	181.71	None
MW204	24-Aug-12	183.98	183.79	10% LEL	2.03	2.22	181.76	None
	12-Dec-12			15 ppm	1.98	2.16	181.81	None
	5-Nov-15			-	Destroyed	-	-	-

Entered by: PJA

Checked by: PJS

MW205	24-Aug-12	183.39	183.23	7% LEL	1.68	1.84	181.54	None
	12-Dec-12			30 ppm	1.59	1.75	181.64	None
	5-Nov-15			<5 ppm	1.68	1.80	181.81	None
MW206	24-Aug-12	183.33	183.20	240 ppm	1.72	1.85	181.48	None
	12-Dec-12			25 ppm	1.55	1.67	181.66	None
	5-Nov-15			<5 ppm	1.71	1.90	182.08	None
MW207	24-Aug-12	183.59	183.50	48% LEL	1.99	2.08	181.51	None
	12-Dec-12			75 ppm	1.83	1.91	181.67	None
	5-Nov-15			<5 ppm	Dry	-	-	None
MW301	2-Dec-15	-	-	<5 ppm	6.71	-	-	None
MW302	2-Dec-15	-	-	<5 ppm	1.82	-	-	None
MW303	2-Dec-15	-	-	25 ppm	1.66	-	-	None

¹ Elevation of ground surface at well location in metres, relative to on-site benchmark.

² Elevation of highest point of well pipe in metres, relative to on-site benchmark.

³ Combustible vapour concentration in well headspace in parts per million (ppm) or percent of lower explosive limit (%LEL).

⁴ Corrected depth to groundwater, in metres from top of PVC pipe, assuming an LPH relative density of 0.8.

⁵ Corrected depth to groundwater, in metres from ground surface, assuming an LPH relative density of 0.8.

⁶ Corrected elevation of groundwater, in metres relative to on-site benchmark, assuming an LPH relative density of 0.8.

⁷ Measured thickness of liquid petroleum hydrocarbons in metres, if any.

- Not measured.

Entered by: PJA

Checked by: PJS

TABLE 2 SOIL ANALYTICAL RESULTS - PHCs
121 Hume Street, Collingwood, ON

Terrapex Sample Name			STANDARDS 2011 Table 3 R / P / I coarse	MW101-3B	MW101-4	MW102-4	MW103-3	MW104-4B
	Units	RDL						
Sample Depth	m bg	-	-	2.0 - 2.1	2.3 - 2.9	2.3 - 2.7	1.5 - 2.1	2.6 - 2.9
SV Reading	-	-	-					
Sampling Date	-	-	-	90% LEL	40 ppm	60 ppm	75 ppm	35 ppm
Analysis Date	-	-	-	07-Aug-07	07-Aug-07	07-Aug-07	08-Aug-07	08-Aug-07
Certificate of Analysis No.	-	-	-	N/A	N/A	N/A	N/A	N/A
Benzene	µg/g	0.2	0.21	< 0.2	< 0.02	< 0.02	< 0.02	< 0.02
Toluene	µg/g	0.2	2.3	< 0.2	< 0.02	< 0.02	< 0.02	< 0.02
Ethylbenzene	µg/g	0.2	2	< 0.2	< 0.02	< 0.02	< 0.02	< 0.02
Xylenes (total)	µg/g	0.4	3.1	< 0.4	< 0.04	< 0.04	< 0.04	< 0.04
Petroleum Hydrocarbons, F1	µg/g	10	55	390	< 10	< 10	< 10	< 10
Petroleum Hydrocarbons, F2	µg/g	10	98	300	< 10	< 10	< 10	< 10
Petroleum Hydrocarbons, F3	µg/g	10	300	< 10	< 10	< 10	< 10	< 10
Petroleum Hydrocarbons, F4	µg/g	10	2,800	< 10	< 10	< 10	< 10	< 10

1 Standards from Table 3 of April 15, 2011 *Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act*; Residential / Parkland / Institutional land use, coarse textured soil

ns No standard

m bg Meters below grade

SV Reading Soil vapour reading (ppm or % LEL)

ppm Parts per million (by volume)

% LEL Percent of the lower explosive limit

BOLD Exceeds standard

TABLE 2 SOIL ANALYTICAL RESULTS - PHCs
121 Hume Street, Collingwood, ON

CONTINUED

Terrapex Sample Name			STANDARDS 2011 Table 3 R / P / I coarse	MW105-4	MW106-4	MW107-4	BH108-4	MW201-4
	Units	RDL						
Sample Depth	m bg	-	-	2.3 - 2.9	2.3 - 2.9	2.3 - 2.9	2.3 - 2.7	2.3-2.5
SV Reading	-	-	-				>100% LEL	15 ppm
Sampling Date	-	-	-	75 ppm	335 ppm	500 ppm	08-Aug-07	Aug 22/12
Analysis Date	-	-	-	08-Aug-07	07-Aug-07	08-Aug-07	N/A	Aug 27-28/12
Certificate of Analysis No.	-	-	-	N/A	N/A	N/A	N/A	B2D0786
Benzene	µg/g	0.2	0.21	< 0.02	< 0.02	< 0.02	< 0.02	ND
Toluene	µg/g	0.2	2.3	< 0.02	< 0.02	< 0.02	< 0.02	ND
Ethylbenzene	µg/g	0.2	2	< 0.02	0.04	0.39	0.35	0.032
Xylenes (total)	µg/g	0.4	3.1	< 0.04	0.19	1.7	3.6	0.070
Petroleum Hydrocarbons, F1	µg/g	10	55	< 10	< 10	36	300	ND
Petroleum Hydrocarbons, F2	µg/g	10	98	< 10	< 10	< 10	94	ND
Petroleum Hydrocarbons, F3	µg/g	10	300	12	< 10	< 10	< 10	22
Petroleum Hydrocarbons, F4	µg/g	10	2,800	< 10	< 10	< 10	< 10	10

- ¹ Standards from Table 3 of April 15, 2011 *Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act*; Residential / Parkland / Institutional land use, coarse textured soil
- ns No standard
- m bg Meters below grade
- SV Reading Soil vapour reading (ppm or % LEL)
- ppm Parts per million (by volume)
- % LEL Percent of the lower explosive limit
- BOLD** Exceeds standard

TABLE 2 SOIL ANALYTICAL RESULTS - PHCs
121 Hume Street, Collingwood, ON

CONTINUED

Terrapex Sample Name			STANDARDS 2011 Table 3 R / P / I coarse	MW202-3	MW203-3	MW204-4	MW205-3	MW206-3
	Units	RDL						
Sample Depth	m bg	-	-	1.8-2.1	1.7-2.1	2.3-2.4	1.5-2.1	1.5-2.1
SV Reading	-	-	-	140 ppm	<10 ppm	40 ppm	10 ppm	15 ppm
Sampling Date	-	-	-	Aug 22/12	Aug 22/12	Aug 23/12	Aug 23/12	Aug 23/12
Analysis Date	-	-	-	Aug 27-29/12	Aug 27-28/12	Aug 27-29/12	Aug 27-29/12	Aug 27-28/12
Certificate of Analysis No.	-	-	-	B2D0786	B2D0786	B2D0786	B2D0786	B2D0786
Benzene	µg/g	0.2	0.21	ND	ND	ND	ND	ND
Toluene	µg/g	0.2	2.3	ND	ND	ND	ND	ND
Ethylbenzene	µg/g	0.2	2	0.96	ND	ND	ND	ND
Xylenes (total)	µg/g	0.4	3.1	11	ND	ND	ND	ND
Petroleum Hydrocarbons, F1	µg/g	10	55	58	ND	ND	ND	ND
Petroleum Hydrocarbons, F2	µg/g	10	98	ND	ND	ND	ND	ND
Petroleum Hydrocarbons, F3	µg/g	10	300	17	49	34	ND	ND
Petroleum Hydrocarbons, F4	µg/g	10	2,800	ND	18	14	ND	ND

¹ Standards from Table 3 of April 15, 2011 *Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act*; Residential / Parkland / Institutional land use, coarse textured soil

ns No standard
m bg Meters below grade
SV Reading Soil vapour reading (ppm or % LEL)
ppm Parts per million (by volume)
% LEL Percent of the lower explosive limit
BOLD Exceeds standard

TABLE 2 SOIL ANALYTICAL RESULTS - PHCs
121 Hume Street, Collingwood, ON

CONTINUED

Terrapex Sample Name			STANDARDS 2011 Table 3 R / P / I coarse	MW211-3 Field Duplicate of MW206-3	MW207-3	BH208-3	BH209-3	BH210-3
	Units	RDL						
Sample Depth	m bg	-	-	-	1.5-2.1	1.5-2.1	1.5-2.1	1.5-2.1
SV Reading	-	-	-	-	200 ppm	375 ppm	15 ppm	<10 ppm
Sampling Date	-	-	-	Aug 23/12	Aug 23/12	Aug 23/12	Aug 23/12	Aug 23/12
Analysis Date	-	-	-	Aug 27-28/12	Aug 27-29/12	Aug 27-29/12	Aug 27-28/12	Aug 27-28/12
Certificate of Analysis No.	-	-	-	B2D0786	B2D0786	B2D0786	B2D0786	B2D0786
Benzene	µg/g	0.2	0.21	ND	ND	ND	ND	ND
Toluene	µg/g	0.2	2.3	ND	ND	ND	ND	ND
Ethylbenzene	µg/g	0.2	2	ND	ND	ND	ND	ND
Xylenes (total)	µg/g	0.4	3.1	ND	0.12	ND	ND	ND
Petroleum Hydrocarbons, F1	µg/g	10	55	ND	33	56	ND	ND
Petroleum Hydrocarbons, F2	µg/g	10	98	ND	ND	460	ND	ND
Petroleum Hydrocarbons, F3	µg/g	10	300	ND	ND	17	ND	ND
Petroleum Hydrocarbons, F4	µg/g	10	2,800	ND	ND	ND	ND	ND

- ¹ Standards from Table 3 of April 15, 2011 *Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act*; Residential / Parkland / Institutional land use, coarse textured soil
- ns No standard
- m bg Meters below grade
- SV Reading Soil vapour reading (ppm or % LEL)
- ppm Parts per million (by volume)
- % LEL Percent of the lower explosive limit
- BOLD** Exceeds standard

TABLE 2 SOIL ANALYTICAL RESULTS - PHCs
121 Hume Street, Collingwood, ON

CONTINUED

Terrapex Sample Name			STANDARDS 2011 Table 3 R / P / I coarse	MW301-4	MW301-40 Field Duplicate of MW301-4	MW302-3	MW303-4A
	Units	RDL					
Sample Depth	m bg	-	-	2.3 - 2.9	-	1.5 - 2.1	2.3 - 2.6
SV Reading	-	-	-	<5 ppm	-	<5 ppm	<5 ppm
Sampling Date	-	-	-	1-Dec-15	1-Dec-15	1-Dec-15	1-Dec-15
Analysis Date	-	-	-	9-Dec-15	9-Dec-15	9-Dec-15	9-Dec-15
Certificate of Analysis No.	-	-	-	B5O9048	B5O9048	B5O9048	B5O9048
Benzene	µg/g	0.2	0.21	ND	ND	ND	ND
Toluene	µg/g	0.2	2.3	ND	ND	ND	ND
Ethylbenzene	µg/g	0.2	2	ND	ND	ND	ND
Xylenes (total)	µg/g	0.4	3.1	ND	ND	ND	ND
Petroleum Hydrocarbons, F1	µg/g	10	55	ND	ND	110	ND
Petroleum Hydrocarbons, F2	µg/g	10	98	ND	ND	41	ND
Petroleum Hydrocarbons, F3	µg/g	10	300	ND	ND	ND	ND
Petroleum Hydrocarbons, F4	µg/g	10	2,800	ND	ND	ND	ND

¹ Standards from Table 3 of April 15, 2011 *Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act*; Residential / Parkland / Institutional land use, coarse textured soil

ns No standard
m bg Meters below grade
SV Reading Soil vapour reading (ppm or % LEL)
ppm Parts per million (by volume)
% LEL Percent of the lower explosive limit
BOLD Exceeds standard

TABLE 3 SOIL ANALYTICAL RESULTS - VOCs
121 Hume Street, Collingwood, ON

Terrapex Sample Name			STANDARDS 2011 Table 3 R / P / I coarse	MW202-3	MW204-4
	Units	RDL			
Sample Depth	m bg	-	-	1.8-2.1	2.3-2.4
SV Reading	-	-	-	140 ppm	40 ppm
Sampling Date	-	-	-	Aug 22/12	Aug 23/12
Analysis Date	-	-	-	Aug 29/12	Aug 29/12
Certificate of Analysis No.	-	-	-	B2D0786	B2D0786
Acetone	µg/g	0.5	16	ND	ND
Benzene	µg/g	0.02	0.21	ND	ND
Bromodichloromethane	µg/g	0.05	13	ND	ND
Bromoform	µg/g	0.05	0.27	ND	ND
Bromomethane	µg/g	0.05	0.05	ND	ND
Carbon tetrachloride	µg/g	0.05	0.05	ND	ND
Chlorobenzene	µg/g	0.05	2.4	ND	ND
Chloroform	µg/g	0.05	0.05	ND	ND
Dibromochloromethane	µg/g	0.05	9.4	ND	ND
Dichlorobenzene 1,2-	µg/g	0.05	3.4	ND	ND
Dichlorobenzene, 1,3-	µg/g	0.05	4.8	ND	ND
Dichlorobenzene,1,4-	µg/g	0.05	0.083	ND	ND
Dichlorodifluoromethane	µg/g	0.05	16	ND	ND
Dichloroethane, 1,1-	µg/g	0.05	3.5	ND	ND
Dichloroethane, 1,2-	µg/g	0.05	0.05	ND	ND
Dichloroethylene, 1,1-	µg/g	0.05	0.05	ND	ND
Dichloroethylene, cis-1,2-	µg/g	0.05	3.4	ND	ND
Dichloroethylene, trans-1,2-	µg/g	0.05	0.084	ND	ND
Dichloropropane, 1,2-	µg/g	0.05	0.05	ND	ND
Dichloropropene, cis-1,3-	µg/g	0.03	-	ND	ND
Dichloropropene, trans-1,3-	µg/g	0.04	-	ND	ND
Dichloropropene, 1,3-	µg/g	0.05	0.05	-	-
Ethylbenzene	µg/g	0.02	2	0.96	ND
Ethylene dibromide	µg/g	0.05	0.05	ND	ND
Hexane	µg/g	0.05	2.8	0.35	ND
Methyl ethyl ketone	µg/g	0.05	16	ND	ND
Methyl isobutyl ketone	µg/g	0.05	1.7	ND	ND
Methyl tert butyl ether	µg/g	0.05	0.75	ND	ND
Methylene Chloride	µg/g	0.05	0.1	ND	ND
Styrene	µg/g	0.05	0.7	ND	ND
Tetrachloroethane, 1,1,1,2-	µg/g	0.05	0.058	ND	ND
Tetrachloroethane, 1,1,2,2-	µg/g	0.05	0.05	ND	ND
Tetrachloroethylene	µg/g	0.05	0.28	ND	ND
Toluene	µg/g	0.02	2.3	ND	ND
Trichloroethane, 1,1,1-	µg/g	0.05	0.38	ND	ND
Trichloroethane, 1,1,2-	µg/g	0.05	0.05	ND	ND
Trichloroethylene	µg/g	0.05	0.061	ND	ND
Trichlorofluoromethane	µg/g	0.05	4	ND	ND
Vinyl chloride	µg/g	0.02	0.02	ND	ND
Xylenes (total)	µg/g	0.02	3.1	11	ND

¹ Standards from Table 3 of April 15, 2011 *Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act* ; Residential / Parkland / Institutional land use, coarse textured soil

ns No standard
m bg Meters below grade
SV Reading Soil vapour reading (ppm or % LEL)
ppm Parts per million (by volume)
% LEL Percent of the lower explosive limit
BOLD Exceeds standard

TABLE 3 SOIL ANALYTICAL RESULTS - VOCs
121 Hume Street, Collingwood, ON

CONTINUED

Terrapex Sample Name			STANDARDS 2011 Table 3 R / P / I coarse	MW205-3	MW207-3
	Units	RDL			
Sample Depth	m bg	-	-	1.5-2.1	1.5-2.1
SV Reading	-	-	-	10 ppm	200 ppm
Sampling Date	-	-	-	Aug 23/12	Aug 23/12
Analysis Date	-	-	-	Aug 29/12	Aug 29/12
Certificate of Analysis No.	-	-	-	B2D0786	B2D0786
Acetone	µg/g	0.5	16	ND	ND
Benzene	µg/g	0.02	0.21	ND	ND
Bromodichloromethane	µg/g	0.05	13	ND	ND
Bromoform	µg/g	0.05	0.27	ND	ND
Bromomethane	µg/g	0.05	0.05	ND	ND
Carbon tetrachloride	µg/g	0.05	0.05	ND	ND
Chlorobenzene	µg/g	0.05	2.4	ND	ND
Chloroform	µg/g	0.05	0.05	ND	ND
Dibromochloromethane	µg/g	0.05	9.4	ND	ND
Dichlorobenzene 1,2-	µg/g	0.05	3.4	ND	ND
Dichlorobenzene, 1,3-	µg/g	0.05	4.8	ND	ND
Dichlorobenzene,1,4-	µg/g	0.05	0.083	ND	ND
Dichlorodifluoromethane	µg/g	0.05	16	ND	ND
Dichloroethane, 1,1-	µg/g	0.05	3.5	ND	ND
Dichloroethane, 1,2-	µg/g	0.05	0.05	ND	ND
Dichloroethylene, 1,1-	µg/g	0.05	0.05	ND	ND
Dichloroethylene, cis-1,2-	µg/g	0.05	3.4	ND	ND
Dichloroethylene, trans-1,2-	µg/g	0.05	0.084	ND	ND
Dichloropropane, 1,2-	µg/g	0.05	0.05	ND	ND
Dichloropropene, cis-1,3-	µg/g	0.03	-	ND	ND
Dichloropropene, trans-1,3-	µg/g	0.04	-	ND	ND
Dichloropropene, 1,3-	µg/g	0.05	0.05	-	-
Ethylbenzene	µg/g	0.02	2	ND	ND
Ethylene dibromide	µg/g	0.05	0.05	ND	ND
Hexane	µg/g	0.05	2.8	ND	1.1
Methyl ethyl ketone	µg/g	0.05	16	ND	ND
Methyl isobutyl ketone	µg/g	0.05	1.7	ND	ND
Methyl tert butyl ether	µg/g	0.05	0.75	ND	ND
Methylene Chloride	µg/g	0.05	0.1	ND	ND
Styrene	µg/g	0.05	0.7	ND	ND
Tetrachloroethane, 1,1,1,2-	µg/g	0.05	0.058	ND	ND
Tetrachloroethane, 1,1,2,2-	µg/g	0.05	0.05	ND	ND
Tetrachloroethylene	µg/g	0.05	0.28	ND	ND
Toluene	µg/g	0.02	2.3	ND	ND
Trichloroethane, 1,1,1-	µg/g	0.05	0.38	ND	ND
Trichloroethane, 1,1,2-	µg/g	0.05	0.05	ND	ND
Trichloroethylene	µg/g	0.05	0.061	ND	ND
Trichlorofluoromethane	µg/g	0.05	4	ND	ND
Vinyl chloride	µg/g	0.02	0.02	ND	ND
Xylenes (total)	µg/g	0.02	3.1	ND	0.12

¹ Standards from Table 3 of April 15, 2011 *Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act* ; Residential / Parkland / Institutional land use, coarse textured soil

ns No standard
m bg Meters below grade
SV Reading Soil vapour reading (ppm or % LEL)
ppm Parts per million (by volume)
% LEL Percent of the lower explosive limit
BOLD Exceeds standard

TABLE 3 SOIL ANALYTICAL RESULTS - VOCs
121 Hume Street, Collingwood, ON

CONTINUED

Terrapex Sample Name			STANDARDS 2011 Table 3 R / P / I coarse	BH208-3	MW301-4
	Units	RDL			
Sample Depth	m bg	-	-	1.5-2.1	2.3 - 2.9
SV Reading	-	-	-	375 ppm	<5 ppm
Sampling Date	-	-	-	Aug 23/12	1-Dec-15
Analysis Date	-	-	-	Aug 29/12	09-Dec-15
Certificate of Analysis No.	-	-	-	B2D0786	B5O9048
Acetone	µg/g	0.5	16	ND	ND
Benzene	µg/g	0.02	0.21	ND	ND
Bromodichloromethane	µg/g	0.05	13	ND	ND
Bromoform	µg/g	0.05	0.27	ND	ND
Bromomethane	µg/g	0.05	0.05	ND	ND
Carbon tetrachloride	µg/g	0.05	0.05	ND	ND
Chlorobenzene	µg/g	0.05	2.4	ND	ND
Chloroform	µg/g	0.05	0.05	ND	ND
Dibromochloromethane	µg/g	0.05	9.4	ND	ND
Dichlorobenzene 1,2-	µg/g	0.05	3.4	ND	ND
Dichlorobenzene, 1,3-	µg/g	0.05	4.8	ND	ND
Dichlorobenzene,1,4-	µg/g	0.05	0.083	ND	ND
Dichlorodifluoromethane	µg/g	0.05	16	ND	ND
Dichloroethane, 1,1-	µg/g	0.05	3.5	ND	ND
Dichloroethane, 1,2-	µg/g	0.05	0.05	ND	ND
Dichloroethylene, 1,1-	µg/g	0.05	0.05	ND	ND
Dichloroethylene, cis-1,2-	µg/g	0.05	3.4	ND	ND
Dichloroethylene, trans-1,2-	µg/g	0.05	0.084	ND	ND
Dichloropropane, 1,2-	µg/g	0.05	0.05	ND	ND
Dichloropropene, cis-1,3-	µg/g	0.03	-	ND	ND
Dichloropropene, trans-1,3-	µg/g	0.04	-	ND	ND
Dichloropropene, 1,3-	µg/g	0.05	0.05	-	ND
Ethylbenzene	µg/g	0.02	2	ND	ND
Ethylene dibromide	µg/g	0.05	0.05	ND	ND
Hexane	µg/g	0.05	2.8	ND	ND
Methyl ethyl ketone	µg/g	0.05	16	ND	ND
Methyl isobutyl ketone	µg/g	0.05	1.7	ND	ND
Methyl tert butyl ether	µg/g	0.05	0.75	ND	ND
Methylene Chloride	µg/g	0.05	0.1	ND	ND
Styrene	µg/g	0.05	0.7	ND	ND
Tetrachloroethane, 1,1,1,2-	µg/g	0.05	0.058	ND (0.060)	ND
Tetrachloroethane, 1,1,2,2-	µg/g	0.05	0.05	ND	ND
Tetrachloroethylene	µg/g	0.05	0.28	ND	ND
Toluene	µg/g	0.02	2.3	ND	ND
Trichloroethane, 1,1,1-	µg/g	0.05	0.38	ND	ND
Trichloroethane, 1,1,2-	µg/g	0.05	0.05	ND	ND
Trichloroethylene	µg/g	0.05	0.061	ND	ND
Trichlorofluoromethane	µg/g	0.05	4	ND	ND
Vinyl chloride	µg/g	0.02	0.02	ND	ND
Xylenes (total)	µg/g	0.02	3.1	ND	ND

¹ Standards from Table 3 of April 15, 2011 *Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act* ; Residential / Parkland / Institutional land use, coarse textured soil

ns No standard
m bg Meters below grade
SV Reading Soil vapour reading (ppm or % LEL)
ppm Parts per million (by volume)
% LEL Percent of the lower explosive limit
BOLD Exceeds standard

TABLE 3 SOIL ANALYTICAL RESULTS - VOCs
121 Hume Street, Collingwood, ON

CONTINUED

Terrapex Sample Name			STANDARDS 2011 Table 3 R / P / I coarse	MW301-40 Field Duplicate of MW301-4	MW302-3
	Units	RDL			
Sample Depth	m bg	-	-	-	1.5 - 2.1
SV Reading	-	-	-	<5 ppm	<5 ppm
Sampling Date	-	-	-	1-Dec=15	1-Dec-15
Analysis Date	-	-	-	09-Dec-15	09-Dec-15
Certificate of Analysis No.	-	-	-	B5O9048	B5O9048
Acetone	µg/g	0.5	16	ND	ND
Benzene	µg/g	0.02	0.21	ND	ND
Bromodichloromethane	µg/g	0.05	13	ND	ND
Bromoform	µg/g	0.05	0.27	ND	ND
Bromomethane	µg/g	0.05	0.05	ND	ND
Carbon tetrachloride	µg/g	0.05	0.05	ND	ND
Chlorobenzene	µg/g	0.05	2.4	ND	ND
Chloroform	µg/g	0.05	0.05	ND	ND
Dibromochloromethane	µg/g	0.05	9.4	ND	ND
Dichlorobenzene 1,2-	µg/g	0.05	3.4	ND	ND
Dichlorobenzene 1,3-	µg/g	0.05	4.8	ND	ND
Dichlorobenzene 1,4-	µg/g	0.05	0.083	ND	ND
Dichlorodifluoromethane	µg/g	0.05	16	ND	ND
Dichloroethane 1,1-	µg/g	0.05	3.5	ND	ND
Dichloroethane 1,2-	µg/g	0.05	0.05	ND	ND
Dichloroethylene 1,1-	µg/g	0.05	0.05	ND	ND
Dichloroethylene cis-1,2-	µg/g	0.05	3.4	ND	ND
Dichloroethylene trans-1,2-	µg/g	0.05	0.084	ND	ND
Dichloropropane 1,2-	µg/g	0.05	0.05	ND	ND
Dichloropropene cis-1,3-	µg/g	0.03	-	ND	ND
Dichloropropene trans-1,3-	µg/g	0.04	-	ND	ND
Dichloropropene 1,3-	µg/g	0.05	0.05	ND	ND
Ethylbenzene	µg/g	0.02	2	ND	ND
Ethylene dibromide	µg/g	0.05	0.05	ND	ND (0.060)
Hexane	µg/g	0.05	2.8	ND	ND
Methyl ethyl ketone	µg/g	0.05	16	ND	ND
Methyl isobutyl ketone	µg/g	0.05	1.7	ND	ND
Methyl tert butyl ether	µg/g	0.05	0.75	ND	ND
Methylene Chloride	µg/g	0.05	0.1	ND (0.090)	ND
Styrene	µg/g	0.05	0.7	ND	ND
Tetrachloroethane 1,1,1,2-	µg/g	0.05	0.058	ND	ND
Tetrachloroethane 1,1,2,2-	µg/g	0.05	0.05	ND	ND
Tetrachloroethylene	µg/g	0.05	0.28	ND	ND
Toluene	µg/g	0.02	2.3	ND	ND
Trichloroethane 1,1,1-	µg/g	0.05	0.38	ND	ND
Trichloroethane 1,1,2-	µg/g	0.05	0.05	ND	ND
Trichloroethylene	µg/g	0.05	0.061	ND	ND
Trichlorofluoromethane	µg/g	0.05	4	ND	ND
Vinyl chloride	µg/g	0.02	0.02	ND	ND
Xylenes (total)	µg/g	0.02	3.1	ND	ND

¹ Standards from Table 3 of April 15, 2011 *Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act* ; Residential / Parkland / Institutional land use, coarse textured soil

ns No standard
m bg Meters below grade
SV Reading Soil vapour reading (ppm or % LEL)
ppm Parts per million (by volume)
% LEL Percent of the lower explosive limit
BOLD Exceeds standard

TABLE 3 SOIL ANALYTICAL RESULTS - VOCs
121 Hume Street, Collingwood, ON

CONTINUED

Terrapex Sample Name			STANDARDS 2011 Table 3 R / P / I coarse	MW303-4A	MW401-3
	Units	RDL			
Sample Depth	m bg	-	-	2.1 - 2.5	2.1-2.4
SV Reading	-	-	-	<5 ppm	<5 ppm
Sampling Date	-	-	-	1-Dec-15	25-May-16
Analysis Date	-	-	-	09-Dec-15	02-Jun-16
Certificate of Analysis No.	-	-	-	B5O9048	B6A7201
Acetone	µg/g	0.5	16	ND	ND
Benzene	µg/g	0.02	0.21	ND	ND
Bromodichloromethane	µg/g	0.05	13	ND	ND
Bromoform	µg/g	0.05	0.27	ND	ND
Bromomethane	µg/g	0.05	0.05	ND	ND
Carbon tetrachloride	µg/g	0.05	0.05	ND	ND
Chlorobenzene	µg/g	0.05	2.4	ND	ND
Chloroform	µg/g	0.05	0.05	ND	ND
Dibromochloromethane	µg/g	0.05	9.4	ND	ND
Dichlorobenzene 1,2-	µg/g	0.05	3.4	ND	ND
Dichlorobenzene, 1,3-	µg/g	0.05	4.8	ND	ND
Dichlorobenzene,1,4-	µg/g	0.05	0.083	ND	ND
Dichlorodifluoromethane	µg/g	0.05	16	ND	ND
Dichloroethane, 1,1-	µg/g	0.05	3.5	ND	ND
Dichloroethane, 1,2-	µg/g	0.05	0.05	ND	ND
Dichloroethylene, 1,1-	µg/g	0.05	0.05	ND	ND
Dichloroethylene, cis-1,2-	µg/g	0.05	3.4	ND	ND
Dichloroethylene, trans-1,2-	µg/g	0.05	0.084	ND	ND
Dichloropropane, 1,2-	µg/g	0.05	0.05	ND	ND
Dichloropropene, cis-1,3-	µg/g	0.03	-	ND	ND
Dichloropropene, trans-1,3-	µg/g	0.04	-	ND	ND
Dichloropropene, 1,3-	µg/g	0.05	0.05	ND	ND
Ethylbenzene	µg/g	0.02	2	ND	ND
Ethylene dibromide	µg/g	0.05	0.05	ND	ND
Hexane	µg/g	0.05	2.8	ND	ND
Methyl ethyl ketone	µg/g	0.05	16	ND	ND
Methyl isobutyl ketone	µg/g	0.05	1.7	ND	ND
Methyl tert butyl ether	µg/g	0.05	0.75	ND	ND
Methylene Chloride	µg/g	0.05	0.1	ND	ND
Styrene	µg/g	0.05	0.7	ND	ND
Tetrachloroethane, 1,1,1,2-	µg/g	0.05	0.058	ND	ND
Tetrachloroethane, 1,1,2,2-	µg/g	0.05	0.05	ND	ND
Tetrachloroethylene	µg/g	0.05	0.28	ND	ND
Toluene	µg/g	0.02	2.3	ND	ND
Trichloroethane, 1,1,1-	µg/g	0.05	0.38	ND	ND
Trichloroethane, 1,1,2-	µg/g	0.05	0.05	ND	ND
Trichloroethylene	µg/g	0.05	0.061	ND	ND
Trichlorofluoromethane	µg/g	0.05	4	ND	ND
Vinyl chloride	µg/g	0.02	0.02	ND	ND
Xylenes (total)	µg/g	0.02	3.1	0.029	ND

¹ Standards from Table 3 of April 15, 2011 *Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act* ; Residential / Parkland / Institutional land use, coarse textured soil

ns No standard
m bg Meters below grade
SV Reading Soil vapour reading (ppm or % LEL)
ppm Parts per million (by volume)
% LEL Percent of the lower explosive limit
BOLD Exceeds standard

TABLE 4 SOIL ANALYTICAL RESULTS - PAHs
121 Hume Street, Collingwood, Ontario

Terrapex Sample Name			STANDARDS ² 2011 Table 3 R / P / I coarse	MW202-4	MW204-4	MW207-1
	Units	RDL				
Sample Depth	m bg	-	-	2.3-2.9	2.3-2.4	0.2-0.8
SV Reading	-	-	-	20 ppm	40 ppm	25 ppm
Sampling Date	-	-	-	22-Aug-12	22-Aug-12	22-Aug-12
Analysis Date	-	-	-	28-Aug-12	28-Aug-12	28-Aug-12
Certificate of Analysis No.	-	-	-	B2D0786	B2D0786	B2D0786
Acenaphthene	µg/g	0.0050	7.9	ND	ND	ND (0.025)
Acenaphthylene	µg/g	0.0050	0.15	ND	0.0091	0.085
Anthracene	µg/g	0.0050	0.67	ND	0.022	0.036
Benzo(a)anthracene	µg/g	0.0050	0.5	ND	0.088	0.15
Benzo(a)pyrene	µg/g	0.0050	0.3	ND	0.072	0.18
Benzo(b)fluoranthene	µg/g	0.0050	0.78	ND	0.088	0.26
Benzo(g,h,i)perylene	µg/g	0.0050	6.6	ND	0.044	0.15
Benzo(k)fluoranthene	µg/g	0.0050	0.78	ND	0.031	0.088
Chrysene	µg/g	0.0050	7	ND	0.080	0.20
Dibenzo(a,h)anthracene	µg/g	0.0050	0.1	ND	0.011	0.035
Fluoranthene	µg/g	0.0050	0.69	ND	0.15	0.31
Fluorene	µg/g	0.0050	62	ND	ND	ND (0.025)
Indeno(1,2,3-cd)pyrene	µg/g	0.0050	0.38	ND	0.051	0.17
Methylnaphthalene, 1- ¹	µg/g	0.0050	0.99	0.025	ND	ND (0.025)
Methylnaphthalene, 2- ¹	µg/g	0.0050	0.99	0.026	ND	ND (0.025)
Methylnaphthalene, 1- & 2- ¹	µg/g	0.0050	0.99	0.052	ND (0.0071)	ND (0.035)
Napthalene	µg/g	0.0050	0.6	0.036	ND	ND (0.025)
Phenanthrene	µg/g	0.0050	6.2	ND	0.043	0.090
Pyrene	µg/g	0.0050	78	ND	0.13	0.28

¹ 2-methylnaphthalene standard applicable to 1-methylnaphthalene with the provision that if both are detected, the sum of the two concentrations cannot exceed the standard

² Standards from Table 3 of April 15, 2011 *Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act*; Residential / Parkland / Institutional land use, coarse textured soil

ns No standard

m bg Meters below grade

CSV Reading Combustible soil vapour reading (ppm or % LEL)

ppm Parts per million (by volume)

% LEL Percent of the lower explosive limit

BOLD Exceeds standard

ND (0.060) Due to the sample matrix, sample required dilution. Detection limits (in brackets) were adjusted accordingly

Entered by: SS

Checked by: PJS

TABLE 4 SOIL ANALYTICAL RESULTS - PAHs
121 Hume Street, Collingwood, Ontario

CONTINUED

Terrapex Sample Name			STANDARDS ² 2011 Table 3 R / P / I coarse	BH209-4	MW401-2B
	Units	RDL			
Sample Depth	m bg	-	-	2.3-2.7	1.5-2.1
SV Reading	-	-	-	15 ppm	<5 ppm
Sampling Date	-	-	-	22-Aug-12	25-May-16
Analysis Date	-	-	-	28-Aug-12	2-Jun-16
Certificate of Analysis No.	-	-	-	B2D0786	B6A7201
Acenaphthene	µg/g	0.0050	7.9	ND	ND
Acenaphthylene	µg/g	0.0050	0.15	ND	ND
Anthracene	µg/g	0.0050	0.67	ND	ND
Benzo(a)anthracene	µg/g	0.0050	0.5	ND	ND
Benzo(a)pyrene	µg/g	0.0050	0.3	ND	ND
Benzo(b)fluoranthene	µg/g	0.0050	0.78	ND	ND
Benzo(g,h,i)perylene	µg/g	0.0050	6.6	ND	ND
Benzo(k)fluoranthene	µg/g	0.0050	0.78	ND	ND
Chrysene	µg/g	0.0050	7	ND	ND
Dibenzo(a,h)anthracene	µg/g	0.0050	0.1	ND	ND
Fluoranthene	µg/g	0.0050	0.69	ND	ND
Fluorene	µg/g	0.0050	62	ND	ND
Indeno(1,2,3-cd)pyrene	µg/g	0.0050	0.38	ND	ND
Methylnaphthalene, 1- ¹	µg/g	0.0050	0.99	ND	ND
Methylnaphthalene, 2- ¹	µg/g	0.0050	0.99	ND	ND
Methylnaphthalene, 1- & 2- ¹	µg/g	0.0050	0.99	ND	ND
Napthalene	µg/g	0.0050	0.6	ND	ND
Phenanthrene	µg/g	0.0050	6.2	ND	ND
Pyrene	µg/g	0.0050	78	ND	ND

¹ 2-methylnaphthalene standard applicable to 1-methylnaphthalene with the provision that if both are detected, the sum of the two concentrations cannot exceed the standard

² Standards from Table 3 of April 15, 2011 *Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act*; Residential / Parkland / Institutional land use, coarse textured soil

ns No standard

m bg Meters below grade

CSV Reading Combustible soil vapour reading (ppm or % LEL)

ppm Parts per million (by volume)

% LEL Percent of the lower explosive limit

BOLD Exceeds standard

ND (0.060) Due to the sample matrix, sample required dilution. Detection limits (in brackets) were adjusted accordingly

Entered by: SS

Checked by: PJS

TABLE 5 SOIL ANALYTICAL RESULTS - INORGANICS
121 Hume Street, Collingwood, Ontario

Terrapex Sample Name			STANDARDS 2011 Table 3 R / P / I coarse ²	MW204-1	MW205-1
	Units	RDL			
Sample Depth	m bg	-	-	0-0.8	0-0.8
SV Reading	-	-	-	35 ppm	15 ppm
Sampling Date	-	-	-	23-Aug-12	23-Aug-12
Analysis Date	-	-	-	28-Aug-12	28-Aug-12
Certificate of Analysis No.	-	-	-	B2D0786	B2D0786
Antimony	µg/g	0.2	7.5	ND	ND
Arsenic	µg/g	1	18	1.2	1.9
Barium	µg/g	0.5	390	2.9	13
Beryllium	µg/g	0.2	4	ND	ND
Boron (Total) ¹	µg/g	5	120	ND	ND
Cadmium	µg/g	0.1	1.2	ND	0.19
Chromium	µg/g	4.2	160	1.6	4.3
Hexavalent Chromium	µg/g	0.2	8	-	-
Cobalt	µg/g	1	22	0.53	1.3
Copper	µg/g	1.4	140	2.3	6.1
Cyanide (CN-)	µg/g	0.01	0.051	-	-
Lead	µg/g	3.2	120	3.2	35
Mercury	µg/g	0.05	0.27	-	-
Molybdenum	µg/g	0.5	6.9	ND	ND
Nickel	µg/g	0.5	100	ND (2.5)	3.1
Selenium	µg/g	0.5	2.4	ND	ND
Silver	µg/g	0.2	20	ND	ND
Thallium	µg/g	0.05	1	ND	ND
Uranium	µg/g	0.05	23	0.071	0.17
Vanadium	µg/g	5	86	ND	5.7
Zinc	µg/g	5	340	7.4	28
pH	-	-	-	8.09	-
Electrical Conductivity	mS/cm	0.002	0.7	-	-
Sodium Adsorption Ratio	-	-	5	-	-

² Standards from Table 3 of April 15, 2011 *Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act* ; Residential / Parkland / Institutional land use, coarse textured soil

¹ Hot Water Soluble Boron standard applies to surface soils; for subsurface soils, the Total Boron standard applies

ns No standard

m bg Meters below grade

SV Reading Soil vapour reading (ppm or % LEL)

ppm Parts per million (by volume)

% LEL Percent of the lower explosive limit

BOLD Exceeds standard

TABLE 5 SOIL ANALYTICAL RESULTS - INORGANICS
121 Hume Street, Collingwood, Ontario

CONTINUED

Terrapex Sample Name			STANDARDS 2011 Table 3 R / P / I coarse ²	MW207-1	MW209-4
	Units	RDL			
Sample Depth	m bg	-	-	0.2-0.8	2.3-2.7
SV Reading	-	-	-	25 ppm	15 ppm
Sampling Date	-	-	-	23-Aug-12	23-Aug-12
Analysis Date	-	-	-	28-Aug-12	28-Aug-12
Certificate of Analysis No.	-	-	-	B2D0786	B2D0786
Antimony	µg/g	0.2	7.5	0.40	-
Arsenic	µg/g	1	18	6.7	-
Barium	µg/g	0.5	390	77	-
Beryllium	µg/g	0.2	4	0.24	-
Boron (Total) ¹	µg/g	5	120	8.2	-
Cadmium	µg/g	0.1	1.2	0.26	-
Chromium	µg/g	4.2	160	8.3	-
Hexavalent Chromium	µg/g	0.2	8	-	-
Cobalt	µg/g	1	22	2.6	-
Copper	µg/g	1.4	140	24	-
Cyanide (CN-)	µg/g	0.01	0.051	-	-
Lead	µg/g	3.2	120	120	-
Mercury	µg/g	0.05	0.27	-	-
Molybdenum	µg/g	0.5	6.9	ND	-
Nickel	µg/g	0.5	100	6.7	-
Selenium	µg/g	0.5	2.4	0.64	-
Silver	µg/g	0.2	20	ND	-
Thallium	µg/g	0.05	1	0.070	-
Uranium	µg/g	0.05	23	0.27	-
Vanadium	µg/g	5	86	8.5	-
Zinc	µg/g	5	340	93	-
pH	-	-	-	-	7.93
Electrical Conductivity	mS/cm	0.002	0.7	-	-
Sodium Adsorption Ratio	-	-	5	-	-

² Standards from Table 3 of April 15, 2011 *Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act* ; Residential / Parkland / Institutional land use, coarse textured soil

¹ Hot Water Soluble Boron standard applies to surface soils; for subsurface soils, the Total Boron standard applies

ns No standard

m bg Meters below grade

SV Reading Soil vapour reading (ppm or % LEL)

ppm Parts per million (by volume)

% LEL Percent of the lower explosive limit

BOLD Exceeds standard

TABLE 5 SOIL ANALYTICAL RESULTS - INORGANICS
121 Hume Street, Collingwood, Ontario

CONTINUED

Terrapex Sample Name			STANDARDS 2011 Table 3 R / P / I coarse ²	MW401-1
	Units	RDL		
Sample Depth	m bg	-	-	0-0.9
SV Reading	-	-	-	<5 ppm
Sampling Date	-	-	-	25-May-16
Analysis Date	-	-	-	02-Jun-16
Certificate of Analysis No.	-	-	-	B6A7201
Antimony	µg/g	0.2	7.5	ND
Arsenic	µg/g	1	18	1.0
Barium	µg/g	0.5	390	4.8
Beryllium	µg/g	0.2	4	ND
Boron (Total) ¹	µg/g	5	120	ND
Cadmium	µg/g	0.1	1.2	ND
Chromium	µg/g	4.2	160	4.2
Hexavalent Chromium	µg/g	0.2	8	ND
Cobalt	µg/g	1	22	1.0
Copper	µg/g	1.4	140	1.4
Cyanide (CN-)	µg/g	0.01	0.051	ND
Lead	µg/g	3.2	120	3.2
Mercury	µg/g	0.05	0.27	ND
Molybdenum	µg/g	0.5	6.9	ND
Nickel	µg/g	0.5	100	2.1
Selenium	µg/g	0.5	2.4	ND
Silver	µg/g	0.2	20	ND
Thallium	µg/g	0.05	1	ND
Uranium	µg/g	0.05	23	0.20
Vanadium	µg/g	5	86	6.5
Zinc	µg/g	5	340	7.6
pH	-	-	-	7.92
Electrical Conductivity	mS/cm	0.002	0.7	0.17
Sodium Adsorption Ratio	-	-	5	0.80

² Standards from Table 3 of April 15, 2011 *Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act* ; Residential / Parkland / Institutional land use, coarse textured soil

¹ Hot Water Soluble Boron standard applies to surface soils; for subsurface soils, the Total Boron standard applies

ns No standard

m bg Meters below grade

SV Reading Soil vapour reading (ppm or % LEL)

ppm Parts per million (by volume)

% LEL Percent of the lower explosive limit

BOLD Exceeds standard

TABLE 6 SOIL ANALYTICAL RESULTS - PHCs
121 Hume Street, Collingwood, Ontario

Terrapex Sample Name			STANDARDS ¹ 2011 Table 3 R / P / I coarse	TP201-4	TP201-5	TP202-4	TP202-6	TP203-5
	Units	RDL						
Sample Depth	m bg	-	-	1.8	2.4	1.8	2.9	2.1
SV Reading	-	-	-	25 ppm	15 ppm	20 ppm	10 ppm	15 ppm
Sampling Date	-	-	-	Dec 13/12	Dec 13/12	Dec 13/12	Dec 13/12	Dec 13/12
Analysis Date	-	-	-	Dec 20-22/12	Dec 20-22/12	Dec 22/12	Dec 22/12	Dec 22/12
Certificate of Analysis No.	-	-	-	B2J8051	B2J8051	B2J8051	B2J8051	B2J8051
Benzene	µg/g	0.02	0.21	ND	ND	ND	0.22	ND
Toluene	µg/g	0.02	2.3	ND	ND	ND	ND	ND
Ethylbenzene	µg/g	0.02	2	ND	ND	ND	ND	ND
Xylenes (total)	µg/g	0.04	3.1	ND	ND	ND	ND	ND
Petroleum Hydrocarbons, F1	µg/g	10	55	ND	ND	ND	ND	ND
Petroleum Hydrocarbons, F2	µg/g	10	98	ND	ND	ND	ND	ND
Petroleum Hydrocarbons, F3	µg/g	10	300	ND	ND	ND	ND	ND
Petroleum Hydrocarbons, F4	µg/g	10	2,800	ND	ND	ND	ND	ND

¹ Standards from Table 3 of April 15, 2011 *Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act*; Residential / Parkland / Institutional land use, coarse textured soil

ns No standard

m bg Meters below grade

SV Reading Soil vapour reading (ppm or % LEL)

ppm Parts per million (by volume)

ND not detected at the laboratory minimum detection limit

% LEL Percent of the lower explosive limit

BOLD Exceeds standard

ND (1) Value in brackets shows adjusted reportable detection limit due to dilution

Entered by: SS

Checked by: PJS

TABLE 6 SOIL ANALYTICAL RESULTS - PHCs
121 Hume Street, Collingwood, Ontario

(CONT'D)

Terrapex Sample Name			STANDARDS ¹ 2011 Table 3 R / P / I coarse	TP203-6	TP204-5	TP204-6	TP205-4	TP205-5
	Units	RDL						
Sample Depth	m bg	-	-	2.7	2.1	2.7	2.0	2.6
SV Reading	-	-	-	15 ppm	20 ppm	10 ppm	10 ppm	10 ppm
Sampling Date	-	-	-	Dec 13/12	Dec 13/12	Dec 13/12	Dec 13/12	Dec 13/12
Analysis Date	-	-	-	Dec 22/12	Dec 21-22/12	Dec 19-22/12	Dec 19-22/12	Dec 20-22/12
Certificate of Analysis No.	-	-	-	B2J8051	B2J8051	B2J8051	B2J8051	B2J8051
Benzene	µg/g	0.02	0.21	ND	ND	0.048	ND	0.048
Toluene	µg/g	0.02	2.3	ND	ND	ND	ND	ND
Ethylbenzene	µg/g	0.02	2	ND	ND	ND	ND	ND
Xylenes (total)	µg/g	0.04	3.1	ND	ND	ND	ND	ND
Petroleum Hydrocarbons, F1	µg/g	10	55	ND	ND	ND	ND	ND
Petroleum Hydrocarbons, F2	µg/g	10	98	ND	ND	ND	ND	ND
Petroleum Hydrocarbons, F3	µg/g	10	300	ND	ND	16	ND	ND
Petroleum Hydrocarbons, F4	µg/g	10	2,800	ND	ND	ND	ND	ND

- ¹ Standards from Table 3 of April 15, 2011 *Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act*; Residential / Parkland / Institutional land use, coarse textured soil
- ns No standard
- m bg Meters below grade
- SV Reading Soil vapour reading (ppm or % LEL)
- ppm Parts per million (by volume)
- ND not detected at the laboratory minimum detection limit
- % LEL Percent of the lower explosive limit
- BOLD** Exceeds standard
- ND (1) Value in brackets shows adjusted reportable detection limit due to dilution

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Checked by: PJS

TABLE 6 SOIL ANALYTICAL RESULTS - PHCs
121 Hume Street, Collingwood, Ontario

(CONT'D)

Terrapex Sample Name			STANDARDS ¹ 2011 Table 3 R / P / I coarse	TP206-4	TP206-5	TP207-4	TP207-6	TP208-5
	Units	RDL						
Sample Depth	m bg	-	-	1.8	2.4	1.8	2.7	2.4
SV Reading	-	-	-	15 ppm	20 ppm	20 ppm	10 ppm	16% LEL
Sampling Date	-	-	-	Dec 13/12	Dec 13/12	Dec 13/12	Dec 13/12	Dec 14/12
Analysis Date	-	-	-	Dec 20-22/12	Dec 20-22/12	Dec 21-22/12	Dec 20-22/12	Dec 22/12
Certificate of Analysis No.	-	-	-	B2J8051	B2J8051	B2J8051	B2J8051	B2J8051
Benzene	µg/g	0.02	0.21	ND	ND	ND	ND	ND
Toluene	µg/g	0.02	2.3	ND	ND	ND	ND	ND
Ethylbenzene	µg/g	0.02	2	ND	ND	ND	ND	ND
Xylenes (total)	µg/g	0.04	3.1	ND	ND	ND	ND	0.092
Petroleum Hydrocarbons, F1	µg/g	10	55	ND	ND	ND	ND	120
Petroleum Hydrocarbons, F2	µg/g	10	98	ND	ND	ND	ND	270
Petroleum Hydrocarbons, F3	µg/g	10	300	ND	ND	45	ND	87
Petroleum Hydrocarbons, F4	µg/g	10	2,800	ND	ND	ND	ND	63

- ¹ Standards from Table 3 of April 15, 2011 *Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act*; Residential / Parkland / Institutional land use, coarse textured soil
- ns No standard
- m bg Meters below grade
- SV Reading Soil vapour reading (ppm or % LEL)
- ppm Parts per million (by volume)
- ND not detected at the laboratory minimum detection limit
- % LEL Percent of the lower explosive limit
- BOLD** Exceeds standard
- ND (1) Value in brackets shows adjusted reportable detection limit due to dilution

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TABLE 6 SOIL ANALYTICAL RESULTS - PHCs
121 Hume Street, Collingwood, Ontario

(CONT'D)

Terrapex Sample Name	Units	RDL	STANDARDS ¹ 2011 Table 3 R / P / I coarse	TP001 Field Duplicate of TP208-5	TP208-6	TP208-7	TP209-5	TP209-7
Sample Depth	m bg	-	-	-	2.7	3.1	2.0	2.7
SV Reading	-	-	-	-	30% LEL	150 ppm	40 ppm	25 ppm
Sampling Date	-	-	-	Dec 14/12	Dec 14/12	Dec 14/12	Dec 14/12	Dec 14/12
Analysis Date	-	-	-	Dec 20-22/12	Dec 22-23/12	Dec 20-23/12	Dec 20-21/12	Dec 22/12
Certificate of Analysis No.	-	-	-	B2J8051	B2J8051	B2J8051	B2J8051	B2J8051
Benzene	µg/g	0.02	0.21	ND	ND (0.40)	ND	ND	0.026
Toluene	µg/g	0.02	2.3	ND	ND (0.40)	ND	ND	ND
Ethylbenzene	µg/g	0.02	2	0.034	2.8	ND	ND	0.18
Xylenes (total)	µg/g	0.04	3.1	0.23	15	0.12	ND	0.76
Petroleum Hydrocarbons, F1	µg/g	10	55	300	3,200	11	ND	ND
Petroleum Hydrocarbons, F2	µg/g	10	98	32	390	ND	ND	ND
Petroleum Hydrocarbons, F3	µg/g	10	300	12	52	ND	ND	12
Petroleum Hydrocarbons, F4	µg/g	10	2,800	ND	24	ND	ND	ND

- ¹ Standards from Table 3 of April 15, 2011 *Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act*; Residential / Parkland / Institutional land use, coarse textured soil
- ns No standard
- m bg Meters below grade
- SV Reading Soil vapour reading (ppm or % LEL)
- ppm Parts per million (by volume)
- ND not detected at the laboratory minimum detection limit
- % LEL Percent of the lower explosive limit
- BOLD** Exceeds standard
- ND (1) Value in brackets shows adjusted reportable detection limit due to dilution

Entered by: SS

Checked by: PJS

TABLE 6 SOIL ANALYTICAL RESULTS - PHCs
121 Hume Street, Collingwood, Ontario

(CONT'D)

Terrapex Sample Name			STANDARDS ¹ 2011 Table 3 R / P / I coarse	TP210-4	TP210-6	TP211-6	TP211-7	TP212-5
	Units	RDL						
Sample Depth	m bg	-	-	1.8	2.9	2.6	2.7	2.4
SV Reading	-	-	-	20 ppm	10 ppm	15 ppm	<10 ppm	20 ppm
Sampling Date	-	-	-	Dec 14/12	Dec 14/12	Dec 14/12	Dec 14/12	Dec 14/12
Analysis Date	-	-	-	Dec 21-22/12	Dec 21-22/12	Dec 20-22/12	Dec 20-22/12	Dec 20-21/12
Certificate of Analysis No.	-	-	-	B2J8051	B2J8051	B2J8051	B2J8051	B2J8051
Benzene	µg/g	0.02	0.21	ND	ND	ND	ND	ND
Toluene	µg/g	0.02	2.3	ND	ND	ND	ND	ND
Ethylbenzene	µg/g	0.02	2	ND	ND	ND	ND	ND
Xylenes (total)	µg/g	0.04	3.1	ND	ND	ND	ND	ND
Petroleum Hydrocarbons, F1	µg/g	10	55	ND	ND	ND	ND	ND
Petroleum Hydrocarbons, F2	µg/g	10	98	14	ND	ND	ND	ND
Petroleum Hydrocarbons, F3	µg/g	10	300	36	11	ND	13	ND
Petroleum Hydrocarbons, F4	µg/g	10	2,800	ND	ND	ND	ND	ND

¹ Standards from Table 3 of April 15, 2011 *Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act*; Residential / Parkland / Institutional land use, coarse textured soil

ns No standard
m bg Meters below grade
SV Reading Soil vapour reading (ppm or % LEL)
ppm Parts per million (by volume)
ND not detected at the laboratory minimum detection limit
% LEL Percent of the lower explosive limit
BOLD Exceeds standard
ND (1) Value in brackets shows adjusted reportable detection limit due to dilution

Entered by: SS

Checked by: PJS

TABLE 6 SOIL ANALYTICAL RESULTS - PHCs
121 Hume Street, Collingwood, Ontario

(CONT'D)

Terrapex Sample Name			STANDARDS ¹ 2011 Table 3 R / P / I coarse	TP212-6	TP213-5	TP002 Field Duplicate of TP213-5	TP213-6	TP214-4
	Units	RDL						
Sample Depth	m bg	-	-	2.7	2.4	-	2.9	1.8
SV Reading	-	-	-	<10 ppm	15 ppm	-	15 ppm	10 ppm
Sampling Date	-	-	-	Dec 14/12	Dec 14/12	Dec 14/12	Dec 14/12	Dec 14/12
Analysis Date	-	-	-	Dec 20-21/12	Dec 20-21/12	Dec 20-28/12	Dec 20-22/12	Dec 20-22/12
Certificate of Analysis No.	-	-	-	B2J8051	B2J8051	B2J8051	B2J8051	B2J8051
Benzene	µg/g	0.02	0.21	ND	ND	ND	ND	ND
Toluene	µg/g	0.02	2.3	ND	ND	ND	ND	ND
Ethylbenzene	µg/g	0.02	2	ND	ND	ND	ND	ND
Xylenes (total)	µg/g	0.04	3.1	ND	ND	ND	ND	ND
Petroleum Hydrocarbons, F1	µg/g	10	55	ND	ND	ND	ND	ND
Petroleum Hydrocarbons, F2	µg/g	10	98	ND	ND	ND	ND	ND
Petroleum Hydrocarbons, F3	µg/g	10	300	ND	120	200	ND	19
Petroleum Hydrocarbons, F4	µg/g	10	2,800	ND	28	320	ND	ND

- ¹ Standards from Table 3 of April 15, 2011 *Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act*; Residential / Parkland / Institutional land use, coarse textured soil
- ns No standard
- m bg Meters below grade
- SV Reading Soil vapour reading (ppm or % LEL)
- ppm Parts per million (by volume)
- ND not detected at the laboratory minimum detection limit
- % LEL Percent of the lower explosive limit
- BOLD** Exceeds standard
- ND (1) Value in brackets shows adjusted reportable detection limit due to dilution

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Checked by: PJS

TABLE 6 SOIL ANALYTICAL RESULTS - PHCs
121 Hume Street, Collingwood, Ontario

(CONT'D)

(CONT'D)

Terrapex Sample Name			STANDARDS ¹ 2011 Table 3 R / P / I coarse	TP214-5	TP215-4	TP003 Field duplicate of TP215-4	TP215-5	TP215-6	TP216-5
	Units	RDL							
Sample Depth	m bg	-	-	2.4	1.8	-	2.4	2.7	2.1
SV Reading	-	-	-	20 ppm	14% LEL	-	125 ppm	20 ppm	17% LEL
Sampling Date	-	-	-	Dec 14/12	Dec 17/12	Dec 17/12	Dec 17/12	Dec 17/12	Dec 17/12
Analysis Date	-	-	-	Dec 20-22/12	Dec 31/12	Dec 31/12	Dec 31/12	Dec 31/12	Dec 31/12-Jan 2/13
Certificate of Analysis No.	-	-	-	B2J8051	B2K2191	B2K2191	B2K2191	B2K2191	B2K2191
Benzene	µg/g	0.02	0.21	ND	ND	ND	ND	ND	ND (0.10)
Toluene	µg/g	0.02	2.3	ND	ND	ND	ND	ND	ND (0.10)
Ethylbenzene	µg/g	0.02	2	ND	0.37	0.043	ND	0.17	ND (0.10)
Xylenes (total)	µg/g	0.04	3.1	ND	5.7	0.52	0.16	0.97	ND (0.20)
Petroleum Hydrocarbons, F1	µg/g	10	55	ND	320	15	ND	ND	640
Petroleum Hydrocarbons, F2	µg/g	10	98	ND	65	41	19	ND	250
Petroleum Hydrocarbons, F3	µg/g	10	300	ND	25	20	17	13	63
Petroleum Hydrocarbons, F4	µg/g	10	2,800	ND	ND	ND	ND	ND	170

- ¹ Standards from Table 3 of April 15, 2011 *Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act*; Residential / Parkland / Institutional land use, coarse textured soil
- ns No standard
- m bg Meters below grade
- SV Reading Soil vapour reading (ppm or % LEL)
- ppm Parts per million (by volume)
- ND not detected at the laboratory minimum detection limit
- % LEL Percent of the lower explosive limit
- BOLD** Exceeds standard
- ND (1) Value in brackets shows adjusted reportable detection limit due to dilution

Entered by: SS

Checked by: PJS

TABLE 6 SOIL ANALYTICAL RESULTS - PHCs
121 Hume Street, Collingwood, Ontario

(CONT'D)

Terrapex Sample Name	Units	RDL	STANDARDS ¹ 2011 Table 3 R / P / I coarse	TP216-6	TP217-5	TP217-6	TP218-5	TP218-6
Sample Depth	m bg	-	-	2.7	2.1	2.7	2.4	2.6
SV Reading	-	-	-	30 ppm	18% LEL	78% LEL	70 ppm	40 ppm
Sampling Date	-	-	-	Dec 17/12	Dec 17/12	Dec 17/12	Dec 17/12	Dec 17/12
Analysis Date	-	-	-	Dec 31/12	Dec 31/12	Dec 31/12-Jan 2/13	Dec 31/12	Dec 31/12-Jan 1/13
Certificate of Analysis No.	-	-	-	B2K2191	B2K2191	B2K2191	B2K2191	B2K2191
Benzene	µg/g	0.02	0.21	ND	ND	ND (0.20)	ND	ND
Toluene	µg/g	0.02	2.3	ND	0.035	ND (0.20)	ND	ND
Ethylbenzene	µg/g	0.02	2	0.53	ND	ND (0.20)	ND	ND
Xylenes (total)	µg/g	0.04	3.1	1.1	0.057	1.9	0.073	ND
Petroleum Hydrocarbons, F1	µg/g	10	55	ND	240	1,700	25	ND
Petroleum Hydrocarbons, F2	µg/g	10	98	ND	360	960	14	ND
Petroleum Hydrocarbons, F3	µg/g	10	300	17	290	540	16	ND
Petroleum Hydrocarbons, F4	µg/g	10	2,800	ND	1,500	230	ND	ND

- ¹ Standards from Table 3 of April 15, 2011 *Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act*; Residential / Parkland / Institutional land use, coarse textured soil
- ns No standard
- m bg Meters below grade
- SV Reading Soil vapour reading (ppm or % LEL)
- ppm Parts per million (by volume)
- ND not detected at the laboratory minimum detection limit
- % LEL Percent of the lower explosive limit
- BOLD** Exceeds standard
- ND (1) Value in brackets shows adjusted reportable detection limit due to dilution

Entered by: SS

Checked by: PJS

TABLE 6 SOIL ANALYTICAL RESULTS - PHCs
121 Hume Street, Collingwood, Ontario

(CONT'D)

Terrapex Sample Name			STANDARDS ¹ 2011 Table 3 R / P / I coarse	TP219-5	TP219-6	TP220-5	TP221-4	TP221-5
	Units	RDL						
Sample Depth	m bg	-	-	2.1	2.7	2.4	2.1	2.7
SV Reading	-	-	-	35 ppm	15 ppm	50 ppm	30% LEL	180 ppm
Sampling Date	-	-	-	Dec 17/12	Dec 17/12	Dec 17/12	Dec 17/12	Dec 17/12
Analysis Date	-	-	-	Dec 31/12	Dec 31/12	Dec 31/12-Jan 2/13	Dec 31/12-Jan 2/13	Dec 31/12
Certificate of Analysis No.	-	-	-	B2K2191	B2K2191	B2K2191	B2K2191	B2K2191
Benzene	µg/g	0.02	0.21	ND	ND	ND (0.040)	ND (0.10)	ND
Toluene	µg/g	0.02	2.3	ND	ND	ND (0.040)	ND (0.10)	ND
Ethylbenzene	µg/g	0.02	2	ND	ND	ND (0.040)	ND (0.10)	ND
Xylenes (total)	µg/g	0.04	3.1	ND	ND	ND (0.080)	ND (0.20)	ND
Petroleum Hydrocarbons, F1	µg/g	10	55	ND	ND	380	1,200	30
Petroleum Hydrocarbons, F2	µg/g	10	98	ND	ND	140	130	ND
Petroleum Hydrocarbons, F3	µg/g	10	300	ND	ND	14	13	33
Petroleum Hydrocarbons, F4	µg/g	10	2,800	ND	ND	ND	ND	ND

¹ Standards from Table 3 of April 15, 2011 *Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act*; Residential / Parkland / Institutional land use, coarse textured soil

ns No standard

m bg Meters below grade

SV Reading Soil vapour reading (ppm or % LEL)

ppm Parts per million (by volume)

ND not detected at the laboratory minimum detection limit

% LEL Percent of the lower explosive limit

BOLD Exceeds standard

ND (1) Value in brackets shows adjusted reportable detection limit due to dilution

Entered by: SS

Checked by: PJS

TABLE 6 SOIL ANALYTICAL RESULTS - PHCs
121 Hume Street, Collingwood, Ontario

(CONT'D)

Terrapex Sample Name			STANDARDS ¹ 2011 Table 3 R / P / I coarse	TP222-5	TP222-6	TP223-5	TP223-7	TP224-5	TP224-6
	Units	RDL							
Sample Depth	m bg	-	-	2.4	2.9	2.1	2.7	2.1	2.4
SV Reading	-	-	-	>100% LEL	4% LEL	10% LEL	140 ppm	65 ppm	5% LEL
Sampling Date	-	-	-	Dec 17/12	Dec 17/12	Dec 17/12	Dec 17/12	Dec 18/12	Dec 18/12
Analysis Date	-	-	-	Dec 31/12-Jan 2/13	Dec 31/12	Dec 31/12	Dec 31/12	Dec 31/12	Dec 31/12
Certificate of Analysis No.	-	-	-	B2K2191	B2K2191	B2K2191	B2K2191	B2K2191	B2K2191
Benzene	µg/g	0.02	0.21	ND (0.20)	ND	ND	ND	ND	ND
Toluene	µg/g	0.02	2.3	ND (0.20)	ND	0.93	ND	ND	ND
Ethylbenzene	µg/g	0.02	2	ND (0.20)	ND	2.2	ND	0.094	0.23
Xylenes (total)	µg/g	0.04	3.1	0.45	ND	7.8	0.059	0.34	0.86
Petroleum Hydrocarbons, F1	µg/g	10	55	<u>2,300</u>	ND	<u>130</u>	ND	ND	<u>98</u>
Petroleum Hydrocarbons, F2	µg/g	10	98	<u>420</u>	ND	97	ND	ND	12
Petroleum Hydrocarbons, F3	µg/g	10	300	46	ND	16	12	ND	10
Petroleum Hydrocarbons, F4	µg/g	10	2,800	ND	ND	ND	ND	ND	ND

- ¹ Standards from Table 3 of April 15, 2011 *Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act*; Residential / Parkland / Institutional land use, coarse textured soil
- ns No standard
- m bg Meters below grade
- SV Reading Soil vapour reading (ppm or % LEL)
- ppm Parts per million (by volume)
- ND not detected at the laboratory minimum detection limit
- % LEL Percent of the lower explosive limit
- BOLD** Exceeds standard
- ND (1) Value in brackets shows adjusted reportable detection limit due to dilution

Entered by: SS

Checked by: PJS

TABLE 6 SOIL ANALYTICAL RESULTS - PHCs
121 Hume Street, Collingwood, Ontario

(CONT'D)

Terrapex Sample Name	Units	RDL	STANDARDS ¹ 2011 Table 3 R / P / I coarse	TP225-5	TP225-6	TP226-5	TP226-6	TP227-5	TP227-7
Sample Depth	m bg	-	-	2.1	2.6	2.1	2.4	2.1	2.9
SV Reading	-	-	-	14% LEL	10 ppm	12% LEL	40 ppm	4% LEL	10 ppm
Sampling Date	-	-	-	Dec 18/12	Dec 18/12	Dec 18/12	Dec 18/12	Dec 18/12	Dec 18/12
Analysis Date	-	-	-	Dec 31/12	Dec 31/12	Dec 31/12-Jan 2/13	Dec 31/12	Dec 29-31/12	Dec 31/12
Certificate of Analysis No.	-	-	-	B2K2191	B2K2191	B2K2191	B2K2191	B2K2191	B2K2191
Benzene	µg/g	0.02	0.21	ND	ND	ND (0.10)	ND	ND	ND
Toluene	µg/g	0.02	2.3	ND	ND	0.12	ND	ND	ND
Ethylbenzene	µg/g	0.02	2	ND	ND	ND (0.10)	ND	0.13	ND
Xylenes (total)	µg/g	0.04	3.1	ND	ND	0.24	ND	0.59	ND
Petroleum Hydrocarbons, F1	µg/g	10	55	32	ND	860	ND	26	ND
Petroleum Hydrocarbons, F2	µg/g	10	98	220	ND	86	ND	17	ND
Petroleum Hydrocarbons, F3	µg/g	10	300	ND	ND	ND	ND	ND	ND
Petroleum Hydrocarbons, F4	µg/g	10	2,800	ND	ND	ND	ND	ND	ND

- ¹ Standards from Table 3 of April 15, 2011 *Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act*; Residential / Parkland / Institutional land use, coarse textured soil
- ns No standard
- m bg Meters below grade
- SV Reading Soil vapour reading (ppm or % LEL)
- ppm Parts per million (by volume)
- ND not detected at the laboratory minimum detection limit
- % LEL Percent of the lower explosive limit
- BOLD** Exceeds standard
- ND (1) Value in brackets shows adjusted reportable detection limit due to dilution

Entered by: SS

Checked by: PJS

TABLE 6 SOIL ANALYTICAL RESULTS - PHCs
121 Hume Street, Collingwood, Ontario

(CONT'D)

Terrapex Sample Name	Units	RDL	STANDARDS ¹ 2011 Table 3 R / P / I coarse	TP228-5	TP004 Field Duplicate of TP228-5	TP228-6	TP229-5	TP229-6
Sample Depth	m bg	-	-	2.1	-	2.9	2.1	2.6
SV Reading	-	-	-	34% LEL	-	<10 ppm	36% LEL	20 ppm
Sampling Date	-	-	-	Dec 18/12	Dec 18/12	Dec 18/12	Dec 18/12	Dec 18/12
Analysis Date	-	-	-	Dec 31/12	Dec 29/12-Jan 3/13	Dec 29-31/12	Dec 29/12-Jan 2/13	Dec 31/12
Certificate of Analysis No.	-	-	-	B2K2191	B2K2191	B2K2191	B2K2191	B2K2191
Benzene	µg/g	0.02	0.21	ND	ND (0.20)	ND	ND (0.10)	ND
Toluene	µg/g	0.02	2.3	ND	ND (0.20)	ND	0.10	ND
Ethylbenzene	µg/g	0.02	2	ND	ND (0.20)	ND	ND (0.10)	ND
Xylenes (total)	µg/g	0.04	3.1	ND	ND (0.40)	ND	ND (0.20)	ND
Petroleum Hydrocarbons, F1	µg/g	10	55	120	2,300	ND	1,100	ND
Petroleum Hydrocarbons, F2	µg/g	10	98	280	290	ND	1,200	ND
Petroleum Hydrocarbons, F3	µg/g	10	300	12	23	ND	41	ND
Petroleum Hydrocarbons, F4	µg/g	10	2,800	ND	ND	ND	ND	ND

- ¹ Standards from Table 3 of April 15, 2011 *Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act*; Residential / Parkland / Institutional land use, coarse textured soil
- ns No standard
- m bg Meters below grade
- SV Reading Soil vapour reading (ppm or % LEL)
- ppm Parts per million (by volume)
- ND not detected at the laboratory minimum detection limit
- % LEL Percent of the lower explosive limit
- BOLD** Exceeds standard
- ND (1) Value in brackets shows adjusted reportable detection limit due to dilution

Entered by: SS

Checked by: PJS

TABLE 6 SOIL ANALYTICAL RESULTS - PHCs
121 Hume Street, Collingwood, Ontario

(CONT'D)

Terrapex Sample Name			STANDARDS ¹ 2011 Table 3 R / P / I coarse	TP230-5	TP230-6	TP230-7	TP231-5	TP231-6
	Units	RDL						
Sample Depth	m bg	-	-	2.1	2.9	3.2	2.3	3.1
SV Reading	-	-	-	70 ppm	115 ppm	50 ppm	45% LEL	10 ppm
Sampling Date	-	-	-	Dec 18/12	Dec 18/12	Dec 18/12	Dec 18/12	Dec 18/12
Analysis Date	-	-	-	Dec 29-31/12	Dec 31/12	Dec 31/12	Dec 29/12-Jan 2/13	Dec 31/12-Jan 1/13
Certificate of Analysis No.	-	-	-	B2K2191	B2K2191	B2K2191	B2K2191	B2K2191
Benzene	µg/g	0.02	0.21	ND	ND	ND	ND (0.20)	ND
Toluene	µg/g	0.02	2.3	ND	ND	ND	ND (0.20)	ND
Ethylbenzene	µg/g	0.02	2	ND	0.037	0.46	ND (0.20)	ND
Xylenes (total)	µg/g	0.04	3.1	ND	0.22	2.4	ND (0.40)	ND
Petroleum Hydrocarbons, F1	µg/g	10	55	ND	220	16	2,500	ND
Petroleum Hydrocarbons, F2	µg/g	10	98	25	500	ND	980	ND
Petroleum Hydrocarbons, F3	µg/g	10	300	ND	50	ND	35	ND
Petroleum Hydrocarbons, F4	µg/g	10	2,800	ND	29	ND	ND	ND

- ¹ Standards from Table 3 of April 15, 2011 *Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act*; Residential / Parkland / Institutional land use, coarse textured soil
- ns No standard
- m bg Meters below grade
- SV Reading Soil vapour reading (ppm or % LEL)
- ppm Parts per million (by volume)
- ND not detected at the laboratory minimum detection limit
- % LEL Percent of the lower explosive limit
- BOLD** Exceeds standard
- ND (1) Value in brackets shows adjusted reportable detection limit due to dilution

Entered by: SS

Checked by: PJS

TABLE 6 SOIL ANALYTICAL RESULTS - PHCs
121 Hume Street, Collingwood, Ontario

Terrapex Sample Name			STANDARDS ¹ 2011 Table 3 R / P / I coarse	TP232-5	TP232-6
	Units	RDL			
Sample Depth	m bg	-	-	2.1	2.4
SV Reading	-	-	-	16% LEL	96% LEL
Sampling Date	-	-	-	Dec 19/12	Dec 19/12
Analysis Date	-	-	-	Dec 29/12-Jan 2/13	Dec 31/12-Jan 2/13
Certificate of Analysis No.	-	-	-	B2K2191	B2K2191
Benzene	µg/g	0.02	0.21	ND	ND (0.10)
Toluene	µg/g	0.02	2.3	ND	ND (0.10)
Ethylbenzene	µg/g	0.02	2	0.92	1.4
Xylenes (total)	µg/g	0.04	3.1	4.6	4.3
Petroleum Hydrocarbons, F1	µg/g	10	55	920	540
Petroleum Hydrocarbons, F2	µg/g	10	98	69	420
Petroleum Hydrocarbons, F3	µg/g	10	300	100	290
Petroleum Hydrocarbons, F4	µg/g	10	2,800	48	3,900

- ¹ Standards from Table 3 of April 15, 2011 *Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act*; Residential / Parkland / Institutional land use, coarse textured soil
- ns No standard
- m bg Meters below grade
- SV Reading Soil vapour reading (ppm or % LEL)
- ppm Parts per million (by volume)
- ND not detected at the laboratory minimum detection limit
- % LEL Percent of the lower explosive limit
- BOLD** Exceeds standard
- ND (1) Value in brackets shows adjusted reportable detection limit due to dilution

Entered by: SS

Checked by: PJS

TABLE 6 SOIL ANALYTICAL RESULTS - PHCs
121 Hume Street, Collingwood, Ontario

(CONT'D)

Terrapex Sample Name	Units	RDL	STANDARDS ¹ 2011 Table 3 R / P / I coarse	TP232-7	TP233-6	TP233-7	TP234-6	TP235-5
Sample Depth	m bg	-	-	3.1	2.4	2.9	2.6	2.4
SV Reading	-	-	-	250 ppm	265 ppm	10 ppm	20 ppm	10 ppm
Sampling Date	-	-	-	Dec 19/12	Dec 19/12	Dec 19/12	Dec 19/12	Dec 19/12
Analysis Date	-	-	-	Dec 31/12-Jan 1/13	Dec 29-31/12	Dec 29-31/12	Dec 29-31/12	Dec 29/12-Jan 1/13
Certificate of Analysis No.	-	-	-	B2K2191	B2K2191	B2K2191	B2K2191	B2K2191
Benzene	µg/g	0.02	0.21	ND	ND	ND	ND	ND
Toluene	µg/g	0.02	2.3	0.066	ND	ND	ND	ND
Ethylbenzene	µg/g	0.02	2	1.2	ND	ND	ND	ND
Xylenes (total)	µg/g	0.04	3.1	6.8	ND	ND	ND	ND
Petroleum Hydrocarbons, F1	µg/g	10	55	74	56	ND	ND	ND
Petroleum Hydrocarbons, F2	µg/g	10	98	ND	11	ND	ND	ND
Petroleum Hydrocarbons, F3	µg/g	10	300	ND	ND	14	99	13
Petroleum Hydrocarbons, F4	µg/g	10	2,800	ND	ND	ND	40	ND

- ¹ Standards from Table 3 of April 15, 2011 *Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act*; Residential / Parkland / Institutional land use, coarse textured soil
- ns No standard
- m bg Meters below grade
- SV Reading Soil vapour reading (ppm or % LEL)
- ppm Parts per million (by volume)
- ND not detected at the laboratory minimum detection limit
- % LEL Percent of the lower explosive limit
- BOLD** Exceeds standard
- ND (1) Value in brackets shows adjusted reportable detection limit due to dilution

Entered by: SS

Checked by: PJS

TABLE 6 SOIL ANALYTICAL RESULTS - PHCs
121 Hume Street, Collingwood, Ontario

(CONT'D)

Terrapex Sample Name			STANDARDS ¹ 2011 Table 3 R / P / I coarse	TP236-5	TP236-7	TP237-5	TP237-7	TP238-5
	Units	RDL						
Sample Depth	m bg	-	-	2.1	2.9	2.1	2.9	2.6
SV Reading	-	-	-	330 ppm	15 ppm	40 ppm	65 ppm	30 ppm
Sampling Date	-	-	-	Dec 19/12	Dec 19/12	Dec 19/12	Dec 19/12	Dec 19/12
Analysis Date	-	-	-	Dec 29/12-Jan 1/13	Dec 29/12-Jan 1/13	Dec 29/12-Jan 1/13	Dec 29/12-Jan 1/13	Dec 29/12-Jan 1/13
Certificate of Analysis No.	-	-	-	B2K2191	B2K2191	B2K2191	B2K2191	B2K2191
Benzene	µg/g	0.02	0.21	ND	ND	ND	ND	ND
Toluene	µg/g	0.02	2.3	ND	ND	ND	ND	ND
Ethylbenzene	µg/g	0.02	2	ND	ND	ND	ND	ND
Xylenes (total)	µg/g	0.04	3.1	ND	0.051	ND	ND	ND
Petroleum Hydrocarbons, F1	µg/g	10	55	12	ND	ND	ND	ND
Petroleum Hydrocarbons, F2	µg/g	10	98	78	ND	ND	ND	ND
Petroleum Hydrocarbons, F3	µg/g	10	300	110	14	21	100	29
Petroleum Hydrocarbons, F4	µg/g	10	2,800	34	ND	ND	31	ND

- ¹ Standards from Table 3 of April 15, 2011 *Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act*; Residential / Parkland / Institutional land use, coarse textured soil
- ns No standard
- m bg Meters below grade
- SV Reading Soil vapour reading (ppm or % LEL)
- ppm Parts per million (by volume)
- ND not detected at the laboratory minimum detection limit
- % LEL Percent of the lower explosive limit
- BOLD** Exceeds standard
- ND (1) Value in brackets shows adjusted reportable detection limit due to dilution

Entered by: SS

Checked by: PJS

TABLE 6 SOIL ANALYTICAL RESULTS - PHCs
121 Hume Street, Collingwood, Ontario

(CONT'D)

Terrapex Sample Name			STANDARDS ¹ 2011 Table 3 R / P / I coarse	TP239-5	TP239-6	TP240-5	TP240-6	TP241-6
	Units	RDL						
Sample Depth	m bg	-	-	2.3	2.7	2.1	2.9	2.4
SV Reading	-	-	-	55 ppm	15 ppm	30 ppm	15 ppm	20 ppm
Sampling Date	-	-	-	Dec 19/12	Dec 19/12	Dec 19/12	Dec 19/12	Dec 20/12
Analysis Date	-	-	-	Dec 31/12-Jan 1/13	Dec 31/12-Jan 1/13	Dec 31/12-Jan 1/13	Dec 29/12-Jan 1/13	Dec 29/12-Jan 1/13
Certificate of Analysis No.	-	-	-	B2K2191	B2K2191	B2K2191	B2K2191	B2K2191
Benzene	µg/g	0.02	0.21	ND	ND	ND	ND	ND
Toluene	µg/g	0.02	2.3	ND	ND	ND	ND	ND
Ethylbenzene	µg/g	0.02	2	ND	ND	ND	ND	ND
Xylenes (total)	µg/g	0.04	3.1	ND	ND	ND	ND	ND
Petroleum Hydrocarbons, F1	µg/g	10	55	ND	ND	ND	ND	ND
Petroleum Hydrocarbons, F2	µg/g	10	98	ND	ND	ND	ND	ND
Petroleum Hydrocarbons, F3	µg/g	10	300	ND	ND	ND	16	ND
Petroleum Hydrocarbons, F4	µg/g	10	2,800	ND	ND	ND	ND	ND

- ¹ Standards from Table 3 of April 15, 2011 *Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act*; Residential / Parkland / Institutional land use, coarse textured soil
- ns No standard
- m bg Meters below grade
- SV Reading Soil vapour reading (ppm or % LEL)
- ppm Parts per million (by volume)
- ND not detected at the laboratory minimum detection limit
- % LEL Percent of the lower explosive limit
- BOLD** Exceeds standard
- ND (1) Value in brackets shows adjusted reportable detection limit due to dilution

Entered by: SS

Checked by: PJS

TABLE 6 SOIL ANALYTICAL RESULTS - PHCs (CONT'D)
121 Hume Street, Collingwood, Ontario

Terrapex Sample Name			STANDARDS ¹ 2011 Table 3 R / P / I coarse	TP242-5	TP243-5	TP244-5	FIELD BLANK
	Units	RDL					
Sample Depth	m bg	-	-	2.1	2.4	2.1	-
SV Reading	-	-	-	15 ppm	20 ppm	25 ppm	-
Sampling Date	-	-	-	Dec 20/12	Dec 20/12	Dec 20/12	-
Analysis Date	-	-	-	Dec 29/12-Jan 1/13	Dec 29/12-Jan 1/13	Dec 31/12-Jan 1/13	Jan 1/13
Certificate of Analysis No.	-	-	-	B2K2191	B2K2191	B2K2191	B2K2191
Benzene	µg/g	0.02	0.21	ND	ND	ND	ND
Toluene	µg/g	0.02	2.3	ND	ND	ND	ND
Ethylbenzene	µg/g	0.02	2	ND	ND	ND	ND
Xylenes (total)	µg/g	0.04	3.1	ND	ND	ND	ND
Petroleum Hydrocarbons, F1	µg/g	10	55	ND	ND	ND	-
Petroleum Hydrocarbons, F2	µg/g	10	98	ND	ND	ND	-
Petroleum Hydrocarbons, F3	µg/g	10	300	15	ND	ND	-
Petroleum Hydrocarbons, F4	µg/g	10	2,800	ND	ND	ND	-

¹ Standards from Table 3 of April 15, 2011 *Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act*; Residential / Parkland / Institutional land use, coarse textured soil

ns No standard

m bg Meters below grade

SV Reading Soil vapour reading (ppm or % LEL)

ppm Parts per million (by volume)

ND not detected at the laboratory minimum detection limit

% LEL Percent of the lower explosive limit

BOLD Exceeds standard

ND (1) Value in brackets shows adjusted reportable detection limit due to dilution

Entered by: SS

Checked by: PJS

TABLE 7 SOIL ANALYTICAL RESULTS - VOCs
121 Hume Street, Collingwood, Ontario

Terrapex Sample Name			STANDARDS ¹ 2011 Table 3 R / P / I coarse	TP204-5	TP204-6
	Units	RDL			
Sample Depth	m bg	-	-	2.1	2.7
SV Reading	-	-	-	20 ppm	10 ppm
Sampling Date	-	-	-	13-Dec-12	13-Dec-12
Analysis Date	-	-	-	21-Dec-12	22-Dec-12
Certificate of Analysis No.	-	-	-	B2J8051	B2J8051
Acetone	µg/g	0.5	16	ND	ND
Benzene	µg/g	0.05	0.21	ND	0.048
Bromodichloromethane	µg/g	0.050	13	ND	ND
Bromoform	µg/g	0.050	0.27	ND	ND
Bromomethane	µg/g	0.050	0.05	ND	ND
Carbon tetrachloride	µg/g	0.050	0.05	ND	ND
Chlorobenzene	µg/g	0.050	2.4	ND	ND
Chloroform	µg/g	0.050	0.05	ND	ND
Dibromochloromethane	µg/g	0.050	9.4	ND	ND
Dichlorobenzene 1,2-	µg/g	0.050	3.4	ND	ND
Dichlorobenzene 1,3-	µg/g	0.050	4.8	ND	ND
Dichlorobenzene 1,4-	µg/g	0.050	0.083	ND	ND
Dichlorodifluoromethane	µg/g	0.050	16	ND	ND
Dichloroethane 1,1-	µg/g	0.050	3.5	ND	ND
Dichloroethane 1,2-	µg/g	0.050	0.05	ND	ND
Dichloroethylene 1,1-	µg/g	0.050	0.05	ND	ND
Dichloroethylene, cis-1,2-	µg/g	0.050	3.4	ND	ND
Dichloroethylene, trans-1,2-	µg/g	0.050	0.084	ND	ND
Dichloropropane 1,2-	µg/g	0.050	0.05	ND	ND
Dichloropropene, cis-1,3-	µg/g	0.030	-	ND	ND
Dichloropropene, trans-1,3-	µg/g	0.040	-	ND	ND
Dichloropropene 1,3-	µg/g	0.050	0.05	ND	ND
Ethylbenzene	µg/g	0.04	2	ND	ND
Ethylene dibromide	µg/g	0.050	0.05	ND	ND
Hexane	µg/g	0.050	2.8	ND	ND
Methyl ethyl ketone	µg/g	0.050	16	ND	ND
Methyl isobutyl ketone	µg/g	0.50	1.7	ND	ND
Methyl tert butyl ether	µg/g	0.50	0.75	ND	ND
Methylene Chloride	µg/g	0.050	0.1	ND	ND
Styrene	µg/g	0.050	0.7	ND	ND
Tetrachloroethane 1,1,1,2-	µg/g	0.050	0.058	ND	ND
Tetrachloroethane 1,1,2,2-	µg/g	0.050	0.05	ND	ND
Tetrachloroethylene	µg/g	0.050	0.28	ND	ND
Toluene	µg/g	0.02	2.3	ND	ND
Trichloroethane 1,1,1-	µg/g	0.050	0.38	ND	ND
Trichloroethane 1,1,2-	µg/g	0.050	0.05	ND	ND
Trichloroethylene	µg/g	0.050	0.061	ND	ND
Vinyl chloride	µg/g	0.02	0.02	ND	ND
Xylenes (total)	µg/g	0.04	3.1	ND	ND

¹ Standards from Table 3 of April 15, 2011 *Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act*; Residential / Parkland / Institutional land use, coarse textured soil

ns No standard

m bg Meters below grade

SV Reading Soil vapour reading (ppm or % LEL)

ppm Parts per million (by volume)

% LEL Percent of the lower explosive limit

BOLD Exceeds standard

TABLE 7 SOIL ANALYTICAL RESULTS - VOCs
121 Hume Street, Collingwood, Ontario

CONTINUED

Terrapex Sample Name			STANDARDS ¹ 2011 Table 3 R / P / I coarse	TP205-4	TP205-5
	Units	RDL			
Sample Depth	m bg	-	-	2.0	2.6
SV Reading	-	-	-	10 ppm	10 ppm
Sampling Date	-	-	-	13-Dec-12	13-Dec-12
Analysis Date	-	-	-	22-Dec-12	22-Dec-12
Certificate of Analysis No.	-	-	-	B2J8051	B2J8051
Acetone	µg/g	0.5	16	ND	ND
Benzene	µg/g	0.05	0.21	ND	0.048
Bromodichloromethane	µg/g	0.050	13	ND	ND
Bromoform	µg/g	0.050	0.27	ND	ND
Bromomethane	µg/g	0.050	0.05	ND	ND
Carbon tetrachloride	µg/g	0.050	0.05	ND	ND
Chlorobenzene	µg/g	0.050	2.4	ND	ND
Chloroform	µg/g	0.050	0.05	ND	ND
Dibromochloromethane	µg/g	0.050	9.4	ND	ND
Dichlorobenzene 1,2-	µg/g	0.050	3.4	ND	ND
Dichlorobenzene, 1,3-	µg/g	0.050	4.8	ND	ND
Dichlorobenzene, 1,4-	µg/g	0.050	0.083	ND	ND
Dichlorodifluoromethane	µg/g	0.050	16	ND	ND
Dichloroethane, 1,1-	µg/g	0.050	3.5	ND	ND
Dichloroethane, 1,2-	µg/g	0.050	0.05	ND	ND
Dichloroethylene, 1,1-	µg/g	0.050	0.05	ND	ND
Dichloroethylene, cis-1,2-	µg/g	0.050	3.4	ND	ND
Dichloroethylene, trans-1,2-	µg/g	0.050	0.084	ND	ND
Dichloropropane, 1,2-	µg/g	0.050	0.05	ND	ND
Dichloropropene, cis-1,3-	µg/g	0.030	-	ND	ND
Dichloropropene, trans-1,3-	µg/g	0.040	-	ND	ND
Dichloropropene, 1,3-	µg/g	0.050	0.05	ND	ND
Ethylbenzene	µg/g	0.04	2	ND	ND
Ethylene dibromide	µg/g	0.050	0.05	ND	ND
Hexane	µg/g	0.050	2.8	ND	ND
Methyl ethyl ketone	µg/g	0.050	16	ND	ND
Methyl isobutyl ketone	µg/g	0.50	1.7	ND	ND
Methyl tert butyl ether	µg/g	0.50	0.75	ND	ND
Methylene Chloride	µg/g	0.050	0.1	ND	ND
Styrene	µg/g	0.050	0.7	ND	ND
Tetrachloroethane, 1,1,1,2-	µg/g	0.050	0.058	ND	ND
Tetrachloroethane, 1,1,2,2-	µg/g	0.050	0.05	ND	ND
Tetrachloroethylene	µg/g	0.050	0.28	ND	ND
Toluene	µg/g	0.02	2.3	ND	ND
Trichloroethane, 1,1,1-	µg/g	0.050	0.38	ND	ND
Trichloroethane, 1,1,2-	µg/g	0.050	0.05	ND	ND
Trichloroethylene	µg/g	0.050	0.061	ND	ND
Vinyl chloride	µg/g	0.02	0.02	ND	ND
Xylenes (total)	µg/g	0.04	3.1	ND	ND

¹ Standards from Table 3 of April 15, 2011 *Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act*; Residential / Parkland / Institutional land use, coarse textured soil

ns No standard

m bg Meters below grade

SV Reading Soil vapour reading (ppm or % LEL)

ppm Parts per million (by volume)

% LEL Percent of the lower explosive limit

BOLD Exceeds standard

TABLE 7 SOIL ANALYTICAL RESULTS - VOCs
121 Hume Street, Collingwood, Ontario

CONTINUED

Terrapex Sample Name			STANDARDS ¹ 2011 Table 3 R / P / I coarse	TP206-4	TP206-5
	Units	RDL			
Sample Depth	m bg	-	-	1.8	2.4
SV Reading	-	-	-	15 ppm	20 ppm
Sampling Date	-	-	-	13-Dec-12	13-Dec-12
Analysis Date	-	-	-	22-Dec-12	22-Dec-12
Certificate of Analysis No.	-	-	-	B2J8051	B2J8051
Acetone	µg/g	0.5	16	ND	ND
Benzene	µg/g	0.05	0.21	ND	ND
Bromodichloromethane	µg/g	0.050	13	ND	ND
Bromoform	µg/g	0.050	0.27	ND	ND
Bromomethane	µg/g	0.050	0.05	ND	ND
Carbon tetrachloride	µg/g	0.050	0.05	ND	ND
Chlorobenzene	µg/g	0.050	2.4	ND	ND
Chloroform	µg/g	0.050	0.05	ND	ND
Dibromochloromethane	µg/g	0.050	9.4	ND	ND
Dichlorobenzene 1,2-	µg/g	0.050	3.4	ND	ND
Dichlorobenzene, 1,3-	µg/g	0.050	4.8	ND	ND
Dichlorobenzene, 1,4-	µg/g	0.050	0.083	ND	ND
Dichlorodifluoromethane	µg/g	0.050	16	ND	ND
Dichloroethane, 1,1-	µg/g	0.050	3.5	ND	ND
Dichloroethane, 1,2-	µg/g	0.050	0.05	ND	ND
Dichloroethylene, 1,1-	µg/g	0.050	0.05	ND	ND
Dichloroethylene, cis-1,2-	µg/g	0.050	3.4	ND	ND
Dichloroethylene, trans-1,2-	µg/g	0.050	0.084	ND	ND
Dichloropropane, 1,2-	µg/g	0.050	0.05	ND	ND
Dichloropropene, cis-1,3-	µg/g	0.030	-	ND	ND
Dichloropropene, trans-1,3-	µg/g	0.040	-	ND	ND
Dichloropropene, 1,3-	µg/g	0.050	0.05	ND	ND
Ethylbenzene	µg/g	0.04	2	ND	ND
Ethylene dibromide	µg/g	0.050	0.05	ND	ND
Hexane	µg/g	0.050	2.8	ND	ND
Methyl ethyl ketone	µg/g	0.050	16	ND	ND
Methyl isobutyl ketone	µg/g	0.50	1.7	ND	ND
Methyl tert butyl ether	µg/g	0.50	0.75	ND	ND
Methylene Chloride	µg/g	0.050	0.1	ND	ND
Styrene	µg/g	0.050	0.7	ND	ND
Tetrachloroethane, 1,1,1,2-	µg/g	0.050	0.058	ND	ND
Tetrachloroethane, 1,1,2,2-	µg/g	0.050	0.05	ND	ND
Tetrachloroethylene	µg/g	0.050	0.28	ND	ND
Toluene	µg/g	0.02	2.3	ND	ND
Trichloroethane, 1,1,1-	µg/g	0.050	0.38	ND	ND
Trichloroethane, 1,1,2-	µg/g	0.050	0.05	ND	ND
Trichloroethylene	µg/g	0.050	0.061	ND	ND
Vinyl chloride	µg/g	0.02	0.02	ND	ND
Xylenes (total)	µg/g	0.04	3.1	ND	ND

¹ Standards from Table 3 of April 15, 2011 *Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act*; Residential / Parkland / Institutional land use, coarse textured soil

ns No standard

m bg Meters below grade

SV Reading Soil vapour reading (ppm or % LEL)

ppm Parts per million (by volume)

% LEL Percent of the lower explosive limit

BOLD Exceeds standard

TABLE 7 SOIL ANALYTICAL RESULTS - VOCs
121 Hume Street, Collingwood, Ontario

CONTINUED

Terrapex Sample Name			STANDARDS ¹ 2011 Table 3 R / P / I coarse	TP207-4	TP207-6
	Units	RDL			
Sample Depth	m bg	-	-	1.8	2.7
SV Reading	-	-	-	20 ppm	10 ppm
Sampling Date	-	-	-	13-Dec-12	13-Dec-12
Analysis Date	-	-	-	22-Dec-12	22-Dec-12
Certificate of Analysis No.	-	-	-	B2J8051	B2J8051
Acetone	µg/g	0.5	16	ND	ND
Benzene	µg/g	0.05	0.21	ND	ND
Bromodichloromethane	µg/g	0.050	13	ND	ND
Bromoform	µg/g	0.050	0.27	ND	ND
Bromomethane	µg/g	0.050	0.05	ND	ND
Carbon tetrachloride	µg/g	0.050	0.05	ND	ND
Chlorobenzene	µg/g	0.050	2.4	ND	ND
Chloroform	µg/g	0.050	0.05	ND	ND
Dibromochloromethane	µg/g	0.050	9.4	ND	ND
Dichlorobenzene 1,2-	µg/g	0.050	3.4	ND	ND
Dichlorobenzene, 1,3-	µg/g	0.050	4.8	ND	ND
Dichlorobenzene, 1,4-	µg/g	0.050	0.083	ND	ND
Dichlorodifluoromethane	µg/g	0.050	16	ND	ND
Dichloroethane, 1,1-	µg/g	0.050	3.5	ND	ND
Dichloroethane, 1,2-	µg/g	0.050	0.05	ND	ND
Dichloroethylene, 1,1-	µg/g	0.050	0.05	ND	ND
Dichloroethylene, cis-1,2-	µg/g	0.050	3.4	ND	ND
Dichloroethylene, trans-1,2-	µg/g	0.050	0.084	ND	ND
Dichloropropane, 1,2-	µg/g	0.050	0.05	ND	ND
Dichloropropene, cis-1,3-	µg/g	0.030	-	ND	ND
Dichloropropene, trans-1,3-	µg/g	0.040	-	ND	ND
Dichloropropene, 1,3-	µg/g	0.050	0.05	ND	ND
Ethylbenzene	µg/g	0.04	2	ND	ND
Ethylene dibromide	µg/g	0.050	0.05	ND	ND
Hexane	µg/g	0.050	2.8	ND	ND
Methyl ethyl ketone	µg/g	0.050	16	ND	ND
Methyl isobutyl ketone	µg/g	0.50	1.7	ND	ND
Methyl tert butyl ether	µg/g	0.50	0.75	ND	ND
Methylene Chloride	µg/g	0.050	0.1	ND	ND
Styrene	µg/g	0.050	0.7	ND	ND
Tetrachloroethane, 1,1,1,2-	µg/g	0.050	0.058	ND	ND
Tetrachloroethane, 1,1,2,2-	µg/g	0.050	0.05	ND	ND
Tetrachloroethylene	µg/g	0.050	0.28	ND	ND
Toluene	µg/g	0.02	2.3	ND	ND
Trichloroethane, 1,1,1-	µg/g	0.050	0.38	ND	ND
Trichloroethane, 1,1,2-	µg/g	0.050	0.05	ND	ND
Trichloroethylene	µg/g	0.050	0.061	ND	ND
Vinyl chloride	µg/g	0.02	0.02	ND	ND
Xylenes (total)	µg/g	0.04	3.1	ND	ND

¹ Standards from Table 3 of April 15, 2011 *Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act*; Residential / Parkland / Institutional land use, coarse textured soil

ns No standard

m bg Meters below grade

SV Reading Soil vapour reading (ppm or % LEL)

ppm Parts per million (by volume)

% LEL Percent of the lower explosive limit

BOLD Exceeds standard

TABLE 7 SOIL ANALYTICAL RESULTS - VOCs
121 Hume Street, Collingwood, Ontario

CONTINUED

Terrapex Sample Name			STANDARDS ¹ 2011 Table 3 R / P / I coarse	TP211-6	TP211-7
	Units	RDL			
Sample Depth	m bg	-	-	2.6	2.7
SV Reading	-	-	-	15 ppm	<10 ppm
Sampling Date	-	-	-	14-Dec-12	14-Dec-12
Analysis Date	-	-	-	22-Dec-12	22-Dec-12
Certificate of Analysis No.	-	-	-	B2J8051	B2J8051
Acetone	µg/g	0.5	16	ND	ND
Benzene	µg/g	0.05	0.21	ND	ND
Bromodichloromethane	µg/g	0.050	13	ND	ND
Bromoform	µg/g	0.050	0.27	ND	ND
Bromomethane	µg/g	0.050	0.05	ND	ND
Carbon tetrachloride	µg/g	0.050	0.05	ND	ND
Chlorobenzene	µg/g	0.050	2.4	ND	ND
Chloroform	µg/g	0.050	0.05	ND	ND
Dibromochloromethane	µg/g	0.050	9.4	ND	ND
Dichlorobenzene 1,2-	µg/g	0.050	3.4	ND	ND
Dichlorobenzene, 1,3-	µg/g	0.050	4.8	ND	ND
Dichlorobenzene, 1,4-	µg/g	0.050	0.083	ND	ND
Dichlorodifluoromethane	µg/g	0.050	16	ND	ND
Dichloroethane, 1,1-	µg/g	0.050	3.5	ND	ND
Dichloroethane, 1,2-	µg/g	0.050	0.05	ND	ND
Dichloroethylene, 1,1-	µg/g	0.050	0.05	ND	ND
Dichloroethylene, cis-1,2-	µg/g	0.050	3.4	ND	ND
Dichloroethylene, trans-1,2-	µg/g	0.050	0.084	ND	ND
Dichloropropane, 1,2-	µg/g	0.050	0.05	ND	ND
Dichloropropene, cis-1,3-	µg/g	0.030	-	ND	ND
Dichloropropene, trans-1,3-	µg/g	0.040	-	ND	ND
Dichloropropene, 1,3-	µg/g	0.050	0.05	ND	ND
Ethylbenzene	µg/g	0.04	2	ND	ND
Ethylene dibromide	µg/g	0.050	0.05	ND	ND
Hexane	µg/g	0.050	2.8	ND	ND
Methyl ethyl ketone	µg/g	0.050	16	ND	ND
Methyl isobutyl ketone	µg/g	0.50	1.7	ND	ND
Methyl tert butyl ether	µg/g	0.50	0.75	ND	ND
Methylene Chloride	µg/g	0.050	0.1	ND	ND
Styrene	µg/g	0.050	0.7	ND	ND
Tetrachloroethane, 1,1,1,2-	µg/g	0.050	0.058	ND	ND
Tetrachloroethane, 1,1,2,2-	µg/g	0.050	0.05	ND	ND
Tetrachloroethylene	µg/g	0.050	0.28	ND	ND
Toluene	µg/g	0.02	2.3	ND	ND
Trichloroethane, 1,1,1-	µg/g	0.050	0.38	ND	ND
Trichloroethane, 1,1,2-	µg/g	0.050	0.05	ND	ND
Trichloroethylene	µg/g	0.050	0.061	ND	ND
Vinyl chloride	µg/g	0.02	0.02	ND	ND
Xylenes (total)	µg/g	0.04	3.1	ND	ND

¹ Standards from Table 3 of April 15, 2011 *Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act*; Residential / Parkland / Institutional land use, coarse textured soil

ns No standard

m bg Meters below grade

SV Reading Soil vapour reading (ppm or % LEL)

ppm Parts per million (by volume)

% LEL Percent of the lower explosive limit

BOLD Exceeds standard

TABLE 7 SOIL ANALYTICAL RESULTS - VOCs
121 Hume Street, Collingwood, Ontario

CONTINUED

Terrapex Sample Name			STANDARDS ¹ 2011 Table 3 R / P / I coarse	TP212-5	TP212-6
	Units	RDL			
Sample Depth	m bg	-	-	2.4	2.7
SV Reading	-	-	-	20 ppm	<10 ppm
Sampling Date	-	-	-	14-Dec-12	14-Dec-12
Analysis Date	-	-	-	22-Dec-12	22-Dec-12
Certificate of Analysis No.	-	-	-	B2J8051	B2J8051
Acetone	µg/g	0.5	16	ND	ND
Benzene	µg/g	0.05	0.21	ND	ND
Bromodichloromethane	µg/g	0.050	13	ND	ND
Bromoform	µg/g	0.050	0.27	ND	ND
Bromomethane	µg/g	0.050	0.05	ND	ND
Carbon tetrachloride	µg/g	0.050	0.05	ND	ND
Chlorobenzene	µg/g	0.050	2.4	ND	ND
Chloroform	µg/g	0.050	0.05	ND	ND
Dibromochloromethane	µg/g	0.050	9.4	ND	ND
Dichlorobenzene 1,2-	µg/g	0.050	3.4	ND	ND
Dichlorobenzene, 1,3-	µg/g	0.050	4.8	ND	ND
Dichlorobenzene, 1,4-	µg/g	0.050	0.083	ND	ND
Dichlorodifluoromethane	µg/g	0.050	16	ND	ND
Dichloroethane, 1,1-	µg/g	0.050	3.5	ND	ND
Dichloroethane, 1,2-	µg/g	0.050	0.05	ND	ND
Dichloroethylene, 1,1-	µg/g	0.050	0.05	ND	ND
Dichloroethylene, cis-1,2-	µg/g	0.050	3.4	ND	ND
Dichloroethylene, trans-1,2-	µg/g	0.050	0.084	ND	ND
Dichloropropane, 1,2-	µg/g	0.050	0.05	ND	ND
Dichloropropene, cis-1,3-	µg/g	0.030	-	ND	ND
Dichloropropene, trans-1,3-	µg/g	0.040	-	ND	ND
Dichloropropene, 1,3-	µg/g	0.050	0.05	ND	ND
Ethylbenzene	µg/g	0.04	2	ND	ND
Ethylene dibromide	µg/g	0.050	0.05	ND	ND
Hexane	µg/g	0.050	2.8	ND	ND
Methyl ethyl ketone	µg/g	0.050	16	ND	ND
Methyl isobutyl ketone	µg/g	0.50	1.7	ND	ND
Methyl tert butyl ether	µg/g	0.50	0.75	ND	ND
Methylene Chloride	µg/g	0.050	0.1	ND	ND
Styrene	µg/g	0.050	0.7	ND	ND
Tetrachloroethane, 1,1,1,2-	µg/g	0.050	0.058	ND	ND
Tetrachloroethane, 1,1,2,2-	µg/g	0.050	0.05	ND	ND
Tetrachloroethylene	µg/g	0.050	0.28	ND	ND
Toluene	µg/g	0.02	2.3	ND	ND
Trichloroethane, 1,1,1-	µg/g	0.050	0.38	ND	ND
Trichloroethane, 1,1,2-	µg/g	0.050	0.05	ND	ND
Trichloroethylene	µg/g	0.050	0.061	ND	ND
Vinyl chloride	µg/g	0.02	0.02	ND	ND
Xylenes (total)	µg/g	0.04	3.1	ND	ND

¹ Standards from Table 3 of April 15, 2011 *Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act*; Residential / Parkland / Institutional land use, coarse textured soil

ns No standard

m bg Meters below grade

SV Reading Soil vapour reading (ppm or % LEL)

ppm Parts per million (by volume)

% LEL Percent of the lower explosive limit

BOLD Exceeds standard

TABLE 7 SOIL ANALYTICAL RESULTS - VOCs
121 Hume Street, Collingwood, Ontario

CONTINUED

Terrapex Sample Name			STANDARDS ¹ 2011 Table 3 R / P / I coarse	TP213-5	TP002 Field Duplicate of TP213-5
	Units	RDL			
Sample Depth	m bg	-	-	2.4	-
SV Reading	-	-	-	15 ppm	-
Sampling Date	-	-	-	14-Dec-12	14-Dec-12
Analysis Date	-	-	-	22-Dec-12	22-Dec-12
Certificate of Analysis No.	-	-	-	B2J8051	B2J8051
Acetone	µg/g	0.5	16	ND	ND
Benzene	µg/g	0.05	0.21	ND	ND
Bromodichloromethane	µg/g	0.050	13	ND	ND
Bromoform	µg/g	0.050	0.27	ND	ND
Bromomethane	µg/g	0.050	0.05	ND	ND
Carbon tetrachloride	µg/g	0.050	0.05	ND	ND
Chlorobenzene	µg/g	0.050	2.4	ND	ND
Chloroform	µg/g	0.050	0.05	ND	ND
Dibromochloromethane	µg/g	0.050	9.4	ND	ND
Dichlorobenzene 1,2-	µg/g	0.050	3.4	ND	ND
Dichlorobenzene, 1,3-	µg/g	0.050	4.8	ND	ND
Dichlorobenzene, 1,4-	µg/g	0.050	0.083	ND	ND
Dichlorodifluoromethane	µg/g	0.050	16	ND	ND
Dichloroethane, 1,1-	µg/g	0.050	3.5	ND	ND
Dichloroethane, 1,2-	µg/g	0.050	0.05	ND	ND
Dichloroethylene, 1,1-	µg/g	0.050	0.05	ND	ND
Dichloroethylene, cis-1,2-	µg/g	0.050	3.4	ND	ND
Dichloroethylene, trans-1,2-	µg/g	0.050	0.084	ND	ND
Dichloropropane, 1,2-	µg/g	0.050	0.05	ND	ND
Dichloropropene, cis-1,3-	µg/g	0.030	-	ND	ND
Dichloropropene, trans-1,3-	µg/g	0.040	-	ND	ND
Dichloropropene, 1,3-	µg/g	0.050	0.05	ND	ND
Ethylbenzene	µg/g	0.04	2	ND	ND
Ethylene dibromide	µg/g	0.050	0.05	ND	ND
Hexane	µg/g	0.050	2.8	ND	ND
Methyl ethyl ketone	µg/g	0.050	16	ND	ND
Methyl isobutyl ketone	µg/g	0.50	1.7	ND	ND
Methyl tert butyl ether	µg/g	0.50	0.75	ND	ND
Methylene Chloride	µg/g	0.050	0.1	ND	ND
Styrene	µg/g	0.050	0.7	ND	ND
Tetrachloroethane, 1,1,1,2-	µg/g	0.050	0.058	ND	ND
Tetrachloroethane, 1,1,2,2-	µg/g	0.050	0.05	ND	ND
Tetrachloroethylene	µg/g	0.050	0.28	ND	ND
Toluene	µg/g	0.02	2.3	ND	ND
Trichloroethane, 1,1,1-	µg/g	0.050	0.38	ND	ND
Trichloroethane, 1,1,2-	µg/g	0.050	0.05	ND	ND
Trichloroethylene	µg/g	0.050	0.061	ND	ND
Vinyl chloride	µg/g	0.02	0.02	ND	ND
Xylenes (total)	µg/g	0.04	3.1	ND	ND

¹ Standards from Table 3 of April 15, 2011 *Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act*; Residential / Parkland / Institutional land use, coarse textured soil

ns No standard

m bg Meters below grade

SV Reading Soil vapour reading (ppm or % LEL)

ppm Parts per million (by volume)

% LEL Percent of the lower explosive limit

BOLD Exceeds standard

TABLE 7 SOIL ANALYTICAL RESULTS - VOCs
121 Hume Street, Collingwood, Ontario

CONTINUED

Terrapex Sample Name			STANDARDS ¹ 2011 Table 3 R / P / I coarse	TP213-6	TP214-4
	Units	RDL			
Sample Depth	m bg	-	-	2.9	1.8
SV Reading	-	-	-	15 ppm	10 ppm
Sampling Date	-	-	-	14-Dec-12	14-Dec-12
Analysis Date	-	-	-	22-Dec-12	22-Dec-12
Certificate of Analysis No.	-	-	-	B2J8051	B2J8051
Acetone	µg/g	0.5	16	ND	ND
Benzene	µg/g	0.05	0.21	ND	ND
Bromodichloromethane	µg/g	0.050	13	ND	ND
Bromoform	µg/g	0.050	0.27	ND	ND
Bromomethane	µg/g	0.050	0.05	ND	ND
Carbon tetrachloride	µg/g	0.050	0.05	ND	ND
Chlorobenzene	µg/g	0.050	2.4	ND	ND
Chloroform	µg/g	0.050	0.05	ND	ND
Dibromochloromethane	µg/g	0.050	9.4	ND	ND
Dichlorobenzene 1,2-	µg/g	0.050	3.4	ND	ND
Dichlorobenzene, 1,3-	µg/g	0.050	4.8	ND	ND
Dichlorobenzene, 1,4-	µg/g	0.050	0.083	ND	ND
Dichlorodifluoromethane	µg/g	0.050	16	ND	ND
Dichloroethane, 1,1-	µg/g	0.050	3.5	ND	ND
Dichloroethane, 1,2-	µg/g	0.050	0.05	ND	ND
Dichloroethylene, 1,1-	µg/g	0.050	0.05	ND	ND
Dichloroethylene, cis-1,2-	µg/g	0.050	3.4	ND	ND
Dichloroethylene, trans-1,2-	µg/g	0.050	0.084	ND	ND
Dichloropropane, 1,2-	µg/g	0.050	0.05	ND	ND
Dichloropropene, cis-1,3-	µg/g	0.030	-	ND	ND
Dichloropropene, trans-1,3-	µg/g	0.040	-	ND	ND
Dichloropropene, 1,3-	µg/g	0.050	0.05	ND	ND
Ethylbenzene	µg/g	0.04	2	ND	ND
Ethylene dibromide	µg/g	0.050	0.05	ND	ND
Hexane	µg/g	0.050	2.8	ND	ND
Methyl ethyl ketone	µg/g	0.050	16	ND	ND
Methyl isobutyl ketone	µg/g	0.50	1.7	ND	ND
Methyl tert butyl ether	µg/g	0.50	0.75	ND	ND
Methylene Chloride	µg/g	0.050	0.1	ND	ND
Styrene	µg/g	0.050	0.7	ND	ND
Tetrachloroethane, 1,1,1,2-	µg/g	0.050	0.058	ND	ND
Tetrachloroethane, 1,1,2,2-	µg/g	0.050	0.05	ND	ND
Tetrachloroethylene	µg/g	0.050	0.28	ND	ND
Toluene	µg/g	0.02	2.3	ND	ND
Trichloroethane, 1,1,1-	µg/g	0.050	0.38	ND	ND
Trichloroethane, 1,1,2-	µg/g	0.050	0.05	ND	ND
Trichloroethylene	µg/g	0.050	0.061	ND	ND
Vinyl chloride	µg/g	0.02	0.02	ND	ND
Xylenes (total)	µg/g	0.04	3.1	ND	ND

¹ Standards from Table 3 of April 15, 2011 *Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act*; Residential / Parkland / Institutional land use, coarse textured soil

ns No standard

m bg Meters below grade

SV Reading Soil vapour reading (ppm or % LEL)

ppm Parts per million (by volume)

% LEL Percent of the lower explosive limit

BOLD Exceeds standard

TABLE 7 SOIL ANALYTICAL RESULTS - VOCs
121 Hume Street, Collingwood, Ontario

CONTINUED

Terrapex Sample Name			STANDARDS ¹	TP214-5
	Units	RDL	2011 Table 3 R / P / I coarse	
Sample Depth	m bg	-	-	2.4
SV Reading	-	-	-	20 ppm
Sampling Date	-	-	-	14-Dec-12
Analysis Date	-	-	-	22-Dec-12
Certificate of Analysis No.	-	-	-	B2J8051
Acetone	µg/g	0.5	16	ND
Benzene	µg/g	0.05	0.21	ND
Bromodichloromethane	µg/g	0.050	13	ND
Bromoform	µg/g	0.050	0.27	ND
Bromomethane	µg/g	0.050	0.05	ND
Carbon tetrachloride	µg/g	0.050	0.05	ND
Chlorobenzene	µg/g	0.050	2.4	ND
Chloroform	µg/g	0.050	0.05	ND
Dibromochloromethane	µg/g	0.050	9.4	ND
Dichlorobenzene 1,2-	µg/g	0.050	3.4	ND
Dichlorobenzene, 1,3-	µg/g	0.050	4.8	ND
Dichlorobenzene, 1,4-	µg/g	0.050	0.083	ND
Dichlorodifluoromethane	µg/g	0.050	16	ND
Dichloroethane, 1,1-	µg/g	0.050	3.5	ND
Dichloroethane, 1,2-	µg/g	0.050	0.05	ND
Dichloroethylene, 1,1-	µg/g	0.050	0.05	ND
Dichloroethylene, cis-1,2-	µg/g	0.050	3.4	ND
Dichloroethylene, trans-1,2-	µg/g	0.050	0.084	ND
Dichloropropane, 1,2-	µg/g	0.050	0.05	ND
Dichloropropene, cis-1,3-	µg/g	0.030	-	ND
Dichloropropene, trans-1,3-	µg/g	0.040	-	ND
Dichloropropene, 1,3-	µg/g	0.050	0.05	ND
Ethylbenzene	µg/g	0.04	2	ND
Ethylene dibromide	µg/g	0.050	0.05	ND
Hexane	µg/g	0.050	2.8	ND
Methyl ethyl ketone	µg/g	0.050	16	ND
Methyl isobutyl ketone	µg/g	0.50	1.7	ND
Methyl tert butyl ether	µg/g	0.50	0.75	ND
Methylene Chloride	µg/g	0.050	0.1	ND
Styrene	µg/g	0.050	0.7	ND
Tetrachloroethane, 1,1,1,2-	µg/g	0.050	0.058	ND
Tetrachloroethane, 1,1,2,2-	µg/g	0.050	0.05	ND
Tetrachloroethylene	µg/g	0.050	0.28	ND
Toluene	µg/g	0.02	2.3	ND
Trichloroethane, 1,1,1-	µg/g	0.050	0.38	ND
Trichloroethane, 1,1,2-	µg/g	0.050	0.05	ND
Trichloroethylene	µg/g	0.050	0.061	ND
Vinyl chloride	µg/g	0.02	0.02	ND
Xylenes (total)	µg/g	0.04	3.1	ND

¹ Standards from Table 3 of April 15, 2011 *Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act*; Residential / Parkland / Institutional land use, coarse textured soil

ns No standard

m bg Meters below grade

SV Reading Soil vapour reading (ppm or % LEL)

ppm Parts per million (by volume)

% LEL Percent of the lower explosive limit

BOLD Exceeds standard

TABLE 8 GROUNDWATER ANALYTICAL RESULTS - PHCs
121 Hume Street, Collingwood, Ontario

Terrapex Sample Name			STANDARDS ¹ 2011 Table 3	STANDARDS 2004 Table 3	MW101	MW101	MW101	MW101
	Units	RDL	coarse	all				
Headspace Reading	-	-	-	-	75 ppm	15 ppm	<10 ppm	<5 ppm
Sampling Date	-	-	-	-	15-Aug-07	Aug 24/12	Dec 12/12	5-Nov-15
Analysis Date	-	-	-	-		Aug 27-28/12	Dec 20-21/12	12-Nov-15
Certificate of Analysis No.	-	-	-	-		B2D0356	B2J8143	B5M8881
Benzene	µg/L	0.2	44	1,900	< 0.2	ND	ND	ND
Toluene	µg/L	0.2	18,000	5,900	< 0.2	ND	ND	ND
Ethylbenzene	µg/L	0.2	2,300	28,000	< 0.2	ND	ND	ND
Xylenes (total)	µg/L	0.4	4,200	5,600	< 0.4	ND	ND	ND
Petroleum Hydrocarbons, F1	µg/L	100	750	ns	390	ND	ND	ND
Petroleum Hydrocarbons, F2	µg/L	100	150	ns	160	ND	ND	ND
Petroleum Hydrocarbons, F3	µg/L	100	500	ns	< 100	ND	ND	ND
Petroleum Hydrocarbons, F4	µg/L	100	500	ns	< 100	ND	ND	ND

¹ Standards from Table 3 of April 15, 2011 *Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act*; coarse textured soil

ns No standard

ppm Parts per million (by volume)

% LEL Percent of the lower explosive limit

BOLD Exceeds the 2011 standard

TABLE 8 GROUNDWATER ANALYTICAL RESULTS - PHCs
121 Hume Street, Collingwood, Ontario

CONTINUED

Terrapex Sample Name			STANDARDS ¹ 2011 Table 3	MW102	MW102	MW102	MW103	MW103
	Units	RDL	coarse					
Headspace Reading	-	-	-	15 ppm	50 ppm	25 ppm	50 ppm	75 ppm
Sampling Date	-	-	-	15-Aug-07	Aug 24/12	Dec 12/12	15-Aug-07	Aug 24/12
Analysis Date	-	-	-		Aug 27-28/12	Dec 20-22/12		Aug 27-28/12
Certificate of Analysis No.	-	-	-		B2D0356	B2J8143		B2D0356
Benzene	µg/L	0.2	44	< 0.2	ND	ND	< 0.2	ND
Toluene	µg/L	0.2	18,000	< 0.2	ND	ND	< 0.2	ND
Ethylbenzene	µg/L	0.2	2,300	< 0.2	ND	ND	< 0.2	ND
Xylenes (total)	µg/L	0.4	4,200	< 0.4	ND	ND	< 0.4	ND
Petroleum Hydrocarbons, F1	µg/L	100	750	< 100	ND	ND	< 100	ND
Petroleum Hydrocarbons, F2	µg/L	100	150	< 100	ND	ND	< 100	ND
Petroleum Hydrocarbons, F3	µg/L	100	500	< 100	ND	ND	< 100	ND
Petroleum Hydrocarbons, F4	µg/L	100	500	< 100	ND	ND	< 100	ND

¹ Standards from Table 3 of April 15, 2011 *Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act*; coarse textured soil

ns No standard

ppm Parts per million (by volume)

% LEL Percent of the lower explosive limit

BOLD Exceeds the 2011 standard

TABLE 8 GROUNDWATER ANALYTICAL RESULTS - PHCs
121 Hume Street, Collingwood, Ontario

CONTINUED

Terrapex Sample Name			STANDARDS ¹ 2011 Table 3 coarse	MW103	MW104	MW105	MW106	MW106
	Units	RDL						
Headspace Reading	-	-	-	35 ppm	40 ppm	120 ppm	5% LEL	55 ppm
Sampling Date	-	-	-	Dec 12/12	15-Aug-07	15-Aug-07	15-Aug-07	Dec 12/12
Analysis Date	-	-	-	Dec 20-22/12				Dec 20-22/12
Certificate of Analysis No.	-	-	-	B2J8143				B2J8143
Benzene	µg/L	0.2	44	ND	< 0.2	0.8	< 0.2	ND
Toluene	µg/L	0.2	18,000	ND	< 0.2	< 0.2	0.3	ND
Ethylbenzene	µg/L	0.2	2,300	ND	< 0.2	< 0.2	< 0.2	ND
Xylenes (total)	µg/L	0.4	4,200	ND	< 0.4	< 0.4	< 0.4	6.3
Petroleum Hydrocarbons, F1	µg/L	100	750	ND	< 100	< 100	< 100	28
Petroleum Hydrocarbons, F2	µg/L	100	150	ND	< 100	< 100	< 100	ND
Petroleum Hydrocarbons, F3	µg/L	100	500	ND	< 100	< 100	< 100	ND
Petroleum Hydrocarbons, F4	µg/L	100	500	ND	< 100	< 100	< 100	ND

¹ Standards from Table 3 of April 15, 2011 *Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act*; coarse textured soil

ns No standard
ppm Parts per million (by volume)
% LEL Percent of the lower explosive limit
BOLD Exceeds the 2011 standard

TABLE 8 GROUNDWATER ANALYTICAL RESULTS - PHCs
121 Hume Street, Collingwood, Ontario

CONTINUED

Terrapex Sample Name			STANDARDS ¹ 2011 Table 3	MW107	MW107	MW107	MW107	MW201
	Units	RDL	coarse					
Headspace Reading	-	-	-	275 ppm	75 ppm	50 ppm	<5 ppm	5% LEL
Sampling Date	-	-	-	15-Aug-07	Aug 24/12	Dec 12/12	05-Nov-15	Aug 24/12
Analysis Date	-	-	-		Aug 27-28/12	Dec 20-22/12	12-Nov-15	Aug 27-28/12
Certificate of Analysis No.	-	-	-		B2D0356	B2J8143	B5M8881	B2D0356
Benzene	µg/L	0.2	44	9	3.2	7.2	ND	0.22
Toluene	µg/L	0.2	18,000	1	ND	14	ND	0.52
Ethylbenzene	µg/L	0.2	2,300	4	4.8	390	250	2.7
Xylenes (total)	µg/L	0.4	4,200	270	12	1,600	1,100	2.3
Petroleum Hydrocarbons, F1	µg/L	100	750	570	490	2,600	2,200	ND
Petroleum Hydrocarbons, F2	µg/L	100	150	550	330	990	1,400	ND
Petroleum Hydrocarbons, F3	µg/L	100	500	< 100	ND	ND	ND	ND
Petroleum Hydrocarbons, F4	µg/L	100	500	< 100	ND	ND	ND	ND

¹ Standards from Table 3 of April 15, 2011 *Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act*; coarse textured soil

ns No standard
ppm Parts per million (by volume)
% LEL Percent of the lower explosive limit
BOLD Exceeds the 2011 standard

TABLE 8 GROUNDWATER ANALYTICAL RESULTS - PHCs
121 Hume Street, Collingwood, Ontario

CONTINUED

Terrapex Sample Name			STANDARDS ¹ 2011 Table 3	MW201	MW201	MW202	MW202	MW202
	Units	RDL	coarse					
Headspace Reading	-	-	-	25 ppm	<5 ppm	275 ppm	45 ppm	<5 ppm
Sampling Date	-	-	-	Dec 12/12	05-Nov-15	Aug 24/12	Dec 12/12	05-Nov-15
Analysis Date	-	-	-	Dec 20-22/12	12-Nov-15	Aug 27-28/12	Dec 20-22/12	12-Nov-15
Certificate of Analysis No.	-	-	-	B2J8143	B5M8881	B2D0356	B2J8143	B5M8881
Benzene	µg/L	0.2	44	ND	ND	11	ND (1.0)	ND
Toluene	µg/L	0.2	18,000	ND	ND	1.8	ND (1.0)	ND
Ethylbenzene	µg/L	0.2	2,300	4.9	ND	58	11	ND
Xylenes (total)	µg/L	0.4	4,200	2.1	ND	750	380	ND
Petroleum Hydrocarbons, F1	µg/L	100	750	100	ND	<u>1,500</u>	<u>1,800</u>	ND
Petroleum Hydrocarbons, F2	µg/L	100	150	150	ND	<u>430</u>	<u>640</u>	ND
Petroleum Hydrocarbons, F3	µg/L	100	500	ND	ND	ND	ND	ND
Petroleum Hydrocarbons, F4	µg/L	100	500	ND	ND	ND	ND	ND

¹ Standards from Table 3 of April 15, 2011 *Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act*; coarse textured soil

ns No standard
ppm Parts per million (by volume)
% LEL Percent of the lower explosive limit
BOLD Exceeds the 2011 standard

TABLE 8 GROUNDWATER ANALYTICAL RESULTS - PHCs
121 Hume Street, Collingwood, Ontario

CONTINUED

Terrapex Sample Name			STANDARDS ¹ 2011 Table 3	MW203	MW203	MW203	MW204	MW204
	Units	RDL	coarse					
Headspace Reading	-	-	-	115 ppm	25 ppm	<5 ppm	10% LEL	15 ppm
Sampling Date	-	-	-	Aug 24/12	Dec 12/12	05-Nov-15	Aug 24/12	Dec 12/12
Analysis Date	-	-	-	Aug 27-28/12	Dec 20-22/12	12-Nov-15	Aug 27-28/12	Dec 20-22/12
Certificate of Analysis No.	-	-	-	B2D0356	B2J8143	B5M8881	B2D0356	B2J8143
Benzene	µg/L	0.2	44	1.9	ND	ND	0.90	ND
Toluene	µg/L	0.2	18,000	2.0	ND	ND	1.3	ND
Ethylbenzene	µg/L	0.2	2,300	0.52	ND	ND	0.29	ND
Xylenes (total)	µg/L	0.4	4,200	1.7	ND	ND	0.73	ND
Petroleum Hydrocarbons, F1	µg/L	100	750	ND	ND	ND	ND	ND
Petroleum Hydrocarbons, F2	µg/L	100	150	ND	ND	ND	ND	ND
Petroleum Hydrocarbons, F3	µg/L	100	500	ND	ND	ND	ND	ND
Petroleum Hydrocarbons, F4	µg/L	100	500	ND	ND	ND	ND	ND

¹ Standards from Table 3 of April 15, 2011 *Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act*; coarse textured soil

ns No standard
 ppm Parts per million (by volume)
 % LEL Percent of the lower explosive limit
BOLD Exceeds the 2011 standard

TABLE 8 GROUNDWATER ANALYTICAL RESULTS - PHCs
121 Hume Street, Collingwood, Ontario

CONTINUED

Terrapex Sample Name			STANDARDS ¹ 2011 Table 3	MW205	MW205	MW205	MW5000 Field Duplicate of MW205	MW206
	Units	RDL	coarse					
Headspace Reading	-	-	-	7% LEL	30 ppm	<5 ppm	-	240 ppm
Sampling Date	-	-	-	Aug 24/12	Dec 12/12	05-Nov-15	-	Aug 24/12
Analysis Date	-	-	-	Aug 27-28/12	Dec 20-23/12	12-Nov-15	12-Nov-15	Aug 27-28/12
Certificate of Analysis No.	-	-	-	B2D0356	B2J8143	B5M8881	B5M8881	B2D0356
Benzene	µg/L	0.2	44	ND	ND	ND	ND	1.4
Toluene	µg/L	0.2	18,000	0.26	ND	ND	ND	ND
Ethylbenzene	µg/L	0.2	2,300	ND	ND	ND	ND	ND
Xylenes (total)	µg/L	0.4	4,200	ND	ND	ND	ND	ND
Petroleum Hydrocarbons, F1	µg/L	100	750	ND	ND	ND	ND	ND
Petroleum Hydrocarbons, F2	µg/L	100	150	ND	ND	ND	ND	ND
Petroleum Hydrocarbons, F3	µg/L	100	500	ND	ND	ND	ND	ND
Petroleum Hydrocarbons, F4	µg/L	100	500	ND	ND	ND	ND	ND

¹ Standards from Table 3 of April 15, 2011 *Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act*; coarse textured soil

ns No standard

ppm Parts per million (by volume)

% LEL Percent of the lower explosive limit

BOLD Exceeds the 2011 standard

TABLE 8 GROUNDWATER ANALYTICAL RESULTS - PHCs
121 Hume Street, Collingwood, Ontario

CONTINUED

Terrapex Sample Name			STANDARDS ¹ 2011 Table 3	MW206	MW206	MW207	MW210 Field Duplicate of MW207	MW207
	Units	RDL	coarse					
Headspace Reading	-	-	-	25 ppm	<5 ppm	48% LEL	-	75 ppm
Sampling Date	-	-	-	Dec 12/12	05-Nov-15	Aug 24/12	Aug 24/12	Dec 13/12
Analysis Date	-	-	-	Dec 20-23/12	12-Nov-15	Aug 27-28/12	Aug 27-28/12	Dec 20-23/12
Certificate of Analysis No.	-	-	-	B2J8143	B5M8881	B2D0356	B2D0356	B2J8143
Benzene	µg/L	0.2	44	ND	ND	0.58	0.64	ND
Toluene	µg/L	0.2	18,000	ND	ND	1.5	1.2	ND
Ethylbenzene	µg/L	0.2	2,300	ND	ND	6.9	6.3	0.60
Xylenes (total)	µg/L	0.4	4,200	ND	ND	44	40	0.65
Petroleum Hydrocarbons, F1	µg/L	100	750	ND	ND	<u>1,300</u>	<u>1,200</u>	120
Petroleum Hydrocarbons, F2	µg/L	100	150	ND	ND	<u>400</u>	<u>430</u>	ND
Petroleum Hydrocarbons, F3	µg/L	100	500	ND	ND	ND	ND	ND
Petroleum Hydrocarbons, F4	µg/L	100	500	ND	ND	ND	ND	ND

¹ Standards from Table 3 of April 15, 2011 *Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act*; coarse textured soil

ns No standard
ppm Parts per million (by volume)
% LEL Percent of the lower explosive limit
BOLD Exceeds the 2011 standard

TABLE 8 GROUNDWATER ANALYTICAL RESULTS - PHCs
121 Hume Street, Collingwood, Ontario

CONTINUED

Terrapex Sample Name			STANDARDS ¹ 2011 Table 3	MW208 Field Duplicate of MW207	MW301	MW302	MW303	MW1000 Field Duplicate of MW302
	Units	RDL	coarse					
Headspace Reading	-	-	-	-	<5 ppm	<5 ppm	25 ppm	-
Sampling Date	-	-	-	Dec 13/12	2-Dec-15	2-Dec-15	2-Dec-15	Dec 13/20
Analysis Date	-	-	-	Dec 19-23/12	09-Dec-15	09-Dec-15	09-Dec-15	Dec 19-23/20
Certificate of Analysis No.	-	-	-	B2J8143	B5O8903	B5O8903	B5O8903	B2J8151
Benzene	µg/L	0.2	44	ND	1.4	ND	1.2	ND
Toluene	µg/L	0.2	18,000	ND	3.0	0.27	2.7	0.26
Ethylbenzene	µg/L	0.2	2,300	0.56	ND	ND	0.58	ND
Xylenes (total)	µg/L	0.4	4,200	0.62	2.2	ND	2.4	ND
Petroleum Hydrocarbons, F1	µg/L	100	750	88	ND	ND	ND	ND
Petroleum Hydrocarbons, F2	µg/L	100	150	ND	ND	ND	ND	ND
Petroleum Hydrocarbons, F3	µg/L	100	500	ND	ND	ND	ND	ND
Petroleum Hydrocarbons, F4	µg/L	100	500	ND	ND	ND	ND	ND

¹ Standards from Table 3 of April 15, 2011 *Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act*; coarse textured soil

ns No standard
ppm Parts per million (by volume)
% LEL Percent of the lower explosive limit
BOLD Exceeds the 2011 standard

TABLE 8 GROUNDWATER ANALYTICAL RESULTS - PHCs
121 Hume Street, Collingwood, Ontario

CONTINUED

Terrapex Sample Name			STANDARDS ¹ 2011 Table 3 coarse	MW401
	Units	RDL		
Headspace Reading	-	-	-	<5 ppm
Sampling Date	-	-	-	26-May-16
Analysis Date	-	-	-	02-Jun-16
Certificate of Analysis No.	-	-	-	B6A7201
Benzene	µg/L	0.2	44	0.57
Toluene	µg/L	0.2	18,000	0.69
Ethylbenzene	µg/L	0.2	2,300	ND
Xylenes (total)	µg/L	0.4	4,200	ND
Petroleum Hydrocarbons, F1	µg/L	100	750	ND
Petroleum Hydrocarbons, F2	µg/L	100	150	ND
Petroleum Hydrocarbons, F3	µg/L	100	500	ND
Petroleum Hydrocarbons, F4	µg/L	100	500	ND

¹ Standards from Table 3 of April 15, 2011 *Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act*; coarse textured soil

ns No standard

ppm Parts per million (by volume)

% LEL Percent of the lower explosive limit

BOLD Exceeds the 2011 standard

TABLE 9 GROUNDWATER ANALYTICAL RESULTS - VOCs
121 Hume Street, Collingwood, ON

Terrapex Sample Name			STANDARDS ¹ 2011 Table 3	MW101	MW101	MW102
	Units	RDL	coarse			
Headspace Reading	-	-	-	<10 ppm	<5 ppm	25 ppm
Sampling Date	-	-	-	Dec 12/12	5-Nov-15	Dec 12/12
Analysis Date	-	-	-	Dec 20-21/12	12-Nov-15	Dec 20-22/12
Certificate of Analysis No.	-	-	-	B2J8143	B5M8881	B2J8143
Acetone	µg/L	10	130,000	ND	ND	ND
Benzene	µg/L	0.2	44	ND	ND	ND
Bromodichloromethane	µg/L	0.50	85,000	ND	ND	ND
Bromoform	µg/L	1.0	380	ND	ND	ND
Bromomethane	µg/L	0.50	5.6	ND	ND	ND
Carbon tetrachloride	µg/L	0.20	0.79	ND	ND	ND
Chlorobenzene	µg/L	0.20	630	ND	ND	ND
Chloroform	µg/L	0.20	2.4	ND	ND	ND
Dibromochloromethane	µg/L	0.50	82,000	ND	ND	ND
Dichlorobenzene 1,2-	µg/L	0.50	4,600	ND	ND	ND
Dichlorobenzene, 1,3-	µg/L	0.50	9,600	ND	ND	ND
Dichlorobenzene, 1,4-	µg/L	0.50	8	ND	ND	ND
Dichlorodifluoromethane	µg/L	1.00	4,400	ND	ND	ND
Dichloroethane, 1,1-	µg/L	0.20	320	ND	ND	ND
Dichloroethane, 1,2-	µg/L	0.50	1.6	ND	ND	ND
Dichloroethylene, 1,1-	µg/L	0.20	1.6	ND	ND	ND
Dichloroethylene, cis-1,2-	µg/L	0.50	1.6	ND	ND	ND
Dichloroethylene, trans-1,2-	µg/L	0.50	1.6	ND	ND	ND
Dichloropropane, 1,2-	µg/L	0.20	16	ND	ND	ND
Ethylbenzene	µg/L	0.20	2,300	ND	ND	ND
Ethylene dibromide	µg/L	0.20	0.25	ND	ND	ND
Hexane	µg/L	1.0	51	ND	ND	ND
Methylene Chloride	µg/L	2.0	610	ND	ND	ND
Methyl isobutyl ketone	µg/L	5.0	140,000	ND	ND	ND
Methyl ethyl ketone	µg/L	10	470,000	ND	ND	ND
Methyl tert butyl ether	µg/L	0.50	190	ND	ND	ND
Styrene	µg/L	0.50	1,300	ND	ND	ND
Tetrachloroethane, 1,1,1,2-	µg/L	0.50	3.3	ND	ND	ND
Tetrachloroethane, 1,1,2,2-	µg/L	0.50	3.2	ND	ND	ND
Tetrachloroethylene	µg/L	0.20	1.6	ND	ND	ND
Toluene	µg/L	0.20	18,000	ND	ND	ND
Trichloroethane, 1,1,1-	µg/L	0.20	640	ND	ND	ND
Trichloroethane, 1,1,2-	µg/L	0.50	4.7	ND	ND	ND
Trichloroethylene	µg/L	0.20	1.6	ND	ND	ND
Vinyl chloride	µg/L	0.20	0.5	ND	ND	ND
Trichlorofluoromethane	µg/L	0.50	2,500	ND	ND	ND
Xylenes (total)	µg/L	0.20	4,200	ND	ND	ND

¹ Standards from Table 3 of April 15, 2011 *Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act*; coarse textured soil

ns No standard

SV Reading Soil vapour reading (ppm or % LEL)

ppm Parts per million (by volume)

ND not detected at the laboratory minimum detection limit

% LEL Percent of the lower explosive limit

BOLD Exceeds standard

ND (1) Value in brackets shows adjusted reportable detection limit

TABLE 9 GROUNDWATER ANALYTICAL RESULTS - VOCs
121 Hume Street, Collingwood, ON

CONTINUED

Terrapex Sample Name			STANDARDS ¹ 2011 Table 3	MW103	MW106	MW107
	Units	RDL	coarse			
Headspace Reading	-	-	-	35 ppm	55 ppm	50 ppm
Sampling Date	-	-	-	Dec 12/12	Dec 12/12	Dec 12/12
Analysis Date	-	-	-	Dec 20-22/12	Dec 20-22/12	Dec 20-22/12
Certificate of Analysis No.	-	-	-	B2J8143	B2J8143	B2J8143
Acetone	µg/L	10	130,000	ND	ND	ND (200)
Benzene	µg/L	0.2	44	ND	ND	7.2
Bromodichloromethane	µg/L	0.50	85,000	ND	ND	ND (10)
Bromoform	µg/L	1.0	380	ND	ND	ND (20)
Bromomethane	µg/L	0.50	5.6	ND	ND	ND
Carbon tetrachloride	µg/L	0.20	0.79	ND	ND	ND
Chlorobenzene	µg/L	0.20	630	ND	ND	ND (4.0)
Chloroform	µg/L	0.20	2.4	ND	ND	ND
Dibromochloromethane	µg/L	0.50	82,000	ND	ND	ND (10)
Dichlorobenzene 1,2-	µg/L	0.50	4,600	ND	ND	ND
Dichlorobenzene, 1,3-	µg/L	0.50	9,600	ND	ND	ND (10)
Dichlorobenzene, 1,4-	µg/L	0.50	8	ND	ND	ND
Dichlorodifluoromethane	µg/L	1.00	4,400	ND	ND	ND (20)
Dichloroethane, 1,1-	µg/L	0.20	320	ND	ND	ND (4.0)
Dichloroethane, 1,2-	µg/L	0.50	1.6	ND	ND	ND
Dichloroethylene, 1,1-	µg/L	0.20	1.6	ND	ND	ND
Dichloroethylene, cis-1,2-	µg/L	0.50	1.6	ND	ND	ND
Dichloroethylene, trans-1,2-	µg/L	0.50	1.6	ND	ND	ND
Dichloropropane, 1,2-	µg/L	0.20	16	ND	ND	ND (4.0)
Ethylbenzene	µg/L	0.20	2,300	ND	ND	390
Ethylene dibromide	µg/L	0.20	0.25	ND	ND	ND
Hexane	µg/L	1.0	51	ND	ND	ND (20)
Methylene Chloride	µg/L	2.0	610	ND	ND	ND (40)
Methyl isobutyl ketone	µg/L	5.0	140,000	ND	ND	ND (100)
Methyl ethyl ketone	µg/L	10	470,000	ND	ND	ND (200)
Methyl tert butyl ether	µg/L	0.50	190	ND	ND	ND (10)
Styrene	µg/L	0.50	1,300	ND	ND	ND
Tetrachloroethane, 1,1,1,2-	µg/L	0.50	3.3	ND	ND	ND
Tetrachloroethane, 1,1,2,2-	µg/L	0.50	3.2	ND	ND	ND
Tetrachloroethylene	µg/L	0.20	1.6	ND	ND	ND
Toluene	µg/L	0.20	18,000	ND	ND	14
Trichloroethane, 1,1,1-	µg/L	0.20	640	ND	ND	ND (4.0)
Trichloroethane, 1,1,2-	µg/L	0.50	4.7	ND	ND	ND
Trichloroethylene	µg/L	0.20	1.6	ND	ND	ND
Vinyl chloride	µg/L	0.20	0.5	ND	ND	ND
Trichlorofluoromethane	µg/L	0.50	2,500	ND	ND	ND (10)
Xylenes (total)	µg/L	0.20	4,200	ND	6.3	1,600

¹ Standards from Table 3 of April 15, 2011 *Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act*; coarse textured soil

ns No standard

SV Reading Soil vapour reading (ppm or % LEL)

ppm Parts per million (by volume)

ND not detected at the laboratory minimum detection limit

% LEL Percent of the lower explosive limit

BOLD Exceeds standard

ND (1) Value in brackets shows adjusted reportable detection limit

TABLE 9 GROUNDWATER ANALYTICAL RESULTS - VOCs
121 Hume Street, Collingwood, ON

CONTINUED

Terrapex Sample Name			STANDARDS ¹ 2011 Table 3	MW107	MW201	MW201
	Units	RDL	coarse			
Headspace Reading	-	-	-	<5 ppm	5% LEL	25 ppm
Sampling Date	-	-	-	5-Nov-15	Aug 24/12	Dec 12/12
Analysis Date	-	-	-	12-Nov-15	Aug 27-28/12	Dec 20-22/12
Certificate of Analysis No.	-	-	-	B5M8881	B2D0356	B2J8143
Acetone	µg/L	10	130,000	ND	20	ND
Benzene	µg/L	0.2	44	ND	0.22	ND
Bromodichloromethane	µg/L	0.50	85,000	ND	ND	ND
Bromoform	µg/L	1.0	380	ND	ND	ND
Bromomethane	µg/L	0.50	5.6	ND	ND	ND
Carbon tetrachloride	µg/L	0.20	0.79	ND	ND	ND
Chlorobenzene	µg/L	0.20	630	ND	ND	ND
Chloroform	µg/L	0.20	2.4	ND	ND	ND
Dibromochloromethane	µg/L	0.50	82,000	ND	ND	ND
Dichlorobenzene 1,2-	µg/L	0.50	4,600	ND	ND	ND
Dichlorobenzene, 1,3-	µg/L	0.50	9,600	ND	ND	ND
Dichlorobenzene,1,4-	µg/L	0.50	8	ND	ND	ND
Dichlorodifluoromethane	µg/L	1.00	4,400	ND	ND	ND
Dichloroethane, 1,1-	µg/L	0.20	320	ND	ND	ND
Dichloroethane, 1,2-	µg/L	0.50	1.6	ND	ND	ND
Dichloroethylene, 1,1-	µg/L	0.20	1.6	ND	ND	ND
Dichloroethylene, cis-1,2-	µg/L	0.50	1.6	ND	ND	ND
Dichloroethylene, trans-1,2-	µg/L	0.50	1.6	ND	ND	ND
Dichloropropane, 1,2-	µg/L	0.20	16	ND	ND	ND
Ethylbenzene	µg/L	0.20	2,300	250	2.7	4.9
Ethylene dibromide	µg/L	0.20	0.25	ND	ND	ND
Hexane	µg/L	1.0	51	32	ND	ND
Methylene Chloride	µg/L	2.0	610	ND	ND	ND
Methyl isobutyl ketone	µg/L	5.0	140,000	ND	ND	ND
Methyl ethyl ketone	µg/L	10	470,000	ND	ND	ND
Methyl tert butyl ether	µg/L	0.50	190	ND	ND	ND
Styrene	µg/L	0.50	1,300	ND	ND	ND
Tetrachloroethane, 1,1,1,2-	µg/L	0.50	3.3	ND	ND	ND
Tetrachloroethane, 1,1,2,2-	µg/L	0.50	3.2	ND	ND	ND
Tetrachloroethylene	µg/L	0.20	1.6	ND	ND	ND
Toluene	µg/L	0.20	18,000	ND	ND	ND
Trichloroethane, 1,1,1-	µg/L	0.20	640	ND	ND	ND
Trichloroethane, 1,1,2-	µg/L	0.50	4.7	ND	ND	ND
Trichloroethylene	µg/L	0.20	1.6	ND	ND	ND
Vinyl chloride	µg/L	0.20	0.5	ND	ND	ND
Trichlorofluoromethane	µg/L	0.50	2,500	ND	ND	ND
Xylenes (total)	µg/L	0.20	4,200	1,100	2.3	2.1

¹ Standards from Table 3 of April 15, 2011 *Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act*; coarse textured soil

ns No standard

SV Reading Soil vapour reading (ppm or % LEL)

ppm Parts per million (by volume)

ND not detected at the laboratory minimum detection limit

% LEL Percent of the lower explosive limit

BOLD Exceeds standard

ND (1) Value in brackets shows adjusted reportable detection limit

TABLE 9 GROUNDWATER ANALYTICAL RESULTS - VOCs
121 Hume Street, Collingwood, ON

CONTINUED

Terrapex Sample Name			STANDARDS ¹ 2011 Table 3	MW201	MW202	MW202
	Units	RDL	coarse			
Headspace Reading	-	-	-	<5 ppm	45 ppm	<5 ppm
Sampling Date	-	-	-	5-Nov-15	Dec 12/12	5-Nov-15
Analysis Date	-	-	-	12-Nov-15	Dec 20-22/12	12-Nov-15
Certificate of Analysis No.	-	-	-	B5M8881	B2J8143	B5M8881
Acetone	µg/L	10	130,000	ND	ND (50)	ND
Benzene	µg/L	0.2	44	ND	ND (1.0)	ND
Bromodichloromethane	µg/L	0.50	85,000	ND	ND (2.5)	ND
Bromoform	µg/L	1.0	380	ND	ND (5.0)	ND
Bromomethane	µg/L	0.50	5.6	ND	ND	ND
Carbon tetrachloride	µg/L	0.20	0.79	ND	ND	ND
Chlorobenzene	µg/L	0.20	630	ND	ND (1.0)	ND
Chloroform	µg/L	0.20	2.4	ND	ND (1.0)	ND
Dibromochloromethane	µg/L	0.50	82,000	ND	ND (2.5)	ND
Dichlorobenzene 1,2-	µg/L	0.50	4,600	ND	ND (2.5)	ND
Dichlorobenzene, 1,3-	µg/L	0.50	9,600	ND	ND (2.5)	ND
Dichlorobenzene,1,4-	µg/L	0.50	8	ND	ND	ND
Dichlorodifluoromethane	µg/L	1.00	4,400	ND	ND (5.0)	ND
Dichloroethane, 1,1-	µg/L	0.20	320	ND	ND (1.0)	ND
Dichloroethane, 1,2-	µg/L	0.50	1.6	ND	ND	ND
Dichloroethylene, 1,1-	µg/L	0.20	1.6	ND	ND (1.0)	ND
Dichloroethylene, cis-1,2-	µg/L	0.50	1.6	ND	ND	ND
Dichloroethylene, trans-1,2-	µg/L	0.50	1.6	ND	ND	ND
Dichloropropane, 1,2-	µg/L	0.20	16	ND	ND (1.0)	ND
Ethylbenzene	µg/L	0.20	2,300	ND	11	ND
Ethylene dibromide	µg/L	0.20	0.25	ND	ND	ND
Hexane	µg/L	1.0	51	ND	8.5	ND
Methylene Chloride	µg/L	2.0	610	ND	ND (10)	ND
Methyl isobutyl ketone	µg/L	5.0	140,000	ND	ND (25)	ND
Methyl ethyl ketone	µg/L	10	470,000	ND	ND (50)	ND
Methyl tert butyl ether	µg/L	0.50	190	ND	ND (2.5)	ND
Styrene	µg/L	0.50	1,300	ND	ND (2.5)	ND
Tetrachloroethane, 1,1,1,2-	µg/L	0.50	3.3	ND	ND	ND
Tetrachloroethane, 1,1,2,2-	µg/L	0.50	3.2	ND	ND	ND
Tetrachloroethylene	µg/L	0.20	1.6	ND	ND (1.0)	ND
Toluene	µg/L	0.20	18,000	ND	ND (1.0)	ND
Trichloroethane, 1,1,1-	µg/L	0.20	640	ND	ND (1.0)	ND
Trichloroethane, 1,1,2-	µg/L	0.50	4.7	ND	ND (2.5)	ND
Trichloroethylene	µg/L	0.20	1.6	ND	ND (1.0)	ND
Vinyl chloride	µg/L	0.20	0.5	ND	ND	ND
Trichlorofluoromethane	µg/L	0.50	2,500	ND	ND (2.5)	ND
Xylenes (total)	µg/L	0.20	4,200	ND	380	ND

¹ Standards from Table 3 of April 15, 2011 *Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act*; coarse textured soil

ns No standard

SV Reading Soil vapour reading (ppm or % LEL)

ppm Parts per million (by volume)

ND not detected at the laboratory minimum detection limit

% LEL Percent of the lower explosive limit

BOLD Exceeds standard

ND (1) Value in brackets shows adjusted reportable detection limit

TABLE 9 GROUNDWATER ANALYTICAL RESULTS - VOCs
121 Hume Street, Collingwood, ON

CONTINUED

Terrapex Sample Name			STANDARDS ¹ 2011 Table 3	MW203	MW203	MW204
	Units	RDL	coarse			
Headspace Reading	-	-	-	25 ppm	<5 ppm	10% LEL
Sampling Date	-	-	-	Dec 12/12	5-Nov-15	Aug 24/12
Analysis Date	-	-	-	Dec 20-22/12	12-Nov-15	Aug 27-28/12
Certificate of Analysis No.	-	-	-	B2J8143	B5M8881	B2D0356
Acetone	µg/L	10	130,000	ND	ND	ND
Benzene	µg/L	0.2	44	ND	ND	0.90
Bromodichloromethane	µg/L	0.50	85,000	ND	ND	ND
Bromoform	µg/L	1.0	380	ND	ND	ND
Bromomethane	µg/L	0.50	5.6	ND	ND	ND
Carbon tetrachloride	µg/L	0.20	0.79	ND	ND	ND
Chlorobenzene	µg/L	0.20	630	ND	ND	ND
Chloroform	µg/L	0.20	2.4	ND	ND	ND
Dibromochloromethane	µg/L	0.50	82,000	ND	ND	ND
Dichlorobenzene 1,2-	µg/L	0.50	4,600	ND	ND	ND
Dichlorobenzene, 1,3-	µg/L	0.50	9,600	ND	ND	ND
Dichlorobenzene,1,4-	µg/L	0.50	8	ND	ND	ND
Dichlorodifluoromethane	µg/L	1.00	4,400	ND	ND	ND
Dichloroethane, 1,1-	µg/L	0.20	320	ND	ND	ND
Dichloroethane, 1,2-	µg/L	0.50	1.6	ND	ND	ND
Dichloroethylene, 1,1-	µg/L	0.20	1.6	ND	ND	ND
Dichloroethylene, cis-1,2-	µg/L	0.50	1.6	ND	ND	ND
Dichloroethylene, trans-1,2-	µg/L	0.50	1.6	ND	ND	ND
Dichloropropane, 1,2-	µg/L	0.20	16	ND	ND	ND
Ethylbenzene	µg/L	0.20	2,300	ND	ND	0.52
Ethylene dibromide	µg/L	0.20	0.25	ND	ND	ND
Hexane	µg/L	1.0	51	ND	ND	ND
Methylene Chloride	µg/L	2.0	610	ND	ND	ND
Methyl isobutyl ketone	µg/L	5.0	140,000	ND	ND	ND
Methyl ethyl ketone	µg/L	10	470,000	ND	ND	ND
Methyl tert butyl ether	µg/L	0.50	190	ND	ND	ND
Styrene	µg/L	0.50	1,300	ND	ND	ND
Tetrachloroethane, 1,1,1,2-	µg/L	0.50	3.3	ND	ND	ND
Tetrachloroethane, 1,1,2,2-	µg/L	0.50	3.2	ND	ND	ND
Tetrachloroethylene	µg/L	0.20	1.6	ND	ND	ND
Toluene	µg/L	0.20	18,000	ND	ND	ND
Trichloroethane, 1,1,1-	µg/L	0.20	640	ND	ND	ND
Trichloroethane, 1,1,2-	µg/L	0.50	4.7	ND	ND	ND
Trichloroethylene	µg/L	0.20	1.6	ND	ND	ND
Vinyl chloride	µg/L	0.20	0.5	ND	ND	ND
Trichlorofluoromethane	µg/L	0.50	2,500	ND	ND	ND
Xylenes (total)	µg/L	0.20	4,200	ND	ND	0.73

¹ Standards from Table 3 of April 15, 2011 *Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act*; coarse textured soil

ns No standard

SV Reading Soil vapour reading (ppm or % LEL)

ppm Parts per million (by volume)

ND not detected at the laboratory minimum detection limit

% LEL Percent of the lower explosive limit

BOLD Exceeds standard

ND (1) Value in brackets shows adjusted reportable detection limit

TABLE 9 GROUNDWATER ANALYTICAL RESULTS - VOCs
121 Hume Street, Collingwood, ON

CONTINUED

Terrapex Sample Name			STANDARDS ¹ 2011 Table 3	MW204	MW205	MW205
	Units	RDL	coarse			
Headspace Reading	-	-	-	15 ppm	7% LEL	30 ppm
Sampling Date	-	-	-	Dec 12/12	Aug 24/12	Dec 12/12
Analysis Date	-	-	-	Dec 20-22/12	Aug 27-28/12	Dec 20-23/12
Certificate of Analysis No.	-	-	-	B2J8143	B2D0356	B2J8143
Acetone	µg/L	10	130,000	ND	ND	ND
Benzene	µg/L	0.2	44	ND	ND	ND
Bromodichloromethane	µg/L	0.50	85,000	ND	ND	ND
Bromoform	µg/L	1.0	380	ND	ND	ND
Bromomethane	µg/L	0.50	5.6	ND	ND	ND
Carbon tetrachloride	µg/L	0.20	0.79	ND	ND	ND
Chlorobenzene	µg/L	0.20	630	ND	ND	ND
Chloroform	µg/L	0.20	2.4	ND	ND	ND
Dibromochloromethane	µg/L	0.50	82,000	ND	ND	ND
Dichlorobenzene 1,2-	µg/L	0.50	4,600	ND	ND	ND
Dichlorobenzene, 1,3-	µg/L	0.50	9,600	ND	ND	ND
Dichlorobenzene, 1,4-	µg/L	0.50	8	ND	ND	ND
Dichlorodifluoromethane	µg/L	1.00	4,400	ND	ND	ND
Dichloroethane, 1,1-	µg/L	0.20	320	ND	ND	ND
Dichloroethane, 1,2-	µg/L	0.50	1.6	ND	1.8	ND
Dichloroethylene, 1,1-	µg/L	0.20	1.6	ND	ND	ND
Dichloroethylene, cis-1,2-	µg/L	0.50	1.6	ND	ND	ND
Dichloroethylene, trans-1,2-	µg/L	0.50	1.6	ND	ND	ND
Dichloropropane, 1,2-	µg/L	0.20	16	ND	ND	ND
Ethylbenzene	µg/L	0.20	2,300	ND	ND	ND
Ethylene dibromide	µg/L	0.20	0.25	ND	ND	ND
Hexane	µg/L	1.0	51	ND	ND	ND
Methylene Chloride	µg/L	2.0	610	ND	ND	ND
Methyl isobutyl ketone	µg/L	5.0	140,000	ND	ND	ND
Methyl ethyl ketone	µg/L	10	470,000	ND	ND	ND
Methyl tert butyl ether	µg/L	0.50	190	ND	ND	ND
Styrene	µg/L	0.50	1,300	ND	ND	ND
Tetrachloroethane, 1,1,1,2-	µg/L	0.50	3.3	ND	ND	ND
Tetrachloroethane, 1,1,2,2-	µg/L	0.50	3.2	ND	ND	ND
Tetrachloroethylene	µg/L	0.20	1.6	ND	ND	ND
Toluene	µg/L	0.20	18,000	ND	0.26	ND
Trichloroethane, 1,1,1-	µg/L	0.20	640	ND	ND	ND
Trichloroethane, 1,1,2-	µg/L	0.50	4.7	ND	ND	ND
Trichloroethylene	µg/L	0.20	1.6	ND	ND	ND
Vinyl chloride	µg/L	0.20	0.5	ND	ND	ND
Trichlorofluoromethane	µg/L	0.50	2,500	ND	ND	ND
Xylenes (total)	µg/L	0.20	4,200	ND	ND	ND

¹ Standards from Table 3 of April 15, 2011 *Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act*; coarse textured soil

ns No standard

SV Reading Soil vapour reading (ppm or % LEL)

ppm Parts per million (by volume)

ND not detected at the laboratory minimum detection limit

% LEL Percent of the lower explosive limit

BOLD Exceeds standard

ND (1) Value in brackets shows adjusted reportable detection limit

TABLE 9 GROUNDWATER ANALYTICAL RESULTS - VOCs
121 Hume Street, Collingwood, ON

CONTINUED

Terrapex Sample Name			STANDARDS ¹ 2011 Table 3	MW205	MW5000 Field Duplicate of MW205	MW206
	Units	RDL	coarse			
Headspace Reading	-	-	-	<5 ppm	-	25 ppm
Sampling Date	-	-	-	5-Nov-15	5-Nov-15	Dec 12/12
Analysis Date	-	-	-	12-Nov-15	12-Nov-15	Dec 20-23/12
Certificate of Analysis No.	-	-	-	B5M8881	B5M8881	B2J8143
Acetone	µg/L	10	130,000	ND	ND	ND
Benzene	µg/L	0.2	44	ND	ND	ND
Bromodichloromethane	µg/L	0.50	85,000	ND	ND	ND
Bromoform	µg/L	1.0	380	ND	ND	ND
Bromomethane	µg/L	0.50	5.6	ND	ND	ND
Carbon tetrachloride	µg/L	0.20	0.79	ND	ND	ND
Chlorobenzene	µg/L	0.20	630	ND	ND	ND
Chloroform	µg/L	0.20	2.4	ND	ND	ND
Dibromochloromethane	µg/L	0.50	82,000	ND	ND	ND
Dichlorobenzene 1,2-	µg/L	0.50	4,600	ND	ND	ND
Dichlorobenzene, 1,3-	µg/L	0.50	9,600	ND	ND	ND
Dichlorobenzene,1,4-	µg/L	0.50	8	ND	ND	ND
Dichlorodifluoromethane	µg/L	1.00	4,400	ND	ND	ND
Dichloroethane, 1,1-	µg/L	0.20	320	ND	ND	ND
Dichloroethane, 1,2-	µg/L	0.50	1.6	ND	ND	ND
Dichloroethylene, 1,1-	µg/L	0.20	1.6	ND	ND	ND
Dichloroethylene, cis-1,2-	µg/L	0.50	1.6	ND	ND	ND
Dichloroethylene, trans-1,2-	µg/L	0.50	1.6	ND	ND	ND
Dichloropropane, 1,2-	µg/L	0.20	16	ND	ND	ND
Ethylbenzene	µg/L	0.20	2,300	ND	ND	ND
Ethylene dibromide	µg/L	0.20	0.25	ND	ND	ND
Hexane	µg/L	1.0	51	ND	ND	ND
Methylene Chloride	µg/L	2.0	610	ND	ND	ND
Methyl isobutyl ketone	µg/L	5.0	140,000	ND	ND	ND
Methyl ethyl ketone	µg/L	10	470,000	ND	ND	ND
Methyl tert butyl ether	µg/L	0.50	190	ND	ND	ND
Styrene	µg/L	0.50	1,300	ND	ND	ND
Tetrachloroethane, 1,1,1,2-	µg/L	0.50	3.3	ND	ND	ND
Tetrachloroethane, 1,1,2,2-	µg/L	0.50	3.2	ND	ND	ND
Tetrachloroethylene	µg/L	0.20	1.6	ND	ND	ND
Toluene	µg/L	0.20	18,000	ND	ND	ND
Trichloroethane, 1,1,1-	µg/L	0.20	640	ND	ND	ND
Trichloroethane, 1,1,2-	µg/L	0.50	4.7	ND	ND	ND
Trichloroethylene	µg/L	0.20	1.6	ND	ND	ND
Vinyl chloride	µg/L	0.20	0.5	ND	ND	ND
Trichlorofluoromethane	µg/L	0.50	2,500	ND	ND	ND
Xylenes (total)	µg/L	0.20	4,200	ND	ND	ND

¹ Standards from Table 3 of April 15, 2011 *Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act*; coarse textured soil

ns No standard

SV Reading Soil vapour reading (ppm or % LEL)

ppm Parts per million (by volume)

ND not detected at the laboratory minimum detection limit

% LEL Percent of the lower explosive limit

BOLD Exceeds standard

ND (1) Value in brackets shows adjusted reportable detection limit

TABLE 9 GROUNDWATER ANALYTICAL RESULTS - VOCs
121 Hume Street, Collingwood, ON

CONTINUED

Terrapex Sample Name			STANDARDS ¹ 2011 Table 3	MW206	MW207	MW207
	Units	RDL	coarse			
Headspace Reading	-	-	-	<5 ppm	48% LEL	75 ppm
Sampling Date	-	-	-	5-Nov-15	Aug 24/12	Dec 13/12
Analysis Date	-	-	-	12-Nov-15	Aug 27-28/12	Dec 20-23/12
Certificate of Analysis No.	-	-	-	B5M8881	B2D0356	B2J8143
Acetone	µg/L	10	130,000	ND	14.0	ND
Benzene	µg/L	0.2	44	ND	0.58	ND
Bromodichloromethane	µg/L	0.50	85,000	ND	ND	ND
Bromoform	µg/L	1.0	380	ND	ND	ND
Bromomethane	µg/L	0.50	5.6	ND	ND	ND
Carbon tetrachloride	µg/L	0.20	0.79	ND	ND	ND
Chlorobenzene	µg/L	0.20	630	ND	ND	ND
Chloroform	µg/L	0.20	2.4	ND	ND	ND (0.40)
Dibromochloromethane	µg/L	0.50	82,000	ND	ND	ND
Dichlorobenzene 1,2-	µg/L	0.50	4,600	ND	ND	ND
Dichlorobenzene, 1,3-	µg/L	0.50	9,600	ND	ND	ND
Dichlorobenzene,1,4-	µg/L	0.50	8	ND	ND	ND
Dichlorodifluoromethane	µg/L	1.00	4,400	ND	ND	ND
Dichloroethane, 1,1-	µg/L	0.20	320	ND	ND	ND
Dichloroethane, 1,2-	µg/L	0.50	1.6	ND	ND	ND
Dichloroethylene, 1,1-	µg/L	0.20	1.6	ND	ND	ND
Dichloroethylene, cis-1,2-	µg/L	0.50	1.6	ND	ND	ND
Dichloroethylene, trans-1,2-	µg/L	0.50	1.6	ND	ND	ND
Dichloropropane, 1,2-	µg/L	0.20	16	ND	ND	ND
Ethylbenzene	µg/L	0.20	2,300	ND	6.9	0.60
Ethylene dibromide	µg/L	0.20	0.25	ND	ND	ND
Hexane	µg/L	1.0	51	ND	ND	1.5
Methylene Chloride	µg/L	2.0	610	ND	ND	ND
Methyl isobutyl ketone	µg/L	5.0	140,000	ND	ND	ND
Methyl ethyl ketone	µg/L	10	470,000	ND	ND	ND
Methyl tert butyl ether	µg/L	0.50	190	ND	ND	ND
Styrene	µg/L	0.50	1,300	ND	ND	ND
Tetrachloroethane, 1,1,1,2-	µg/L	0.50	3.3	ND	ND	ND
Tetrachloroethane, 1,1,2,2-	µg/L	0.50	3.2	ND	ND	ND
Tetrachloroethylene	µg/L	0.20	1.6	ND	ND	ND
Toluene	µg/L	0.20	18,000	ND	1.5	ND
Trichloroethane, 1,1,1-	µg/L	0.20	640	ND	ND	ND
Trichloroethane, 1,1,2-	µg/L	0.50	4.7	ND	ND	ND
Trichloroethylene	µg/L	0.20	1.6	ND	ND	ND
Vinyl chloride	µg/L	0.20	0.5	ND	ND	ND
Trichlorofluoromethane	µg/L	0.50	2,500	ND	ND	ND
Xylenes (total)	µg/L	0.20	4,200	ND	44	0.65

¹ Standards from Table 3 of April 15, 2011 *Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act*; coarse textured soil

ns No standard

SV Reading Soil vapour reading (ppm or % LEL)

ppm Parts per million (by volume)

ND not detected at the laboratory minimum detection limit

% LEL Percent of the lower explosive limit

BOLD Exceeds standard

ND (1) Value in brackets shows adjusted reportable detection limit

TABLE 9 GROUNDWATER ANALYTICAL RESULTS - VOCs
121 Hume Street, Collingwood, ON

CONTINUED

Terrapex Sample Name			STANDARDS ¹ 2011 Table 3	MW208 Field Duplicate of MW207	MW301	MW302
	Units	RDL	coarse			
Headspace Reading	-	-	-	-	<5 ppm	<5 ppm
Sampling Date	-	-	-	Dec 13/12	2-Dec-15	2-Dec-15
Analysis Date	-	-	-	Dec 19-23/12	09-Dec-15	09-Dec-15
Certificate of Analysis No.	-	-	-	B2J8143	B5O8903	B5O8903
Acetone	µg/L	10	130,000	ND	ND	ND
Benzene	µg/L	0.2	44	ND	1.4	ND
Bromodichloromethane	µg/L	0.50	85,000	ND	ND	ND
Bromoform	µg/L	1.0	380	ND	ND	ND
Bromomethane	µg/L	0.50	5.6	ND	ND	ND
Carbon tetrachloride	µg/L	0.20	0.79	ND	ND	ND
Chlorobenzene	µg/L	0.20	630	ND	ND	ND
Chloroform	µg/L	0.20	2.4	ND	ND	ND
Dibromochloromethane	µg/L	0.50	82,000	ND	ND	ND
Dichlorobenzene 1,2-	µg/L	0.50	4,600	ND	ND	ND
Dichlorobenzene, 1,3-	µg/L	0.50	9,600	ND	ND	ND
Dichlorobenzene,1,4-	µg/L	0.50	8	ND	ND	ND
Dichlorodifluoromethane	µg/L	1.00	4,400	ND	ND	ND
Dichloroethane, 1,1-	µg/L	0.20	320	ND	ND	ND
Dichloroethane, 1,2-	µg/L	0.50	1.6	ND	ND	ND
Dichloroethylene, 1,1-	µg/L	0.20	1.6	ND	ND	ND
Dichloroethylene, cis-1,2-	µg/L	0.50	1.6	ND	ND	ND
Dichloroethylene, trans-1,2-	µg/L	0.50	1.6	ND	ND	ND
Dichloropropane, 1,2-	µg/L	0.20	16	ND	ND	ND
Ethylbenzene	µg/L	0.20	2,300	0.56	ND	ND
Ethylene dibromide	µg/L	0.20	0.25	ND	ND	ND
Hexane	µg/L	1.0	51	1.5	ND	ND
Methylene Chloride	µg/L	2.0	610	ND	ND	ND
Methyl isobutyl ketone	µg/L	5.0	140,000	ND	ND	ND
Methyl ethyl ketone	µg/L	10	470,000	ND	ND	ND
Methyl tert butyl ether	µg/L	0.50	190	ND	ND	ND
Styrene	µg/L	0.50	1,300	ND	ND	ND
Tetrachloroethane, 1,1,1,2-	µg/L	0.50	3.3	ND	ND	ND
Tetrachloroethane, 1,1,2,2-	µg/L	0.50	3.2	ND	ND	ND
Tetrachloroethylene	µg/L	0.20	1.6	ND	ND	ND
Toluene	µg/L	0.20	18,000	ND	3	0.27
Trichloroethane, 1,1,1-	µg/L	0.20	640	ND	ND	ND
Trichloroethane, 1,1,2-	µg/L	0.50	4.7	ND	ND	ND
Trichloroethylene	µg/L	0.20	1.6	ND	ND	ND
Vinyl chloride	µg/L	0.20	0.5	ND	ND	ND
Trichlorofluoromethane	µg/L	0.50	2,500	ND	ND	ND
Xylenes (total)	µg/L	0.20	4,200	0.62	2.2	ND

¹ Standards from Table 3 of April 15, 2011 *Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act*; coarse textured soil

ns No standard

SV Reading Soil vapour reading (ppm or % LEL)

ppm Parts per million (by volume)

ND not detected at the laboratory minimum detection limit

% LEL Percent of the lower explosive limit

BOLD Exceeds standard

ND (1) Value in brackets shows adjusted reportable detection limit

TABLE 9 GROUNDWATER ANALYTICAL RESULTS - VOCs
121 Hume Street, Collingwood, ON

CONTINUED

Terrapex Sample Name			STANDARDS ¹ 2011 Table 3	MW303	MW5000 Field Duplicate of MW302	MW401
	Units	RDL	coarse			
Headspace Reading	-	-	-	25 ppm	-	<5 ppm
Sampling Date	-	-	-	2-Dec-15	2-Dec-15	26-May-16
Analysis Date	-	-	-	09-Dec-15	09-Dec-15	02-Jun-16
Certificate of Analysis No.	-	-	-	B5O8903	B5O8903	B6A7363
Acetone	µg/L	10	130,000	ND	ND	ND
Benzene	µg/L	0.2	44	1.2	ND	0.57
Bromodichloromethane	µg/L	0.50	85,000	ND	ND	ND
Bromoform	µg/L	1.0	380	ND	ND	ND
Bromomethane	µg/L	0.50	5.6	ND	ND	ND
Carbon tetrachloride	µg/L	0.20	0.79	ND	ND	ND
Chlorobenzene	µg/L	0.20	630	ND	ND	ND
Chloroform	µg/L	0.20	2.4	ND	ND	ND
Dibromochloromethane	µg/L	0.50	82,000	ND	ND	ND
Dichlorobenzene 1,2-	µg/L	0.50	4,600	ND	ND	ND
Dichlorobenzene, 1,3-	µg/L	0.50	9,600	ND	ND	ND
Dichlorobenzene, 1,4-	µg/L	0.50	8	ND	ND	ND
Dichlorodifluoromethane	µg/L	1.00	4,400	ND	ND	ND
Dichloroethane, 1,1-	µg/L	0.20	320	ND	ND	ND
Dichloroethane, 1,2-	µg/L	0.50	1.6	ND	ND	ND
Dichloroethylene, 1,1-	µg/L	0.20	1.6	ND	ND	ND
Dichloroethylene, cis-1,2-	µg/L	0.50	1.6	ND	ND	ND
Dichloroethylene, trans-1,2-	µg/L	0.50	1.6	ND	ND	ND
Dichloropropane, 1,2-	µg/L	0.20	16	ND	ND	ND
Ethylbenzene	µg/L	0.20	2,300	0.58	ND	ND
Ethylene dibromide	µg/L	0.20	0.25	ND	ND	ND
Hexane	µg/L	1.0	51	ND	ND	ND
Methylene Chloride	µg/L	2.0	610	ND	ND	ND
Methyl isobutyl ketone	µg/L	5.0	140,000	ND	ND	ND
Methyl ethyl ketone	µg/L	10	470,000	ND	ND	ND
Methyl tert butyl ether	µg/L	0.50	190	ND	ND	ND
Styrene	µg/L	0.50	1,300	ND	ND	ND
Tetrachloroethane, 1,1,1,2-	µg/L	0.50	3.3	ND	ND	ND
Tetrachloroethane, 1,1,2,2-	µg/L	0.50	3.2	ND	ND	ND
Tetrachloroethylene	µg/L	0.20	1.6	ND	ND	ND
Toluene	µg/L	0.20	18,000	2.7	0.26	0.69
Trichloroethane, 1,1,1-	µg/L	0.20	640	ND	ND	ND
Trichloroethane, 1,1,2-	µg/L	0.50	4.7	ND	ND	ND
Trichloroethylene	µg/L	0.20	1.6	ND	ND	ND
Vinyl chloride	µg/L	0.20	0.5	ND	ND	ND
Trichlorofluoromethane	µg/L	0.50	2,500	ND	ND	ND
Xylenes (total)	µg/L	0.20	4,200	2.4	ND	ND

¹ Standards from Table 3 of April 15, 2011 *Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act*; coarse textured soil

ns No standard

SV Reading Soil vapour reading (ppm or % LEL)

ppm Parts per million (by volume)

ND not detected at the laboratory minimum detection limit

% LEL Percent of the lower explosive limit

BOLD Exceeds standard

ND (1) Value in brackets shows adjusted reportable detection limit

TABLE 9 GROUNDWATER ANALYTICAL RESULTS - VOCs
121 Hume Street, Collingwood, ON

CONTINUED

Terrapex Sample Name			STANDARDS ¹	MW2000
	Units	RDL	2011 Table 3 coarse	Field Duplicate of MW401
Headspace Reading	-	-	-	-
Sampling Date	-	-	-	26-May-16
Analysis Date	-	-	-	02-Jun-16
Certificate of Analysis No.	-	-	-	B6A7363
Acetone	µg/L	10	130,000	ND
Benzene	µg/L	0.2	44	0.60
Bromodichloromethane	µg/L	0.50	85,000	ND
Bromoform	µg/L	1.0	380	ND
Bromomethane	µg/L	0.50	5.6	ND
Carbon tetrachloride	µg/L	0.20	0.79	ND
Chlorobenzene	µg/L	0.20	630	ND
Chloroform	µg/L	0.20	2.4	ND
Dibromochloromethane	µg/L	0.50	82,000	ND
Dichlorobenzene 1,2-	µg/L	0.50	4,600	ND
Dichlorobenzene, 1,3-	µg/L	0.50	9,600	ND
Dichlorobenzene,1,4-	µg/L	0.50	8	ND
Dichlorodifluoromethane	µg/L	1.00	4,400	ND
Dichloroethane, 1,1-	µg/L	0.20	320	ND
Dichloroethane, 1,2-	µg/L	0.50	1.6	ND
Dichloroethylene, 1,1-	µg/L	0.20	1.6	ND
Dichloroethylene, cis-1,2-	µg/L	0.50	1.6	ND
Dichloroethylene, trans-1,2-	µg/L	0.50	1.6	ND
Dichloropropane, 1,2-	µg/L	0.20	16	ND
Ethylbenzene	µg/L	0.20	2,300	ND
Ethylene dibromide	µg/L	0.20	0.25	ND
Hexane	µg/L	1.0	51	ND
Methylene Chloride	µg/L	2.0	610	ND
Methyl isobutyl ketone	µg/L	5.0	140,000	ND
Methyl ethyl ketone	µg/L	10	470,000	ND
Methyl tert butyl ether	µg/L	0.50	190	ND
Styrene	µg/L	0.50	1,300	ND
Tetrachloroethane, 1,1,1,2-	µg/L	0.50	3.3	ND
Tetrachloroethane, 1,1,2,2-	µg/L	0.50	3.2	ND
Tetrachloroethylene	µg/L	0.20	1.6	ND
Toluene	µg/L	0.20	18,000	0.69
Trichloroethane, 1,1,1-	µg/L	0.20	640	ND
Trichloroethane, 1,1,2-	µg/L	0.50	4.7	ND
Trichloroethylene	µg/L	0.20	1.6	ND
Vinyl chloride	µg/L	0.20	0.5	ND
Trichlorofluoromethane	µg/L	0.50	2,500	ND
Xylenes (total)	µg/L	0.20	4,200	ND

¹ Standards from Table 3 of April 15, 2011 *Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act*; coarse textured soil

ns No standard

SV Reading Soil vapour reading (ppm or % LEL)

ppm Parts per million (by volume)

ND not detected at the laboratory minimum detection limit

% LEL Percent of the lower explosive limit

BOLD Exceeds standard

ND (1) Value in brackets shows adjusted reportable detection limit

TABLE 10 GROUNDWATER ANALYTICAL RESULTS - PAHs
121 Hume Street, Collingwood, Ontario

Terrapex Sample Name			STANDARDS 2011 Table 3	MW204	MW205	MW207
	Units	RDL	coarse ²			
Headspace Reading	-	-	-	10% LEL	7% LEL	48% LEL
Sampling Date	-	-	-	Aug 24/12	Aug 24/12	Aug 24/12
Analysis Date	-	-	-	Aug 28/12	Aug 28/12	Aug 28/12
Certificate of Analysis No.	-	-	-	B2D0356	B2D0356	B2D0356
Acenaphthene	µg/L	0.050	600	ND	ND	ND
Acenaphthylene	µg/L	0.050	1.8	ND	ND	ND
Anthracene	µg/L	0.050	2.4	ND	ND	ND
Benzo(a)anthracene	µg/L	0.050	4.7	ND	ND	ND
Benzo(a)pyrene	µg/L	0.010	0.81	ND	ND	ND
Benzo(b)fluoranthene	µg/L	0.050	0.75	ND	ND	ND
Benzo(g,h,i)perylene	µg/L	0.050	0.2	ND	ND	ND
Benzo(k)fluoranthene	µg/L	0.050	0.4	ND	ND	ND
Chrysene	µg/L	0.050	1	ND	ND	ND
Dibenzo(a,h)anthracene	µg/L	0.050	0.52	ND	ND	ND
Fluoranthene	µg/L	0.050	130	ND	ND	ND
Fluorene	µg/L	0.050	400	ND	ND	0.071
Indeno(1,2,3-cd)pyrene	µg/L	0.050	0.2	ND	ND	ND
Methylnapthalene, 1- ¹	µg/L	0.050	1,800	0.065	ND	4.9
Methylnapthalene, 2- ¹	µg/L	0.050	1,800	0.059	ND	6.4
Methylnapthalene, 1- & 2- ¹	µg/L	0.071	1,800	0.12	ND	11
Napthalene	µg/L	0.050	1,400	ND	ND	6.9
Phenanthrene	µg/L	0.030	580	0.084	0.20	0.14
Pyrene	µg/L	0.050	68	ND	ND	ND

- ¹ 2-methylnapthalene standard applicable to 1-methylnapthalene with the provision that if both are detected, the sum of the two concentrations cannot exceed the standard
- ² Standards from Table 3 of April 15, 2011 *Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act*; Industrial / Commercial / Community land use, coarse textured soil
- ns No standard
- CSV Reading Combustible soil vapour reading (ppm or % LEL)
- ppm Parts per million (by volume)
- % LEL Percent of the lower explosive limit
- BOLD** Exceeds standard

TABLE 10 GROUNDWATER ANALYTICAL RESULTS - PAHs
121 Hume Street, Collingwood, Ontario

CONTINUED

Terrapex Sample Name			STANDARDS 2011 Table 3	MW203	MW401	MW404
	Units	RDL	coarse ²			
Headspace Reading	-	-	-	<5 ppm	<5 ppm	<5 ppm
Sampling Date	-	-	-	26-May-16	26-May-16	26-May-16
Analysis Date	-	-	-	02-Jun-16	02-Jun-16	02-Jun-16
Certificate of Analysis No.	-	-	-	B6A7201	B6A7201	B6A7363
Acenaphthene	µg/L	0.050	600	ND	ND	ND
Acenaphthylene	µg/L	0.050	1.8	ND	ND	ND
Anthracene	µg/L	0.050	2.4	ND	ND	ND
Benzo(a)anthracene	µg/L	0.050	4.7	ND	ND	ND
Benzo(a)pyrene	µg/L	0.010	0.81	ND	0.019	ND
Benzo(b)fluoranthene	µg/L	0.050	0.75	ND	ND	ND
Benzo(g,h,i)perylene	µg/L	0.050	0.2	ND	ND	ND
Benzo(k)fluoranthene	µg/L	0.050	0.4	ND	ND	ND
Chrysene	µg/L	0.050	1	ND	ND	ND
Dibenzo(a,h)anthracene	µg/L	0.050	0.52	ND	ND	ND
Fluoranthene	µg/L	0.050	130	ND	ND	ND
Fluorene	µg/L	0.050	400	ND	ND	ND
Indeno(1,2,3-cd)pyrene	µg/L	0.050	0.2	ND	ND	ND
Methylnapthalene, 1- ¹	µg/L	0.050	1,800	ND	ND	ND
Methylnapthalene, 2- ¹	µg/L	0.050	1,800	ND	ND	ND
Methylnapthalene, 1- & 2- ¹	µg/L	0.071	1,800	ND	ND	ND
Napthalene	µg/L	0.050	1,400	ND	ND	ND
Phenanthrene	µg/L	0.030	580	ND	ND	ND
Pyrene	µg/L	0.050	68	ND	ND	ND

- ¹ 2-methylnapthalene standard applicable to 1-methylnapthalene with the provision that if both are detected, the sum of the two concentrations cannot exceed the standard
- ² Standards from Table 3 of April 15, 2011 *Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act*; Industrial / Commercial / Community land use, coarse textured soil
- ns No standard
- CSV Reading Combustible soil vapour reading (ppm or % LEL)
- ppm Parts per million (by volume)
- % LEL Percent of the lower explosive limit
- BOLD** Exceeds standard

TABLE 10 GROUNDWATER ANALYTICAL RESULTS - PAHs
121 Hume Street, Collingwood, Ontario

CONTINUED

Terrapex Sample Name			STANDARDS 2011 Table 3	MW1000 Field Duplicate of MW404
	Units	RDL	coarse ²	
Headspace Reading	-	-	-	-
Sampling Date	-	-	-	26-May-16
Analysis Date	-	-	-	02-Jun-16
Certificate of Analysis No.	-	-	-	B6A7363
Acenaphthene	µg/L	0.050	600	ND
Acenaphthylene	µg/L	0.050	1.8	ND
Anthracene	µg/L	0.050	2.4	ND
Benzo(a)anthracene	µg/L	0.050	4.7	ND
Benzo(a)pyrene	µg/L	0.010	0.81	ND
Benzo(b)fluoranthene	µg/L	0.050	0.75	ND
Benzo(g,h,i)perylene	µg/L	0.050	0.2	ND
Benzo(k)fluoranthene	µg/L	0.050	0.4	ND
Chrysene	µg/L	0.050	1	ND
Dibenzo(a,h)anthracene	µg/L	0.050	0.52	ND
Fluoranthene	µg/L	0.050	130	ND
Fluorene	µg/L	0.050	400	ND
Indeno(1,2,3-cd)pyrene	µg/L	0.050	0.2	ND
Methylnapthalene, 1- ¹	µg/L	0.050	1,800	ND
Methylnapthalene, 2- ¹	µg/L	0.050	1,800	ND
Methylnapthalene, 1- & 2- ¹	µg/L	0.071	1,800	ND
Napthalene	µg/L	0.050	1,400	ND
Phenanthrene	µg/L	0.030	580	ND
Pyrene	µg/L	0.050	68	ND

¹ 2-methylnapthalene standard applicable to 1-methylnapthalene
with the provision that if both are detected, the sum of the two
concentrations cannot exceed the standard

² Standards from Table 3 of April 15, 2011 *Soil, Ground Water
and Sediment Standards for Use Under Part XV.1 of the
Environmental Protection Act* ; Industrial / Commercial / Community
land use, coarse textured soil

ns No standard

CSV Reading Combustible soil vapour reading (ppm or % LEL)

ppm Parts per million (by volume)

% LEL Percent of the lower explosive limit

BOLD Exceeds standard

TABLE 11 GROUNDWATER ANALYTICAL RESULTS - INORGANICS
121 Hume Street, Collingwood, Ontario

Terrapex Sample Name			STANDARDS 2011 Table 3	MW103	MW201	MW204	MW205	MW206	MW207
	Units	RDL	coarse ¹						
Headspace Reading	-	-	-	75 ppm	5% LEL	10% LEL	7% LEL	240 ppm	48% LEL
Sampling Date	-	-	-	Aug 24/12	Aug 24/12	Aug 24/12	Aug 24/12	Aug 24/12	Aug 24/12
Analysis Date	-	-	-	Aug 27/12	Aug 28/12	Aug 27/12	Aug 27/12	Aug 27/12	Aug 27/12
Certificate of Analysis No.	-	-	-	B2D0356	B2D0356	B2D0356	B2D0356	B2D0356	B2D0356
Antimony	µg/L	0.50	20,000	-	0.8	0.75	ND	-	ND
Arsenic	µg/L	1.0	1,900	-	1.1	1.0	1.1	-	ND
Barium	µg/L	2.0	29,000	-	64	60	83	-	130
Beryllium	µg/L	0.50	67	-	ND	ND	ND	-	ND
Boron	µg/L	10	45,000	-	120	79	260	-	69
Cadmium	µg/L	0.10	2.7	-	ND	ND	ND	-	0.32
Chromium	µg/L	5.0	810	-	ND	ND	ND	-	ND
Cobalt	µg/L	0.50	66	-	1.7	2.4	6.3	-	18
Copper	µg/L	1.0	87	-	1.0	1.4	ND	-	ND
Lead	µg/L	0.50	25	-	ND	0.62	ND	-	ND
Molybdenum	µg/L	0.50	9,200	-	22	19	12	-	12
Nickel	µg/L	1.0	490	-	3.5	3.9	8.8	-	23
Selenium	µg/L	2.0	63	-	ND	2.4	ND	-	ND
Silver	µg/L	0.10	1.5	-	ND	ND	ND	-	ND
Sodium	µg/L	100	2,300,000	-	38,000	240,000	51,000	-	400,000
Thallium	µg/L	0.050	510	-	ND	ND	ND	-	0.10
Uranium	µg/L	0.10	420	-	2.8	2.4	2.1	-	2.2
Vanadium	µg/L	0.50	250	-	0.77	ND	ND	-	ND
Zinc	µg/L	5.0	1,100	-	ND	10	5.9	-	13
pH	-	-	-	7.25	-	-	-	7.26	-

¹ Standards from Table 3 of April 15, 2011 *Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act* ; Industrial / Commercial / Community land use, coarse textured soil

ns No standard

CSV Reading Combustible soil vapour reading (ppm or % LEL)

ppm Parts per million (by volume)

% LEL Percent of the lower explosive limit

BOLD Exceeds standard

TABLE 11 GROUNDWATER ANALYTICAL RESULTS - INORGANICS
121 Hume Street, Collingwood, Ontario

CONTINUED

Terrapex Sample Name			STANDARDS 2011 Table 3	MW203	MW401	MW403	MW404	MW1000
	Units	RDL	coarse ¹					Field Duplicate of MW404
Headspace Reading	-	-	-	<5 ppm	<5 ppm	<5 ppm	<5 ppm	<5 ppm
Sampling Date	-	-	-	23-Jun-16	26-May-16	26-May-16	26-May-16	26-May-16
Analysis Date	-	-	-	29-Jun-16	02-Jun-16	02-Jun-16	02-Jun-16	02-Jun-16
Certificate of Analysis No.	-	-	-	B6D0487	B6A7201	B6A7201	B6A7201	B6A7201
Antimony	µg/L	0.50	20,000	ND	2.1	ND	ND	0.64
Arsenic	µg/L	1.0	1,900	ND	ND	3.8	ND	1.4
Barium	µg/L	2.0	29,000	50	86	94	ND	76
Beryllium	µg/L	0.50	67	ND	ND	ND	ND	ND
Boron	µg/L	10	45,000	62	51	87	ND	150
Cadmium	µg/L	0.10	2.7	ND	ND	ND	ND	ND
Chromium	µg/L	5.0	810	ND	ND	ND	ND	ND
Cobalt	µg/L	0.50	66	ND	ND	1.4	ND	0.54
Copper	µg/L	1.0	87	2.3	1.2	1.6	ND	1.2
Lead	µg/L	0.50	25	ND	ND	0.58	ND	ND
Molybdenum	µg/L	0.50	9,200	2.9	8.2	5.9	ND	4.4
Nickel	µg/L	1.0	490	ND	ND	1.8	ND	1.1
Selenium	µg/L	2.0	63	ND	ND	ND	ND	ND
Silver	µg/L	0.10	1.5	ND	ND	ND	ND	ND
Sodium	µg/L	100	2,300,000	67,000	120,000	62,000	380	54,000
Thallium	µg/L	0.050	510	ND	ND	ND	ND	ND
Uranium	µg/L	0.10	420	0.58	2.7	1.2	ND	1.2
Vanadium	µg/L	0.50	250	0.82	1.50	1.0	ND	1.0
Zinc	µg/L	5.0	1,100	ND	11	7	ND	ND
pH	-	-	-	-	-	-	-	-

¹ Standards from Table 3 of April 15, 2011 *Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act* ; Industrial / Commercial / Community land use, coarse textured soil

ns No standard

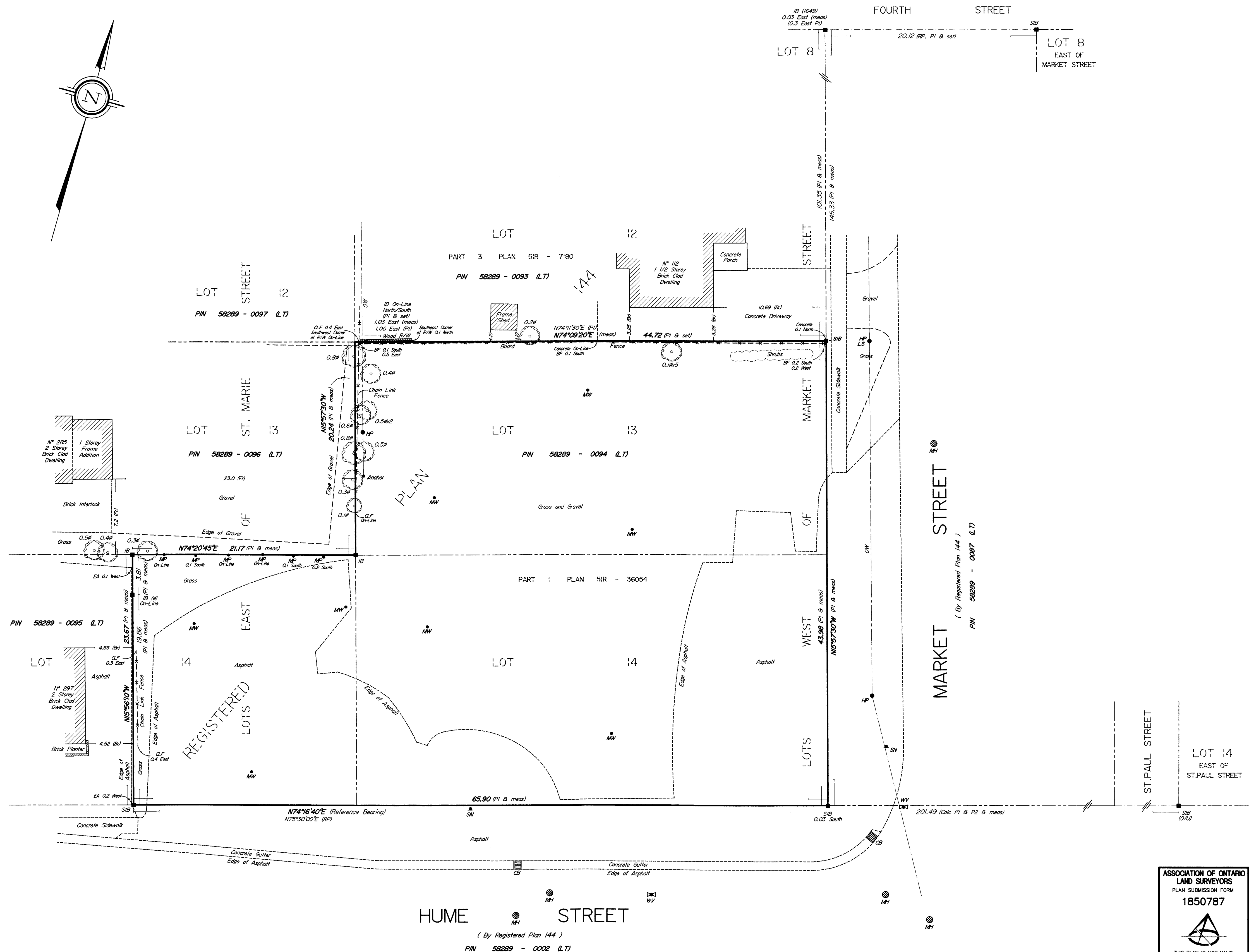
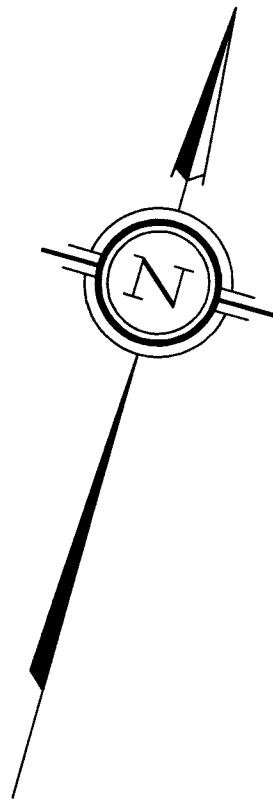
CSV Reading Combustible soil vapour reading (ppm or % LEL)

ppm Parts per million (by volume)

% LEL Percent of the lower explosive limit

BOLD Exceeds standard

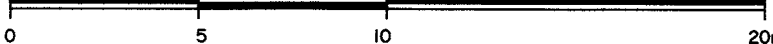
APPENDIX I
PLAN OF SURVEY



SURVEYOR'S REAL PROPERTY REPORT
PART 1) PLAN OF
LOTS 13 AND 14
WEST OF MARKET STREET AND
PART OF LOT 14
EAST OF ST. MARIE STREET
REGISTERED PLAN 144
TOWN OF COLLINGWOOD
COUNTY OF SIMCOE

SEXTON MCKAY LIMITED
ONTARIO LAND SURVEYORS
CANADA LANDS SURVEYOR

SCALE 1 : 200



PART 2) Report Summary

DESCRIPTION OF LAND:

LOTS 13 AND 14, WEST OF MARKET STREET AND PART OF LOT 14, EAST OF ST. MARIE STREET, REGISTERED PLAN 144, PART 1 PLAN 51R-36054
PIN 58289-0094 (LT)

REGISTERED EASEMENTS and/or RIGHTS-OF-WAY:

NONE

COMPLIANCE WITH MUNICIPAL ZONING BY-LAWS:

NOT CERTIFIED BY THIS REPORT

ADDITIONAL REMARKS:

NOTE LOCATION OF BOARD FENCE AND METAL POSTS ALONG THE NORTHERLY LIMIT AND CHAIN LINK FENCES ALONG THE WESTERLY LIMIT OF SUBJECT PROPERTY

METRIC NOTE:

DISTANCES SHOWN ON THIS PLAN ARE IN METRES AND CAN BE CONVERTED TO FEET BY DIVIDING BY 0.3048.

NOTES

BEARINGS ARE ASTRONOMIC AND ARE REFERRED TO THE NORTHERLY LIMIT OF HUME STREET, HAVING A BEARING OF N74°16'40"E AS SHOWN ON PLAN 51R-36054.

LEGEND

■	DENOTES	SURVEY MONUMENT FOUND
□	DENOTES	SURVEY MONUMENT SET
SIB	DENOTES	STANDARD IRON BAR
IB	DENOTES	IRON BAR
O/U	DENOTES	ORIGIN UNKNOWN
1649	DENOTES	M.W. KNISLEY
RP	DENOTES	REGISTERED PLAN 144
P1	DENOTES	PLAN 51R-36054
P2	DENOTES	PLAN 51R-25808
R/W	DENOTES	RETAINING WALL
CLF	DENOTES	CHAIN LINK FENCE
BF	DENOTES	BOARD FENCE
EA	DENOTES	EDGE OF ASPHALT
Br	DENOTES	BRICK
Fr	DENOTES	FRAME
HP	DENOTES	HYDRO POLE
LS	DENOTES	LIGHT STANDARD
OW	DENOTES	OVERHEAD WIRES
MH	DENOTES	MANHOLE
WV	DENOTES	WATER VALVE
CB	DENOTES	CATCHBASIN
MW	DENOTES	MONITORING WELL
MP	DENOTES	METAL POST
SN	DENOTES	SIGN
Ø	DENOTES	DIAMETER/ROUND

ALL SURVEY MONUMENTS FOUND WERE SET BY ZUBEK, EMO, PATTEN & THOMSEN LTD. O.L.S. UNLESS NOTED OTHERWISE

THIS REPORT WAS PREPARED FOR SUNCOR ENERGY INC. AND THE UNDERSIGNED ACCEPTS NO RESPONSIBILITY FOR USE BY OTHER PARTIES.

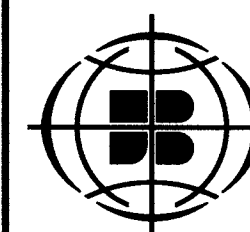
SURVEYOR'S CERTIFICATE

I CERTIFY THAT

- THIS SURVEY AND PLAN ARE CORRECT AND IN ACCORDANCE WITH THE SURVEYS ACT, THE SURVEYORS ACT AND THE REGULATIONS MADE UNDER THEM;
- THE SURVEY WAS COMPLETED ON THE 2nd DAY OF NOVEMBER 2012

Nov. 7, 2012
DATE

G. C. Laframboise
G.C. LAFRAMBOISE
ONTARIO LAND SURVEYOR



SEXTON MCKAY
LIMITED

A wholly owned subsidiary of J.D. Barnes Limited
Ontario Land Surveyors / Canada Lands Surveyor
140 RENFREW DRIVE, SUITE 100, MARKHAM, ONTARIO, L3R 6B3
T: (905) 477-3800 F: (905) 477-3882 www.jdbarnes.com

DRAWN BY: VB CHECKED BY: GCL REFERENCE NO.: 12-12-613-00
FILE: S:\12-12-613-00\121261300.DWG DATED: NOVEMBER 7, 2012

APPENDIX II
SAMPLING AND ANALYSIS PLAN

PROPOSED SAMPLING PLAN AND RATIONALE
121 Hume Street, Collingwood, Ontario

Borehole No. (actual and proposed)	Location	Rationale	Soil						Groundwater					
			Soil Sampling Depth Interval	Soil Sample Submission	Analysis				Monitoring Well Screened Interval	Groundwater Sampling Depths	Analysis			
					BTEX, F1-F4	VOCs	Inorg	PAH			BTEX, F1-F4	VOCs	Inorg	PAH
MW101	Southwest corner of site	Confirm the absence or presence of COCs in groundwater.	Entire length of borehole	From worst case soil vapours, or water table	-	-	-	-	2 m screen - straddle the groundwater table	Near the bottom of the well	3	2	-	-
MW102	South of former Tank Nest	Confirm the absence or presence of COCs in groundwater.	Entire length of borehole	From worst case soil vapours, or water table	-	-	-	-	1.7 m screen - straddle the groundwater table	Near the bottom of the well	2	1	-	-
MW103	Vacinity of former Pump Island	Confirm the absence or presence of COCs in groundwater.	Entire length of borehole	From worst case soil vapours, or water table	-	-	-	-	2.0 m screen - straddle the groundwater table	Near the bottom of the well	2	1	-	-
MW104	Vacinity of former Oil/Water Separator	Confirm the absence or presence of COCs in groundwater.	Entire length of borehole	From worst case soil vapours, or water table	-	-	-	-	2.3 m screen - straddle the groundwater table	Near the bottom of the well	-	-	-	-
MW105	North of former building	Confirm the absence or presence of COCs in groundwater.	Entire length of borehole	From worst case soil vapours, or water table	-	-	-	-	3.0 m screen - straddle the groundwater table	Near the bottom of the well	-	-	-	-
MW106	West of the former building	Confirm the absence or presence of COCs in groundwater.	Entire length of borehole	From worst case soil vapours, or water table	-	-	-	-	1.5 m screen - straddle the groundwater table	Near the bottom of the well	1	1	-	-
MW107	West of the former Tank Nest	Confirm the absence or presence of COCs in groundwater.	Entire length of borehole	From worst case soil vapours, or water table	-	-	-	-	2.3 m screen - straddle the groundwater table	Near the bottom of the well	3	2	-	-
MW201	Former Tank Nest	Confirm the absence or presence of COCs in soil and groundwater.	Entire length of borehole	From worst case soil vapours, or water table	1	-	-	-	3.0 m screen - straddle the groundwater table	Near the bottom of the well	3	3	1	-
MW202	Former Car Wash Footprint	Confirm the absence or presence of COCs in soil and groundwater.	Entire length of borehole	From worst case soil vapours, or water table	1	1	-	1	1.6 m screen - straddle the groundwater table	Near the bottom of the well	3	2	-	-
MW203	Former Building	Confirm the absence or presence of COCs in soil and groundwater.	Entire length of borehole	From worst case soil vapours, or water table	1	-	-	-	1.4 m screen - straddle the groundwater table	Near the bottom of the well	3	2	1	1
MW204	Former pump island	Confirm the absence or presence of COCs in soil and groundwater.	Entire length of borehole	From worst case soil vapours, or water table	1	1	1	1	1.5 m screen - straddle the groundwater table	Near the bottom of the well	2	2	1	1
MW205	Northeast corner of site	Confirm the absence or presence of COCs in soil and groundwater.	Entire length of borehole	From worst case soil vapours, or water table	1	1	1	-	1.6 m screen - straddle the groundwater table	Near the bottom of the well	3	3	1	1
MW206	North of site	Confirm the absence or presence of COCs in soil and groundwater.	Entire length of borehole	From worst case soil vapours, or water table	1	-	-	-	1.5 m screen - straddle the groundwater table	Near the bottom of the well	3	2	-	-
MW207	Northwest of site	Confirm the absence or presence of COCs in soil and groundwater.	Entire length of borehole	From worst case soil vapours, or water table	1	1	1	1	1.8 m screen - straddle the groundwater table	Near the bottom of the well	2	2	1	1
MW301	Former Car Wash Footprint	Confirm the absence or presence of COCs in soil and groundwater.	Entire length of borehole	From worst case soil vapours, or water table	1	1	-	-	1.0 m screen - straddle the groundwater table	Near the bottom of the well	1	1	-	-
MW302	Northwest of former tank nest	Confirm the absence or presence of COCs in soil and groundwater.	Entire length of borehole	From worst case soil vapours, or water table	1	1	-	-	1.0 m screen - straddle the groundwater table	Near the bottom of the well	1	1	-	-
MW303	Northwest of site	Confirm the absence or presence of COCs in soil and groundwater.	Entire length of borehole	From worst case soil vapours, or water table	1	1	-	-	1.0 m screen - straddle the groundwater table	Near the bottom of the well	1	1	-	-
MW401	East of site	Confirm the absence or presence of COCs in soil and groundwater.	Entire length of borehole	From worst case soil vapours, or water table	-	1	1	1	1.5 m screen - straddle the groundwater table	Near the bottom of the well	1	1	1	1
MW402	Southwest of former tanks nest	Post Remediation	-	From worst case soil vapours, or water table	-	-	-	-	1.5 m screen - straddle the groundwater table					
MW403	West of former tank nest	Post Remediation	-	From worst case soil vapours, or water table	-	-	-	-	1.5 m screen - straddle the groundwater table	Near the bottom of the well	-	-	1	-
MW404	former building	Post Remediation	-	From worst case soil vapours, or water table	-	-	-	-	1.4 m screen - straddle the groundwater table	Near the bottom of the well	-	-	1	1
BH208	Southwest of site	Confirm the absence or presence of COCs in soil	Entire length of borehole	From worst case soil vapours, or water table	1	1	-	-						
BH209	Vicinity of former building	Confirm the absence or presence of COCs in soil	Entire length of borehole	From worst case soil vapours, or water table	1	-	-	1						
BH210	Southeast corner of site	Confirm the absence or presence of COCs in soil	Entire length of borehole	From worst case soil vapours, or water table	1	-	-	-						
TP201	Northwest corner of site	Site coverage. Further assess potential impacts.	Entire length of test pit	From worst case soil vapours, or water table	2	-	-	-						
TP202	Northwest corner of site	Site coverage. Further assess potential impacts.	Entire length of test pit	From worst case soil vapours, or water table	2	-	-	-						
TP203	North of site	Site coverage. Further assess potential impacts.	Entire length of test pit	From worst case soil vapours, or water table	2	-	-	-						
TP204	North of site	Site coverage. Further assess potential impacts.	Entire length of test pit	From worst case soil vapours, or water table	2	2	-	-						
TP205	North of site	Site coverage. Further assess potential impacts.	Entire length of test pit	From worst case soil vapours, or water table	2	2	-	-						
TP206	Northeast corner of site	Site coverage. Further assess potential impacts.	Entire length of test pit	From worst case soil vapours, or water table	2	2	-	-						
TP207	Northeast corner of site	Site coverage. Further assess potential impacts.	Entire length of test pit	From worst case soil vapours, or water table	2	2	-	-						

PROPOSED SAMPLING PLAN AND RATIONALE
121 Hume Street, Collingwood, Ontario

Borehole No. (actual and proposed)	Location	Rationale	Soil						Groundwater					
			Soil Sampling Depth Interval	Soil Sample Submission	Analysis				Monitoring Well Screened Interval	Groundwater Sampling Depths	Analysis			
					BTEX, F1-F4	VOCs	Inorg	PAH			BTEX, F1-F4	VOCs	Inorg	PAH
TP208	Vicinity of Former Building	Site coverage. Further assess potential impacts.	Entire length of test pit	From worst case soil vapours, or water table	3	-	-	-						
TP209	Former building	Site coverage. Further assess potential impacts.	Entire length of test pit	From worst case soil vapours, or water table	2	-	-	-						
TP210	Former building	Site coverage. Further assess potential impacts.	Entire length of test pit	From worst case soil vapours, or water table	2	-	-	-						
TP211	Former building	Site coverage. Further assess potential impacts.	Entire length of test pit	From worst case soil vapours, or water table	2	2	-	-						
TP212	Former building	Site coverage. Further assess potential impacts.	Entire length of test pit	From worst case soil vapours, or water table	2	2	-	-						
TP213	Vicinity of former Oil/Water separator	Site coverage. Further assess potential impacts.	Entire length of test pit	From worst case soil vapours, or water table	2	2	-	-						
TP214	Northeast corner of site	Site coverage. Further assess potential impacts.	Entire length of test pit	From worst case soil vapours, or water table	2	2	-	-						
TP215	Former building	Site coverage. Further assess potential impacts.	Entire length of test pit	From worst case soil vapours, or water table	3	-	-	-						
TP216	Former Tank Nest	Site coverage. Further assess potential impacts.	Entire length of test pit	From worst case soil vapours, or water table	2	-	-	-						
TP217	Former Tank Nest	Site coverage. Further assess potential impacts.	Entire length of test pit	From worst case soil vapours, or water table	2	-	-	-						
TP218	Former building	Site coverage. Further assess potential impacts.	Entire length of test pit	From worst case soil vapours, or water table	2	-	-	-						
TP219	Former building	Site coverage. Further assess potential impacts.	Entire length of test pit	From worst case soil vapours, or water table	2	-	-	-						
TP220	Vicinity of former building	Site coverage. Further assess potential impacts.	Entire length of test pit	From worst case soil vapours, or water table	1	-	-	-						
TP221	Former building	Site coverage. Further assess potential impacts.	Entire length of test pit	From worst case soil vapours, or water table	2	-	-	-						
TP222	Vicinity of former tank nest	Site coverage. Further assess potential impacts.	Entire length of test pit	From worst case soil vapours, or water table	2	-	-	-						
TP223	Former Tank Nest	Site coverage. Further assess potential impacts.	Entire length of test pit	From worst case soil vapours, or water table	2	-	-	-						
TP224	Northwest corner of site	Site coverage. Further assess potential impacts.	Entire length of test pit	From worst case soil vapours, or water table	2	-	-	-						
TP225	West of site	Site coverage. Further assess potential impacts.	Entire length of test pit	From worst case soil vapours, or water table	2	-	-	-						
TP226	Southwest corner of site	Site coverage. Further assess potential impacts.	Entire length of test pit	From worst case soil vapours, or water table	2	-	-	-						
TP227	West of former tank nest	Site coverage. Further assess potential impacts.	Entire length of test pit	From worst case soil vapours, or water table	2	-	-	-						
TP228	South west of former tank nest	Site coverage. Further assess potential impacts.	Entire length of test pit	From worst case soil vapours, or water table	2	-	-	-						
TP229	Southeast of site	Site coverage. Further assess potential impacts.	Entire length of test pit	From worst case soil vapours, or water table	2	-	-	-						
TP230	Former Tank Nest	Site coverage. Further assess potential impacts.	Entire length of test pit	From worst case soil vapours, or water table	3	-	-	-						
TP231	South of site	Site coverage. Further assess potential impacts.	Entire length of test pit	From worst case soil vapours, or water table	2	-	-	-						
TP232	Vicinity of former tank nest	Site coverage. Further assess potential impacts.	Entire length of test pit	From worst case soil vapours, or water table	3	-	-	-						
TP233	South of former Tank Nest	Site coverage. Further assess potential impacts.	Entire length of test pit	From worst case soil vapours, or water table	2	-	-	-						
TP234	Vicinity of former pump island	Site coverage. Further assess potential impacts.	Entire length of test pit	From worst case soil vapours, or water table	1	-	-	-						
TP235	Vicinity of former pump island	Site coverage. Further assess potential impacts.	Entire length of test pit	From worst case soil vapours, or water table	1	-	-	-						
TP236	Vicinity of former pump island	Site coverage. Further assess potential impacts.	Entire length of test pit	From worst case soil vapours, or water table	2	-	-	-						
TP237	Former pump island	Site coverage. Further assess potential impacts.	Entire length of test pit	From worst case soil vapours, or water table	2	-	-	-						
TP238	Southeast corner of site	Site coverage. Further assess potential impacts.	Entire length of test pit	From worst case soil vapours, or water table	1	-	-	-						
TP239	Southeast of site	Site coverage. Further assess potential impacts.	Entire length of test pit	From worst case soil vapours, or water table	2	-	-	-						

PROPOSED SAMPLING PLAN AND RATIONALE
121 Hume Street, Collingwood, Ontario

Borehole No. (actual and proposed)	Location	Rationale	Soil						Groundwater					
			Soil Sampling Depth Interval	Soil Sample Submission	Analysis				Monitoring Well Screened Interval	Groundwater Sampling Depths	Analysis			
					BTEX, F1-F4	VOCs	Inorg	PAH			BTEX, F1-F4	VOCs	Inorg	PAH
TP240	East of former building	Site coverage. Further assess potential impacts.	Entire length of test pit	From worst case soil vapours, or water table	2	-	-	-						
TP241	Southeast corner of site	Site coverage. Further assess potential impacts.	Entire length of test pit	From worst case soil vapours, or water table	1	-	-	-						
TP242	East of site	Site coverage. Further assess potential impacts.	Entire length of test pit	From worst case soil vapours, or water table	1	-	-	-						
TP243	East of site	Site coverage. Further assess potential impacts.	Entire length of test pit	From worst case soil vapours, or water table	1	-	-	-						
TP244	Vicinity of former building	Site coverage. Further assess potential impacts.	Entire length of test pit	From worst case soil vapours, or water table	1	-	-	-						
QA/QC including field duplicate, field blank and trip blank where applicable					6	2	-	-			4	3	1	1
Total Laboratory Analyses					103	27	4	5			38	30	9	7

Notes: BTEX/F1-F4 = benzene, toluene, ethylbenzene, xylenes and petroleum hydrocarbons in the F1 to F4 fractions
VOCs = volatile organic compounds (O. Reg. 153/04)
Inorg = metals and general inorganic parameters (O. Reg. 153/04)

PAH = polycyclic aromatic hydrocarbons

APPENDIX III

STANDARD OPERATING PROCEDURES

SAMPLING AND ANALYSIS PLAN

DATA QUALITY OBJECTIVES

Data quality objectives for the investigation are to assess the soil and groundwater conditions beneath the site surface with respect to contaminants of concern identified through the Phase One ESA, if any, in accordance with Ontario Regulation 153/04.

STANDARD OPERATING PROCEDURES

Standard Operating Procedures (SOPs) are included in Appendix III. The SOP corresponding to the field task is to be followed whenever work is being performed on site. Any deviation to the SOPs is to be appropriately annotated on field notes/log sheets. SOPs included as part of this work program are:

- Field Vapour Meter Calibration;
- Borehole Advancement Using Rotary Auger;
- Monitoring Well Installation;
- Test Pitting
- Monitoring Well Development;
- Groundwater Monitoring;
- Groundwater Sampling, Low Flow Purge, Using Peristaltic Pump;
- Remedial Excavations;
- Soil Sample Handling;
- Soil Classification; and,
- Measuring and Surveying Using Rod and Level.

PHYSICAL IMPEDIMENTS

Physical impediments that could interfere with the Sampling and Analysis Plan include, but are not limited to:

- restricted access on the site; and,
- proximity to property lines and off-site infrastructure.

TERRAPEX STANDARD OPERATING PROCEDURE FIELD PROGRAM QUALITY ASSURANCE & QUALITY CONTROL

GENERAL NOTES

Standard Operating Procedures (SOPs) have been developed by Terrapex Environmental Ltd. to standardize protocols used during environmental assessment work programs. However, certain work programs may warrant deviations from SOPs and some clients may have specific requirements which differ from those outlined in this SOP. Any significant deviations should be discussed with and approved by the project manager. Each deviation, along with the rationale for the deviation, should be documented in the field notes, project scope and/or notes to file.

Where SOPs are appended to reports, all deviations from this SOP, along with the rationale for the deviation, must be documented in the report.

APPLICATION

This SOP is applicable to intrusive investigations involving the collection of soil, sediment, groundwater, or surface water samples for possible laboratory chemical analyses. The SOP addresses only measures required for quality assurance and quality control purposes. Sample collection, nomenclature, documentation, and other requirements associated with specific sampling approaches (e.g., borehole drilling using rotary auger equipment) are described in other SOPs.

SPECIAL PLANNING AND PREPARATION REQUIREMENTS

Liaison with the contract laboratory in advance of field programs will be required as the laboratory will normally be responsible for providing appropriate sampling containers, prepared trip blank and trip spike quality assurance samples, and appropriate analyte-free water for the preparation of field blanks and equipment blanks by Terrapex.

FIELD PROGRAM QUALITY CONTROL REQUIREMENTS

Sample Collection

Quality control measures during sample collection are primarily intended to mitigate the accidental introduction of a contaminant or the loss of a volatile constituent of the sample.

Specific requirements associated with sampling methods are defined in the SOP(s) applicable to those methods. General requirements for all work programs are described below:

- Sampling containers and field preservative (if applicable) will be obtained from the contract laboratory.
- Available information relating to environmental conditions at the site should be reviewed and, to the extent practicable, sampling should commence in the apparent least-impacted area and progress to areas of apparently greater impact, finishing in the apparent “worst-case” area.
- New disposable gloves are to be donned for the collection / handling of each sample.
- To the extent practicable, dedicated sampling equipment is to be employed during sampling collection; any non-dedicated sampling equipment which comes into contact with the sample must be thoroughly washed and rinsed prior to use.
- For water samples, sampling equipment (regardless of whether it is dedicated or non-dedicated) should be purged prior to sample collection by passing a minimum of three times the volume of the sampling equipment of either sample water or analyte-free water supplied by the contract laboratory through the equipment.

For groundwater samples, purging of sampling equipment is typically completed concurrently with well purging (e.g., by employing the inertial sampler to be used during sample collection during the initial purging of the well).

- Water samples (including groundwater) are to be collected directly into laboratory-supplied containers appropriate for intended/potential analytical requirements; passing the sample through an in-line field filtration device prior to collection into the sampling container is an acceptable practice.
- Soil and sediment samples are often split into two portions – one for field screening/logging, and one for (potential) laboratory analyses; to the extent practical, the sample portion for (potential) laboratory analyses should be immediately placed into laboratory-supplied containers appropriate for the intended/potential analytical requirements. Regardless, samples of soil potentially impacted by volatile or organic contaminants should be containerized immediately to minimize potential volatile loss.
- Where multiple sampling containers are required, to the extent practical the containers should be filled concurrently – for instance, by alternating the filling of the sampling bottles during sample recover to ensure that each container is filled at approximately the same rate and over the same period as the other sample containers.
- Samples collected for (potential) analyses of organic contaminants should not be subjected to extended contact with plastics.

Quality control measures are also required to ensure that a record of recovered samples, and the location from which they were obtained, is maintained. Specific requirements associated with

sampling methods are defined in the SOP(s) applicable to those methods. General requirements for all work programs are described below:

- All recovered samples during a work program are to be assigned a sample identification that is unique during the work program, and sampling details – INCLUDING the time and date of sample collection – are to be recorded on field forms and/or in the field notes.
- In the case of soil or sediment samples, sample identifications are expected to be unique even over several work programs, including work programs that are completed by other parties. In some instances this may require advancing standard Terrapex sampling counts to address sampling identifications used or potentially used by third parties (e.g., if another consultant has already advanced boreholes identified as BH101 through BH110, the first round of Terrapex boreholes should begin at BH201, even though this is normally the count for the second round of Terrapex boreholes).
- In the case of water or groundwater samples, sample identifications are typically tied to a sampling location (e.g., a monitoring well identification), and it is quite common for several water samples (collected on different dates) to have been assigned a common identification. This is acceptable, provided that the date of sample collection is recorded in the field notes and included in work program documentation.

Temporary Sample Storage

Temporary sample storage is required between the time of sample collection and the time of sample submission or when the sample is discarded. Quality control measures during temporary sample storage are primarily intended to mitigate the accidental introduction of a contaminant or the loss of a volatile constituent of the sample. Quality control measures are also required to maintain appropriate Chain of Custody of recovered samples.

- Samples must be labelled prior to being placed in temporary storage.
- Generally, samples are to be maintained in a cool environment, ideally 3 to 5°C, and protected from direct exposure to sunlight (e.g., within a cooler with loose ice).
- Samples are not to be left unattended in a public space during storage. A public space includes any work site where access is not restricted by a fence or similar physical barrier to prevent unauthorized entry, even if the site is owned by a private corporation or individual.

Terrapex offices, locked vehicles, or work site trailers are not considered public spaces.

- Unpreserved samples submitted for laboratory analyses of VOCs / F1 PHCs and/or volatile gases should be received by the contract laboratory within 36 hours of sample collection (so as to permit the laboratory sufficient time to prepare sample extractions within regulated hold times). Samples submitted for all other analyses should be received by the contract laboratory within 72 hours of sample collection.

Note that a sample collected using a hermetic sampling device (e.g., En Core sampler) is NOT considered to be preserved.

Sample Submission

Sample submission is the point at which Terrapex ceases to have custody of samples intended for laboratory analyses. This point may occur when the samples are released directly into the custody of the contract laboratory (i.e., hand delivered by Terrapex), or when the samples are released into the custody of a courier for delivery to the laboratory.

Quality control measures associated with sample submission are required to maintain sample integrity and appropriate Chain of Custody:

- Samples for submission are to be placed in an insulated packing container (e.g., a cooler) along with appropriate packing materials to mitigate breakage during transport to the contract laboratory.
- Loose ice is also to be placed in the cooler to assist in maintaining a cool internal temperature (ideally 3 to 5°C).
- Sample submissions are to be accompanied by a completed Chain of Custody form. The Chain of Custody form is to be signed immediately before sealing the cooler, and placed inside the cooler within a sealed bag.
- Both the date and time of sample collection is to be recorded for each sample on the Chain of Custody form.
- If coolers are to be released into the custody of a party other than the contract laboratory (e.g., a courier), signed and dated custody seals must be placed on the cooler and secured in a manner that it is not possible to open the cooler without breaking one or more seals.

FIELD PROGRAM QUALITY ASSURANCE SAMPLES

Field Quality Assurance sample requirements for work programs are outlined below. These requirements are related to both the frequency of sample submissions (the number of samples submitted) as well as the duration of the field program.

The following terminology is used in defining sample requirements for this SOP:

- **Field day:** a work program to which this SOP applies that is completed in the space of a single calendar day.

- **Sampling round:** a work program to which this SOP applies that is completed over a period of one or more days, and which are associated with a single submission of samples to the contract laboratory. (Note that a single submission may constitute several coolers; “submission” refers to a batch of samples which are delivered to the laboratory at the same time.)
- **Number of samples:** for the purposes of this SOP, the number of samples for the work program comprises the sum of uniquely identified samples, excluding field program quality assurance samples, within each of the Analytical Program Groupings (refer to Table 1, below).

For example, a work program involving the submission of three samples for VOC analyses with two of these three samples also submitted for analyses of metallic parameters would comprise a total of five samples, even though only three sample names might be listed on a chain of custody.

The number of samples can be determined on both a field day and sampling round basis.

Table 1 Analytical Program Groupings, Quality Assurance Sampling and Analyses

Grouping	Notes
Metals	-
VOCs / F1 PHCs	Includes “BTEX” parameters; includes 1,4-dioxane when processed as a VOC sample
Volatile Gases	-
General Chemistry	Includes inorganic parameters
Base, Neutral and Acid Extractables (BNAs)	Includes PAHs, phenols and TCLP extractions; includes 1,4-dioxane when processed as a BNA sample
Other organics	Includes the F2, F3, and F4 PHC parameters

Source: adapted from Tables A and B, MOE Analytical Protocol (April 15, 2011)

Field Duplicates

A field duplicate is a second sample concurrently collected from the same location as another sample and submitted for duplicated analyses. Field duplicates provide information relating to:

- The ability of the contract laboratory to provide reproducible (i.e., similar or the same results) analytical results;
- The ability of Terrapex to consistently collect representative samples (as both the duplicate and its sampling pair are purportedly representative of the sampling location, similar results should be obtained); and,
- Homogeneity of the sampled media.

It is generally preferable to obtain field duplicate samples from sampling locations likely to generate quantified concentrations of the target parameters, as comparisons of quantified results is more informative than comparisons of non-detectable concentrations.

To mitigate potential bias in methodology, etc. at the contract laboratory, field duplicate samples should not be identified as field program quality assurance samples at the time of submission.

Field duplicate sampling requirements are provided in Table 2.

Field Blanks

Field blanks, whether they are accompanying soil, sediment, or groundwater samples, comprise a sample of analyte-free water prepared in the field and submitted for laboratory analyses as a measure of:

- The ability of the laboratory to avoid introducing concentrations of target parameters into analysed samples (i.e., potential analytical bias);
- The ability of Terrapex to avoid introducing concentrations of target parameters into recovered samples (e.g., cross contamination);
- Potential cross-contamination between samples during temporary storage and/or transportation to the contract laboratory; and,
- Potential cross-contamination between samples during temporary storage at the contract laboratory.

Analyte-free water for preparing field blanks is normally obtained from the contract laboratory in bulk and transferred to appropriate sampling containers in the field. Ideally, a field blank sample should be prepared (or opened) adjacent to the “worst-case” sampling location. If this is impracticable, field blank samples should be prepared at another location in the field. Field blank samples should not be prepared at the office or at the laboratory. The location at which a field blank sample was prepared should be recorded in the field notes.

To mitigate potential bias in methodology, etc. at the contract laboratory, field blank samples should not be identified as field program quality assurance samples at the time of submission. Consequently, because a field blank is by definition a water sample, field blanks are not normally part of soil sampling programs.

The exception to these general rules involves the use of methanol-preserved or sodium bisulphate solution-preserved soil samples for analyses of volatile organic constituents. Unused sampling containers precharged with preservative should be used as field blanks. The container(s) for the blank sample(s) should be opened, exposed to ambient atmosphere for

approximately 30 seconds (the approximate time required to collect a soil sample into the sampling container), and re-sealed. It is not necessary, and not advisable, to attempt to transfer the preservative to another sampling container.

The “preparation” of the soil sample field blanks should be completed adjacent to the “worst-case” sampling location or condition; if this is impracticable, the activity should be completed at another location in the field at which bias of sampling results could have resulted. The location at which the soil sample field blank was prepared should be recorded in the field notes.

Field blank sampling requirements are provided in Table 2.

Trip Blanks

A trip blank is a sample prepared by the contract laboratory using analyte-free water and obtained by Terrapex immediately prior to the site visit. Trip blanks may also be prepared by the laboratory using methanol or sodium bisulphate solution for sampling programs involving soil samples for analyses of volatile organic constituents.

The trip blank sample accompanies Terrapex during the execution of the sampling activities and is not opened during this time. While in the possession of Terrapex, trip blanks are to be managed as if they were any other sample (e.g., maintained in a cool, dark environment as described above). At the conclusion of the sampling activities, the sample is submitted to the contract laboratory for analyses as a measure of:

- The ability of the laboratory to avoid introducing concentrations of target parameters into analysed samples;
- Potential cross-contamination between samples during temporary storage and/or transportation to the contract laboratory; and,
- Potential cross-contamination between samples during temporary storage at the contract laboratory.

As it is prepared by the contract laboratory, trip blanks will be received bearing a sampling label and associated sample identification. Reasonable efforts are to be made to limit the amount of time a trip blank sample is in possession of Terrapex (e.g., obtaining the sample is close to practicable to the start of sampling activities whilst ensuring it is in Terrapex’s possession at the start). Regardless, the trip blank sample is to be received by the laboratory within seven days of the date/time of preparation listed on the sampling label.

Trip blank sampling requirements are provided in Table 2.

Equipment Blanks

An equipment blank is a sample prepared by exposing analyte-free water (supplied by the contract laboratory) to sampling equipment employed during the sampling activities (e.g., passing water through a bailer). Because the objectives of the equipment blank includes assessment of potential cross-contamination associated with the use of non-dedicated sampling equipment, non-dedicated equipment is to be washed in accordance with normal field procedures prior to preparing equipment blank samples.

Notwithstanding the objective of equipment blank samples, it should be noted that equipment blank laboratory results may also be affected by analytical bias or cross-contamination.

Equipment blanks should be prepared at the conclusion of the field day (as representative of “worst-case” cross-contamination potential when non-dedicated sampling equipment is used), as sampling is to commence in the apparent least impacted area and progress to areas of apparent increasing impact), and ideally in the field itself. The time and location of preparing each equipment blank sample is to be recorded in the field notes.

Equipment blank sampling requirements are provided in Table 2.

Trip Spikes

A trip spike is a sample prepared by the contract laboratory using water containing known concentrations of target parameters. The sample is obtained by Terrapex immediately prior to the site visit and accompanies Terrapex during the execution of the sampling activities, but is not opened. While in the possession of Terrapex, trip spikes are to be managed as if it were any other sample. At the conclusion of the sampling round, the sample is submitted to the contract laboratory for analyses.

Trip Spikes are primarily intended as measures of potential loss (low bias) in samples collected for volatile analysis, although results can also be affected by issues associated with laboratory analytical precision (e.g., laboratory equipment calibration) as well as potential cross-contamination between samples during temporary storage and/or transportation.

As it is prepared by the contract laboratory, trip spikes will be received bearing a sampling label and associated sample identification. Reasonable efforts are to be made to limit the amount of time a trip spike sample is in possession of Terrapex (e.g., obtaining the sample as close to practicable to the start of sampling activities whilst ensuring it is in Terrapex's possession at the start of the work program). Regardless, the trip spike sample is to be received by the laboratory within seven days of the date/time of preparation listed on the sampling label.

Trip spike sampling requirements are provided in Table 2.

Table 2 Field Program Quality Assurance Sampling Requirements

Sample Type	Media	Minimum Frequency	Comments
Field Duplicate ¹	Soil / Sediment	1 per 10 samples	Duplicates not required for TCLP extraction analyses
	Water / Groundwater	1 per 10 samples	
	Air / Soil Vapour	1 per 10 samples	
Field Blank ¹	Soil / Sediment	Generally not required ²	A field blank is not required if a trip blank is being submitted (e.g., analyses of VOCs / F1 PHCs and/or volatile gases)
	Water / Groundwater	1 per sampling round	
	Air / Soil Vapour	1 per sampling round	
Trip Blank	Soil / Sediment	Generally not required ²	Applicable only for analyses of VOCs / F1 PHCs and/or volatile gases
	Water / Groundwater	1 per sampling round (see comments)	
	Air / Soil Vapour	1 per sampling round (see comments)	
Equipment Blank ¹	Soil / Sediment	Generally not required ³	Not required if only dedicated sampling equipment employed
	Water / Groundwater	1 per field day	
	Air / Soil Vapour	Not required	It is generally impracticable to attempt collection of equipment blanks during air or soil vapour sampling
Trip Spike	Soil / Sediment	Generally not required ⁴	Applicable only for analyses of VOCs / F1 PHCs and/or volatile gases
	Water / Groundwater	Not required but 1 per sampling round recommended ⁵	
	Air / Soil Vapour	Not required	Commercial laboratories are generally unable to provide reliable trip spike samples for air or soil vapour sampling

Notes:

- 1 To the extent practicable, at least one of each type of field program quality assurance sample should be submitted for the various analytical groupings that comprises the sampling program
- 2 A trip blank sample OR a field blank sample is required for each sampling round that includes methanol-preserved or sodium bisulphate solution-preserved soil samples for analyses of volatile constituents
- 3 Equipment blanks are not required if reasonable efforts are made to clean non-dedicated soil or sediment samplers between use (e.g., if split spoon samplers are washed between use, an equipment blank would not be required by this SOP). Otherwise, an equipment blank sample should be prepared by running laboratory-supplied analyte-free water over/through the equipment and collecting these waters for laboratory analyses of the target parameters.

- 4 *Trip Spike samples are not required for soil or sediment analyses, as the laboratory-provided spikes are generally not provided in an equivalent media to the recovered samples (e.g., trip spike samples are generally water, and losses in a water sample may not be representative of the presence, absence, or magnitude of losses in hermetic samplers, methanol preserved samples, etc.)*
- 5 *Trip Spike samples are not required field program Quality Assurance elements per O. Reg. 153/04 and consequently are not mandatory per this SOP. However, as loss of volatile constituents during sample storage / transport to the analytical laboratory can significantly affect the reliability of analytical results, analyses of one trip per sampling round is recommended.*

Nomenclature for Field Quality Assurance Samples

As a general practice, the contract laboratory should not be informed of the number or nature of field program quality assurance samples submitted as part of a sampling program unless the laboratory's assistance is required in investigating a potential data quality issue (e.g., in the event of a result triggering an alert criteria specified in Data Quality Analysis, below).

Notwithstanding this general principal, both trip blank and trip spike samples are typically prepared and provided by the contract laboratory. Accordingly, these samples will be assigned sample identifications by the laboratory, and the date/time of preparation will typically be recorded on the sampling label. Such samples should be recorded on the Chain of Custody form using the sample identification and date/time of preparation provided by the laboratory.

The remaining field program quality assurance samples (field duplicates, field blanks, and equipment blanks) should be submitted on a "blind" basis so that the laboratory ought to be reasonably unaware of the nature of the sample submission. That is, these samples should be assigned a plausible sampling identification that does not correspond to another actual or potential sampling location at the site, and the true nature of the sample identification recorded in the field notes. Selected sample identifications should not, for example, be identified as or include "DUP", "BLANK", or any other nomenclature suggesting that the sample represents a field program quality assurance measure.

This principal extends to field blanks prepared for methanol-preserved or sodium bisulphate solution-preserved soil samples for analyses of volatile constituents. Although field blanks may be readily identified as such at sample reception (through the lack of any soil within the sample container), the nature of such samples would not be readily apparent to other laboratory staff following laboratory extraction procedures. Accordingly, these samples should be assigned a plausible sampling identification that does not correspond to another actual or potential sampling location at the site, and the true nature of the sample identification recorded in the field notes.

LABORATORY QUALITY ASSURANCE

Commercial contract laboratories will have their own internal quality assurance and quality control programs. These programs typically include quality assurance samples in analytical runs, the results of which are provided (in summary form) in the Certificate of Analysis documenting analytical results for a sample submission.

Maintaining overall field program quality assurance and quality control and completing data quality analysis requires a review of the laboratory Certificate of Approval.

For the purposes of this SOP, laboratory quality assurance samples are defined as outlined below. Note that while this nomenclature had been adopted to reflect language typical in the commercial contract laboratory industry, it may not necessarily correlate exactly with that used in the laboratory Certificate of Analysis.

Method Blank: an aliquot prepared using analyte-free water and processed through the entire analytical method, including extracting, digestion, and other preparation procedures.

Blank Spike: an aliquot prepared using water containing known concentrations of target parameters and processed through the entire analytical method, including extracting, digestion, and other preparation procedures.

Matrix Spike: a second aliquot from an analytical sample that is fortified with known concentrations of the target parameters and processed through the entire analytical method, including extracting, digestion, and other preparation procedures. As quality assurance results are assessed on the basis of comparison of the determined concentration versus the known concentrations, high concentrations of the target parameters in the fortified sample can obscure (mask) matrix spike recovery.

Laboratory Duplicate: a second aliquot from an analytical sample that is included in the analytical run for comparison to results from the corresponding sampling pair.

Certificate Reference Material (CRM): an aliquot that has been certified by a recognized agency to contain specific concentrations of target parameters and which is included in the analytical run. A CRM differs from a blank spike in that it is not prepared internally by the contract laboratory.

Surrogate Recovery: Surrogates are parameters not normally found in nature but that behave chemically and physically similar to the analytical run target parameters, and that are introduced into the aliquot of an analytical sample. Surrogate recovery is the evaluation of the determined concentration of the surrogate versus the known concentration introduced into the sample aliquot.

DATA QUALITY OBJECTIVES

Alert criteria for quality assurance and quality control metrics are summarized in Table 3. Any result triggering the specified alert criteria must be identified in the work program report, and specific commentary regarding the implication of this result on the work program findings (if any) offered.

Note that triggering an alert criteria does not mean that the corresponding laboratory results are invalid; it only indicates a situation where specific commentary regarding the validity of the laboratory results is required in the work program report.

Quality assurance samples involving comparisons of actual results to expected results are evaluated on the basis of **Recovery**, or recovery percentage. Note that Recovery does not necessarily relate to the ability to provide consistent (similar) quantitations between successive analyses.

Recovery is calculated as follows:

$$\text{Recovery} = \frac{\text{reported concentration}}{\text{actual (expected) concentration}} \times 100\%$$

Quality assurance samples involving comparisons of 'duplicate' analysis are evaluated on the basis of **Relative Percent Difference (RPD)**. RPD provides a measure of the ability to provide consistent results on successive analyses, but does not necessarily relate to the ability to provide results that are representative of the actual concentration of the target parameter (e.g., the expected result when comparing against a known standard).

RPD is calculated as follows:

$$\text{RPD} = \left| \frac{\text{result}_1 - \text{result}_2}{\frac{1}{2} \times (\text{result}_1 + \text{result}_2)} \right| \times 100\%$$

RPD values should not be calculated where one or both of the results do not yield quantifiable results (i.e., non-detect findings), or where one or both of the results are less than five times the reported detection limits. RPD values should not be calculated for parameters which are based on calculations using raw data (e.g., sodium adsorption ratio, total xylenes); instead, where applicable, RPD values should be calculated for the 'raw' data (e.g., the m&p-xylenes, o-xylenes parameters).

Note that the mere absence of a calculated RPD is not considered a quality assurance failure, but simply a situation where alert criteria cannot be quantifiably evaluated. Similarly, the absence of

a RPD value is not necessarily considered to be an acceptable field quality assurance result (e.g., a non-detect result in a duplicate sample but an elevated concentrations reported for the corresponding sampling pair is suggestive of a potentially significant variance in sampling results, and may warrant commentary in the work program report).

Table 3 Field Program Data Quality Objectives

Field QC Metric	Alert Criteria		
Sample integrity	Deviation from this SOP recorded within field notes Significant variance in field screening results (if applicable) recorded within field notes between duplicate samples Laboratory reports average sample temperature at time of receipt greater than 10°C Incorrect sampling container employed Broken or leaking sampling container reported by laboratory Excessive particulate within received water sample reported by laboratory		
Sample identification integrity	Laboratory reports discrepancy between samples reported on Chain of Custody and those actually received (as per sampling container labels) Laboratory reports unlabelled sample received (no sample identification apparent)		
Chain of Custody integrity	Laboratory reports missing/damaged custody seal Laboratory reports missing Chain of Custody form Date/time of sample recovery not recorded on Chain of Custody form		
Sample storage (hold time) integrity	Sample for analysis of VOC / F1 PHCs and/or volatile gases received by laboratory more than 36 hours after recorded sample collection Sample for analysis other than VOC / F1 PHCs and volatile gases received by laboratory more than 72 hours after recorded sample collection		
Laboratory QA Metric	Alert Criteria		
	Analytical Grouping	Soil / Sediment	Air / Soil Vapour / Water / Groundwater
Method Blank	ALL	Any concentration in excess of laboratory detection limits	

Table 3 Field Program Data Quality Objectives

Blank Spike, Matrix Spike	BNAs, PAHs 1,4-Dioxane Dioxins/Furans OC Pesticides PCBs PHCs VOCs Hg, Cr ⁶⁺ , CN ⁻ FOC, Chloride Methyl mercury Metals (incl. B, HWS B, Ca, Mg, Na)	<i>results outside:</i> 50% - 140% Recovery 50% - 140% Recovery 50% - 150% Recovery 50% - 140% Recovery 60% - 140% Recovery 60% - 140% Recovery 50% - 140% Recovery 70% - 130% Recovery 70% - 130% Recovery 60% - 140% Recovery 70% - 130% Recovery ¹	<i>results outside:</i> 50% - 140% Recovery 50% - 140% Recovery 50% - 150% Recovery 50% - 140% Recovery 60% - 140% Recovery 60% - 140% Recovery 50% - 140% Recovery 70% - 130% Recovery 70% - 130% Recovery 60% - 140% Recovery 70% - 130% Recovery ¹
Laboratory Duplicate	BNAs, PAHs 1,4-Dioxane Dioxins/Furans OC Pesticides PCBs PHCs VOCs Hg, Cr ⁶⁺ , CN ⁻ EC FOC, Chloride Methyl mercury Metals (incl. B, HWS B, Ca, Mg, Na) pH	> 40% RPD ² > 50% RPD > 40% RPD > 40% RPD > 40% RPD > 30% RPD > 50% RPD > 35% RPD > 10% RPD > 35% RPD > 30% RPD > 30% RPD ^{2,3} 4	> 30% RPD > 30% RPD > 30% RPD > 30% RPD > 30% RPD > 30% RPD > 30% RPD > 20% RPD n/a > 20% RPD > 20% RPD > 20% RPD 4
Certified Reference Material, Laboratory Control Sample	BNAs, PAHs 1,4-Dioxane Dioxins/Furans OC Pesticides PCBs PHCs VOCs Hg, Cr ⁶⁺ , CN ⁻ EC FOC, Chloride Methyl mercury Metals (incl. B, HWS B, Ca, Mg, Na)	<i>results outside:</i> 50% - 140% Recovery ⁵ 50% - 140% Recovery 50% - 150% Recovery 50% - 140% Recovery 60% - 140% Recovery 80% - 120% Recovery 60% - 140% Recovery 80% - 120% Recovery 90% - 110% Recovery 70% - 130% Recovery 70% - 130% Recovery 80% - 120% Recovery ⁶	<i>results outside:</i> 50% - 140% Recovery ⁵ 50% - 140% Recovery 50% - 150% Recovery 50% - 140% Recovery 60% - 140% Recovery 60% - 140% Recovery 60% - 140% Recovery 80% - 120% Recovery 90% - 110% Recovery 70% - 130% Recovery 70% - 130% Recovery 80% - 120% Recovery ⁶

Table 3 Field Program Data Quality Objectives

Surrogate Recovery	BNAs, PAHs 1,4-Dioxane Dioxins/Furans OC Pesticides PCBs PHCs VOCs	<i>results outside:</i> 50% - 140% Recovery 50% - 140% Recovery 40% - 140% Recovery 50% - 140% Recovery 60% - 140% Recovery 60% - 140% Recovery 50% - 140% Recovery	<i>results outside:</i> 50% - 140% Recovery 50% - 140% Recovery 40% - 140% Recovery 50% - 140% Recovery 60% - 140% Recovery 60% - 140% Recovery 50% - 140% Recovery
Field Program QA Metric	Alert Criteria		
	Analytical Grouping	Soil / Sediment	Air / Soil Vapour / Water / Groundwater
Field Duplicate	pH BNAs, PAHs 1,4-Dioxane Dioxins/Furans OC Pesticides PCBs PHCs VOCs Hg, Cr ⁶⁺ , CN ⁻ EC FOC, Chloride Methyl mercury Metals (incl. B, HWS B, Ca, Mg, Na)	² > 40% RPD ³ > 50% RPD > 40% RPD > 40% RPD > 40% RPD > 30% RPD > 50% RPD > 35% RPD > 10% RPD > 35% RPD > 30% RPD > 30% RPD ^{3,4}	² >30% RPD > 30% RPD > 30% RPD > 30% RPD > 30% RPD > 30% RPD > 30% RPD > 20% RPD n/a > 20% RPD > 20% RPD > 20% RPD
Field Blank	ALL	Any concentration in excess of laboratory detection limits	
Trip Blank	VOCs / F1 PHCs Volatile Gases	Any concentration in excess of laboratory detection limits	
Equipment Blank	ALL	Any concentration in excess of laboratory detection limits	
Trip Spike	VOCs / F1 PHCs Volatile Gases	<i>results outside:</i> 70% - 130% Recovery 60% - 140% Recovery	

Source: adapted from Tables 5-1 through 5-14, MOE Analytical Protocol (April 15, 2011)

Notes:

¹ Alert Criteria for Hot Water Soluble Boron is 60% - 140% Recovery

² RPD values are not calculated for pH analyses; however, results should be within 0.3 pH units

³ Increased RPD values may be encountered whenever duplicate analyses are completed on samples representing heterogeneous fill materials. Specific commentary regarding the validity of analytical results should be offered whenever the specified alert criteria is exceeded; however, significant concerns regarding the validity of analytical results would generally not be suspected if calculated RPD do not exceed the specified alert criteria more than a factor of 2.

- ⁴ *Alert Criteria for Hot Water Soluble Boron is >40% RPD*
- ⁵ *Alert Criteria for p-chloroaniline, 3,3-dichlorobenzidine, phenol, 2,4-dimethylphenol, and DNP is 30% - 130% Recovery*
- ⁶ *Alert Criteria for Hot Water Soluble Boron is 70% - 130% Recovery*

TERRAPEX STANDARD OPERATING PROCEDURE

FIELD VAPOUR METER CALIBRATION

GENERAL NOTES

Standard Operating Procedures (SOPs) have been developed by Terrapex Environmental Ltd. to standardize protocols used during environmental assessment work programs. However, certain work programs may warrant deviations from SOPs and some clients may have specific requirements which differ from those outlined in this SOP. Any significant deviations should be discussed with and approved by the project manager. Each deviation, along with the rationale for the deviation, should be documented in the field notes, project scope and/or notes to file.

Where SOPs are appended to reports, all deviations from this SOP, along with the rationale for the deviation, must be documented in the report.

APPLICATION

This SOP describes calibration procedures and requirements for portable meters used to measure combustible vapours, volatile organic compounds, and/or other gases within an atmosphere. The procedures described herein are applicable to calibration both in the office and in the field (using a portable calibration kit).

GENERAL CALIBRATION PROCEDURES

1. Turn on the instrument and allow 5-10 minutes for it to warm up. When calibrating in the field, complete instrument warm up in a sheltered environment, or allow an additional 5-10 minutes for warm up.
2. Attach hoses, water traps, probe ends and other pieces that will be utilized during actual measurement, and set instrument to the intended measurement mode (e.g., on a Gastech Model 1238 ME, turn “methane elimination” on or off, as appropriate).
3. Check instrument flow rate to confirm suitable vapour intake.
4. In a baseline environment (e.g., ambient air), “zero” the instrument. Record any adjustments made on the instrument calibration log, including initial and final (calibrated) readings.
5. Fill an empty Tedlar bag with calibration gas, and connect it to the instrument. If the instrument being calibrated has multiple sensors for different ranges of target vapours (e.g., GasTech model 1238ME), calibrate the coarse range (higher concentrations) first.

6. Allow the instrument to equilibrate with the environment in the Tedlar bag and adjust the instrument span settings as appropriate. Record any adjustments made on the instrument calibration log, including initial and final (calibrated) readings.
7. Remove the Tedlar bag and confirm that the instrument returns to a baseline reading (e.g., zero reading on a combustible vapour meter).
8. Repeat steps 4 through 7, as necessary, for additional sensors and/or target vapours.

CALIBRATION REQUIREMENTS

Portable meters are to be calibrated prior to the start of a site visit, and prior to the start of each successive site visit if the project requires more than a single day onsite.

More frequent calibration may be required on projects where elevated vapour readings are frequently encountered, as such scenarios can result in calibration “drift” (erroneous readings on the instrument). Calibration drift is often characterized by one or more of the following conditions:

- Failure of the instrument to return to a baseline reading in ambient conditions;
- No response or apparently “sluggish” response of the instrument upon exposure to an environment containing target vapours; or,
- Inconsistent instrument readings despite exposure to apparently identical target environments.

Where calibration drift is suspected, the instrument should be recalibrated as soon as practicable. Readings potentially affected by calibration drift should be appropriately annotated on field notes/log sheets.

TERRAPEX STANDARD OPERATING PROCEDURE BOREHOLE ADVANCEMENT USING ROTARY AUGER

GENERAL NOTES

Standard Operating Procedures (SOPs) have been developed by Terrapex Environmental Ltd. to standardize protocols used during environmental assessment work programs. However, certain work programs may warrant deviations from SOPs and some clients may have specific requirements which differ from those outlined in this SOP. Any significant deviations should be discussed with and approved by the project manager. Each deviation, along with the rationale for the deviation, should be documented in the field notes, project scope and/or notes to file.

Where SOPs are appended to reports, all deviations from this SOP, along with the rationale for the deviation, must be documented in the report.

APPLICATION

This SOP is applicable to intrusive environmental investigations involving the advancement of borings using rotary auger drilling rigs employing 5 ft (approximately 1.5 m) long continuous flight hollow stem augers or solid stem augers. The SOP is applicable whether such activity constitutes the whole of a work program, or part of a larger work program.

EQUIPMENT

The following list details the standard equipment necessary for borehole advancement. Specific sites may require additional or specialized equipment.

- ☐ Portable vapour meter (e.g., Gastech™ 1238ME), calibrated and charged
- ☐ Vapour meter field calibration kit, if applicable
- ☐ tape measure with weighted end
- ☐ sampling equipment (gloves, bags, permanent marker)
- ☐ bucket for washing split spoon samplers
- ☐ detergent solution in spray bottle
- ☐ distilled/clean water in spray bottle
- ☐ laboratory-supplied sampling jars appropriate for contaminants of concern
- ☐ cooler with ice

- ☐ laboratory chain of custody forms
- ☐ field notebook
- ☐ field borehole logs (F025)
- ☐ site plan
- ☐ scope of work/field work instructions
- ☐ site-specific health and safety plan, including Job Safety Analysis and other POST™ documentation
- ☐ Personal Protective Equipment (e.g., hard hat, vest, safety glasses, respirator, steel toe boots, gloves, hearing protection)
- ☐ Camera
- ☐ Measuring wheel or similar device

PREPARATION

- review scope, proposed borehole locations, and utility locates with project manager
- ensure utility locates are complete, contractor is confirmed, and site access is confirmed
- ensure equipment booked is suitable for site (e.g., tracked drill rig vs. truck-mounted rig)
- calibrate and sign-out field equipment

SPECIAL PLANNING AND PREPARATION REQUIREMENTS

Above ground and underground utilities and other services within the assessment area are to be located and identified in the field prior to drilling. Where appropriate, a private locating contractor should also be retained to identify secondary services such as yard lights, internal computer/communication lines, etc., and clear proposed borehole locations. All exclusions or conditions attached to utility service locates (e.g., notification requirements, “hand dig only” areas) are to be strictly adhered to.

NOMENCLATURE

Boreholes should be uniquely numbered on a sequential basis, and prefaced by “BH”.

The initial round of borehole advancement should begin with borehole “BH101”, with subsequent boreholes advanced during this round identified as “BH102”, “BH103”, etc. Additional rounds of borehole advancement would begin by advancing the borehole count to the next 100 (e.g., the

first borehole from the second and third investigation program would be “BH201” and “BH301”, respectively). Borehole numbering is to be maintained irrespective of the manner in which the borehole is advanced (e.g., if the second round of borehole advancement is completed using a method other than rotary auger drilling, it would still commence with borehole “BH201”).

If a monitoring well is installed in a borehole (refer to *Monitoring Well Installation*, SOP E04.00), the prefix “MW” is to be substituted for “BH”, however, the borehole numbering sequence is to be maintained (e.g., if the second borehole of the first round of investigation is instrumented as a monitoring well, it would be identified as “MW102”, not “MW101”).

Soil samples collected during borehole advancement should be numbered sequentially using the borehole number followed by a dash as a prefix, (e.g., sample “BH101-4”, indicating the fourth sample from borehole BH101). Subdivided samples should be labelled with alphabetical suffixes from the top of the sample (e.g., “BH101-4A” and “BH101-4B”, with the later sample located at the greater depth).

All alphabetical prefixes and suffixes should be written in capital letters.

FIELD PROCEDURES

Sampling

Split spoons are to be advanced, where possible, 2 ft. (approx. 61 cm) below the end of the augers at regular 2.5 ft. intervals (e.g. 0 ft., 2.5 ft., 5 ft., etc.), beginning at ground surface, and at regular 2.5 ft. intervals thereafter (i.e. 2.5 ft., 5 ft., 7.5 ft., etc.). Standard penetration tests should be conducted to advance the spoon, and the number of blows required to drive the spoon each 6 in. (approx. 150 mm) interval recorded.

For boreholes advanced in areas of asphalt, concrete, or crushed stone surfacing, the initial spoon should be advanced starting at the base of the surfacing, and to a depth no greater than 2.5 ft. to permit subsequent spoons to be advanced at regular intervals beginning at 2.5 ft. (e.g. 2.5 ft., 5 ft., 7.5 ft., etc.). The thickness and type of the “unsampled” surfacing material is to be measured and recorded on the borehole log.

Split spoon advancement should be abandoned at “refusal”. “Refusal” includes greater than 50 blows to drive a spoon 6 in. (150 mm) or less.

Where significant “caving” or “slough” occurs, or may occur, between sample intervals, hollow stem augers should be used to advance the borehole and to facilitate the installation of a monitoring well (if applicable) in the completed boring. Sand traps may be used to improve sample recovery, where necessary, when advancing split spoons into wet, non-cohesive soils (e.g. sands and gravels).

Split spoon samples are to be cleaned prior to use using soapy water and a fresh water rinse.

Recovered soil samples should be handled and screened in the field as specified in *Soil Sample Handling* (SOP E09.00). Where appropriate, samples should be divided into two or more sub-samples to facilitate logging of observed changes in geological conditions (stratigraphy, etc.) or evidence of possible impact (staining, odours, etc.). Subdivided samples should be identified as described in the Nomenclature section above; i.e., assigning the suffix "A" to the sub-sample at the top of the spoon (the sample first collected), then "B", "C", etc.

Boreholes are to be advanced to at least the maximum anticipated depth of potential impact (e.g., at least the water table for investigations of possible petroleum hydrocarbon impacts). Whenever possible, the final depth of the borehole should approximately delineate the vertical extent of contamination in the vicinity of the borehole (e.g., one "clean" sample should be obtained from the base of the borehole).

Note Taking

Use the Terrapex field borehole form (Form F025). Always fill in every field of the top portion of the form completely - logs can easily get separated from each other. Note the outer diameter of augers.

Avoid using non-established short forms on all descriptions. Do not scribble anything out or erase, just place a line through the word.

The type and thickness of surfacing materials (asphalt, concrete and/or crushed stone) should also be recorded.

Record the sampling interval graphically as the interval over which the split spoon was driven, not the length of the spoon (i.e., record the actual sampling interval, accounting for refusal, not the planned sampling interval).

Label each sample collected as 1, 2, 3, etc. as specified in the Nomenclature section. Do not start a new set of numbers if you change collection methods. Do not use depth intervals for the sample name (e.g. 10'-12').

Record percent recovery based on how far you drove the spoon (actual sampling interval), not one length of the spoon or the intended sampling interval, rounded to the nearest 5%.

$$\% \text{ recovery} = (\text{Quantity of soil recovered}) / (\text{distance spoon was driven}) \times 100\%$$

For example, if the spoon was driven 60 cm (2 ft), and 20 cm (8") of soil was recovered, % recovery = (20 cm / 60 cm) x 100% = 33.33%, rounded to 35%.

Record blow counts based on Standard Penetration Test (blows to drive the split spoon 6 inches). If it takes more than 50 blows to drive the spoon less than 6 inches, record as 50/x", where x is the number of inches the spoon was actually driven, and terminate the test.

When screening soil headspace vapours, record vapour readings AND units. Note the instrument number used to collect vapour readings. If you are using an instrument other than the default GasTech 1238 combustible meter or equivalent, note the type of instrument.

If there is no deflection on the combustible gas meter (or other field headspace screening instrument) record the reading as less than the effective detection limit (<10 ppm for combustible gas meters), not 0 ppm.

For odours, use NONE, SLIGHT, MODERATE and STRONG. The default is assumed to be hydrocarbon odour; other types of odours require a description entered onto the log. Do not leave this blank unless you did not check for odours.

Refer to the *Soil Classification* (SOP E10.00) for standard terminology for recording sample descriptions. In addition:

- always record the relative grain size of sand particles (fine/medium/coarse), not just "sand";
- note any structural observations (bedding, etc.)
- record presence of rootlets/roots, organic matter, debris, and anything else that might help determine whether the soil is fill or native;
- note fractures and location, width, weathered, staining, open, closed, tight.
- for sand seams, record the depth and thickness as well as a description (coarse, wet, etc.).

Clearly and fully document the stratigraphy encountered during drilling and soil sampling, including the depths of stratigraphic contacts observed within split spoons (e.g., located within sampling intervals). If there are distinct layers within a split spoon, the samples should be divided into sub-samples and identified with suffixes A, B, C, etc. as described above.

The depth and reasons for abandoning further borehole advancement (e.g., refusal at bedrock, depth of desired investigation obtained) is to be recorded on the log.

Backfilling

This section applies to boreholes in which monitoring wells are not installed. Refer to *Monitoring Well Installation* (SOP E04.00) for instrumenting boreholes as monitoring wells.

To ensure that the boring does not represent a potential conduit for groundwater flow or contaminant migration, boreholes are to be backfilled using bentonite chips and subsequently hydrated by the addition of a sufficient volume of potable-grade water. Where boreholes have been advanced through a hole cut through asphalt, concrete or similar hard surfacing, a concrete patch is to be applied to mitigate further cracking/degradation of surface treatments.

Prior to Leaving Site

- Check the scope of work to ensure you have completed project objectives
- Measure the final location of all boreholes from permanent site features and show on site plan (refer to *Measuring and Surveying using Rod and Level*, SOP E11.00)
- Ensure boreholes are properly backfilled and the site is sufficiently restored
- Clean up any garbage or debris and leave the site the way you found it (or better)
- Call the project manager to ensure there is nothing else required, to summarize findings and results, and select final lab samples
- Pack and submit samples to lab with chain of custody

UPON RETURN TO OFFICE

- Clean and sign in all equipment used
- Log in soil samples in soil bins
- Complete equipment and supply form
- Complete field package (place logs and photocopies of relevant field log book pages in project file folder)
- Submit site drawing depicting borehole locations to drafting.

TERRAPEX STANDARD OPERATING PROCEDURE MONITORING WELL INSTALLATION

GENERAL NOTES

Standard Operating Procedures (SOPs) have been developed by Terrapex Environmental Ltd. to standardize protocols used during environmental assessment work programs. However, certain work programs may warrant deviations from SOPs and some clients may have specific requirements which differ from those outlined in this SOP. Any significant deviations should be discussed with and approved by the project manager. Each deviation, along with the rationale for the deviation, should be documented in the field notes, project scope and/or notes to file.

Where SOPs are appended to reports, all deviations from this SOP, along with the rationale for the deviation, must be documented in the report.

APPLICATION

This SOP is applicable to the installation of monitoring wells following the vertical advancement of a borehole in overburden or bedrock. Borehole drilling procedures are not covered by this SOP.

EQUIPMENT

The following list details the standard equipment necessary for monitoring well installation over and beyond that required for borehole advancement. Specific sites may require additional or specialized equipment.

- ☐ Well screen and riser pipe
- ☐ “well gravel” (silica sand)
- ☐ Bentonite chips
- ☐ Cement mix
- ☐ End caps
- ☐ Expandable gripper caps (“J-plugs”)
- ☐ Protective casings
- ☐ locks
- ☐ clean, disposable vinyl or nitrile gloves

SPECIAL PLANNING AND PREPARATION REQUIREMENTS

A well record (per R.R.O. 1990, Reg. 903) must be completed by the drilling contractor for all monitoring wells greater than 3 m in depth, or for any well (regardless of depth) installed with a contaminated or potentially contaminated area. All necessary information to complete the well record (e.g., well owner, their address and telephone number, etc.) is to be on hand during installation or provided to the well contractor prior to the start of the work program.

Wells shall not be installed in a manner that would facilitate the migration of liquids between differing water-bearing units, or between overburden and bedrock. The subsurface stratigraphy at the borehole location should be thoroughly assessed prior to well installation.

Monitoring wells to be used for the collection of groundwater samples for laboratory analyses shall be installed such that the saturated portion of the well screen has a length less than or equal to 3.1 m.

NOMENCLATURE

Monitoring wells will be assigned numbers corresponding to the borehole numbering (refer to the appropriate borehole advancement SOP), identified by a “MW” prefix in place of “BH” (e.g., borehole “BH101” becomes “MW101”).

Multi-level well installations, whether installed within a common boring or as a series of separate borings in immediate proximity of each other, will be identified through the use of alphabetical suffixes from the deepest to the shallowest installation (e.g., “MW101A” is deeper than “MW101B”); this convention is based on the principle that numbering begins with the initial installation, and proceeds sequentially thereafter.

All alphabetical prefixes and suffixes should be written in capital letters.

The assigned well name is to be recorded on the well casing, outside of the well standpipe, and/or the top (outside) of the well standpipe cap/plug.

FIELD PROCEDURES

Well Construction

Monitoring wells must be constructed of new, clean materials. Every individual (including drilling contractor staff) involved in the installation of a monitoring well shall be provided, and must wear,

a new, clean pair of disposable gloves. Gloves should be changed between installations, and whenever contact with a potential contaminant occurs.

The base of the completed boring should be measured using a weighted tape and recorded prior to well installation. It is not acceptable to rely on estimates of the completed boring depth based on the number of auger sections used to advance the borehole, etc.

The well should be constructed such that the screened portion of the well intersects the depth range of interest (e.g., the top of the unconfined water table for a typical investigation of potential petroleum hydrocarbon impacts).

Well screens shall intersect a single water-bearing unit only. If the depth range of interest comprises multiple water-bearing units, multi-level well installations should be used. Well screens shall not traverse the bedrock-overburden interface. If the depth range of interest includes both bedrock and overburden, multi-level well installations should be used.

The length of the screened interval, as well as the depth of installation (base of the screened interval) are to be measured and recorded, along with the well slot size, standpipe thickness (e.g., schedule 40, schedule 80, etc.), and standpipe diameter. The length of the screened interval should not exceed 3.1 m (10 ft), and the screened interval of the well should extend no higher than a depth of 1.2 m (4 ft) below ground surface to ensure adequate sealing of the boring annulus.

“Well gravel” (filter pack) should be placed in the annulus of the borehole either by manually filling the annular space, or by using a tremie pipe. The grading classification (e.g., No. 1, No.2, etc.) of well gravel used should be recorded. The top of the filter pack should ideally be located between 15 and 30 cm (6 and 12 in) above the top of the screened interval of the well. The depth of the top of the filter pack should be measured using a weighted tape and recorded. It is not acceptable to rely on estimates of the depth of the top of the filter pack.

The remaining annulus of the well should be backfilled using bentonite chips to a depth of approximately 45 cm (18 in) below ground surface and subsequently hydrated by the addition of a sufficient volume of potable-grade water. The depth of the top of the sealant should be measured and recorded.

A flush-mount or monument (“stick-up”) protective casing shall be set in concrete overtop the well. If a monument casing is installed, the height of the above grade portion of the well standpipe (not the casing) is to be measured and recorded.

Surveying, Establishment of Measuring Points

A consistent measuring point for future groundwater monitoring events is to be indicated on each well by placing a shallow notch on the outside of the well standpipe at its highest point. The

elevation of the “ground surface” and “top of pipe” are to be surveyed relative to an appropriate temporary or geodetic benchmark. All “top of pipe” elevations are to be surveyed by placing the rod on the shallow notch (measuring point) on the outside of the well standpipe. Refer to Measuring and Surveying using Rod and Level SOP E11.00 for additional surveying details.

MULTI-LEVEL INSTALLATIONS

The preferred method for completing multi-levelled well installations is to complete a separate boring for each screened interval in the immediate vicinity of each other (“nested installation”). Nested installations should not be separated from the adjoining installation by distances greater than 1 m (3 ft).

Within nested installations, it is typically only necessary to collect soil samples and log stratigraphy within the deepest boring. However, each well installation is to be logged and recorded on a separate field form/report log with each log illustrating a single standpipe in a unique boring.

If multiple well standpipes are placed within the same boring, an appropriate sealant with a thickness of at least 2 m must be used to mitigate migration of liquids between the screened intervals. Such installations are to be logged and recorded on a single field form/report log that illustrates the multiple standpipes within a common boring.

FIELD DOCUMENTATION

Monitoring well installations should be recorded on field form F025 (field borehole log). Refer to the appropriate borehole advancement SOP for general borehole logging procedures.

TERRAPEX STANDARD OPERATING PROCEDURE

TEST PITTING

GENERAL NOTES

Standard Operating Procedures (SOPs) have been developed by Terrapex Environmental Ltd. to standardize protocols used during environmental assessment work programs. However, certain work programs may warrant deviations from SOPs and some clients may have specific requirements which differ from those outlined in this SOP. Any significant deviations should be discussed with and approved by the project manager. Each deviation, along with the rationale for the deviation, should be documented in the field notes, project scope and/or notes to file.

Where SOPs are appended to reports, all deviations from this SOP, along with the rationale for the deviation, must be documented in the report.

APPLICATION

This SOP is applicable to intrusive environmental investigations involving the completion of localized excavations for the purposes of collecting soil samples and/or documenting subsurface conditions. The SOP is applicable whether such activity constitutes the whole of a work program, or part of a larger work program.

EQUIPMENT

The following list details the standard equipment necessary for excavation of test pits. Specific sites may require additional or specialized equipment.

- ☐ Portable vapour meter (e.g., Gastech™ 1238ME), calibrated and charged
- ☐ Vapour meter field calibration kit, if applicable
- ☐ tape measure with weighted end
- ☐ trowel or knife for sampling from bucket
- ☐ sampling equipment (gloves, bags, permanent marker)
- ☐ laboratory-supplied sampling jars appropriate for contaminants of concern
- ☐ cooler with ice
- ☐ laboratory chain of custody forms
- ☐ field notebook

- ☐ field test pit logs (F027)
- ☐ site plan
- ☐ scope of work/field work instructions
- ☐ site-specific health and safety plan, including Job Safety Analysis and other POST™ documentation
- ☐ Personal Protective Equipment (e.g., hard hat, vest, safety glasses, respirator, steel toe boots, gloves, hearing protection)
- ☐ Camera
- ☐ Measuring wheel or similar device

PREPARATION

- review scope, test pit locations, and utility locates with project manager
- ensure utility locates are complete, contractor is confirmed, and site access is confirmed
- ensure equipment booked is suitable for site (e.g., tracked excavator vs. rubber tire backhoe)
- calibrate and sign-out field equipment

SPECIAL PLANNING AND PREPARATION REQUIREMENTS

Above ground and underground utilities and other services within the assessment area are to be located and identified in the field prior to drilling. Where appropriate, a private locating contractor should also be retained to identify secondary services such as yard lights, internal computer/communication lines, etc. and clear proposed test pit locations. All exclusions or conditions attached to utility service locates (e.g. notification requirements, “hand dig only” areas) are to be strictly adhered to.

NOMENCLATURE

Test Pits should be uniquely numbered on a sequential basis, and prefaced by “TP”.

The initial round of test pitting should begin with test pit “TP101”, with subsequent test pits completed during this round identified as “TP102”, “TP103”, etc. Additional rounds of test pitting would begin by advancing the test pit starting to the next 100 (e.g., the first test pit from the second and third investigation program would be “TP201” and “TP301”, respectively).

Soil samples collected during test pit excavation should be numbered sequentially using the test pit number followed by a dash as a prefix, (e.g., sample "TP101-4", indicating the fourth sample from test pit TP101). Subdivided samples should be labelled with alphabetical suffixes from the top of the sample (e.g., "TP101-4A" and "TP101-4B", with the later sample located at the greater depth).

All alphabetical prefixes and suffixes should be written in capital letters.

FIELD PROCEDURES

Excavating

If possible, begin excavating test pits in the least impacted area of the site to minimize potential cross-contamination between test pits. The depth of test pit excavation will vary, depending upon type of equipment used and the scope of the project.

Always stand where the operator can see you. Use hand signals to communicate with the operator. Do not stand right at the edge of the test pit except to measure the depth. When measuring depths within test pits, stand along the short axis of the test pit (i.e. the "width", not the "length"). Be aware of potential cave-in at all times. Do not leave equipment at the edge of the test pit.

Instruct the excavator to segregate excavated material into piles by type. Be particularly careful to segregate potentially impacted material from non-impacted soil.

Sampling

Obtain soil samples manually from the bucket of the excavator once the bucket has come to rest on firm ground. Never approach a bucket that is suspended above the ground surface.. Avoid entering the test pit and never enter the test pit once it is more than 1.2 m deep. Carefully watch the bucket to ensure you are not sampling material that has caved into the test pit. Also observe the walls of the test pit for areas of stratigraphic change. Keep in mind that sometimes deeper material smears on the sides of the test pit during excavation.

Generally, soil samples should be collected a minimum of every 0.60 m (2.0') with additional samples (if necessary) at areas of stratigraphic change and/or evidence of chemical impact. Try to sample soil from the base of the teeth of the excavator since it is most likely undisturbed material from the bottom of the test pit and less likely to be caved material. Measure the sample depths and depth of stratigraphic layers from grade using your tape measure to an accuracy of 0.1 m.

Samples of material potentially impacted by volatile or organic contaminants should be jarred immediately to minimize. Refer to *Soil Sample Handling* (SOP E09.00) for more detail.

Note Taking

The test pit location (measured to the centroid of the test pit), approximate orientation, and plan (horizontal) dimensions must be recorded on a scaled site plan, or in an equivalent manner so that a scaled site plan illustrating this information may be produced. Test pit locations should ultimately be referenced to a survey monument or other fixed, permanent feature such that the test pit location may be accurately determined in a subsequent site visit.

Record test pit data using field form F027. Specific guidance follows:

Depth (left column):	The range in depth of the stratigraphic layer described (e.g. 0-2 m). Use metric measurements, not Imperial.
Soil Description:	Describe grain size, texture, colour, moisture (including water seepage), evidence of staining, if the material is fill or native material, the nature of any debris, any other observations. Note caving and water seepage. Refer to <i>Soil Classification</i> (SOP E10.00) for more detail on describing soils.
Sample No.:	Number each sample in order of collection (1, 2, 3, etc.).
Depth:	The specific sample depth or interval (e.g., 0.6 m, 1.2 m, etc.).
Odours:	Any hydrocarbon, solvent, organic or other odour noted (use none, slight, moderate, strong as modifiers).
CSV:	Record combustible soil vapour measurements with units (ppm or % LEL). Refer to <i>Field Meter Calibration</i> (SOP E01.00) for more detail.

Include other observations in your field notes such as:

- site observations including potential sources of contamination, nearest watercourses etc.
- surrounding land uses and off-site concerns
- times of arrival on-site, contractor arrival, any site visitors

Field notes should be supplemented with photographs of the site showing the test pit locations. Take some photos of the test pits and/or the excavated soil (test pits can be more useful than boreholes in illustrating stratigraphy). Use a flash if taking a photo of a test pit wall and try to

avoid shadows. Put an identifier (paper with test pit number) in the photo if photographing soil or test pits to ensure the sampling location may be identified afterwards.

Backfilling

Replace excavated material back in the test pit in the same layers as it came out, to the extent possible.

Have the operator compact the test pit with the bucket of the machine and by driving over it several times. If there is excess material, leave it mounded up slightly on top of the test pit to mitigate future settling, or if that is not possible, find a location on the site to pile it (with the permission of the owner/site manager).

Prior to Leaving Site

- Check the scope of work to ensure you have completed project objectives
- Measure the final location of the centre of all test pits from permanent site features and show on site plan (refer to *Measuring and Surveying using Rod and Level* , SOP E11.00)
- Ensure test pits are properly backfilled and the site is sufficiently restored
- Clean up any garbage or debris and leave the site the way you found it (or better)
- Call the project manager to ensure there is nothing else required, to summarize findings and results, and select final lab samples
- Pack and submit samples to lab with chain of custody

UPON RETURN TO OFFICE

- Clean and sign in all equipment used
- Log in soil samples in soil bins
- Complete equipment and supply form
- Complete field package (place logs and photocopies of relevant field log book pages in project file folder)
- Submit site drawing depicting test pit locations to drafting.

TERRAPEX STANDARD OPERATING PROCEDURE

MONITORING WELL DEVELOPMENT

GENERAL NOTE

Standard Operating Procedures (SOPs) have been developed by Terrapex Environmental Ltd. to standardize protocols used during environmental assessment work programs. However, certain work programs may warrant deviations from SOPs and some clients may have specific requirements which differ from those outlined in this SOP. Any significant deviations should be discussed with and approved by the project manager. Each deviation, along with the rationale for the deviation, should be documented in the field notes, project scope and/or notes to file.

Where SOPs are appended to reports, all deviations from this SOP, along with the rationale for the deviation, must be documented in the report.

APPLICATION

These procedures are applicable to developing monitoring wells or piezometers installed for the purposes of monitoring groundwater conditions, hydraulic conductivity or similar in-situ testing, and/or recovering samples for physical inspection/laboratory analytical testing. The procedures are applicable whether such activity constitutes the whole of a work program, or part of a larger work program.

EQUIPMENT

The following list details the standard equipment necessary for groundwater monitoring. Specific sites may require additional or specialized equipment.

- ☐ Well opening tools (e.g., hex wrench , $\frac{9}{16}$ " socket wrench, pry bar, well keys)
- ☐ bucket for washing down-hole field equipment
- ☐ detergent solution in spray bottle
- ☐ distilled/clean water in spray bottle
- ☐ Surge-block
- ☐ File for well notching
- ☐ field notebook
- ☐ field well development form
- ☐ site plan

- ☐ scope of work/field work instructions
- ☐ site-specific health and safety plan, including Job Safety Analysis and other POST™ documentation
- ☐ Personal Protective Equipment (e.g., hard hat, vest, safety glasses, respirator, steel toe boots, gloves, hearing protection)
- ☐ Camera

PREPARATION

- review scope of work with project manager
- ensure site access is confirmed
- calibrate and sign-out field equipment

SPECIAL PLANNING AND PREPARATION REQUIREMENTS

Traffic spotters should be employed when development activities include wells located in the travelled portion of a roadway or in well-trafficked areas of active sites (e.g., a busy gas station). A traffic control plan in accordance with Ontario Ministry of Transportation (MTO) guidelines must be implemented for all work in road allowance.

Accumulated headspace vapours, the depth to water, the depth to the bottom of the well, and the depths to any water/non-aqueous phase liquid (NAPL) interfaces within the well should be measured (refer to SOP E06.00, *Groundwater Monitoring*) prior to development so as to establish baseline conditions.

Waters removed from wells in which there is evidence of significant contamination (e.g., NAPL) should be containerized for future disposal off-site.

Well development is NOT synonymous with purging completed prior to groundwater sampling, and wells must be permitted to return to equilibrium conditions prior to subsequent monitoring, in-situ testing, and/or sampling efforts. The period of recovery will vary depending on well construction and subsurface conditions, but will be no less than twenty-four hours regardless.

FIELD PROCEDURES

Objectives

Monitoring wells are developed in order to remove "drilling debris" - entrained particulate in the well standpipe, well screen and filter pack, and surrounding formation materials - thereby

mitigating potential bias that may occur during groundwater monitoring, in-situ hydraulic testing, or laboratory analyses of recovered groundwater samples. A secondary objective of development is to remove waters that may have been introduced during drilling (e.g., water used as coolant during diamond coring), or that may have been impacted by drilling fluids used during drilling (e.g., mud-rotary augering).

Development Requirements

Non-dedicated down hole equipment employed during development must be cleaned using soapy water and a fresh water rinse prior to use within a well.

Development is conducted until the well yields water free of visible particulate. At a minimum, at least one borehole volume of water (defined as the initial volume of water in the well standpipe plus the volume of water in the filter pack surrounding the well) should be removed from the well during surge/purge cycles.

Where water or drilling fluids have been introduced during borehole drilling and/or monitoring well installation, development efforts should not commence until a minimum of seven calendar days have passed since the completion of borehole drilling and monitoring well installation. Alternatively, the minimum volume of water to be removed from the well during the surge/purge cycles should be calculated as the greater of:

- i. three times the volume of the water/fluids introduced (or "lost") to the subsurface during drilling; and,
- ii. one borehole volume of water (defined as the initial volume of water in the well standpipe plus the volume of water in the filter pack surrounding the well).

Under certain circumstances, development may be halted prior to achieving visibly particulate-free discharges waters and removing the required volume of water:

- If the well has been purged to a "dry" condition on three consecutive surge/purge cycles, and where the water column within the well standpipe has been permitted to recover to at least 90% of its initial height between each surge/purge cycle; or,
- If the well has been purged to a "dry" condition during surging/purging, where at least three times the volume of water/fluids introduced ("lost") to the subsurface have been removed, and where the water column within the well standpipe has not returned to at least 90% of its initial height following a recovery period of 24 hours or more; or,
- Following the removal of an "excessive" volume of water from a well that has yielded water continuously during surge/purge cycles, where "excessive" is defined as **the greater of:**
 - i. a volume exceeding three times the initial borehole volume of water (where a borehole volume is calculated as the volume of water in the well standpipe plus the volume of water in the filter pack surrounding the well);

- ii. ten times the initial volume of water in the well standpipe; and,
- iii. three times the volume of the water/fluids introduced (or "lost") to the subsurface during drilling.

The start and stop time of development, equipment used (e.g., surge block, bailer), the volume of water removed, and the rationale for ceasing development efforts (e.g., particulate-free water obtained, excessive volume of water removed) are to be recorded for each well.

Bailers and Inertial Samplers

Inertial samplers generally exert a weak "surging" action, and as a result typically require significantly more water to be purged from a well to achieve a particulate-free state.

A relatively strong surging action can be achieved using a bailer if:

- the bailer is rapidly removed from the well; and,
- the removal results in a significant instantaneous drop in the water level within the well standpipe.

This generally requires the use of an elongated bailer (e.g., a 36" nominal length rather than a 12" nominal length bailer) with an outside diameter only marginally less than the inside diameter of a well standpipe (e.g., a 1.66" nominal diameter bailer within a 2" nominal diameter monitoring well), as well as a sufficient volume of water in the well to fill or nearly fill the bailer. The well must yield a sufficient volume of water to permit particulate mobilized during the removal of the bailer to be subsequently captured as the bailer is reintroduced into the well. (Otherwise, the particular will simply settle at the bottom of the well standpipe.)

Because of their relatively weak surging action, the use of bailers and inertial samplers may result in poor development of wells that do not yield water continuously.

Surge Blocks

Surge blocks generate significant surging action and are therefore quite effective for wells that do not yield water continuously and/or that contain a significant amount of particulate (e.g., wells installed in borings advanced through bedrock).

However, surge blocks do not contribute any purging action, and must therefore be combined with a sampling or pumping device (e.g., a bailer or an inertial sampler) to remove mobilized particulate. Moreover, surge blocks generally cannot be employed within a well that has down-hole equipment installed within, necessitating the successive installation and removal of the paired sampling/pumping device. Care must be taken to ensure that neither the surge block nor the sampling/pumping device come into direct contact with the ground while they are being installed, removed, used, or otherwise manipulated.

As surge blocks are not dedicated sampling equipment, they must be cleaned using soapy water and a fresh water rinse prior to use in a well.

PRIOR TO LEAVING SITE

- Check the scope of work to ensure you have completed project objectives
- Verify the site plan accurately reflects site features and infrastructure (e.g., plan does not indicate buildings that have since been demolished, wells that have been decommissioned, etc.)
- Clean up any garbage or debris and leave the site the way you found it (or better)
- Call the project manager to ensure there is nothing else required, to summarize findings and results

UPON RETURN TO OFFICE

- Clean and sign in all equipment used
- Complete equipment and supply form
- Complete field package (place logs and photocopies of relevant field log book pages in project file folder)
- Submit any necessary revisions to site plan to drafting.

TERRAPEX STANDARD OPERATING PROCEDURE GROUNDWATER MONITORING

GENERAL NOTE

Standard Operating Procedures (SOPs) have been developed by Terrapex Environmental Ltd. to standardize protocols used during environmental assessment work programs. However, certain work programs may warrant deviations from SOPs and some clients may have specific requirements which differ from those outlined in this SOP. Any significant deviations should be discussed with and approved by the project manager. Each deviation, along with the rationale for the deviation, should be documented in the field notes, project scope and/or notes to file.

Where SOPs are appended to reports, all deviations from this SOP, along with the rationale for the deviation, must be documented in the report.

APPLICATION

These procedures are applicable to monitoring headspace vapours, depth to water, and non-aqueous phase liquid (NAPL) thicknesses within existing groundwater monitoring wells. The procedures are applicable whether such activity constitutes the whole of a work program, or part of a larger work program.

EQUIPMENT

The following list details the standard equipment necessary for groundwater monitoring. Specific sites may require additional or specialized equipment.

- ☐ Portable vapour meter (e.g., Gastech™ 1238ME), calibrated and charged
- ☐ Vapour meter field calibration kit, if applicable
- ☐ “oil/water” interface probe
- ☐ Well opening tools (e.g., hex wrench , $\frac{9}{16}$ ” socket wrench, pry bar, well keys)
- ☐ File for well notching
- ☐ bucket for washing down-hole field equipment
- ☐ detergent solution in spray bottle
- ☐ distilled/clean water in spray bottle
- ☐ field notebook
- ☐ field groundwater monitoring form (F018)

- ☐ site plan
- ☐ scope of work/field work instructions
- ☐ site-specific health and safety plan, including Job Safety Analysis and other POST™ documentation
- ☐ Personal Protective Equipment (e.g., hard hat, vest, safety glasses, respirator, steel toe boots, gloves, hearing protection)
- ☐ Camera

PREPARATION

- review scope of work with project manager
- ensure site access is confirmed
- calibrate and sign-out field equipment

SPECIAL PLANNING AND PREPARATION REQUIREMENTS

Traffic spotters should be employed when monitoring activities include wells located in the travelled portion of a roadway or in well-trafficked areas of active sites (e.g., a busy gas station). A traffic control plan in accordance with Ontario Ministry of Transportation (MTO) guidelines must be implemented for all work in road allowance.

FIELD PROCEDURES

General Instructions

Groundwater monitoring activities comprise the measurement of accumulated headspace vapours, the depth to water, the depth to the bottom of the well, and the depths to any water/NAPL interfaces detected within a well. Vapour measurements should be collected immediately upon removal of the well plug/cap to minimize venting of accumulated vapours. Accumulated headspace vapours are also to be measured within all accessible manholes and catchbasins present at the site or immediately adjacent to the site.

To minimize contamination of the interface probe and tape, well depths should not be measured if floating ("light") NAPL is encountered.

As part of the groundwater monitoring activities, each monitored well should be inspected to assess whether the well casing is intact, MOE well record tags (if present) remain attached to the well, and that the well standpipe is equipped with an appropriate plug/cap. Damage to the well or

surrounding ground surfacing should be recorded, and broken/missing plugs or caps replaced.

If the well name recorded on the well casing, outside of the well standpipe, or top of the well standpipe cap/plug has faded or smudged, a replacement identifier is to be placed. However; it is imperative that appropriate steps be taken to confirm the well identification before doing so to avoid mislabeling.

It should be noted that while groundwater monitoring may be completed on wells that have yet to be developed (refer to SOP05.00, *Monitoring Well Development*), groundwater elevation, apparent LNAPL thickness, and similar “hydraulic” data obtained from monitoring wells that have been developed (and in which conditions have returned to equilibrium) is generally more reliable; data obtained from wells pre-development should generally be discarded in favour of data obtained post-development and equilibrium recovery.

Headspace Vapour Measurements

A water trap must be used for the field vapour meter if it is available. The probe tip is to be inserted approximately 15 cm into the well or other headspace being measured, unless this would result in immersing the probe tip in water. Cover the opening as best as possible to mitigate venting of vapours and record the highest vapour level indicated on the meter within the 30 seconds of inserting the probe tip.

When utilizing Gastech 1238 ME combustible (or “hydrocarbon”) vapour meters or equivalent devices, switch to the % LEL (percentage of lower explosive limit) scale when measured vapours in exceed 500 parts per million by volume (ppm). Recognize that Gastech 1238 ME and equivalent devices are considered to have an effective detection limit of 10 ppm; readings of zero or readings less than 10 ppm are to be recorded as “< 10 ppm”.

Depth to Water and Water/NAPL Interface Measurements

Prior to use in a well, the interface probe is to be cleaned using soapy water and a fresh water rinse. The grounding clip is to be attached to the well casing or an equivalent grounding point before inserting the probe into the well.

Depths to water and any water/NAPL interfaces are to be measured relative to established measuring points (a notch on the outside of the well standpipe). Should a well lack an established measuring point, a file should be used to create a notch on the outside of the well standpoint at its highest point, and this point should be used to measure depths.

Depths are to be recorded to the gradations provided on the probe tape (typically 5 mm), or at least the nearest 0.5 cm if the tape lacks more detailed gradational markings.

If the presence of NAPL is indicated by the interface probe, depths to the interface of water and floating NAPL (LNAPL) in the well are to be determined by lowering the probe past the apparent

interface and slowly raising the probe until the presence of NAPL is indicated. For sinking NAPL (DNAPL), depths to the water/NAPL are to be determined by raising the probe above the apparent interface and slowly lowering the probe until the presence of NAPL is indicated. This approach will limit potential measurement bias associated with adherence of non-polar NAPL to the probe surface as it is raised/lowered in the well water column.

If the interface probe does not indicate the presence of floating NAPL (LNAPL), but other factors suggest LNAPL may be present (e.g., high headspace vapour readings, “sheen” on the probe, historical LNAPL findings), a clean disposable bailer should be used to recover a water sample and visually assess the possible presence of LNAPL. Such verification efforts and their findings should be documented in the field notes.

Prior to Leaving Site

- Check the scope of work to ensure you have completed project objectives
- Verify the site plan accurately reflects site features and infrastructure (e.g., plan does not indicate buildings that have since been demolished, wells that have been decommissioned, etc.)
- Clean up any garbage or debris and leave the site the way you found it (or better)
- Call the project manager to ensure there is nothing else required, to summarize findings and results, and select final lab samples

UPON RETURN TO OFFICE

- Clean and sign in all equipment used
- Complete equipment and supply form
- Complete field package (place logs and photocopies of relevant field log book pages in project file folder)
- Submit any necessary revisions to site plan to drafting.

TERRAPEX STANDARD OPERATING PROCEDURE

GROUNDWATER SAMPLING, LOW VOLUME PURGE, USING PERISTALTIC PUMP

GENERAL NOTES

Standard Operating Procedures (SOPs) have been developed by Terrapex Environmental Ltd. to standardize protocols used during environmental assessment work programs. However, certain work programs may warrant deviations from SOPs and some clients may have specific requirements which differ from those outlined in this SOP. Any significant deviations should be discussed with and approved by the project manager. Each deviation, along with the rationale for the deviation, should be documented in the field notes, project scope and/or notes to file.

Where SOPs are appended to reports, all deviations from this SOP, along with the rationale for the deviation, must be documented in the report.

APPLICATION

This SOP is applicable to the collection of groundwater samplings from developed monitoring wells using a positive displacement peristaltic pump, or “roller” pump. Procedures for well development are defined in SOP E05.00, *Monitoring Well Development*, while procedures for pre-screening (“monitoring”) of groundwater conditions are described in SOP E06.00, *Groundwater Monitoring*.

EQUIPMENT

The following list details the standard equipment necessary for groundwater sampling. Specific sites may require additional or specialized equipment.

- ☐ Portable combustible vapour meter (e.g., Gastech™ 1238ME), calibrated and charged
- ☐ Combustible vapour meter field calibration kit, if applicable
- ☐ Water level indicator or equivalent (e.g., interface probe)
- ☐ Multi-meter capable of measuring pH, conductivity, ORP/redox potential, and dissolved oxygen
- ☐ Flow-through cell
- ☐ Variable-speed Peristaltic Pump
- ☐ Equipment cleaning/decontamination supplies (spray bottle with detergent solution, spray bottle with distilled/potable-grade water, paper towels)

- ☐ Well opening tools (hex keys, brass key, socket wrench, screwdriver, pry bar, well key)
- ☐ Turkey baster or other equipment to purge or bail accumulated water within protective casings
- ☐ File for well “notching”
- ☐ bucket with volume markings
- ☐ laboratory-supplied sampling containers appropriate for contaminants of concern
- ☐ cooler with ice
- ☐ laboratory chain of custody forms
- ☐ field notebook
- ☐ well sampling form (F028)
- ☐ site plan
- ☐ scope of work/field work instructions
- ☐ site-specific health and safety plan, including Job Safety Analysis and other POST™ documentation
- ☐ Personal Protective Equipment (hard hat, vest, safety glasses, respirator, steel toe boots, gloves, hearing protection)
- ☐ Camera
- ☐ Measuring wheel or similar device

PLANNING

- review scope of work and well locations with project manager
- ensure site access is confirmed
- calibrate and sign-out field equipment

SPECIAL PLANNING AND PREPARATION REQUIREMENTS

Traffic control and, flag persons, and/or spotters should be employed when groundwater sampling activities include wells within a road allowance, or in high-traffic areas of a site (e.g., an operating retail fuel outlet). Traffic control plans must correspond to Ontario Ministry of Transportation guidelines/requirements.

Groundwater samples should not be collected from wells that have not been developed (refer to SOP E05.00, *Monitoring Well Development*).

Care should be taken when handling sampling containers pre-charged with sample preservative for safety reasons (they are generally acids), and so that preservative is not inadvertently lost.

NOMENCLATURE

Groundwater samples are assigned names that correspond to the well from which the sample was collected (e.g., sample name “MW110A” is assigned to the sample recovered from monitoring well MW110A).

FIELD PROCEDURES

Prior to use, the peristaltic pump is to be outfitted with new silicone tubing for the sampling mechanism, and any non-dedicated equipment is to be cleaned using soapy water and a fresh water rinse. New and/or dedicated tubing is to be employed to draw water into and out from the pump.

To mitigate potential cross-contamination:

- always don fresh latex/nitrile gloves for each sample collection;
- do not allow the sampling equipment to touch sample bottles (preservatives from one bottle may be a “contaminant” for another bottle)
- use dedicated sampling equipment to the maximum extent possible;
- decontaminate non-dedicated monitoring equipment between samples; and,
- Wells should be sampled beginning with “least” impacted and progressing to the “most” impacted wells to minimize cross-contamination potential. The determination of relative impact should be made using information obtained during pre-sampling monitoring, previous monitoring/sampling events, site assessment results, or similar data.

Discharge waters are to be inspected to assess for the possibility of contamination of the samplers (e.g., the presence of odours in discharged waters where none had been observed during previous samplings).

Purging

For a well that is screened across the water table, set the pump intake approximately 0.5 m below the initial static water surface level. Otherwise, set the pump intake at the approximate midpoint of the screened interval.

Water is to be purged from the well at a rate between 0.1 to 0.5 L/min. (0.1 L/min = 500 mL in 5 minutes and 0.5 L/min = 2.5 L in 5 minutes). If the pump does not have a flow meter, check the flow rate by pumping into a container of known volume and record the time to fill it. Do not use the flow-through cell to check flow rate.

Water levels should be monitored to ensure that excessive drawdown does not occur within the well (the height of the water column in the well does not drop by more than 25% during purging). To the extent possible, the pump flow rate should be adjusted to maintain a constant water level within the well during purging.

Geochemical parameters should be measured using the multi-meter and flow-through cell assembly approximately every 3 to 5 minutes.

Purging is considered complete once the monitored parameters have “stabilized” for a minimum of three consecutive readings (parameters are within the ranges shown below of the previous reading). It is not necessary to wait for groundwater levels in the well to recover before recovering samples for laboratory analysis.

Note that dissolved oxygen may not stabilize in all situations; if all parameters other than dissolved oxygen have stabilized for a minimum of five consecutive readings, purging may be considered complete.

Geochemical stabilization Requirements

pH units	+/-0.2
Conductivity	+/-3%
ORP/redox	+/-20 mV
Dissolved Oxygen	+/-0.2 mg/L

(Source: ASTM Standard D6771)

It is not necessary to wait for groundwater levels in the well to recover before recovering samples for laboratory analysis.

Alternative Purging Criteria

Purging may cease once three times the initial volume of water in the well has been removed, regardless of whether the monitored parameters have stabilized, and groundwater samples may be collected. It is not necessary to wait for groundwater levels in the well to recover before recovering samples for laboratory analysis. The reason for ceasing purging should be recorded.

(Well volumes are calculated on the basis of the well standpipe; the volume of any water in the sand pack surrounding the well screen is not included in the calculation of the initial volume of

water. For a 2 inch (50 mm) nominal diameter well, one well volume is approximately equal to 2 L per metre of standing water.)

If excessive drawdown cannot be avoided during purging (i.e., the water column height in the well drops more than 25%, even at a purge rate of 0.1 L/min), the well should be purged until a minimum of three times the initial volume of water in the wells has been removed. The well should then be permitted to recover; purging will be considered complete once the well has recovered such that the volume of water in the well is at least 50% of its initial volume.

If the well does not yield three volumes of water (e.g., the well is purged “dry”), the well should be allowed to recover so that the volume of water in the well is at least 50% of its initial volume, and then purged “dry” once more. The well should then be permitted to recover again; purging will be considered complete once the well has recovered such that the volume of water in the well is at least 50% of its initial volume.

Volumes purged, points at which the well went “dry” (if applicable), and well recovery (water height) are to be recorded.

Sampling

Wells are to be sampled immediately following purging (and recovery, if applicable). Sampling is to be completed by disconnecting the flow-through cell and adjusting the pump flow rate to collect groundwater samples into standard laboratory supplied containers for analysis at a steady rate, and under laminar (not turbulent) flow conditions.

Where more than one sampling container is required, filling should be conducted concurrently, alternating filling so that the containers contain the same “mix” of water (e.g., avoid filling bottles sequentially). Turbulent flow conditions should be avoided to minimize loss of volatile or semi-volatile parameters. Vials and bottles should be filled until a convex water surface occurs at the top of the vial or bottle, and the cap carefully placed on the sampling container.

Vials filed for testing of volatile compounds should be inverted (turned upside down) to examine for the presence of air bubbles. If significant bubbles are present, the cap should be removed and additional water added. When using sampling vials pre-charged with sample preservative, no more than two additional attempts to remove excessive bubbles through the addition of extra water are to be made; if after the second attempt significant bubble remain in the sample, the vial should be discarded and another vial filled to mitigate unacceptable preservative loss/dilution in the sample.

Always be aware of the preservatives in the bottles, for safety reasons (they are generally acids) and so that you do not inadvertently wash them out.

To mitigate potential cross-contamination:

- always don fresh latex/nitrile gloves for each sample collection;
- do not allow the sampling equipment to touch sample bottles (preservatives from one bottle may be a “contaminant” for another bottle)
- use dedicated sampling equipment to the maximum extent possible;
- decontaminate non-dedicated monitoring equipment between samples; and,
- Wells should be sampled beginning with “least” impacted and progressing to the “most” impacted wells to minimize cross-contamination potential. The determination of relative impact should be made using information obtained during pre-sampling monitoring, previous monitoring/sampling events, site assessment results, or similar data.

Recovered samples are to be placed in a closed cooler with ice immediately after collection, and maintained in a secure environment to prevent accidental or deliberate tampering.

Field Filtering

Groundwater samples collected for analyses of metallic parameters (including hydride metals, hexavalent chromium, and mercury, but excluding methyl mercury) are to be field filtered during sample collection using dedicated 0.45 µm in-line filters. Groundwater samples for other analyses, including inorganic analyses, are not to be field filtered.

The purpose of filtering groundwater samples for metals analysis is to remove particulate before acidifying the water, so that the acid does not extract metals contained within the particulate.

Each filter is to be fitted to the discharge point of the inertial foot-valve during purging such that a minimum volume of water equal to three times the volume of the filter passes through the filter before sampling containers are filled. In-line filters cannot be re-used. A new filter is required for each well, and each sampling event.

Submission to contract laboratory

All samples are to be packed in coolers with loose ice and appropriate packing materials to mitigate potential breakage during shipment to the contract laboratory. All shipments must be accompanied by completed and signed Chain of Custody form placed inside the cooler. The date and time for each sample recovery is to be recorded on the Chain of Custody.

Each cooler is to be secured with Custody Seals affixed in such a fashion that the cooler may not be opened without breaking one or more of the Custody Seals. Samples are to be delivered to the laboratory within 48 hours of collection.

QUALITY ASSURANCE / QUALITY CONTROL SAMPLES

QA/QC sample requirements are specified in SOP E12.00, *Laboratory analysis Quality Assurance & Quality Control*.

FIELD DOCUMENTATION

Groundwater sampling should be recorded on the Low Flow Purging and Sampling field form. The form must be filled out completely, and dates should be recorded such that the month, day, and year of the sampling event is unambiguous (e.g., use Feb. 3, 2011, rather than 03/02/11).

Any irregularities or conditions suggestive of possible bias observed during sampling (e.g., sediment within recovered groundwater samples) should be recorded on the form.

TERRAPEX STANDARD OPERATING PROCEDURE REMEDIAL EXCAVATIONS

GENERAL NOTES

Standard Operating Procedures (SOPs) have been developed by Terrapex Environmental Ltd. to standardize protocols used during environmental assessment work programs. However, certain work programs may warrant deviations from SOPs and some clients may have specific requirements which differ from those outlined in this SOP. Any significant deviations should be discussed with and approved by the project manager. Each deviation, along with the rationale for the deviation, should be documented in the field notes, project scope and/or notes to file.

Where SOPs are appended to reports, all deviations from this SOP, along with the rationale for the deviation, must be documented in the report.

APPLICATION

This SOP is applicable to the collection of soil samples from the walls and base(s) of completed excavations for environmental site assessment purposes. The SOP is applicable to both remedial excavation work programs, as well as the evaluation of soil conditions immediately following the removal of one or more underground storage tanks (USTs) and/or similar buried infrastructure.

The SOP is applicable whether such activity constitutes the whole of a work program, or part of a larger work program.

EQUIPMENT

The following list details the standard equipment necessary for excavation of test pits. Specific sites may require additional or specialized equipment.

- ☐ Portable vapour meter (e.g., Gastech™ 1238ME), calibrated and charged
- ☐ Vapour meter field calibration kit, if applicable
- ☐ tape measure with weighted end
- ☐ trowel or knife for sampling from bucket
- ☐ sampling equipment (gloves, bags, permanent marker)
- ☐ laboratory-supplied sampling jars appropriate for contaminants of concern

- ☐ cooler with ice
- ☐ laboratory chain of custody forms
- ☐ field notebook
- ☐ field test pit logs (F027)
- ☐ site plan
- ☐ scope of work/field work instructions
- ☐ site-specific health and safety plan, including Job Safety Analysis and other POST™ documentation
- ☐ Personal Protective Equipment (e.g., hard hat, vest, safety glasses, respirator, steel toe boots, gloves, hearing protection)
- ☐ Camera
- ☐ Measuring wheel or similar device

PREPARATION

- consult site plans, previous reports, site operator, or client for locations of the following:
 - USTs and ASTs
 - pump islands, distribution piping, vent lines
 - estimated areas of impacts (previous reports)
 - permanent structures
 - utilities of concern including overhead and buried hazards
 - ground cover (will concrete, pavement require disposal)
 - historical structures such as buildings or tanks
 - property boundaries (review legal survey if available).
- establish potential areas on-site for:
 - stockpiling soil
 - loading trucks
 - access for vacuum trucks, if required
 - technician work area
- determine the optimum area to begin excavating, given the above considerations and the number of areas to be excavated.
- consider whether groundwater will be a problem (consult previous reports for water levels, monitor existing wells, if present)
- establish a water management plan and discuss with the client; this may include permits to discharge to a municipal sewer system, some sort of treatment system, or dewatering by vacuum truck

- obtain any necessary permits or waste generator numbers (if pumping residual material from tanks or the excavation is required)
- determine whether a sample has been submitted for leachate toxicity testing for soil disposal purposes and whether this will be required prior to or during excavation
- consider whether a geotechnical consultant or geotechnical measures will be necessary for the project due to the depth of the excavation, proximity to buildings or for compaction testing
- review the results of previous investigations to determine appropriate remediation standards and any field screening objectives (e.g., vapour readings and/or visual and olfactory observations) that are likely to meet the remedial objectives

SPECIAL PLANNING AND PREPARATION REQUIREMENTS

Above ground and underground utilities and other services within the assessment area are to be located and identified in the field prior to drilling. Where appropriate, a private locating contractor should also be retained to identify secondary services such as yard lights, internal computer/communication lines, etc. and clear proposed test pit locations. All exclusions or conditions attached to utility service locates (e.g. notification requirements, “hand dig only” areas) are to be strictly adhered to.

If the excavation contractor is responsible for utility locates, ensure that the locates are reviewed at the kick-off safety meeting, prior to beginning work. Ensure that the locates marked on the ground match those on the sheets and that the locates are still valid. **If there is any question regarding the quality of locates, the excavation should be postponed until this uncertainty is addressed and digging can be conducted safely.**

FACILITY REMOVAL

If facilities have not been removed prior to arrival on-site, the location and condition of any tanks, lines, separators, hoists, or other equipment should be documented prior to, during, and after removal. The size and construction of the equipment should be documented, including information on any identification tags, such as tank volume and age. Equipment should be examined for any signs of corrosion, pitting or perforations. Photos of equipment should be taken.

If USTs or ASTs are removed, they should be pumped of any residual liquid by the contractor and evacuated of any explosive vapours. USTs should be rendered unfit for re-use prior to disposal.

Haulers and disposal destinations for all equipment removed from the site, and for all wastes removed as part of equipment removal/decommissioning, should be documented.

Following removal of equipment, subsurface conditions should be documented, including evidence of any leaks, any staining, or any fill (such as industrial slag, construction debris, etc.). The depth and location of the former equipment should be documented on a scaled site plan.

EXCAVATION AND FIELD SCREENING

During excavation activities, excavated material should be examined at frequent intervals. The use of contaminant indicators such as visual staining, soil type, vapours, or odour may be used to direct the excavation. Excavated materials should be segregated into material which is likely impacted and material which is likely suitable for re-use as backfill. Additional stockpiles, such as material which is marginal, based on field screening, may be required. If prior analytical data is not available (e.g., from a Phase II ESA), submission of a few soil samples representative of various material quality may be useful in determining field screening objectives.

Documentation of stratigraphy, including soil type, moisture, CSV concentrations and evidence of impact should be completed throughout excavation activities. Vapour screening samples may even be collected as stockpiles are generated and worst-case samples jarred for analysis. Further details of stockpile sampling are discussed in later sections.

The excavation should be extended until field objectives are met, or until further excavation is not possible due to the presence of utilities or the property boundary.

If re-sampling is required due to a failure of verification samples, first determine the exact location of the failure. CSV concentrations in the area surrounding the failure may need to be collected as a result of additional excavation. A new “worst-case” sample should be submitted from the vicinity of the re-excavated area but may not necessarily be from the same grid area as the original sample. Keep in mind that additional wall samples may be required as the excavation is extended vertically.

VERIFICATION SAMPLING – EXCAVATIONS

A verification sampling program is conducted to assess whether the remedial work program has been completed and that all contaminated material has been removed. Where material is being excavated to remediate localized contamination, such as surrounding a UST or a known area of impacted soil, material should be excavated until the verification sampling shows that the quality of the remaining material meets the remediation targets. In some cases, re-excavation of areas not meeting the applicable remediation standards may be required.

Excavation floors are to be sub-divided into 3 m x 3 m grid areas, with a minimum of one screening sample obtained from the centre of each 9 m² grid area. The 3 m grid subdivisions should also be applied to horizontal grids comprising excavation walls, with samples collected at vertical (depth) intervals no greater than 1.5 m, with 3 m spacings horizontally. Vertical spacings should be staggered to ensure adequate coverage of excavation side walls (e.g., the first vertical line of samples collected at 0.5 m depth, then 2.0 m depth, and 3.5 m depth; the second vertical line of samples collected at 1.0 m depth, 2.5 m depth, and 4.0 m depth).

Additional screening samples are required if the vertical or horizontal grid area includes distinctly different soil horizons or layers, such that one screening sample is collected from each horizon within the each grid area. To mitigate sampling bias associated with the loss of volatile constituents within soil samples that have been exposed for extended periods, samples should be collected immediately upon exposure of the wall or floor face, or from a depth of at least 10 cm below the excavation wall or floor.

The soil samples should be collected manually from the bucket of the excavator using a clean stainless steel trowel and/or fresh latex or nitrile gloves, and immediately placed in sample bags for CSV monitoring (refer to SOP E09.00, *Soil Sample Handling*).

Sampling locations from the excavation should be recorded on the basis of X, Y, and Z coordinates, where X and Y represent horizontal grid distances from an established benchmark along defined X and Y axes; and Z represents the depth of the sample relative to “ground surface” (or an equivalent plane, should the excavation area include significant topographic relief). Sampling locations should be either recorded using the coordinate system described above, or graphically (i.e., by position on scaled site drawing that includes the X and Y axes, accompanied by a notation indicating sampling depth).

Laboratory analytical requirements for the final walls and floors of excavations are summarized in Table 1. Note that the specified number of laboratory analyses is applicable for EACH contaminant of concern at the site.

It should be noted that the minimum laboratory requirements outlined in Table 1 assume consistent stratigraphy and floor depth across the excavation. Where the excavation comprises distinctly different soil horizons or layers, the minimum sidewall samples specified in Table 1 are applicable to EACH horizon. Where an excavation comprises two significantly different depths, each depth horizon should be considered as a separate floor (e.g., a 50 m² excavation that comprises 25 m² excavated to 1.5 m depth and 25 m² excavated to 3.5 m depth should have a minimum of 2 soil samples submitted for laboratory analyses from each depth), and any internal walls between varying depths must be included as part of the total excavation wall count.

Table 1 Minimum Soil Sample Laboratory Analytical Requirements for Excavations¹

Floor Area (m ²)	Floor Samples	Sidewall Samples ^{2,3}
< 25	2	2
> 25 to 50	2	3
> 50 to 100	3	3
> 100 to 250	3	5
>250 to 500	4	6
> 500 to 750	4	7
> 750 to 1,000	5	8

Notes:

- ¹ Sampling locations for laboratory analyses should represent nominal “worst-case” conditions and should be selected to provide areal and vertical representation from the entirety of the excavation (e.g., sidewall samples should not all be taken from the same wall).
- ² Additional sidewall samples are required for excavation pits greater than 4 m; the revised minimum samples should be calculated on a prorated basis to 4 m depth, rounding up to the next whole number; e.g., an excavation pit of 110 m² floor area and 5.0 m total depth (normally a minimum of 5 sidewall samples) should have $\frac{5}{4} \times 5 = 6.25$, or 7 sidewall samples.
- ³ Where excavations are being undertaken for the purposes of removing contaminated soils (e.g., site remediation), at least one sample from each wall of the excavation is to be submitted for laboratory analyses, even if this results in a greater number of sidewall samples than the minimum number listed in the table.

The selection of “worst-case” conditions should be made on the basis of field screening results (CSV or other vapour readings, visual and olfactory observations), and known or established areas/depths of particular concern, and to achieve adequate areal and vertical coverage of the excavation.

VERIFICATION SAMPLING – STOCKPILES

Sampling requirements for stockpiles of material originating at the site (e.g., segregated for possible re-use as backfill) are specified in Table 2. Note that the specified number of laboratory analyses is applicable for EACH contaminant of concern at the site.

Ideally, stockpiles can be screened while material is being excavated for placement in a stockpile, or while piles are being moved, such that the pile may be sampled in lifts. However, where samples must be collected from existing stockpiles, samples should be collected from interior areas of the stockpile, where losses of volatile components are less likely, and over from locations over the entire soil pile.

Table 2 Minimum Soil Sampling Requirements for Stockpiles¹

Pile Volume (m ³)	Screening Samples	Laboratory Analyses
< 50	5	1
> 50 to 150	15	3
> 150 to 500	30	5
> 500 to 1,500	50	10
> 1,500 to 2,000	75	15

Notes:

- ¹ A maximum stockpile size of 2,000 m³ should be established. Stockpiles greater than this volume should be subdivided into one or more smaller stockpiles for sampling purposes.

VERIFICATION SAMPLING – IMPORTED SOIL

Sampling requirements for soil imported to the site for use as backfill are specified in Table 3. Note that the specified number of laboratory analyses is applicable for EACH contaminant of concern associated with the originating location of the imported soil. In addition, the chemical parameters listed in Table 4 are to be considered contaminants of concern at EVERY originating location of imported soil.

A minimum of one sample per 1,500 m³ of imported soil should also be submitted for laboratory analyses of any contaminants of concern at the site that are not also contaminants of concern at the originating location of imported soil.

For soils obtained from a commercial supplier (i.e., sourced from a pit or quarry operating under a “site plan”, or license, issued under the *Aggregate Resources Act*), contaminants of concern are generally restricted to the chemical parameters listed in Table 4.

Table 3 Minimum Soil Sampling Requirements for Imported Soil (Backfill)¹

Cumulative Volume	Screening Samples ²	Laboratory Analyses
Up to 5,000 m ³	n/a	1 per every 150 m ³
above 5,000 m ³	n/a	1 per every 300 m ³

Notes:

- ¹ If multiple originating locations apply, indicated requirements apply to each originating location
- ² Although there are no established minimum screening sample requirements, importation should be monitored on a full time basis, with visual QA/QC checks made of each load of imported soil so that any changes to the type or apparent environmental quality of imported soil may be readily identified.

Table 4 Minimum Contaminants of Concern for Laboratory Analyses of Imported Soil (Backfill)

Parameters		
Antimony	Copper	Silver
Arsenic	Lead	Thallium
Beryllium	Mercury	Uranium
Cadmium	Molybdenum	Vanadium
Chromium (total)	Nickel	Zinc
Cobalt	Selenium	

SAMPLE NOMENCLATURE

Screening samples from the floors or walls of an excavation should be uniquely numbered on a sequential basis, and prefaced by “CS”. The first sample from the initial excavation should be “CS1”, with subsequent samples from this excavation identified as “CS2”, “CS3”, etc. Additional excavations would begin by advancing the starting count by 1000 (e.g., the first soil samples from the second and third excavations would be “CS1001” and “CS2001”, respectively).

The location of samples will be determined from an accompanying diagram and field documentation, discussed further in the Field Documentation Section. Additional location identifiers (e.g. “FLR” or other prefixes/suffixes) should NOT be used in the sample name.

Screening samples from soil stockpiled for potential re-use onsite as backfill s should be uniquely numbered on a sequential basis, and prefaced by “SP”. The first sample from the initial stockpile should be “SP101”, with subsequent samples from this stock pile identified as “SP102”, “SP103”, etc. Additional soil stockpiles would begin with the next 100 starting count (e.g., the first soil samples from the second and third stockpiles would be “SP201” and “SP301”, respectively).

Samples of soil imported to the site that are collected for laboratory analyses should be uniquely numbered on a sequential basis, and prefaced by “GS”. The first sample from the initial originating location of imported soil should be “GS1”, with subsequent samples identified as “GS2”, “GS3”, etc. Samples of soil imported to the site from a differing originating location would begin with the next 1000 starting count (e.g., the first soil sample for imported soil from the second originating location would be “GS1001”).

All alphabetical prefixes should be written in capital letters.

FIELD DOCUMENTATION

Use the Terrapex field form F029 as a guide for what your notes should contain. You should be capable of completing this form fully at the end of the excavation. Your field notes should be completed daily and should contain a description of daily activities including the following:

-
- the job number, date and your initials (each page)
- general work conducted at the site e.g., areas excavated stockpiles sampled
- a description of any unusual conditions
- any other activities at the site
- any visitors to the site such as clients, regulatory agencies etc.
- equipment used at the site (excavator, trucks etc.); this is especially important if Terrapex is responsible for tracking contractor costs;
- soil or liquid waste removed from the site including the name of the hauler and receiver
- the duration you and any contractors were present at the site

The Excavation Sampling Form should be completed as the excavation progresses to document sample location and whether samples have been re-excavated as a result of a failure to meet remediation standards.

Always fill in every field of the top portion of the form completely.

A drawing of the excavation area must be updated daily to indicate the extent of the excavation and to aid in interpreting the Excavation Sampling Form. Daily documentation must be sufficient to allow another person to take over the project with full understanding of the work completed to date.

At a minimum, these requirements include:

- job #
- date
- technician's initials
- direction arrow
- excavation limits with respect to reference point
- scale
- to-scale sketch of excavation floors (plan view)
- sketch of excavation walls (view facing walls; typically not to)

- sample names
- vapour concentrations
- indication of lab submissions (circle)
- location of any stockpiles, if applicable

A running total of the following is also to be maintained on a daily basis:

- total number of samples submitted for laboratory analyses during project
- total number of truck load shipped off-site during project
- total estimated volume/mass of stockpiled soil segregated for re-use
- total number of Terrapex hours spent on-site

TERRAPEX STANDARD OPERATING PROCEDURE

SOIL SAMPLE HANDLING

GENERAL NOTE

Standard Operating Procedures (SOPs) have been developed by Terrapex Environmental Ltd. to standardize protocols used during environmental assessment work programs. However, certain work programs may warrant deviations from SOPs and some clients may have specific requirements which differ from those outlined in this SOP. Any significant deviations should be discussed with and approved by the project manager. Each deviation, along with the rationale for the deviation, should be documented in the field notes, project scope and/or notes to file.

Where SOPs are appended to reports, all deviations from this SOP, along with the rationale for the deviation, must be documented in the report.

APPLICATION

These procedures are applicable to intrusive investigations involving the collection of soil samples for the purposes of environmental assessment. The SOP is also applicable to work programs that involve the collection of samples of materials that are not technically soil, but which are soil-like, including sediments, regolith, and engineered granular materials.

It should be noted that this SOP addresses general requirements related to soil sample handling (e.g., once a sample has been recovered). Specific requirements related to sample collection methodology, including sample nomenclature and documentation, are provided in SOPs related to these sampling approaches. Additional information relating to sample description and quality assurance and quality control requirements for soil sampling programs are provided in SOPs E10.00 (*Soil Classification*) and E12.00 (*Field Program Quality Assurance & Quality Control*), respectively.

EQUIPMENT

The following list details standard equipment used in the sampling of soil or soil-like materials. Specific sites may require additional or specialized equipment.

- ☐ Gastech™ 1238ME, calibrated and charged
- ☐ Gastech™ field calibration kit, if applicable
- ☐ tape measure (preferably weighted flexible tape)
- ☐ trowel or knife for sampling from bucket

- ☐ sampling equipment (gloves, bags, permanent marker)
- ☐ laboratory-supplied sampling jars appropriate for contaminants of concern
- ☐ laboratory chain of custody forms
- ☐ field notebook
- ☐ site plan
- ☐ Sampling Plan (scope of work/field work instructions)
- ☐ site-specific health and safety plan
- ☐ Personal Protective Equipment (hard hat, vest, safety glasses, respirator, steel toe boots)
- ☐ camera

SPECIAL PLANNING AND PREPARATION REQUIREMENTS

Above ground and underground utilities and other services within the assessment area are to be located and identified in the field prior to intrusive sampling. Where appropriate, a private locating contractor should also be retained to identify secondary services such as yard lights, internal computer/communication lines, etc. and clear proposed sampling locations. All exclusions or conditions attached to utility service locates (e.g. notification requirements, “hand dig only” areas) are to be strictly adhered to.

Requirements outlined in the SOP specific to the sampling methodology are to be adopted during sample collection. To mitigate potential cross contamination, new disposable gloves are to be donned for the collection / handling of each sample, and any non-dedicated sampling equipment washed and rinsed prior to use.

Recovered samples should be identified using the nomenclature requirements outlined in the SOP specific to the sampling methodology. Available information relating to previous intrusive sampling programs at the site (including those by parties other than Terrapex) should be reviewed to ensure that sample identifications employed during the work program are unique; in some instances this may require advancing standard Terrapex sampling counts to address sampling identifications used by third parties during earlier investigations (e.g., if another consultant has already advanced boreholes identified as BH1 through BH10, the first round of Terrapex boreholes should begin at BH101, even though this is normally the count for the second round of Terrapex boreholes).

DISCRETE SAMPLES

Recovered samples are to be split into two portions; one portion is to be placed in a clear sealable sampling bag for field logging and screening, while the second portion is to be retained for possible laboratory analyses.

Portions for (Possible) Laboratory Analyses

If contaminants of concern / potential contaminants of concern for the sampling program include volatile constituents (see below for a detailed list of these parameters), the portion of the sample for possible volatile laboratory analyses is to be collected using a hermetically sealed sampling device (e.g., En Core Samplers) or placed directly into laboratory-supplied sampling containers pre-charged with sample preservative.

Samples (or portions of samples) for other analyses should either be placed directly into laboratory-supplied sampling containers appropriate for the intended/potential analyses, or should be placed in a second sealable sampling bag (i.e., a sampling bag other than the bag in which the portion for field screening and logging was placed) without headspace for subsequent transfer to laboratory-supplied sampling containers once samples for laboratory analyses have been selected).

If it is possible to accurately return to the sampling location, it is also acceptable for initial sampling to be completed for field screening and logging purposes only, with the portion of the sample for laboratory analyses recovered at a later time. In such an instance, samples for laboratory analyses are to be collected directly into laboratory-supplied sampling containers. This approach is generally only applicable during the collection of samples from open excavations (remedial excavation work programs, tank removals, etc.).

From a purely technical perspective, the preference for sample collection methodologies (from most preferred to least preferred) is:

1. Collection directly into laboratory-supplied sampling containers concurrently with collection of the portion of the sample for field screening and logging.
2. Sampling for field screening and logging only, and returning to the sampling location at a later time to sample for the purposes of laboratory analyses.
3. Collection into sealable sampling bags concurrently with collection of the portion of the sample for field screening and logging.

To the extent practicable during the work program, the technical preference outlined above should be adhered to. The sampling methodology employed for each sample should be recorded in the field notes, and included as part of the report documenting the work program.

It should be noted that the third approach identified above is not acceptable and should not be used for samples involving volatile constituents. Further, if the third approach is selected the sampling bags should be managed while in temporary storage as would any other sample (refer to SOP E12.00, *Field Program Quality Assurance & Quality Control*), and should not be manipulated or otherwise disturbed until the bag contents are to be transferred to laboratory-supplied sampling containers for submission to the contract laboratory. When

transferring the sample from the sampling bag to the laboratory-supplied sampling containers, efforts should be made to select portions of the sample from the interior of the bag (i.e., not in contact with the sides of the bag) and avoid undue manipulation of the sample.

Sample submissions to the contract laboratory should NOT be prepared using material placed in the sampling bag for field logging and screening (see below), as this activity involves significant manipulation of the recovered sample.

Field Screening and Logging

Logging is the process by which individual samples are recorded (documented). Logging also includes classifying / describing the sample for the purposes of determining overall site stratigraphy.

Samples are to be logged using the appropriate field form (refer to the SOP specific to the sampling methodology), and classified / described as per SOP E10.00, *Soil Classification*.

Detailed examination and logging of samples requires some time, and is often completed at the conclusion of sampling activities. This practice is acceptable, but any information relating to structural or similar details (e.g., bedding, orientation of clasts within soil matrix) likely to be lost during movement of the bag and/or manipulation of the sample during field screening will need to be logged immediately at the time of sample collection.

Field screening is the process by which samples are qualitatively assessed for evidence of chemical impact, often to assist in the selection of samples for quantitative chemical testing by a contract laboratory. As field screening information is often gathered concurrently with field logging of recovered samples and is recorded on field logs, the distinction between field logging and field screening is subtle.

The components of field screening include:

- Measurements of vapours within the headspace of the sealable sampling bag containing the portion of the soil sample for field screening and logging (sometimes referred to combustible soil vapour measurements or CSV measurement);
- Examination of the sample for visual evidence of possible chemical impact (e.g., staining, presence of debris or other inclusions); and,
- Examination of the sample for olfactory evidence of possible chemical impact; and,
- Evaluation of the sampling location (both horizontally and vertically) with respect to the conceptual site model (e.g., proximity to underground storage tanks or other areas of potential environmental concern, relative positioning to the groundwater table or other contaminant fate and transport factors).

Typically, the selection of soil samples for laboratory analyses will be based on the results of the field screening process. On occasion, samples may also be selected to address specific work program objectives (e.g., duplication of previous results, re-evaluation of specific sampling locations), regardless of field screening results, however, field screening of recovered samples is still to be completed in such instances.

Procedures for measuring headspace vapours within the sealable sampling bag are described below.

Observations regarding visual and/or olfactory evidence of possible chemical impact are to be recorded in the sampling log. Where staining is present, describe both the apparent colour and the distribution of the staining (e.g., throughout the soil matrix, or within fractures). Odours are described using NONE, SLIGHT, MODERATE or STRONG, along with a description of the type of odour (e.g., hydrocarbon, organic, etc.).

DUPLICATE SAMPLES

A field duplicate is a second sample concurrently collected from the same location as another sample and submitted for duplicated analyses to provide quality assurance information during sampling programs (refer to SOP E12.00, *Field Program Quality Assurance & Quality Control*).

Field duplicate samples should be recorded in the field notes using their assigned sample nomenclature, along with their corresponding sampling pair. When possible, sample duplicates should be subjected to field screening and logging procedures, although limited sample volume may occasionally preclude such efforts.

COMPOSITE SAMPLES

Composite samples are 'prepared' samples; that is they are created by Terrapex out of two or more discrete samples. Composite samples may only be prepared using samples collected from the same depth, and that are located within a single 2 m horizontal radius.

Composite samples should be prepared by placing approximately equal volumes of each contributing discrete sample in a stainless steel bowl and blending the samples together such that the individual samples can no longer be visually distinguished from one another. It should be noted that compositing cohesive soils or very dense cohesionless soils may be impracticable at some sites.

The composite sample should be recorded in the field notes (e.g., on the sampling log), noting each of the contributing discrete samples incorporated within, with the time and date of the composite “sampling” being that when the sample was created. Composite soil samples are NOT to be classified per SOP E10.00, *Soil Classification.*, nor are they subject to the field screening procedures applicable to discrete soil samples.

Composite soil samples should not be submitted for laboratory analyses other than metallic (with the exception of mercury and methyl mercury, which are volatile parameters) or general chemistry (inorganic) parameters.

SPECIAL CONSIDERATIONS, SAMPLES FOR ANALYSES OF VOLATILE CONSTITUENTS

To minimize potential losses through off-gassing, soil samples for analyses or potential analyses of volatile constituents are subject to special handling requirements as outlined in Table 1, below..

Table 1 Soil Sampling Requirements, Analyses for Volatile Constituents

Parameter(s)	Notes
Mercury, Methyl Mercury	Samples to be packaged in glass, high density polyethylene (HDPE), or polyethylene terephthalate (PET) container without headspace. Note that it is not necessary to prepare additional sampling containers for mercury and/or methyl mercury analyses if analyses of other metallic compounds are also being completed for the sample.
Volatile Organic Compounds (VOCs)	Samples are to be collected using hermetically sealed sampling device (e.g., En Core Samplers) and submitted to the laboratory for receipt within 36 hours of sample collection; OR, Each sample is to be placed into sampling containers pre-charged with methanol preservative (note that a second container may be required by the laboratory to facilitate laboratory QA/QC; verify requirements with the contract laboratory). The methanol-preserved samples must be accompanied by a portion of the sample placed in a glass jar to permit moisture content determination.
Bromomethane (also known as methyl bromide)	Where the collection of soil samples employ methanol preservative and where bromomethane is a contaminant of concern, a separate sample (collected either using a hermetically sealed sampling device, or collected into a container pre-charged with sodium bisulphate solution preservative) may be required to achieve appropriate detection limits.

Parameter(s)	Notes
Trihalomethanes (THMs)	THMs are technically VOCs, but since they are primarily related to chlorination of drinking water they may also be considered separately. Requirements for general VOCs apply to THMs. Note that it is not necessary to prepare additional sampling containers for THMs if general VOC analyses are also being completed for the sample.
1,4-Dioxane	1,4-Dioxane is typically an additional analysis to a general VOC analyses, or an additional analysis to an analyses of acid/base/neutral compounds. It is not necessary to collect additional sampling containers when 1,4-Dioxane analyses is to be completed. When collected as an addition to acid/base/neutral compound analyses, the sampling requirements of that analysis apply. When completed as an addition to general VOCs analyses, the sampling requirements for general VOCs apply. When a soil sample is collected specifically for analysis or potential analysis of 1,4-Dioxane (e.g., and not also for analyses of VOCs or acid/base/neutral compounds), the requirements for general VOCs apply (see above).
Benzene, Toluene, Ethylbenzene, and Xylenes (BTEX)	BTEX can be determined as part of a general VOC analyses, or as a targeted analyses only for these parameters (typically in combination with the F1 parameter and accompanied by samples for analyses of the F2 to F4 parameters). When soil samples are being collected specifically for analyses or potential analyses of BTEX, the requirements for general VOCs apply (see above).
F1 Petroleum Hydrocarbon (PHC) parameter	Requirements for general VOCs apply to the F1 parameter. Note that it is not necessary to prepare additional sampling containers analysis of F1 if BTEX or general VOC analyses are also being completed for the sample.
F2 to F4 PHC parameters (includes gravimetric determination of F4 parameter)	Samples to be packaged in glass jar without headspace and sealed using polytetrafluoroethylene (PTFE, or "Teflon") lined cap.

HEADSPACE VAPOUR SCREENING

Headspace vapour screening is completed using portable gas monitoring devices (or meters), with the most common devices being catalytic bead combustible gas meters (e.g., Gastech 1238 ME, RKI Eagle, RKI NP-204) and photo ionization detectors (PIDs).

The selection of the specific gas monitoring device is determined during development of the Sampling Plan. Generally, PIDs are employed at locations where volatile compounds are considered to be contaminants of concern. However, if volatile contaminants of concern are restricted to petroleum hydrocarbons (PHCs), a combustible gas meter calibrated to n-hexane will typically be selected over a PID, due to their relatively greater 'sensitivity' to PHC compounds. Combustible gas meters calibrated to methane may also be used at locations where elevated natural gas levels are a concern or potential concern.

Some combustible gas meters are equipped with a "methane elimination" toggle that, when activated, reduces the response of the instrument to methane gas. However, it should be noted that the switch does not truly eliminate contributions of methane gas to the overall combustible gas reading; where significant methane is present, the gas meter may still report significant overall combustible gas levels, even in the absence of any other gases.

Methodology

1. Field screening is to be completed using portable gas monitoring meters that have been appropriately calibrated (refer to SOP E01.00, *Field Meter Calibration*).
2. The sampling bag containing the portion of the sample for field screening is to be tightly sealed with a nominal headspace, and any clumps within the sampling bag are to be gently broken by manually manipulating the sealed sampling bag.
3. The sampling bag should not be opened or pierced until headspace vapour screening has been completed.
4. Once the sample has reached a temperature approximately between 5°C and 15°C and within two hours of sample collection, the tip of the portable gas monitoring meter is to be inserted into the nominal headspace of the sampling bag to record headspace vapour levels. The tip is to be inserted in a manner that does not permit vapours within the sampling bag to vent to ambient air during measurement.
5. The sample should be gently manipulated, and the peak reading registered by the meter during the first 15 seconds of measurement should be recorded as the sample headspace vapour reading.

TERRAPEX STANDARD OPERATING PROCEDURE SOIL CLASSIFICATION

GENERAL NOTE

Standard Operating Procedures (SOPs) have been developed by Terrapex Environmental Ltd. to standardize protocols used during environmental assessment work programs. However, certain work programs may warrant deviations from SOPs and some clients may have specific requirements which differ from those outlined in this SOP. Any significant deviations should be discussed with and approved by the project manager. Each deviation, along with the rationale for the deviation, should be documented in the field notes, project scope and/or notes to file.

Where SOPs are appended to reports, all deviations from this SOP, along with the rationale for the deviation, must be documented in the report.

APPLICATION

These procedures are applicable to intrusive investigations involving the completion of localized excavations for the purposes of collecting soil samples and/or documenting subsurface conditions. The procedures are applicable whether such activity constitutes the whole of a work program, or part of a larger work program.

PRESENTATION OF DESCRIPTION

Soils descriptions will be presented in the order specified below:

- Texture Descriptive (applicable for sands and gravels only)
- Major Constituent (principal grain size)
- Minor constituents (major to minor, largest to smallest if same %).
 - include organics after minor constituents
- Colour
- Moisture Descriptive
- Consistency Descriptive (only where appropriate field tests are conducted)
- Plasticity (if applicable)
- Other Modifiers, e.g. laminated, uniform, fissured, etc. (If applicable)
- Odours, where applicable, i.e., slight, moderate, strong with odour type (e.g., earthy, hydrocarbon, etc.)

CLASSIFICATION BY PARTICLE DIAMETER

Description	Range	Notes
BOULDERS	> 300 mm	
COBBLES	75 to 300 mm	
GRAVEL		
Coarse	19 to 75 mm	
Fine	4.75 to 19 mm	
SAND		
Coarse	2.0 to 4.75 mm	individual grains are visible to naked eye; refer to examples for texture descriptive
Medium	0.425 to 2.0 mm	
Fine	0.075 to 0.425 mm	
SILT	0.002 to 0.075 mm	individual grains not visible to naked eye; other methods necessary to more specifically identify distribution/type of fines
CLAY	< 0.002	

DESCRIPTION OF CONSTITUENT PARTS OF A SOIL

Soils will be principally described on the basis of the largest particle size classification by percentage of particles (e.g. sand, silt), with the dominant texture descriptive, where applicable (e.g. coarse sand). Where two or more classifications are present in approximately equal amounts, the sample will be principally described using the constituents presented from largest to smallest and joined by “and” (e.g. “sand and silt”).

Where two or more texture descriptives are present in approximately equal amounts, the sample will be described using the descriptives presented from largest to smallest and joined by “and” (e.g. “coarse and medium sand”).

Minor constituents are described using the terms defined below

<u>Descriptive Term</u>	<u>Range of Proportion</u>
Trace	1-10%
Some	11-20%
Adjective (i.e. sandy, silty)	21-35%
And	36-50%

COLOUR

Generally soil is described using BROWN, GREY, OLIVE.

Use qualifiers such as LIGHT, DARK, or combination terms like REDDISH-BROWN, BROWN/BLACK

Where more specific colour references are required, scientific colour descriptors from the Munsell Colour Chart should be used.

MOISTURE DESCRIPTIVE

- DRY - absence of moisture
- MOIST - damp, but no visible water
- WET - damp, contains visible water
- SATURATED - soil is completely wetted to excess and may be dripping

CONSISTENCY OF COHESIONLESS SOILS

The standard terminology to describe cohesionless soils (i.e., gravel, sand, or silt) includes the compactness as determined by laboratory test or by the Standard Penetration Test 'N' value.

<u>Descriptive Term</u>	<u>Density Index</u>	<u>Standard Penetration Test</u> <u>(blows per 300 mm)</u>
Very Loose	0-20%	0 - 4
Loose	20-40%	5 - 10
Compact	40-70%	11 - 30
Dense	70-90%	31 - 50
Very Dense	90-100%	over 50

CONSISTENCY OF COHESIVE SOILS

The standard terminology to describe cohesive soils (i.e., clay, or soil containing significant clay content) includes the consistency, which is based on undrained shear strength as measured by in-situ vane tests, penetrometer tests, unconfined compression tests, or occasionally by Standard Penetration Tests.

<u>Descriptive Term</u>	<u>Standard Penetration Test</u> <u>(blows per 300 mm)</u>	
Very Soft	Less than 2	penetrate w/fist
Soft	2-4	indent w/fist
Firm	5-8	penetrate w/thumb
Stiff	9-15	indent w/thumb
Very Stiff	16-30	indent w/thumbnail
Hard	over 30	can't indent

Consistency Limits of Cohesive Soil

Applicable if geotechnical laboratory tests are completed.

<u>Descriptive Term</u>	<u>Plasticity Index</u>
Non-plastic	0 - 3
Low plastic	4 - 9
Medium plastic	10 - 30
Highly plastic	over 30

FIELD TESTS FOR COHESIVE SOIL

For determining relative clay content.

Dilatancy – “none”, “slow”, or “rapid”

Pat of wet soil is shaken in the palm of the hand and alternately squeezed and released. Predominantly silty materials will show a dull, dry surface when squeezed and a glassy wet surface when released/shaken (dilatent). This characteristic becomes less pronounced with increasing clay content, as clays are not dilatant.

Plasticity from thread test – “none”, “low”, “medium”, or “high”

Attempt to roll a 3 mm thread of soil on a flat surface with the palm of your hand, adding as much water as necessary. Fold the thread and roll until it crumbles. (Note: silts can be plastic as well as clays so this is not a definitive test of particle size.)

- NON-PLASTIC - thread cannot be rolled
- LOW PLASTICITY - thread can barely be rolled
- MEDIUM PLASTICITY - thread can be rolled, but not re-rolled
- HIGH PLASTICITY - can be easily rolled and re-rolled

OTHER MODIFIERS

Sorting

Sorting is a geological term that describes the relative range of particles sizes.

- POORLY SORTED - a wide range of particle sizes is present
- WELL SORTED - a narrow range of particle sizes is present

Sorting is analogous to the geotechnical concept of “grading”, except that opposite descriptors are used (e.g. a poorly sorted soil, geologically, is considered a well graded soil, geotechnically). Geological descriptors are to be used for environmental descriptions of the relative range of particle sizes.

Angularity of Particles

- ANGULAR Many corners/pointed parts, not smooth
- SUB-ANGULAR Between angular and rounded
- ROUNDED Rounded and generally smooth, no corners or pointed parts
- WELL-ROUNDED Very round and smooth

DESCRIPTIVE SOIL TERMINOLOGY

These terms may be used, where applicable, to further describe soils.

TILL	An unstratified, unsorted glacial deposit of clay, silt, sand, gravel, cobbles and boulders in any combination. Typically dense and heterogeneous.
FILL	Any materials below the surface identified as placed by humans. “FILL (PRESUMED)” may be used when a stratigraphy is suspected as being fill, but the author also wishes to convey uncertainty regarding the accuracy of this determination.
TOPSOIL	Weathered surface materials which are capable of supporting plant life.
INCLUSION	An anomalous substance or fragment incorporated in a soil or rock mass.

STRATIFIED	Containing layers of different soil types (more than 3 mm thick).
LAMINATED	Composed of thin layers (less than 3 mm thick) of varying color and texture.
DESICCATED	Dried by moisture evaporation - desiccated clays are sometimes described as fissured or having nugget structure.
FISSURED	Containing shrinkage cracks, frequently filled with fine sand or silt; usually more or less vertical.
SENSITIVE	Exhibiting loss of strength on remolding.
FRIABLE	A soil consistency term pertaining to the ease of crumbling of soils. Easily crumbled between the fingers.
CALCAREOUS	Containing appreciable quantities of calcium-carbonate.
LAYER	> 75 mm in thickness
SEAM	2 mm to 75 mm in thickness
PARTING	< 2 mm in thickness
VARVED	Composed of regular alternating layers of silt and clay, often manifesting as alternating light and dark colouring, each usually between 25 and 75 mm in thickness, typically resulting from alternating seasonal deposition in a lacustrine environment.

TERRAPEX STANDARD OPERATING PROCEDURE MEASURING AND SURVEYING USING ROD AND LEVEL

GENERAL NOTE

Standard Operating Procedures (SOPs) have been developed by Terrapex Environmental Ltd. to standardize protocols used during environmental assessment work programs. However, certain work programs may warrant deviations from SOPs and some clients may have specific requirements which differ from those outlined in this SOP. Any significant deviations should be discussed with and approved by the project manager. Each deviation, along with the rationale for the deviation, should be documented in the field notes, project scope and/or notes to file.

Where SOPs are appended to reports, all deviations from this SOP, along with the rationale for the deviation, must be documented in the report.

APPLICATION

These procedures are applicable to obtaining basic site dimensioning information, including determining reference elevations using a survey rod and level. The procedures are applicable whether such activity constitutes the whole of a work program, or part of a larger work program.

These procedures are not applicable to legal surveying, or the use of a Total Station survey instrument.

EQUIPMENT

The following list details the standard equipment necessary for excavation of test pits. Specific sites may require additional or specialized equipment.

- ☐ automatic level
- ☐ tripod
- ☐ survey rod
- ☐ survey rod level
- ☐ field notebook
- ☐ field form F026 (Survey Form)
- ☐ 2-way walkie-talkie radios
- ☐ 30 m tape measure (for small sites)

- ☐ measuring wheel (for large sites)
- ☐ safety equipment (hard hat, boots, safety vest, safety glasses)
- ☐ chalk and/or spray paint
- ☐ nails and flagging tape (for setting control points)
- ☐ hammer and chisel (for making control points or benchmarks)
- ☐ traffic control equipment (pylons, traffic signs), if applicable
- ☐ site plan
- ☐ site-specific health and safety plan
- ☐ Traffic Control Plan and Road Occupation Permit, if applicable

SPECIAL PLANNING AND PREPARATION REQUIREMENTS

Traffic spotters should be employed when surveying or dimensioning activities include locations located in the travelled portion of a roadway or in high traffic areas. A traffic control plan in accordance with Ontario Ministry of Transportation (MTO) guidelines must be implemented for all work in road allowance.

DEFINITIONS

Temporary Benchmark (TBM): semi-permanent structure or point of known (or assumed) elevation such as the flange bolt on a fire hydrant (do not use the top bolt as opening the hydrant will change the elevation of this bolt), the centre of a catch basin, the base of a sign, or a nail on the side of a wooden hydro pole or tree (make note of height of nail above grade).

It is preferable to use an existing (geodetic) benchmark so that elevations can be reported in metres above mean sea level (m amsl). Locations of geodetic benchmarks can be obtained from the municipality or from Control Survey Information Exchange (COSINE).

Where an assumed elevation is used, it is conventional to assign the TBM with an elevation of 100.000 metres above local datum (m ald), and the location and a description of the TBM must be provided in the project report(s).

Turning Point (TP): a point temporarily used to transfer an elevation, where the rod is first held for a foresight reading, then for a back sight reading. It establishes a new bench mark from which a new height of instrument is calculated. Preferably, select a solid surface (concrete sidewalk or block, asphalt, cable box) as your TP.

Back Sight (BS): a rod reading taken on a point of “known” elevation (e.g., an established geodetic benchmark or a TBM with an assumed elevation) in order to establish the elevation of instrument line of sight (TP or TBM).

Height of Instrument (HI): the elevation of the line of sight through the level.

Fore Sight (FS): a rod reading taken on a TP or TBM.

Intermediate Sight (IS): a rod reading taken at any other point where an elevation is required.

FIELD PROCEDURES

Setup

1. Choose a TBM and record information carefully and accurately on form so it can be used again if required. Assign the TBM an elevation of 100.000 m. Avoid using a monitoring well as a TBM, since it may be subject to frost heaving. Also, the well may be decommissioned or destroyed at a later date.
2. Plan your survey path before setting up the instrument. Choose a location where you can see the TBM and minimize the number of turning points.
3. Set up pylons around your surveying location if it is in a traffic pathway on site.
4. Stand tripod, roughly level by adjusting legs.
5. Screw level assembly to base. Set level lens parallel to two of the levelling screws. Turn screws simultaneously in opposite directions until levelling bubble is in line with circle. Turn third screw either clockwise or counter clockwise to centre bubble in circle.
6. Once level, turn 90 degrees to check accuracy. If bubble moves out of circle, repeat above steps.

Hand Signals

Due to the distances involved, and if a 2-way walkie-talkie radio is not available, establish hand signals between the surveyor and rod person, prior to commencing the survey. Common hand signals include:

- “All Right” Both arms extended horizontally and forearms waved vertically.
- “Wave Rod” Operator holds arm vertical and moves arm from side to side.
- “Give Foresight” Operator holds arm vertically above head.
- “Set Turning Point” Rod person holds rod horizontally over head and brings it down on point.

- “Plumb” Rod arm is held vertically and moved in direction of plumb.
- “Move Right/Left” Arm extended with motion in direction of desired movement.
- “Move Up/Down” Arm extended with motion in direction of desired movement.
- “Pick Up Unit” Arms extended outward and downward, then inward and upward.

Basic Survey

Rod person must hold rod as vertical as possible. Tilt it very slowly back and forth in the direction of the surveyor so the surveyor can read the lowest number (when the rod is vertical).

Alternatively, if the survey rod level is used, ensure that the rod person holds the rod level against the rod and keeps them both completely still and confirms with the surveyor (via walkie talkie) as to when the rod is level to take a reading.

Surveyor must read elevation to nearest millimeter (three decimal places). Surveyor shoots the TBM, enters reading in the BS column. Surveyor calculates and records the HI ($HI = E_{TBM} + BS$).

Surveyor shoots monitoring wells or other points to be surveyed. Both the ground elevation and elevation of the well standpipe measuring point (refer to SOP E06.00, *Groundwater Monitoring*) are to be surveyed. Surveyor enters data for each point in the IS column.

For wells equipped with flush-mounted casings, shoot the top of the protective casing as representing “ground” elevation. For wells equipped with monument (“stick up”) casings, shoot the ground surface adjacent to the casing.

Limit all elevation shots to distances of no more than 30 m (100 ft). If an object is too far away, use a turning point to move the instrument closer. Significant errors may result if longer elevation shots are attempted. To the extent practicable, the level should be placed such that IS shot distances for each placement are approximately equal. To the extent practicable, BS and FS shot distances should also be approximately equal.

When all points have been shot, surveyor re-shoots the TBM to close the survey loop and enters the rod reading in the FS column.

Turning Point (if required)

A TP is required if you cannot see all your survey points from one instrument location, or if the distance between one or more survey points and the instrument exceed 30 m.

Choose a suitable TP where you can see the instrument’s current location and will be able to see the instrument’s new location (the instrument will be located where it can see as many of the

points to be surveyed as possible). Try to minimize the number of turning points to minimize the accuracy of rod reading errors.

The rod person moves to the TP and places a mark there (e.g., chalk or spray paint) if it is not a fixed point. Surveyor shoots the TP and records reading in the FS column. Surveyor calculates and records the elevation of the TP ($E_{TP} = HI - FS$).

Surveyor moves instrument to the new location (note that the instrument location is not assigned a specific name). Surveyor re-levels the instrument. Surveyor re-shoots the TP and enters in BS column. Surveyor calculates and records a new HI ($HI = E_{TP} + BS$). Note that it is imperative that the rod person must keep the rod on the TP until after the Surveyor has completed setting up the level and has taken a BS reading of the TP from the new instrument location.

Surveyor shoots remaining monitoring wells or other points to be surveyed as above.

When all points have been shot, surveyor traverses back to TBM using new TPs as required. Surveyor records final shot to TBM in the FS column.

Accuracy Check

Method 1: Surveyor adds all the FS readings together, enters result at bottom of form. Repeat for BS readings. The error is the difference between the two totals.

Method 2: Surveyor calculates elevation of the TBM from the final rod reading ($E_{TBM} = HI - FS$). This requires that calculations be done throughout the survey (for TPs, not for wells). The error is the difference between the assigned elevation of the TBM and the calculated elevation.

Acceptable Error: +/- 3 mm

If the error is greater, the survey must be repeated.

TYING IN EXISTING WELLS

If there are wells already existing at the site, survey them ALL in, even if an older survey exists. Wells can shift over time. Wherever possible, use the benchmark used in the original survey for consistency. If the benchmark has been removed, use another benchmark and re-survey in all the wells.

SITE DIMENSIONING

Use a measuring tape or wheel to measure distances. Pacing to record distances does not yield sufficiently accurate dimensioning information, and is not to be used. Triangulate points to be measured (take two measurements for each location, each from a different mapable point). To avoid large inaccuracies in locating objects, do not measure in objects using offset measurements from linear features (such as sidewalks, building walls, etc) where the measured distances exceed 2 metres.

If a site plan has been provided, double check the accuracy and confirm the drawing is up-to-date by re-measuring dimensions of existing buildings and structures and comparing to the site plan. If measurements do not match site plan, adjust the incorrect dimensions accordingly.

If a site plan does not exist, sketch a site plan with all existing structures and dimensions between them for proper layout and orientation. On-site dimension locations include: buildings, pump islands, fences, property lines/iron bars, catch basins/manholes, USTs, utility services, etc. Off-site dimension locations include: catch basins/manholes, sidewalks, roads/curbs, hydrants, utility services, hydro poles, etc.

Site plans/sketches must include a North directional arrow. Indicate whether the arrow indicates **magnetic north** (i.e., north from a compass), **true north** (i.e., magnetic north with an appropriate declination correction), or **reference north** (e.g., assumed/approximate north direction).

Where the site/study area is very large and/or a high degree of horizontal accuracy is not required for the project, portable GPS units may be used to determine approximate UTM coordinates for site features, however, the indicated accuracy range on the GPS unit must be identified for each mapped feature in the notes.

APPENDIX IV
TEST PIT AND BOREHOLE LOGS

TP201

Date: December 13, 2012

Stratigraphy		Sample Date			
Depth (m)	Soil Description	CSV	I.D.	Depth (m)	Lab Analysis/ Comments
0-0.1	ORGANICS (FOLIAGE, GRASS)	-	-	-	
0.1-0.8	FINE TO MEDIUM SAND, SILT, SOME FINE GRAVEL, TRACE CLAY DARK BROWN, MOIST	10 ppm	1	0.3	
0.8-2.7	FINE TO MEDIUM SAND, SEAMS OF COARSE SAND, SILTY BROWN, MOIST - BECOMES GREY AND WET AT 1.8 m	35 ppm	2	0.6	
		25 ppm	3	1.2	
		25 ppm	TP201-4	1.8	BTEX/F1-F4
		15 ppm	TP201-5	2.4	BTEX/F1-F4

TP202

Date: December 13, 2012

Stratigraphy		Sample Date			
Depth (m)	Soil Description	CSV	I.D.	Depth (m)	Lab Analysis/ Comments
0-0.3	TOPSOIL	10 ppm	1	0.15	
0.3-2.7	FINE SAND, SILTY, TRACE ORGANICS BROWN, MOIST - BECOMES WET AND GREY AT 1.8 m - SEAMS OF COARSE SAND AT 2.4 m	15 ppm	2	0.6	
		10 ppm	3	1.2	
		20 ppm	TP202-4	1.8	BTEX/F1-F4
		10 ppm	5	2.4	
2.7-3.1	CLAY, SILTY, SOME FINE TO COARSE SAND GREY, WET	10 ppm	TP202-6	2.9	BTEX/F1-F4

Stratigraphy		Sample Date			
Depth (m)	Soil Description	CSV	I.D.	Depth (m)	Lab Analysis/ Comments
0-0.5	FINE SAND, SILTY, SOME TO TRACE ORGANICS DARK BROWN, MOIST	10 ppm	1	0.15	
0.5-2.4	FINE SAND, SILTY BROWN MOIST - TRACE ORGANICS AND COARSE GRAVEL AT 0.6 m - BECOMES WET AT 1.8 m - BECOMES GREY AT 2.1 m	20 ppm	2	0.6	
		10 ppm	3	1.2	
		25 ppm	4	2.1	
		15 ppm	TP203-5	2.1	BTEX/F1-F4
2.4-2.9	FINE TO COARSE SAND, TRACE COARSE GRAVEL AND BEDROCK FRAGMENTS GREY, WET	15 ppm	TP203-6	2.7	BTEX/F1-F4

Stratigraphy		Sample Date			
Depth (m)	Soil Description	CSV	I.D.	Depth (m)	Lab Analysis/ Comments
0-0.5	FINE SAND, SILTY, SOME FINE TO COARSE GRAVEL DARK BROWN, MOIST	<10 ppm	1	0.3	
0.5-2.4	FINE TO MEDIUM SAND, SILTY BROWN, MOIST - BECOMES WET AT 1.8 m - BECOMES GREY AT 2.1 m	15 ppm	2	0.6	
		15 ppm	3	1.2	
		20 ppm	4	1.8	
		20 ppm	TP204-5	2.1	VOCs/F1-F4
2.4-2.9	SILT, SOME CLAY, FINE TO COARSE GRAVEL AND FINE SAND GREY, MOIST	10 ppm	TP205-6	2.7	VOCs/F1-F4

Stratigraphy		Sample Date			
Depth (m)	Soil Description	CSV	I.D.	Depth (m)	Lab Analysis/ Comments
0-0.6	FINE SAND, SOME GRAVEL, LAYER OF ASPHALT DEBRIS AT 0.15-0.3 mbg BROWN, MOIST	<10 ppm	1	0.3	
0.6-2.4	FINE SAND, SILTY BROWN, MOIST TO VERY MOIST - BECOMES WET AT 2 mbg	10 ppm	2	0.9	
		10 ppm	3	1.5	
		10 ppm	TP205-4	2.0	VOCs/F1-F4
2.4-2.9	SILT, SOME CLAY, SAND, FINE TO COARSE GRAVEL AND COBBLES GREY, MOIST	10 ppm	TP205-5	2.6	VOCs/F1-F4

Stratigraphy		Sample Date			
Depth (m)	Soil Description	CSV	I.D.	Depth (m)	Lab Analysis/ Comments
0-0.5	FINE SAND, SILTY, SOME GRAVEL, TRACE ORGANICS DARK BROWN, MOIST	15 ppm	1	0.3	
0.5-2.4	FINE SAND, SILTY BROWN, MOIST TO VERY MOIST - BECOMES WET AT 2.1 mbg	15 ppm	2	0.6	
		15 ppm	3	1.2	
		15 ppm	TP206-4	1.8	VOCs/F1-F4
		20 ppm	TP206-5	2.4	VOCs/F1-F4
2.4-2.9	SILT, BOULDERS, COBBLES, GRAVEL, SOME SAND AND CLAY GREY, MOIST	15 ppm	6	2.9	

Stratigraphy		Sample Date			
Depth (m)	Soil Description	CSV	I.D.	Depth (m)	Lab Analysis/ Comments
0-0.15	SAND, SILT, SOME GRAVEL AND ORGANICS BROWN, MOIST	-	-	-	
0.15-2.6	FINE SAND, SILTY BROWN, MOIST - SEAMS OF ORGANIC MATTER AT 1.7-1.8 mbg - BECOMES BROWN/GREY AND WET AT 1.8 mbg	10 ppm	1	0.3	
		10 ppm	2	0.6	
		10 ppm	3	1.2	
		20 ppm	TP207-4	1.8	VOCs/F1-F4
		15 ppm	5	2.4	
2.6-2.9	SILT, GRAVEL, SOME CLAY AND FINE SAND GREY, MOIST	10 ppm	TP207-6	2.7	VOCs/F1-F4

Stratigraphy		Sample Date			
Depth (m)	Soil Description	CSV	I.D.	Depth (m)	Lab Analysis/ Comments
0-0.1	ASPHALT	-	-	-	
0.1-2.9	FINE SAND, SILTY DARK BROWN TO BROWN, MOIST TO VERY MOIST - BECOMES GREY AND WET AT 2.4 mbg - PETROLEUM HYDROCARBON STAINING AT 2.7 mbg	10 ppm	1	0.3	
		15 ppm	2	0.6	
		15 ppm	3	1.2	
		20 ppm	4	2.1	
		16% LEL	TP208-5	2.4	BTEX/F1-F4 TP001 – FIELD DUPLICATE
		30% LEL	TP208-6	2.7	BTEX/F1-F4
2.9-3.1	FINE SAND, SILTY, GRAVEL, COBBLES GREY, WET	150 ppm	TP208-7	3.1	BTEX/F1-F4

Stratigraphy		Sample Date			
Depth (m)	Soil Description	CSV	I.D.	Depth (m)	Lab Analysis/ Comments
0-0.6	SAND, SOME SILT, ORGANICS (ROOTS), FINE TO COARSE GRAVEL TO TRACE GRAVEL DARK BROWN, MOIST	10 ppm	1	0.15	
		20 ppm	2	0.6	
0.6-2.6	FINE SAND, SILTY BROWN, MOIST TO VERY MOIST - BECOMES GREY AND WET AT 2 mbg	10 ppm	3	1.2	
		15 ppm	4	1.7	
		40 ppm	TP209-5	2.0	BTEX/F1-F4
		30 ppm	6	2.3	
2.6-2.9	SILT, COBBLES, GRAVEL, SOME CLAY, TRACE FINE SAND GREY, MOIST	25 ppm	TP209-7	2.7	BTEX/F1-F4

Stratigraphy		Sample Date			
Depth (m)	Soil Description	CSV	I.D.	Depth (m)	Lab Analysis/ Comments
0-0.5	FINE SAND, SOME SILT AND FINE TO COARSE GRAVEL, TRACE ORGANICS (ROOTS) DARK BROWN, MOIST	<10 ppm	1	0.3	
0.5-2.6	FINE SAND, SILTY BROWN, MOIST - BECOMES GREY AND WET AT 1.8 mbg - SEAMS OF ORGANIC MATTER AT 1.8 mbg	<10 ppm	2	0.9	
		<10 ppm	3	1.4	
		20 ppm	TP210-4	1.8	BTEX/F1-F4
		20 ppm	5	2.4	
2.6-2.9	SILT, COBBLES, BOULDERS, GRAVEL, SOME CLAY AND FINE SAND GREY, VERY MOIST	10 ppm	TP210-6	2.9	BTEX/F1-F4

TP211

Date: December 14, 2012

Stratigraphy		Sample Date			
Depth (m)	Soil Description	CSV	I.D.	Depth (m)	Lab Analysis/ Comments
0-0.5	SAND, SOME SILTY AND GRAVEL, TRACE ORGANICS DARK BROWN, MOIST	<10 ppm	1	0.3	
0.5-2.6	FINE SAND, SILTY, TRACE GRAVEL BROWN, MOIST - FINE TO COARSE SAND AT 2.1 mbg, GREY, WET	10 ppm	2	0.6	
		10 ppm	3	1.2	
		15 ppm	4	1.8	
		15 ppm	5	2.1	
		15 ppm	TP211-6	2.6	VOCs/F1-F4
2.6-2.7	SILT, GRAVEL, COBBLES, SOME CLAY AND SAND GREY, MOIST	<10 ppm	TP211-7	2.7	VOCs/F1-F4

TP212

Date: December 14, 2012

Stratigraphy		Sample Date			
Depth (m)	Soil Description	CSV	I.D.	Depth (m)	Lab Analysis/ Comments
0-0.6	FINE SAND, SOME SILT AND GRAVEL, TRACE ORGANICS (ROOTS) TO NO ORGANICS DARK BROWN, MOIST	<10 ppm	1	0.15	
		10 ppm	2	0.6	
0.6-2.6	FINE SAND, SILTY BROWN, MOIST TO WET - TRACE COARSE GRAVEL AT 2.4 mbg	10 ppm	3	1.2	
		20 ppm	4	2.0	
		20 ppm	TP212-5	2.4	VOCs/F1-F4
2.6-2.7	SILT, GRAVEL, COBBLES, SOME SAND, TRACE TO SOME CLAY GREY, MOIST	<10 ppm	TP212-6	2.7	VOCs/F1-F4

TP213

Date: December 14, 2012

Stratigraphy		Sample Date			
Depth (m)	Soil Description	CSV	I.D.	Depth (m)	Lab Analysis/ Comments
0-2.9	SAND, SOME SILT AND GRAVEL, TRACE ORGANICS (ROOTS, WOOD DEBRIS) AND VARIOUS DEBRIS (PAPER, WIRES ETC.) BROWN, MOIST - BECOMES WET AT 1.8 mbg - PETROLEUM HYDROCARBON STAINING AT 2.4 mbg - FINE TO COARSE SAND AT 2.7 mbg	10 ppm	1	0.3	
		10 ppm	2	0.6	
		10 ppm	3	1.2	
		15 ppm	4	1.8	
		15 ppm	TP213-5	2.4	VOCs/F1-F4 TP002 – FIELD DUPLICATE
		15 ppm	TP213-6	2.9	VOCs/F1-F4

TP214

Date: December 14, 2012

Stratigraphy		Sample Date			
Depth (m)	Soil Description	CSV	I.D.	Depth (m)	Lab Analysis/ Comments
0-2.4	FINE SAND, SILTY, TRACE GRAVEL, COBBLES AND ORGANICS (ROOTS) BROWN, MOIST - BECOMES WET AT 1.8 mbg - BECOMES GREY AT 2.4 mbg	10 ppm	1	0.3	
		10 ppm	2	0.6	
		10 ppm	3	1.2	
		10 ppm	TP214-4	1.8	VOCs/F1-F4
		20 ppm	TP214-5	2.4	VOCs/F1-F4

Stratigraphy		Sample Date			
Depth (m)	Soil Description	CSV	I.D.	Depth (m)	Lab Analysis/ Comments
0-0.5	FINE SAND, SILTY, TRACE FINE GRAVEL AND CLAY DARK BROWN, MOIST	15 ppm	1	0.15	
0.5-2.6	FINE SAND, SILTY BROWN, MOIST - BECOMES GREY AND WET AT 1.8 mbg	15 ppm	2	0.6	
		10 ppm	3	1.2	
		14% LEL	TP215-4	1.8	BTEX/F1-F4 TP003 – FIELD DUPLICATE
		125 ppm	TP215-5	2.4	BTEX/F1-F4
2.6-2.9	CLAY, SILTY, SOME FINE TO COARSE GRAVEL, COBBLES AND SAND GREY, MOIST	20 ppm	TP215-6	2.7	BTEX/F1-F4

Stratigraphy		Sample Date			
Depth (m)	Soil Description	CSV	I.D.	Depth (m)	Lab Analysis/ Comments
0-0.5	CRUSHED LIMESTONE	<10 ppm	1	0.15	
0.5-0.9	FINE SAND, SOME SILT, TRACE TO SOME FINE TO COARSE GRAVEL, TRACE ORGANICS (ROOTS) BROWN, MOIST	10 ppm	2	0.6	
0.9-1.3	FINE SAND, SOME SILT BROWN, MOIST	15 ppm	3	1.2	
1.3-2.6	FINE TO COARSE SAND, SILTY, FINE TO COARSE GRAVEL BROWN, WET - BECOMES GREY AT 2.1 mbg	<10 ppm	4	1.8	
		17% LEL	TP216-5	2.1	BTEX/F1-F4
2.6-2.9	SILT, SOME CLAY, GRAVEL, COBBLES AND SAND GREY, MOIST	30 ppm	TP216-6	2.7	BTEX/F1-F4

Stratigraphy		Sample Date			
Depth (m)	Soil Description	CSV	I.D.	Depth (m)	Lab Analysis/ Comments
0-2.9	FINE SAND, SOME SILT AND FINE TO COARSE GRAVEL BROWN, MOIST - BECOMES WET AT 1.8 mbg - FINE TO MEDIUM SAND, PETROLEUM HYDROCARBON STAINING, GREY AT 2.1 mbg	10 ppm	1	0.3	
		10 ppm	2	0.6	
		<10 ppm	3	1.2	
		15 ppm	4	1.8	
		18% LEL	TP217-5	2.1	BTEX/F1-F4
		78% LEL	TP217-6	2.7	BTEX/F1-F4

Stratigraphy		Sample Date			
Depth (m)	Soil Description	CSV	I.D.	Depth (m)	Lab Analysis/ Comments
0-2.6	FINE SAND, SILTY, SOME GRAVEL BROWN, MOIST - TRACE COARSE GRAVEL, VERY MOIST AT 1.8 mbg - BECOMES GREY AT 2.4 mbg	15 ppm	1	0.3	
		15 ppm	2	0.6	
		15 ppm	3	1.2	
		10 ppm	4	1.8	
		70 ppm	TP218-5	2.4	BTEX/F1-F4
		40 ppm	TP218-6	2.6	BTEX/F1-F4
2.6-2.7	SILT, CLAY, SOME COARSE GRAVEL AND COBBLES GREY, MOIST	20 ppm	7	2.7	

Stratigraphy		Sample Date			
Depth (m)	Soil Description	CSV	I.D.	Depth (m)	Lab Analysis/ Comments
0-0.3	SAND, SILT, FINE TO COARSE SAND, BRICK DEBRIS, TRACE CLAY DARK BROWN, MOIST	<10 ppm	1	0.15	
0.3-2.7	FINE SAND, SILTY, TRACE FINE GRAVEL DARK BROWN TO BROWN, MOIST - SEAM OF ORGANIC MATTER, GREY, WET AT 1.8 mbg - SOME COARSE GRAVEL AND COBBLES AT 2.7 mbg	10 ppm	2	0.6	
		<10 ppm	3	1.2	
		40 ppm	4	1.8	
		35 ppm	TP219-5	2.1	BTEX/F1-F4
		15 ppm	TP219-6	2.7	BTEX/F1-F4

Stratigraphy		Sample Date			
Depth (m)	Soil Description	CSV	I.D.	Depth (m)	Lab Analysis/ Comments
0-0.15	CRUSHED LIMESTONE	-	-	-	
0.15-2.7	FINE TO MEDIUM SAND, SOME SILT AND FINE TO COARSE GRAVEL, TRACE ORGANICS (ROOTS) DARK BROWN, MOIST - BECOMES VERY MOST TO WET AT 1.8 mbg - BECOMES GREY AT 2.1 mbg	<10 ppm	1	0.3	
		10 ppm	2	0.6	
		10 ppm	3	1.2	
		10 ppm	4	1.8	
		50 ppm	TP219-5	2.4	BTEX/F1-F4
		10 ppm	6	2.7	

Stratigraphy		Sample Date			
Depth (m)	Soil Description	CSV	I.D.	Depth (m)	Lab Analysis/ Comments
0-0.1	CRUSHED LIMESTONE	-	-	-	
0.1-0.9	FINE SAND, SILTY, SOME FINE TO COARSE GRAVEL BROWN, MOIST	<10 ppm	1	0.15	
0.9-2.7	FINE SAND, SOME SILT TO SILTY, TRACE GRAVEL BROWN, MOIST TO WET - BECOMES GREY, PETROLEUM HYDROCARBON STAINING AT 2.0 mbg - 0.1 m LAYER OF ORGANIC MATTER AT 2.7 mbg - SOME COARSE GRAVEL , BROWN, GREY AT 2.9 mbg	<10 ppm	2	0.6	
		<10 ppm	3	1.2	
		30% LEL	TP221-4	2.1	BTEX/F1-F4
		180 ppm	TP221-5	2.7	BTEX/F1-F4
		50 ppm	6	2.9	

Stratigraphy		Sample Date			
Depth (m)	Soil Description	CSV	I.D.	Depth (m)	Lab Analysis/ Comments
0-2.9	FINE SAND, SILTY, SOME TO TRACE FINE TO COARSE GRAVEL BROWN, MOIST - BECOMES VERY MOIST AT 1.8 mbg - BECOMES WET AND GREY, PETROLEIUM HYDROCARBON STAINING AT 2.1 mbg - TRACE CLAY AT 2.9 mbg	10 ppm	1	0.3	
		10 ppm	2	0.6	
		10 ppm	3	1.2	
		10 ppm	4	1.8	
		>100% LEL	TP222-5	2.4	BTEX/F1-F4
		4% LEL	TP222-6	2.9	BTEX/F1-F4

Stratigraphy		Sample Date			
Depth (m)	Soil Description	CSV	I.D.	Depth (m)	Lab Analysis/ Comments
0-0.3	CRUSHED LIMESTONE	<10 ppm	1	0.15	
0.3-2.9	FINE SAND, SILTY, SOME COARSE GRAVEL BROWN, MOIST - BECOMES VERY MOIST AT 1.8 mbg - PIECE OF FIBREGLASS PIPE AND PETROLEUM HYDROCARBON STAINING AT 2.1 mbg - FINE TO COARSE SAND AND FINE TO COARSE GRAVEL, GREY AT 2.4 mbg	15 ppm	2	0.6	
		15 ppm	3	1.2	
		15 ppm	4	1.8	
		10% LEL	TP223-5	2.1	BTEX/F1-F4
		135 ppm	6	2.4	
		140 ppm	TP223-7	2.7	BTEX/F1-F4

Stratigraphy		Sample Date			
Depth (m)	Soil Description	CSV	I.D.	Depth (m)	Lab Analysis/ Comments
0-0.5	SILT, SAND, SOME FINE TO COARSE GRAVEL, CLAY AND ORGANICS DARK BROWN, MOIST	15 ppm	1	0.15	
0.5-2.4	FINE SAND, SILTY, TRACE ORGANICS AND FINE TO COARSE GRAVEL BROWN, MOIST - BECOMES WET AT 1.8 mbg - BECOMES GREY AT 2.1 mbg - THIN SEAM OF ORGANIC MATTER AT 2.4 mbg	20 ppm	2	0.6	
		10 ppm	3	1.2	
		40 ppm	4	1.8	
		65 ppm	TP224-5	2.1	BTEX/F1-F4
		5% LEL	TP224-6	2.4	BTEX/F1-F4
2.4-2.5	SILT, SAND, COBBLES, SOME CLAY GREY, MOIST	-	7	2.5	

Stratigraphy		Sample Date			
Depth (m)	Soil Description	CSV	I.D.	Depth (m)	Lab Analysis/ Comments
0-0.08	ASPHALT	-	-	-	
0.08-0.6	FINE TO MEDIUM SAND, SOME SILT TO SILTY, SOME FINE TO COARSE GRAVEL, TRACE ORGANICS BROWN, MOIST	10 ppm	1	0.15	
		35 ppm	2	0.6	
0.6-2.4	FINE SAND, SILTY BROWN, MOIST TO VERY MOIST - BECOMES GREY AND WET AT 2.1 mbg	10 ppm	3	1.2	
		25 ppm	4	1.8	
		14% LEL	TP225-5	2.1	BTEX/F1-F4
2.5-2.6	CLAY, SILTY, SOME FINE SAND, FINE TO COARSE GRAVEL, COBBLES AND BOULDERS GREY, VERY MOIST	10 ppm	TP225-6	2.6	BTEX/F1-F4

Stratigraphy		Sample Date			
Depth (m)	Soil Description	CSV	I.D.	Depth (m)	Lab Analysis/ Comments
0-0.08	ASPHALT	-	-	-	
0.08-0.15	CRUSHED LIMESTONE (SUBGRADE)	-	-	-	
0.15-0.3	SAND, SILT, SOME FINE TO COARSE GRAVEL, TRACE CLAY AND ORGANICS BROWN, MOIST	<10 ppm	1	0.15	
0.3-0.6	SAND, SOME SILT, TRACE CLAY AND FINE TO COARSE GRAVEL, TRACE ORGANICS BROWN, MOIST	20 ppm	2	0.6	
0.6-1.8	FINE SAND, SILTY BROWN, MOIST TO VERY MOIST	15 ppm	3	1.2	
		15 ppm	4	1.7	
1.8-2.3	FINE TO COARSE SAND, SOME SILT AND FINE TO COARSE GRAVEL, TRACE CLAY GREY, PETROLEUM HYDROCARBON STAINING, WET	12% LEL	TP226-5	2.1	BTEX/F1-F4
2.3-2.4	FINE SAND, SILTY, TRACE CLAY AND GRAVEL GREY, WET	40 ppm	TP226-6	2.4	BTEX/F1-F4
2.4-2.6	SILT, CLAY, SOME FINE TO COARSE GRAVEL AND COBBLES GREY, MOIST	10 ppm	7	2.6	

TP227

Date: December 17, 2012

Stratigraphy		Sample Date			
Depth (m)	Soil Description	CSV	I.D.	Depth (m)	Lab Analysis/ Comments
0-0.08	ASPHALT	-	-	-	
0.08-0.3	CRUSHED LIMESTONE, SAND, GRAVEL, TRACE ORGANICS (SUBGRADE) DARK BROWN, MOIST	15 ppm	1	0.15	
0.3-2.6	FINE SAND, SILTY, TRACE COARSE GRAVEL AND ORGANICS (ROOTS) DARK BROWN TO BROWN, MOIST TO VERY MOIST - BECOMES GREY AND WET AT 2.1 mbg	10 ppm	2	0.6	
		20 ppm	3	1.2	
		30 ppm	4	1.8	
		4% LEL	TP227-5	2.1	BTEX/F1-F4
		50 ppm	6	2.4	
2.6-2.9	CLAY, SILTY, SOME FINES SAND, FINE TO COARSE GRAVEL, COBBLES AND BOULDERS GREY, VERY MOIST	10 ppm	TP227-7	2.9	BTEX/F1-F4

TP228

Date: December 18, 2012

Stratigraphy		Sample Date			
Depth (m)	Soil Description	CSV	I.D.	Depth (m)	Lab Analysis/ Comments
0-0.08	ASPHALT	-	-	-	
0.08-0.3	SAND, GRAVEL, CRUSHED LIMESTONE (SUBGRADE) BROWN, VERY MOIST	10 ppm	1	0.15	
0.3-0.8	FINE SAND, SILTY, TRACE CLAY AND ORGANICS (ROOTS) DARK BROWN, MOIST	25 ppm	2	0.6	
0.8-2.4	FINE SAND, SILTY TO SOME SILT BROWN, MOIST TO VERY MOIST - FINE TO COARSE SAND, TRACE FINE GRAVEL, GREY, WET AT 2.1 mbg	25 ppm	3	1.2	
		20 ppm	4	1.8	
		34% LEL	TP228-5	2.1	BTEX/F1-F4 TP004 – FIELD DUPLICATE
2.4-2.9	SILT, SOME SAND, GRAVEL, COBBLES AND CLAY GREY, MOIST	<10 ppm	TP228-6	2.9	BTEX/F1-F4

Stratigraphy		Sample Date			
Depth (m)	Soil Description	CSV	I.D.	Depth (m)	Lab Analysis/ Comments
0-0.08	ASPHALT	-	-	-	
0.08-0.3	SAND, GRAVEL, CRUSHED STONE, SOME SILT (SUBGRADE) BROWN, MOIST	15 ppm	1	0.15	
0.3-2.4	FINE SAND, SILTY, TRACE CLAY BROWN, MOIST	20 ppm	2	0.6	
		15 ppm	3	1.2	
		20 ppm	4	1.8	
	- FINE TO COARSE SAND, SOME SILT GREY, WET AT 2.1 mbg	36% LEL	TP229-5	2.1	BTEX/F1-F4
2.4-2.6	SILT, SOME SAND, CLAY, GRAVEL AND COBBLES GREY, MOIST	20 ppm	TP229-6	2.6	BTEX/F1-F4

Stratigraphy		Sample Date			
Depth (m)	Soil Description	CSV	I.D.	Depth (m)	Lab Analysis/ Comments
0-0.08	ASPHALT	-	-	-	
0.08-0.3	GRAVEL, SAND, SOME SILT AND ORGANICS (ROOTS) BROWN, MOIST	15 ppm	1	0.15	
0.3-1.5	FINE TO MEDIUM SAND, SOME SILT AND FINE TO COARSE GRAVEL BROWN, MOIST	<10 ppm	2	0.6	
		<10 ppm	3	1.2	
1.5-2.9	FINE SAND, SILTY TO SOME SILT BROWN, VERY MOIST - BECOMES GREY AND WET AT 2.1 mbg - FINE TO COARSE SAND PETROLEUM HYDROCARBON STAINING AT 2.9 mbg	10 ppm	4	1.8	
		70 ppm	TP230-5	70 ppm	BTEX/F1-F4
		115 ppm	TP230-6	115 ppm	BTEX/F1-F4
2.9-3.2	SILT, SOME CLAY, SAND AND FINE TO COARSE GRAVEL GREY, MOIST	50 ppm	TP230-7	50 ppm	BTEX/F1-F4

Stratigraphy		Sample Date			
Depth (m)	Soil Description	CSV	I.D.	Depth (m)	Lab Analysis/ Comments
0-0.08	ASPHALT	-	-	-	
0.08-0.15	CRUSHED LIMESTONE (SUBGRADE)	-	-	-	
0.15-0.3	SAND, GRAVEL, SOME SILT, TRACE CLAY (SUBGRADE) BROWN, MOIST	15 ppm	1	0.3	
0.3-0.9	FINE SAND, SILTY, SOME FINE TO COARSE GRAVEL DARK BROWN, MOIST	15 ppm	2	0.6	
0.9-2.7	MEDIUM TO FINE SAND, SILTY BROWN, MOIST - FINE TO COARSE SAND, SOME SILT, TRACE GRAVEL GREY, WET, PETROLEUM HYDROCARBON STAINING AT 2.3 mbg	25 ppm	3	1.2	
		15 ppm	4	1.8	
		45% LEL	TP231-5	2.3	BTEX/F1-F4
2.7-3.1	SILT, SOME CLAY, FINE TO COARSE GRAVEL AND SAND GREY, MOIST	10 ppm	TP231-6	3.1	BTEX/F1-F4

Stratigraphy		Sample Date			
Depth (m)	Soil Description	CSV	I.D.	Depth (m)	Lab Analysis/ Comments
0-3.1	FINE TO MEDIUM SAND, FINE TO COARSE GRAVEL, SOME SILT BROWN, MOIST - BECOMES SILTY, SOME FINE TO COARSE GRAVEL AT 0.6 mbg - SAND, GRANULAR MATERIAL, TRACE CLAY BROWN, GREY, WET, PETROLEUM HYDROCARBON STAINING AT 2.1 mbg - FABRIC DEBRIS AT 2.4 mbg	<10 ppm	1	0.15	
		10 ppm	2	0.6	
		20 ppm	3	1.2	
		20 ppm	4	1.8	
		16% LEL	TP232-5	2.1	BTEX/F1-F4
		96% LEL	TP232-6	2.4	BTEX/F1-F4
3.1-3.2	SILT, SOME FINE TO COARSE GRAVEL, SOME SAND AND CLAY GREY, MOIST	250 ppm	TP232-7	3.2	BTEX/F1-F4

Stratigraphy		Sample Date			
Depth (m)	Soil Description	CSV	I.D.	Depth (m)	Lab Analysis/ Comments
0-0.9	SAND, GRAVEL, SOME SILT, VARIOUS DEBRIS (OLD TIRE, WIRES) BROWN, MOIST	10 ppm	1	0.15	
		20 ppm	2	0.6	
0.9-2.7	FINE SAND, SILTY BROWN, MOIST - BECOMES GREY AND WET AT 2.1 mbg - FINE TO COARSE SAND AT 2.4 mbg	15 ppm	3	1.2	
		20 ppm	4	1.8	
		40 ppm	5	2.1	
		265 ppm	TP233-6	2.4	BTEX/F1-F4
2.7-2.9	SILT, SOME CLAY, FINE TO COARSE GRAVEL AND SAND GREY, MOIST	10 ppm	TP233-7	2.9	BTEX/F1-F4

Stratigraphy		Sample Date			
Depth (m)	Soil Description	CSV	I.D.	Depth (m)	Lab Analysis/ Comments
0-0.08	ASPHALT	-	-	-	
0.08-0.2	SAND, GRAVEL, SOME SILT (SUBGRADE) BROWN, MOIST	10 ppm	1	0.15	
0.2-2.3	FINE SAND, SILTY, SOME FINE TO COARSE GRAVEL BROWN, MOIST - SEAM OF ORGANIC MATERIAL AT 2.1 mbg	10 ppm	2	0.6	
		10 ppm	3	1.2	
		10 ppm	4	1.8	
		15 ppm	5	2.1	
2.3-3.1	SAND AND SILT, TRACE ORGANICS BROWN, WET	20 ppm	TP234-6	2.6	BTEX/F1-F4
3.1-3.2	SILT, SOME CLAY, SAND, FINE TO COARSE GRAVEL AND BOULDERS GREY, VERY MOIST	<10 ppm	7	3.2	

Stratigraphy		Sample Date			
Depth (m)	Soil Description	CSV	I.D.	Depth (m)	Lab Analysis/ Comments
0-0.08	ASPHALT	-	-	-	
0.08-0.2	CRUSHED LIMESTONE (SUBGRADE)	-	-	-	
0.2-0.5	SAND, GRAVEL, SOME SILT AND ORGANICS (ROOTS) BROWN, MOIST	<10 ppm	1	0.3	
0.5-2.3	FINE SAND, SILTY BROWN, MOIST	15 ppm	2	0.6	
		<10 ppm	3	1.2	
		<10 ppm	4	1.8	
2.3-2.9	FINE SAND, SILTY, SOME FINE TO COARSE GRAVEL BROWN, SATURATED	10 ppm	TP235-5	2.4	BTEX/F1-F4
2.9-3.2	SILT, SOME FINE TO COARSE GRAVEL, COBBLES, CLAY AND SAND GREY, MOIST	10 ppm	6	3.1	

Stratigraphy		Sample Date			
Depth (m)	Soil Description	CSV	I.D.	Depth (m)	Lab Analysis/ Comments
0-0.1	CRUSHED LIMESTONE	-	-	-	
0.1-0.5	FINE TO MEDIUM SAND, SILTY, SOME FINE TO COARSE GRAVEL, TRACE ORGANICS (ROOTS) BROWN, MOIST	<10 ppm	1	0.3	
0.5-2.7	FINE SAND, SILTY, TRACE COARSE GRAVEL BROWN, MOIST	<10 ppm	2	0.6	
		<10 ppm	3	1.2	
		10 ppm	4	1.8	
	- BECOMES VERY MOIST AT 1.8 mbg	330 ppm	TP236-5	2.1	BTEX/F1-F4
		210 ppm	6	2.7	
2.7-2.9	FINE SAND, SILTY, SOME FINE TO COARSE GRAVEL BROWN, GREY, WET	15 ppm	TP236-7	2.9	BTEX/F1-F4

Stratigraphy		Sample Date			
Depth (m)	Soil Description	CSV	I.D.	Depth (m)	Lab Analysis/ Comments
0-0.2	CRUSHED LIMESTONE	10 ppm	1	0.15	
0.2-2.4	FINE SAND, SILTY BROWN, MOIST - TRACE GRAVEL AT 1.8 mbg - BECOMES GREY AND WET	<10 ppm	2	0.6	
		<10 ppm	3	1.2	
		10 ppm	4	1.8	
		40 ppm	TP237-5	2.1	BTEX/F1-F4
2.4-2.9	FINE TO COARSE SAND, FINE TO COARSE GRAVEL, SOME SILT GREY, WET - SOME FINE TO COARSE GRAVEL AT 2.9 mbg	35 ppm	6	2.7	
		65 ppm	TP237-7	2.9	BTEX/F1-F4

Stratigraphy		Sample Date			
Depth (m)	Soil Description	CSV	I.D.	Depth (m)	Lab Analysis/ Comments
0-0.13	ASPHALT	-	-	-	
0.13-0.3	FINE TO COARSE SAND, FINE TO COARSE GRAVEL, SOME SILT, TRACE CLAY AND ORGANICS BROWN, MOIST	10 ppm	1	0.2	
0.3-2.7	FINE SAND, SILTY, TRACE FINE TO COARSE GRAVEL BROWN, MOIST - SEAM OF ORGANIC MATERIAL AT 2.6 mgb	15 ppm	2	0.6	
		15 ppm	3	1.2	
		15 ppm	4	1.8	
		30 ppm	TP238-5	2.6	TP238-5
2.7-2.9	SILT, SOME FINE TO COARSE GRAVEL, CLAY AND SAND GREY, MOIST	<10 ppm	6	2.7	

Stratigraphy		Sample Date			
Depth (m)	Soil Description	CSV	I.D.	Depth (m)	Lab Analysis/ Comments
0-0.05	ASPHALT	-	-	-	
0.05-0.25	GRANULAR MATERIA (SUBGRADE)	10 ppm	1	0.15	
0.25-2.7	FINE SAND, SILTY, SOME FINE TO COARSE GRAVEL BROWN, MOIST - BECOMES GREY AND WET AT 2.3 mbg - COBBLES AND BOULDERS AT 2.7 mbg	20 ppm	2	0.6	
		15 ppm	3	1.2	
		10 ppm	4	1.8	
		55 ppm	TP239-5	2.3	BTEX/F1-F4
		15 ppm	TP239-6	2.7	BTEX/F1-F4

Stratigraphy		Sample Date			
Depth (m)	Soil Description	CSV	I.D.	Depth (m)	Lab Analysis/ Comments
0-0.3	SAND, SILT, GRAVEL, ASPHALT DEBRIS BROWN, VERY MOIST	<10 ppm	1	0.15	
0.3-2.3	FINE SAND, SILTY DARK BROWN TO BROWN - TRACE FINE TO COARSE GRAVEL AT 0.6 mbg - BECOMES GREY AND WET AT 2.1 mbg	15 ppm	2	0.6	
		10 ppm	3	1.2	
		20 ppm	4	1.8	
		30 ppm	TP240-5	2.1	BTEX/F1-F4
2.3-2.9	FINE TO COARSE SAND, SILTY, SOME FINE TO COARSE GRAVEL GREY, WET	15 ppm	TP240-6	2.9	BTEX/F1-F4

Stratigraphy		Sample Date			
Depth (m)	Soil Description	CSV	I.D.	Depth (m)	Lab Analysis/ Comments
0-0.08	ASPHALT	-	-	-	
0.08-0.5	SAND, SILT, GRAVEL, SOME CLAY (FILL) BROWN, MOIST	15 ppm	1	0.3	
0.5-2.4	FINE SAND, SILTY DARK BROWN TO BROWN, MOIST - TRACE GRAVEL AND ORGANIC MATTER VERY MOIST AT 2.1 mbg	35 ppm	2	0.6	
		15 ppm	3	1.2	
		20 ppm	4	1.8	
		20 ppm	5	2.1	
		20 ppm	TP241-6	2.4	BTEX/F1-F4
2.5-2.6	SILT, GRAVEL, SOME SAND AND CLAY GREY, WET	10 ppm	7	2.6	

Stratigraphy		Sample Date			
Depth (m)	Soil Description	CSV	I.D.	Depth (m)	Lab Analysis/ Comments
0-0.08	ASPHALT	-	-	-	
0.08-0.3	FINE SAND, SILTY, SOME FINE TO COARSE GRAVEL BROWN, MOIST	15 ppm	1	0.2	
0.3-2.1	FINE SAND, SILTY BROWN, MOIST	25 ppm	2	0.6	
		20 ppm	3	1.2	
		15 ppm	4	1.8	
2.1-2.6	FINE TO COARSE SAND, SOME SILT AND FINE TO COARSE GRAVEL GREY, WET	15 ppm	TP242-5	2.1	BTEX/F1-F4
		10 ppm	6	2.6	

Stratigraphy		Sample Date			
Depth (m)	Soil Description	CSV	I.D.	Depth (m)	Lab Analysis/ Comments
0-0.08	ASPHALT	-	-	-	
0.08-0.25	SAND, GRAVEL, SOME SILT BROWN, MOIST	-	-	-	
0.25-0.3	ASPHALT	-	-	-	
0.3-0.6	FINE SAND, SILTY, SOME COARSE GRAVEL BROWN, MOIST	15 ppm	1	0.3	
		30 ppm	2	0.6	
0.6-2.6	FINE SAND, SILTY BROWN, MOIST TO VERY MOIST	15 ppm	3	1.2	
		20 ppm	4	1.8	
	- BECOMES GREY AND WET AT 2.4 mbg	20 ppm	TP243-5	2.4	BTEX/F1-F4
2.6-2.7	FINE SAND, SILTY, SOME COARSE GRAVEL AND COBBLES GREY, WET	15 ppm	6	2.7	

Stratigraphy		Sample Date			
Depth (m)	Soil Description	CSV	I.D.	Depth (m)	Lab Analysis/ Comments
0-0.1	CRUSHED LIMESTONE	-	-	-	
0.1-1.5	FINE SAND, SILTY, SOME FINE TO COARSE GRAVEL BROWN, MOIST	<10 ppm	1	0.15	
		<10 ppm	2	0.6	
		<10 ppm	3	1.2	
1.5-2.4	FINE SAND, SILTY, TRACE FINE GRAVEL BROWN TO GREY, VERY MOIST TO WET	<10 ppm	4	1.8	
		25 ppm	TP244-5	2.1	BTEX/F1-F4
2.4-2.7	FINE SAND, SILTY, SOME FINE TO COARSE GRAVEL GREY, WET	10 ppm	6	2.7	

RECORD OF : MW101

PROJECT LOCATION : **121 HUME STREET
COLLINGWOOD, ONTARIO**
CLIENT : **SUNCOR ENERGY PRODUCTS INC.**

PROJECT NUMBER : **CT1539.1**
BORING DATE : **AUGUST 7, 2007**
TYPE OF AUGER : **HOLLOW STEM**
TYPE OF RIG : **CME75 - TRUCK MOUNTED**

SHEET 1 OF 1



SOIL PROFILE				SAMPLES					CSV (ppm or %LEL - if indicated)	ODOUR	LABORATORY TESTING	PIEZOMETER OR MONITORING WELL INSTALLATION	
METRES	STRATA PLOT	DESCRIPTION	FEET	LOCATION	NUMBER	TYPE	% RECOVERY	SPT (n)				METRES	FEET
1			4									4	
			3									3	
			2									2	
			1									1	
0		GROUND SURFACE	0									0	
		ASPHALT											
		COARSE SAND AND GRAVEL			1	SS	45	11	35	NONE			
		BROWN, MOIST, COMPACT	1										1
		COARSE SAND, TRACE WOOD CHIPS	2										2
		BROWN TO DARK BROWN, MOIST,											
		COMPACT	3										3
1		COARSE SAND			2	SS	60	15	20	NONE			
		LIGHT BROWN, MOIST, COMPACT	4										4
			5										5
			6		3A	SS	60	14	90	NONE			6
2		COARSE TO MEDIUM SAND, SOME			3B				90% LEL	STRONG HC			
		GRAVEL	7										7
		GREY, WET, COMPACT											
		- TRACE TO SOME SILT	8		4	SS	60	32	40	SLIGHT HC			8
		DENSE	9										9
3		- VERY DENSE			5	SS	5	50/3"	35	VERY SLIGHT HC			
		BOTTOM OF BOREHOLE	10										10
		REFUSAL (BEDROCK)	11										11
			12										12
4			13										13
			14										14
			15										15
5			16										16
			17										17
			18										18
			19										19
6			20										20
			21										21
			22										22
7			23										23
			24										24
			25										25
8			26										26
			27										27
			28										28
9			29										29
			30										30
			31										31
			32										32
10													

LOGGED BY: LC

INPUT BY: LC

CHECKED BY:

INPUT DATE: AUGUST 21, 2007

RECORD OF : MW102

PROJECT LOCATION : 121 HUME STREET
 COLLINGWOOD, ONTARIO
 CLIENT : SUNCOR ENERGY PRODUCTS INC.

PROJECT NUMBER : CT1539.1
 BORING DATE : AUGUST 7, 2007
 TYPE OF AUGER : HQ CORE BARREL
 TYPE OF RIG : CME75 - TRUCK MOUNTED

SHEET 1 OF 1



SOIL PROFILE				SAMPLES					CSV (ppm or %LEL - if indicated)	ODOUR	LABORATORY TESTING	PIEZOMETER OR MONITORING WELL INSTALLATION	
METRES	STRATA PLOT	DESCRIPTION	FEET	LOCATION	NUMBER	TYPE	% RECOVERY	SPT (n)				METRES	FEET
1			4									4	4
			3									3	3
			2									2	2
			1									1	1
0		GROUND SURFACE	0									0	0
		ASPHALT											
		COARSE SAND AND GRAVEL, SOME ASPHALT FRAGMENTS	1		1	SS	35	16	35	NONE			1
		BROWN, MOIST, COMPACT	2										2
1		COARSE SAND, SOME GRAVEL	3		2	SS	50	7	35	NONE			3
		BROWN, MOIST, LOOSE	4										4
		COARSE SAND	5										5
		BROWN, MOIST, COMPACT	6		3	SS	60	18	25	NONE			6
2		- TRACE GRAVEL AND COBBLE	7										7
		GREY, WET, VERY DENSE	8		4	SS	60	50/5"	60	SLIGHT HC			8
		SILTY FINE SAND, TRACE GRAVEL	9										9
		GREY, WET, VERY DENSE	10		5	RC	-	-	-	-			10
3		LIGHT GREY UNFRACTURED COMPETENT LIMESTONE	11										11
			12										12
			13		6	RC	-	-	-	-			13
4			14										14
			15										15
			16		7	RC	-	-	-	-			16
5			17										17
		BOTTOM OF BOREHOLE	18										18
			19										19
6			20										20
			21										21
			22										22
7			23										23
			24										24
			25										25
8			26										26
			27										27
			28										28
9			29										29
			30										30
			31										31
10			32										32

LOGGED BY: LC

INPUT BY: LC

CHECKED BY:

INPUT DATE: AUGUST 21, 2007

RECORD OF : MW103

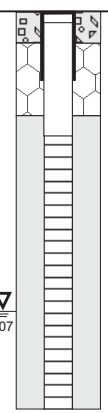
PROJECT LOCATION : **121 HUME STREET
COLLINGWOOD, ONTARIO**
CLIENT : **SUNCOR ENERGY PRODUCTS INC.**

PROJECT NUMBER : **CT1539.1**
BORING DATE : **AUGUST 8, 2007**
TYPE OF AUGER : **HOLLOW STEM**
TYPE OF RIG : **CME75 - TRUCK MOUNTED**

SHEET 1 OF 1



SOIL PROFILE				SAMPLES					CSV (ppm or %LEL - if indicated)	ODOUR	LABORATORY TESTING	PIEZOMETER OR MONITORING WELL INSTALLATION	
METRES	STRATA PLOT	DESCRIPTION	FEET	LOCATION	NUMBER	TYPE	% RECOVERY	SPT (n)				METRES	FEET
1			4									4	4
			3									3	3
			2									2	2
			1									1	1
0		GROUND SURFACE	0									0	0
		ASPHALT											
		COARSE SAND AND GRAVEL, TRACE ROCK FRAGMENTS	1		1	SS	20	26	10	NONE			1
		BROWN, MOIST, COMPACT	2										2
1		COARSE SAND, TRACE GRAVEL	3		2	SS	40	4	40	NONE		1	3
		BROWN, MOIST, VERY LOOSE	4										4
			5										5
		COARSE SAND	6		3	SS	55	19	75	NONE		2	6
2		BROWN, MOIST, COMPACT	7										7
			8										8
		- TRACE TO SOME SILT, TRACE GRAVEL	9		4A	SS	60	25	40	NONE			9
		WET	10		4B				40	NONE			10
3		SILTY SAND, TRACE GRAVEL											
		GREY, WET, COMPACT											
		BOTTOM OF BOREHOLE											
		REFUSAL (BEDROCK)											
			11										11
			12										12
			13										13
			14										14
			15										15
			16										16
5			17									5	17
			18										18
			19										19
			20									6	20
			21										21
			22										22
			23									7	23
			24										24
			25										25
			26									8	26
			27										27
			28										28
			29										29
			30									9	30
			31										31
			32										32
10												10	

LOGGED BY: **LC**INPUT BY: **LC**

CHECKED BY:

INPUT DATE: **AUGUST 21, 2007**

RECORD OF : MW104

PROJECT LOCATION : 121 HUME STREET
 COLLINGWOOD, ONTARIO
 CLIENT : SUNCOR ENERGY PRODUCTS INC.

PROJECT NUMBER : CT1539.1
 BORING DATE : AUGUST 8, 2007
 TYPE OF AUGER : HOLLOW STEM
 TYPE OF RIG : CME75 - TRUCK MOUNTED

SHEET 1 OF 1



SOIL PROFILE				SAMPLES					CSV (ppm or %LEL - if indicated)	ODOUR	LABORATORY TESTING	PIEZOMETER OR MONITORING WELL INSTALLATION	
METRES	STRATA PLOT	DESCRIPTION	FEET	LOCATION	NUMBER	TYPE	% RECOVERY	SPT (n)				METRES	FEET
1			4									4	
			3									3	
			2									2	
			1									1	
0		GROUND SURFACE	0									0	
		VEGETATION											
		COARSE SAND, TRACE TO SOME GRAVEL, TRACE ORGANICS	1		1	SS	20	10	40	NONE			1
		BROWN, MOIST, LOOSE	2										2
1			3		2	SS	40	8	20	NONE			3
			4										4
		- DARK BROWN, MOIST	5										5
			6		3	SS	5	5	10	NONE			6
2			7										7
		- WET, DENSE	8		4A	SS	75	31	50	NONE			8
		SILTY FINE TO MEDIUM SAND, TRACE GRAVEL, TRACE TO SOME ROCK FRAGMENTS	9		4B				35	SLIGHT HC			9
3		GREY, WET, VERY DENSE	10		5	SS	10	50/1"	45	SLIGHT HC			10
		BOTTOM OF BOREHOLE REFUSAL (BEDROCK)	11										11
			12										12
4			13										13
			14										14
			15										15
5			16										16
			17										17
			18										18
			19										19
6			20										20
			21										21
			22										22
7			23										23
			24										24
			25										25
8			26										26
			27										27
			28										28
9			29										29
			30										30
			31										31
			32										32
10													

LOGGED BY : LC

INPUT BY : LC

CHECKED BY :

INPUT DATE : AUGUST 21, 2007

RECORD OF : MW105

PROJECT LOCATION : 121 HUME STREET
 COLLINGWOOD, ONTARIO
 CLIENT : SUNCOR ENERGY PRODUCTS INC.

PROJECT NUMBER : CT1539.1
 BORING DATE : AUGUST 8, 2007
 TYPE OF AUGER : HOLLOW STEM
 TYPE OF RIG : CME75 - TRUCK MOUNTED

SHEET 1 OF 1



SOIL PROFILE				SAMPLES					CSV (ppm or %LEL - if indicated)	ODOUR	LABORATORY TESTING	PIEZOMETER OR MONITORING WELL INSTALLATION	
METRES	STRATA PLOT	DESCRIPTION	FEET	LOCATION	NUMBER	TYPE	% RECOVERY	SPT (n)				METRES	FEET
1			4									4	4
			3									3	3
			2									2	2
			1									1	1
0		GROUND SURFACE	0									0	0
		VEGETATION											
		COARSE SAND, SOME GRAVEL, SOME ORGANICS, TRACE GLASS FRAGMENTS	1		1	SS	40	16	25	NONE			1
		BROWN, MOIST, COMPACT	2										2
1		COARSE SAND, TRACE GRAVEL	3		2	SS	50	14	30	NONE			3
		BROWN TO DARK BROWN, MOIST, COMPACT	4										4
		- TRACE ORGANICS	5										5
2			6		3	SS	60	15	205	NONE			6
			7										7
		- GREY, WET, DENSE	8		4	SS	20	33	75	SLIGHT HC			8
			9										9
3		SILTY FINE TO MEDIUM SAND, TRACE ROCK FRAGMENTS	10		5	SS	60	27	30	SLIGHT HC			10
		GREY, WET, COMPACT	11										11
			12										12
4			13		6	SS	15	50/2"	20	NONE			13
			14										14
		BOTTOM OF BOREHOLE REFUSAL (BEDROCK)	15										15
5			16										16
			17										17
			18										18
			19										19
6			20										20
			21										21
			22										22
7			23										23
			24										24
			25										25
8			26										26
			27										27
			28										28
9			29										29
			30										30
			31										31
			32										32
10													

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CHECKED BY :

INPUT DATE : AUGUST 21, 2007

RECORD OF : MW106

PROJECT LOCATION : 121 HUME STREET
 COLLINGWOOD, ONTARIO
 CLIENT : SUNCOR ENERGY PRODUCTS INC.

PROJECT NUMBER : CT1539.1
 BORING DATE : AUGUST 7, 2007
 TYPE OF AUGER : HQ CORE BARREL
 TYPE OF RIG : CME75 - TRUCK MOUNTED

SHEET 1 OF 1



SOIL PROFILE				SAMPLES					CSV (ppm or %LEL - if indicated)	ODOUR	LABORATORY TESTING	PIEZOMETER OR MONITORING WELL INSTALLATION	
METRES	STRATA PLOT	DESCRIPTION	FEET	LOCATION	NUMBER	TYPE	% RECOVERY	SPT (n)				METRES	FEET
1			4									4	4
			3									3	3
			2									2	2
			1									1	1
0		GROUND SURFACE	0									0	0
		ASPHALT											
		COARSE SAND, TRACE TO SOME GRAVEL, TRACE COBBLE	1		1	SS	40	11	30	NONE			1
		BROWN, MOIST, COMPACT	2										2
1		COARSE SAND, TRACE ORGANICS	3		2	SS	60	10	25	NONE			3
		BROWN, MOIST, COMPACT	4										4
		COARSE SAND	5										5
		BROWN, MOIST, COMPACT	6		3	SS	50	13	110	NONE			6
2			7										7
		- GREY, SATURATED	8		4	SS	80	27	335	MODERATE HC			8
			9										9
3		SILTY FINE SAND, TRACE ROCK FRAGMENTS	10		5	SS	55	47	35	NONE			10
		GREY, WET, DENSE	11										11
			12										12
4		- VERY DENSE	13		6	SS	10	50/2"	15	NONE			13
			14										14
		LIGHT GREY UNFRACTURED COMPETENT LIMESTONE	15										15
5			16										16
			17		7	RC	-	-	-	-			17
			18										18
			19										19
6			20		8	RC	-	-	-	-			20
			21										21
		BOTTOM OF BOREHOLE	22										22
7			23										23
			24										24
			25										25
8			26										26
			27										27
			28										28
9			29										29
			30										30
			31										31
			32										32

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CHECKED BY :

INPUT DATE : AUGUST 21, 2007

RECORD OF : MW107

PROJECT LOCATION : 121 HUME STREET
 COLLINGWOOD, ONTARIO
 CLIENT : SUNCOR ENERGY PRODUCTS INC.

PROJECT NUMBER : CT1539.1
 BORING DATE : AUGUST 8, 2007
 TYPE OF AUGER : HOLLOW STEM
 TYPE OF RIG : CME75 - TRUCK MOUNTED

SHEET 1 OF 1



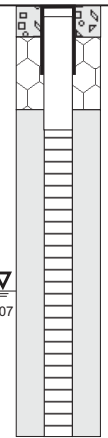
SOIL PROFILE				SAMPLES					CSV (ppm or %LEL - if indicated)	ODOUR	LABORATORY TESTING	PIEZOMETER OR MONITORING WELL INSTALLATION	
METRES	STRATA PLOT	DESCRIPTION	FEET	LOCATION	NUMBER	TYPE	% RECOVERY	SPT (n)				METRES	FEET
1			4									4	
			3									3	
			2									2	
			1									1	
0		GROUND SURFACE	0									0	
		ASPHALT											
		COARSE SAND AND GRAVEL, SOME ASPHALT FRAGMENTS	1		1	SS	5	4	15	NONE			1
		BROWN, MOIST, VERY LOOSE	2										2
1		COARSE SAND	3		2	SS	50	6	30	NONE			3
		BROWN TO DARK BROWN, MOIST, LOOSE	4										4
		- COMPACT	5										5
2			6		3	SS	45	16	100	NONE			6
		- GREY, WET	7										7
			8		4	SS	50	17	500	MODERATE HC			8
3			9										9
		SILTY SAND, TRACE ROCK FRAGMENTS	10		5	SS	3	503"	10	NONE			10
		GREY, MOIST, COMPACT	11										11
		BOTTOM OF BOREHOLE REFUSAL (BEDROCK)	12										12
4			13										13
			14										14
5			15										15
			16										16
			17										17
			18										18
6			19										19
			20										20
			21										21
			22										22
7			23										23
			24										24
			25										25
			26										26
8			27										27
			28										28
			29										29
9			30										30
			31										31
			32										32
10													

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INPUT DATE: AUGUST 21, 2007



RECORD OF : BH108

PROJECT LOCATION : **121 HUME STREET
COLLINGWOOD, ONTARIO**
CLIENT : **SUNCOR ENERGY PRODUCTS INC.**

PROJECT NUMBER : **CT1539.1**
BORING DATE : **AUGUST 8, 2007**
TYPE OF AUGER : **SPLIT SPOON**
TYPE OF RIG : **PIONJAR**

SHEET 1 OF 1



SOIL PROFILE				SAMPLES					CSV (ppm or %LEL - if indicated)	ODOUR	LABORATORY TESTING	PIEZOMETER OR MONITORING WELL INSTALLATION	
METRES	STRATA PLOT	DESCRIPTION	FEET	LOCATION	NUMBER	TYPE	% RECOVERY	SPT (n)				METRES	FEET
1			4									4	4
			3									3	3
			2									2	2
			1									1	1
0		GROUND SURFACE	0									0	0
		CONCRETE											
		COARSE SAND AND GRAVEL, TRACE ROCK FRAGMENTS BROWN, MOIST	1		1	SS	60	-	15	NONE		1	1
1		COARSE SAND BROWN, MOIST	2		2	SS	60	-	<10	NONE		2	2
			3									3	3
			4									4	4
			5									5	5
2			6		3	SS	80	-	65	SLIGHT HC		6	6
			7									7	7
		- DARK GREY TO BLACK, WET	8		4	SS	70	-	>100% LEL	STRONG HC		8	8
			9		5	SS	60	-	50	SLIGHT HC		9	9
3		BOTTOM OF BOREHOLE	10									10	10
			11									11	11
			12									12	12
4			13									13	13
			14									14	14
			15									15	15
			16									16	16
5			17									17	17
			18									18	18
			19									19	19
6			20									20	20
			21									21	21
			22									22	22
7			23									23	23
			24									24	24
			25									25	25
8			26									26	26
			27									27	27
			28									28	28
9			29									29	29
			30									30	30
			31									31	31
			32									32	32
10													

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INPUT DATE: **AUGUST 21, 2007**

RECORD OF: BH208PROJECT NO: **CB644.00**CLIENT: **SUNCOR ENERGY PRODUCTS PARTNERSHIP**ADDRESS LINE 1: **121 HUME STREET**CITY / PROVINCE: **COLLINGWOOD, ONTARIO**BORING DATE: **AUGUST 23, 2012**TYPE OF AUGER: **HOLLOW**TYPE OF RIG: **CME-75 TRUCK MOUNTED**CONTRACTOR: **PONTIL DRILLING**

VAPOUR MONITOR:

BOREHOLE DIAMETER: **200 mm**

WELL DIAMETER: -

PIPE SCHEDULE: -

SCREEN SLOT #: -

SCREEN LENGTH: -

RISER LENGTH: -

SAND TYPE: -

SEALANT TYPE: **BENTONITE**

SUBSURFACE PROFILE			SAMPLE						Piezometer or Monitoring Well Installation	
Depth	Strataplot	Description	Elevation	Number	Type	% Recovery	SPT (n)	SV (ppm or %LEL - if applicable)		Laboratory Testing
0 ft 0 m		Ground Surface	0.00							
1		ASPHALT	-0.37							
2		MEDIUM SAND, COARSE GRAVEL, SOME SILT, TRACE ASPHALT DEBRIS BROWN, MOIST, LOOSE		1	SS	90	8			
3		FINE SAND, SOME SILT BROWN, MOIST, LOOSE TO COMPACT		2	SS	65	7			
4		- BECOMES GREY AND WET TO SATURATED AT 1.9 m.								
5										
6			3	SS	80	17		VOCs/F1-F4		
7										
8			-2.51							
9		SILT, SOME FINE TO COARSE GRAVEL, TRACE TO SOME FINE SAND, TRACE CLAY	-2.90	4	SS	90	27			
10		GREY, MOIST, COMPACT								
11		END OF BOREHOLE (REFUSAL)								
12										
13										
14										
15										
16										
17										
18										
19										
20										
21										
22										
23										
24										
25										

LOGGED BY: **SS**INPUT BY: **SS**CHECKED BY: **PJS**INPUT DATE: **AUGUST 31, 2012**

RECORD OF: BH209PROJECT NO: **CB644.00**CLIENT: **SUNCOR ENERGY PRODUCTS PARTNERSHIP**ADDRESS LINE 1: **121 HUME STREET**CITY / PROVINCE: **COLLINGWOOD, ONTARIO**BORING DATE: **AUGUST 23, 2012**TYPE OF AUGER: **HOLLOW**TYPE OF RIG: **CME-75 TRUCK MOUNTED**CONTRACTOR: **PONTIL DRILLING**

VAPOUR MONITOR:

BOREHOLE DIAMETER: -

WELL DIAMETER: -

PIPE SCHEDULE: -

SCREEN SLOT #: -

SCREEN LENGTH: -

RISER LENGTH: -

SAND TYPE: -

SEALANT TYPE: **BENTONITE**

SUBSURFACE PROFILE			SAMPLE						Laboratory Testing	Piezometer or Monitoring Well Installation
Depth	Strataplot	Description	Elevation	Number	Type	% Recovery	SPT (n)	SV (ppm or %LEL - if applicable)		
0 ft 0 m		Ground Surface	0.00							
1		ASPHALT	-0.30							
2		SUBGRADE (SAND, SILT) BROWN, MOIST		1	AU	0	8			
3		SILT, FINE SAND, TRACE TO SOME SILT BROWN, MOIST, FIRM	-0.76							
4		FINE SAND, SOME SILT BROWN, MOIST, LOOSE		2	SS	85	5			
5										
6		- BECOMES WET TO SATURATED AT 1.7 m		3	SS	80	8		BTEX/F1-F4	
7										
8				4	SS	70	5		PAHs/pH	
9		END OF BOREHOLE (REFUSAL)	-2.74							
10										
11										
12										
13										
14										
15										
16										
17										
18										
19										
20										
21										
22										
23										
24										
25										

LOGGED BY: **SS**INPUT BY: **SS**CHECKED BY: **PJS**INPUT DATE: **AUGUST 31, 2012**

RECORD OF: BH210PROJECT NO: **CB644.00**CLIENT: **SUNCOR ENERGY PRODUCTS PARTNERSHIP**ADDRESS LINE 1: **121 HUME STREET**CITY / PROVINCE: **COLLINGWOOD, ONTARIO**BORING DATE: **AUGUST 23, 2012**TYPE OF AUGER: **HOLLOW**TYPE OF RIG: **CME-75 TRUCK MOUNTED**CONTRACTOR: **PONTIL DRILLING**

VAPOUR MONITOR:

BOREHOLE DIAMETER: -

WELL DIAMETER: -

PIPE SCHEDULE: -

SCREEN SLOT #: -

SCREEN LENGTH: -

RISER LENGTH: -

SAND TYPE: -

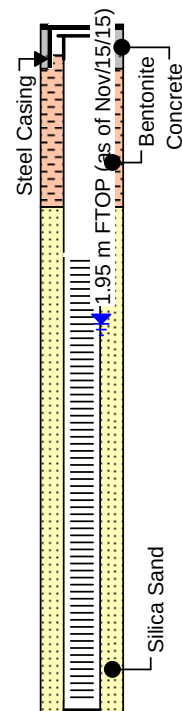
SEALANT TYPE: **BENTONITE**

SUBSURFACE PROFILE			SAMPLE						Laboratory Testing	Piezometer or Monitoring Well Installation
Depth	Strataplot	Description	Elevation	Number	Type	% Recovery	SPT (n)	SV (ppm or %LEL - if applicable)		
0 ft 0 m		Ground Surface	0.00							
1		ASPHALT SAND, SOME SILT AND GRAVEL, TRACE ASPHALT DEBRIS DARK BROWN TO DARK GREY, MOIST, LOOSE	-0.38	1	AU	100	4			
2		FINE SAND, SOME SILT BROWN, MOIST, LOOSE		2	SS	90	9			
3										
4										
5		- BECOMES COMPACT AND VERY MOIST TO SATURATED AT 1.6 m								
6		- 0.5 cm LAYER OF ROTTEN WOOD AT 1.8 m		3	SS	90	14		BTEX/F1-F4	
7										
8			-2.44	4	SS	0	5			
9		END OF BOREHOLE (REFUSAL)								
10										
11										
12										
13										
14										
15										
16										
17										
18										
19										
20										
21										
22										
23										
24										
25										

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RECORD OF: MW201PROJECT NO: **CB644.00**CLIENT: **SUNCOR ENERGY PRODUCTS PARTNERSHIP**ADDRESS LINE 1: **121 HUME STREET**CITY / PROVINCE: **COLLINGWOOD, ONTARIO**BORING DATE: **AUGUST 22, 2012**TYPE OF AUGER: **HOLLOW/AIR HAMMER**TYPE OF RIG: **CME-75 TRUCK MOUNTED**CONTRACTOR: **PONTIL DRILLING**VAPOUR MONITOR: **RKI EAGLE**BOREHOLE DIAMETER: **200 mm**WELL DIAMETER: **50 mm**PIPE SCHEDULE: **40**SCREEN SLOT #: **10**SCREEN LENGTH: **3.0 m**RISER LENGTH: **1.5**SAND TYPE: **#2 SILICA SAND**SEALANT TYPE: **BENTONITE**

SUBSURFACE PROFILE			SAMPLE						Laboratory Testing	Piezometer or Monitoring Well Installation
Depth	Strataplot	Description	Elevation	Number	Type	% Recovery	SPT (n)	SV (ppm or %LEL - if applicable)		
0		Ground Surface	0.00							
1		FINE TO MEDIUM SAND, SILTY, SOME TO TRACE FINE TO COARSE GRAVEL BROWN, MOIST TO WET, VERY LOOSE		1	SS	40	8			
2										
3				2	SS	80	9			
4		CLAY, SILTY BROWN, VERY MOIST, SOFT								
5										
6				3	SS	60	5			
7		BEDROCK								
8			-2.44	4	SS	100	50		BTEX/F1-F4	
9		END OF BOREHOLE								
10										
11										
12										
13										
14										
15			-4.57							
16										
17										
18										
19										
20										
21										
22										
23										
24										
25										

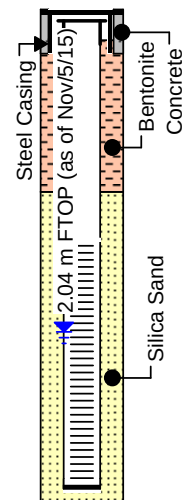
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RECORD OF: MW202PROJECT NO: **CB644.00**CLIENT: **SUNCOR ENERGY PRODUCTS PARTNERSHIP**ADDRESS LINE 1: **121 HUME STREET**CITY / PROVINCE: **COLLINGWOOD, ONTARIO**BORING DATE: **AUGUST 22, 2012**TYPE OF AUGER: **HOLLOW**TYPE OF RIG: **CME-75 TRUCK MOUNTED**CONTRACTOR: **PONTIL DRILLING**

VAPOUR MONITOR:

BOREHOLE DIAMETER: **200 mm**WELL DIAMETER: **50 mm**PIPE SCHEDULE: **40**SCREEN SLOT #: **10**SCREEN LENGTH: **1.5 m**RISER LENGTH: **1.5**SAND TYPE: **#2 SILICA SAND**SEALANT TYPE: **BENTONITE**

SUBSURFACE PROFILE			SAMPLE						Laboratory Testing	Piezometer or Monitoring Well Installation
Depth	Strataplot	Description	Elevation	Number	Type	% Recovery	SPT (n)	SV (ppm or %LEL - if applicable)		
0 ft 0 m		Ground Surface	0.00							
1		FINE TO MEDIUM SAND, SILT, TRACE TO SOME ORGANICS BROWN, MOIST, LOOSE		1	SS	60	4			
2			-0.76							
3		FINE TO MEDIUM SAND, SILTY BROWN, MOIST TO VERY MOIST, LOOSE		2	SS	70	5			
4										
5										
6				3	SS	100	9		VOCs/F1-F4	
7		- BECOMES SATURATED AT 2.1 m								
8			-2.48							
9		SILT, SOME FINE TO COARSE GRAVEL, TRACE FINE SAND AND CLAY BROWN, VERY MOIST TO MOIST, DENSE		4	SS	100	50		PAHs	
10										
11			-3.28	5	SS	100	>50			
12		END OF BOREHOLE (REFUSAL)								
13										
14										
15										
16										
17										
18										
19										
20										
21										
22										
23										
24										
25										

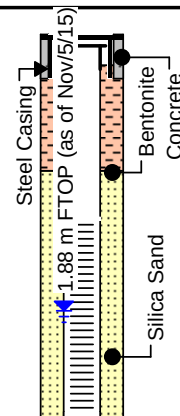
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RECORD OF: MW203PROJECT NO: **CB644.00**CLIENT: **SUNCOR ENERGY PRODUCTS PARTNERSHIP**ADDRESS LINE 1: **121 HUME STREET**CITY / PROVINCE: **COLLINGWOOD, ONTARIO**BORING DATE: **AUGUST 22, 2012**TYPE OF AUGER: **HOLLOW**TYPE OF RIG: **CME-75 TRUCK MOUNTED**CONTRACTOR: **PONTIL DRILLING**

VAPOUR MONITOR:

BOREHOLE DIAMETER: **200 mm**WELL DIAMETER: **50 mm**PIPE SCHEDULE: **40**SCREEN SLOT #: **10**SCREEN LENGTH: **1.2 m**RISER LENGTH: **1.2 m**SAND TYPE: **#2 SILICA SAND**SEALANT TYPE: **BENTONITE**

SUBSURFACE PROFILE			SAMPLE						Laboratory Testing	Piezometer or Monitoring Well Installation
Depth	Strataplot	Description	Elevation	Number	Type	% Recovery	SPT (n)	SV (ppm or %LEL - if applicable)		
0		Ground Surface	0.00							
1		FINE TO MEDIUM SAND, SILTY, SOME FINE TO COARSE GRAVEL AND CRUSHED STONE, TRACE ORGANICS (GRASS ROOTS)		1	SS	60	7			
2		BROWN, MOIST, LOOSE	-0.76							
3		FINE TO MEDIUM SAND, SILTY, TRACE FINE GRAVEL		2	SS	60	4			
4		BROWN, MOIST, LOOSE	-1.52							
5		CONCRETE/ROCK	-1.68							
6		FINE TO MEDIUM SAND, SOME SILT, TRACE FINE GRAVEL		3	SS	60	9		BTEX/F1-F4	
7		BROWN, VERY MOIST TO SATURATED, LOOSE	-2.29							
8		FINE SAND, SOME SILT, TRACE TO SOME FINE TO COARSE GRAVEL	-2.56	4	SS	100	16			
9		BROWN, SATURATED, COMPACT								
10		END OF BOREHOLE (REFUSAL)								
11										
12										
13										
14										
15										
16										
17										
18										
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LOGGED BY: **SS**INPUT BY: **SS**CHECKED BY: **PJS**INPUT DATE: **AUGUST 31, 2012**

RECORD OF: MW204PROJECT NO: **CB644.00**CLIENT: **SUNCOR ENERGY PRODUCTS PARTNERSHIP**ADDRESS LINE 1: **121 HUME STREET**CITY / PROVINCE: **COLLINGWOOD, ONTARIO**BORING DATE: **AUGUST 23, 2012**TYPE OF AUGER: **HOLLOW**TYPE OF RIG: **CME-75 TRUCK MOUNTED**CONTRACTOR: **PONTIL DRILLING**

VAPOUR MONITOR:

PIPE SCHEDULE: **40**RISER LENGTH: **1.2 m**BOREHOLE DIAMETER: **200 mm**SCREEN SLOT #: **10**SAND TYPE: **#2 SILICA SAND**WELL DIAMETER: **50 mm**SCREEN LENGTH: **1.5 m**SEALANT TYPE: **BENTONITE**

SUBSURFACE PROFILE			SAMPLE							Piezometer or Monitoring Well Installation
Depth	Strataplot	Description	Elevation	Number	Type	% Recovery	SPT (n)	SV (ppm or %LEL - if applicable)	Laboratory Testing	
0	0	Ground Surface	0.00							
1		FINE TO MEDIUM SAND, FINE TO COARSE GRAVEL/CRUSHED STONE, SOME SILT, TRACE ASPHALT DEBRIS BROWN, MOIST, COMPACT		1	SS	50	15		INORGANICS	
2			-0.76							
3	1	FINE TO MEDIUM SAND, SILTY, TRACE COARSE GRAVEL BROWN, MOIST, LOOSE		2	SS	80	6			
4										
5										
6				3	SS	60	4			
7	2									
8		- BECOMES GREY AND SATURATED AT 2.3 m	-2.44	4	SS/AU	100	>50		VOCs/F1-F4; PAHs	
9		BEDROCK/ROCK FRAGMENTS AUGERED TO 2.7 m	-2.74							
10	3	END OF BOREHOLE (REFUSAL)								
11										
12										
13	4									
14										
15										
16	5									
17										
18										
19	6									
20										
21										
22										
23	7									
24										
25										

LOGGED BY: **SS**INPUT BY: **SS**CHECKED BY: **PJS**INPUT DATE: **AUGUST 31, 2012**

RECORD OF: MW205PROJECT NO: **CB644.00**CLIENT: **SUNCOR ENERGY PRODUCTS PARTNERSHIP**ADDRESS LINE 1: **121 HUME STREET**CITY / PROVINCE: **COLLINGWOOD, ONTARIO**BORING DATE: **AUGUST 23, 2012**TYPE OF AUGER: **HOLLOW**TYPE OF RIG: **CME-75 TRUCK MOUNTED**CONTRACTOR: **PONTIL DRILLING**

VAPOUR MONITOR:

PIPE SCHEDULE: **40**RISER LENGTH: **1.2 m**BOREHOLE DIAMETER: **200 mm**SCREEN SLOT #: **10**SAND TYPE: **#2 SILICA SAND**WELL DIAMETER: **50 mm**SCREEN LENGTH: **1.7 m**SEALANT TYPE: **BENTONITE**

SUBSURFACE PROFILE			SAMPLE							Piezometer or Monitoring Well Installation
Depth	Strataplot	Description	Elevation	Number	Type	% Recovery	SPT (n)	SV (ppm or %LEL- if applicable)	Laboratory Testing	
0	0	Ground Surface	0.00							INORGANICS
0	0	FINE TO MEDIUM SAND, SILT, SOME FINE TO COARSE GRAVEL BROWN, MOIST, LOOSE		1	SS	90	6			
1	1		-0.76							
2	1	FINE TO MEDIUM SAND, SOME SILT BROWN, MOIST, LOOSE TO COMPACT		2	SS	100	8			
3	1									VOCs/F1-F4
4	1									
5	1	- BECOMES WET AT 1.6 m.								
6	2			3	SS	60	11			
7	2		-2.36							
8	2	SILT, CLAYEY, FINE TO MEDIUM SAND SOME FINE TO COARSE GRAVEL GREY, WET TO MOIST, VERY STIFF		4	SS	70	18			
9	3	END OF BOREHOLE (REFUSAL)	-2.90							
10	3									
11										
12										
13	4									
14										
15										
16	5									
17										
18										
19	6									
20										
21										
22										
23	7									
24										
25										

Steel Casing

1.68 m FTOP (as of Nov/5/15)

Bentonite Concrete

Silica Sand

LOGGED BY: **SS**INPUT BY: **SS**CHECKED BY: **PJS**INPUT DATE: **AUGUST 31, 2012**

RECORD OF: MW206PROJECT NO: **CB644.00**CLIENT: **SUNCOR ENERGY PRODUCTS PARTNERSHIP**ADDRESS LINE 1: **121 HUME STREET**CITY / PROVINCE: **COLLINGWOOD, ONTARIO**BORING DATE: **AUGUST 23, 2012**TYPE OF AUGER: **HOLLOW**TYPE OF RIG: **CME-75 TRUCK MOUNTED**CONTRACTOR: **PONTIL DRILLING**

VAPOUR MONITOR:

PIPE SCHEDULE: **40**RISER LENGTH: **1.2 m**BOREHOLE DIAMETER: **200 mm**SCREEN SLOT #: **10**SAND TYPE: **#2 SILICA SAND**WELL DIAMETER: **50 mm**SCREEN LENGTH: **1.7 m**SEALANT TYPE: **BENTONITE**

SUBSURFACE PROFILE			SAMPLE						Piezometer or Monitoring Well Installation
Depth	Strataplot	Description	Elevation	Number	Type	% Recovery	SPT (n)	SV (ppm or %LEL - if applicable)	
0		Ground Surface	0.00						
1		FINE TO MEDIUM SAND, SILTY TO SOME SILT, TRACE ORGANICS (GRASS ROOTS) AND FINE TO COARSE GRAVEL BROWN, MOIST, LOOSE		1	SS	60	7		
2									
3				2	SS	80	8		
4		- BECOMES COMPACT AND VERY MOIST TO SATURATED AT 1.6 m							BTEX/F1-F4
5									
6				3	SS	90	15		
7									
8		CRUSHED STONE	-2.36						
9									
10		SILT, SOME FINE TO MEDIUM SAND AND GRAVEL, TRACE CLAY BROWN, VERY MOIST, VERY DENSE	-2.67	4	SS	80	>50		
11		END OF BOREHOLE (REFUSAL)	-2.90						
12									
13									
14									
15									
16									
17									
18									
19									
20									
21									
22									
23									
24									
25									

LOGGED BY: **SS**INPUT BY: **SS**CHECKED BY: **PJS**INPUT DATE: **AUGUST 31, 2012**

RECORD OF: MW207PROJECT NO: **CB644.00**CLIENT: **SUNCOR ENERGY PRODUCTS PARTNERSHIP**ADDRESS LINE 1: **121 HUME STREET**CITY / PROVINCE: **COLLINGWOOD, ONTARIO**BORING DATE: **AUGUST 23, 2012**TYPE OF AUGER: **HOLLOW**TYPE OF RIG: **CME-75 TRUCK MOUNTED**CONTRACTOR: **PONTIL DRILLING**

VAPOUR MONITOR:

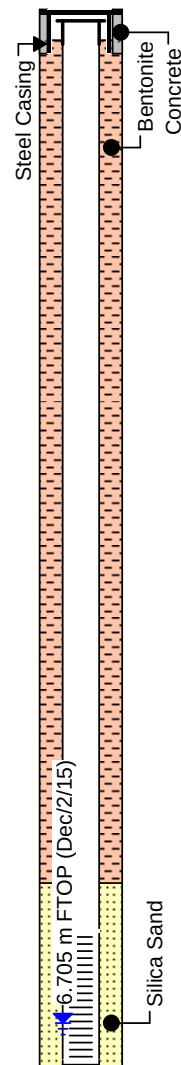
PIPE SCHEDULE: **40**RISER LENGTH: **1.5 m**BOREHOLE DIAMETER: **200 mm**SCREEN SLOT #: **10**SAND TYPE: **#2 SILICA SAND**WELL DIAMETER: **50 mm**SCREEN LENGTH: **1.8 m**SEALANT TYPE: **BENTONITE**

SUBSURFACE PROFILE			SAMPLE							Piezometer or Monitoring Well Installation
Depth	Strataplot	Description	Elevation	Number	Type	% Recovery	SPT (n)	SV (ppm or %LEL- if applicable)	Laboratory Testing	
0		Ground Surface	0.00							
0		ASPHALT								
1		FINE TO MEDIUM SAND, SILTY, TRACE GRAVEL AND ASPHALT DEBRIS		1	SS	50	5		INORGANICS, PAHs	
2		BROWN, DARK GREY SEAMS, MOIST, LOOSE	-0.76							
3		FINE SAND, SOME SILT		2	SS	60	8			
4		BROWN, MOIST, LOOSE TO COMPACT								
5		- BECOMES GREY AND VERY MOIST TO WET AT 1.6 m								
6			3	SS	60	14		VOCs/F1-F4		
7										
8										
9				4	SS	10	15			
10			-3.05							
11		SILT, SOME SAND AND GRAVEL, TRACE CLAY	-3.36	5	SS	100	>50			
12		GREY, MOIST, COMPACT								
13		END OF BOREHOLE (REFUSAL)								
14										
15										
16										
17										
18										
19										
20										
21										
22										
23										
24										
25										

LOGGED BY: **SS**INPUT BY: **SS**CHECKED BY: **PJS**INPUT DATE: **AUGUST 31, 2012**

RECORD OF: MW301PROJECT NO: **CB644.02**CLIENT: **SUNCOR ENERGY PRODUCTS PARTNERSHIP**ADDRESS LINE 1: **121 HUME STREET**CITY / PROVINCE: **COLLINGWOOD, ONTARIO**BORING DATE: **DECEMBER 1, 2015**TYPE OF AUGER: **HOLLOW/AIR HAMMER**TYPE OF RIG: **CME-75 TRUCK MOUNTED**CONTRACTOR: **PONTIL DRILLING**VAPOUR MONITOR: **RKI EAGLE 2**BOREHOLE DIAMETER: **200 mm**WELL DIAMETER: **50 mm**PIPE SCHEDULE: **40**SCREEN SLOT #: **10**SCREEN LENGTH: **1.0 m**RISER LENGTH: **6.2 m**SAND TYPE: **#2 SILICA SAND**SEALANT TYPE: **HOLEPLUG**

SUBSURFACE PROFILE			SAMPLE						Laboratory Testing	Piezometer or Monitoring Well Installation
Depth	Strataplot	Description	Elevation	Number	Type	% Recovery	SPT (n)	SV (ppm or %LEL - if applicable)		
0		Ground Surface	0.00							
1		FINE SAND, TRACE GRAVEL AND SILT, BROWN, MOIST, COMPACT		1	SS	30	11	<5 PPM		
2			-0.76							
3		FINE SAND		2	SS	40	15	<5 PPM		
4		BROWN, MOIST, COMPACT								
5			-1.52							
6		LOOSE								
7			-1.98	3	SS	30	10	<5 PPM	pH	
8		BLACK STAINING								
9			-2.35							
10		TRACE COBBLES, SOME STAINING		4	SS	50	25	<5 PPM	VOCs, PHCs	
11		BLACK TO DARK GREY, WET, COMPACT								
12			-3.05							
13		SILT, SOME SAND, TRACE COBBLES		5	SS	50	>50	<5 PPM		
14		BROWN, WET, VERY DENSE								
15			-3.51							
16		BEDROCK								
17										
18										
19										
20										
21										
22										
23			-7.01							
24		End of Borehole								
25										

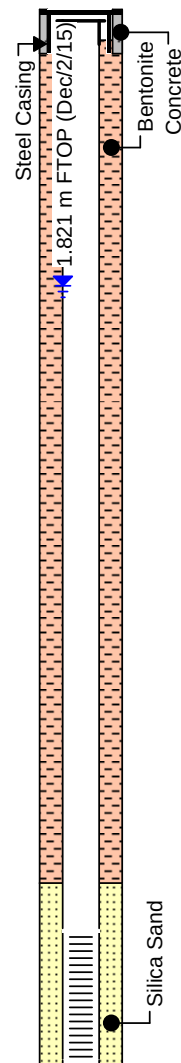
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CHECKED BY:

INPUT DATE: **DECEMBER 3, 2015**

RECORD OF: MW302PROJECT NO: **CB644.02**CLIENT: **SUNCOR ENERGY PRODUCTS PARTNERSHIP**ADDRESS LINE 1: **121 HUME STREET**CITY / PROVINCE: **COLLINGWOOD, ONTARIO**BORING DATE: **DECEMBER 1, 2015**TYPE OF AUGER: **HOLLOW/AIR HAMMER**TYPE OF RIG: **CME-75 TRUCK MOUNTED**CONTRACTOR: **PONTIL DRILLING**VAPOUR MONITOR: **RKI EAGLE 2**BOREHOLE DIAMETER: **200 mm**WELL DIAMETER: **50 mm**PIPE SCHEDULE: **40**SCREEN SLOT #: **10**SCREEN LENGTH: **1.0 m**RISER LENGTH: **6.2 m**SAND TYPE: **#2 SILICA SAND**SEALANT TYPE: **HOLEPLUG**

SUBSURFACE PROFILE			SAMPLE						Laboratory Testing	Piezometer or Monitoring Well Installation
Depth	Strataplot	Description	Elevation	Number	Type	% Recovery	SPT (n)	SV (ppm or %LEL - if applicable)		
0		Ground Surface	0.00							
1		SAND AND GRAVEL, TRACE SILT BROWN, MOIST, VERY LOOSE		1	SS	30	5	<5 PPM		
2			-0.76							
3		FINE SAND ORANGE, MOIST, LOOSE		2	SS	40	10	<5 PPM		
4			-1.52							
5		MOIST TO WET, COMPACT								
6			-1.98	3	SS	30	17	NES	VOCs, PHCs	
7		BLACK STAINING								
8			-2.35							
9		STAINING BLACK TO DARK GREY, WET, DENSE		4A	SS	50	39	<5 PPM		
10			-2.74	4B	SS	50	>50	<5 PPM		
11		SILTY CLAY, TRACE COBBLES BROWN, WET								
12			-3.05							
13		BEDROCK								
14										
15										
16										
17										
18										
19										
20										
21										
22										
23			-7.01							
24		End of Borehole								
25										

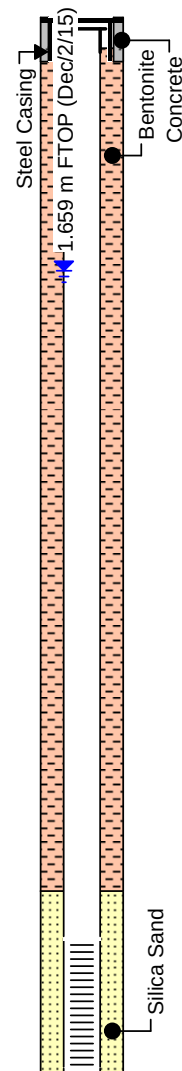
LOGGED BY: **PA**INPUT BY: **PA**

CHECKED BY:

INPUT DATE: **DECEMBER 3, 2015**

RECORD OF: MW303PROJECT NO: **CB644.02**CLIENT: **SUNCOR ENERGY PRODUCTS PARTNERSHIP**ADDRESS LINE 1: **121 HUME STREET**CITY / PROVINCE: **COLLINGWOOD, ONTARIO**BORING DATE: **DECEMBER 1, 2015**TYPE OF AUGER: **HOLLOW/AIR HAMMER**TYPE OF RIG: **CME-75 TRUCK MOUNTED**CONTRACTOR: **PONTIL DRILLING**VAPOUR MONITOR: **RKI EAGLE 2**BOREHOLE DIAMETER: **200 mm**WELL DIAMETER: **50 mm**PIPE SCHEDULE: **40**SCREEN SLOT #: **10**SCREEN LENGTH: **1.0 m**RISER LENGTH: **6.2 m**SAND TYPE: **#2 SILICA SAND**SEALANT TYPE: **HOLEPLUG**

SUBSURFACE PROFILE			SAMPLE						Laboratory Testing	Piezometer or Monitoring Well Installation
Depth	Strataplot	Description	Elevation	Number	Type	% Recovery	SPT (n)	SV (ppm or %LEL - if applicable)		
0		Ground Surface	0.00							
1		FINE SAND, TRACE GRAVEL AND ROOTLETS BROWN TO ORANGE, MOIST, VERY LOOSE		1	SS	50	4	<5 PPM		
2			-0.76							
3		BROWN, MOIST, COMPACT		2	SS	50	11	<5 PPM		
4			-1.52							
5		WET, VERY LOOSE		3	SS	50	1	<5 PPM		
6			-2.29							
7		SOME STAINING BLACK TO DARK GREY, WET, COMPACT	-2.59	4A	SS	50	29	<5 PPM	VOCs, PHCs	
8		SILTY CLAY, TRACE COBBLES, LIGHT BROWN, WET, STIFF		4B	SS	50	29	<5 PPM		
9										
10			-3.20	5	SS	<5	5	<5 PPM		
11		BEDROCK								
12										
13										
14										
15										
16										
17										
18										
19										
20										
21										
22										
23			-7.01							
24		End of Borehole								
25										

LOGGED BY: **PA**INPUT BY: **PA**

CHECKED BY:

INPUT DATE: **DECEMBER 3, 2015**

APPENDIX V
LABORATORY CERTIFICATES OF ANALYSIS

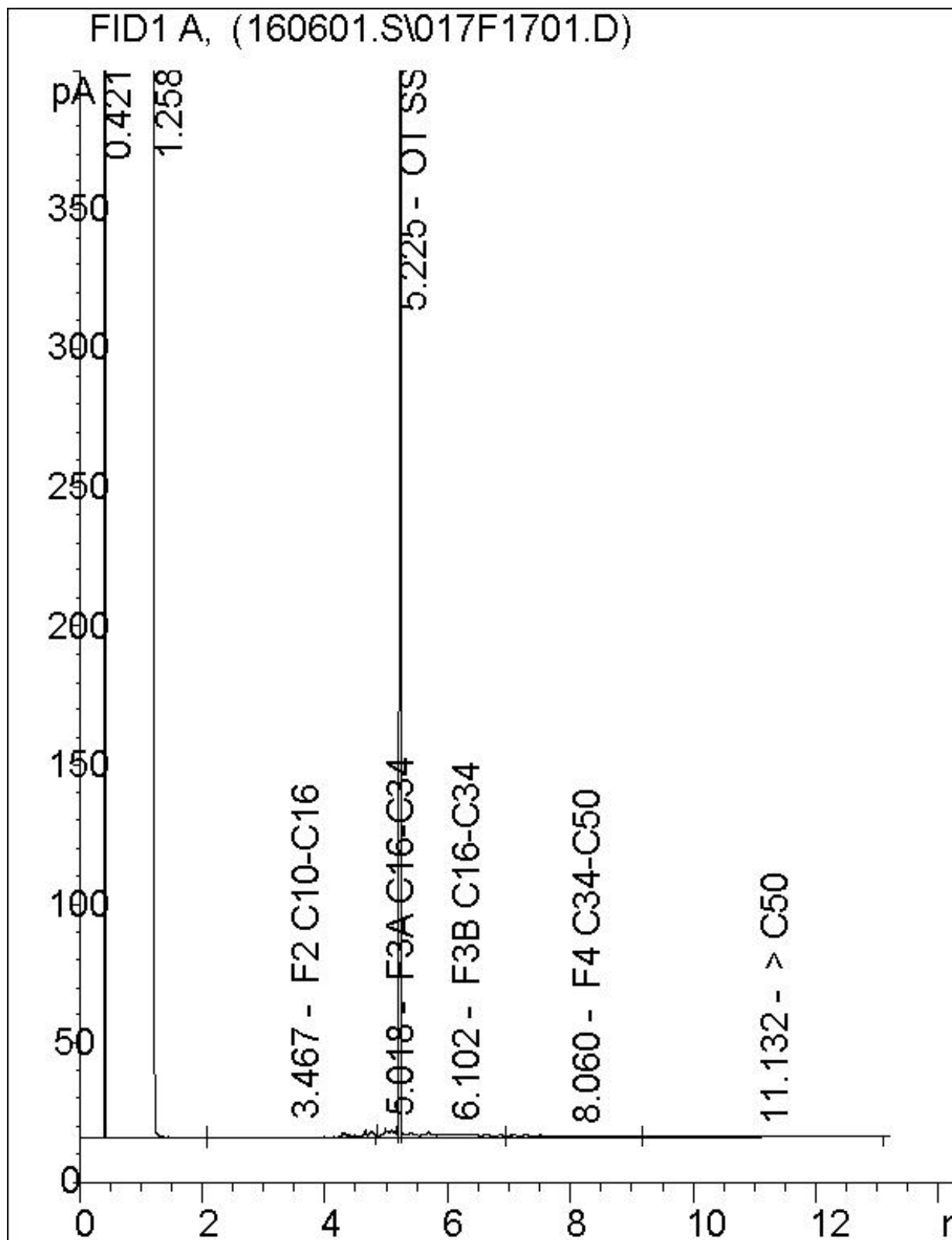
Page 1 of 1

MOE REGULATED DRINKING WATER OR WATER INTENDED FOR HUMAN CONSUMPTION MUST BE SUBMITTED ON THE MAXXAM DRINKING WATER CHAIN OF CUSTODY	ANALYSIS REQUESTED (PLEASE BE SPECIFIC)										Turnaround Time (TAT) Required

[illegible]

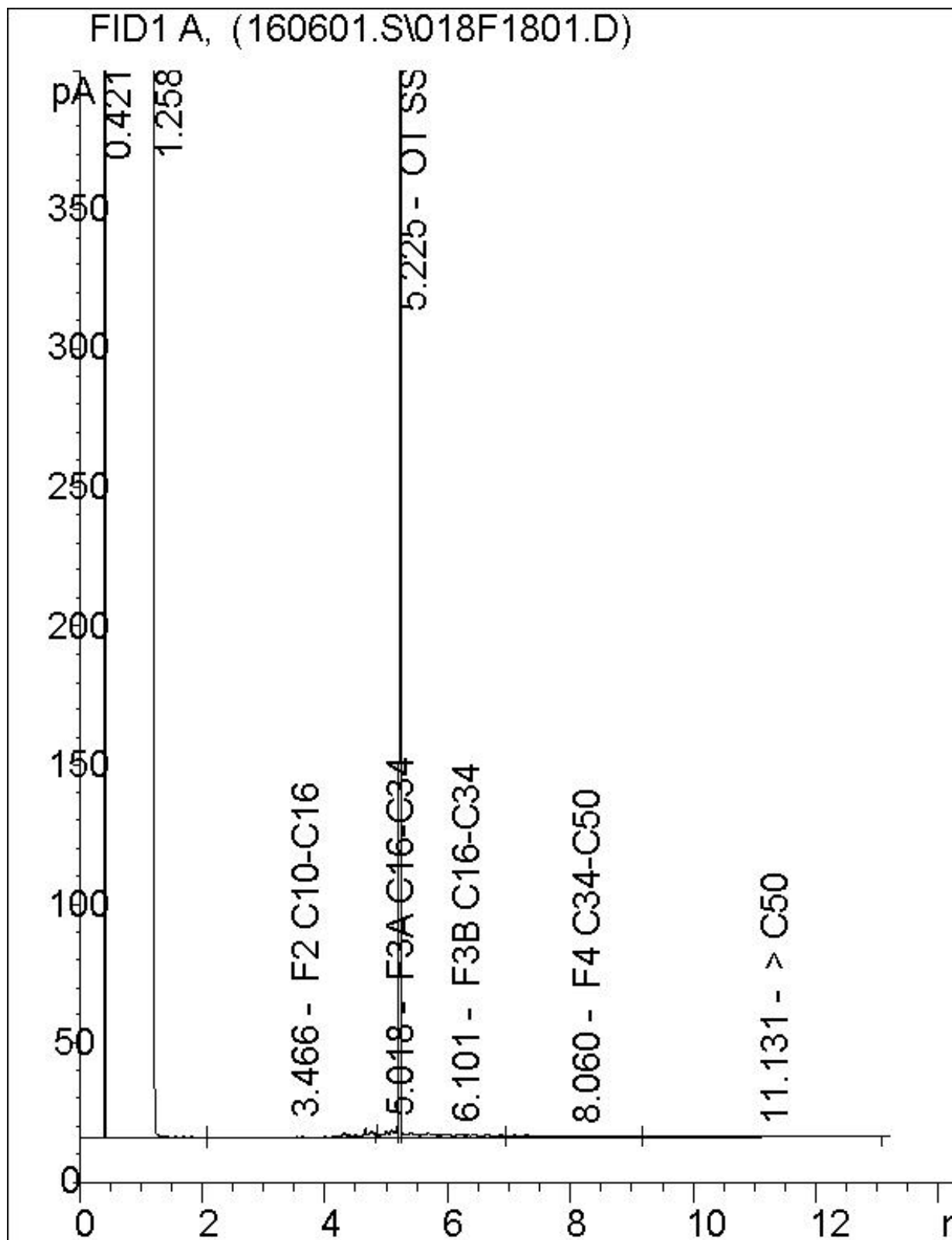
* RELINQUISHED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	RECEIVED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	# jars used and not submitted	Laboratory Use Only				
Philip Arles	16/05/26	13:00	Lee-NUSBAT m82	16/05/27	09:40		Time Sensitive	Temperature (°C) on Receipt	Custody Seal	Yes	No
						Present			☒		
								0/2/2	Intact	☒	

Petroleum Hydrocarbons F2-F4 in Water Chromatogram



Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Petroleum Hydrocarbons F2-F4 in Water Chromatogram



Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Attention: Jeff Stevenson

Terrapex Environmental Ltd
920 Brant Street
Unit 16
Burlington, ON
CANADA L7R 4J1

Your P.O. #: 4700001396

Your Project #: CB644.02

Site#: 60680

Site Location: 121 Hume Street, Collingwood, ON

Your C.O.C. #: 562385-01-01

Report Date: 2016/06/03

Report #: R4013953

Version: 1 - Final

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B6A7363

Received: 2016/05/27, 09:40

Sample Matrix: Water

Samples Received: 5

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Reference
Methylnaphthalene Sum	2	N/A	2016/06/02	CAM SOP-00301	EPA 8270D m
1,3-Dichloropropene Sum	4	N/A	2016/06/02		EPA 8260C m
Chloride by Automated Colourimetry	3	N/A	2016/05/31	CAM SOP-00463	EPA 325.2 m
Chromium (VI) in Water	3	N/A	2016/05/31	CAM SOP-00436	EPA 7199 m
Free (WAD) Cyanide	3	N/A	2016/05/30	CAM SOP-00457	OMOE E3015 m
Petroleum Hydro. CCME F1 & BTEX in Water	2	N/A	2016/06/01	CAM SOP-00315	CCME PHC-CWS m
Petroleum Hydrocarbons F2-F4 in Water (1)	2	2016/06/01	2016/06/02	CAM SOP-00316	CCME PHC-CWS m
Mercury	1	2016/05/31	2016/06/02	CAM SOP-00453	EPA 7470A m
Mercury	2	2016/06/01	2016/06/02	CAM SOP-00453	EPA 7470A m
Dissolved Metals by ICPMS	3	N/A	2016/06/01	CAM SOP-00447	EPA 6020A m
PAH Compounds in Water by GC/MS (SIM)	1	2016/06/01	2016/06/01	CAM SOP-00318	EPA 8270D m
PAH Compounds in Water by GC/MS (SIM)	1	2016/06/01	2016/06/02	CAM SOP-00318	EPA 8270D m
Volatile Organic Compounds in Water	4	N/A	2016/05/30	CAM SOP-00228	EPA 8260C m

Remarks:

Maxxam Analytics has performed all analytical testing herein in accordance with ISO 17025 and the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act. All methodologies comply with this document and are validated for use in the laboratory. The methods and techniques employed in this analysis conform to the performance criteria (detection limits, accuracy and precision) as outlined in the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act.

Maxxam Analytics is accredited for all specific parameters as required by Ontario Regulation 153/04. Maxxam Analytics is limited in liability to the actual cost of analysis unless otherwise agreed in writing. There is no other warranty expressed or implied. Samples will be retained at Maxxam Analytics for three weeks from receipt of data or as per contract.

Reference Method suffix "m" indicates test methods incorporate validated modifications from specific reference methods to improve performance.

* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.

(1) All CCME PHC results met required criteria unless otherwise stated in the report. The CWS PHC methods employed by Maxxam conform to all prescribed elements of the reference method and performance based elements have been validated. All modifications have been validated and proven equivalent following "Alberta Environment's Interpretation of the Reference Method for the Canada-Wide Standard for Petroleum Hydrocarbons in Soil Validation of Performance-Based Alternative Methods September 2003". Documentation is available upon request. Modifications from Reference Method for the Canada-wide Standard for Petroleum Hydrocarbons in Soil-Tier 1 Method: F2/F3/F4 data reported using validated cold solvent extraction instead of Soxhlet extraction.

Attention: Jeff Stevenson

Terrapex Environmental Ltd
920 Brant Street
Unit 16
Burlington, ON
CANADA L7R 4J1

Your P.O. #: 4700001396
Your Project #: CB644.02
Site#: 60680
Site Location: 121 Hume Street, Collingwood, ON
Your C.O.C. #: 562385-01-01

Report Date: 2016/06/03
Report #: R4013953
Version: 1 - Final

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B6A7363
Received: 2016/05/27, 09:40

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.
Marissa Oddi, Customer Service Representative
Email: moddi@maxxam.ca
Phone# (905) 817-5700

=====

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

O.REG 153 METALS & INORGANICS PKG (WTR)

Maxxam ID		CKV220	CKV220		CKV221		CKV222		
Sampling Date		2016/05/26 08:30	2016/05/26 08:30		2016/05/26 08:30		2016/05/26 10:00		
COC Number		562385-01-01	562385-01-01		562385-01-01		562385-01-01		
	UNITS	MW404	MW404 Lab-Dup	QC Batch	MW1000	QC Batch	MW403	RDL	QC Batch
Inorganics									
Free Cyanide	ug/L	ND	ND	4516392	ND	4516392	ND	2	4516392
Dissolved Chloride (Cl)	mg/L	96		4518124	97	4518124	87	1.0	4518124
Metals									
Chromium (VI)	ug/L	ND		4516402	ND	4516402	ND	0.50	4516402
Mercury (Hg)	ug/L	ND	ND	4520376	ND	4518905	ND	0.1	4520376
Dissolved Antimony (Sb)	ug/L	ND		4519452	0.64	4519452	ND	0.50	4519452
Dissolved Arsenic (As)	ug/L	ND		4519452	1.4	4519452	3.8	1.0	4519452
Dissolved Barium (Ba)	ug/L	ND		4519452	76	4519452	94	2.0	4519452
Dissolved Beryllium (Be)	ug/L	ND		4519452	ND	4519452	ND	0.50	4519452
Dissolved Boron (B)	ug/L	ND		4519452	150	4519452	87	10	4519452
Dissolved Cadmium (Cd)	ug/L	ND		4519452	ND	4519452	ND	0.10	4519452
Dissolved Chromium (Cr)	ug/L	ND		4519452	ND	4519452	ND	5.0	4519452
Dissolved Cobalt (Co)	ug/L	ND		4519452	0.54	4519452	1.4	0.50	4519452
Dissolved Copper (Cu)	ug/L	ND		4519452	1.2	4519452	1.6	1.0	4519452
Dissolved Lead (Pb)	ug/L	ND		4519452	ND	4519452	0.58	0.50	4519452
Dissolved Molybdenum (Mo)	ug/L	ND		4519452	4.4	4519452	5.9	0.50	4519452
Dissolved Nickel (Ni)	ug/L	ND		4519452	1.1	4519452	1.8	1.0	4519452
Dissolved Selenium (Se)	ug/L	ND		4519452	ND	4519452	ND	2.0	4519452
Dissolved Silver (Ag)	ug/L	ND		4519452	ND	4519452	ND	0.10	4519452
Dissolved Sodium (Na)	ug/L	380		4519452	54000	4519452	62000	100	4519452
Dissolved Thallium (Tl)	ug/L	ND		4519452	ND	4519452	ND	0.050	4519452
Dissolved Uranium (U)	ug/L	ND		4519452	1.2	4519452	1.2	0.10	4519452
Dissolved Vanadium (V)	ug/L	ND		4519452	1.0	4519452	1.0	0.50	4519452
Dissolved Zinc (Zn)	ug/L	ND		4519452	ND	4519452	7.1	5.0	4519452
RDL = Reportable Detection Limit QC Batch = Quality Control Batch Lab-Dup = Laboratory Initiated Duplicate ND = Not detected									

O.REG 153 PAHS (WATER)

Maxxam ID		CKV220	CKV221		
Sampling Date		2016/05/26 08:30	2016/05/26 08:30		
COC Number		562385-01-01	562385-01-01		
	UNITS	MW404	MW1000	RDL	QC Batch
Calculated Parameters					
Methylnaphthalene, 2-(1-)	ug/L	ND	ND	0.071	4515022
Polyaromatic Hydrocarbons					
Acenaphthene	ug/L	ND	ND	0.050	4520648
Acenaphthylene	ug/L	ND	ND	0.050	4520648
Anthracene	ug/L	ND	ND	0.050	4520648
Benzo(a)anthracene	ug/L	ND	ND	0.050	4520648
Benzo(a)pyrene	ug/L	ND	ND	0.010	4520648
Benzo(b/j)fluoranthene	ug/L	ND	ND	0.050	4520648
Benzo(g,h,i)perylene	ug/L	ND	ND	0.050	4520648
Benzo(k)fluoranthene	ug/L	ND	ND	0.050	4520648
Chrysene	ug/L	ND	ND	0.050	4520648
Dibenz(a,h)anthracene	ug/L	ND	ND	0.050	4520648
Fluoranthene	ug/L	ND	ND	0.050	4520648
Fluorene	ug/L	ND	ND	0.050	4520648
Indeno(1,2,3-cd)pyrene	ug/L	ND	ND	0.050	4520648
1-Methylnaphthalene	ug/L	ND	ND	0.050	4520648
2-Methylnaphthalene	ug/L	ND	ND	0.050	4520648
Naphthalene	ug/L	ND	ND	0.050	4520648
Phenanthrene	ug/L	ND	ND	0.030	4520648
Pyrene	ug/L	ND	ND	0.050	4520648
Surrogate Recovery (%)					
D10-Anthracene	%	106	101		4520648
D14-Terphenyl (FS)	%	102	97		4520648
D8-Acenaphthylene	%	104	98		4520648
RDL = Reportable Detection Limit QC Batch = Quality Control Batch ND = Not detected					

O.REG 153 PETROLEUM HYDROCARBONS (WATER)

Maxxam ID		CKV220	CKV222		
Sampling Date		2016/05/26 08:30	2016/05/26 10:00		
COC Number		562385-01-01	562385-01-01		
	UNITS	MW404	MW403	RDL	QC Batch
BTEX & F1 Hydrocarbons					
F1 (C6-C10)	ug/L	ND	ND	25	4520303
F1 (C6-C10) - BTEX	ug/L	ND	ND	25	4520303
F2-F4 Hydrocarbons					
F2 (C10-C16 Hydrocarbons)	ug/L	ND	ND	100	4520892
F3 (C16-C34 Hydrocarbons)	ug/L	ND	ND	200	4520892
F4 (C34-C50 Hydrocarbons)	ug/L	ND	ND	200	4520892
Reached Baseline at C50	ug/L	Yes	Yes		4520892
Surrogate Recovery (%)					
1,4-Difluorobenzene	%	99	98		4520303
4-Bromofluorobenzene	%	102	100		4520303
D10-Ethylbenzene	%	96	96		4520303
D4-1,2-Dichloroethane	%	96	94		4520303
o-Terphenyl	%	98	97		4520892
RDL = Reportable Detection Limit					
QC Batch = Quality Control Batch					
ND = Not detected					

O.REG 153 VOLATILE ORGANICS (WATER)

Maxxam ID		CKV220	CKV222	CKV222	CKV223	CKV224		
Sampling Date		2016/05/26 08:30	2016/05/26 10:00	2016/05/26 10:00	2016/05/26 11:30	2016/05/26 11:30		
COC Number		562385-01-01	562385-01-01	562385-01-01	562385-01-01	562385-01-01		
	UNITS	MW404	MW403	MW403 Lab-Dup	MW3000	TRIP BLANK	RDL	QC Batch

Calculated Parameters								
1,3-Dichloropropene (cis+trans)	ug/L	ND	ND		ND	ND	0.50	4515032
Volatile Organics								
Acetone (2-Propanone)	ug/L	ND	31	29	ND	ND	10	4516635
Benzene	ug/L	2.2	ND	ND	ND	ND	0.20	4516635
Bromodichloromethane	ug/L	ND	ND	ND	ND	ND	0.50	4516635
Bromoform	ug/L	ND	ND	ND	ND	ND	1.0	4516635
Bromomethane	ug/L	ND	ND	ND	ND	ND	0.50	4516635
Carbon Tetrachloride	ug/L	ND	ND	ND	ND	ND	0.20	4516635
Chlorobenzene	ug/L	ND	ND	ND	ND	ND	0.20	4516635
Chloroform	ug/L	ND	ND	ND	ND	ND	0.20	4516635
Dibromochloromethane	ug/L	ND	ND	ND	ND	ND	0.50	4516635
1,2-Dichlorobenzene	ug/L	ND	ND	ND	ND	ND	0.50	4516635
1,3-Dichlorobenzene	ug/L	ND	ND	ND	ND	ND	0.50	4516635
1,4-Dichlorobenzene	ug/L	ND	ND	ND	ND	ND	0.50	4516635
Dichlorodifluoromethane (FREON 12)	ug/L	ND	ND	ND	ND	ND	1.0	4516635
1,1-Dichloroethane	ug/L	ND	ND	ND	ND	ND	0.20	4516635
1,2-Dichloroethane	ug/L	ND	ND	ND	ND	ND	0.50	4516635
1,1-Dichloroethylene	ug/L	ND	ND	ND	ND	ND	0.20	4516635
cis-1,2-Dichloroethylene	ug/L	ND	ND	ND	ND	ND	0.50	4516635
trans-1,2-Dichloroethylene	ug/L	ND	ND	ND	ND	ND	0.50	4516635
1,2-Dichloropropane	ug/L	ND	ND	ND	ND	ND	0.20	4516635
cis-1,3-Dichloropropene	ug/L	ND	ND	ND	ND	ND	0.30	4516635
trans-1,3-Dichloropropene	ug/L	ND	ND	ND	ND	ND	0.40	4516635
Ethylbenzene	ug/L	ND	0.23	0.24	ND	ND	0.20	4516635
Ethylene Dibromide	ug/L	ND	ND	ND	ND	ND	0.20	4516635
Hexane	ug/L	ND	ND	ND	ND	ND	1.0	4516635
Methylene Chloride(Dichloromethane)	ug/L	ND	ND	ND	ND	ND	2.0	4516635
Methyl Ethyl Ketone (2-Butanone)	ug/L	ND	ND	ND	ND	ND	10	4516635
Methyl Isobutyl Ketone	ug/L	ND	ND	ND	ND	ND	5.0	4516635
Methyl t-butyl ether (MTBE)	ug/L	ND	ND	ND	ND	ND	0.50	4516635
Styrene	ug/L	ND	ND	ND	ND	ND	0.50	4516635

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate
ND = Not detected

O.REG 153 VOLATILE ORGANICS (WATER)

Maxxam ID		CKV220	CKV222	CKV222	CKV223	CKV224		
Sampling Date		2016/05/26 08:30	2016/05/26 10:00	2016/05/26 10:00	2016/05/26 11:30	2016/05/26 11:30		
COC Number		562385-01-01	562385-01-01	562385-01-01	562385-01-01	562385-01-01		
	UNITS	MW404	MW403	MW403 Lab-Dup	MW3000	TRIP BLANK	RDL	QC Batch
1,1,1,2-Tetrachloroethane	ug/L	ND	ND	ND	ND	ND	0.50	4516635
1,1,2,2-Tetrachloroethane	ug/L	ND	ND	ND	ND	ND	0.50	4516635
Tetrachloroethylene	ug/L	ND	ND	ND	ND	ND	0.20	4516635
Toluene	ug/L	0.43	ND	ND	ND	ND	0.20	4516635
1,1,1-Trichloroethane	ug/L	ND	ND	ND	ND	ND	0.20	4516635
1,1,2-Trichloroethane	ug/L	ND	ND	ND	ND	ND	0.50	4516635
Trichloroethylene	ug/L	ND	ND	ND	ND	ND	0.20	4516635
Trichlorofluoromethane (FREON 11)	ug/L	ND	ND	ND	ND	ND	0.50	4516635
Vinyl Chloride	ug/L	ND	ND	ND	ND	ND	0.20	4516635
p+m-Xylene	ug/L	ND	0.35	0.35	ND	ND	0.20	4516635
o-Xylene	ug/L	ND	ND	ND	ND	ND	0.20	4516635
Total Xylenes	ug/L	ND	0.35	0.35	ND	ND	0.20	4516635
Surrogate Recovery (%)								
4-Bromofluorobenzene	%	89	91	91	89	93		4516635
D4-1,2-Dichloroethane	%	107	111	110	107	104		4516635
D8-Toluene	%	100	98	98	99	99		4516635
RDL = Reportable Detection Limit QC Batch = Quality Control Batch Lab-Dup = Laboratory Initiated Duplicate ND = Not detected								

Maxxam Job #: B6A7363
Report Date: 2016/06/03

Terrapex Environmental Ltd
Client Project #: CB644.02
Site Location: 121 Hume Street, Collingwood, ON
Your P.O. #: 4700001396
Sampler Initials: PA

TEST SUMMARY

Maxxam ID: CKV220
Sample ID: MW404
Matrix: Water

Collected: 2016/05/26
Shipped:
Received: 2016/05/27

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	4515022	N/A	2016/06/02	Automated Statchk
1,3-Dichloropropene Sum	CALC	4515032	N/A	2016/06/02	Automated Statchk
Chloride by Automated Colourimetry	KONE	4518124	N/A	2016/05/31	Deonarine Ramnarine
Chromium (VI) in Water	IC	4516402	N/A	2016/05/31	Sally Coughlin
Free (WAD) Cyanide	TECH/CN	4516392	N/A	2016/05/30	Christine Pham
Petroleum Hydro. CCME F1 & BTEX in Water	HSGC/MSFD	4520303	N/A	2016/06/01	Haibin Wu
Petroleum Hydrocarbons F2-F4 in Water	GC/FID	4520892	2016/06/01	2016/06/02	Zhiyue (Frank) Zhu
Mercury	CV/AA	4520376	2016/06/01	2016/06/02	Magdalena Carlos
Dissolved Metals by ICPMS	ICP/MS	4519452	N/A	2016/06/01	Prempal Bhatti
PAH Compounds in Water by GC/MS (SIM)	GC/MS	4520648	2016/06/01	2016/06/01	Jett Wu
Volatile Organic Compounds in Water	GC/MS	4516635	N/A	2016/05/30	Karen Hughes

Maxxam ID: CKV220 Dup
Sample ID: MW404
Matrix: Water

Collected: 2016/05/26
Shipped:
Received: 2016/05/27

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Free (WAD) Cyanide	TECH/CN	4516392	N/A	2016/05/30	Christine Pham
Mercury	CV/AA	4520376	2016/06/02	2016/06/02	Magdalena Carlos

Maxxam ID: CKV221
Sample ID: MW1000
Matrix: Water

Collected: 2016/05/26
Shipped:
Received: 2016/05/27

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	4515022	N/A	2016/06/02	Automated Statchk
Chloride by Automated Colourimetry	KONE	4518124	N/A	2016/05/31	Deonarine Ramnarine
Chromium (VI) in Water	IC	4516402	N/A	2016/05/31	Sally Coughlin
Free (WAD) Cyanide	TECH/CN	4516392	N/A	2016/05/30	Christine Pham
Mercury	CV/AA	4518905	2016/05/31	2016/06/02	Magdalena Carlos
Dissolved Metals by ICPMS	ICP/MS	4519452	N/A	2016/06/01	Prempal Bhatti
PAH Compounds in Water by GC/MS (SIM)	GC/MS	4520648	2016/06/01	2016/06/02	Jett Wu

Maxxam ID: CKV222
Sample ID: MW403
Matrix: Water

Collected: 2016/05/26
Shipped:
Received: 2016/05/27

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
1,3-Dichloropropene Sum	CALC	4515032	N/A	2016/06/02	Automated Statchk
Chloride by Automated Colourimetry	KONE	4518124	N/A	2016/05/31	Deonarine Ramnarine
Chromium (VI) in Water	IC	4516402	N/A	2016/05/31	Sally Coughlin
Free (WAD) Cyanide	TECH/CN	4516392	N/A	2016/05/30	Christine Pham
Petroleum Hydro. CCME F1 & BTEX in Water	HSGC/MSFD	4520303	N/A	2016/06/01	Haibin Wu
Petroleum Hydrocarbons F2-F4 in Water	GC/FID	4520892	2016/06/01	2016/06/02	Zhiyue (Frank) Zhu

Maxxam Job #: B6A7363
Report Date: 2016/06/03

Terrapex Environmental Ltd
Client Project #: CB644.02
Site Location: 121 Hume Street, Collingwood, ON
Your P.O. #: 4700001396
Sampler Initials: PA

TEST SUMMARY

Maxxam ID: CKV222
Sample ID: MW403
Matrix: Water

Collected: 2016/05/26
Shipped:
Received: 2016/05/27

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Mercury	CV/AA	4520376	2016/06/01	2016/06/02	Magdalena Carlos
Dissolved Metals by ICPMS	ICP/MS	4519452	N/A	2016/06/01	Prempal Bhatti
Volatile Organic Compounds in Water	GC/MS	4516635	N/A	2016/05/30	Karen Hughes

Maxxam ID: CKV222 Dup
Sample ID: MW403
Matrix: Water

Collected: 2016/05/26
Shipped:
Received: 2016/05/27

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Volatile Organic Compounds in Water	GC/MS	4516635	N/A	2016/05/30	Karen Hughes

Maxxam ID: CKV223
Sample ID: MW3000
Matrix: Water

Collected: 2016/05/26
Shipped:
Received: 2016/05/27

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
1,3-Dichloropropene Sum	CALC	4515032	N/A	2016/06/02	Automated Statchk
Volatile Organic Compounds in Water	GC/MS	4516635	N/A	2016/05/30	Karen Hughes

Maxxam ID: CKV224
Sample ID: TRIP BLANK
Matrix: Water

Collected: 2016/05/26
Shipped:
Received: 2016/05/27

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
1,3-Dichloropropene Sum	CALC	4515032	N/A	2016/06/02	Automated Statchk
Volatile Organic Compounds in Water	GC/MS	4516635	N/A	2016/05/30	Karen Hughes

Maxxam Job #: B6A7363
Report Date: 2016/06/03

Terrapex Environmental Ltd
Client Project #: CB644.02
Site Location: 121 Hume Street, Collingwood, ON
Your P.O. #: 4700001396
Sampler Initials: PA

GENERAL COMMENTS

Each temperature is the average of up to three cooler temperatures taken at receipt

Package 1	1.3°C

Results relate only to the items tested.

QUALITY ASSURANCE REPORT

QA/QC	Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
	4516392	CP	Matrix Spike [CKV220-03]	Free Cyanide	2016/05/30		100	%	80 - 120
	4516392	CP	Spiked Blank	Free Cyanide	2016/05/30		100	%	80 - 120
	4516392	CP	Method Blank	Free Cyanide	2016/05/30	ND,RDL=2		ug/L	
	4516392	CP	RPD [CKV220-03]	Free Cyanide	2016/05/30	NC		%	20
	4516402	SAC	Matrix Spike	Chromium (VI)	2016/05/31		100	%	80 - 120
	4516402	SAC	Spiked Blank	Chromium (VI)	2016/05/31		101	%	80 - 120
	4516402	SAC	Method Blank	Chromium (VI)	2016/05/31	ND, RDL=0.50		ug/L	
	4516402	SAC	RPD	Chromium (VI)	2016/05/31	NC		%	20
	4516635	KH2	Matrix Spike [CKV220-08]	4-Bromofluorobenzene	2016/05/30		98	%	70 - 130
				D4-1,2-Dichloroethane	2016/05/30		105	%	70 - 130
				D8-Toluene	2016/05/30		105	%	70 - 130
				Acetone (2-Propanone)	2016/05/30		108	%	60 - 140
				Benzene	2016/05/30		99	%	70 - 130
				Bromodichloromethane	2016/05/30		100	%	70 - 130
				Bromoform	2016/05/30		96	%	70 - 130
				Bromomethane	2016/05/30		86	%	60 - 140
				Carbon Tetrachloride	2016/05/30		95	%	70 - 130
				Chlorobenzene	2016/05/30		102	%	70 - 130
				Chloroform	2016/05/30		98	%	70 - 130
				Dibromochloromethane	2016/05/30		99	%	70 - 130
				1,2-Dichlorobenzene	2016/05/30		99	%	70 - 130
				1,3-Dichlorobenzene	2016/05/30		99	%	70 - 130
				1,4-Dichlorobenzene	2016/05/30		104	%	70 - 130
				Dichlorodifluoromethane (FREON 12)	2016/05/30		86	%	60 - 140
				1,1-Dichloroethane	2016/05/30		101	%	70 - 130
				1,2-Dichloroethane	2016/05/30		103	%	70 - 130
				1,1-Dichloroethylene	2016/05/30		104	%	70 - 130
				cis-1,2-Dichloroethylene	2016/05/30		96	%	70 - 130
				trans-1,2-Dichloroethylene	2016/05/30		95	%	70 - 130
				1,2-Dichloropropane	2016/05/30		104	%	70 - 130
				cis-1,3-Dichloropropene	2016/05/30		105	%	70 - 130
				trans-1,3-Dichloropropene	2016/05/30		109	%	70 - 130
				Ethylbenzene	2016/05/30		105	%	70 - 130
				Ethylene Dibromide	2016/05/30		104	%	70 - 130
				Hexane	2016/05/30		110	%	70 - 130
				Methylene Chloride(Dichloromethane)	2016/05/30		93	%	70 - 130
				Methyl Ethyl Ketone (2-Butanone)	2016/05/30		120	%	60 - 140
				Methyl Isobutyl Ketone	2016/05/30		118	%	70 - 130
				Methyl t-butyl ether (MTBE)	2016/05/30		102	%	70 - 130
				Styrene	2016/05/30		104	%	70 - 130
				1,1,1,2-Tetrachloroethane	2016/05/30		96	%	70 - 130
				1,1,2,2-Tetrachloroethane	2016/05/30		109	%	70 - 130
				Tetrachloroethylene	2016/05/30		91	%	70 - 130
				Toluene	2016/05/30		99	%	70 - 130
				1,1,1-Trichloroethane	2016/05/30		93	%	70 - 130
				1,1,2-Trichloroethane	2016/05/30		111	%	70 - 130
				Trichloroethylene	2016/05/30		90	%	70 - 130
				Trichlorofluoromethane (FREON 11)	2016/05/30		96	%	70 - 130
				Vinyl Chloride	2016/05/30		105	%	70 - 130
				p+m-Xylene	2016/05/30		105	%	70 - 130

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC	Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
4516635	KH2	Spiked Blank		o-Xylene	2016/05/30		103	%	70 - 130
				4-Bromofluorobenzene	2016/05/30		98	%	70 - 130
				D4-1,2-Dichloroethane	2016/05/30		105	%	70 - 130
				D8-Toluene	2016/05/30		106	%	70 - 130
				Acetone (2-Propanone)	2016/05/30		116	%	60 - 140
				Benzene	2016/05/30		99	%	70 - 130
				Bromodichloromethane	2016/05/30		100	%	70 - 130
				Bromoform	2016/05/30		96	%	70 - 130
				Bromomethane	2016/05/30		86	%	60 - 140
				Carbon Tetrachloride	2016/05/30		94	%	70 - 130
				Chlorobenzene	2016/05/30		101	%	70 - 130
				Chloroform	2016/05/30		98	%	70 - 130
				Dibromochloromethane	2016/05/30		99	%	70 - 130
				1,2-Dichlorobenzene	2016/05/30		98	%	70 - 130
				1,3-Dichlorobenzene	2016/05/30		99	%	70 - 130
				1,4-Dichlorobenzene	2016/05/30		105	%	70 - 130
				Dichlorodifluoromethane (FREON 12)	2016/05/30		89	%	60 - 140
				1,1-Dichloroethane	2016/05/30		101	%	70 - 130
				1,2-Dichloroethane	2016/05/30		103	%	70 - 130
				1,1-Dichloroethylene	2016/05/30		103	%	70 - 130
				cis-1,2-Dichloroethylene	2016/05/30		96	%	70 - 130
				trans-1,2-Dichloroethylene	2016/05/30		94	%	70 - 130
				1,2-Dichloropropane	2016/05/30		103	%	70 - 130
				cis-1,3-Dichloropropene	2016/05/30		104	%	70 - 130
				trans-1,3-Dichloropropene	2016/05/30		106	%	70 - 130
				Ethylbenzene	2016/05/30		104	%	70 - 130
				Ethylene Dibromide	2016/05/30		104	%	70 - 130
				Hexane	2016/05/30		107	%	70 - 130
				Methylene Chloride(Dichloromethane)	2016/05/30		93	%	70 - 130
				Methyl Ethyl Ketone (2-Butanone)	2016/05/30		128	%	60 - 140
				Methyl Isobutyl Ketone	2016/05/30		120	%	70 - 130
				Methyl t-butyl ether (MTBE)	2016/05/30		103	%	70 - 130
				Styrene	2016/05/30		104	%	70 - 130
				1,1,1,2-Tetrachloroethane	2016/05/30		97	%	70 - 130
				1,1,2,2-Tetrachloroethane	2016/05/30		110	%	70 - 130
				Tetrachloroethylene	2016/05/30		90	%	70 - 130
				Toluene	2016/05/30		98	%	70 - 130
				1,1,1-Trichloroethane	2016/05/30		94	%	70 - 130
				1,1,2-Trichloroethane	2016/05/30		109	%	70 - 130
				Trichloroethylene	2016/05/30		90	%	70 - 130
				Trichlorofluoromethane (FREON 11)	2016/05/30		95	%	70 - 130
				Vinyl Chloride	2016/05/30		104	%	70 - 130
				p+m-Xylene	2016/05/30		104	%	70 - 130
4516635	KH2	Method Blank		o-Xylene	2016/05/30		104	%	70 - 130
				4-Bromofluorobenzene	2016/05/30		93	%	70 - 130
				D4-1,2-Dichloroethane	2016/05/30		107	%	70 - 130
				D8-Toluene	2016/05/30		100	%	70 - 130
				Acetone (2-Propanone)	2016/05/30	ND, RDL=10		ug/L	
				Benzene	2016/05/30	ND, RDL=0.20		ug/L	

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Bromodichloromethane	2016/05/30	ND, RDL=0.50		ug/L	
			Bromoform	2016/05/30	ND, RDL=1.0		ug/L	
			Bromomethane	2016/05/30	ND, RDL=0.50		ug/L	
			Carbon Tetrachloride	2016/05/30	ND, RDL=0.20		ug/L	
			Chlorobenzene	2016/05/30	ND, RDL=0.20		ug/L	
			Chloroform	2016/05/30	ND, RDL=0.20		ug/L	
			Dibromochloromethane	2016/05/30	ND, RDL=0.50		ug/L	
			1,2-Dichlorobenzene	2016/05/30	ND, RDL=0.50		ug/L	
			1,3-Dichlorobenzene	2016/05/30	ND, RDL=0.50		ug/L	
			1,4-Dichlorobenzene	2016/05/30	ND, RDL=0.50		ug/L	
			Dichlorodifluoromethane (FREON 12)	2016/05/30	ND, RDL=1.0		ug/L	
			1,1-Dichloroethane	2016/05/30	ND, RDL=0.20		ug/L	
			1,2-Dichloroethane	2016/05/30	ND, RDL=0.50		ug/L	
			1,1-Dichloroethylene	2016/05/30	ND, RDL=0.20		ug/L	
			cis-1,2-Dichloroethylene	2016/05/30	ND, RDL=0.50		ug/L	
			trans-1,2-Dichloroethylene	2016/05/30	ND, RDL=0.50		ug/L	
			1,2-Dichloropropane	2016/05/30	ND, RDL=0.20		ug/L	
			cis-1,3-Dichloropropene	2016/05/30	ND, RDL=0.30		ug/L	
			trans-1,3-Dichloropropene	2016/05/30	ND, RDL=0.40		ug/L	
			Ethylbenzene	2016/05/30	ND, RDL=0.20		ug/L	
			Ethylene Dibromide	2016/05/30	ND, RDL=0.20		ug/L	
			Hexane	2016/05/30	ND, RDL=1.0		ug/L	
			Methylene Chloride(Dichloromethane)	2016/05/30	ND, RDL=2.0		ug/L	
			Methyl Ethyl Ketone (2-Butanone)	2016/05/30	ND, RDL=10		ug/L	

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QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Methyl Isobutyl Ketone	2016/05/30	ND, RDL=5.0		ug/L	
			Methyl t-butyl ether (MTBE)	2016/05/30	ND, RDL=0.50		ug/L	
			Styrene	2016/05/30	ND, RDL=0.50		ug/L	
			1,1,1,2-Tetrachloroethane	2016/05/30	ND, RDL=0.50		ug/L	
			1,1,2,2-Tetrachloroethane	2016/05/30	ND, RDL=0.50		ug/L	
			Tetrachloroethylene	2016/05/30	ND, RDL=0.20		ug/L	
			Toluene	2016/05/30	ND, RDL=0.20		ug/L	
			1,1,1-Trichloroethane	2016/05/30	ND, RDL=0.20		ug/L	
			1,1,2-Trichloroethane	2016/05/30	ND, RDL=0.50		ug/L	
			Trichloroethylene	2016/05/30	ND, RDL=0.20		ug/L	
			Trichlorofluoromethane (FREON 11)	2016/05/30	ND, RDL=0.50		ug/L	
			Vinyl Chloride	2016/05/30	ND, RDL=0.20		ug/L	
			p+m-Xylene	2016/05/30	ND, RDL=0.20		ug/L	
			o-Xylene	2016/05/30	ND, RDL=0.20		ug/L	
			Total Xylenes	2016/05/30	ND, RDL=0.20		ug/L	
4516635	KH2	RPD [CKV222-07]	Acetone (2-Propanone)	2016/05/30	NC		%	30
			Benzene	2016/05/30	NC		%	30
			Bromodichloromethane	2016/05/30	NC		%	30
			Bromoform	2016/05/30	NC		%	30
			Bromomethane	2016/05/30	NC		%	30
			Carbon Tetrachloride	2016/05/30	NC		%	30
			Chlorobenzene	2016/05/30	NC		%	30
			Chloroform	2016/05/30	NC		%	30
			Dibromochloromethane	2016/05/30	NC		%	30
			1,2-Dichlorobenzene	2016/05/30	NC		%	30
			1,3-Dichlorobenzene	2016/05/30	NC		%	30
			1,4-Dichlorobenzene	2016/05/30	NC		%	30
			Dichlorodifluoromethane (FREON 12)	2016/05/30	NC		%	30
			1,1-Dichloroethane	2016/05/30	NC		%	30
			1,2-Dichloroethane	2016/05/30	NC		%	30
			1,1-Dichloroethylene	2016/05/30	NC		%	30
			cis-1,2-Dichloroethylene	2016/05/30	NC		%	30
			trans-1,2-Dichloroethylene	2016/05/30	NC		%	30
			1,2-Dichloropropane	2016/05/30	NC		%	30

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				cis-1,3-Dichloropropene	2016/05/30	NC		%	30
				trans-1,3-Dichloropropene	2016/05/30	NC		%	30
				Ethylbenzene	2016/05/30	NC		%	30
				Ethylene Dibromide	2016/05/30	NC		%	30
				Hexane	2016/05/30	NC		%	30
				Methylene Chloride(Dichloromethane)	2016/05/30	NC		%	30
				Methyl Ethyl Ketone (2-Butanone)	2016/05/30	NC		%	30
				Methyl Isobutyl Ketone	2016/05/30	NC		%	30
				Methyl t-butyl ether (MTBE)	2016/05/30	NC		%	30
				Styrene	2016/05/30	NC		%	30
				1,1,1,2-Tetrachloroethane	2016/05/30	NC		%	30
				1,1,2,2-Tetrachloroethane	2016/05/30	NC		%	30
				Tetrachloroethylene	2016/05/30	NC		%	30
				Toluene	2016/05/30	NC		%	30
				1,1,1-Trichloroethane	2016/05/30	NC		%	30
				1,1,2-Trichloroethane	2016/05/30	NC		%	30
				Trichloroethylene	2016/05/30	NC		%	30
				Trichlorofluoromethane (FREON 11)	2016/05/30	NC		%	30
				Vinyl Chloride	2016/05/30	NC		%	30
				p+m-Xylene	2016/05/30	NC		%	30
				o-Xylene	2016/05/30	NC		%	30
				Total Xylenes	2016/05/30	NC		%	30
4518124	DRM		Matrix Spike	Dissolved Chloride (Cl)	2016/05/31		NC	%	80 - 120
4518124	DRM		Spiked Blank	Dissolved Chloride (Cl)	2016/05/31		102	%	80 - 120
4518124	DRM		Method Blank	Dissolved Chloride (Cl)	2016/05/31	ND, RDL=1.0		mg/L	
4518124	DRM		RPD	Dissolved Chloride (Cl)	2016/05/31	1.0		%	20
4518905	MC		Matrix Spike	Mercury (Hg)	2016/06/02		103	%	75 - 125
4518905	MC		Spiked Blank	Mercury (Hg)	2016/06/02		102	%	80 - 120
4518905	MC		Method Blank	Mercury (Hg)	2016/06/02	ND, RDL=0.1		ug/L	
4518905	MC		RPD	Mercury (Hg)	2016/06/02	NC		%	20
4519452	PBA		Matrix Spike	Dissolved Antimony (Sb)	2016/06/01		112	%	80 - 120
				Dissolved Arsenic (As)	2016/06/01		106	%	80 - 120
				Dissolved Barium (Ba)	2016/06/01		110	%	80 - 120
				Dissolved Beryllium (Be)	2016/06/01		112	%	80 - 120
				Dissolved Boron (B)	2016/06/01		112	%	80 - 120
				Dissolved Cadmium (Cd)	2016/06/01		111	%	80 - 120
				Dissolved Chromium (Cr)	2016/06/01		107	%	80 - 120
				Dissolved Cobalt (Co)	2016/06/01		107	%	80 - 120
				Dissolved Copper (Cu)	2016/06/01		105	%	80 - 120
				Dissolved Lead (Pb)	2016/06/01		108	%	80 - 120
				Dissolved Molybdenum (Mo)	2016/06/01		114	%	80 - 120
				Dissolved Nickel (Ni)	2016/06/01		106	%	80 - 120
				Dissolved Selenium (Se)	2016/06/01		110	%	80 - 120
				Dissolved Silver (Ag)	2016/06/01		110	%	80 - 120
				Dissolved Sodium (Na)	2016/06/01		105	%	80 - 120
				Dissolved Thallium (Tl)	2016/06/01		109	%	80 - 120
				Dissolved Uranium (U)	2016/06/01		107	%	80 - 120
				Dissolved Vanadium (V)	2016/06/01		110	%	80 - 120
				Dissolved Zinc (Zn)	2016/06/01		NC	%	80 - 120

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QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
4519452	PBA	Spiked Blank	Dissolved Antimony (Sb)	2016/06/01		107	%	80 - 120
			Dissolved Arsenic (As)	2016/06/01		99	%	80 - 120
			Dissolved Barium (Ba)	2016/06/01		102	%	80 - 120
			Dissolved Beryllium (Be)	2016/06/01		107	%	80 - 120
			Dissolved Boron (B)	2016/06/01		108	%	80 - 120
			Dissolved Cadmium (Cd)	2016/06/01		104	%	80 - 120
			Dissolved Chromium (Cr)	2016/06/01		104	%	80 - 120
			Dissolved Cobalt (Co)	2016/06/01		103	%	80 - 120
			Dissolved Copper (Cu)	2016/06/01		101	%	80 - 120
			Dissolved Lead (Pb)	2016/06/01		101	%	80 - 120
			Dissolved Molybdenum (Mo)	2016/06/01		107	%	80 - 120
			Dissolved Nickel (Ni)	2016/06/01		103	%	80 - 120
			Dissolved Selenium (Se)	2016/06/01		105	%	80 - 120
			Dissolved Silver (Ag)	2016/06/01		103	%	80 - 120
			Dissolved Sodium (Na)	2016/06/01		104	%	80 - 120
			Dissolved Thallium (Tl)	2016/06/01		101	%	80 - 120
			Dissolved Uranium (U)	2016/06/01		101	%	80 - 120
			Dissolved Vanadium (V)	2016/06/01		105	%	80 - 120
			Dissolved Zinc (Zn)	2016/06/01		102	%	80 - 120
4519452	PBA	Method Blank	Dissolved Antimony (Sb)	2016/06/01	ND, RDL=0.50		ug/L	
			Dissolved Arsenic (As)	2016/06/01	ND, RDL=1.0		ug/L	
			Dissolved Barium (Ba)	2016/06/01	ND, RDL=2.0		ug/L	
			Dissolved Beryllium (Be)	2016/06/01	ND, RDL=0.50		ug/L	
			Dissolved Boron (B)	2016/06/01	ND, RDL=10		ug/L	
			Dissolved Cadmium (Cd)	2016/06/01	ND, RDL=0.10		ug/L	
			Dissolved Chromium (Cr)	2016/06/01	ND, RDL=5.0		ug/L	
			Dissolved Cobalt (Co)	2016/06/01	ND, RDL=0.50		ug/L	
			Dissolved Copper (Cu)	2016/06/01	ND, RDL=1.0		ug/L	
			Dissolved Lead (Pb)	2016/06/01	ND, RDL=0.50		ug/L	
			Dissolved Molybdenum (Mo)	2016/06/01	ND, RDL=0.50		ug/L	
			Dissolved Nickel (Ni)	2016/06/01	ND, RDL=1.0		ug/L	
			Dissolved Selenium (Se)	2016/06/01	ND, RDL=2.0		ug/L	
			Dissolved Silver (Ag)	2016/06/01	ND, RDL=0.10		ug/L	
			Dissolved Sodium (Na)	2016/06/01	ND, RDL=100		ug/L	

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QA/QC	Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
				Dissolved Thallium (Tl)	2016/06/01	ND, RDL=0.050		ug/L	
				Dissolved Uranium (U)	2016/06/01	ND, RDL=0.10		ug/L	
				Dissolved Vanadium (V)	2016/06/01	ND, RDL=0.50		ug/L	
				Dissolved Zinc (Zn)	2016/06/01	ND, RDL=5.0		ug/L	
4520303	H_W		Matrix Spike	1,4-Difluorobenzene	2016/06/01		98	%	70 - 130
				4-Bromofluorobenzene	2016/06/01		102	%	70 - 130
				D10-Ethylbenzene	2016/06/01		100	%	70 - 130
				D4-1,2-Dichloroethane	2016/06/01		97	%	70 - 130
				F1 (C6-C10)	2016/06/01		94	%	70 - 130
4520303	H_W		Spiked Blank	1,4-Difluorobenzene	2016/06/01		100	%	70 - 130
				4-Bromofluorobenzene	2016/06/01		104	%	70 - 130
				D10-Ethylbenzene	2016/06/01		112	%	70 - 130
				D4-1,2-Dichloroethane	2016/06/01		97	%	70 - 130
				F1 (C6-C10)	2016/06/01		95	%	70 - 130
4520303	H_W		Method Blank	1,4-Difluorobenzene	2016/06/01		100	%	70 - 130
				4-Bromofluorobenzene	2016/06/01		101	%	70 - 130
				D10-Ethylbenzene	2016/06/01		99	%	70 - 130
				D4-1,2-Dichloroethane	2016/06/01		94	%	70 - 130
				F1 (C6-C10)	2016/06/01	ND, RDL=25		ug/L	
				F1 (C6-C10) - BTEX	2016/06/01	ND, RDL=25		ug/L	
4520303	H_W		RPD	F1 (C6-C10)	2016/06/01	NC		%	30
				F1 (C6-C10) - BTEX	2016/06/01	NC		%	30
4520376	MC		Matrix Spike [CKV220-05]	Mercury (Hg)	2016/06/02		94	%	75 - 125
4520376	MC		Spiked Blank	Mercury (Hg)	2016/06/02		108	%	80 - 120
4520376	MC		Method Blank	Mercury (Hg)	2016/06/02	ND, RDL=0.1		ug/L	
4520376	MC		RPD [CKV220-05]	Mercury (Hg)	2016/06/02	NC		%	20
4520648	JET		Matrix Spike	D10-Anthracene	2016/06/01		101	%	50 - 130
				D14-Terphenyl (FS)	2016/06/01		98	%	50 - 130
				D8-Acenaphthylene	2016/06/01		99	%	50 - 130
				Acenaphthene	2016/06/01		110	%	50 - 130
				Acenaphthylene	2016/06/01		110	%	50 - 130
				Anthracene	2016/06/01		111	%	50 - 130
				Benzo(a)anthracene	2016/06/01		118	%	50 - 130
				Benzo(a)pyrene	2016/06/01		120	%	50 - 130
				Benzo(b/j)fluoranthene	2016/06/01		120	%	50 - 130
				Benzo(g,h,i)perylene	2016/06/01		115	%	50 - 130
				Benzo(k)fluoranthene	2016/06/01		118	%	50 - 130
				Chrysene	2016/06/01		116	%	50 - 130
				Dibenz(a,h)anthracene	2016/06/01		110	%	50 - 130
				Fluoranthene	2016/06/01		121	%	50 - 130
				Fluorene	2016/06/01		113	%	50 - 130
				Indeno(1,2,3-cd)pyrene	2016/06/01		125	%	50 - 130
				1-Methylnaphthalene	2016/06/01		103	%	50 - 130

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QA/QC	Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
4520648	JET	Spiked Blank		2-Methylnaphthalene	2016/06/01		102	%	50 - 130
				Naphthalene	2016/06/01		97	%	50 - 130
				Phenanthrene	2016/06/01		110	%	50 - 130
				Pyrene	2016/06/01		120	%	50 - 130
				D10-Anthracene	2016/06/02		104	%	50 - 130
				D14-Terphenyl (FS)	2016/06/02		102	%	50 - 130
				D8-Acenaphthylene	2016/06/02		99	%	50 - 130
				Acenaphthene	2016/06/02		110	%	50 - 130
				Acenaphthylene	2016/06/02		110	%	50 - 130
				Anthracene	2016/06/02		112	%	50 - 130
				Benzo(a)anthracene	2016/06/02		116	%	50 - 130
				Benzo(a)pyrene	2016/06/02		119	%	50 - 130
				Benzo(b/j)fluoranthene	2016/06/02		123	%	50 - 130
				Benzo(g,h,i)perylene	2016/06/02		119	%	50 - 130
				Benzo(k)fluoranthene	2016/06/02		121	%	50 - 130
				Chrysene	2016/06/02		117	%	50 - 130
				Dibenz(a,h)anthracene	2016/06/02		108	%	50 - 130
				Fluoranthene	2016/06/02		122	%	50 - 130
				Fluorene	2016/06/02		112	%	50 - 130
				Indeno(1,2,3-cd)pyrene	2016/06/02		128	%	50 - 130
				1-Methylnaphthalene	2016/06/02		102	%	50 - 130
				2-Methylnaphthalene	2016/06/02		100	%	50 - 130
				Naphthalene	2016/06/02		96	%	50 - 130
				Phenanthrene	2016/06/02		111	%	50 - 130
4520648	JET	Method Blank		Pyrene	2016/06/02		120	%	50 - 130
				D10-Anthracene	2016/06/01		105	%	50 - 130
				D14-Terphenyl (FS)	2016/06/01		103	%	50 - 130
				D8-Acenaphthylene	2016/06/01		102	%	50 - 130
				Acenaphthene	2016/06/01	ND, RDL=0.050		ug/L	
				Acenaphthylene	2016/06/01	ND, RDL=0.050		ug/L	
				Anthracene	2016/06/01	ND, RDL=0.050		ug/L	
				Benzo(a)anthracene	2016/06/01	ND, RDL=0.050		ug/L	
				Benzo(a)pyrene	2016/06/01	ND, RDL=0.010		ug/L	
				Benzo(b/j)fluoranthene	2016/06/01	ND, RDL=0.050		ug/L	
				Benzo(g,h,i)perylene	2016/06/01	ND, RDL=0.050		ug/L	
				Benzo(k)fluoranthene	2016/06/01	ND, RDL=0.050		ug/L	
				Chrysene	2016/06/01	ND, RDL=0.050		ug/L	
				Dibenz(a,h)anthracene	2016/06/01	ND, RDL=0.050		ug/L	
				Fluoranthene	2016/06/01	ND, RDL=0.050		ug/L	

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4520648	JET	RPD		Fluorene	2016/06/01	ND, RDL=0.050		ug/L	
				Indeno(1,2,3-cd)pyrene	2016/06/01	ND, RDL=0.050		ug/L	
				1-Methylnaphthalene	2016/06/01	ND, RDL=0.050		ug/L	
				2-Methylnaphthalene	2016/06/01	ND, RDL=0.050		ug/L	
				Naphthalene	2016/06/01	ND, RDL=0.050		ug/L	
				Phenanthrene	2016/06/01	ND, RDL=0.030		ug/L	
				Pyrene	2016/06/01	ND, RDL=0.050		ug/L	
				Acenaphthene	2016/06/01	NC		%	30
				Acenaphthylene	2016/06/01	NC		%	30
				Anthracene	2016/06/01	NC		%	30
				Benzo(a)anthracene	2016/06/01	NC		%	30
				Benzo(a)pyrene	2016/06/01	NC		%	30
				Benzo(b/j)fluoranthene	2016/06/01	NC		%	30
				Benzo(g,h,i)perylene	2016/06/01	NC		%	30
				Benzo(k)fluoranthene	2016/06/01	NC		%	30
				Chrysene	2016/06/01	NC		%	30
				Dibenz(a,h)anthracene	2016/06/01	NC		%	30
				Fluoranthene	2016/06/01	NC		%	30
				Fluorene	2016/06/01	NC		%	30
				Indeno(1,2,3-cd)pyrene	2016/06/01	NC		%	30
				1-Methylnaphthalene	2016/06/01	NC		%	30
				2-Methylnaphthalene	2016/06/01	NC		%	30
				Naphthalene	2016/06/01	NC		%	30
				Phenanthrene	2016/06/01	NC		%	30
				Pyrene	2016/06/01	NC		%	30
4520892	ZZ	Matrix Spike		o-Terphenyl	2016/06/01		99	%	60 - 130
				F2 (C10-C16 Hydrocarbons)	2016/06/01		109	%	50 - 130
				F3 (C16-C34 Hydrocarbons)	2016/06/01		100	%	50 - 130
				F4 (C34-C50 Hydrocarbons)	2016/06/01		100	%	50 - 130
4520892	ZZ	Spiked Blank		o-Terphenyl	2016/06/01		102	%	60 - 130
				F2 (C10-C16 Hydrocarbons)	2016/06/01		113	%	60 - 130
				F3 (C16-C34 Hydrocarbons)	2016/06/01		105	%	60 - 130
				F4 (C34-C50 Hydrocarbons)	2016/06/01		103	%	60 - 130
4520892	ZZ	Method Blank		o-Terphenyl	2016/06/01		97	%	60 - 130
				F2 (C10-C16 Hydrocarbons)	2016/06/01	ND, RDL=100		ug/L	
				F3 (C16-C34 Hydrocarbons)	2016/06/01	ND, RDL=200		ug/L	
				F4 (C34-C50 Hydrocarbons)	2016/06/01	ND, RDL=200		ug/L	
4520892	ZZ	RPD		F2 (C10-C16 Hydrocarbons)	2016/06/02	NC		%	30
				F3 (C16-C34 Hydrocarbons)	2016/06/02	NC		%	30

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Batch	Init	QC Type	Parameter	Analyzed	Value	Recovery	UNITS	QC Limits	
			F4 (C34-C50 Hydrocarbons)	2016/06/02	NC		%	30	
Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement. Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference. Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy. Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination. Surrogate: A pure or isotopically labeled compound whose behavior mirrors the analytes of interest. Used to evaluate extraction efficiency. NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spiked amount was too small to permit a reliable recovery calculation (matrix spike concentration was less than 2x that of the native sample concentration). NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (one or both samples < 5x RDL).									

VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by the following individual(s).

Cristina Carriere

Cristina Carriere, Scientific Services

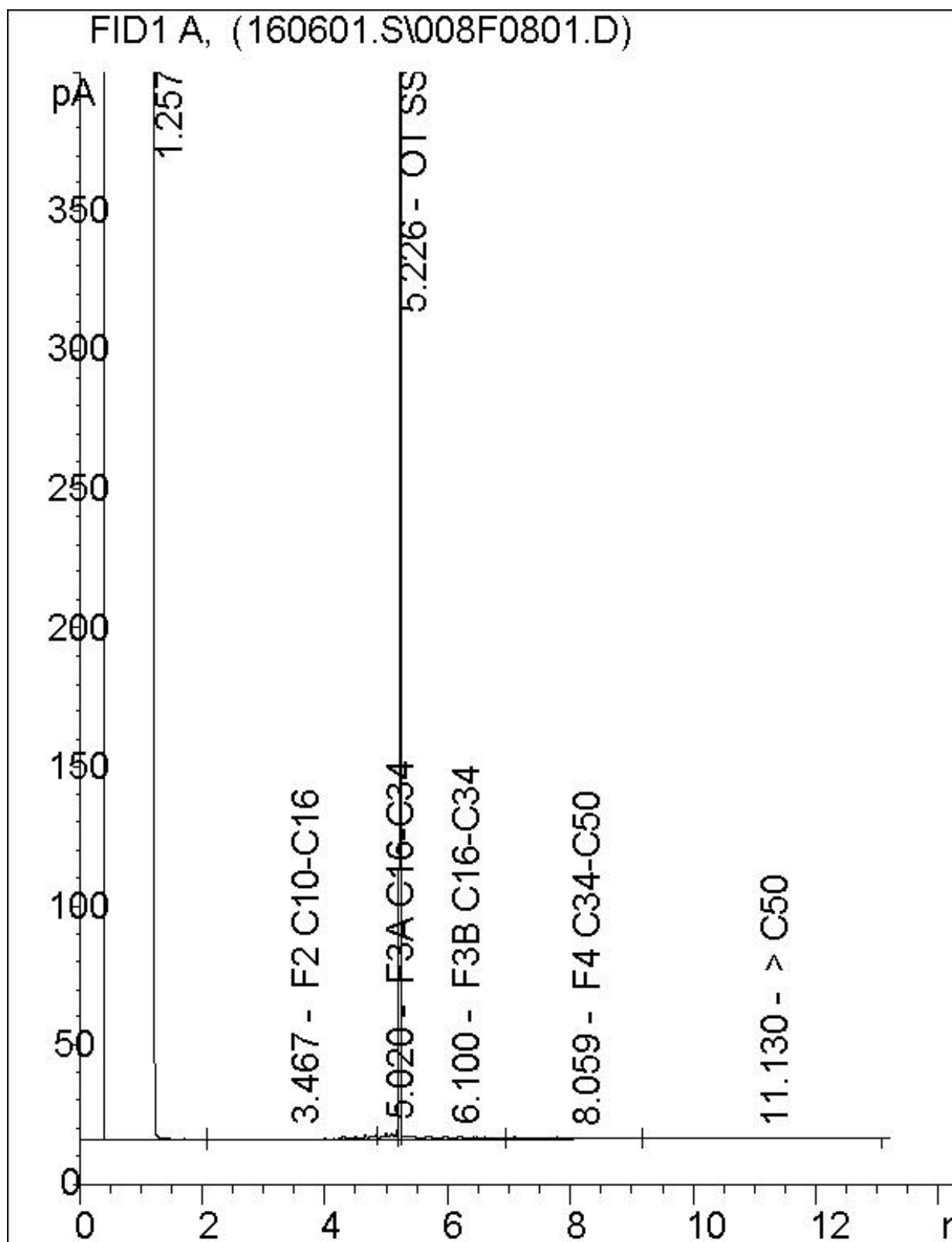
Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

ANALYSIS REQUESTED (PLEASE BE SPECIFIC)Field Filtered (please circle):

Bottles	Comments

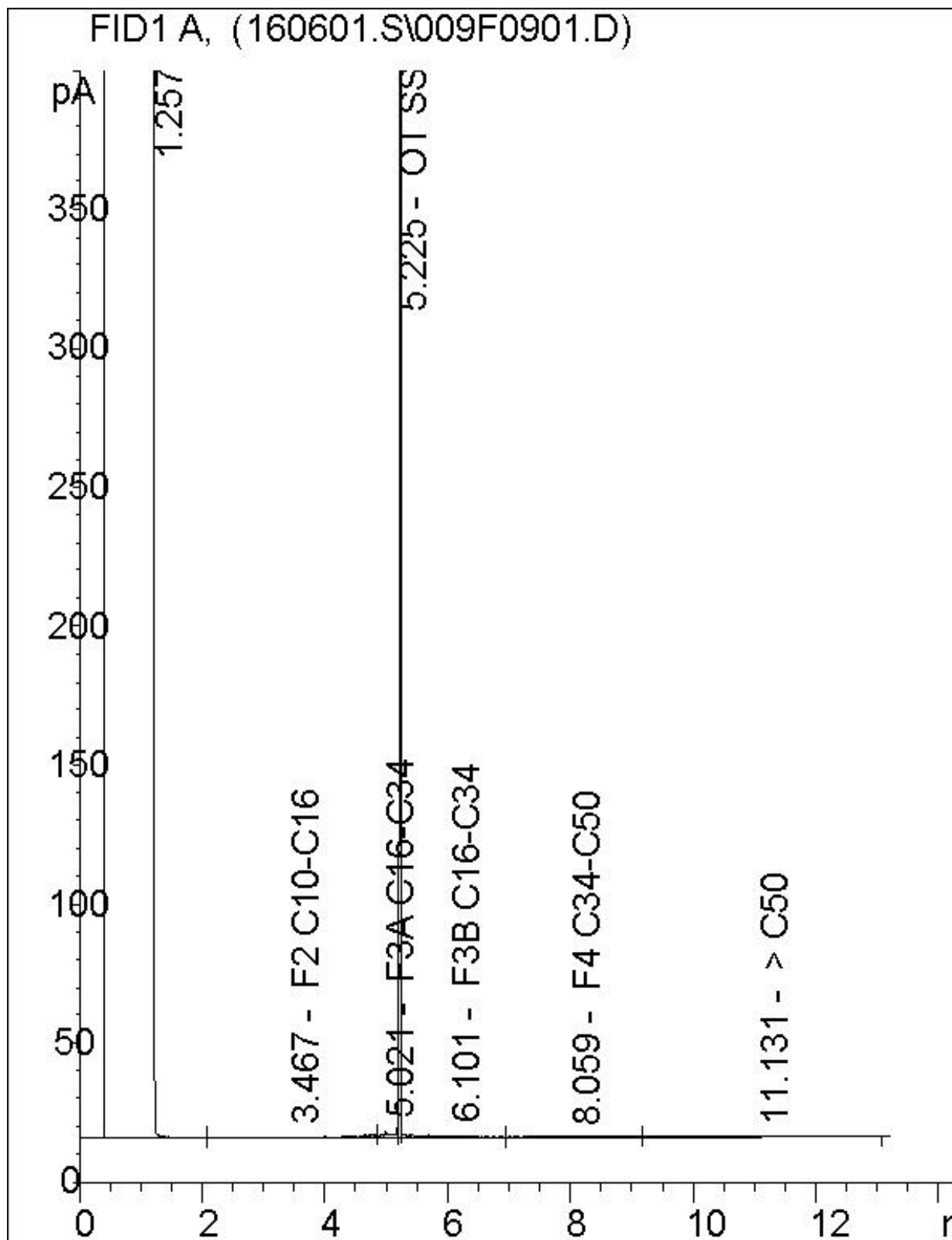
* IT IS THE RESPONSIBILITY OF THE RELINQUISHER TO ENSURE THE ACCURACY OF THE CHAIN OF CUSTODY RECORD. AN INCOMPLETE CHAIN OF CUSTODY MAY RESULT IN ANALYTICAL TAT DELAYS.

Petroleum Hydrocarbons F2-F4 in Water Chromatogram



Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Petroleum Hydrocarbons F2-F4 in Water Chromatogram



Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Attention: Jeff Stevenson

Terrapex Environmental Ltd
920 Brant Street
Unit 16
Burlington, ON
CANADA L7R 4J1

Your P.O. #: 4700001396

Your Project #: CB644.02

Site#: 60680

Site Location: 121 Hume Street, Collingwood, ON

Your C.O.C. #: 562385-02-01

Report Date: 2016/06/03

Report #: R4014271

Version: 1 - Final

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B6A7201

Received: 2016/05/27, 10:23

Sample Matrix: Soil
Samples Received: 3

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Reference
Methylnaphthalene Sum	1	N/A	2016/06/02	CAM SOP-00301	EPA 8270D m
Hot Water Extractable Boron	1	2016/05/31	2016/05/31	CAM SOP-00408	R153 Ana. Prot. 2011
1,3-Dichloropropene Sum	1	N/A	2016/06/01		EPA 8260C m
Free (WAD) Cyanide	1	2016/05/31	2016/06/01	CAM SOP-00457	OMOE E3015 m
Conductivity	1	2016/06/02	2016/06/02	CAM SOP-00414	OMOE E3138 v2 m
Hexavalent Chromium in Soil by IC (1)	1	2016/05/31	2016/06/01	CAM SOP-00436	EPA 3060/7199 m
Strong Acid Leachable Metals by ICPMS	1	2016/05/31	2016/06/01	CAM SOP-00447	EPA 6020A m
Moisture	3	N/A	2016/05/31	CAM SOP-00445	Carter 2nd ed 51.2 m
PAH Compounds in Soil by GC/MS (SIM)	1	2016/06/01	2016/06/02	CAM SOP-00318	EPA 8270D m
pH CaCl2 EXTRACT	1	2016/05/30	2016/05/30	CAM SOP-00413	EPA 9045 D m
Sodium Adsorption Ratio (SAR)	1	N/A	2016/06/02	CAM SOP-00102	EPA 6010C
SAR - ICP Metals	1	2016/06/02	2016/06/02	CAM SOP-00408	EPA 6010C m
Volatile Organic Compounds in Soil	1	N/A	2016/05/31	CAM SOP-00228	EPA 8260C m

Sample Matrix: Water
Samples Received: 4

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Reference
Methylnaphthalene Sum	2	N/A	2016/06/02	CAM SOP-00301	EPA 8270D m
1,3-Dichloropropene Sum	3	N/A	2016/05/31		EPA 8260C m
Chloride by Automated Colourimetry	1	N/A	2016/05/30	CAM SOP-00463	EPA 325.2 m
Chromium (VI) in Water	1	N/A	2016/05/31	CAM SOP-00436	EPA 7199 m
Free (WAD) Cyanide	1	N/A	2016/05/30	CAM SOP-00457	OMOE E3015 m
Petroleum Hydro. CCME F1 & BTEX in Water	2	N/A	2016/06/01	CAM SOP-00315	CCME PHC-CWS m
Petroleum Hydrocarbons F2-F4 in Water (2)	2	2016/06/01	2016/06/01	CAM SOP-00316	CCME PHC-CWS m
Mercury	1	2016/06/01	2016/06/01	CAM SOP-00453	EPA 7470A m
Dissolved Metals by ICPMS	1	N/A	2016/05/31	CAM SOP-00447	EPA 6020A m
PAH Compounds in Water by GC/MS (SIM)	1	2016/06/01	2016/06/01	CAM SOP-00318	EPA 8270D m
PAH Compounds in Water by GC/MS (SIM)	1	2016/06/01	2016/06/02	CAM SOP-00318	EPA 8270D m
Volatile Organic Compounds in Water	3	N/A	2016/05/30	CAM SOP-00228	EPA 8260C m

Attention: Jeff Stevenson

Terrapex Environmental Ltd
920 Brant Street
Unit 16
Burlington, ON
CANADA L7R 4J1

Your P.O. #: 4700001396

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CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B6A7201

Received: 2016/05/27, 10:23

Remarks:

Maxxam Analytics has performed all analytical testing herein in accordance with ISO 17025 and the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act. All methodologies comply with this document and are validated for use in the laboratory. The methods and techniques employed in this analysis conform to the performance criteria (detection limits, accuracy and precision) as outlined in the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act.

Maxxam Analytics is accredited for all specific parameters as required by Ontario Regulation 153/04. Maxxam Analytics is limited in liability to the actual cost of analysis unless otherwise agreed in writing. There is no other warranty expressed or implied. Samples will be retained at Maxxam Analytics for three weeks from receipt of data or as per contract.

Reference Method suffix "m" indicates test methods incorporate validated modifications from specific reference methods to improve performance.

* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.

(1) Soils are reported on a dry weight basis unless otherwise specified.

(2) All CCME PHC results met required criteria unless otherwise stated in the report. The CWS PHC methods employed by Maxxam conform to all prescribed elements of the reference method and performance based elements have been validated. All modifications have been validated and proven equivalent following "Alberta Environment's Interpretation of the Reference Method for the Canada-Wide Standard for Petroleum Hydrocarbons in Soil Validation of Performance-Based Alternative Methods September 2003". Documentation is available upon request. Modifications from Reference Method for the Canada-wide Standard for Petroleum Hydrocarbons in Soil-Tier 1 Method: F2/F3/F4 data reported using validated cold solvent extraction instead of Soxhlet extraction.

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.

Marissa Oddi, Customer Service Representative

Email: moddi@maxxam.ca

Phone# (905) 817-5700

=====

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

O.REG 153 METALS & INORGANICS PKG (SOIL)

Maxxam ID		CKU361		
Sampling Date		2016/05/25 09:00		
COC Number		562385-02-01		
	UNITS	MW401-1	RDL	QC Batch
Calculated Parameters				
Sodium Adsorption Ratio	N/A	0.80		4514989
Inorganics				
Conductivity	mS/cm	0.17	0.002	4521281
Free Cyanide	ug/g	ND	0.01	4518525
Moisture	%	7.1	1.0	4519291
Available (CaCl2) pH	pH	7.92		4517247
Metals				
Soluble Calcium (Ca)	mg/L	17.5	0.5	4521260
Soluble Magnesium (Mg)	mg/L	1.0	0.5	4521260
Soluble Sodium (Na)	mg/L	13	5	4521260
Inorganics				
Chromium (VI)	ug/g	ND	0.2	4518998
Metals				
Hot Water Ext. Boron (B)	ug/g	0.13	0.050	4518796
Acid Extractable Antimony (Sb)	ug/g	ND	0.20	4518764
Acid Extractable Arsenic (As)	ug/g	1.0	1.0	4518764
Acid Extractable Barium (Ba)	ug/g	4.8	0.50	4518764
Acid Extractable Beryllium (Be)	ug/g	ND	0.20	4518764
Acid Extractable Boron (B)	ug/g	ND	5.0	4518764
Acid Extractable Cadmium (Cd)	ug/g	ND	0.10	4518764
Acid Extractable Chromium (Cr)	ug/g	4.2	1.0	4518764
Acid Extractable Cobalt (Co)	ug/g	1.0	0.10	4518764
Acid Extractable Copper (Cu)	ug/g	1.4	0.50	4518764
Acid Extractable Lead (Pb)	ug/g	3.2	1.0	4518764
Acid Extractable Molybdenum (Mo)	ug/g	ND	0.50	4518764
Acid Extractable Nickel (Ni)	ug/g	2.1	0.50	4518764
Acid Extractable Selenium (Se)	ug/g	ND	0.50	4518764
Acid Extractable Silver (Ag)	ug/g	ND	0.20	4518764
Acid Extractable Thallium (Tl)	ug/g	ND	0.050	4518764
Acid Extractable Uranium (U)	ug/g	0.20	0.050	4518764
Acid Extractable Vanadium (V)	ug/g	6.5	5.0	4518764
Acid Extractable Zinc (Zn)	ug/g	7.6	5.0	4518764
RDL = Reportable Detection Limit				
QC Batch = Quality Control Batch				
ND = Not detected				

Maxxam Job #: B6A7201
Report Date: 2016/06/03

Terrapex Environmental Ltd
Client Project #: CB644.02
Site Location: 121 Hume Street, Collingwood, ON
Your P.O. #: 4700001396
Sampler Initials: PA

O.REG 153 METALS & INORGANICS PKG (SOIL)

Maxxam ID		CKU361		
Sampling Date		2016/05/25 09:00		
COC Number		562385-02-01		
	UNITS	MW401-1	RDL	QC Batch
Acid Extractable Mercury (Hg)	ug/g	ND	0.050	4518764
RDL = Reportable Detection Limit QC Batch = Quality Control Batch ND = Not detected				

O.REG 153 PAHS (SOIL)

Maxxam ID		CKU362		
Sampling Date		2016/05/25 09:10		
COC Number		562385-02-01		
	UNITS	MW401-2B	RDL	QC Batch
Inorganics				
Moisture	%	27	1.0	4518935
Calculated Parameters				
Methylnaphthalene, 2-(1-)	ug/g	ND	0.0071	4515021
Polyaromatic Hydrocarbons				
Acenaphthene	ug/g	ND	0.0050	4521902
Acenaphthylene	ug/g	ND	0.0050	4521902
Anthracene	ug/g	ND	0.0050	4521902
Benzo(a)anthracene	ug/g	ND	0.0050	4521902
Benzo(a)pyrene	ug/g	ND	0.0050	4521902
Benzo(b/j)fluoranthene	ug/g	ND	0.0050	4521902
Benzo(g,h,i)perylene	ug/g	ND	0.0050	4521902
Benzo(k)fluoranthene	ug/g	ND	0.0050	4521902
Chrysene	ug/g	ND	0.0050	4521902
Dibenz(a,h)anthracene	ug/g	ND	0.0050	4521902
Fluoranthene	ug/g	ND	0.0050	4521902
Fluorene	ug/g	ND	0.0050	4521902
Indeno(1,2,3-cd)pyrene	ug/g	ND	0.0050	4521902
1-Methylnaphthalene	ug/g	ND	0.0050	4521902
2-Methylnaphthalene	ug/g	ND	0.0050	4521902
Naphthalene	ug/g	ND	0.0050	4521902
Phenanthrene	ug/g	ND	0.0050	4521902
Pyrene	ug/g	ND	0.0050	4521902
Surrogate Recovery (%)				
D10-Anthracene	%	75		4521902
D14-Terphenyl (FS)	%	78		4521902
D8-Acenaphthylene	%	82		4521902
RDL = Reportable Detection Limit QC Batch = Quality Control Batch ND = Not detected				

O.REG 153 VOLATILE ORGANICS (SOIL)

Maxxam ID		CKU363		
Sampling Date		2016/05/25 09:20		
COC Number		562385-02-01		
	UNITS	MW401-3	RDL	QC Batch
Inorganics				
Moisture	%	9.1	1.0	4519291
Calculated Parameters				
1,3-Dichloropropene (cis+trans)	ug/g	ND	0.050	4514369
Volatile Organics				
Acetone (2-Propanone)	ug/g	ND	0.50	4517528
Benzene	ug/g	ND	0.020	4517528
Bromodichloromethane	ug/g	ND	0.050	4517528
Bromoform	ug/g	ND	0.050	4517528
Bromomethane	ug/g	ND	0.050	4517528
Carbon Tetrachloride	ug/g	ND	0.050	4517528
Chlorobenzene	ug/g	ND	0.050	4517528
Chloroform	ug/g	ND	0.050	4517528
Dibromochloromethane	ug/g	ND	0.050	4517528
1,2-Dichlorobenzene	ug/g	ND	0.050	4517528
1,3-Dichlorobenzene	ug/g	ND	0.050	4517528
1,4-Dichlorobenzene	ug/g	ND	0.050	4517528
Dichlorodifluoromethane (FREON 12)	ug/g	ND	0.050	4517528
1,1-Dichloroethane	ug/g	ND	0.050	4517528
1,2-Dichloroethane	ug/g	ND	0.050	4517528
1,1-Dichloroethylene	ug/g	ND	0.050	4517528
cis-1,2-Dichloroethylene	ug/g	ND	0.050	4517528
trans-1,2-Dichloroethylene	ug/g	ND	0.050	4517528
1,2-Dichloropropane	ug/g	ND	0.050	4517528
cis-1,3-Dichloropropene	ug/g	ND	0.030	4517528
trans-1,3-Dichloropropene	ug/g	ND	0.040	4517528
Ethylbenzene	ug/g	ND	0.020	4517528
Ethylene Dibromide	ug/g	ND	0.050	4517528
Hexane	ug/g	ND	0.050	4517528
Methylene Chloride(Dichloromethane)	ug/g	ND	0.050	4517528
Methyl Ethyl Ketone (2-Butanone)	ug/g	ND	0.50	4517528
Methyl Isobutyl Ketone	ug/g	ND	0.50	4517528
Methyl t-butyl ether (MTBE)	ug/g	ND	0.050	4517528
RDL = Reportable Detection Limit QC Batch = Quality Control Batch ND = Not detected				

O.REG 153 VOLATILE ORGANICS (SOIL)

Maxxam ID		CKU363		
Sampling Date		2016/05/25 09:20		
COC Number		562385-02-01		
	UNITS	MW401-3	RDL	QC Batch
Styrene	ug/g	ND	0.050	4517528
1,1,1,2-Tetrachloroethane	ug/g	ND	0.050	4517528
1,1,2,2-Tetrachloroethane	ug/g	ND	0.050	4517528
Tetrachloroethylene	ug/g	ND	0.050	4517528
Toluene	ug/g	ND	0.020	4517528
1,1,1-Trichloroethane	ug/g	ND	0.050	4517528
1,1,2-Trichloroethane	ug/g	ND	0.050	4517528
Trichloroethylene	ug/g	ND	0.050	4517528
Trichlorofluoromethane (FREON 11)	ug/g	ND	0.050	4517528
Vinyl Chloride	ug/g	ND	0.020	4517528
p+m-Xylene	ug/g	ND	0.020	4517528
o-Xylene	ug/g	ND	0.020	4517528
Total Xylenes	ug/g	ND	0.020	4517528
Surrogate Recovery (%)				
4-Bromofluorobenzene	%	95		4517528
D10-o-Xylene	%	95		4517528
D4-1,2-Dichloroethane	%	110		4517528
D8-Toluene	%	97		4517528
RDL = Reportable Detection Limit				
QC Batch = Quality Control Batch				
ND = Not detected				

O.REG 153 METALS & INORGANICS PKG (WTR)

Maxxam ID		CKU366	CKU366		
Sampling Date		2016/05/26 11:30	2016/05/26 11:30		
COC Number		562385-02-01	562385-02-01		
	UNITS	MW401	MW401 Lab-Dup	RDL	QC Batch
Inorganics					
Free Cyanide	ug/L	ND		2	4516392
Dissolved Chloride (Cl)	mg/L	260		3.0	4516483
Metals					
Chromium (VI)	ug/L	ND		0.50	4516402
Mercury (Hg)	ug/L	ND		0.1	4520139
Dissolved Antimony (Sb)	ug/L	2.1	2.1	0.50	4517716
Dissolved Arsenic (As)	ug/L	ND	ND	1.0	4517716
Dissolved Barium (Ba)	ug/L	86	85	2.0	4517716
Dissolved Beryllium (Be)	ug/L	ND	ND	0.50	4517716
Dissolved Boron (B)	ug/L	51	54	10	4517716
Dissolved Cadmium (Cd)	ug/L	ND	ND	0.10	4517716
Dissolved Chromium (Cr)	ug/L	ND	ND	5.0	4517716
Dissolved Cobalt (Co)	ug/L	ND	ND	0.50	4517716
Dissolved Copper (Cu)	ug/L	1.2	1.2	1.0	4517716
Dissolved Lead (Pb)	ug/L	ND	ND	0.50	4517716
Dissolved Molybdenum (Mo)	ug/L	8.2	8.2	0.50	4517716
Dissolved Nickel (Ni)	ug/L	ND	ND	1.0	4517716
Dissolved Selenium (Se)	ug/L	ND	ND	2.0	4517716
Dissolved Silver (Ag)	ug/L	ND	ND	0.10	4517716
Dissolved Sodium (Na)	ug/L	120000	120000	100	4517716
Dissolved Thallium (Tl)	ug/L	ND	ND	0.050	4517716
Dissolved Uranium (U)	ug/L	2.7	2.8	0.10	4517716
Dissolved Vanadium (V)	ug/L	1.5	1.4	0.50	4517716
Dissolved Zinc (Zn)	ug/L	11	11	5.0	4517716
RDL = Reportable Detection Limit QC Batch = Quality Control Batch Lab-Dup = Laboratory Initiated Duplicate ND = Not detected					

O.REG 153 PAHS (WATER)

Maxxam ID		CKU364	CKU364	CKU366		
Sampling Date		2016/05/26 11:00	2016/05/26 11:00	2016/05/26 11:30		
COC Number		562385-02-01	562385-02-01	562385-02-01		
	UNITS	MW203	MW203 Lab-Dup	MW401	RDL	QC Batch
Calculated Parameters						
Methylnaphthalene, 2-(1-)	ug/L	ND		ND	0.071	4515022
Polyaromatic Hydrocarbons						
Acenaphthene	ug/L	ND	ND	ND	0.050	4520648
Acenaphthylene	ug/L	ND	ND	ND	0.050	4520648
Anthracene	ug/L	ND	ND	ND	0.050	4520648
Benzo(a)anthracene	ug/L	ND	ND	ND	0.050	4520648
Benzo(a)pyrene	ug/L	ND	ND	0.019	0.010	4520648
Benzo(b/j)fluoranthene	ug/L	ND	ND	ND	0.050	4520648
Benzo(g,h,i)perylene	ug/L	ND	ND	ND	0.050	4520648
Benzo(k)fluoranthene	ug/L	ND	ND	ND	0.050	4520648
Chrysene	ug/L	ND	ND	ND	0.050	4520648
Dibenz(a,h)anthracene	ug/L	ND	ND	ND	0.050	4520648
Fluoranthene	ug/L	ND	ND	ND	0.050	4520648
Fluorene	ug/L	ND	ND	ND	0.050	4520648
Indeno(1,2,3-cd)pyrene	ug/L	ND	ND	ND	0.050	4520648
1-Methylnaphthalene	ug/L	ND	ND	ND	0.050	4520648
2-Methylnaphthalene	ug/L	ND	ND	ND	0.050	4520648
Naphthalene	ug/L	ND	ND	ND	0.050	4520648
Phenanthrene	ug/L	ND	ND	ND	0.030	4520648
Pyrene	ug/L	ND	ND	ND	0.050	4520648
Surrogate Recovery (%)						
D10-Anthracene	%	101	104	101		4520648
D14-Terphenyl (FS)	%	96	99	97		4520648
D8-Acenaphthylene	%	100	103	97		4520648
RDL = Reportable Detection Limit QC Batch = Quality Control Batch Lab-Dup = Laboratory Initiated Duplicate ND = Not detected						

O.REG 153 PETROLEUM HYDROCARBONS (WATER)

Maxxam ID		CKU365	CKU365	CKU366		
Sampling Date		2016/05/26 10:30	2016/05/26 10:30	2016/05/26 11:30		
COC Number		562385-02-01	562385-02-01	562385-02-01		
	UNITS	MW402	MW402 Lab-Dup	MW401	RDL	QC Batch
BTEX & F1 Hydrocarbons						
F1 (C6-C10)	ug/L	ND	ND	ND	25	4520008
F1 (C6-C10) - BTEX	ug/L	ND	ND	ND	25	4520008
F2-F4 Hydrocarbons						
F2 (C10-C16 Hydrocarbons)	ug/L	ND		ND	100	4520892
F3 (C16-C34 Hydrocarbons)	ug/L	ND		ND	200	4520892
F4 (C34-C50 Hydrocarbons)	ug/L	ND		ND	200	4520892
Reached Baseline at C50	ug/L	Yes		Yes		4520892
Surrogate Recovery (%)						
1,4-Difluorobenzene	%	98	101	97		4520008
4-Bromofluorobenzene	%	98	99	97		4520008
D10-Ethylbenzene	%	97	96	96		4520008
D4-1,2-Dichloroethane	%	103	103	104		4520008
o-Terphenyl	%	98		96		4520892
RDL = Reportable Detection Limit QC Batch = Quality Control Batch Lab-Dup = Laboratory Initiated Duplicate ND = Not detected						

O.REG 153 VOLATILE ORGANICS (WATER)

Maxxam ID		CKU365	CKU366	CKU367		
Sampling Date		2016/05/26 10:30	2016/05/26 11:30	2016/05/26 11:30		
COC Number		562385-02-01	562385-02-01	562385-02-01		
	UNITS	MW402	MW401	MW2000	RDL	QC Batch
Calculated Parameters						
1,3-Dichloropropene (cis+trans)	ug/L	ND	ND	ND	0.50	4515032
Volatile Organics						
Acetone (2-Propanone)	ug/L	ND	ND	ND	10	4516620
Benzene	ug/L	0.25	0.57	0.60	0.20	4516620
Bromodichloromethane	ug/L	ND	ND	ND	0.50	4516620
Bromoform	ug/L	ND	ND	ND	1.0	4516620
Bromomethane	ug/L	ND	ND	ND	0.50	4516620
Carbon Tetrachloride	ug/L	ND	ND	ND	0.20	4516620
Chlorobenzene	ug/L	ND	ND	ND	0.20	4516620
Chloroform	ug/L	ND	ND	ND	0.20	4516620
Dibromochloromethane	ug/L	ND	ND	ND	0.50	4516620
1,2-Dichlorobenzene	ug/L	ND	ND	ND	0.50	4516620
1,3-Dichlorobenzene	ug/L	ND	ND	ND	0.50	4516620
1,4-Dichlorobenzene	ug/L	ND	ND	ND	0.50	4516620
Dichlorodifluoromethane (FREON 12)	ug/L	ND	ND	ND	1.0	4516620
1,1-Dichloroethane	ug/L	ND	ND	ND	0.20	4516620
1,2-Dichloroethane	ug/L	ND	ND	ND	0.50	4516620
1,1-Dichloroethylene	ug/L	ND	ND	ND	0.20	4516620
cis-1,2-Dichloroethylene	ug/L	ND	ND	ND	0.50	4516620
trans-1,2-Dichloroethylene	ug/L	ND	ND	ND	0.50	4516620
1,2-Dichloropropane	ug/L	ND	ND	ND	0.20	4516620
cis-1,3-Dichloropropene	ug/L	ND	ND	ND	0.30	4516620
trans-1,3-Dichloropropene	ug/L	ND	ND	ND	0.40	4516620
Ethylbenzene	ug/L	0.27	ND	ND	0.20	4516620
Ethylene Dibromide	ug/L	ND	ND	ND	0.20	4516620
Hexane	ug/L	ND	ND	ND	1.0	4516620
Methylene Chloride(Dichloromethane)	ug/L	ND	ND	ND	2.0	4516620
Methyl Ethyl Ketone (2-Butanone)	ug/L	ND	ND	ND	10	4516620
Methyl Isobutyl Ketone	ug/L	ND	ND	ND	5.0	4516620
Methyl t-butyl ether (MTBE)	ug/L	ND	ND	ND	0.50	4516620
Styrene	ug/L	ND	ND	ND	0.50	4516620
1,1,1,2-Tetrachloroethane	ug/L	ND	ND	ND	0.50	4516620
RDL = Reportable Detection Limit						
QC Batch = Quality Control Batch						
ND = Not detected						

O.REG 153 VOLATILE ORGANICS (WATER)

Maxxam ID		CKU365	CKU366	CKU367		
Sampling Date		2016/05/26 10:30	2016/05/26 11:30	2016/05/26 11:30		
COC Number		562385-02-01	562385-02-01	562385-02-01		
	UNITS	MW402	MW401	MW2000	RDL	QC Batch
1,1,2,2-Tetrachloroethane	ug/L	ND	ND	ND	0.50	4516620
Tetrachloroethylene	ug/L	ND	ND	ND	0.20	4516620
Toluene	ug/L	0.39	0.69	0.69	0.20	4516620
1,1,1-Trichloroethane	ug/L	ND	ND	ND	0.20	4516620
1,1,2-Trichloroethane	ug/L	ND	ND	ND	0.50	4516620
Trichloroethylene	ug/L	ND	ND	ND	0.20	4516620
Trichlorofluoromethane (FREON 11)	ug/L	ND	ND	ND	0.50	4516620
Vinyl Chloride	ug/L	ND	ND	ND	0.20	4516620
p+m-Xylene	ug/L	1.0	ND	ND	0.20	4516620
o-Xylene	ug/L	0.72	ND	ND	0.20	4516620
Total Xylenes	ug/L	1.7	ND	ND	0.20	4516620
Surrogate Recovery (%)						
4-Bromofluorobenzene	%	99	99	99		4516620
D4-1,2-Dichloroethane	%	103	103	103		4516620
D8-Toluene	%	98	100	99		4516620
RDL = Reportable Detection Limit QC Batch = Quality Control Batch ND = Not detected						

Maxxam Job #: B6A7201
Report Date: 2016/06/03

Terrapex Environmental Ltd
Client Project #: CB644.02
Site Location: 121 Hume Street, Collingwood, ON
Your P.O. #: 4700001396
Sampler Initials: PA

TEST SUMMARY

Maxxam ID: CKU361
Sample ID: MW401-1
Matrix: Soil

Collected: 2016/05/25
Shipped:
Received: 2016/05/27

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hot Water Extractable Boron	ICP	4518796	2016/05/31	2016/05/31	Suban Kanapathipillai
Free (WAD) Cyanide	TECH	4518525	2016/05/31	2016/06/01	Christine Pham
Conductivity	AT	4521281	2016/06/02	2016/06/02	Lemeneh Addis
Hexavalent Chromium in Soil by IC	IC/SPEC	4518998	2016/05/31	2016/06/01	Sally Coughlin
Strong Acid Leachable Metals by ICPMS	ICP/MS	4518764	2016/05/31	2016/06/01	Viviana Canzonieri
Moisture	BAL	4519291	N/A	2016/05/31	Shivani Desai
pH CaCl2 EXTRACT	AT	4517247	2016/05/30	2016/05/30	Neil Dassanayake
Sodium Adsorption Ratio (SAR)	CALC/MET	4514989	N/A	2016/06/02	Automated Statchk
SAR - ICP Metals	ICP	4521260	2016/06/02	2016/06/02	Jolly John

Maxxam ID: CKU362
Sample ID: MW401-2B
Matrix: Soil

Collected: 2016/05/25
Shipped:
Received: 2016/05/27

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	4515021	N/A	2016/06/02	Automated Statchk
Moisture	BAL	4518935	N/A	2016/05/31	Shivani Desai
PAH Compounds in Soil by GC/MS (SIM)	GC/MS	4521902	2016/06/01	2016/06/02	Jett Wu

Maxxam ID: CKU363
Sample ID: MW401-3
Matrix: Soil

Collected: 2016/05/25
Shipped:
Received: 2016/05/27

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
1,3-Dichloropropene Sum	CALC	4514369	N/A	2016/06/01	Automated Statchk
Moisture	BAL	4519291	N/A	2016/05/31	Shivani Desai
Volatile Organic Compounds in Soil	GC/MS	4517528	N/A	2016/05/31	Xueming Jiang

Maxxam ID: CKU364
Sample ID: MW203
Matrix: Water

Collected: 2016/05/26
Shipped:
Received: 2016/05/27

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	4515022	N/A	2016/06/02	Automated Statchk
PAH Compounds in Water by GC/MS (SIM)	GC/MS	4520648	2016/06/01	2016/06/01	Jett Wu

Maxxam ID: CKU364 Dup
Sample ID: MW203
Matrix: Water

Collected: 2016/05/26
Shipped:
Received: 2016/05/27

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
PAH Compounds in Water by GC/MS (SIM)	GC/MS	4520648	2016/06/01	2016/06/01	Jett Wu

Maxxam Job #: B6A7201
Report Date: 2016/06/03

Terrapex Environmental Ltd
Client Project #: CB644.02
Site Location: 121 Hume Street, Collingwood, ON
Your P.O. #: 4700001396
Sampler Initials: PA

TEST SUMMARY

Maxxam ID: CKU365
Sample ID: MW402
Matrix: Water

Collected: 2016/05/26
Shipped:
Received: 2016/05/27

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
1,3-Dichloropropene Sum	CALC	4515032	N/A	2016/05/31	Automated Statchk
Petroleum Hydro. CCME F1 & BTEX in Water	HSGC/MSFD	4520008	N/A	2016/06/01	Ravinder Gaidhu
Petroleum Hydrocarbons F2-F4 in Water	GC/FID	4520892	2016/06/01	2016/06/01	Zhiyue (Frank) Zhu
Volatile Organic Compounds in Water	GC/MS	4516620	N/A	2016/05/30	Blair Gannon

Maxxam ID: CKU365 Dup
Sample ID: MW402
Matrix: Water

Collected: 2016/05/26
Shipped:
Received: 2016/05/27

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Petroleum Hydro. CCME F1 & BTEX in Water	HSGC/MSFD	4520008	N/A	2016/06/01	Ravinder Gaidhu

Maxxam ID: CKU366
Sample ID: MW401
Matrix: Water

Collected: 2016/05/26
Shipped:
Received: 2016/05/27

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	4515022	N/A	2016/06/02	Automated Statchk
1,3-Dichloropropene Sum	CALC	4515032	N/A	2016/05/31	Automated Statchk
Chloride by Automated Colourimetry	KONE	4516483	N/A	2016/05/30	Deonarine Ramnarine
Chromium (VI) in Water	IC	4516402	N/A	2016/05/31	Sally Coughlin
Free (WAD) Cyanide	TECH/CN	4516392	N/A	2016/05/30	Christine Pham
Petroleum Hydro. CCME F1 & BTEX in Water	HSGC/MSFD	4520008	N/A	2016/06/01	Ravinder Gaidhu
Petroleum Hydrocarbons F2-F4 in Water	GC/FID	4520892	2016/06/01	2016/06/01	Zhiyue (Frank) Zhu
Mercury	CV/AA	4520139	2016/06/01	2016/06/01	Magdalena Carlos
Dissolved Metals by ICPMS	ICP/MS	4517716	N/A	2016/05/31	Arefa Dabhad
PAH Compounds in Water by GC/MS (SIM)	GC/MS	4520648	2016/06/01	2016/06/02	Jett Wu
Volatile Organic Compounds in Water	GC/MS	4516620	N/A	2016/05/30	Blair Gannon

Maxxam ID: CKU366 Dup
Sample ID: MW401
Matrix: Water

Collected: 2016/05/26
Shipped:
Received: 2016/05/27

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Dissolved Metals by ICPMS	ICP/MS	4517716	N/A	2016/05/31	Arefa Dabhad

Maxxam ID: CKU367
Sample ID: MW2000
Matrix: Water

Collected: 2016/05/26
Shipped:
Received: 2016/05/27

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
1,3-Dichloropropene Sum	CALC	4515032	N/A	2016/05/31	Automated Statchk
Volatile Organic Compounds in Water	GC/MS	4516620	N/A	2016/05/30	Blair Gannon

Maxxam Job #: B6A7201
Report Date: 2016/06/03

Terrapex Environmental Ltd
Client Project #: CB644.02
Site Location: 121 Hume Street, Collingwood, ON
Your P.O. #: 4700001396
Sampler Initials: PA

GENERAL COMMENTS

Each temperature is the average of up to three cooler temperatures taken at receipt

Package 1	0.3°C

Results relate only to the items tested.

Maxxam Job #: B6A7201
Report Date: 2016/06/03

Terrapex Environmental Ltd
Client Project #: CB644.02
Site Location: 121 Hume Street, Collingwood, ON
Your P.O. #: 4700001396
Sampler Initials: PA

QUALITY ASSURANCE REPORT

QA/QC	Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
	4516392	CP	Matrix Spike	Free Cyanide	2016/05/30		100	%	80 - 120
	4516392	CP	Spiked Blank	Free Cyanide	2016/05/30		100	%	80 - 120
	4516392	CP	Method Blank	Free Cyanide	2016/05/30	ND,RDL=2		ug/L	
	4516392	CP	RPD	Free Cyanide	2016/05/30	NC		%	20
	4516402	SAC	Matrix Spike	Chromium (VI)	2016/05/31		100	%	80 - 120
	4516402	SAC	Spiked Blank	Chromium (VI)	2016/05/31		101	%	80 - 120
	4516402	SAC	Method Blank	Chromium (VI)	2016/05/31	ND, RDL=0.50		ug/L	
	4516402	SAC	RPD	Chromium (VI)	2016/05/31	NC		%	20
	4516483	DRM	Matrix Spike	Dissolved Chloride (Cl)	2016/05/30		NC	%	80 - 120
	4516483	DRM	Spiked Blank	Dissolved Chloride (Cl)	2016/05/30		105	%	80 - 120
	4516483	DRM	Method Blank	Dissolved Chloride (Cl)	2016/05/30	ND, RDL=1.0		mg/L	
	4516483	DRM	RPD	Dissolved Chloride (Cl)	2016/05/30	2.0		%	20
	4516620	BG1	Matrix Spike	4-Bromofluorobenzene	2016/05/30		100	%	70 - 130
				D4-1,2-Dichloroethane	2016/05/30		101	%	70 - 130
				D8-Toluene	2016/05/30		100	%	70 - 130
				Acetone (2-Propanone)	2016/05/30		103	%	60 - 140
				Benzene	2016/05/30		95	%	70 - 130
				Bromodichloromethane	2016/05/30		95	%	70 - 130
				Bromoform	2016/05/30		96	%	70 - 130
				Bromomethane	2016/05/30		81	%	60 - 140
				Carbon Tetrachloride	2016/05/30		94	%	70 - 130
				Chlorobenzene	2016/05/30		99	%	70 - 130
				Chloroform	2016/05/30		94	%	70 - 130
				Dibromochloromethane	2016/05/30		98	%	70 - 130
				1,2-Dichlorobenzene	2016/05/30		95	%	70 - 130
				1,3-Dichlorobenzene	2016/05/30		93	%	70 - 130
				1,4-Dichlorobenzene	2016/05/30		93	%	70 - 130
				Dichlorodifluoromethane (FREON 12)	2016/05/30		78	%	60 - 140
				1,1-Dichloroethane	2016/05/30		94	%	70 - 130
				1,2-Dichloroethane	2016/05/30		99	%	70 - 130
				1,1-Dichloroethylene	2016/05/30		96	%	70 - 130
				cis-1,2-Dichloroethylene	2016/05/30		94	%	70 - 130
				trans-1,2-Dichloroethylene	2016/05/30		94	%	70 - 130
				1,2-Dichloropropane	2016/05/30		95	%	70 - 130
				cis-1,3-Dichloropropene	2016/05/30		98	%	70 - 130
				trans-1,3-Dichloropropene	2016/05/30		97	%	70 - 130
				Ethylbenzene	2016/05/30		95	%	70 - 130
				Ethylene Dibromide	2016/05/30		99	%	70 - 130
				Hexane	2016/05/30		98	%	70 - 130
				Methylene Chloride(Dichloromethane)	2016/05/30		102	%	70 - 130
				Methyl Ethyl Ketone (2-Butanone)	2016/05/30		103	%	60 - 140
				Methyl Isobutyl Ketone	2016/05/30		100	%	70 - 130
				Methyl t-butyl ether (MTBE)	2016/05/30		97	%	70 - 130
				Styrene	2016/05/30		95	%	70 - 130
				1,1,1,2-Tetrachloroethane	2016/05/30		95	%	70 - 130
				1,1,2,2-Tetrachloroethane	2016/05/30		93	%	70 - 130
				Tetrachloroethylene	2016/05/30		95	%	70 - 130
				Toluene	2016/05/30		93	%	70 - 130
				1,1,1-Trichloroethane	2016/05/30		92	%	70 - 130

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC				Date				
Batch	Init	QC Type	Parameter	Analyzed	Value	Recovery	UNITS	QC Limits
4516620	BG1	Spiked Blank	1,1,2-Trichloroethane	2016/05/30		98	%	70 - 130
			Trichloroethylene	2016/05/30		103	%	70 - 130
			Trichlorofluoromethane (FREON 11)	2016/05/30		92	%	70 - 130
			Vinyl Chloride	2016/05/30		94	%	70 - 130
			p+m-Xylene	2016/05/30		91	%	70 - 130
			o-Xylene	2016/05/30		96	%	70 - 130
			4-Bromofluorobenzene	2016/05/30		101	%	70 - 130
			D4-1,2-Dichloroethane	2016/05/30		99	%	70 - 130
			D8-Toluene	2016/05/30		101	%	70 - 130
			Acetone (2-Propanone)	2016/05/30		98	%	60 - 140
			Benzene	2016/05/30		94	%	70 - 130
			Bromodichloromethane	2016/05/30		94	%	70 - 130
			Bromoform	2016/05/30		96	%	70 - 130
			Bromomethane	2016/05/30		80	%	60 - 140
			Carbon Tetrachloride	2016/05/30		95	%	70 - 130
			Chlorobenzene	2016/05/30		99	%	70 - 130
			Chloroform	2016/05/30		94	%	70 - 130
			Dibromochloromethane	2016/05/30		96	%	70 - 130
			1,2-Dichlorobenzene	2016/05/30		95	%	70 - 130
			1,3-Dichlorobenzene	2016/05/30		93	%	70 - 130
			1,4-Dichlorobenzene	2016/05/30		94	%	70 - 130
			Dichlorodifluoromethane (FREON 12)	2016/05/30		80	%	60 - 140
			1,1-Dichloroethane	2016/05/30		94	%	70 - 130
			1,2-Dichloroethane	2016/05/30		96	%	70 - 130
			1,1-Dichloroethylene	2016/05/30		96	%	70 - 130
			cis-1,2-Dichloroethylene	2016/05/30		93	%	70 - 130
			trans-1,2-Dichloroethylene	2016/05/30		94	%	70 - 130
			1,2-Dichloropropane	2016/05/30		95	%	70 - 130
			cis-1,3-Dichloropropene	2016/05/30		95	%	70 - 130
			trans-1,3-Dichloropropene	2016/05/30		92	%	70 - 130
			Ethylbenzene	2016/05/30		96	%	70 - 130
			Ethylene Dibromide	2016/05/30		96	%	70 - 130
			Hexane	2016/05/30		99	%	70 - 130
			Methylene Chloride(Dichloromethane)	2016/05/30		101	%	70 - 130
			Methyl Ethyl Ketone (2-Butanone)	2016/05/30		99	%	60 - 140
			Methyl Isobutyl Ketone	2016/05/30		97	%	70 - 130
			Methyl t-butyl ether (MTBE)	2016/05/30		96	%	70 - 130
			Styrene	2016/05/30		96	%	70 - 130
			1,1,1,2-Tetrachloroethane	2016/05/30		95	%	70 - 130
			1,1,2,2-Tetrachloroethane	2016/05/30		99	%	70 - 130
			Tetrachloroethylene	2016/05/30		95	%	70 - 130
			Toluene	2016/05/30		93	%	70 - 130
			1,1,1-Trichloroethane	2016/05/30		92	%	70 - 130
			1,1,2-Trichloroethane	2016/05/30		96	%	70 - 130
			Trichloroethylene	2016/05/30		92	%	70 - 130
			Trichlorofluoromethane (FREON 11)	2016/05/30		93	%	70 - 130
			Vinyl Chloride	2016/05/30		94	%	70 - 130
			p+m-Xylene	2016/05/30		92	%	70 - 130
			o-Xylene	2016/05/30		97	%	70 - 130
4516620	BG1	Method Blank	4-Bromofluorobenzene	2016/05/30		99	%	70 - 130
			D4-1,2-Dichloroethane	2016/05/30		98	%	70 - 130

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			D8-Toluene	2016/05/30		100	%	70 - 130
			Acetone (2-Propanone)	2016/05/30	ND, RDL=10		ug/L	
			Benzene	2016/05/30	ND, RDL=0.20		ug/L	
			Bromodichloromethane	2016/05/30	ND, RDL=0.50		ug/L	
			Bromoform	2016/05/30	ND, RDL=1.0		ug/L	
			Bromomethane	2016/05/30	ND, RDL=0.50		ug/L	
			Carbon Tetrachloride	2016/05/30	ND, RDL=0.20		ug/L	
			Chlorobenzene	2016/05/30	ND, RDL=0.20		ug/L	
			Chloroform	2016/05/30	ND, RDL=0.20		ug/L	
			Dibromochloromethane	2016/05/30	ND, RDL=0.50		ug/L	
			1,2-Dichlorobenzene	2016/05/30	ND, RDL=0.50		ug/L	
			1,3-Dichlorobenzene	2016/05/30	ND, RDL=0.50		ug/L	
			1,4-Dichlorobenzene	2016/05/30	ND, RDL=0.50		ug/L	
			Dichlorodifluoromethane (FREON 12)	2016/05/30	ND, RDL=1.0		ug/L	
			1,1-Dichloroethane	2016/05/30	ND, RDL=0.20		ug/L	
			1,2-Dichloroethane	2016/05/30	ND, RDL=0.50		ug/L	
			1,1-Dichloroethylene	2016/05/30	ND, RDL=0.20		ug/L	
			cis-1,2-Dichloroethylene	2016/05/30	ND, RDL=0.50		ug/L	
			trans-1,2-Dichloroethylene	2016/05/30	ND, RDL=0.50		ug/L	
			1,2-Dichloropropane	2016/05/30	ND, RDL=0.20		ug/L	
			cis-1,3-Dichloropropene	2016/05/30	ND, RDL=0.30		ug/L	
			trans-1,3-Dichloropropene	2016/05/30	ND, RDL=0.40		ug/L	
			Ethylbenzene	2016/05/30	ND, RDL=0.20		ug/L	
			Ethylene Dibromide	2016/05/30	ND, RDL=0.20		ug/L	

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
4516620	BG1	RPD	Hexane	2016/05/30	ND, RDL=1.0		ug/L	
			Methylene Chloride(Dichloromethane)	2016/05/30	ND, RDL=2.0		ug/L	
			Methyl Ethyl Ketone (2-Butanone)	2016/05/30	ND, RDL=10		ug/L	
			Methyl Isobutyl Ketone	2016/05/30	ND, RDL=5.0		ug/L	
			Methyl t-butyl ether (MTBE)	2016/05/30	ND, RDL=0.50		ug/L	
			Styrene	2016/05/30	ND, RDL=0.50		ug/L	
			1,1,1,2-Tetrachloroethane	2016/05/30	ND, RDL=0.50		ug/L	
			1,1,2,2-Tetrachloroethane	2016/05/30	ND, RDL=0.50		ug/L	
			Tetrachloroethylene	2016/05/30	ND, RDL=0.20		ug/L	
			Toluene	2016/05/30	ND, RDL=0.20		ug/L	
			1,1,1-Trichloroethane	2016/05/30	ND, RDL=0.20		ug/L	
			1,1,2-Trichloroethane	2016/05/30	ND, RDL=0.50		ug/L	
			Trichloroethylene	2016/05/30	ND, RDL=0.20		ug/L	
			Trichlorofluoromethane (FREON 11)	2016/05/30	ND, RDL=0.50		ug/L	
			Vinyl Chloride	2016/05/30	ND, RDL=0.20		ug/L	
			p+m-Xylene	2016/05/30	ND, RDL=0.20		ug/L	
			o-Xylene	2016/05/30	ND, RDL=0.20		ug/L	
			Total Xylenes	2016/05/30	ND, RDL=0.20		ug/L	
			Acetone (2-Propanone)	2016/05/30	NC		%	30
			Benzene	2016/05/30	NC		%	30
			Bromodichloromethane	2016/05/30	NC		%	30
			Bromoform	2016/05/30	NC		%	30
			Bromomethane	2016/05/30	NC		%	30
			Carbon Tetrachloride	2016/05/30	NC		%	30
			Chlorobenzene	2016/05/30	NC		%	30
			Chloroform	2016/05/30	NC		%	30
			Dibromochloromethane	2016/05/30	NC		%	30
			1,2-Dichlorobenzene	2016/05/30	NC		%	30
			1,3-Dichlorobenzene	2016/05/30	NC		%	30
			1,4-Dichlorobenzene	2016/05/30	NC		%	30
			Dichlorodifluoromethane (FREON 12)	2016/05/30	NC		%	30

Maxxam Job #: B6A7201
Report Date: 2016/06/03

Terrapex Environmental Ltd
Client Project #: CB644.02
Site Location: 121 Hume Street, Collingwood, ON
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Sampler Initials: PA

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC	Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
				1,1-Dichloroethane	2016/05/30	NC		%	30
				1,2-Dichloroethane	2016/05/30	NC		%	30
				1,1-Dichloroethylene	2016/05/30	NC		%	30
				cis-1,2-Dichloroethylene	2016/05/30	NC		%	30
				trans-1,2-Dichloroethylene	2016/05/30	NC		%	30
				1,2-Dichloropropane	2016/05/30	NC		%	30
				cis-1,3-Dichloropropene	2016/05/30	NC		%	30
				trans-1,3-Dichloropropene	2016/05/30	NC		%	30
				Ethylbenzene	2016/05/30	NC		%	30
				Ethylene Dibromide	2016/05/30	NC		%	30
				Hexane	2016/05/30	NC		%	30
				Methylene Chloride(Dichloromethane)	2016/05/30	NC		%	30
				Methyl Ethyl Ketone (2-Butanone)	2016/05/30	NC		%	30
				Methyl Isobutyl Ketone	2016/05/30	NC		%	30
				Methyl t-butyl ether (MTBE)	2016/05/30	NC		%	30
				Styrene	2016/05/30	NC		%	30
				1,1,1,2-Tetrachloroethane	2016/05/30	NC		%	30
				1,1,2,2-Tetrachloroethane	2016/05/30	NC		%	30
				Tetrachloroethylene	2016/05/30	0.35		%	30
				Toluene	2016/05/30	NC		%	30
				1,1,1-Trichloroethane	2016/05/30	NC		%	30
				1,1,2-Trichloroethane	2016/05/30	NC		%	30
				Trichloroethylene	2016/05/30	NC		%	30
				Trichlorofluoromethane (FREON 11)	2016/05/30	NC		%	30
				Vinyl Chloride	2016/05/30	NC		%	30
				p+m-Xylene	2016/05/30	NC		%	30
				o-Xylene	2016/05/30	NC		%	30
				Total Xylenes	2016/05/30	NC		%	30
4517247	NYS		Spiked Blank	Available (CaCl2) pH	2016/05/30		99	%	97 - 103
4517247	NYS		RPD	Available (CaCl2) pH	2016/05/30	0.29		%	N/A
4517528	XJI		Matrix Spike	4-Bromofluorobenzene	2016/05/31		99	%	60 - 140
				D10-o-Xylene	2016/05/31		101	%	60 - 130
				D4-1,2-Dichloroethane	2016/05/31		109	%	60 - 140
				D8-Toluene	2016/05/31		103	%	60 - 140
				Acetone (2-Propanone)	2016/05/31		104	%	60 - 140
				Benzene	2016/05/31		106	%	60 - 140
				Bromodichloromethane	2016/05/31		105	%	60 - 140
				Bromoform	2016/05/31		99	%	60 - 140
				Bromomethane	2016/05/31		98	%	60 - 140
				Carbon Tetrachloride	2016/05/31		110	%	60 - 140
				Chlorobenzene	2016/05/31		101	%	60 - 140
				Chloroform	2016/05/31		107	%	60 - 140
				Dibromochloromethane	2016/05/31		101	%	60 - 140
				1,2-Dichlorobenzene	2016/05/31		94	%	60 - 140
				1,3-Dichlorobenzene	2016/05/31		92	%	60 - 140
				1,4-Dichlorobenzene	2016/05/31		93	%	60 - 140
				Dichlorodifluoromethane (FREON 12)	2016/05/31		129	%	60 - 140
				1,1-Dichloroethane	2016/05/31		108	%	60 - 140
				1,2-Dichloroethane	2016/05/31		113	%	60 - 140
				1,1-Dichloroethylene	2016/05/31		112	%	60 - 140
				cis-1,2-Dichloroethylene	2016/05/31		107	%	60 - 140

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC	Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
				trans-1,2-Dichloroethylene	2016/05/31		108	%	60 - 140
				1,2-Dichloropropane	2016/05/31		104	%	60 - 140
				cis-1,3-Dichloropropene	2016/05/31		99	%	60 - 140
				trans-1,3-Dichloropropene	2016/05/31		98	%	60 - 140
				Ethylbenzene	2016/05/31		98	%	60 - 140
				Ethylene Dibromide	2016/05/31		103	%	60 - 140
				Hexane	2016/05/31		113	%	60 - 140
				Methylene Chloride(Dichloromethane)	2016/05/31		106	%	60 - 140
				Methyl Ethyl Ketone (2-Butanone)	2016/05/31		102	%	60 - 140
				Methyl Isobutyl Ketone	2016/05/31		100	%	60 - 140
				Methyl t-butyl ether (MTBE)	2016/05/31		108	%	60 - 140
				Styrene	2016/05/31		98	%	60 - 140
				1,1,1,2-Tetrachloroethane	2016/05/31		99	%	60 - 140
				1,1,2,2-Tetrachloroethane	2016/05/31		99	%	60 - 140
				Tetrachloroethylene	2016/05/31		100	%	60 - 140
				Toluene	2016/05/31		99	%	60 - 140
				1,1,1-Trichloroethane	2016/05/31		107	%	60 - 140
				1,1,2-Trichloroethane	2016/05/31		105	%	60 - 140
				Trichloroethylene	2016/05/31		99	%	60 - 140
				Trichlorofluoromethane (FREON 11)	2016/05/31		114	%	60 - 140
				Vinyl Chloride	2016/05/31		114	%	60 - 140
				p+m-Xylene	2016/05/31		94	%	60 - 140
				o-Xylene	2016/05/31		96	%	60 - 140
4517528	XII		Spiked Blank	4-Bromofluorobenzene	2016/05/31		99	%	60 - 140
				D10-o-Xylene	2016/05/31		104	%	60 - 130
				D4-1,2-Dichloroethane	2016/05/31		113	%	60 - 140
				D8-Toluene	2016/05/31		102	%	60 - 140
				Acetone (2-Propanone)	2016/05/31		124	%	60 - 140
				Benzene	2016/05/31		107	%	60 - 130
				Bromodichloromethane	2016/05/31		107	%	60 - 130
				Bromoform	2016/05/31		104	%	60 - 130
				Bromomethane	2016/05/31		101	%	60 - 140
				Carbon Tetrachloride	2016/05/31		110	%	60 - 130
				Chlorobenzene	2016/05/31		102	%	60 - 130
				Chloroform	2016/05/31		108	%	60 - 130
				Dibromochloromethane	2016/05/31		104	%	60 - 130
				1,2-Dichlorobenzene	2016/05/31		94	%	60 - 130
				1,3-Dichlorobenzene	2016/05/31		90	%	60 - 130
				1,4-Dichlorobenzene	2016/05/31		92	%	60 - 130
				Dichlorodifluoromethane (FREON 12)	2016/05/31		133	%	60 - 140
				1,1-Dichloroethane	2016/05/31		109	%	60 - 130
				1,2-Dichloroethane	2016/05/31		116	%	60 - 130
				1,1-Dichloroethylene	2016/05/31		113	%	60 - 130
				cis-1,2-Dichloroethylene	2016/05/31		109	%	60 - 130
				trans-1,2-Dichloroethylene	2016/05/31		109	%	60 - 130
				1,2-Dichloropropane	2016/05/31		106	%	60 - 130
				cis-1,3-Dichloropropene	2016/05/31		101	%	60 - 130
				trans-1,3-Dichloropropene	2016/05/31		100	%	60 - 130
				Ethylbenzene	2016/05/31		97	%	60 - 130
				Ethylene Dibromide	2016/05/31		106	%	60 - 130
				Hexane	2016/05/31		119	%	60 - 130

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC	Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
				Methylene Chloride(Dichloromethane)	2016/05/31		108	%	60 - 130
				Methyl Ethyl Ketone (2-Butanone)	2016/05/31		121	%	60 - 140
				Methyl Isobutyl Ketone	2016/05/31		111	%	60 - 130
				Methyl t-butyl ether (MTBE)	2016/05/31		108	%	60 - 130
				Styrene	2016/05/31		99	%	60 - 130
				1,1,1,2-Tetrachloroethane	2016/05/31		100	%	60 - 130
				1,1,2,2-Tetrachloroethane	2016/05/31		104	%	60 - 130
				Tetrachloroethylene	2016/05/31		99	%	60 - 130
				Toluene	2016/05/31		99	%	60 - 130
				1,1,1-Trichloroethane	2016/05/31		107	%	60 - 130
				1,1,2-Trichloroethane	2016/05/31		107	%	60 - 130
				Trichloroethylene	2016/05/31		99	%	60 - 130
				Trichlorofluoromethane (FREON 11)	2016/05/31		115	%	60 - 130
				Vinyl Chloride	2016/05/31		116	%	60 - 130
				p+m-Xylene	2016/05/31		93	%	60 - 130
				o-Xylene	2016/05/31		96	%	60 - 130
4517528	XJI		Method Blank	4-Bromofluorobenzene	2016/05/31		95	%	60 - 140
				D10-o-Xylene	2016/05/31		90	%	60 - 130
				D4-1,2-Dichloroethane	2016/05/31		116	%	60 - 140
				D8-Toluene	2016/05/31		95	%	60 - 140
				Acetone (2-Propanone)	2016/05/31	ND, RDL=0.50		ug/g	
				Benzene	2016/05/31	ND, RDL=0.020		ug/g	
				Bromodichloromethane	2016/05/31	ND, RDL=0.050		ug/g	
				Bromoform	2016/05/31	ND, RDL=0.050		ug/g	
				Bromomethane	2016/05/31	ND, RDL=0.050		ug/g	
				Carbon Tetrachloride	2016/05/31	ND, RDL=0.050		ug/g	
				Chlorobenzene	2016/05/31	ND, RDL=0.050		ug/g	
				Chloroform	2016/05/31	ND, RDL=0.050		ug/g	
				Dibromochloromethane	2016/05/31	ND, RDL=0.050		ug/g	
				1,2-Dichlorobenzene	2016/05/31	ND, RDL=0.050		ug/g	
				1,3-Dichlorobenzene	2016/05/31	ND, RDL=0.050		ug/g	
				1,4-Dichlorobenzene	2016/05/31	ND, RDL=0.050		ug/g	
				Dichlorodifluoromethane (FREON 12)	2016/05/31	ND, RDL=0.050		ug/g	
				1,1-Dichloroethane	2016/05/31	ND, RDL=0.050		ug/g	

Maxxam Job #: B6A7201
Report Date: 2016/06/03

Terrapex Environmental Ltd
Client Project #: CB644.02
Site Location: 121 Hume Street, Collingwood, ON
Your P.O. #: 4700001396
Sampler Initials: PA

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			1,2-Dichloroethane	2016/05/31	ND, RDL=0.050		ug/g	
			1,1-Dichloroethylene	2016/05/31	ND, RDL=0.050		ug/g	
			cis-1,2-Dichloroethylene	2016/05/31	ND, RDL=0.050		ug/g	
			trans-1,2-Dichloroethylene	2016/05/31	ND, RDL=0.050		ug/g	
			1,2-Dichloropropane	2016/05/31	ND, RDL=0.050		ug/g	
			cis-1,3-Dichloropropene	2016/05/31	ND, RDL=0.030		ug/g	
			trans-1,3-Dichloropropene	2016/05/31	ND, RDL=0.040		ug/g	
			Ethylbenzene	2016/05/31	ND, RDL=0.020		ug/g	
			Ethylene Dibromide	2016/05/31	ND, RDL=0.050		ug/g	
			Hexane	2016/05/31	ND, RDL=0.050		ug/g	
			Methylene Chloride(Dichloromethane)	2016/05/31	ND, RDL=0.050		ug/g	
			Methyl Ethyl Ketone (2-Butanone)	2016/05/31	ND, RDL=0.50		ug/g	
			Methyl Isobutyl Ketone	2016/05/31	ND, RDL=0.50		ug/g	
			Methyl t-butyl ether (MTBE)	2016/05/31	ND, RDL=0.050		ug/g	
			Styrene	2016/05/31	ND, RDL=0.050		ug/g	
			1,1,1,2-Tetrachloroethane	2016/05/31	ND, RDL=0.050		ug/g	
			1,1,2,2-Tetrachloroethane	2016/05/31	ND, RDL=0.050		ug/g	
			Tetrachloroethylene	2016/05/31	ND, RDL=0.050		ug/g	
			Toluene	2016/05/31	ND, RDL=0.020		ug/g	
			1,1,1-Trichloroethane	2016/05/31	ND, RDL=0.050		ug/g	
			1,1,2-Trichloroethane	2016/05/31	ND, RDL=0.050		ug/g	
			Trichloroethylene	2016/05/31	ND, RDL=0.050		ug/g	
			Trichlorofluoromethane (FREON 11)	2016/05/31	ND, RDL=0.050		ug/g	
			Vinyl Chloride	2016/05/31	ND, RDL=0.020		ug/g	

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC	Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
				p+m-Xylene	2016/05/31	ND, RDL=0.020		ug/g	
				o-Xylene	2016/05/31	ND, RDL=0.020		ug/g	
				Total Xylenes	2016/05/31	ND, RDL=0.020		ug/g	
4517528	XII	RPD		Acetone (2-Propanone)	2016/05/31	NC		%	50
				Benzene	2016/05/31	NC		%	50
				Bromodichloromethane	2016/05/31	NC		%	50
				Bromoform	2016/05/31	NC		%	50
				Bromomethane	2016/05/31	NC		%	50
				Carbon Tetrachloride	2016/05/31	NC		%	50
				Chlorobenzene	2016/05/31	NC		%	50
				Chloroform	2016/05/31	NC		%	50
				Dibromochloromethane	2016/05/31	NC		%	50
				1,2-Dichlorobenzene	2016/05/31	NC		%	50
				1,3-Dichlorobenzene	2016/05/31	NC		%	50
				1,4-Dichlorobenzene	2016/05/31	NC		%	50
				Dichlorodifluoromethane (FREON 12)	2016/05/31	NC		%	50
				1,1-Dichloroethane	2016/05/31	NC		%	50
				1,2-Dichloroethane	2016/05/31	NC		%	50
				1,1-Dichloroethylene	2016/05/31	NC		%	50
				cis-1,2-Dichloroethylene	2016/05/31	NC		%	50
				trans-1,2-Dichloroethylene	2016/05/31	NC		%	50
				1,2-Dichloropropane	2016/05/31	NC		%	50
				cis-1,3-Dichloropropene	2016/05/31	NC		%	50
				trans-1,3-Dichloropropene	2016/05/31	NC		%	50
				Ethylbenzene	2016/05/31	NC		%	50
				Ethylene Dibromide	2016/05/31	NC		%	50
				Hexane	2016/05/31	NC		%	50
				Methylene Chloride(Dichloromethane)	2016/05/31	NC		%	50
				Methyl Ethyl Ketone (2-Butanone)	2016/05/31	NC		%	50
				Methyl Isobutyl Ketone	2016/05/31	NC		%	50
				Methyl t-butyl ether (MTBE)	2016/05/31	NC		%	50
				Styrene	2016/05/31	NC		%	50
				1,1,1,2-Tetrachloroethane	2016/05/31	NC		%	50
				1,1,2,2-Tetrachloroethane	2016/05/31	NC		%	50
				Tetrachloroethylene	2016/05/31	NC		%	50
				Toluene	2016/05/31	NC		%	50
				1,1,1-Trichloroethane	2016/05/31	NC		%	50
				1,1,2-Trichloroethane	2016/05/31	NC		%	50
				Trichloroethylene	2016/05/31	NC		%	50
				Trichlorofluoromethane (FREON 11)	2016/05/31	NC		%	50
				Vinyl Chloride	2016/05/31	NC		%	50
				p+m-Xylene	2016/05/31	NC		%	50
				o-Xylene	2016/05/31	NC		%	50
				Total Xylenes	2016/05/31	NC		%	50
4517716	ADA	Matrix Spike [CKU366-06]		Dissolved Antimony (Sb)	2016/05/31		111	%	80 - 120
				Dissolved Arsenic (As)	2016/05/31		105	%	80 - 120
				Dissolved Barium (Ba)	2016/05/31		106	%	80 - 120
				Dissolved Beryllium (Be)	2016/05/31		112	%	80 - 120

Maxxam Job #: B6A7201
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Sampler Initials: PA

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC	Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
4517716	ADA	Spiked Blank		Dissolved Boron (B)	2016/05/31		109	%	80 - 120
				Dissolved Cadmium (Cd)	2016/05/31		109	%	80 - 120
				Dissolved Chromium (Cr)	2016/05/31		101	%	80 - 120
				Dissolved Cobalt (Co)	2016/05/31		104	%	80 - 120
				Dissolved Copper (Cu)	2016/05/31		107	%	80 - 120
				Dissolved Lead (Pb)	2016/05/31		103	%	80 - 120
				Dissolved Molybdenum (Mo)	2016/05/31		112	%	80 - 120
				Dissolved Nickel (Ni)	2016/05/31		102	%	80 - 120
				Dissolved Selenium (Se)	2016/05/31		104	%	80 - 120
				Dissolved Silver (Ag)	2016/05/31		103	%	80 - 120
				Dissolved Sodium (Na)	2016/05/31		NC	%	80 - 120
				Dissolved Thallium (Tl)	2016/05/31		104	%	80 - 120
				Dissolved Uranium (U)	2016/05/31		102	%	80 - 120
				Dissolved Vanadium (V)	2016/05/31		103	%	80 - 120
				Dissolved Zinc (Zn)	2016/05/31		103	%	80 - 120
				Dissolved Antimony (Sb)	2016/05/31		102	%	80 - 120
				Dissolved Arsenic (As)	2016/05/31		101	%	80 - 120
				Dissolved Barium (Ba)	2016/05/31		101	%	80 - 120
				Dissolved Beryllium (Be)	2016/05/31		105	%	80 - 120
				Dissolved Boron (B)	2016/05/31		99	%	80 - 120
				Dissolved Cadmium (Cd)	2016/05/31		102	%	80 - 120
				Dissolved Chromium (Cr)	2016/05/31		96	%	80 - 120
				Dissolved Cobalt (Co)	2016/05/31		99	%	80 - 120
				Dissolved Copper (Cu)	2016/05/31		102	%	80 - 120
				Dissolved Lead (Pb)	2016/05/31		98	%	80 - 120
				Dissolved Molybdenum (Mo)	2016/05/31		101	%	80 - 120
				Dissolved Nickel (Ni)	2016/05/31		98	%	80 - 120
				Dissolved Selenium (Se)	2016/05/31		102	%	80 - 120
				Dissolved Silver (Ag)	2016/05/31		99	%	80 - 120
				Dissolved Sodium (Na)	2016/05/31		102	%	80 - 120
				Dissolved Thallium (Tl)	2016/05/31		100	%	80 - 120
				Dissolved Uranium (U)	2016/05/31		96	%	80 - 120
				Dissolved Vanadium (V)	2016/05/31		98	%	80 - 120
				Dissolved Zinc (Zn)	2016/05/31		99	%	80 - 120
4517716	ADA	Method Blank		Dissolved Antimony (Sb)	2016/05/31	ND, RDL=0.50		ug/L	
				Dissolved Arsenic (As)	2016/05/31	ND, RDL=1.0		ug/L	
				Dissolved Barium (Ba)	2016/05/31	ND, RDL=2.0		ug/L	
				Dissolved Beryllium (Be)	2016/05/31	ND, RDL=0.50		ug/L	
				Dissolved Boron (B)	2016/05/31	ND, RDL=10		ug/L	
				Dissolved Cadmium (Cd)	2016/05/31	ND, RDL=0.10		ug/L	
				Dissolved Chromium (Cr)	2016/05/31	ND, RDL=5.0		ug/L	
				Dissolved Cobalt (Co)	2016/05/31	ND, RDL=0.50		ug/L	

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Dissolved Copper (Cu)	2016/05/31	ND, RDL=1.0		ug/L	
			Dissolved Lead (Pb)	2016/05/31	ND, RDL=0.50		ug/L	
			Dissolved Molybdenum (Mo)	2016/05/31	ND, RDL=0.50		ug/L	
			Dissolved Nickel (Ni)	2016/05/31	ND, RDL=1.0		ug/L	
			Dissolved Selenium (Se)	2016/05/31	ND, RDL=2.0		ug/L	
			Dissolved Silver (Ag)	2016/05/31	ND, RDL=0.10		ug/L	
			Dissolved Sodium (Na)	2016/05/31	ND, RDL=100		ug/L	
			Dissolved Thallium (Tl)	2016/05/31	ND, RDL=0.050		ug/L	
			Dissolved Uranium (U)	2016/05/31	ND, RDL=0.10		ug/L	
			Dissolved Vanadium (V)	2016/05/31	ND, RDL=0.50		ug/L	
			Dissolved Zinc (Zn)	2016/05/31	ND, RDL=5.0		ug/L	
4517716	ADA	RPD [CKU366-06]	Dissolved Antimony (Sb)	2016/05/31	NC		%	20
			Dissolved Arsenic (As)	2016/05/31	NC		%	20
			Dissolved Barium (Ba)	2016/05/31	0.43		%	20
			Dissolved Beryllium (Be)	2016/05/31	NC		%	20
			Dissolved Boron (B)	2016/05/31	5.5		%	20
			Dissolved Cadmium (Cd)	2016/05/31	NC		%	20
			Dissolved Chromium (Cr)	2016/05/31	NC		%	20
			Dissolved Cobalt (Co)	2016/05/31	NC		%	20
			Dissolved Copper (Cu)	2016/05/31	NC		%	20
			Dissolved Lead (Pb)	2016/05/31	NC		%	20
			Dissolved Molybdenum (Mo)	2016/05/31	0.15		%	20
			Dissolved Nickel (Ni)	2016/05/31	NC		%	20
			Dissolved Selenium (Se)	2016/05/31	NC		%	20
			Dissolved Silver (Ag)	2016/05/31	NC		%	20
			Dissolved Sodium (Na)	2016/05/31	1.4		%	20
			Dissolved Thallium (Tl)	2016/05/31	NC		%	20
			Dissolved Uranium (U)	2016/05/31	2.4		%	20
			Dissolved Vanadium (V)	2016/05/31	NC		%	20
			Dissolved Zinc (Zn)	2016/05/31	NC		%	20
4518525	CP	Matrix Spike	Free Cyanide	2016/06/01		101	%	75 - 125
4518525	CP	Spiked Blank	Free Cyanide	2016/06/01		99	%	80 - 120
4518525	CP	Method Blank	Free Cyanide	2016/06/01	ND, RDL=0.01		ug/g	
4518525	CP	RPD	Free Cyanide	2016/06/01	NC		%	35
4518764	VIV	Matrix Spike	Acid Extractable Antimony (Sb)	2016/06/01		NC	%	75 - 125
			Acid Extractable Arsenic (As)	2016/06/01		NC	%	75 - 125
			Acid Extractable Barium (Ba)	2016/06/01		NC	%	75 - 125
			Acid Extractable Beryllium (Be)	2016/06/01		92	%	75 - 125

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
4518764	VIV	Spiked Blank	Acid Extractable Boron (B)	2016/06/01		NC	%	75 - 125
			Acid Extractable Cadmium (Cd)	2016/06/01		97	%	75 - 125
			Acid Extractable Chromium (Cr)	2016/06/01		NC	%	75 - 125
			Acid Extractable Cobalt (Co)	2016/06/01		NC	%	75 - 125
			Acid Extractable Copper (Cu)	2016/06/01		NC	%	75 - 125
			Acid Extractable Lead (Pb)	2016/06/01		NC	%	75 - 125
			Acid Extractable Molybdenum (Mo)	2016/06/01		96	%	75 - 125
			Acid Extractable Nickel (Ni)	2016/06/01		NC	%	75 - 125
			Acid Extractable Selenium (Se)	2016/06/01		93	%	75 - 125
			Acid Extractable Silver (Ag)	2016/06/01		95	%	75 - 125
			Acid Extractable Thallium (Tl)	2016/06/01		92	%	75 - 125
			Acid Extractable Uranium (U)	2016/06/01		101	%	75 - 125
			Acid Extractable Vanadium (V)	2016/06/01		NC	%	75 - 125
			Acid Extractable Zinc (Zn)	2016/06/01		NC	%	75 - 125
			Acid Extractable Mercury (Hg)	2016/06/01		95	%	75 - 125
			Acid Extractable Antimony (Sb)	2016/06/01		104	%	80 - 120
			Acid Extractable Arsenic (As)	2016/06/01		105	%	80 - 120
			Acid Extractable Barium (Ba)	2016/06/01		103	%	80 - 120
			Acid Extractable Beryllium (Be)	2016/06/01		99	%	80 - 120
			Acid Extractable Boron (B)	2016/06/01		101	%	80 - 120
			Acid Extractable Cadmium (Cd)	2016/06/01		101	%	80 - 120
			Acid Extractable Chromium (Cr)	2016/06/01		101	%	80 - 120
			Acid Extractable Cobalt (Co)	2016/06/01		101	%	80 - 120
			Acid Extractable Copper (Cu)	2016/06/01		102	%	80 - 120
			Acid Extractable Lead (Pb)	2016/06/01		101	%	80 - 120
			Acid Extractable Molybdenum (Mo)	2016/06/01		102	%	80 - 120
			Acid Extractable Nickel (Ni)	2016/06/01		102	%	80 - 120
			Acid Extractable Selenium (Se)	2016/06/01		99	%	80 - 120
			Acid Extractable Silver (Ag)	2016/06/01		101	%	80 - 120
			Acid Extractable Thallium (Tl)	2016/06/01		100	%	80 - 120
			Acid Extractable Uranium (U)	2016/06/01		103	%	80 - 120
			Acid Extractable Vanadium (V)	2016/06/01		102	%	80 - 120
			Acid Extractable Zinc (Zn)	2016/06/01		99	%	80 - 120
			Acid Extractable Mercury (Hg)	2016/06/01		102	%	80 - 120
4518764	VIV	Method Blank	Acid Extractable Antimony (Sb)	2016/06/01	ND, RDL=0.20		ug/g	
			Acid Extractable Arsenic (As)	2016/06/01	ND, RDL=1.0		ug/g	
			Acid Extractable Barium (Ba)	2016/06/01	ND, RDL=0.50		ug/g	
			Acid Extractable Beryllium (Be)	2016/06/01	ND, RDL=0.20		ug/g	
			Acid Extractable Boron (B)	2016/06/01	ND, RDL=5.0		ug/g	
			Acid Extractable Cadmium (Cd)	2016/06/01	ND, RDL=0.10		ug/g	
			Acid Extractable Chromium (Cr)	2016/06/01	ND, RDL=1.0		ug/g	
			Acid Extractable Cobalt (Co)	2016/06/01	ND, RDL=0.10		ug/g	

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Acid Extractable Copper (Cu)	2016/06/01	ND, RDL=0.50		ug/g	
			Acid Extractable Lead (Pb)	2016/06/01	ND, RDL=1.0		ug/g	
			Acid Extractable Molybdenum (Mo)	2016/06/01	ND, RDL=0.50		ug/g	
			Acid Extractable Nickel (Ni)	2016/06/01	ND, RDL=0.50		ug/g	
			Acid Extractable Selenium (Se)	2016/06/01	ND, RDL=0.50		ug/g	
			Acid Extractable Silver (Ag)	2016/06/01	ND, RDL=0.20		ug/g	
			Acid Extractable Thallium (Tl)	2016/06/01	ND, RDL=0.050		ug/g	
			Acid Extractable Uranium (U)	2016/06/01	ND, RDL=0.050		ug/g	
			Acid Extractable Vanadium (V)	2016/06/01	ND, RDL=5.0		ug/g	
			Acid Extractable Zinc (Zn)	2016/06/01	ND, RDL=5.0		ug/g	
			Acid Extractable Mercury (Hg)	2016/06/01	ND, RDL=0.050		ug/g	
4518764	VIV	RPD	Acid Extractable Antimony (Sb)	2016/06/01	1.9		%	30
			Acid Extractable Arsenic (As)	2016/06/01	9.9		%	30
			Acid Extractable Barium (Ba)	2016/06/01	0.47		%	30
			Acid Extractable Beryllium (Be)	2016/06/01	NC		%	30
			Acid Extractable Boron (B)	2016/06/01	1.1		%	30
			Acid Extractable Cadmium (Cd)	2016/06/01	NC		%	30
			Acid Extractable Cobalt (Co)	2016/06/01	6.1		%	30
			Acid Extractable Copper (Cu)	2016/06/01	4.2		%	30
			Acid Extractable Lead (Pb)	2016/06/01	2.1		%	30
			Acid Extractable Molybdenum (Mo)	2016/06/01	NC		%	30
			Acid Extractable Nickel (Ni)	2016/06/01	4.0		%	30
			Acid Extractable Selenium (Se)	2016/06/01	NC		%	30
			Acid Extractable Silver (Ag)	2016/06/01	NC		%	30
			Acid Extractable Uranium (U)	2016/06/01	1.6		%	30
			Acid Extractable Vanadium (V)	2016/06/01	8.1		%	30
			Acid Extractable Zinc (Zn)	2016/06/01	3.7		%	30
4518796	SUK	Matrix Spike	Hot Water Ext. Boron (B)	2016/05/31		110	%	75 - 125
4518796	SUK	Spiked Blank	Hot Water Ext. Boron (B)	2016/05/31		103	%	75 - 125
4518796	SUK	Method Blank	Hot Water Ext. Boron (B)	2016/05/31	ND, RDL=0.050		ug/g	
4518796	SUK	RPD	Hot Water Ext. Boron (B)	2016/05/31	NC		%	40
4518935	VGS	RPD	Moisture	2016/05/31	3.2		%	20
4518998	SAC	Matrix Spike	Chromium (VI)	2016/06/01		80	%	75 - 125
4518998	SAC	Spiked Blank	Chromium (VI)	2016/06/01		89	%	80 - 120
4518998	SAC	Method Blank	Chromium (VI)	2016/06/01	ND, RDL=0.2		ug/g	
4518998	SAC	RPD	Chromium (VI)	2016/06/01	NC		%	35
4519291	GYA	RPD	Moisture	2016/05/31	14		%	20

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC	Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
4520008	RGA	Matrix Spike [CKU365-02]		1,4-Difluorobenzene	2016/06/01		100	%	70 - 130
				4-Bromofluorobenzene	2016/06/01		98	%	70 - 130
				D10-Ethylbenzene	2016/06/01		96	%	70 - 130
				D4-1,2-Dichloroethane	2016/06/01		103	%	70 - 130
				F1 (C6-C10)	2016/06/01		90	%	70 - 130
4520008	RGA	Spiked Blank		1,4-Difluorobenzene	2016/06/01		101	%	70 - 130
				4-Bromofluorobenzene	2016/06/01		98	%	70 - 130
				D10-Ethylbenzene	2016/06/01		98	%	70 - 130
				D4-1,2-Dichloroethane	2016/06/01		102	%	70 - 130
				F1 (C6-C10)	2016/06/01		86	%	70 - 130
4520008	RGA	Method Blank		1,4-Difluorobenzene	2016/06/01		102	%	70 - 130
				4-Bromofluorobenzene	2016/06/01		98	%	70 - 130
				D10-Ethylbenzene	2016/06/01		101	%	70 - 130
				D4-1,2-Dichloroethane	2016/06/01		103	%	70 - 130
				F1 (C6-C10)	2016/06/01	ND, RDL=25		ug/L	
4520008	RGA	RPD [CKU365-02]		F1 (C6-C10)	2016/06/01	NC		%	30
				F1 (C6-C10) - BTEX	2016/06/01	NC		%	30
4520139	MC	Matrix Spike		Mercury (Hg)	2016/06/01		110	%	75 - 125
4520139	MC	Spiked Blank		Mercury (Hg)	2016/06/01		102	%	80 - 120
4520139	MC	Method Blank		Mercury (Hg)	2016/06/01	ND, RDL=0.1		ug/L	
4520139	MC	RPD		Mercury (Hg)	2016/06/01	NC		%	20
4520648	JET	Matrix Spike [CKU366-02]		D10-Anthracene	2016/06/01		101	%	50 - 130
				D14-Terphenyl (FS)	2016/06/01		98	%	50 - 130
				D8-Acenaphthylene	2016/06/01		99	%	50 - 130
				Acenaphthene	2016/06/01		110	%	50 - 130
				Acenaphthylene	2016/06/01		110	%	50 - 130
				Anthracene	2016/06/01		111	%	50 - 130
				Benzo(a)anthracene	2016/06/01		118	%	50 - 130
				Benzo(a)pyrene	2016/06/01		120	%	50 - 130
				Benzo(b,j)fluoranthene	2016/06/01		120	%	50 - 130
				Benzo(g,h,i)perylene	2016/06/01		115	%	50 - 130
				Benzo(k)fluoranthene	2016/06/01		118	%	50 - 130
				Chrysene	2016/06/01		116	%	50 - 130
				Dibenz(a,h)anthracene	2016/06/01		110	%	50 - 130
				Fluoranthene	2016/06/01		121	%	50 - 130
				Fluorene	2016/06/01		113	%	50 - 130
				Indeno(1,2,3-cd)pyrene	2016/06/01		125	%	50 - 130
				1-Methylnaphthalene	2016/06/01		103	%	50 - 130
				2-Methylnaphthalene	2016/06/01		102	%	50 - 130
				Naphthalene	2016/06/01		97	%	50 - 130
				Phenanthrene	2016/06/01		110	%	50 - 130
				Pyrene	2016/06/01		120	%	50 - 130
4520648	JET	Spiked Blank		D10-Anthracene	2016/06/02		104	%	50 - 130
				D14-Terphenyl (FS)	2016/06/02		102	%	50 - 130
				D8-Acenaphthylene	2016/06/02		99	%	50 - 130
				Acenaphthene	2016/06/02		110	%	50 - 130
				Acenaphthylene	2016/06/02		110	%	50 - 130

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC				Date				
Batch	Init	QC Type	Parameter	Analyzed	Value	Recovery	UNITS	QC Limits
4520648	JET	Method Blank	Anthracene	2016/06/02		112	%	50 - 130
			Benzo(a)anthracene	2016/06/02		116	%	50 - 130
			Benzo(a)pyrene	2016/06/02		119	%	50 - 130
			Benzo(b/j)fluoranthene	2016/06/02		123	%	50 - 130
			Benzo(g,h,i)perylene	2016/06/02		119	%	50 - 130
			Benzo(k)fluoranthene	2016/06/02		121	%	50 - 130
			Chrysene	2016/06/02		117	%	50 - 130
			Dibenz(a,h)anthracene	2016/06/02		108	%	50 - 130
			Fluoranthene	2016/06/02		122	%	50 - 130
			Fluorene	2016/06/02		112	%	50 - 130
			Indeno(1,2,3-cd)pyrene	2016/06/02		128	%	50 - 130
			1-Methylnaphthalene	2016/06/02		102	%	50 - 130
			2-Methylnaphthalene	2016/06/02		100	%	50 - 130
			Naphthalene	2016/06/02		96	%	50 - 130
			Phenanthrene	2016/06/02		111	%	50 - 130
			Pyrene	2016/06/02		120	%	50 - 130
			D10-Anthracene	2016/06/01		105	%	50 - 130
			D14-Terphenyl (FS)	2016/06/01		103	%	50 - 130
			D8-Acenaphthylene	2016/06/01		102	%	50 - 130
			Acenaphthene	2016/06/01		ND, RDL=0.050		ug/L
			Acenaphthylene	2016/06/01		ND, RDL=0.050		ug/L
			Anthracene	2016/06/01		ND, RDL=0.050		ug/L
			Benzo(a)anthracene	2016/06/01		ND, RDL=0.050		ug/L
			Benzo(a)pyrene	2016/06/01		ND, RDL=0.010		ug/L
			Benzo(b/j)fluoranthene	2016/06/01		ND, RDL=0.050		ug/L
			Benzo(g,h,i)perylene	2016/06/01		ND, RDL=0.050		ug/L
			Benzo(k)fluoranthene	2016/06/01		ND, RDL=0.050		ug/L
			Chrysene	2016/06/01		ND, RDL=0.050		ug/L
			Dibenz(a,h)anthracene	2016/06/01		ND, RDL=0.050		ug/L
			Fluoranthene	2016/06/01		ND, RDL=0.050		ug/L
			Fluorene	2016/06/01		ND, RDL=0.050		ug/L
			Indeno(1,2,3-cd)pyrene	2016/06/01		ND, RDL=0.050		ug/L
			1-Methylnaphthalene	2016/06/01		ND, RDL=0.050		ug/L
			2-Methylnaphthalene	2016/06/01		ND, RDL=0.050		ug/L

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QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
4520648	JET	RPD [CKU364-01]	Naphthalene	2016/06/01	ND, RDL=0.050		ug/L	
			Phenanthrene	2016/06/01	ND, RDL=0.030		ug/L	
			Pyrene	2016/06/01	ND, RDL=0.050		ug/L	
			Acenaphthene	2016/06/01	NC		%	30
			Acenaphthylene	2016/06/01	NC		%	30
			Anthracene	2016/06/01	NC		%	30
			Benzo(a)anthracene	2016/06/01	NC		%	30
			Benzo(a)pyrene	2016/06/01	NC		%	30
			Benzo(b,j)fluoranthene	2016/06/01	NC		%	30
			Benzo(g,h,i)perylene	2016/06/01	NC		%	30
			Benzo(k)fluoranthene	2016/06/01	NC		%	30
			Chrysene	2016/06/01	NC		%	30
			Dibenz(a,h)anthracene	2016/06/01	NC		%	30
			Fluoranthene	2016/06/01	NC		%	30
			Fluorene	2016/06/01	NC		%	30
			Indeno(1,2,3-cd)pyrene	2016/06/01	NC		%	30
			1-Methylnaphthalene	2016/06/01	NC		%	30
			2-Methylnaphthalene	2016/06/01	NC		%	30
			Naphthalene	2016/06/01	NC		%	30
			Phenanthrene	2016/06/01	NC		%	30
			Pyrene	2016/06/01	NC		%	30
4520892	ZZ	Matrix Spike	o-Terphenyl	2016/06/01		99	%	60 - 130
			F2 (C10-C16 Hydrocarbons)	2016/06/01		109	%	50 - 130
			F3 (C16-C34 Hydrocarbons)	2016/06/01		100	%	50 - 130
			F4 (C34-C50 Hydrocarbons)	2016/06/01		100	%	50 - 130
4520892	ZZ	Spiked Blank	o-Terphenyl	2016/06/01		102	%	60 - 130
			F2 (C10-C16 Hydrocarbons)	2016/06/01		113	%	60 - 130
			F3 (C16-C34 Hydrocarbons)	2016/06/01		105	%	60 - 130
			F4 (C34-C50 Hydrocarbons)	2016/06/01		103	%	60 - 130
4520892	ZZ	Method Blank	o-Terphenyl	2016/06/01		97	%	60 - 130
			F2 (C10-C16 Hydrocarbons)	2016/06/01	ND, RDL=100		ug/L	
			F3 (C16-C34 Hydrocarbons)	2016/06/01	ND, RDL=200		ug/L	
			F4 (C34-C50 Hydrocarbons)	2016/06/01	ND, RDL=200		ug/L	
4520892	ZZ	RPD	F2 (C10-C16 Hydrocarbons)	2016/06/02	NC		%	30
			F3 (C16-C34 Hydrocarbons)	2016/06/02	NC		%	30
			F4 (C34-C50 Hydrocarbons)	2016/06/02	NC		%	30
4521260	JOH	Spiked Blank	Soluble Calcium (Ca)	2016/06/02		97	%	80 - 120
			Soluble Magnesium (Mg)	2016/06/02		96	%	80 - 120
			Soluble Sodium (Na)	2016/06/02		92	%	80 - 120
4521260	JOH	Method Blank	Soluble Calcium (Ca)	2016/06/02	ND, RDL=0.5		mg/L	
			Soluble Magnesium (Mg)	2016/06/02	ND, RDL=0.5		mg/L	
			Soluble Sodium (Na)	2016/06/02	ND,RDL=5		mg/L	

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4521260	JOH	RPD		Soluble Calcium (Ca)	2016/06/02	3.8		%	30
				Soluble Magnesium (Mg)	2016/06/02	NC		%	30
				Soluble Sodium (Na)	2016/06/02	NC		%	30
4521281	L_A	Spiked Blank		Conductivity	2016/06/02		100	%	90 - 110
4521281	L_A	Method Blank		Conductivity	2016/06/02	ND, RDL=0.002		mS/cm	
4521281	L_A	RPD		Conductivity	2016/06/02	0.40		%	10
4521902	JET	Matrix Spike		D10-Anthracene	2016/06/02		102	%	50 - 130
				D14-Terphenyl (FS)	2016/06/02		107	%	50 - 130
				D8-Acenaphthylene	2016/06/02		113	%	50 - 130
				Acenaphthene	2016/06/02		100	%	50 - 130
				Acenaphthylene	2016/06/02		111	%	50 - 130
				Anthracene	2016/06/02		107	%	50 - 130
				Benzo(a)anthracene	2016/06/02		111	%	50 - 130
				Benzo(a)pyrene	2016/06/02		101	%	50 - 130
				Benzo(b/j)fluoranthene	2016/06/02		95	%	50 - 130
				Benzo(g,h,i)perylene	2016/06/02		100	%	50 - 130
				Benzo(k)fluoranthene	2016/06/02		96	%	50 - 130
				Chrysene	2016/06/02		101	%	50 - 130
				Dibenz(a,h)anthracene	2016/06/02		102	%	50 - 130
				Fluoranthene	2016/06/02		106	%	50 - 130
				Fluorene	2016/06/02		104	%	50 - 130
				Indeno(1,2,3-cd)pyrene	2016/06/02		103	%	50 - 130
				1-Methylnaphthalene	2016/06/02		101	%	50 - 130
				2-Methylnaphthalene	2016/06/02		102	%	50 - 130
				Naphthalene	2016/06/02		99	%	50 - 130
				Phenanthrene	2016/06/02		103	%	50 - 130
				Pyrene	2016/06/02		106	%	50 - 130
				D10-Anthracene	2016/06/02		98	%	50 - 130
				D14-Terphenyl (FS)	2016/06/02		109	%	50 - 130
				D8-Acenaphthylene	2016/06/02		104	%	50 - 130
				Acenaphthene	2016/06/02		106	%	50 - 130
				Acenaphthylene	2016/06/02		105	%	50 - 130
				Anthracene	2016/06/02		106	%	50 - 130
				Benzo(a)anthracene	2016/06/02		107	%	50 - 130
				Benzo(a)pyrene	2016/06/02		106	%	50 - 130
				Benzo(b/j)fluoranthene	2016/06/02		105	%	50 - 130
				Benzo(g,h,i)perylene	2016/06/02		105	%	50 - 130
				Benzo(k)fluoranthene	2016/06/02		106	%	50 - 130
				Chrysene	2016/06/02		105	%	50 - 130
				Dibenz(a,h)anthracene	2016/06/02		106	%	50 - 130
				Fluoranthene	2016/06/02		107	%	50 - 130
				Fluorene	2016/06/02		105	%	50 - 130
				Indeno(1,2,3-cd)pyrene	2016/06/02		106	%	50 - 130
				1-Methylnaphthalene	2016/06/02		107	%	50 - 130
				2-Methylnaphthalene	2016/06/02		108	%	50 - 130
				Naphthalene	2016/06/02		107	%	50 - 130
				Phenanthrene	2016/06/02		105	%	50 - 130
				Pyrene	2016/06/02		106	%	50 - 130
4521902	JET	Method Blank		D10-Anthracene	2016/06/02		75	%	50 - 130
				D14-Terphenyl (FS)	2016/06/02		84	%	50 - 130

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Site Location: 121 Hume Street, Collingwood, ON
Your P.O. #: 4700001396
Sampler Initials: PA

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
4521902	JET	RPD	D8-Acenaphthylene	2016/06/02		81	%	50 - 130
			Acenaphthene	2016/06/02	ND, RDL=0.0050		ug/g	
			Acenaphthylene	2016/06/02	ND, RDL=0.0050		ug/g	
			Anthracene	2016/06/02	ND, RDL=0.0050		ug/g	
			Benzo(a)anthracene	2016/06/02	ND, RDL=0.0050		ug/g	
			Benzo(a)pyrene	2016/06/02	ND, RDL=0.0050		ug/g	
			Benzo(b/j)fluoranthene	2016/06/02	ND, RDL=0.0050		ug/g	
			Benzo(g,h,i)perylene	2016/06/02	ND, RDL=0.0050		ug/g	
			Benzo(k)fluoranthene	2016/06/02	ND, RDL=0.0050		ug/g	
			Chrysene	2016/06/02	ND, RDL=0.0050		ug/g	
			Dibenz(a,h)anthracene	2016/06/02	ND, RDL=0.0050		ug/g	
			Fluoranthene	2016/06/02	ND, RDL=0.0050		ug/g	
			Fluorene	2016/06/02	ND, RDL=0.0050		ug/g	
			Indeno(1,2,3-cd)pyrene	2016/06/02	ND, RDL=0.0050		ug/g	
			1-Methylnaphthalene	2016/06/02	ND, RDL=0.0050		ug/g	
			2-Methylnaphthalene	2016/06/02	ND, RDL=0.0050		ug/g	
			Naphthalene	2016/06/02	ND, RDL=0.0050		ug/g	
			Phenanthrene	2016/06/02	ND, RDL=0.0050		ug/g	
			Pyrene	2016/06/02	ND, RDL=0.0050		ug/g	
			Acenaphthene	2016/06/02	NC		%	40
			Acenaphthylene	2016/06/02	NC		%	40
			Anthracene	2016/06/02	NC		%	40
			Benzo(a)anthracene	2016/06/02	NC		%	40
			Benzo(a)pyrene	2016/06/02	NC		%	40
			Benzo(b/j)fluoranthene	2016/06/02	NC		%	40
			Benzo(g,h,i)perylene	2016/06/02	NC		%	40
			Benzo(k)fluoranthene	2016/06/02	NC		%	40
			Chrysene	2016/06/02	NC		%	40
			Dibenz(a,h)anthracene	2016/06/02	NC		%	40
			Fluoranthene	2016/06/02	NC		%	40
			Fluorene	2016/06/02	NC		%	40

Maxxam Job #: B6A7201
Report Date: 2016/06/03

Terrapex Environmental Ltd
Client Project #: CB644.02
Site Location: 121 Hume Street, Collingwood, ON
Your P.O. #: 4700001396
Sampler Initials: PA

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Indeno(1,2,3-cd)pyrene	2016/06/02	NC		%	40
			1-Methylnaphthalene	2016/06/02	NC		%	40
			2-Methylnaphthalene	2016/06/02	NC		%	40
			Naphthalene	2016/06/02	NC		%	40
			Phenanthrene	2016/06/02	NC		%	40
			Pyrene	2016/06/02	NC		%	40

N/A = Not Applicable

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.

Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.

Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.

Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.

Surrogate: A pure or isotopically labeled compound whose behavior mirrors the analytes of interest. Used to evaluate extraction efficiency.

NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spiked amount was too small to permit a reliable recovery calculation (matrix spike concentration was less than 2x that of the native sample concentration).

NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (one or both samples < 5x RDL).

VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by the following individual(s).

Cristina Carriere

Cristina Carriere, Scientific Services

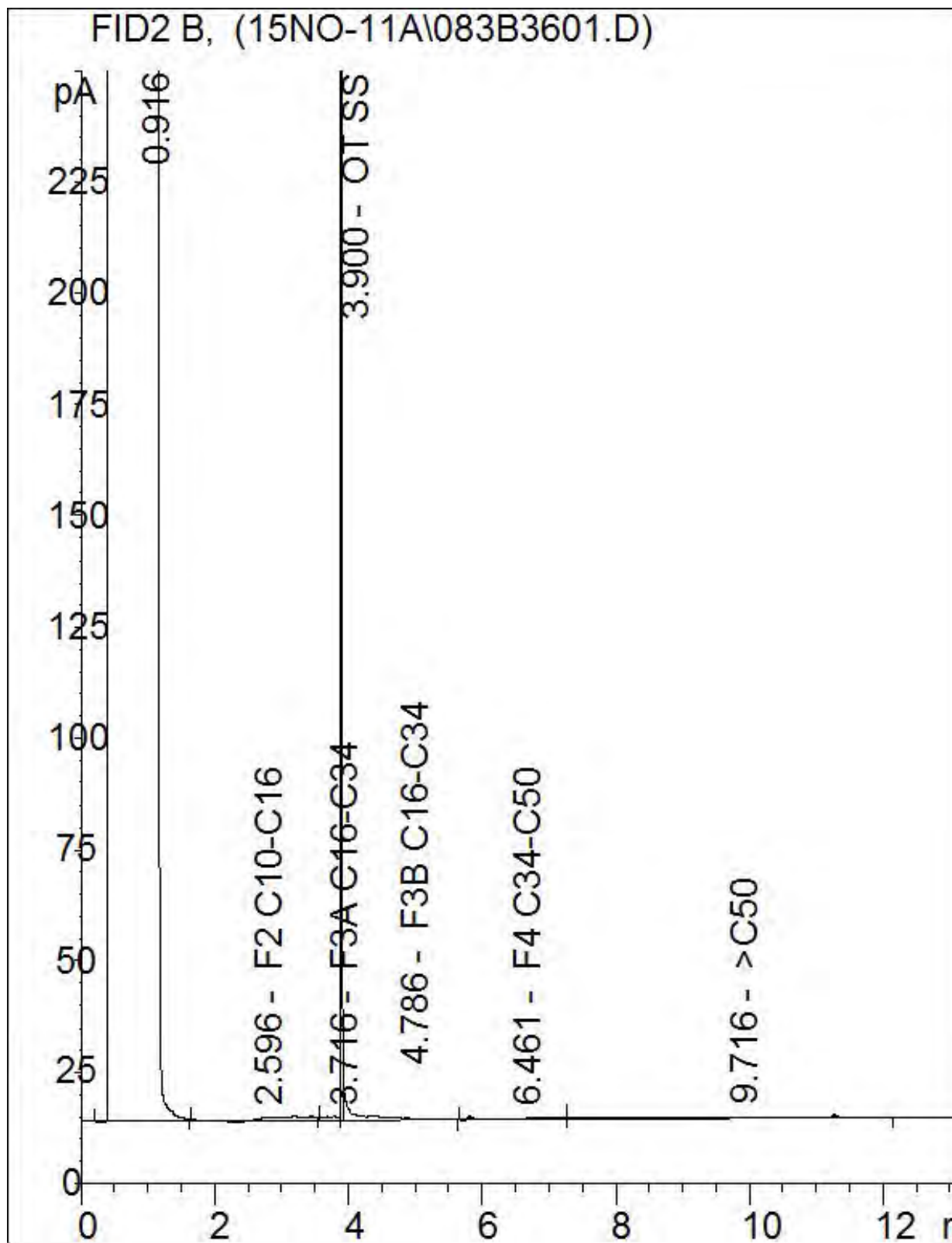
Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

CHAIN OF CUSTODY RECORD SUNCOR DOWNSTREAM

Page 1 of 1

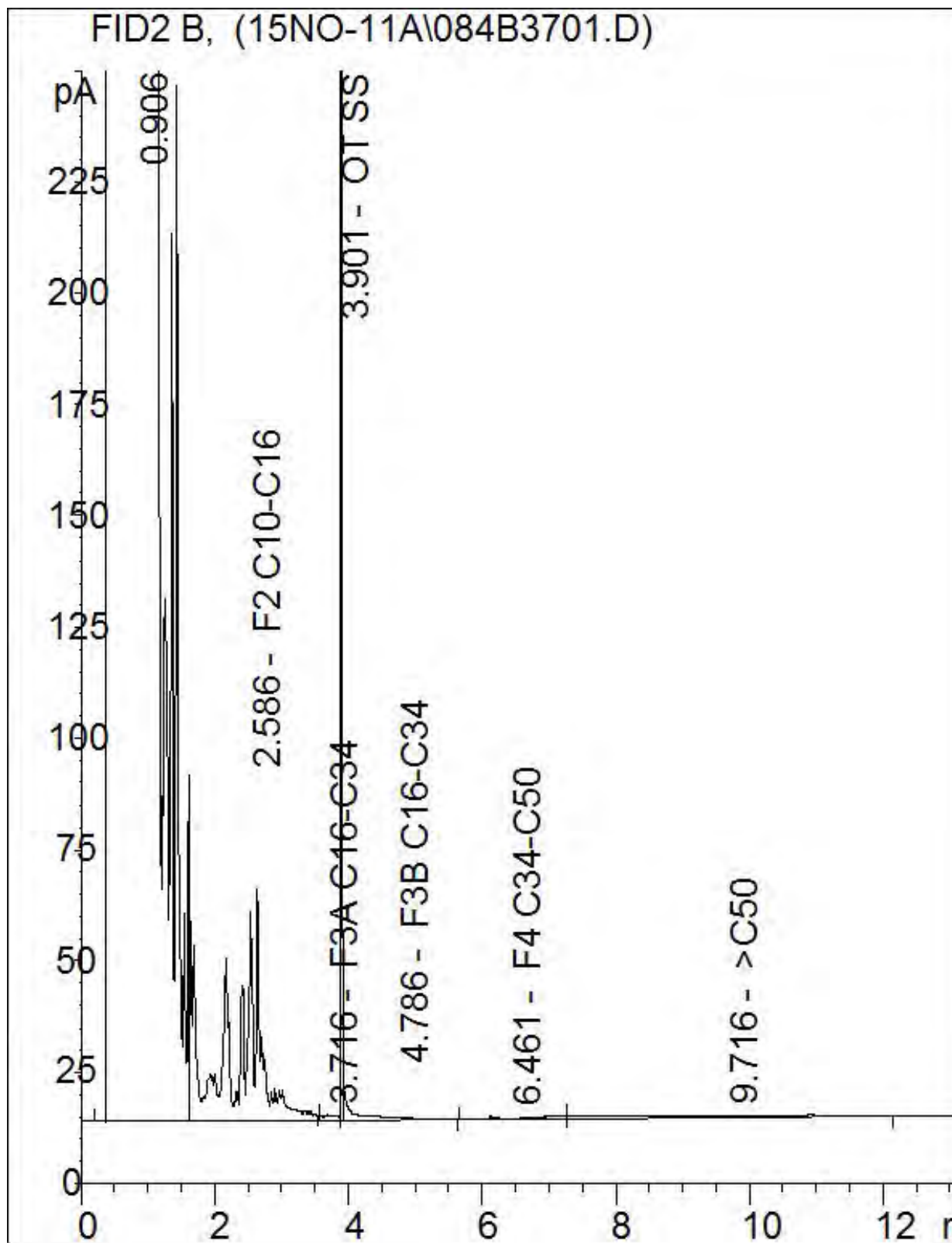
INVOICE INFORMATION			REPORT INFORMATION (if differs from invoice)			PROJECT INFORMATION			Laboratory Use Only		
Company Name: #14539 Suncor Energy Products Partnership			Company Name: #6557 Terrapex Environmental Ltd			Quotation #: B43750			Maxxam Job #:		
Contact Name: Ken Tedder			Contact Name: Jeff Stevenson			Task Order #: CB644.02			Bottle Order #:		
Address: 3275 Rebecca St			Address: 920 Brant Street Unit 16			Project #: 121 Hume Street, Collingwood, ON			COC #:		
Oakville ON L6L 6N5			Burlington ON L7R 4J1			Site Location: 60680			Project Manager:		
Phone: (905) 469-3754			Phone: (905) 632-5939 x 226			Outlet #: 60680			Augustyna Dobosz		
Email: ktedder@suncor.com			Email: j.stevenson@terrapex.com			Sampled By: MS/PA			C#537317-04-01		
MOE REGULATED DRINKING WATER OR WATER INTENDED FOR HUMAN CONSUMPTION MUST BE SUBMITTED ON THE MAXXAM DRINKING WATER CHAIN OF CUSTODY											
Regulation 153 (2011)			Other Regulations			Activity			Field Filled (please circle):		
☐ Table 1 ☐ Res/Park ☐ Medium/Fine			☐ CCME ☐ Sanitary Sewer Bylaw			☐ A2			Metals / Hg / Cr VI		
☒ Table 2 ☒ Ind/Comm ☒ Coarse			☐ Reg 558 ☐ Storm Sewer Bylaw			Assessment (circle one)					
☐ Table 3 ☐ Agri/Other			☐ MISA Municipality			FA ☒ AR, AV					
☐ Table 4			☐ PWDO			Remediations (circle one)					
☐ For RSC			☐ Other			RE, RX, RI, RA					
Include Criteria on Certificate of Analysis (Y/N)? ☒ N											
Sample Barcode Label			Sample (Location) Identification			Date Sampled			Time Sampled		
1			MW101			Nov 5/15			13:00		
2			MW107			12:20			1		
3			MW201			12:05			1		
4			MW202			11:48			1		
5			MW203			11:10			1		
6			MW205			10:10			1		
7			MW206			10:46			1		
8			MW5000			Nov 5/15			10:16		
9											
10											
RELINQUISHED BY: (Signature/Print)			Date: (YY/MM/DD)			Time			RECEIVED BY: (Signature/Print)		
M. Ke Swick			15/11/06			10:00			Mike Swick 15/11/06 13:22		
# jars used and not submitted			Time Sensitive			Temperature (°C) on Receipt			Custody Seal		
0			77.8			Present			Yes		
						Intact			No		
* IT IS THE RESPONSIBILITY OF THE RELINQUISHER TO ENSURE THE ACCURACY OF THE CHAIN OF CUSTODY RECORD. AN INCOMPLETE CHAIN OF CUSTODY MAY RESULT IN ANALYTICAL TAT DELAYS.											
SAMPLES MUST BE KEPT COOL (< 10° C) FROM TIME OF SAMPLING UNTIL DELIVERY TO MAXXAM											
White: Maxxam Yellow: Client											

Petroleum Hydrocarbons F2-F4 in Water Chromatogram



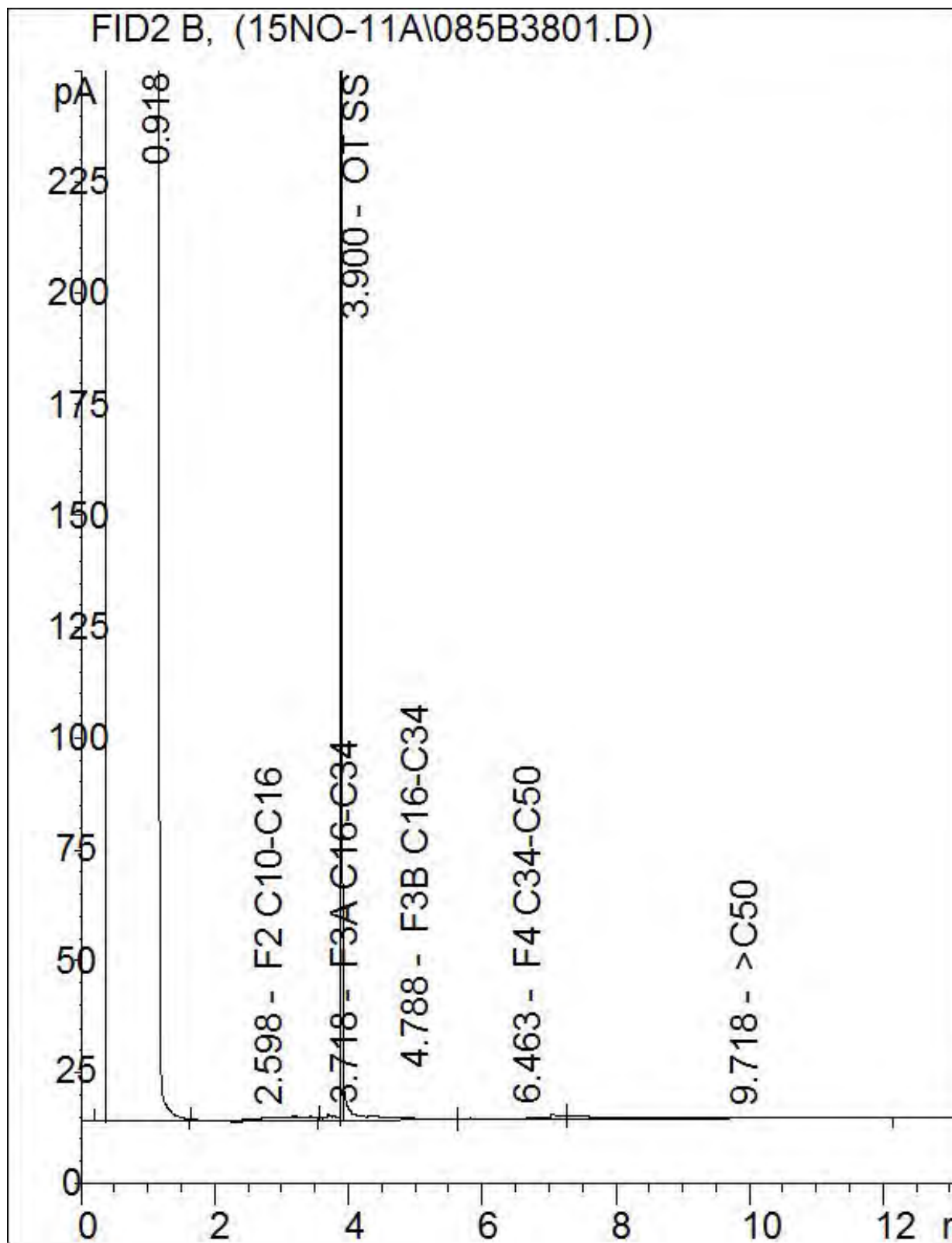
Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Petroleum Hydrocarbons F2-F4 in Water Chromatogram



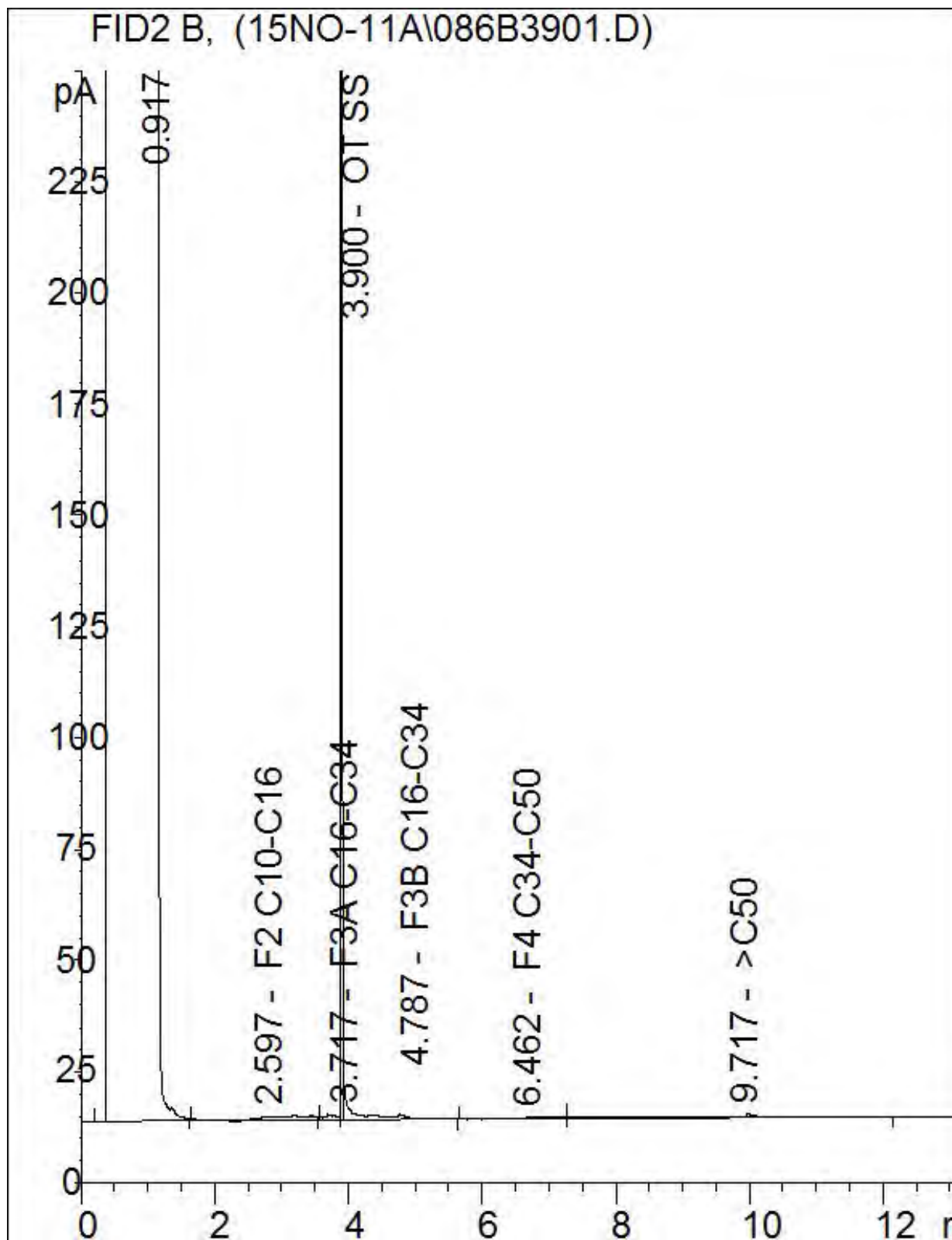
Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Petroleum Hydrocarbons F2-F4 in Water Chromatogram



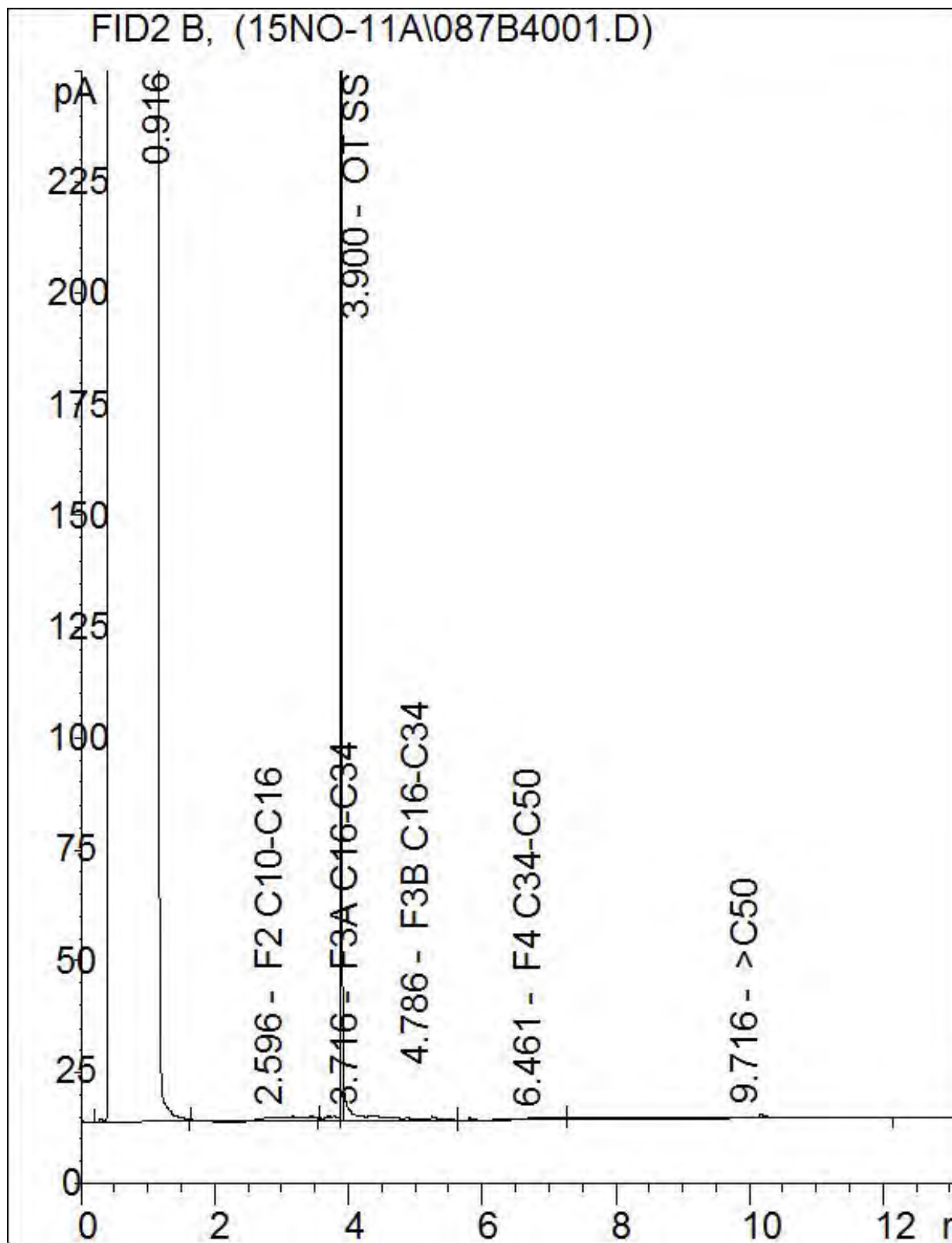
Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Petroleum Hydrocarbons F2-F4 in Water Chromatogram



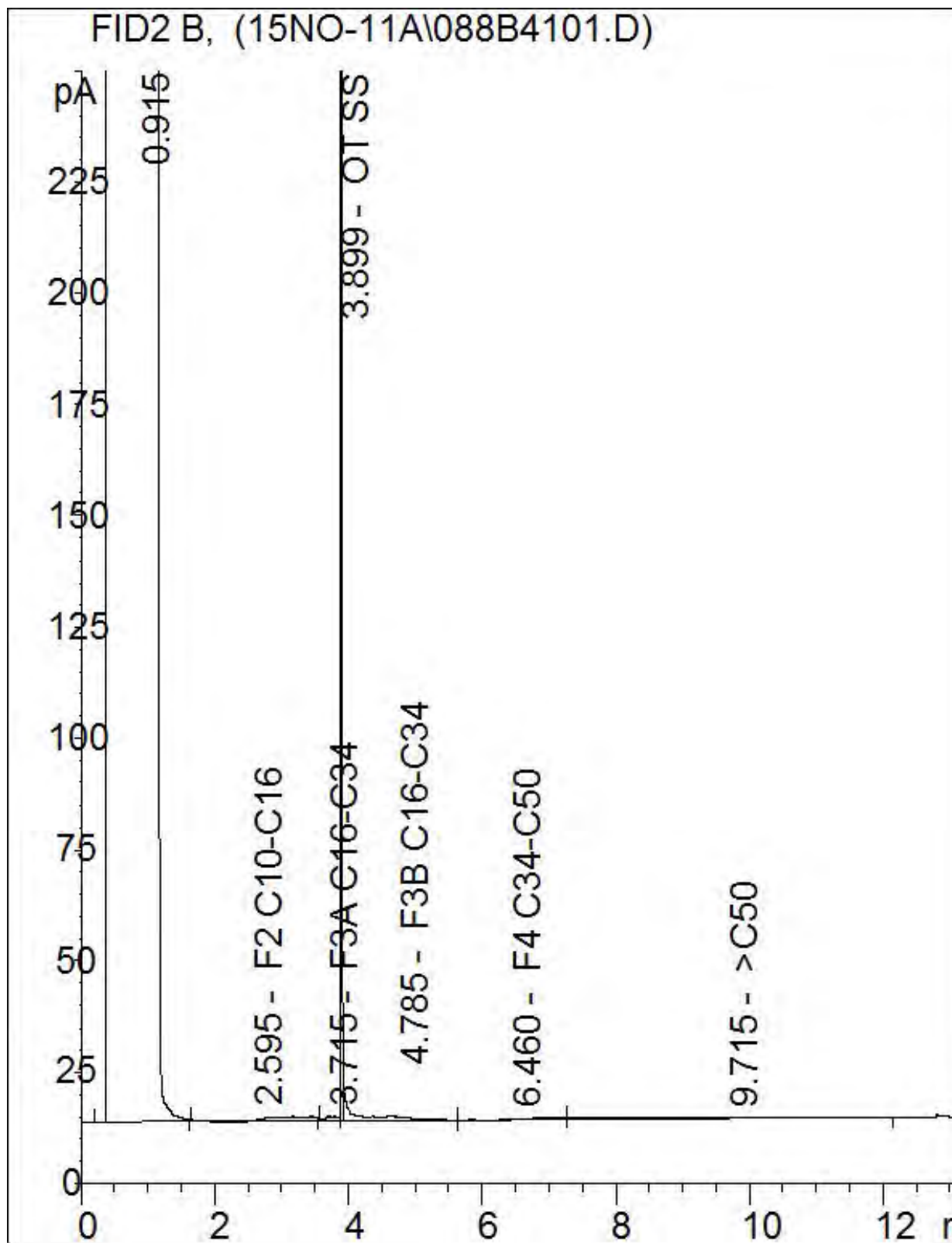
Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Petroleum Hydrocarbons F2-F4 in Water Chromatogram



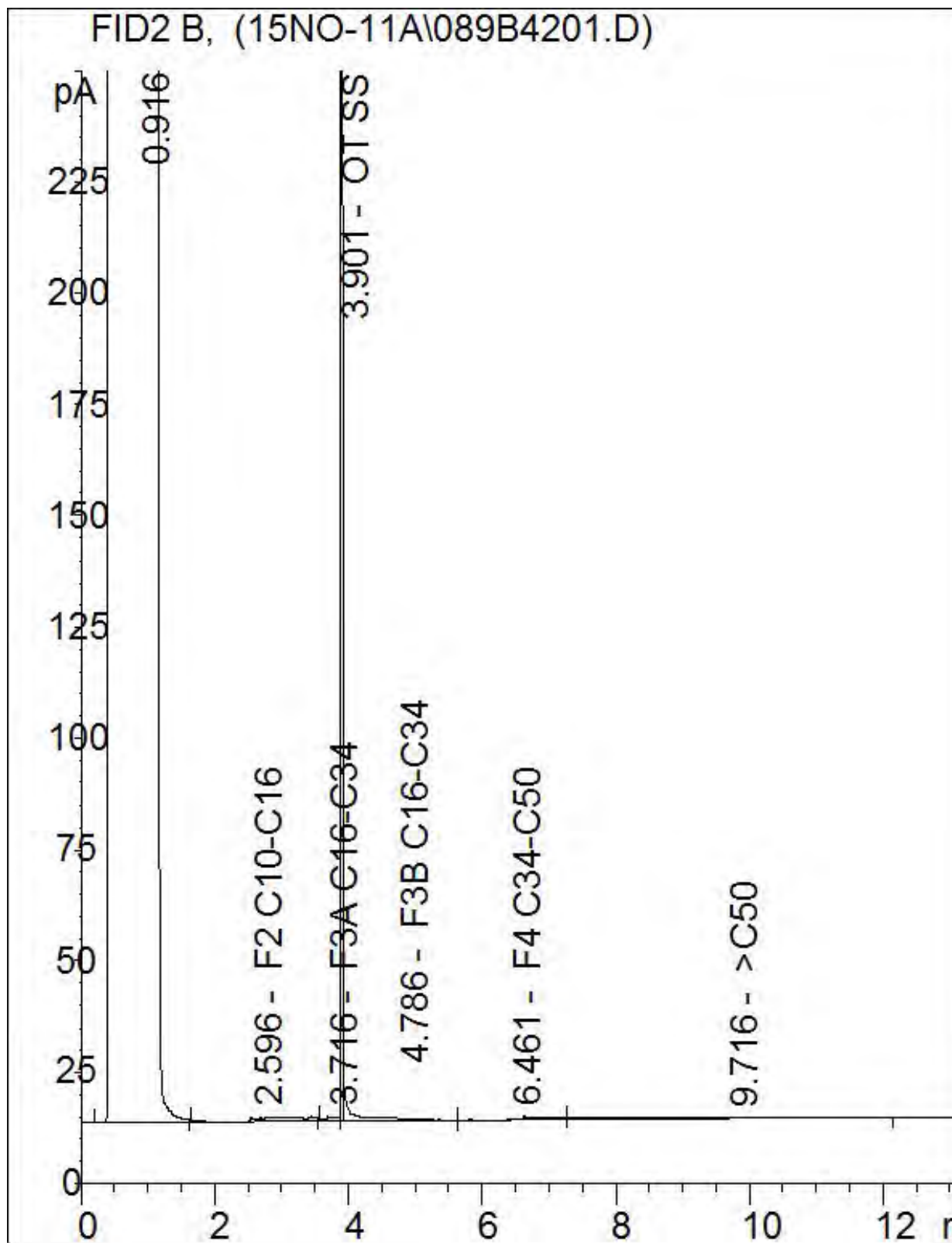
Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Petroleum Hydrocarbons F2-F4 in Water Chromatogram



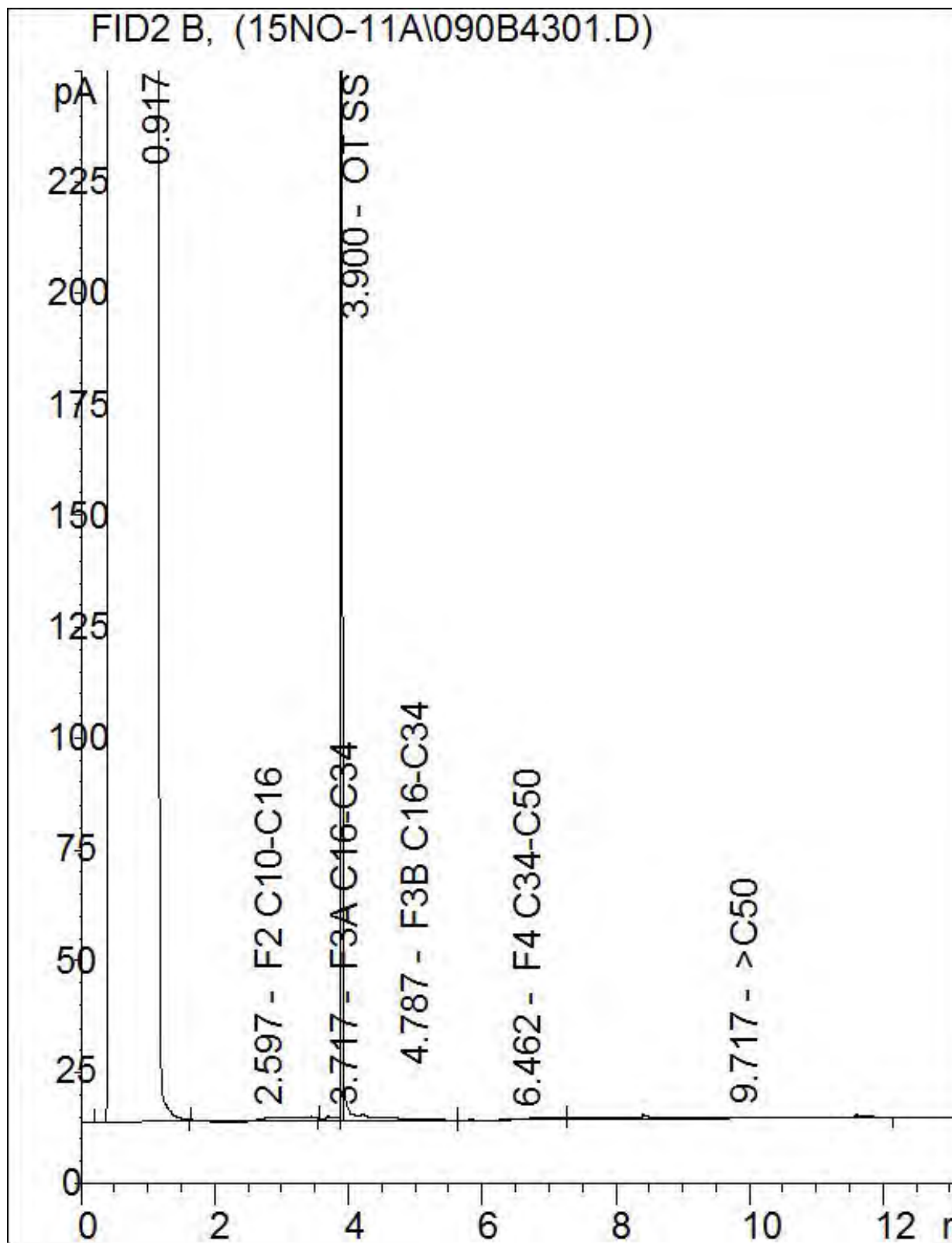
Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Petroleum Hydrocarbons F2-F4 in Water Chromatogram



Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Petroleum Hydrocarbons F2-F4 in Water Chromatogram



Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Attention: Jeff Stevenson

Terrapex Environmental Ltd
920 Brant Street
Unit 16
Burlington, ON
CANADA L7R 4J1

Your P.O. #: 4700000306

Your Project #: CB644.02

Site#: 60680

Site Location: 121 Hume Street, Collingwood, ON

Your C.O.C. #: 537317-04-01

Report Date: 2015/11/12

Report #: R3764071

Version: 1 - Final

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B5M8881

Received: 2015/11/06, 13:22

Sample Matrix: Water
Samples Received: 8

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Reference
1,3-Dichloropropene Sum	8	N/A	2015/11/12		EPA 8260C m
Petroleum Hydro. CCME F1 & BTEX in Water	7	N/A	2015/11/11	CAM SOP-00315	CCME PHC-CWS m
Petroleum Hydro. CCME F1 & BTEX in Water	1	N/A	2015/11/12	CAM SOP-00315	CCME PHC-CWS m
Petroleum Hydrocarbons F2-F4 in Water (1)	8	2015/11/11	2015/11/12	CAM SOP-00316	CCME PHC-CWS m
Volatile Organic Compounds in Water	8	N/A	2015/11/11	CAM SOP000228	EPA 8260C m

Remarks:

Maxxam Analytics has performed all analytical testing herein in accordance with ISO 17025 and the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act. All methodologies comply with this document and are validated for use in the laboratory. The methods and techniques employed in this analysis conform to the performance criteria (detection limits, accuracy and precision) as outlined in the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act.

Maxxam Analytics is accredited for all specific parameters as required by Ontario Regulation 153/04. Maxxam Analytics is limited in liability to the actual cost of analysis unless otherwise agreed in writing. There is no other warranty expressed or implied. Samples will be retained at Maxxam Analytics for three weeks from receipt of data or as per contract.

Reference Method suffix "m" indicates test methods incorporate validated modifications from specific reference methods to improve performance.

* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.

(1) All CCME PHC results met required criteria unless otherwise stated in the report. The CWS PHC methods employed by Maxxam conform to all prescribed elements of the reference method and performance based elements have been validated. All modifications have been validated and proven equivalent following "Alberta Environment's Interpretation of the Reference Method for the Canada-Wide Standard for Petroleum Hydrocarbons in Soil Validation of Performance-Based Alternative Methods September 2003". Documentation is available upon request. Modifications from Reference Method for the Canada-wide Standard for Petroleum Hydrocarbons in Soil-Tier 1 Method: F2/F3/F4 data reported using validated cold solvent extraction instead of Soxhlet extraction.

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.

Marissa Oddi, Customer Service Representative

Email: moddi@maxxam.ca

Phone# (905) 817-5700

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

Total Cover Pages : 1

Page 1 of 17

O.REG 153 PETROLEUM HYDROCARBONS (WATER)

Maxxam ID		BHR726		BHR727		BHR728	BHR729	BHR730		
Sampling Date		2015/11/05 13:00		2015/11/05 12:20		2015/11/05 12:05	2015/11/05 11:40	2015/11/05 11:10		
COC Number		537317-04-01		537317-04-01		537317-04-01	537317-04-01	537317-04-01		
	UNITS	MW 101	RDL	MW 107	RDL	MW 201	MW 202	MW 203	RDL	QC Batch
BTEX & F1 Hydrocarbons										
F1 (C6-C10)	ug/L	ND	25	3600	130	ND	ND	ND	25	4267753
F1 (C6-C10) - BTEX	ug/L	ND	25	2200	130	ND	ND	ND	25	4267753
F2-F4 Hydrocarbons										
F2 (C10-C16 Hydrocarbons)	ug/L	ND	100	1400	100	ND	ND	ND	100	4267759
F3 (C16-C34 Hydrocarbons)	ug/L	ND	200	ND	200	ND	ND	ND	200	4267759
F4 (C34-C50 Hydrocarbons)	ug/L	ND	200	ND	200	ND	ND	ND	200	4267759
Reached Baseline at C50	ug/L	Yes		Yes		Yes	Yes	Yes		4267759
Surrogate Recovery (%)										
1,4-Difluorobenzene	%	102		100		103	104	102		4267753
4-Bromofluorobenzene	%	96		98		96	96	95		4267753
D10-Ethylbenzene	%	97		94		96	99	96		4267753
D4-1,2-Dichloroethane	%	95		92		97	95	95		4267753
o-Terphenyl	%	100		100		99	97	98		4267759
RDL = Reportable Detection Limit										
QC Batch = Quality Control Batch										
ND = Not detected										

O.REG 153 PETROLEUM HYDROCARBONS (WATER)

Maxxam ID		BHR731	BHR732	BHR733		
Sampling Date		2015/11/05 10:10	2015/11/05 10:40	2015/11/05 10:10		
COC Number		537317-04-01	537317-04-01	537317-04-01		
	UNITS	MW 205	MW 206	MW 5000	RDL	QC Batch
BTEX & F1 Hydrocarbons						
F1 (C6-C10)	ug/L	ND	ND	ND	25	4267753
F1 (C6-C10) - BTEX	ug/L	ND	ND	ND	25	4267753
F2-F4 Hydrocarbons						
F2 (C10-C16 Hydrocarbons)	ug/L	ND	ND	ND	100	4267759
F3 (C16-C34 Hydrocarbons)	ug/L	ND	ND	ND	200	4267759
F4 (C34-C50 Hydrocarbons)	ug/L	ND	ND	ND	200	4267759
Reached Baseline at C50	ug/L	Yes	Yes	Yes		4267759
Surrogate Recovery (%)						
1,4-Difluorobenzene	%	101	103	103		4267753
4-Bromofluorobenzene	%	96	94	97		4267753
D10-Ethylbenzene	%	94	97	98		4267753
D4-1,2-Dichloroethane	%	96	97	97		4267753
o-Terphenyl	%	99	96	99		4267759
RDL = Reportable Detection Limit QC Batch = Quality Control Batch ND = Not detected						

O.REG 153 VOLATILE ORGANICS (WATER)

Maxxam ID		BHR726	BHR726		BHR727		BHR728	BHR729		
Sampling Date		2015/11/05 13:00	2015/11/05 13:00		2015/11/05 12:20		2015/11/05 12:05	2015/11/05 11:40		
COC Number		537317-04-01	537317-04-01		537317-04-01		537317-04-01	537317-04-01		
	UNITS	MW 101	MW 101 Lab-Dup	RDL	MW 107	RDL	MW 201	MW 202	RDL	QC Batch

Calculated Parameters										
1,3-Dichloropropene (cis+trans)	ug/L	ND		0.50	ND	0.50	ND	ND	0.50	4263347
Volatile Organics										
Acetone (2-Propanone)	ug/L	ND	ND	10	ND	200	ND	ND	10	4264422
Benzene	ug/L	ND	ND	0.20	ND	4.0	ND	ND	0.20	4264422
Bromodichloromethane	ug/L	ND	ND	0.50	ND	10	ND	ND	0.50	4264422
Bromoform	ug/L	ND	ND	1.0	ND	20	ND	ND	1.0	4264422
Bromomethane	ug/L	ND	ND	0.50	ND	0.50	ND	ND	0.50	4264422
Carbon Tetrachloride	ug/L	ND	ND	0.20	ND	0.20	ND	ND	0.20	4264422
Chlorobenzene	ug/L	ND	ND	0.20	ND	4.0	ND	ND	0.20	4264422
Chloroform	ug/L	ND	ND	0.20	ND	0.20	ND	ND	0.20	4264422
Dibromochloromethane	ug/L	ND	ND	0.50	ND	10	ND	ND	0.50	4264422
1,2-Dichlorobenzene	ug/L	ND	ND	0.50	ND	0.50	ND	ND	0.50	4264422
1,3-Dichlorobenzene	ug/L	ND	ND	0.50	ND	10	ND	ND	0.50	4264422
1,4-Dichlorobenzene	ug/L	ND	ND	0.50	ND	0.50	ND	ND	0.50	4264422
Dichlorodifluoromethane (FREON 12)	ug/L	ND	ND	1.0	ND	20	ND	ND	1.0	4264422
1,1-Dichloroethane	ug/L	ND	ND	0.20	ND	4.0	ND	ND	0.20	4264422
1,2-Dichloroethane	ug/L	ND	ND	0.50	ND	0.50	ND	ND	0.50	4264422
1,1-Dichloroethylene	ug/L	ND	ND	0.20	ND	0.20	ND	ND	0.20	4264422
cis-1,2-Dichloroethylene	ug/L	ND	ND	0.50	ND	0.50	ND	ND	0.50	4264422
trans-1,2-Dichloroethylene	ug/L	ND	ND	0.50	ND	0.50	ND	ND	0.50	4264422
1,2-Dichloropropane	ug/L	ND	ND	0.20	ND	4.0	ND	ND	0.20	4264422
cis-1,3-Dichloropropene	ug/L	ND	ND	0.30	ND	0.30	ND	ND	0.30	4264422
trans-1,3-Dichloropropene	ug/L	ND	ND	0.40	ND	0.40	ND	ND	0.40	4264422
Ethylbenzene	ug/L	ND	ND	0.20	250	4.0	ND	ND	0.20	4264422
Ethylene Dibromide	ug/L	ND	ND	0.20	ND	0.20	ND	ND	0.20	4264422
Hexane	ug/L	ND	ND	1.0	32	20	ND	ND	1.0	4264422
Methylene Chloride(Dichloromethane)	ug/L	ND	ND	2.0	ND	40	ND	ND	2.0	4264422
Methyl Ethyl Ketone (2-Butanone)	ug/L	ND	ND	10	ND	200	ND	ND	10	4264422
Methyl Isobutyl Ketone	ug/L	ND	ND	5.0	ND	100	ND	ND	5.0	4264422
Methyl t-butyl ether (MTBE)	ug/L	ND	ND	0.50	ND	10	ND	ND	0.50	4264422

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate
ND = Not detected

Maxxam Job #: B5M8881
Report Date: 2015/11/12

Terrapex Environmental Ltd
Client Project #: CB644.02
Site Location: 121 Hume Street, Collingwood, ON
Your P.O. #: 4700000306
Sampler Initials: MS

O.REG 153 VOLATILE ORGANICS (WATER)

Maxxam ID		BHR726	BHR726		BHR727		BHR728	BHR729		
Sampling Date		2015/11/05 13:00	2015/11/05 13:00		2015/11/05 12:20		2015/11/05 12:05	2015/11/05 11:40		
COC Number		537317-04-01	537317-04-01		537317-04-01		537317-04-01	537317-04-01		
	UNITS	MW 101	MW 101 Lab-Dup	RDL	MW 107	RDL	MW 201	MW 202	RDL	QC Batch
Styrene	ug/L	ND	ND	0.50	ND	0.50	ND	ND	0.50	4264422
1,1,1,2-Tetrachloroethane	ug/L	ND	ND	0.50	ND	0.50	ND	ND	0.50	4264422
1,1,2,2-Tetrachloroethane	ug/L	ND	ND	0.50	ND	0.50	ND	ND	0.50	4264422
Tetrachloroethylene	ug/L	ND	ND	0.20	ND	0.20	ND	ND	0.20	4264422
Toluene	ug/L	ND	ND	0.20	ND	4.0	ND	ND	0.20	4264422
1,1,1-Trichloroethane	ug/L	ND	ND	0.20	ND	4.0	ND	ND	0.20	4264422
1,1,2-Trichloroethane	ug/L	ND	ND	0.50	ND	0.50	ND	ND	0.50	4264422
Trichloroethylene	ug/L	ND	ND	0.20	ND	0.20	ND	ND	0.20	4264422
Trichlorofluoromethane (FREON 11)	ug/L	ND	ND	0.50	ND	10	ND	ND	0.50	4264422
Vinyl Chloride	ug/L	ND	ND	0.20	ND	0.20	ND	ND	0.20	4264422
p+m-Xylene	ug/L	ND	ND	0.20	1100	4.0	ND	ND	0.20	4264422
o-Xylene	ug/L	ND	ND	0.20	22	4.0	ND	ND	0.20	4264422
Total Xylenes	ug/L	ND	ND	0.20	1100	4.0	ND	ND	0.20	4264422
Surrogate Recovery (%)										
4-Bromofluorobenzene	%	97	96		97		95	96		4264422
D4-1,2-Dichloroethane	%	110	110		111		112	110		4264422
D8-Toluene	%	95	96		96		95	96		4264422
RDL = Reportable Detection Limit QC Batch = Quality Control Batch Lab-Dup = Laboratory Initiated Duplicate ND = Not detected										

O.REG 153 VOLATILE ORGANICS (WATER)

Maxxam ID		BHR730	BHR731	BHR732	BHR733		
Sampling Date		2015/11/05 11:10	2015/11/05 10:10	2015/11/05 10:40	2015/11/05 10:10		
COC Number		537317-04-01	537317-04-01	537317-04-01	537317-04-01		
	UNITS	MW 203	MW 205	MW 206	MW 5000	RDL	QC Batch
Calculated Parameters							
1,3-Dichloropropene (cis+trans)	ug/L	ND	ND	ND	ND	0.50	4263347
Volatile Organics							
Acetone (2-Propanone)	ug/L	ND	ND	ND	ND	10	4264422
Benzene	ug/L	ND	ND	ND	ND	0.20	4264422
Bromodichloromethane	ug/L	ND	ND	ND	ND	0.50	4264422
Bromoform	ug/L	ND	ND	ND	ND	1.0	4264422
Bromomethane	ug/L	ND	ND	ND	ND	0.50	4264422
Carbon Tetrachloride	ug/L	ND	ND	ND	ND	0.20	4264422
Chlorobenzene	ug/L	ND	ND	ND	ND	0.20	4264422
Chloroform	ug/L	ND	ND	ND	ND	0.20	4264422
Dibromochloromethane	ug/L	ND	ND	ND	ND	0.50	4264422
1,2-Dichlorobenzene	ug/L	ND	ND	ND	ND	0.50	4264422
1,3-Dichlorobenzene	ug/L	ND	ND	ND	ND	0.50	4264422
1,4-Dichlorobenzene	ug/L	ND	ND	ND	ND	0.50	4264422
Dichlorodifluoromethane (FREON 12)	ug/L	ND	ND	ND	ND	1.0	4264422
1,1-Dichloroethane	ug/L	ND	ND	ND	ND	0.20	4264422
1,2-Dichloroethane	ug/L	ND	ND	ND	ND	0.50	4264422
1,1-Dichloroethylene	ug/L	ND	ND	ND	ND	0.20	4264422
cis-1,2-Dichloroethylene	ug/L	ND	ND	ND	ND	0.50	4264422
trans-1,2-Dichloroethylene	ug/L	ND	ND	ND	ND	0.50	4264422
1,2-Dichloropropane	ug/L	ND	ND	ND	ND	0.20	4264422
cis-1,3-Dichloropropene	ug/L	ND	ND	ND	ND	0.30	4264422
trans-1,3-Dichloropropene	ug/L	ND	ND	ND	ND	0.40	4264422
Ethylbenzene	ug/L	ND	ND	ND	ND	0.20	4264422
Ethylene Dibromide	ug/L	ND	ND	ND	ND	0.20	4264422
Hexane	ug/L	ND	ND	ND	ND	1.0	4264422
Methylene Chloride(Dichloromethane)	ug/L	ND	ND	ND	ND	2.0	4264422
Methyl Ethyl Ketone (2-Butanone)	ug/L	ND	ND	ND	ND	10	4264422
Methyl Isobutyl Ketone	ug/L	ND	ND	ND	ND	5.0	4264422
Methyl t-butyl ether (MTBE)	ug/L	ND	ND	ND	ND	0.50	4264422
Styrene	ug/L	ND	ND	ND	ND	0.50	4264422
RDL = Reportable Detection Limit QC Batch = Quality Control Batch ND = Not detected							

O.REG 153 VOLATILE ORGANICS (WATER)

Maxxam ID		BHR730	BHR731	BHR732	BHR733		
Sampling Date		2015/11/05 11:10	2015/11/05 10:10	2015/11/05 10:40	2015/11/05 10:10		
COC Number		537317-04-01	537317-04-01	537317-04-01	537317-04-01		
	UNITS	MW 203	MW 205	MW 206	MW 5000	RDL	QC Batch
1,1,1,2-Tetrachloroethane	ug/L	ND	ND	ND	ND	0.50	4264422
1,1,2,2-Tetrachloroethane	ug/L	ND	ND	ND	ND	0.50	4264422
Tetrachloroethylene	ug/L	ND	ND	ND	ND	0.20	4264422
Toluene	ug/L	ND	ND	ND	ND	0.20	4264422
1,1,1-Trichloroethane	ug/L	ND	ND	ND	ND	0.20	4264422
1,1,2-Trichloroethane	ug/L	ND	ND	ND	ND	0.50	4264422
Trichloroethylene	ug/L	ND	ND	ND	ND	0.20	4264422
Trichlorofluoromethane (FREON 11)	ug/L	ND	ND	ND	ND	0.50	4264422
Vinyl Chloride	ug/L	ND	ND	ND	ND	0.20	4264422
p+m-Xylene	ug/L	ND	ND	ND	ND	0.20	4264422
o-Xylene	ug/L	ND	ND	ND	ND	0.20	4264422
Total Xylenes	ug/L	ND	ND	ND	ND	0.20	4264422
Surrogate Recovery (%)							
4-Bromofluorobenzene	%	94	95	96	96		4264422
D4-1,2-Dichloroethane	%	112	112	113	113		4264422
D8-Toluene	%	94	95	95	96		4264422
RDL = Reportable Detection Limit QC Batch = Quality Control Batch ND = Not detected							

Maxxam Job #: B5M8881
Report Date: 2015/11/12

Terrapex Environmental Ltd
Client Project #: CB644.02
Site Location: 121 Hume Street, Collingwood, ON
Your P.O. #: 4700000306
Sampler Initials: MS

TEST SUMMARY

Maxxam ID: BHR726
Sample ID: MW 101
Matrix: Water

Collected: 2015/11/05
Shipped:
Received: 2015/11/06

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
1,3-Dichloropropene Sum	CALC	4263347	N/A	2015/11/12	Automated Statchk
Petroleum Hydro. CCME F1 & BTEX in Water	HSGC/MSFD	4267753	N/A	2015/11/11	Sung Ho Kim (Sunny)
Petroleum Hydrocarbons F2-F4 in Water	GC/FID	4267759	2015/11/11	2015/11/12	Jolanta Kawzowicz
Volatile Organic Compounds in Water	GC/MS	4264422	N/A	2015/11/11	Xueming Jiang

Maxxam ID: BHR726 Dup
Sample ID: MW 101
Matrix: Water

Collected: 2015/11/05
Shipped:
Received: 2015/11/06

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Volatile Organic Compounds in Water	GC/MS	4264422	N/A	2015/11/11	Xueming Jiang

Maxxam ID: BHR727
Sample ID: MW 107
Matrix: Water

Collected: 2015/11/05
Shipped:
Received: 2015/11/06

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
1,3-Dichloropropene Sum	CALC	4263347	N/A	2015/11/12	Automated Statchk
Petroleum Hydro. CCME F1 & BTEX in Water	HSGC/MSFD	4267753	N/A	2015/11/12	Sung Ho Kim (Sunny)
Petroleum Hydrocarbons F2-F4 in Water	GC/FID	4267759	2015/11/11	2015/11/12	Jolanta Kawzowicz
Volatile Organic Compounds in Water	GC/MS	4264422	N/A	2015/11/11	Xueming Jiang

Maxxam ID: BHR728
Sample ID: MW 201
Matrix: Water

Collected: 2015/11/05
Shipped:
Received: 2015/11/06

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
1,3-Dichloropropene Sum	CALC	4263347	N/A	2015/11/12	Automated Statchk
Petroleum Hydro. CCME F1 & BTEX in Water	HSGC/MSFD	4267753	N/A	2015/11/11	Sung Ho Kim (Sunny)
Petroleum Hydrocarbons F2-F4 in Water	GC/FID	4267759	2015/11/11	2015/11/12	Jolanta Kawzowicz
Volatile Organic Compounds in Water	GC/MS	4264422	N/A	2015/11/11	Xueming Jiang

Maxxam ID: BHR729
Sample ID: MW 202
Matrix: Water

Collected: 2015/11/05
Shipped:
Received: 2015/11/06

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
1,3-Dichloropropene Sum	CALC	4263347	N/A	2015/11/12	Automated Statchk
Petroleum Hydro. CCME F1 & BTEX in Water	HSGC/MSFD	4267753	N/A	2015/11/11	Sung Ho Kim (Sunny)
Petroleum Hydrocarbons F2-F4 in Water	GC/FID	4267759	2015/11/11	2015/11/12	Jolanta Kawzowicz
Volatile Organic Compounds in Water	GC/MS	4264422	N/A	2015/11/11	Xueming Jiang

Maxxam Job #: B5M8881
Report Date: 2015/11/12

Terrapex Environmental Ltd
Client Project #: CB644.02
Site Location: 121 Hume Street, Collingwood, ON
Your P.O. #: 4700000306
Sampler Initials: MS

TEST SUMMARY

Maxxam ID: BHR730
Sample ID: MW 203
Matrix: Water

Collected: 2015/11/05
Shipped:
Received: 2015/11/06

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
1,3-Dichloropropene Sum	CALC	4263347	N/A	2015/11/12	Automated Statchk
Petroleum Hydro. CCME F1 & BTEX in Water	HSGC/MSFD	4267753	N/A	2015/11/11	Sung Ho Kim (Sunny)
Petroleum Hydrocarbons F2-F4 in Water	GC/FID	4267759	2015/11/11	2015/11/12	Jolanta Kawzowicz
Volatile Organic Compounds in Water	GC/MS	4264422	N/A	2015/11/11	Xueming Jiang

Maxxam ID: BHR731
Sample ID: MW 205
Matrix: Water

Collected: 2015/11/05
Shipped:
Received: 2015/11/06

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
1,3-Dichloropropene Sum	CALC	4263347	N/A	2015/11/12	Automated Statchk
Petroleum Hydro. CCME F1 & BTEX in Water	HSGC/MSFD	4267753	N/A	2015/11/11	Sung Ho Kim (Sunny)
Petroleum Hydrocarbons F2-F4 in Water	GC/FID	4267759	2015/11/11	2015/11/12	Jolanta Kawzowicz
Volatile Organic Compounds in Water	GC/MS	4264422	N/A	2015/11/11	Xueming Jiang

Maxxam ID: BHR732
Sample ID: MW 206
Matrix: Water

Collected: 2015/11/05
Shipped:
Received: 2015/11/06

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
1,3-Dichloropropene Sum	CALC	4263347	N/A	2015/11/12	Automated Statchk
Petroleum Hydro. CCME F1 & BTEX in Water	HSGC/MSFD	4267753	N/A	2015/11/11	Sung Ho Kim (Sunny)
Petroleum Hydrocarbons F2-F4 in Water	GC/FID	4267759	2015/11/11	2015/11/12	Jolanta Kawzowicz
Volatile Organic Compounds in Water	GC/MS	4264422	N/A	2015/11/11	Xueming Jiang

Maxxam ID: BHR733
Sample ID: MW 5000
Matrix: Water

Collected: 2015/11/05
Shipped:
Received: 2015/11/06

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
1,3-Dichloropropene Sum	CALC	4263347	N/A	2015/11/12	Automated Statchk
Petroleum Hydro. CCME F1 & BTEX in Water	HSGC/MSFD	4267753	N/A	2015/11/11	Sung Ho Kim (Sunny)
Petroleum Hydrocarbons F2-F4 in Water	GC/FID	4267759	2015/11/11	2015/11/12	Jolanta Kawzowicz
Volatile Organic Compounds in Water	GC/MS	4264422	N/A	2015/11/11	Xueming Jiang

GENERAL COMMENTS

Each temperature is the average of up to three cooler temperatures taken at receipt

Package 1	7.3°C

F1-BTEX Analysis: The BTEX results used for the F1-BTEX calculation were obtained from Headspace-GC analysis.

Sample BHR727-01 : VOC Analysis: Due to high concentrations of target analytes, sample required dilution. Detection limits were adjusted accordingly. In order to meet required regulatory criteria, results for selected compounds (obtained by a separate analysis using an appropriate low dilution) are included in the report.

Results relate only to the items tested.

QUALITY ASSURANCE REPORT

QA/QC				Date				
Batch	Init	QC Type	Parameter	Analyzed	Value	Recovery	UNITS	QC Limits
4264422	XII	Matrix Spike	4-Bromofluorobenzene	2015/11/11		99	%	70 - 130
			D4-1,2-Dichloroethane	2015/11/11		107	%	70 - 130
			D8-Toluene	2015/11/11		100	%	70 - 130
			Acetone (2-Propanone)	2015/11/11		114	%	60 - 140
			Benzene	2015/11/11		96	%	70 - 130
			Bromodichloromethane	2015/11/11		106	%	70 - 130
			Bromoform	2015/11/11		97	%	70 - 130
			Bromomethane	2015/11/11		85	%	60 - 140
			Carbon Tetrachloride	2015/11/11		94	%	70 - 130
			Chlorobenzene	2015/11/11		105	%	70 - 130
			Chloroform	2015/11/11		98	%	70 - 130
			Dibromochloromethane	2015/11/11		99	%	70 - 130
			1,2-Dichlorobenzene	2015/11/11		94	%	70 - 130
			1,3-Dichlorobenzene	2015/11/11		86	%	70 - 130
			1,4-Dichlorobenzene	2015/11/11		93	%	70 - 130
			Dichlorodifluoromethane (FREON 12)	2015/11/11		96	%	60 - 140
			1,1-Dichloroethane	2015/11/11		97	%	70 - 130
			1,2-Dichloroethane	2015/11/11		101	%	70 - 130
			1,1-Dichloroethylene	2015/11/11		103	%	70 - 130
			cis-1,2-Dichloroethylene	2015/11/11		105	%	70 - 130
			trans-1,2-Dichloroethylene	2015/11/11		92	%	70 - 130
			1,2-Dichloropropane	2015/11/11		96	%	70 - 130
			cis-1,3-Dichloropropene	2015/11/11		84	%	70 - 130
			trans-1,3-Dichloropropene	2015/11/11		92	%	70 - 130
			Ethylbenzene	2015/11/11		98	%	70 - 130
			Ethylene Dibromide	2015/11/11		99	%	70 - 130
			Hexane	2015/11/11		98	%	70 - 130
			Methylene Chloride(Dichloromethane)	2015/11/11		108	%	70 - 130
			Methyl Ethyl Ketone (2-Butanone)	2015/11/11		122	%	60 - 140
			Methyl Isobutyl Ketone	2015/11/11		117	%	70 - 130
			Methyl t-butyl ether (MTBE)	2015/11/11		99	%	70 - 130
			Styrene	2015/11/11		91	%	70 - 130
			1,1,1,2-Tetrachloroethane	2015/11/11		96	%	70 - 130
			1,1,2,2-Tetrachloroethane	2015/11/11		106	%	70 - 130
			Tetrachloroethylene	2015/11/11		87	%	70 - 130
			Toluene	2015/11/11		92	%	70 - 130
			1,1,1-Trichloroethane	2015/11/11		96	%	70 - 130
			1,1,2-Trichloroethane	2015/11/11		100	%	70 - 130
			Trichloroethylene	2015/11/11		90	%	70 - 130
			Trichlorofluoromethane (FREON 11)	2015/11/11		99	%	70 - 130
			Vinyl Chloride	2015/11/11		101	%	70 - 130
			p+m-Xylene	2015/11/11		82	%	70 - 130
			o-Xylene	2015/11/11		88	%	70 - 130
4264422	XII	Spiked Blank	4-Bromofluorobenzene	2015/11/11		98	%	70 - 130
			D4-1,2-Dichloroethane	2015/11/11		108	%	70 - 130
			D8-Toluene	2015/11/11		101	%	70 - 130
			Acetone (2-Propanone)	2015/11/11		112	%	60 - 140
			Benzene	2015/11/11		100	%	70 - 130
			Bromodichloromethane	2015/11/11		110	%	70 - 130
			Bromoform	2015/11/11		102	%	70 - 130
			Bromomethane	2015/11/11		88	%	60 - 140

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC	Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
				Carbon Tetrachloride	2015/11/11		98	%	70 - 130
				Chlorobenzene	2015/11/11		110	%	70 - 130
				Chloroform	2015/11/11		102	%	70 - 130
				Dibromochloromethane	2015/11/11		104	%	70 - 130
				1,2-Dichlorobenzene	2015/11/11		98	%	70 - 130
				1,3-Dichlorobenzene	2015/11/11		88	%	70 - 130
				1,4-Dichlorobenzene	2015/11/11		94	%	70 - 130
				Dichlorodifluoromethane (FREON 12)	2015/11/11		101	%	60 - 140
				1,1-Dichloroethane	2015/11/11		101	%	70 - 130
				1,2-Dichloroethane	2015/11/11		105	%	70 - 130
				1,1-Dichloroethylene	2015/11/11		107	%	70 - 130
				cis-1,2-Dichloroethylene	2015/11/11		108	%	70 - 130
				trans-1,2-Dichloroethylene	2015/11/11		93	%	70 - 130
				1,2-Dichloropropane	2015/11/11		100	%	70 - 130
				cis-1,3-Dichloropropene	2015/11/11		83	%	70 - 130
				trans-1,3-Dichloropropene	2015/11/11		90	%	70 - 130
				Ethylbenzene	2015/11/11		102	%	70 - 130
				Ethylene Dibromide	2015/11/11		103	%	70 - 130
				Hexane	2015/11/11		102	%	70 - 130
				Methylene Chloride(Dichloromethane)	2015/11/11		111	%	70 - 130
				Methyl Ethyl Ketone (2-Butanone)	2015/11/11		121	%	60 - 140
				Methyl Isobutyl Ketone	2015/11/11		117	%	70 - 130
				Methyl t-butyl ether (MTBE)	2015/11/11		103	%	70 - 130
				Styrene	2015/11/11		95	%	70 - 130
				1,1,1,2-Tetrachloroethane	2015/11/11		102	%	70 - 130
				1,1,2,2-Tetrachloroethane	2015/11/11		110	%	70 - 130
				Tetrachloroethylene	2015/11/11		89	%	70 - 130
				Toluene	2015/11/11		96	%	70 - 130
				1,1,1-Trichloroethane	2015/11/11		101	%	70 - 130
				1,1,2-Trichloroethane	2015/11/11		105	%	70 - 130
				Trichloroethylene	2015/11/11		92	%	70 - 130
				Trichlorofluoromethane (FREON 11)	2015/11/11		104	%	70 - 130
				Vinyl Chloride	2015/11/11		105	%	70 - 130
				p+m-Xylene	2015/11/11		85	%	70 - 130
				o-Xylene	2015/11/11		94	%	70 - 130
4264422	XII		Method Blank	4-Bromofluorobenzene	2015/11/11		96	%	70 - 130
				D4-1,2-Dichloroethane	2015/11/11		111	%	70 - 130
				D8-Toluene	2015/11/11		95	%	70 - 130
				Acetone (2-Propanone)	2015/11/11	ND, RDL=10		ug/L	
				Benzene	2015/11/11	ND, RDL=0.20		ug/L	
				Bromodichloromethane	2015/11/11	ND, RDL=0.50		ug/L	
				Bromoform	2015/11/11	ND, RDL=1.0		ug/L	
				Bromomethane	2015/11/11	ND, RDL=0.50		ug/L	
				Carbon Tetrachloride	2015/11/11	ND, RDL=0.20		ug/L	

Maxxam Job #: B5M8881
Report Date: 2015/11/12

Terrapex Environmental Ltd
Client Project #: CB644.02
Site Location: 121 Hume Street, Collingwood, ON
Your P.O. #: 4700000306
Sampler Initials: MS

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Chlorobenzene	2015/11/11	ND, RDL=0.20		ug/L	
			Chloroform	2015/11/11	ND, RDL=0.20		ug/L	
			Dibromochloromethane	2015/11/11	ND, RDL=0.50		ug/L	
			1,2-Dichlorobenzene	2015/11/11	ND, RDL=0.50		ug/L	
			1,3-Dichlorobenzene	2015/11/11	ND, RDL=0.50		ug/L	
			1,4-Dichlorobenzene	2015/11/11	ND, RDL=0.50		ug/L	
			Dichlorodifluoromethane (FREON 12)	2015/11/11	ND, RDL=1.0		ug/L	
			1,1-Dichloroethane	2015/11/11	ND, RDL=0.20		ug/L	
			1,2-Dichloroethane	2015/11/11	ND, RDL=0.50		ug/L	
			1,1-Dichloroethylene	2015/11/11	ND, RDL=0.20		ug/L	
			cis-1,2-Dichloroethylene	2015/11/11	ND, RDL=0.50		ug/L	
			trans-1,2-Dichloroethylene	2015/11/11	ND, RDL=0.50		ug/L	
			1,2-Dichloropropane	2015/11/11	ND, RDL=0.20		ug/L	
			cis-1,3-Dichloropropene	2015/11/11	ND, RDL=0.30		ug/L	
			trans-1,3-Dichloropropene	2015/11/11	ND, RDL=0.40		ug/L	
			Ethylbenzene	2015/11/11	ND, RDL=0.20		ug/L	
			Ethylene Dibromide	2015/11/11	ND, RDL=0.20		ug/L	
			Hexane	2015/11/11	ND, RDL=1.0		ug/L	
			Methylene Chloride(Dichloromethane)	2015/11/11	ND, RDL=2.0		ug/L	
			Methyl Ethyl Ketone (2-Butanone)	2015/11/11	ND, RDL=10		ug/L	
			Methyl Isobutyl Ketone	2015/11/11	ND, RDL=5.0		ug/L	
			Methyl t-butyl ether (MTBE)	2015/11/11	ND, RDL=0.50		ug/L	
			Styrene	2015/11/11	ND, RDL=0.50		ug/L	
			1,1,1,2-Tetrachloroethane	2015/11/11	ND, RDL=0.50		ug/L	

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC	Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
				1,1,2,2-Tetrachloroethane	2015/11/11	ND, RDL=0.50		ug/L	
				Tetrachloroethylene	2015/11/11	ND, RDL=0.20		ug/L	
				Toluene	2015/11/11	ND, RDL=0.20		ug/L	
				1,1,1-Trichloroethane	2015/11/11	ND, RDL=0.20		ug/L	
				1,1,2-Trichloroethane	2015/11/11	ND, RDL=0.50		ug/L	
				Trichloroethylene	2015/11/11	ND, RDL=0.20		ug/L	
				Trichlorofluoromethane (FREON 11)	2015/11/11	ND, RDL=0.50		ug/L	
				Vinyl Chloride	2015/11/11	ND, RDL=0.20		ug/L	
				p+m-Xylene	2015/11/11	ND, RDL=0.20		ug/L	
				o-Xylene	2015/11/11	ND, RDL=0.20		ug/L	
				Total Xylenes	2015/11/11	ND, RDL=0.20		ug/L	
4264422	XJI		RPD [BHR726-02]	Acetone (2-Propanone)	2015/11/11	NC		%	30
				Benzene	2015/11/11	NC		%	30
				Bromodichloromethane	2015/11/11	NC		%	30
				Bromoform	2015/11/11	NC		%	30
				Bromomethane	2015/11/11	NC		%	30
				Carbon Tetrachloride	2015/11/11	NC		%	30
				Chlorobenzene	2015/11/11	NC		%	30
				Chloroform	2015/11/11	NC		%	30
				Dibromochloromethane	2015/11/11	NC		%	30
				1,2-Dichlorobenzene	2015/11/11	NC		%	30
				1,3-Dichlorobenzene	2015/11/11	NC		%	30
				1,4-Dichlorobenzene	2015/11/11	NC		%	30
				Dichlorodifluoromethane (FREON 12)	2015/11/11	NC		%	30
				1,1-Dichloroethane	2015/11/11	NC		%	30
				1,2-Dichloroethane	2015/11/11	NC		%	30
				1,1-Dichloroethylene	2015/11/11	NC		%	30
				cis-1,2-Dichloroethylene	2015/11/11	NC		%	30
				trans-1,2-Dichloroethylene	2015/11/11	NC		%	30
				1,2-Dichloropropane	2015/11/11	NC		%	30
				cis-1,3-Dichloropropene	2015/11/11	NC		%	30
				trans-1,3-Dichloropropene	2015/11/11	NC		%	30
				Ethylbenzene	2015/11/11	NC		%	30
				Ethylene Dibromide	2015/11/11	NC		%	30
				Hexane	2015/11/11	NC		%	30
				Methylene Chloride(Dichloromethane)	2015/11/11	NC		%	30
				Methyl Ethyl Ketone (2-Butanone)	2015/11/11	NC		%	30
				Methyl Isobutyl Ketone	2015/11/11	NC		%	30
				Methyl t-butyl ether (MTBE)	2015/11/11	NC		%	30

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC	Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
				Styrene	2015/11/11	NC		%	30
				1,1,1,2-Tetrachloroethane	2015/11/11	NC		%	30
				1,1,2,2-Tetrachloroethane	2015/11/11	NC		%	30
				Tetrachloroethylene	2015/11/11	NC		%	30
				Toluene	2015/11/11	NC		%	30
				1,1,1-Trichloroethane	2015/11/11	NC		%	30
				1,1,2-Trichloroethane	2015/11/11	NC		%	30
				Trichloroethylene	2015/11/11	NC		%	30
				Trichlorofluoromethane (FREON 11)	2015/11/11	NC		%	30
				Vinyl Chloride	2015/11/11	NC		%	30
				p+m-Xylene	2015/11/11	NC		%	30
				o-Xylene	2015/11/11	NC		%	30
				Total Xylenes	2015/11/11	NC		%	30
4267753	SHK		Matrix Spike	1,4-Difluorobenzene	2015/11/11		100	%	70 - 130
				4-Bromofluorobenzene	2015/11/11		95	%	70 - 130
				D10-Ethylbenzene	2015/11/11		99	%	70 - 130
				D4-1,2-Dichloroethane	2015/11/11		94	%	70 - 130
				F1 (C6-C10)	2015/11/11		104	%	70 - 130
4267753	SHK		Spiked Blank	1,4-Difluorobenzene	2015/11/11		102	%	70 - 130
				4-Bromofluorobenzene	2015/11/11		96	%	70 - 130
				D10-Ethylbenzene	2015/11/11		101	%	70 - 130
				D4-1,2-Dichloroethane	2015/11/11		94	%	70 - 130
				F1 (C6-C10)	2015/11/11		85	%	70 - 130
4267753	SHK		Method Blank	1,4-Difluorobenzene	2015/11/11		101	%	70 - 130
				4-Bromofluorobenzene	2015/11/11		95	%	70 - 130
				D10-Ethylbenzene	2015/11/11		94	%	70 - 130
				D4-1,2-Dichloroethane	2015/11/11		95	%	70 - 130
				F1 (C6-C10)	2015/11/11	ND, RDL=25		ug/L	
				F1 (C6-C10) - BTEX	2015/11/11	ND, RDL=25		ug/L	
4267753	SHK		RPD	F1 (C6-C10)	2015/11/11	NC		%	30
				F1 (C6-C10) - BTEX	2015/11/11	NC		%	30
4267759	JKA		Matrix Spike	o-Terphenyl	2015/11/12		105	%	60 - 130
				F2 (C10-C16 Hydrocarbons)	2015/11/12		104	%	50 - 130
				F3 (C16-C34 Hydrocarbons)	2015/11/12		105	%	50 - 130
				F4 (C34-C50 Hydrocarbons)	2015/11/12		109	%	50 - 130
4267759	JKA		Spiked Blank	o-Terphenyl	2015/11/12		102	%	60 - 130
				F2 (C10-C16 Hydrocarbons)	2015/11/12		100	%	60 - 130
				F3 (C16-C34 Hydrocarbons)	2015/11/12		102	%	60 - 130
				F4 (C34-C50 Hydrocarbons)	2015/11/12		103	%	60 - 130
4267759	JKA		Method Blank	o-Terphenyl	2015/11/11		101	%	60 - 130
				F2 (C10-C16 Hydrocarbons)	2015/11/11	ND, RDL=100		ug/L	
				F3 (C16-C34 Hydrocarbons)	2015/11/11	ND, RDL=200		ug/L	
				F4 (C34-C50 Hydrocarbons)	2015/11/11	ND, RDL=200		ug/L	
4267759	JKA		RPD	F2 (C10-C16 Hydrocarbons)	2015/11/12	NC		%	30
				F3 (C16-C34 Hydrocarbons)	2015/11/12	NC		%	30

Maxxam Job #: B5M8881
Report Date: 2015/11/12

Terrapex Environmental Ltd
Client Project #: CB644.02
Site Location: 121 Hume Street, Collingwood, ON
Your P.O. #: 4700000306
Sampler Initials: MS

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC				Date					
Batch	Init	QC Type	Parameter	Analyzed	Value	Recovery	UNITS	QC Limits	
			F4 (C34-C50 Hydrocarbons)	2015/11/12	NC		%	30	
Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement. Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference. Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy. Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination. Surrogate: A pure or isotopically labeled compound whose behavior mirrors the analytes of interest. Used to evaluate extraction efficiency. NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (one or both samples < 5x RDL).									

VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by the following individual(s).

Cristina Carriere

Cristina Carriere, Scientific Services

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

IMMEDIATE TEST

Maxxam Analytics International Corporation c/o Maxxam Analytics
6740 Campobello Road, Mississauga, Ontario Canada L5N 2L8 Tel: (905) 817-5700 Toll-Free (800) 563-6266 Fax: (905) 817-5777 www.maxxam.ca

CHAIN OF CUSTODY RECORD SUNCOR DOWNSTREAM

Page 1 of 1

INVOICE INFORMATION: Company Name: #14539 Suncor Energy Products Partnership Contact Name: Ken Tedder Address: 3275 Rebecca St Oakville ON L6L 6N5 Phone: (905) 469-3754 Email: ktedder@suncor.com		REPORT INFORMATION (if differs from invoice): Company Name: #6557 Terrapex Environmental Ltd Contact Name: Jeff Stevenson Address: 920 Brant Street Unit 16 Burlington ON L7R 4J1 Phone: (905) 632-5939 x 226 Email: j.stevenson@terrapex.com		PROJECT INFORMATION: Quotation #: B43750 Task Order #: CB644.02 Project #: 121 Hume Street, Collingwood, ON Site Location: 60680 Outlet #: PL Sampled By:		Laboratory Use Only: Maxxam Job #: Bottle Order #: COC #: Project Manager: Marissa Oddi C#539891-02-01	

MOE REGULATED DRINKING WATER OR WATER INTENDED FOR HUMAN CONSUMPTION MUST BE SUBMITTED ON THE MAXXAM DRINKING WATER CHAIN OF CUSTODY

Regulation 153 (2011) Table 1 ☐ Res/Park ☐ Medium/Fine Table 2 ☒ Ind/Comm ☐ Coarse Table 3 ☒ Agri/Other ☐ For RSC			Other Regulations CCME ☐ Sanitary Sewer Bylaw Reg 558 ☐ Storm Sewer Bylaw MISA ☐ Municipality PVOO ☐ Other:			Activity Assessment (circle one) A1 ☒ A2 ☐ AR ☐ AV Remediations (circle one) RE ☐ RX ☐ RI ☐ RA Contaminant Management (circle one) M, MW, MV			ANALYSIS REQUESTED (PLEASE BE SPECIFIC) Field Filtered (please circle): Metals / Hg / Cr VI O Reg 153 Petroleum Hydrocarbons (C1 - C4) O Reg 153 Volatile Organics (C5 - C10) pH Grain Size +/- 75um		Turnaround Time (TAT) Required: Please provide advance notice for rush projects Regular (Standard) TAT: ☒ (will be applied if Rush TAT is not specified) Standard TAT = 5-7 Working days for most tests. Please note: Standard TAT for certain tests such as BOD and Dioxins/Furans are > 5 days - contact your Project Manager for details. Rush TAT: 2 Day ☐ 1 DAY ☐ SameDay ☐ Date Required: Time Required: Rush Confirmation Number: (call lab for #)	
Sample Barcode Label	Sample (Location) Identification	Date Sampled	Time Sampled	Matrix	Field Filtered (please circle):	Metals / Hg / Cr VI	O Reg 153 Petroleum Hydrocarbons (C1 - C4)	O Reg 153 Volatile Organics (C5 - C10)	pH	Grain Size +/- 75um	# of Bottles	Comments
1	MW301-3	Dec-2-15	10:00	Soil							3	
2	MW301-4		10:15								3	
3	MW301-40		10:15								3	
4	~~MW301-2~~	~~12-15~~									~~3~~	
5	MW302-3		13:20								3	
6	MW303-4A	Dec-1-15	15:30	Soil							3	

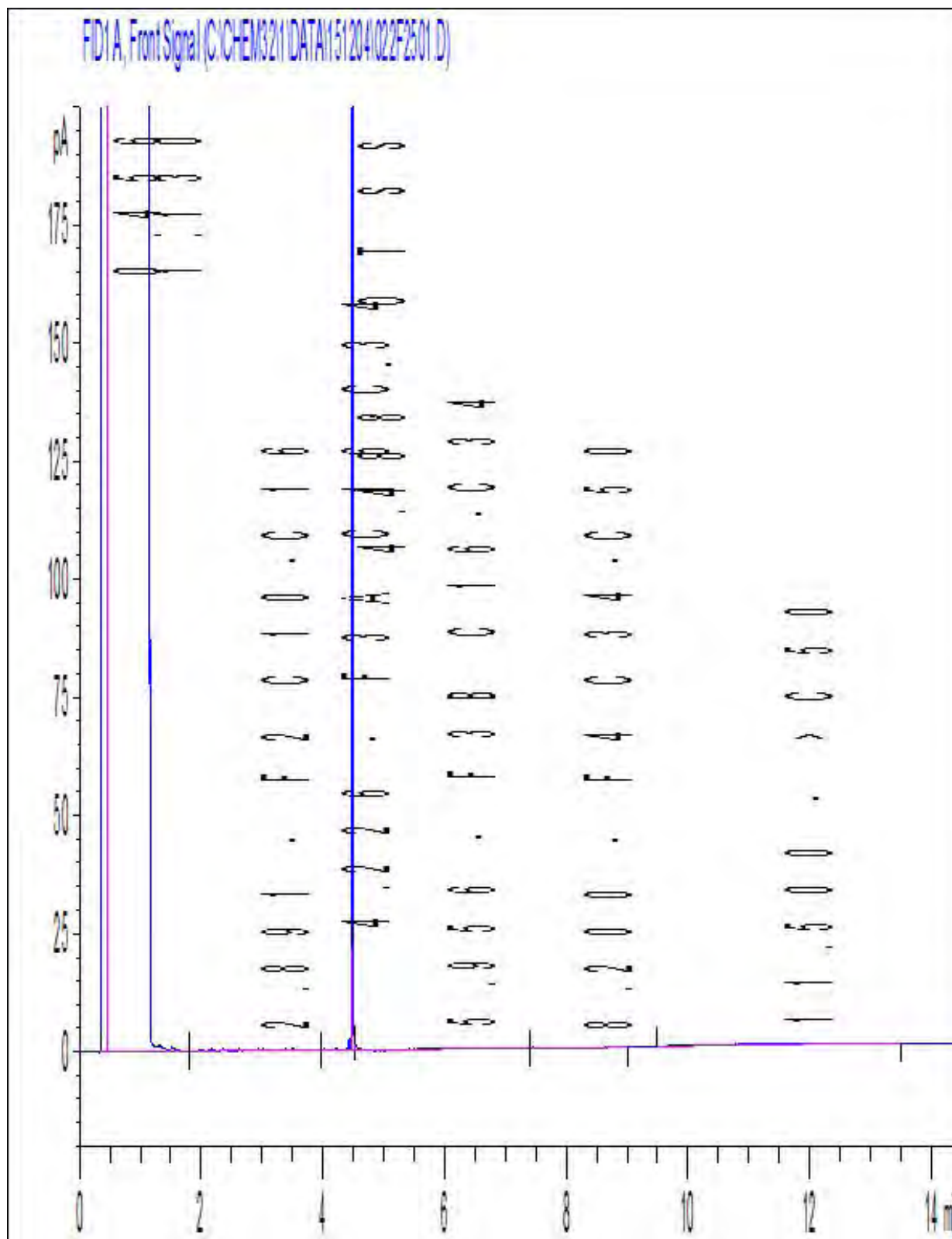
03-Dec-15 13:47
Marissa Oddi
B5O9048
FSD ENV-990

RELINQUISHED BY: (Signature/Print) Philip Arlos		Date: (YY/MM/DD) 15/12/03		Time: 10:00		RECEIVED BY: (Signature/Print) ROQUEL DERYN		Date: (YY/MM/DD) 2015/12/03		Time: 13:47		# jars used and not submitted 0		Laboratory Use Only Time Sensitive: ☐ Temperature (°C) on Receipt: 01011 Custody Seal: Present ☒ Intact ☒ Yes ☒ No ☐			

IT IS THE RESPONSIBILITY OF THE RELINQUISHER TO ENSURE THE ACCURACY OF THE CHAIN OF CUSTODY RECORD. AN INCOMPLETE CHAIN OF CUSTODY MAY RESULT IN ANALYTICAL TAT DELAYS. SAMPLES MUST BE KEPT COOL (< 10° C) FROM TIME OF SAMPLING UNTIL DELIVERY TO MAXXAM. White: Maxxam Yellow: Client

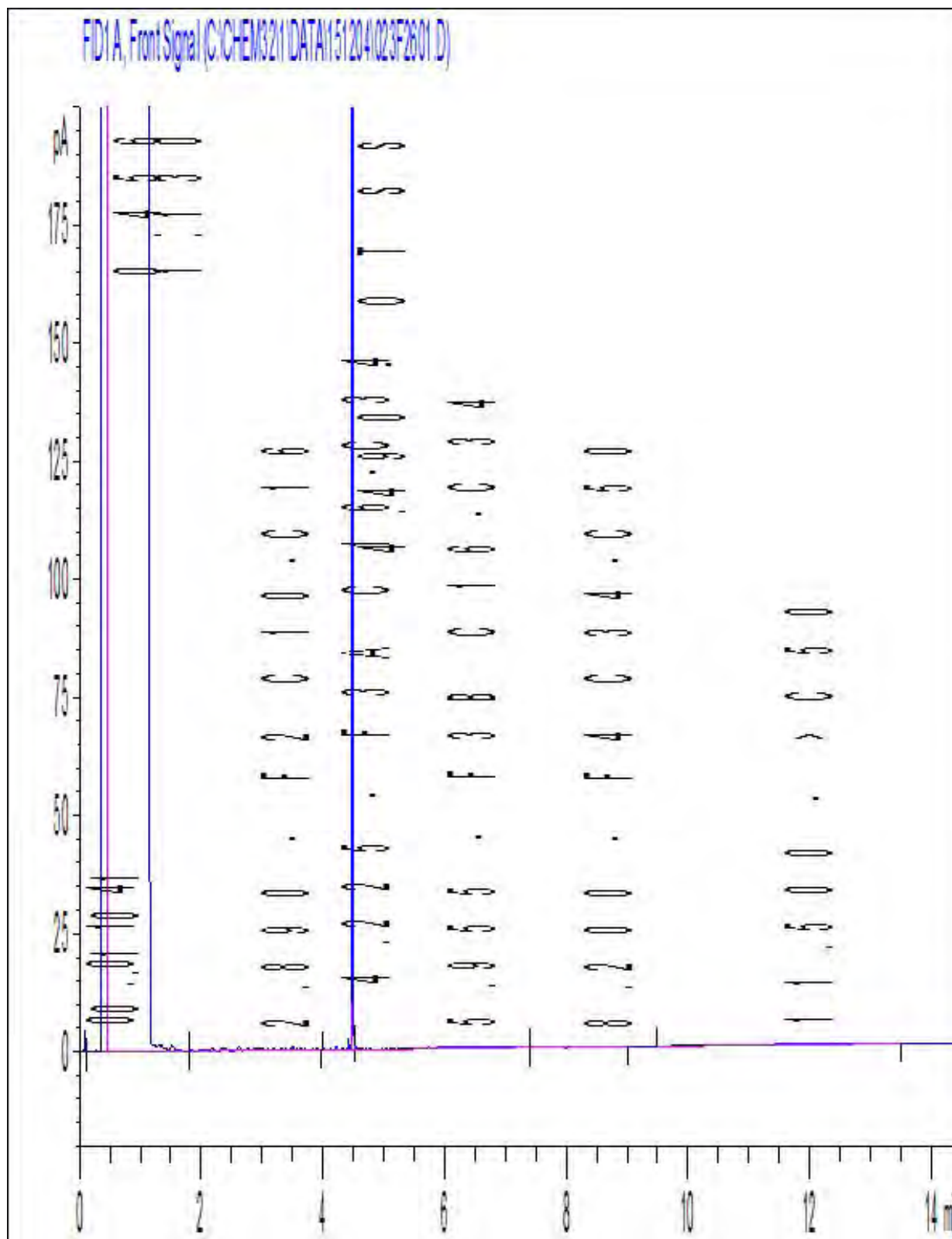
Maxxam Analytics International Corporation c/o Maxxam Analytics

Petroleum Hydrocarbons F2-F4 in Soil Chromatogram



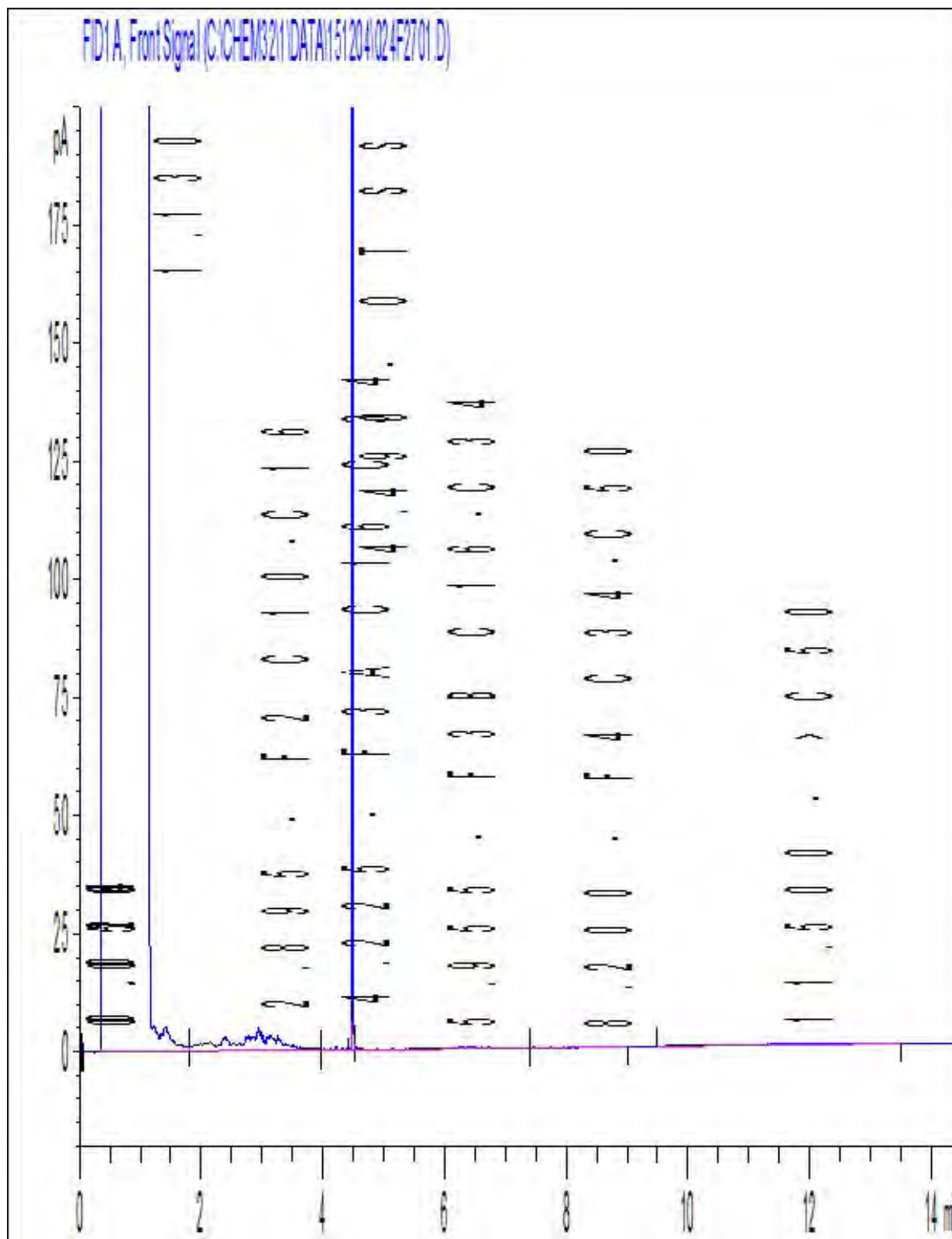
Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Petroleum Hydrocarbons F2-F4 in Soil Chromatogram



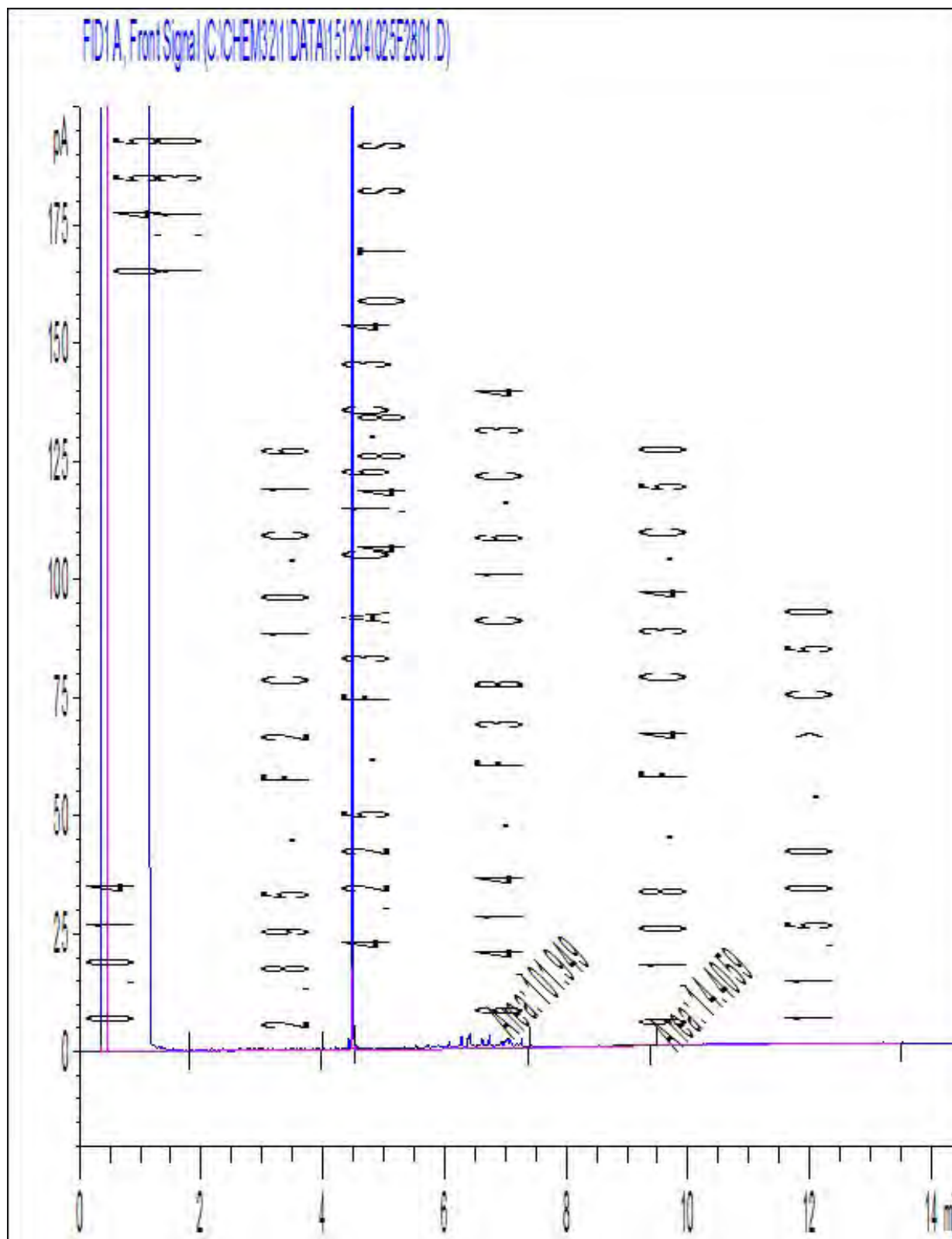
Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Petroleum Hydrocarbons F2-F4 in Soil Chromatogram



Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Petroleum Hydrocarbons F2-F4 in Soil Chromatogram



Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Attention: Jeff Stevenson

Terrapex Environmental Ltd
920 Brant Street
Unit 16
Burlington, ON
CANADA L7R 4J1

Your P.O. #: 4700000306

Your Project #: CB644.02

Site#: 60680

Site Location: 121 Hume Street, Collingwood, ON

Your C.O.C. #: 539891-02-01

Report Date: 2015/12/10

Report #: R3800853

Version: 1 - Final

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B509048

Received: 2015/12/03, 13:47

Sample Matrix: Soil
Samples Received: 5

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Reference
1,3-Dichloropropene Sum	4	N/A	2015/12/09		EPA 8260C m
Petroleum Hydro. CCME F1 & BTEX in Soil (1)	4	N/A	2015/12/08	CAM SOP-00315	CCME PHC-CWS m
Petroleum Hydrocarbons F2-F4 in Soil (2)	4	2015/12/05	2015/12/07	CAM SOP-00316	CCME CWS m
Moisture	3	N/A	2015/12/05	CAM SOP-00445	Carter 2nd ed 51.2 m
Moisture	1	N/A	2015/12/07	CAM SOP-00445	Carter 2nd ed 51.2 m
pH CaCl2 EXTRACT	2	2015/12/08	2015/12/08	CAM SOP-00413	EPA 9045 D m
Volatile Organic Compounds in Soil	4	N/A	2015/12/09	CAM SOP000228	EPA 8260C m

Remarks:

Maxxam Analytics has performed all analytical testing herein in accordance with ISO 17025 and the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act. All methodologies comply with this document and are validated for use in the laboratory. The methods and techniques employed in this analysis conform to the performance criteria (detection limits, accuracy and precision) as outlined in the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act.

Maxxam Analytics is accredited for all specific parameters as required by Ontario Regulation 153/04. Maxxam Analytics is limited in liability to the actual cost of analysis unless otherwise agreed in writing. There is no other warranty expressed or implied. Samples will be retained at Maxxam Analytics for three weeks from receipt of data or as per contract.

Reference Method suffix "m" indicates test methods incorporate validated modifications from specific reference methods to improve performance.

* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.

(1) No lab extraction date is given for F1BTEX & VOC samples that are field preserved with methanol. Extraction date is the date sampled unless otherwise stated.

(2) All CCME PHC results met required criteria unless otherwise stated in the report. The CWS PHC methods employed by Maxxam conform to all prescribed elements of the reference method and performance based elements have been validated. All modifications have been validated and proven equivalent following "Alberta Environment's Interpretation of the Reference Method for the Canada-Wide Standard for Petroleum Hydrocarbons in Soil Validation of Performance-Based Alternative Methods September 2003". Documentation is available upon request. Modifications from Reference Method for the Canada-wide Standard for Petroleum Hydrocarbons in Soil-Tier 1 Method: F2/F3/F4 data reported using validated cold solvent extraction instead of Soxhlet extraction.

Attention: Jeff Stevenson

Terrapex Environmental Ltd
920 Brant Street
Unit 16
Burlington, ON
CANADA L7R 4J1

Your P.O. #: 4700000306

Your Project #: CB644.02

Site#: 60680

Site Location: 121 Hume Street, Collingwood, ON

Your C.O.C. #: 539891-02-01

Report Date: 2015/12/10

Report #: R3800853

Version: 1 - Final

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B509048

Received: 2015/12/03, 13:47

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.

Marissa Oddi, Customer Service Representative

Email: moddi@maxxam.ca

Phone# (905) 817-5700

=====

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

O.REG 153 PETROLEUM HYDROCARBONS (SOIL)

Maxxam ID		BLS084	BLS085		BLS086		BLS087		
Sampling Date		2015/12/02 10:15	2015/12/02 10:15		2015/12/02 13:20		2015/12/02 15:30		
COC Number		539891-02-01	539891-02-01		539891-02-01		539891-02-01		
	UNITS	MW301-4	MW301-40	QC Batch	MW302-3	QC Batch	MW303-4A	RDL	QC Batch
Inorganics									
Moisture	%	18	20	4300918	18	4301895	21	1.0	4300918
BTEX & F1 Hydrocarbons									
F1 (C6-C10)	ug/g	ND	ND	4300958	110	4300958	ND	10	4300958
F1 (C6-C10) - BTEX	ug/g	ND	ND	4300958	110	4300958	ND	10	4300958
F2-F4 Hydrocarbons									
F2 (C10-C16 Hydrocarbons)	ug/g	ND	ND	4300831	41	4300831	ND	10	4300831
F3 (C16-C34 Hydrocarbons)	ug/g	ND	ND	4300831	ND	4300831	ND	50	4300831
F4 (C34-C50 Hydrocarbons)	ug/g	ND	ND	4300831	ND	4300831	ND	50	4300831
Reached Baseline at C50	ug/g	Yes	Yes	4300831	Yes	4300831	Yes		4300831
Surrogate Recovery (%)									
1,4-Difluorobenzene	%	98	98	4300958	97	4300958	100		4300958
4-Bromofluorobenzene	%	98	96	4300958	97	4300958	100		4300958
D10-Ethylbenzene	%	85	88	4300958	86	4300958	84		4300958
D4-1,2-Dichloroethane	%	102	101	4300958	99	4300958	102		4300958
o-Terphenyl	%	93	92	4300831	92	4300831	91		4300831
RDL = Reportable Detection Limit									
QC Batch = Quality Control Batch									
ND = Not detected									

O.REG 153 VOLATILE ORGANICS (SOIL)

Maxxam ID		BLS084	BLS084		BLS085		BLS086		
Sampling Date		2015/12/02 10:15	2015/12/02 10:15		2015/12/02 10:15		2015/12/02 13:20		
COC Number		539891-02-01	539891-02-01		539891-02-01		539891-02-01		
	UNITS	MW301-4	MW301-4 Lab-Dup	RDL	MW301-40	RDL	MW302-3	RDL	QC Batch

Calculated Parameters									
1,3-Dichloropropene (cis+trans)	ug/g	ND		0.050	ND	0.050	ND	0.050	4298921
Volatile Organics									
Acetone (2-Propanone)	ug/g	ND	ND	0.50	ND	0.50	ND	0.50	4301969
Benzene	ug/g	ND	ND	0.020	ND	0.020	ND	0.020	4301969
Bromodichloromethane	ug/g	ND	ND	0.050	ND	0.050	ND	0.050	4301969
Bromoform	ug/g	ND	ND	0.050	ND	0.050	ND	0.050	4301969
Bromomethane	ug/g	ND	ND	0.050	ND	0.050	ND	0.050	4301969
Carbon Tetrachloride	ug/g	ND	ND	0.050	ND	0.050	ND	0.050	4301969
Chlorobenzene	ug/g	ND	ND	0.050	ND	0.050	ND	0.050	4301969
Chloroform	ug/g	ND	ND	0.050	ND	0.050	ND	0.050	4301969
Dibromochloromethane	ug/g	ND	ND	0.050	ND	0.050	ND	0.050	4301969
1,2-Dichlorobenzene	ug/g	ND	ND	0.050	ND	0.050	ND	0.050	4301969
1,3-Dichlorobenzene	ug/g	ND	ND	0.050	ND	0.050	ND	0.050	4301969
1,4-Dichlorobenzene	ug/g	ND	ND	0.050	ND	0.050	ND	0.050	4301969
Dichlorodifluoromethane (FREON 12)	ug/g	ND	ND	0.050	ND	0.050	ND	0.050	4301969
1,1-Dichloroethane	ug/g	ND	ND	0.050	ND	0.050	ND	0.050	4301969
1,2-Dichloroethane	ug/g	ND	ND	0.050	ND	0.050	ND	0.050	4301969
1,1-Dichloroethylene	ug/g	ND	ND	0.050	ND	0.050	ND	0.050	4301969
cis-1,2-Dichloroethylene	ug/g	ND	ND	0.050	ND	0.050	ND	0.050	4301969
trans-1,2-Dichloroethylene	ug/g	ND	ND	0.050	ND	0.050	ND	0.050	4301969
1,2-Dichloropropane	ug/g	ND	ND	0.050	ND	0.050	ND	0.050	4301969
cis-1,3-Dichloropropene	ug/g	ND	ND	0.030	ND	0.030	ND	0.030	4301969
trans-1,3-Dichloropropene	ug/g	ND	ND	0.040	ND	0.040	ND	0.040	4301969
Ethylbenzene	ug/g	ND	ND	0.020	ND	0.020	ND	0.020	4301969
Ethylene Dibromide	ug/g	ND	ND	0.050	ND	0.050	ND (1)	0.060	4301969
Hexane	ug/g	ND	ND	0.050	ND	0.050	ND	0.050	4301969
Methylene Chloride(Dichloromethane)	ug/g	ND	ND	0.050	ND (2)	0.090	ND	0.050	4301969
Methyl Ethyl Ketone (2-Butanone)	ug/g	ND	ND	0.50	ND	0.50	ND	0.50	4301969
Methyl Isobutyl Ketone	ug/g	ND	ND	0.50	ND	0.50	ND	0.50	4301969

RDL = Reportable Detection Limit

QC Batch = Quality Control Batch

Lab-Dup = Laboratory Initiated Duplicate

ND = Not detected

(1) Detection limit was raised due to matrix interferences.

(2) VOC Analysis: Detection limits were raised due to laboratory background of this compound.

O.REG 153 VOLATILE ORGANICS (SOIL)

Maxxam ID		BLS084	BLS084		BLS085		BLS086		
Sampling Date		2015/12/02 10:15	2015/12/02 10:15		2015/12/02 10:15		2015/12/02 13:20		
COC Number		539891-02-01	539891-02-01		539891-02-01		539891-02-01		
	UNITS	MW301-4	MW301-4 Lab-Dup	RDL	MW301-40	RDL	MW302-3	RDL	QC Batch
Methyl t-butyl ether (MTBE)	ug/g	ND	ND	0.050	ND	0.050	ND	0.050	4301969
Styrene	ug/g	ND	ND	0.050	ND	0.050	ND	0.050	4301969
1,1,1,2-Tetrachloroethane	ug/g	ND	ND	0.050	ND	0.050	ND	0.050	4301969
1,1,2,2-Tetrachloroethane	ug/g	ND	ND	0.050	ND	0.050	ND	0.050	4301969
Tetrachloroethylene	ug/g	ND	ND	0.050	ND	0.050	ND	0.050	4301969
Toluene	ug/g	ND	ND	0.020	ND	0.020	ND	0.020	4301969
1,1,1-Trichloroethane	ug/g	ND	ND	0.050	ND	0.050	ND	0.050	4301969
1,1,2-Trichloroethane	ug/g	ND	ND	0.050	ND	0.050	ND	0.050	4301969
Trichloroethylene	ug/g	ND	ND	0.050	ND	0.050	ND	0.050	4301969
Trichlorofluoromethane (FREON 11)	ug/g	ND	ND	0.050	ND	0.050	ND	0.050	4301969
Vinyl Chloride	ug/g	ND	ND	0.020	ND	0.020	ND	0.020	4301969
p+m-Xylene	ug/g	ND	ND	0.020	ND	0.020	ND	0.020	4301969
o-Xylene	ug/g	ND	ND	0.020	ND	0.020	ND	0.020	4301969
Total Xylenes	ug/g	ND	ND	0.020	ND	0.020	ND	0.020	4301969
Surrogate Recovery (%)									
4-Bromofluorobenzene	%	92	93		91		104		4301969
D10-o-Xylene	%	81	79		80		95		4301969
D4-1,2-Dichloroethane	%	93	93		96		88		4301969
D8-Toluene	%	92	93		92		101		4301969
RDL = Reportable Detection Limit QC Batch = Quality Control Batch Lab-Dup = Laboratory Initiated Duplicate ND = Not detected									

O.REG 153 VOLATILE ORGANICS (SOIL)

Maxxam ID		BLS087		
Sampling Date		2015/12/02 15:30		
COC Number		539891-02-01		
	UNITS	MW303-4A	RDL	QC Batch
Calculated Parameters				
1,3-Dichloropropene (cis+trans)	ug/g	ND	0.050	4298921
Volatile Organics				
Acetone (2-Propanone)	ug/g	ND	0.50	4301969
Benzene	ug/g	ND	0.020	4301969
Bromodichloromethane	ug/g	ND	0.050	4301969
Bromoform	ug/g	ND	0.050	4301969
Bromomethane	ug/g	ND	0.050	4301969
Carbon Tetrachloride	ug/g	ND	0.050	4301969
Chlorobenzene	ug/g	ND	0.050	4301969
Chloroform	ug/g	ND	0.050	4301969
Dibromochloromethane	ug/g	ND	0.050	4301969
1,2-Dichlorobenzene	ug/g	ND	0.050	4301969
1,3-Dichlorobenzene	ug/g	ND	0.050	4301969
1,4-Dichlorobenzene	ug/g	ND	0.050	4301969
Dichlorodifluoromethane (FREON 12)	ug/g	ND	0.050	4301969
1,1-Dichloroethane	ug/g	ND	0.050	4301969
1,2-Dichloroethane	ug/g	ND	0.050	4301969
1,1-Dichloroethylene	ug/g	ND	0.050	4301969
cis-1,2-Dichloroethylene	ug/g	ND	0.050	4301969
trans-1,2-Dichloroethylene	ug/g	ND	0.050	4301969
1,2-Dichloropropane	ug/g	ND	0.050	4301969
cis-1,3-Dichloropropene	ug/g	ND	0.030	4301969
trans-1,3-Dichloropropene	ug/g	ND	0.040	4301969
Ethylbenzene	ug/g	ND	0.020	4301969
Ethylene Dibromide	ug/g	ND	0.050	4301969
Hexane	ug/g	ND	0.050	4301969
Methylene Chloride(Dichloromethane)	ug/g	ND	0.050	4301969
Methyl Ethyl Ketone (2-Butanone)	ug/g	ND	0.50	4301969
Methyl Isobutyl Ketone	ug/g	ND	0.50	4301969
Methyl t-butyl ether (MTBE)	ug/g	ND	0.050	4301969
Styrene	ug/g	ND	0.050	4301969
1,1,1,2-Tetrachloroethane	ug/g	ND	0.050	4301969
RDL = Reportable Detection Limit				
QC Batch = Quality Control Batch				
ND = Not detected				

O.REG 153 VOLATILE ORGANICS (SOIL)

Maxxam ID		BLS087		
Sampling Date		2015/12/02 15:30		
COC Number		539891-02-01		
	UNITS	MW303-4A	RDL	QC Batch
1,1,2,2-Tetrachloroethane	ug/g	ND	0.050	4301969
Tetrachloroethylene	ug/g	ND	0.050	4301969
Toluene	ug/g	ND	0.020	4301969
1,1,1-Trichloroethane	ug/g	ND	0.050	4301969
1,1,2-Trichloroethane	ug/g	ND	0.050	4301969
Trichloroethylene	ug/g	ND	0.050	4301969
Trichlorofluoromethane (FREON 11)	ug/g	ND	0.050	4301969
Vinyl Chloride	ug/g	ND	0.020	4301969
p+m-Xylene	ug/g	0.029	0.020	4301969
o-Xylene	ug/g	ND	0.020	4301969
Total Xylenes	ug/g	0.029	0.020	4301969
Surrogate Recovery (%)				
4-Bromofluorobenzene	%	91		4301969
D10-o-Xylene	%	83		4301969
D4-1,2-Dichloroethane	%	94		4301969
D8-Toluene	%	93		4301969
RDL = Reportable Detection Limit QC Batch = Quality Control Batch ND = Not detected				

Maxxam Job #: B5O9048
Report Date: 2015/12/10

Terrapex Environmental Ltd
Client Project #: CB644.02
Site Location: 121 Hume Street, Collingwood, ON
Your P.O. #: 4700000306
Sampler Initials: P.A

RESULTS OF ANALYSES OF SOIL

Maxxam ID		BLS086	BLS088	
Sampling Date		2015/12/02 13:20	2015/12/02 13:15	
COC Number		539891-02-01	539891-02-01	
	UNITS	MW302-3	MW302-2	QC Batch
Inorganics				
Available (CaCl2) pH	pH	7.71	7.74	4303613
QC Batch = Quality Control Batch				

TEST SUMMARY

Maxxam ID: BLS084
Sample ID: MW301-4
Matrix: Soil

Collected: 2015/12/02
Shipped:
Received: 2015/12/03

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
1,3-Dichloropropene Sum	CALC	4298921	N/A	2015/12/09	Automated Statchk
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	4300958	N/A	2015/12/08	Lincoln Ramdahin
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	4300831	2015/12/05	2015/12/07	Zhiyue (Frank) Zhu
Moisture	BAL	4300918	N/A	2015/12/05	Valentina Kaftani
Volatile Organic Compounds in Soil	GC/MS	4301969	N/A	2015/12/09	Anna Gabrielyan

Maxxam ID: BLS084 Dup
Sample ID: MW301-4
Matrix: Soil

Collected: 2015/12/02
Shipped:
Received: 2015/12/03

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Volatile Organic Compounds in Soil	GC/MS	4301969	N/A	2015/12/09	Anna Gabrielyan

Maxxam ID: BLS085
Sample ID: MW301-40
Matrix: Soil

Collected: 2015/12/02
Shipped:
Received: 2015/12/03

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
1,3-Dichloropropene Sum	CALC	4298921	N/A	2015/12/09	Automated Statchk
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	4300958	N/A	2015/12/08	Lincoln Ramdahin
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	4300831	2015/12/05	2015/12/07	Zhiyue (Frank) Zhu
Moisture	BAL	4300918	N/A	2015/12/05	Valentina Kaftani
Volatile Organic Compounds in Soil	GC/MS	4301969	N/A	2015/12/09	Anna Gabrielyan

Maxxam ID: BLS086
Sample ID: MW302-3
Matrix: Soil

Collected: 2015/12/02
Shipped:
Received: 2015/12/03

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
1,3-Dichloropropene Sum	CALC	4298921	N/A	2015/12/09	Automated Statchk
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	4300958	N/A	2015/12/08	Lincoln Ramdahin
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	4300831	2015/12/05	2015/12/07	Zhiyue (Frank) Zhu
Moisture	BAL	4301895	N/A	2015/12/07	Chun Yan
pH CaCl2 EXTRACT	AT	4303613	2015/12/08	2015/12/08	Neil Dassanayake
Volatile Organic Compounds in Soil	GC/MS	4301969	N/A	2015/12/09	Anna Gabrielyan

Maxxam ID: BLS087
Sample ID: MW303-4A
Matrix: Soil

Collected: 2015/12/02
Shipped:
Received: 2015/12/03

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
1,3-Dichloropropene Sum	CALC	4298921	N/A	2015/12/09	Automated Statchk
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	4300958	N/A	2015/12/08	Lincoln Ramdahin
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	4300831	2015/12/05	2015/12/07	Zhiyue (Frank) Zhu

Maxxam Job #: B5O9048
Report Date: 2015/12/10

Terrapex Environmental Ltd
Client Project #: CB644.02
Site Location: 121 Hume Street, Collingwood, ON
Your P.O. #: 4700000306
Sampler Initials: P.A

TEST SUMMARY

Maxxam ID: BLS087
Sample ID: MW303-4A
Matrix: Soil

Collected: 2015/12/02
Shipped:
Received: 2015/12/03

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Moisture	BAL	4300918	N/A	2015/12/05	Valentina Kaftani
Volatile Organic Compounds in Soil	GC/MS	4301969	N/A	2015/12/09	Anna Gabrielyan

Maxxam ID: BLS088
Sample ID: MW302-2
Matrix: Soil

Collected: 2015/12/02
Shipped:
Received: 2015/12/03

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
pH CaCl2 EXTRACT	AT	4303613	2015/12/08	2015/12/08	Neil Dassanayake

Maxxam Job #: B5O9048
Report Date: 2015/12/10

Terrapex Environmental Ltd
Client Project #: CB644.02
Site Location: 121 Hume Street, Collingwood, ON
Your P.O. #: 4700000306
Sampler Initials: P.A

GENERAL COMMENTS

Each temperature is the average of up to three cooler temperatures taken at receipt

Package 1	0.3°C

Sample BLS086-01 : F1/BTEX Analysis:

The BTEX results used for the F1-BTEX calculation were obtained from Headspace-GC analysis.

Results relate only to the items tested.

QUALITY ASSURANCE REPORT

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
4300831	ZZ	Matrix Spike	o-Terphenyl	2015/12/07		90	%	60 - 130
			F2 (C10-C16 Hydrocarbons)	2015/12/07		87	%	50 - 130
			F3 (C16-C34 Hydrocarbons)	2015/12/07		102	%	50 - 130
			F4 (C34-C50 Hydrocarbons)	2015/12/07		80	%	50 - 130
4300831	ZZ	Spiked Blank	o-Terphenyl	2015/12/07		87	%	60 - 130
			F2 (C10-C16 Hydrocarbons)	2015/12/07		83	%	80 - 120
			F3 (C16-C34 Hydrocarbons)	2015/12/07		93	%	80 - 120
			F4 (C34-C50 Hydrocarbons)	2015/12/07		87	%	80 - 120
4300831	ZZ	Method Blank	o-Terphenyl	2015/12/07		82	%	60 - 130
			F2 (C10-C16 Hydrocarbons)	2015/12/07	ND, RDL=10		ug/g	
			F3 (C16-C34 Hydrocarbons)	2015/12/07	ND, RDL=50		ug/g	
			F4 (C34-C50 Hydrocarbons)	2015/12/07	ND, RDL=50		ug/g	
4300831	ZZ	RPD	F2 (C10-C16 Hydrocarbons)	2015/12/07	NC		%	30
			F3 (C16-C34 Hydrocarbons)	2015/12/07	NC		%	30
			F4 (C34-C50 Hydrocarbons)	2015/12/07	NC		%	30
4300918	VGS	RPD	Moisture	2015/12/05	4.2		%	20
4300958	LRA	Matrix Spike	1,4-Difluorobenzene	2015/12/07		99	%	60 - 140
			4-Bromofluorobenzene	2015/12/07		96	%	60 - 140
			D10-Ethylbenzene	2015/12/07		90	%	60 - 140
			D4-1,2-Dichloroethane	2015/12/07		101	%	60 - 140
			F1 (C6-C10)	2015/12/07		67	%	60 - 140
4300958	LRA	Spiked Blank	1,4-Difluorobenzene	2015/12/07		98	%	60 - 140
			4-Bromofluorobenzene	2015/12/07		101	%	60 - 140
			D10-Ethylbenzene	2015/12/07		99	%	60 - 140
			D4-1,2-Dichloroethane	2015/12/07		98	%	60 - 140
			F1 (C6-C10)	2015/12/07		98	%	80 - 120
4300958	LRA	Method Blank	1,4-Difluorobenzene	2015/12/07		102	%	60 - 140
			4-Bromofluorobenzene	2015/12/07		98	%	60 - 140
			D10-Ethylbenzene	2015/12/07		84	%	60 - 140
			D4-1,2-Dichloroethane	2015/12/07		102	%	60 - 140
			F1 (C6-C10)	2015/12/07	ND, RDL=10		ug/g	
4300958	LRA	RPD	F1 (C6-C10) - BTEX	2015/12/07	ND, RDL=10		ug/g	
			F1 (C6-C10)	2015/12/07	NC		%	30
4301895	SKE	RPD	Moisture	2015/12/07	1.4		%	20
4301969	AYA	Matrix Spike [BLS084-02]	4-Bromofluorobenzene	2015/12/09		103	%	60 - 140
			D10-o-Xylene	2015/12/09		97	%	60 - 130
			D4-1,2-Dichloroethane	2015/12/09		89	%	60 - 140
			D8-Toluene	2015/12/09		107	%	60 - 140
			Acetone (2-Propanone)	2015/12/09		93	%	60 - 140
			Benzene	2015/12/09		96	%	60 - 140
			Bromodichloromethane	2015/12/09		91	%	60 - 140
			Bromoform	2015/12/09		88	%	60 - 140
			Bromomethane	2015/12/09		78	%	60 - 140
			Carbon Tetrachloride	2015/12/09		97	%	60 - 140
			Chlorobenzene	2015/12/09		102	%	60 - 140

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC	Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
				Chloroform	2015/12/09		92	%	60 - 140
				Dibromochloromethane	2015/12/09		91	%	60 - 140
				1,2-Dichlorobenzene	2015/12/09		99	%	60 - 140
				1,3-Dichlorobenzene	2015/12/09		100	%	60 - 140
				1,4-Dichlorobenzene	2015/12/09		102	%	60 - 140
				Dichlorodifluoromethane (FREON 12)	2015/12/09		90	%	60 - 140
				1,1-Dichloroethane	2015/12/09		92	%	60 - 140
				1,2-Dichloroethane	2015/12/09		90	%	60 - 140
				1,1-Dichloroethylene	2015/12/09		99	%	60 - 140
				cis-1,2-Dichloroethylene	2015/12/09		99	%	60 - 140
				trans-1,2-Dichloroethylene	2015/12/09		99	%	60 - 140
				1,2-Dichloropropane	2015/12/09		92	%	60 - 140
				cis-1,3-Dichloropropene	2015/12/09		81	%	60 - 140
				trans-1,3-Dichloropropene	2015/12/09		78	%	60 - 140
				Ethylbenzene	2015/12/09		100	%	60 - 140
				Ethylene Dibromide	2015/12/09		92	%	60 - 140
				Hexane	2015/12/09		108	%	60 - 140
				Methylene Chloride(Dichloromethane)	2015/12/09		88	%	60 - 140
				Methyl Ethyl Ketone (2-Butanone)	2015/12/09		92	%	60 - 140
				Methyl Isobutyl Ketone	2015/12/09		90	%	60 - 140
				Methyl t-butyl ether (MTBE)	2015/12/09		94	%	60 - 140
				Styrene	2015/12/09		77	%	60 - 140
				1,1,1,2-Tetrachloroethane	2015/12/09		95	%	60 - 140
				1,1,2,2-Tetrachloroethane	2015/12/09		89	%	60 - 140
				Tetrachloroethylene	2015/12/09		104	%	60 - 140
				Toluene	2015/12/09		104	%	60 - 140
				1,1,1-Trichloroethane	2015/12/09		93	%	60 - 140
				1,1,2-Trichloroethane	2015/12/09		88	%	60 - 140
				Trichloroethylene	2015/12/09		98	%	60 - 140
				Trichlorofluoromethane (FREON 11)	2015/12/09		98	%	60 - 140
				Vinyl Chloride	2015/12/09		96	%	60 - 140
				p+m-Xylene	2015/12/09		80	%	60 - 140
				o-Xylene	2015/12/09		101	%	60 - 140
4301969	AYA		Spiked Blank	4-Bromofluorobenzene	2015/12/09		104	%	60 - 140
				D10-o-Xylene	2015/12/09		104	%	60 - 130
				D4-1,2-Dichloroethane	2015/12/09		96	%	60 - 140
				D8-Toluene	2015/12/09		104	%	60 - 140
				Acetone (2-Propanone)	2015/12/09		101	%	60 - 140
				Benzene	2015/12/09		95	%	60 - 130
				Bromodichloromethane	2015/12/09		94	%	60 - 130
				Bromoform	2015/12/09		95	%	60 - 130
				Bromomethane	2015/12/09		76	%	60 - 140
				Carbon Tetrachloride	2015/12/09		93	%	60 - 130
				Chlorobenzene	2015/12/09		97	%	60 - 130
				Chloroform	2015/12/09		92	%	60 - 130
				Dibromochloromethane	2015/12/09		95	%	60 - 130
				1,2-Dichlorobenzene	2015/12/09		96	%	60 - 130
				1,3-Dichlorobenzene	2015/12/09		92	%	60 - 130
				1,4-Dichlorobenzene	2015/12/09		94	%	60 - 130
				Dichlorodifluoromethane (FREON 12)	2015/12/09		71	%	60 - 140
				1,1-Dichloroethane	2015/12/09		92	%	60 - 130

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC	Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
				1,2-Dichloroethane	2015/12/09		94	%	60 - 130
				1,1-Dichloroethylene	2015/12/09		93	%	60 - 130
				cis-1,2-Dichloroethylene	2015/12/09		99	%	60 - 130
				trans-1,2-Dichloroethylene	2015/12/09		94	%	60 - 130
				1,2-Dichloropropane	2015/12/09		94	%	60 - 130
				cis-1,3-Dichloropropene	2015/12/09		81	%	60 - 130
				trans-1,3-Dichloropropene	2015/12/09		80	%	60 - 130
				Ethylbenzene	2015/12/09		91	%	60 - 130
				Ethylene Dibromide	2015/12/09		97	%	60 - 130
				Hexane	2015/12/09		99	%	60 - 130
				Methylene Chloride(Dichloromethane)	2015/12/09		89	%	60 - 130
				Methyl Ethyl Ketone (2-Butanone)	2015/12/09		103	%	60 - 140
				Methyl Isobutyl Ketone	2015/12/09		102	%	60 - 130
				Methyl t-butyl ether (MTBE)	2015/12/09		95	%	60 - 130
				Styrene	2015/12/09		74	%	60 - 130
				1,1,1,2-Tetrachloroethane	2015/12/09		95	%	60 - 130
				1,1,2,2-Tetrachloroethane	2015/12/09		97	%	60 - 130
				Tetrachloroethylene	2015/12/09		96	%	60 - 130
				Toluene	2015/12/09		98	%	60 - 130
				1,1,1-Trichloroethane	2015/12/09		90	%	60 - 130
				1,1,2-Trichloroethane	2015/12/09		93	%	60 - 130
				Trichloroethylene	2015/12/09		93	%	60 - 130
				Trichlorofluoromethane (FREON 11)	2015/12/09		90	%	60 - 130
				Vinyl Chloride	2015/12/09		86	%	60 - 130
				p+m-Xylene	2015/12/09		72	%	60 - 130
				o-Xylene	2015/12/09		96	%	60 - 130
4301969	AYA		Method Blank	4-Bromofluorobenzene	2015/12/09		92	%	60 - 140
				D10-o-Xylene	2015/12/09		86	%	60 - 130
				D4-1,2-Dichloroethane	2015/12/09		103	%	60 - 140
				D8-Toluene	2015/12/09		89	%	60 - 140
				Acetone (2-Propanone)	2015/12/09	ND, RDL=0.50		ug/g	
				Benzene	2015/12/09	ND, RDL=0.020		ug/g	
				Bromodichloromethane	2015/12/09	ND, RDL=0.050		ug/g	
				Bromoform	2015/12/09	ND, RDL=0.050		ug/g	
				Bromomethane	2015/12/09	ND, RDL=0.050		ug/g	
				Carbon Tetrachloride	2015/12/09	ND, RDL=0.050		ug/g	
				Chlorobenzene	2015/12/09	ND, RDL=0.050		ug/g	
				Chloroform	2015/12/09	ND, RDL=0.050		ug/g	
				Dibromochloromethane	2015/12/09	ND, RDL=0.050		ug/g	
				1,2-Dichlorobenzene	2015/12/09	ND, RDL=0.050		ug/g	

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			1,3-Dichlorobenzene	2015/12/09	ND, RDL=0.050		ug/g	
			1,4-Dichlorobenzene	2015/12/09	ND, RDL=0.050		ug/g	
			Dichlorodifluoromethane (FREON 12)	2015/12/09	ND, RDL=0.050		ug/g	
			1,1-Dichloroethane	2015/12/09	ND, RDL=0.050		ug/g	
			1,2-Dichloroethane	2015/12/09	ND, RDL=0.050		ug/g	
			1,1-Dichloroethylene	2015/12/09	ND, RDL=0.050		ug/g	
			cis-1,2-Dichloroethylene	2015/12/09	ND, RDL=0.050		ug/g	
			trans-1,2-Dichloroethylene	2015/12/09	ND, RDL=0.050		ug/g	
			1,2-Dichloropropane	2015/12/09	ND, RDL=0.050		ug/g	
			cis-1,3-Dichloropropene	2015/12/09	ND, RDL=0.030		ug/g	
			trans-1,3-Dichloropropene	2015/12/09	ND, RDL=0.040		ug/g	
			Ethylbenzene	2015/12/09	ND, RDL=0.020		ug/g	
			Ethylene Dibromide	2015/12/09	ND, RDL=0.050		ug/g	
			Hexane	2015/12/09	ND, RDL=0.050		ug/g	
			Methylene Chloride(Dichloromethane)	2015/12/09	ND, RDL=0.050		ug/g	
			Methyl Ethyl Ketone (2-Butanone)	2015/12/09	ND, RDL=0.50		ug/g	
			Methyl Isobutyl Ketone	2015/12/09	ND, RDL=0.50		ug/g	
			Methyl t-butyl ether (MTBE)	2015/12/09	ND, RDL=0.050		ug/g	
			Styrene	2015/12/09	ND, RDL=0.050		ug/g	
			1,1,1,2-Tetrachloroethane	2015/12/09	ND, RDL=0.050		ug/g	
			1,1,2,2-Tetrachloroethane	2015/12/09	ND, RDL=0.050		ug/g	
			Tetrachloroethylene	2015/12/09	ND, RDL=0.050		ug/g	
			Toluene	2015/12/09	ND, RDL=0.020		ug/g	
			1,1,1-Trichloroethane	2015/12/09	ND, RDL=0.050		ug/g	

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC	Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
				1,1,2-Trichloroethane	2015/12/09	ND, RDL=0.050		ug/g	
				Trichloroethylene	2015/12/09	ND, RDL=0.050		ug/g	
				Trichlorofluoromethane (FREON 11)	2015/12/09	ND, RDL=0.050		ug/g	
				Vinyl Chloride	2015/12/09	ND, RDL=0.020		ug/g	
				p+m-Xylene	2015/12/09	ND, RDL=0.020		ug/g	
				o-Xylene	2015/12/09	ND, RDL=0.020		ug/g	
				Total Xylenes	2015/12/09	ND, RDL=0.020		ug/g	
4301969	AYA	RPD [BLS084-02]		Acetone (2-Propanone)	2015/12/09	NC		%	50
				Benzene	2015/12/09	NC		%	50
				Bromodichloromethane	2015/12/09	NC		%	50
				Bromoform	2015/12/09	NC		%	50
				Bromomethane	2015/12/09	NC		%	50
				Carbon Tetrachloride	2015/12/09	NC		%	50
				Chlorobenzene	2015/12/09	NC		%	50
				Chloroform	2015/12/09	NC		%	50
				Dibromochloromethane	2015/12/09	NC		%	50
				1,2-Dichlorobenzene	2015/12/09	NC		%	50
				1,3-Dichlorobenzene	2015/12/09	NC		%	50
				1,4-Dichlorobenzene	2015/12/09	NC		%	50
				Dichlorodifluoromethane (FREON 12)	2015/12/09	NC		%	50
				1,1-Dichloroethane	2015/12/09	NC		%	50
				1,2-Dichloroethane	2015/12/09	NC		%	50
				1,1-Dichloroethylene	2015/12/09	NC		%	50
				cis-1,2-Dichloroethylene	2015/12/09	NC		%	50
				trans-1,2-Dichloroethylene	2015/12/09	NC		%	50
				1,2-Dichloropropane	2015/12/09	NC		%	50
				cis-1,3-Dichloropropene	2015/12/09	NC		%	50
				trans-1,3-Dichloropropene	2015/12/09	NC		%	50
				Ethylbenzene	2015/12/09	NC		%	50
				Ethylene Dibromide	2015/12/09	NC		%	50
				Hexane	2015/12/09	NC		%	50
				Methylene Chloride(Dichloromethane)	2015/12/09	NC		%	50
				Methyl Ethyl Ketone (2-Butanone)	2015/12/09	NC		%	50
				Methyl Isobutyl Ketone	2015/12/09	NC		%	50
				Methyl t-butyl ether (MTBE)	2015/12/09	NC		%	50
				Styrene	2015/12/09	NC		%	50
				1,1,1,2-Tetrachloroethane	2015/12/09	NC		%	50
				1,1,2,2-Tetrachloroethane	2015/12/09	NC		%	50
				Tetrachloroethylene	2015/12/09	NC		%	50
				Toluene	2015/12/09	NC		%	50
				1,1,1-Trichloroethane	2015/12/09	NC		%	50
				1,1,2-Trichloroethane	2015/12/09	NC		%	50
				Trichloroethylene	2015/12/09	NC		%	50

Maxxam Job #: B5O9048
Report Date: 2015/12/10

Terrapex Environmental Ltd
Client Project #: CB644.02
Site Location: 121 Hume Street, Collingwood, ON
Your P.O. #: 4700000306
Sampler Initials: P.A

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Trichlorofluoromethane (FREON 11)	2015/12/09	NC		%	50
			Vinyl Chloride	2015/12/09	NC		%	50
			p+m-Xylene	2015/12/09	NC		%	50
			o-Xylene	2015/12/09	NC		%	50
			Total Xylenes	2015/12/09	NC		%	50
4303613	NYS	Spiked Blank	Available (CaCl ₂) pH	2015/12/08		99	%	97 - 103
4303613	NYS	RPD	Available (CaCl ₂) pH	2015/12/08	0.13		%	N/A

N/A = Not Applicable

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.

Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.

Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.

Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.

Surrogate: A pure or isotopically labeled compound whose behavior mirrors the analytes of interest. Used to evaluate extraction efficiency.

NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (one or both samples < 5x RDL).

VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by the following individual(s).

Cristina Carriere

Cristina Carriere, Scientific Services

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

Maxxam
A Maxxam Nutrition Company

Maxxim Analytics International Corporation (a/k/a Maxxim Analytics)
6740 Campbell Road, Mississauga, Ontario Canada L5N 2L8 Tel (905) 817-5700 Toll-Free (800) 563-6266 Fax (905) 817-5777 www.maxxim.ca

CHAIN OF CUSTODY RECORD SUNCOR DOWNSTREAM

Page 2 of 2

INVOICE INFORMATION:		REPORT INFORMATION (if differs from invoice):		PROJECT INFORMATION:		Laboratory Use Only:	
Company Name	#14539 Suncor Energy Products Partnership	Company Name	#6557 Terrapex Environmental Ltd	Quotation #	B43750	Maxxam Job #:	Bottle Order #:
Contact Name	Ken Tedder	Contact Name	Jeff Stevenson	Task Order #			
Address	3275 Rebecca St Oakville ON L6L 6N5	Address	920 Brant Street Unit 16 Burlington ON L7R 4J1	Project #	CB644.02		
Phone	(905) 469-3754	Phone	(905) 632-5939 x 226	Site Location	121 Hume Street, Collingwood, ON	COC #:	Project Manager:
Email	ktedder@suncor.com	Email	j.stevenson@terrapex.com	Outlet #	60680		
				Sampled By	DA		

MOE REGULATED DRINKING WATER OR WATER INTENDED FOR HUMAN CONSUMPTION MUST BE SUBMITTED ON THE MAXXAM DRINKING WATER CHAIN OF CUSTODY

Regulation 153 (2011)			Other Regulations		Activity
☐ Table 1 ☐ Table 2 ☒ Table 3 ☐ Table 4	☐ Res/Park ☒ Ind/Comm ☐ Agrl/Other	☐ Medium/Fine ☒ Coarse ☐ For RSC	☐ CCME Reg 558 ☐ MISA PWQO ☐ Other	☐ Sanitary Sewer Bylaw ☐ Storm Sewer Bylaw Municipality _____	_____ <i>MW</i> Assessment (circle one) A1, A2, AR, AV Remediations (circle one) RE, RX, RI, RA Contaminant Management (circle one) M, G, N, ANV
Include Criteria on Certificate of Analysis (Y/N)? <i>N</i>					

Include Criteria on Certificate of Analysis (Y/N)? **N**

	Sample Barcode Label	Sample (Location) Identification	Date Sampled	Time Sampled	Matrix
1		MW 301	Dec-2-15	14:30	GW
2		MW 302	↓	14:45	GW
3		MW 303		15:00	GW
4	1	MW1000	Dec-2-15	14:45	GW
5					
6					
7					
8					
9					
10					

ANALYSIS REQUESTED (PLEASE BE SPECIFIC)

[illegible]

Turnaround Time (TAT) Required

Please provide advance notice for rush projects

Regular (Standard) TAT:

(will be applied if Rush TAT is not specified)

Standard TAT = 5-7 Working days for most tests

Please note: Standard TAT for certain tests such as BOD and Dioxins/Furans are > 5 days - contact your Project Manager for details.

Rush TAT

2 Day ☐1 DAY ☐☐ Samudra

Date Required _____

Time Required

Rush Confirmation Number:

(call lah for it)

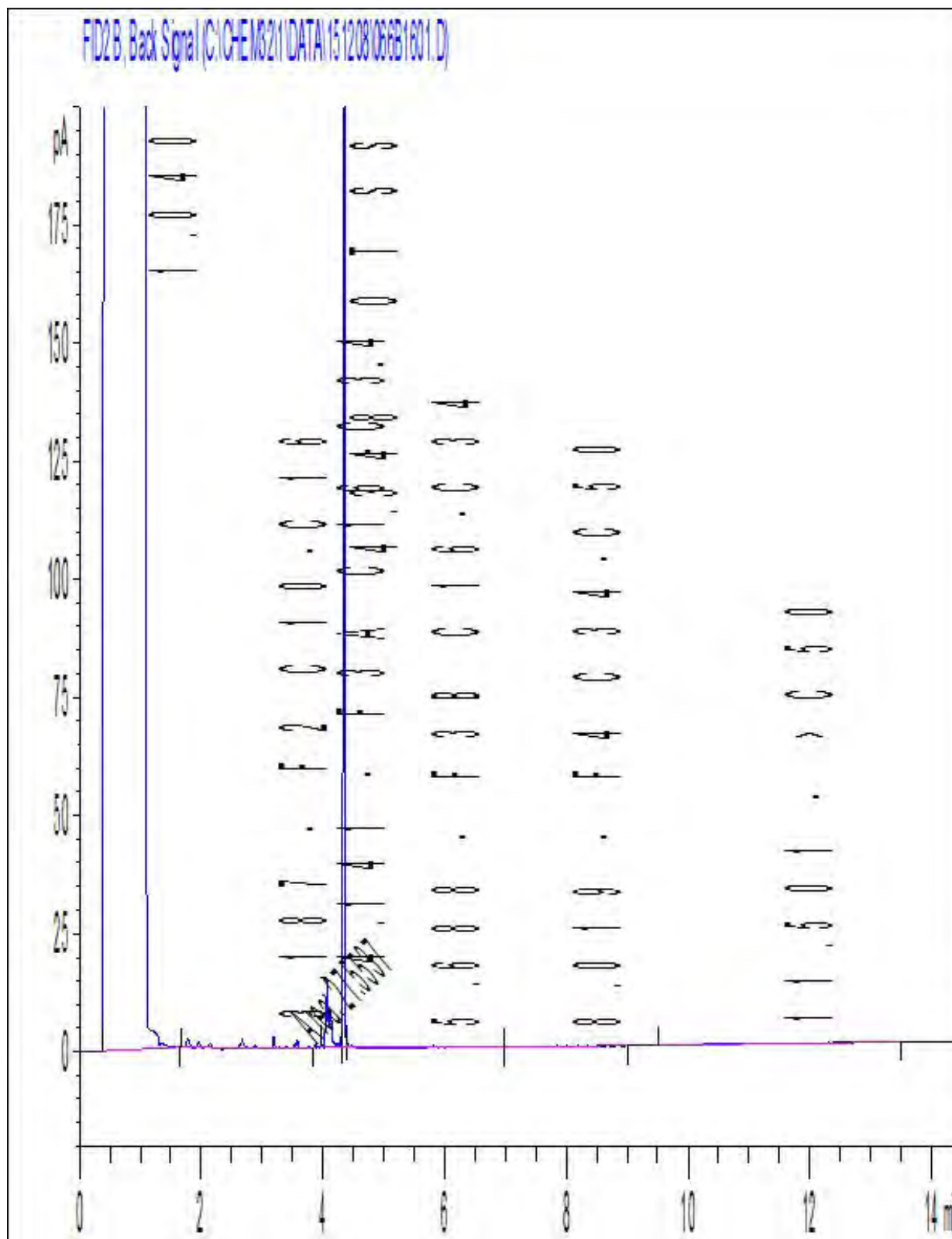
[illegible]

ELINQUISHED BY: (Signature/Print)		Date: (YY/MM/DD)	Time	RECEIVED BY: (Signature/Print)		Date: (YY/MM/DD)	Time	# jars used and not submitted	Laboratory Use Only				
Thy. A. L. S.		15/12/03	10:00	RICHARD DEVLIN		20/5/12/03	13:47	0	Time Sensitivity	Temperature (°C) on Receipt	Custody Seal	Yes	No
[Signature]										0.1/0	Present		
											Intact	☒	
* REINQUISHER TO ENSURE THE ACCURACY OF THE CHAIN OF CUSTODY RECORD, AN INCOMPLETE CHAIN OF CUSTODY MAY RESULT IN ANALYTICAL DATA DELAYS								SAMPLES MUST BE KEPT COOL (< 10°C) FROM TIME OF SAMPLING UNTIL DELIVERY TO MAXAM		White: Maxam Yellow: Client			

Maxxam Analytics International Corporation o/a Maxxam Analytics

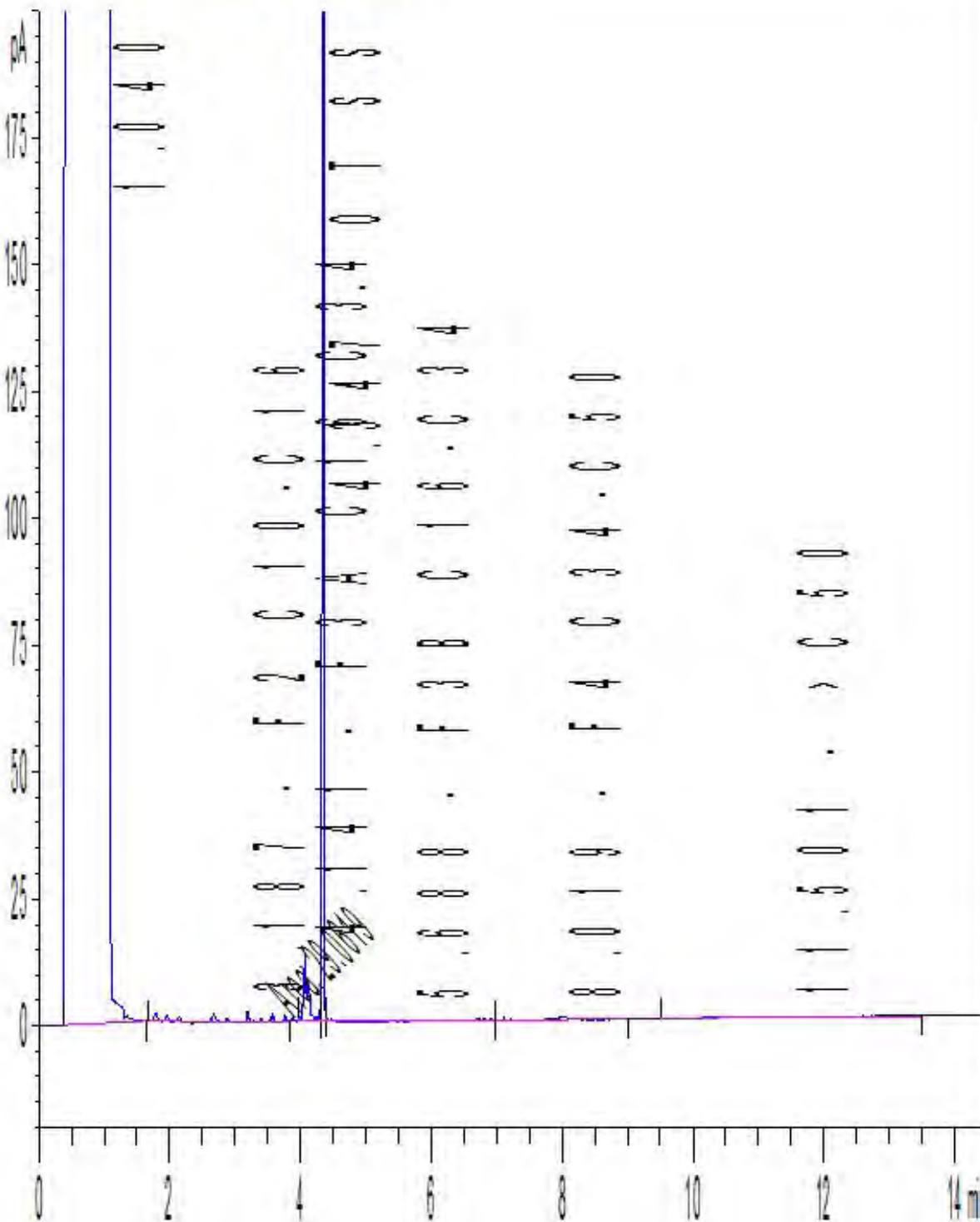
#317404

Petroleum Hydrocarbons F2-F4 in Water Chromatogram



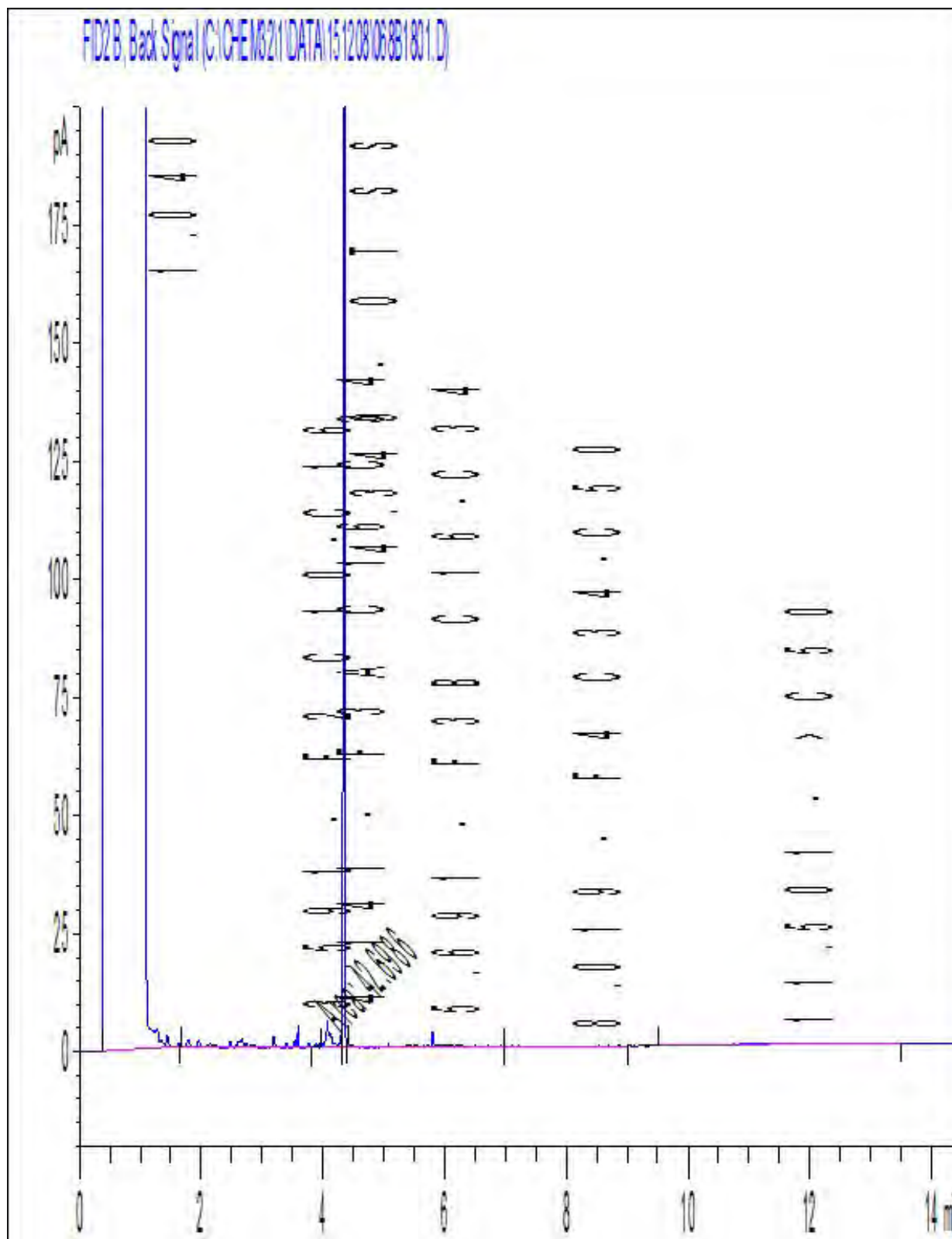
Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Petroleum Hydrocarbons F2-F4 in Water Chromatogram



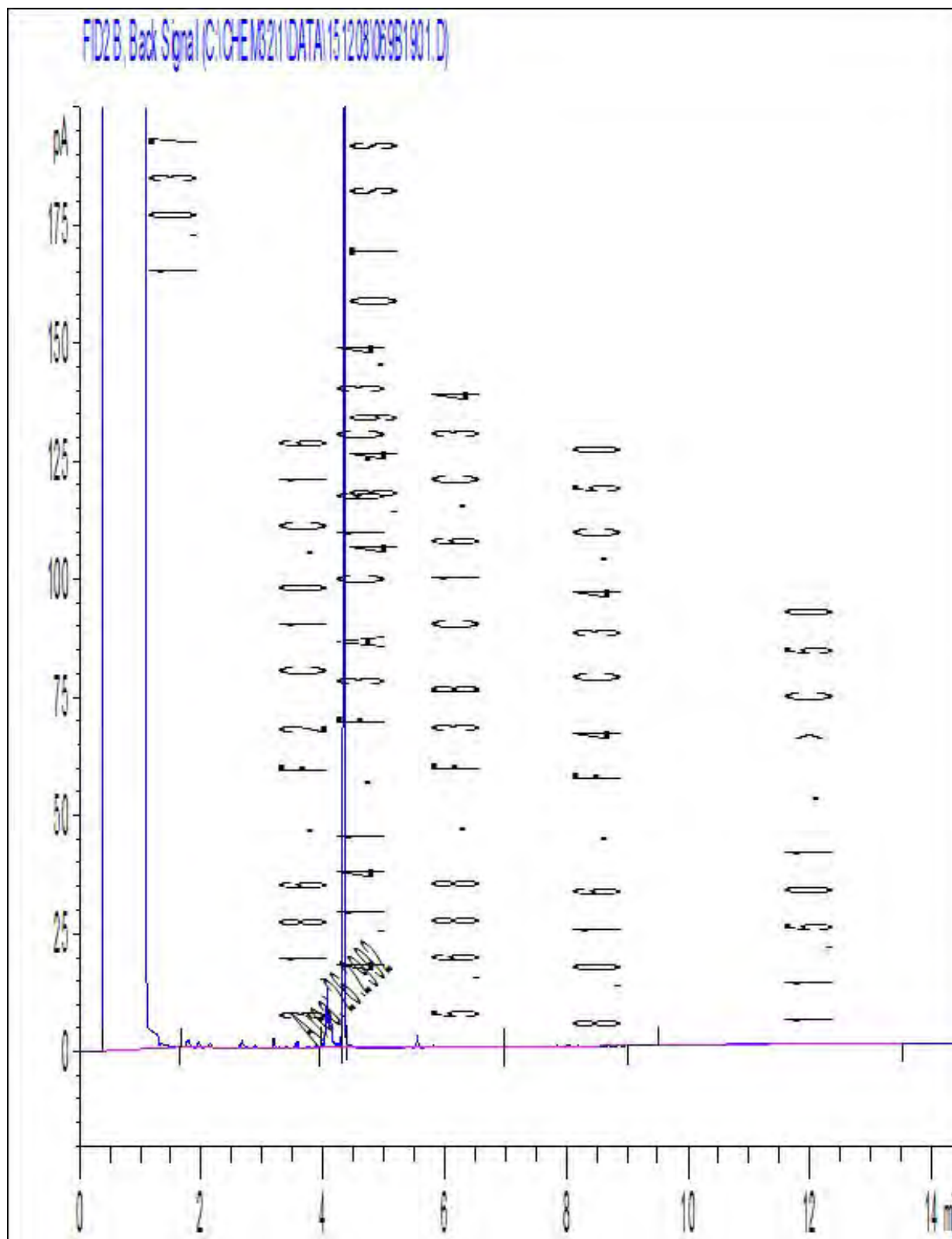
or fingerprinting be required, please contact the laboratory.

Petroleum Hydrocarbons F2-F4 in Water Chromatogram



Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Petroleum Hydrocarbons F2-F4 in Water Chromatogram



Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Attention: Jeff Stevenson

Terrapex Environmental Ltd
920 Brant Street
Unit 16
Burlington, ON
CANADA L7R 4J1

Your P.O. #: 4700000306
Your Project #: CB644.02
Site#: 60680
Site Location: 121 HUME STREET, COLLINGWOOD, ON
Your C.O.C. #: 539891-01-01

Report Date: 2015/12/10
Report #: R3800850
Version: 1 - Final

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B508903

Received: 2015/12/03, 13:47

Sample Matrix: Water
Samples Received: 4

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Reference
1,3-Dichloropropene Sum	4	N/A	2015/12/07		EPA 8260C m
Petroleum Hydro. CCME F1 & BTEX in Water	4	N/A	2015/12/08	CAM SOP-00315	CCME PHC-CWS m
Petroleum Hydrocarbons F2-F4 in Water (1)	4	2015/12/08	2015/12/09	CAM SOP-00316	CCME PHC-CWS m
Volatile Organic Compounds in Water	4	N/A	2015/12/05	CAM SOP000228	EPA 8260C m

Remarks:

Maxxam Analytics has performed all analytical testing herein in accordance with ISO 17025 and the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act. All methodologies comply with this document and are validated for use in the laboratory. The methods and techniques employed in this analysis conform to the performance criteria (detection limits, accuracy and precision) as outlined in the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act.

Maxxam Analytics is accredited for all specific parameters as required by Ontario Regulation 153/04. Maxxam Analytics is limited in liability to the actual cost of analysis unless otherwise agreed in writing. There is no other warranty expressed or implied. Samples will be retained at Maxxam Analytics for three weeks from receipt of data or as per contract.

Reference Method suffix "m" indicates test methods incorporate validated modifications from specific reference methods to improve performance.

* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.

(1) All CCME PHC results met required criteria unless otherwise stated in the report. The CWS PHC methods employed by Maxxam conform to all prescribed elements of the reference method and performance based elements have been validated. All modifications have been validated and proven equivalent following "Alberta Environment's Interpretation of the Reference Method for the Canada-Wide Standard for Petroleum Hydrocarbons in Soil Validation of Performance-Based Alternative Methods September 2003". Documentation is available upon request. Modifications from Reference Method for the Canada-wide Standard for Petroleum Hydrocarbons in Soil-Tier 1 Method: F2/F3/F4 data reported using validated cold solvent extraction instead of Soxhlet extraction.

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.
Marissa Oddi, Customer Service Representative
Email: moddi@maxxam.ca
Phone# (905) 817-5700

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

O.REG 153 PETROLEUM HYDROCARBONS (WATER)

Maxxam ID		BLR328	BLR328	BLR329	BLR330	BLR331		
Sampling Date		2015/12/02 14:30	2015/12/02 14:30	2015/12/02 14:45	2015/12/02 15:00	2015/12/02 14:45		
COC Number		539891-01-01	539891-01-01	539891-01-01	539891-01-01	539891-01-01		
	UNITS	MW301	MW301 Lab-Dup	MW302	MW303	MW1000	RDL	QC Batch
BTEX & F1 Hydrocarbons								
F1 (C6-C10)	ug/L	ND	ND	ND	ND	ND	25	4303777
F1 (C6-C10) - BTEX	ug/L	ND	ND	ND	ND	ND	25	4303777
F2-F4 Hydrocarbons								
F2 (C10-C16 Hydrocarbons)	ug/L	ND		ND	ND	ND	100	4303808
F3 (C16-C34 Hydrocarbons)	ug/L	ND		ND	ND	ND	200	4303808
F4 (C34-C50 Hydrocarbons)	ug/L	ND		ND	ND	ND	200	4303808
Reached Baseline at C50	ug/L	Yes		Yes	Yes	Yes		4303808
Surrogate Recovery (%)								
1,4-Difluorobenzene	%	103	101	103	102	102		4303777
4-Bromofluorobenzene	%	106	104	103	104	103		4303777
D10-Ethylbenzene	%	105	100	103	100	102		4303777
D4-1,2-Dichloroethane	%	96	95	94	96	94		4303777
o-Terphenyl	%	95		94	96	95		4303808
RDL = Reportable Detection Limit QC Batch = Quality Control Batch Lab-Dup = Laboratory Initiated Duplicate ND = Not detected								

O.REG 153 VOLATILE ORGANICS (WATER)

Maxxam ID		BLR328	BLR329	BLR330	BLR331		
Sampling Date		2015/12/02 14:30	2015/12/02 14:45	2015/12/02 15:00	2015/12/02 14:45		
COC Number		539891-01-01	539891-01-01	539891-01-01	539891-01-01		
	UNITS	MW301	MW302	MW303	MW1000	RDL	QC Batch
Calculated Parameters							
1,3-Dichloropropene (cis+trans)	ug/L	ND	ND	ND	ND	0.50	4298306
Volatile Organics							
Acetone (2-Propanone)	ug/L	ND	ND	ND	ND	10	4299059
Benzene	ug/L	1.4	ND	1.2	ND	0.20	4299059
Bromodichloromethane	ug/L	ND	ND	ND	ND	0.50	4299059
Bromoform	ug/L	ND	ND	ND	ND	1.0	4299059
Bromomethane	ug/L	ND	ND	ND	ND	0.50	4299059
Carbon Tetrachloride	ug/L	ND	ND	ND	ND	0.20	4299059
Chlorobenzene	ug/L	ND	ND	ND	ND	0.20	4299059
Chloroform	ug/L	ND	ND	ND	ND	0.20	4299059
Dibromochloromethane	ug/L	ND	ND	ND	ND	0.50	4299059
1,2-Dichlorobenzene	ug/L	ND	ND	ND	ND	0.50	4299059
1,3-Dichlorobenzene	ug/L	ND	ND	ND	ND	0.50	4299059
1,4-Dichlorobenzene	ug/L	ND	ND	ND	ND	0.50	4299059
Dichlorodifluoromethane (FREON 12)	ug/L	ND	ND	ND	ND	1.0	4299059
1,1-Dichloroethane	ug/L	ND	ND	ND	ND	0.20	4299059
1,2-Dichloroethane	ug/L	ND	ND	ND	ND	0.50	4299059
1,1-Dichloroethylene	ug/L	ND	ND	ND	ND	0.20	4299059
cis-1,2-Dichloroethylene	ug/L	ND	ND	ND	ND	0.50	4299059
trans-1,2-Dichloroethylene	ug/L	ND	ND	ND	ND	0.50	4299059
1,2-Dichloropropane	ug/L	ND	ND	ND	ND	0.20	4299059
cis-1,3-Dichloropropene	ug/L	ND	ND	ND	ND	0.30	4299059
trans-1,3-Dichloropropene	ug/L	ND	ND	ND	ND	0.40	4299059
Ethylbenzene	ug/L	0.56	ND	0.58	ND	0.20	4299059
Ethylene Dibromide	ug/L	ND	ND	ND	ND	0.20	4299059
Hexane	ug/L	ND	ND	ND	ND	1.0	4299059
Methylene Chloride(Dichloromethane)	ug/L	ND	ND	ND	ND	2.0	4299059
Methyl Ethyl Ketone (2-Butanone)	ug/L	ND	ND	ND	ND	10	4299059
Methyl Isobutyl Ketone	ug/L	ND	ND	ND	ND	5.0	4299059
Methyl t-butyl ether (MTBE)	ug/L	ND	ND	ND	ND	0.50	4299059
Styrene	ug/L	ND	ND	ND	ND	0.50	4299059
1,1,1,2-Tetrachloroethane	ug/L	ND	ND	ND	ND	0.50	4299059
RDL = Reportable Detection Limit							
QC Batch = Quality Control Batch							
ND = Not detected							

O.REG 153 VOLATILE ORGANICS (WATER)

Maxxam ID		BLR328	BLR329	BLR330	BLR331		
Sampling Date		2015/12/02 14:30	2015/12/02 14:45	2015/12/02 15:00	2015/12/02 14:45		
COC Number		539891-01-01	539891-01-01	539891-01-01	539891-01-01		
	UNITS	MW301	MW302	MW303	MW1000	RDL	QC Batch
1,1,2,2-Tetrachloroethane	ug/L	ND	ND	ND	ND	0.50	4299059
Tetrachloroethylene	ug/L	ND	ND	ND	ND	0.20	4299059
Toluene	ug/L	3.0	0.27	2.7	0.26	0.20	4299059
1,1,1-Trichloroethane	ug/L	ND	ND	ND	ND	0.20	4299059
1,1,2-Trichloroethane	ug/L	ND	ND	ND	ND	0.50	4299059
Trichloroethylene	ug/L	ND	ND	ND	ND	0.20	4299059
Trichlorofluoromethane (FREON 11)	ug/L	ND	ND	ND	ND	0.50	4299059
Vinyl Chloride	ug/L	ND	ND	ND	ND	0.20	4299059
p+m-Xylene	ug/L	1.6	ND	1.6	ND	0.20	4299059
o-Xylene	ug/L	0.63	ND	0.78	ND	0.20	4299059
Total Xylenes	ug/L	2.2	ND	2.4	ND	0.20	4299059
Surrogate Recovery (%)							
4-Bromofluorobenzene	%	90	90	89	90		4299059
D4-1,2-Dichloroethane	%	116	115	115	113		4299059
D8-Toluene	%	90	92	90	92		4299059
RDL = Reportable Detection Limit QC Batch = Quality Control Batch ND = Not detected							

Maxxam Job #: B508903
Report Date: 2015/12/10

Terrapex Environmental Ltd
Client Project #: CB644.02
Site Location: 121 HUME STREET, COLLINGWOOD, ON
Your P.O. #: 4700000306
Sampler Initials: PA

TEST SUMMARY

Maxxam ID: BLR328
Sample ID: MW301
Matrix: Water

Collected: 2015/12/02
Shipped:
Received: 2015/12/03

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
1,3-Dichloropropene Sum	CALC	4298306	N/A	2015/12/07	Automated Statchk
Petroleum Hydro. CCME F1 & BTEX in Water	HSGC/MSFD	4303777	N/A	2015/12/08	Joe Paino
Petroleum Hydrocarbons F2-F4 in Water	GC/FID	4303808	2015/12/08	2015/12/09	Zhiyue (Frank) Zhu
Volatile Organic Compounds in Water	GC/MS	4299059	N/A	2015/12/05	Manpreet Sarao

Maxxam ID: BLR328 Dup
Sample ID: MW301
Matrix: Water

Collected: 2015/12/02
Shipped:
Received: 2015/12/03

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Petroleum Hydro. CCME F1 & BTEX in Water	HSGC/MSFD	4303777	N/A	2015/12/08	Joe Paino

Maxxam ID: BLR329
Sample ID: MW302
Matrix: Water

Collected: 2015/12/02
Shipped:
Received: 2015/12/03

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
1,3-Dichloropropene Sum	CALC	4298306	N/A	2015/12/07	Automated Statchk
Petroleum Hydro. CCME F1 & BTEX in Water	HSGC/MSFD	4303777	N/A	2015/12/08	Joe Paino
Petroleum Hydrocarbons F2-F4 in Water	GC/FID	4303808	2015/12/08	2015/12/09	Zhiyue (Frank) Zhu
Volatile Organic Compounds in Water	GC/MS	4299059	N/A	2015/12/05	Manpreet Sarao

Maxxam ID: BLR330
Sample ID: MW303
Matrix: Water

Collected: 2015/12/02
Shipped:
Received: 2015/12/03

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
1,3-Dichloropropene Sum	CALC	4298306	N/A	2015/12/07	Automated Statchk
Petroleum Hydro. CCME F1 & BTEX in Water	HSGC/MSFD	4303777	N/A	2015/12/08	Joe Paino
Petroleum Hydrocarbons F2-F4 in Water	GC/FID	4303808	2015/12/08	2015/12/09	Zhiyue (Frank) Zhu
Volatile Organic Compounds in Water	GC/MS	4299059	N/A	2015/12/05	Manpreet Sarao

Maxxam ID: BLR331
Sample ID: MW1000
Matrix: Water

Collected: 2015/12/02
Shipped:
Received: 2015/12/03

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
1,3-Dichloropropene Sum	CALC	4298306	N/A	2015/12/07	Automated Statchk
Petroleum Hydro. CCME F1 & BTEX in Water	HSGC/MSFD	4303777	N/A	2015/12/08	Joe Paino
Petroleum Hydrocarbons F2-F4 in Water	GC/FID	4303808	2015/12/08	2015/12/09	Zhiyue (Frank) Zhu
Volatile Organic Compounds in Water	GC/MS	4299059	N/A	2015/12/05	Manpreet Sarao

Maxxam Job #: B508903
Report Date: 2015/12/10

Terrapex Environmental Ltd
Client Project #: CB644.02
Site Location: 121 HUME STREET, COLLINGWOOD, ON
Your P.O. #: 4700000306
Sampler Initials: PA

GENERAL COMMENTS

Each temperature is the average of up to three cooler temperatures taken at receipt

Package 1	0.3°C

Results relate only to the items tested.

Maxxam Job #: B508903
Report Date: 2015/12/10

Terrapex Environmental Ltd
Client Project #: CB644.02
Site Location: 121 HUME STREET, COLLINGWOOD, ON
Your P.O. #: 4700000306
Sampler Initials: PA

QUALITY ASSURANCE REPORT

QA/QC				Date				
Batch	Init	QC Type	Parameter	Analyzed	Value	Recovery	UNITS	QC Limits
4299059	MS4	Matrix Spike	4-Bromofluorobenzene	2015/12/05		99	%	70 - 130
			D4-1,2-Dichloroethane	2015/12/05		107	%	70 - 130
			D8-Toluene	2015/12/05		102	%	70 - 130
			Acetone (2-Propanone)	2015/12/05		126	%	60 - 140
			Benzene	2015/12/05		103	%	70 - 130
			Bromodichloromethane	2015/12/05		105	%	70 - 130
			Bromoform	2015/12/05		104	%	70 - 130
			Bromomethane	2015/12/05		93	%	60 - 140
			Carbon Tetrachloride	2015/12/05		102	%	70 - 130
			Chlorobenzene	2015/12/05		103	%	70 - 130
			Chloroform	2015/12/05		103	%	70 - 130
			Dibromochloromethane	2015/12/05		104	%	70 - 130
			1,2-Dichlorobenzene	2015/12/05		103	%	70 - 130
			1,3-Dichlorobenzene	2015/12/05		100	%	70 - 130
			1,4-Dichlorobenzene	2015/12/05		102	%	70 - 130
			Dichlorodifluoromethane (FREON 12)	2015/12/05		98	%	60 - 140
			1,1-Dichloroethane	2015/12/05		102	%	70 - 130
			1,2-Dichloroethane	2015/12/05		109	%	70 - 130
			1,1-Dichloroethylene	2015/12/05		102	%	70 - 130
			cis-1,2-Dichloroethylene	2015/12/05		104	%	70 - 130
			trans-1,2-Dichloroethylene	2015/12/05		103	%	70 - 130
			1,2-Dichloropropane	2015/12/05		104	%	70 - 130
			cis-1,3-Dichloropropene	2015/12/05		109	%	70 - 130
			trans-1,3-Dichloropropene	2015/12/05		111	%	70 - 130
			Ethylbenzene	2015/12/05		98	%	70 - 130
			Ethylene Dibromide	2015/12/05		106	%	70 - 130
			Hexane	2015/12/05		110	%	70 - 130
			Methylene Chloride(Dichloromethane)	2015/12/05		108	%	70 - 130
			Methyl Ethyl Ketone (2-Butanone)	2015/12/05		128	%	60 - 140
			Methyl Isobutyl Ketone	2015/12/05		120	%	70 - 130
			Methyl t-butyl ether (MTBE)	2015/12/05		NC	%	70 - 130
			Styrene	2015/12/05		101	%	70 - 130
			1,1,1,2-Tetrachloroethane	2015/12/05		103	%	70 - 130
			1,1,2,2-Tetrachloroethane	2015/12/05		111	%	70 - 130
			Tetrachloroethylene	2015/12/05		98	%	70 - 130
			Toluene	2015/12/05		99	%	70 - 130
			1,1,1-Trichloroethane	2015/12/05		99	%	70 - 130
			1,1,2-Trichloroethane	2015/12/05		109	%	70 - 130
			Trichloroethylene	2015/12/05		97	%	70 - 130
			Trichlorofluoromethane (FREON 11)	2015/12/05		101	%	70 - 130
			Vinyl Chloride	2015/12/05		103	%	70 - 130
			p+m-Xylene	2015/12/05		93	%	70 - 130
			o-Xylene	2015/12/05		97	%	70 - 130
4299059	MS4	Spiked Blank	4-Bromofluorobenzene	2015/12/05		99	%	70 - 130
			D4-1,2-Dichloroethane	2015/12/05		105	%	70 - 130
			D8-Toluene	2015/12/05		103	%	70 - 130
			Acetone (2-Propanone)	2015/12/05		119	%	60 - 140
			Benzene	2015/12/05		98	%	70 - 130
			Bromodichloromethane	2015/12/05		101	%	70 - 130
			Bromoform	2015/12/05		101	%	70 - 130
			Bromomethane	2015/12/05		87	%	60 - 140

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC	Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
				Carbon Tetrachloride	2015/12/05		98	%	70 - 130
				Chlorobenzene	2015/12/05		100	%	70 - 130
				Chloroform	2015/12/05		98	%	70 - 130
				Dibromochloromethane	2015/12/05		100	%	70 - 130
				1,2-Dichlorobenzene	2015/12/05		100	%	70 - 130
				1,3-Dichlorobenzene	2015/12/05		96	%	70 - 130
				1,4-Dichlorobenzene	2015/12/05		98	%	70 - 130
				Dichlorodifluoromethane (FREON 12)	2015/12/05		97	%	60 - 140
				1,1-Dichloroethane	2015/12/05		98	%	70 - 130
				1,2-Dichloroethane	2015/12/05		104	%	70 - 130
				1,1-Dichloroethylene	2015/12/05		99	%	70 - 130
				cis-1,2-Dichloroethylene	2015/12/05		99	%	70 - 130
				trans-1,2-Dichloroethylene	2015/12/05		97	%	70 - 130
				1,2-Dichloropropane	2015/12/05		100	%	70 - 130
				cis-1,3-Dichloropropene	2015/12/05		97	%	70 - 130
				trans-1,3-Dichloropropene	2015/12/05		95	%	70 - 130
				Ethylbenzene	2015/12/05		95	%	70 - 130
				Ethylene Dibromide	2015/12/05		102	%	70 - 130
				Hexane	2015/12/05		106	%	70 - 130
				Methylene Chloride(Dichloromethane)	2015/12/05		103	%	70 - 130
				Methyl Ethyl Ketone (2-Butanone)	2015/12/05		122	%	60 - 140
				Methyl Isobutyl Ketone	2015/12/05		117	%	70 - 130
				Methyl t-butyl ether (MTBE)	2015/12/05		97	%	70 - 130
				Styrene	2015/12/05		102	%	70 - 130
				1,1,1,2-Tetrachloroethane	2015/12/05		99	%	70 - 130
				1,1,2,2-Tetrachloroethane	2015/12/05		107	%	70 - 130
				Tetrachloroethylene	2015/12/05		95	%	70 - 130
				Toluene	2015/12/05		96	%	70 - 130
				1,1,1-Trichloroethane	2015/12/05		95	%	70 - 130
				1,1,2-Trichloroethane	2015/12/05		104	%	70 - 130
				Trichloroethylene	2015/12/05		93	%	70 - 130
				Trichlorofluoromethane (FREON 11)	2015/12/05		98	%	70 - 130
				Vinyl Chloride	2015/12/05		100	%	70 - 130
				p+m-Xylene	2015/12/05		93	%	70 - 130
				o-Xylene	2015/12/05		98	%	70 - 130
4299059	MS4		Method Blank	4-Bromofluorobenzene	2015/12/05		93	%	70 - 130
				D4-1,2-Dichloroethane	2015/12/05		109	%	70 - 130
				D8-Toluene	2015/12/05		93	%	70 - 130
				Acetone (2-Propanone)	2015/12/05	ND, RDL=10		ug/L	
				Benzene	2015/12/05	ND, RDL=0.20		ug/L	
				Bromodichloromethane	2015/12/05	ND, RDL=0.50		ug/L	
				Bromoform	2015/12/05	ND, RDL=1.0		ug/L	
				Bromomethane	2015/12/05	ND, RDL=0.50		ug/L	
				Carbon Tetrachloride	2015/12/05	ND, RDL=0.20		ug/L	

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Chlorobenzene	2015/12/05	ND, RDL=0.20		ug/L	
			Chloroform	2015/12/05	ND, RDL=0.20		ug/L	
			Dibromochloromethane	2015/12/05	ND, RDL=0.50		ug/L	
			1,2-Dichlorobenzene	2015/12/05	ND, RDL=0.50		ug/L	
			1,3-Dichlorobenzene	2015/12/05	ND, RDL=0.50		ug/L	
			1,4-Dichlorobenzene	2015/12/05	ND, RDL=0.50		ug/L	
			Dichlorodifluoromethane (FREON 12)	2015/12/05	ND, RDL=1.0		ug/L	
			1,1-Dichloroethane	2015/12/05	ND, RDL=0.20		ug/L	
			1,2-Dichloroethane	2015/12/05	ND, RDL=0.50		ug/L	
			1,1-Dichloroethylene	2015/12/05	ND, RDL=0.20		ug/L	
			cis-1,2-Dichloroethylene	2015/12/05	ND, RDL=0.50		ug/L	
			trans-1,2-Dichloroethylene	2015/12/05	ND, RDL=0.50		ug/L	
			1,2-Dichloropropane	2015/12/05	ND, RDL=0.20		ug/L	
			cis-1,3-Dichloropropene	2015/12/05	ND, RDL=0.30		ug/L	
			trans-1,3-Dichloropropene	2015/12/05	ND, RDL=0.40		ug/L	
			Ethylbenzene	2015/12/05	ND, RDL=0.20		ug/L	
			Ethylene Dibromide	2015/12/05	ND, RDL=0.20		ug/L	
			Hexane	2015/12/05	ND, RDL=1.0		ug/L	
			Methylene Chloride(Dichloromethane)	2015/12/05	ND, RDL=2.0		ug/L	
			Methyl Ethyl Ketone (2-Butanone)	2015/12/05	ND, RDL=10		ug/L	
			Methyl Isobutyl Ketone	2015/12/05	ND, RDL=5.0		ug/L	
			Methyl t-butyl ether (MTBE)	2015/12/05	ND, RDL=0.50		ug/L	
			Styrene	2015/12/05	ND, RDL=0.50		ug/L	
			1,1,1,2-Tetrachloroethane	2015/12/05	ND, RDL=0.50		ug/L	

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC	Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
				1,1,2,2-Tetrachloroethane	2015/12/05	ND, RDL=0.50		ug/L	
				Tetrachloroethylene	2015/12/05	ND, RDL=0.20		ug/L	
				Toluene	2015/12/05	ND, RDL=0.20		ug/L	
				1,1,1-Trichloroethane	2015/12/05	ND, RDL=0.20		ug/L	
				1,1,2-Trichloroethane	2015/12/05	ND, RDL=0.50		ug/L	
				Trichloroethylene	2015/12/05	ND, RDL=0.20		ug/L	
				Trichlorofluoromethane (FREON 11)	2015/12/05	ND, RDL=0.50		ug/L	
				Vinyl Chloride	2015/12/05	ND, RDL=0.20		ug/L	
				p+m-Xylene	2015/12/05	ND, RDL=0.20		ug/L	
				o-Xylene	2015/12/05	ND, RDL=0.20		ug/L	
				Total Xylenes	2015/12/05	ND, RDL=0.20		ug/L	
4299059	MS4	RPD		Acetone (2-Propanone)	2015/12/05	NC		%	30
				Benzene	2015/12/05	NC		%	30
				Bromodichloromethane	2015/12/05	NC		%	30
				Bromoform	2015/12/05	NC		%	30
				Bromomethane	2015/12/05	NC		%	30
				Carbon Tetrachloride	2015/12/05	NC		%	30
				Chlorobenzene	2015/12/05	NC		%	30
				Chloroform	2015/12/05	NC		%	30
				Dibromochloromethane	2015/12/05	NC		%	30
				1,2-Dichlorobenzene	2015/12/05	NC		%	30
				1,3-Dichlorobenzene	2015/12/05	NC		%	30
				1,4-Dichlorobenzene	2015/12/05	NC		%	30
				Dichlorodifluoromethane (FREON 12)	2015/12/05	NC		%	30
				1,1-Dichloroethane	2015/12/05	NC		%	30
				1,2-Dichloroethane	2015/12/05	NC		%	30
				1,1-Dichloroethylene	2015/12/05	NC		%	30
				cis-1,2-Dichloroethylene	2015/12/05	NC		%	30
				trans-1,2-Dichloroethylene	2015/12/05	NC		%	30
				1,2-Dichloropropane	2015/12/05	NC		%	30
				cis-1,3-Dichloropropene	2015/12/05	NC		%	30
				trans-1,3-Dichloropropene	2015/12/05	NC		%	30
				Ethylbenzene	2015/12/05	NC		%	30
				Ethylene Dibromide	2015/12/05	NC		%	30
				Hexane	2015/12/05	NC		%	30
				Methylene Chloride(Dichloromethane)	2015/12/05	NC		%	30
				Methyl Ethyl Ketone (2-Butanone)	2015/12/05	NC		%	30
				Methyl Isobutyl Ketone	2015/12/05	NC		%	30
				Methyl t-butyl ether (MTBE)	2015/12/05	NC		%	30

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC	Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
				Styrene	2015/12/05	NC		%	30
				1,1,1,2-Tetrachloroethane	2015/12/05	NC		%	30
				1,1,2,2-Tetrachloroethane	2015/12/05	NC		%	30
				Tetrachloroethylene	2015/12/05	NC		%	30
				Toluene	2015/12/05	NC		%	30
				1,1,1-Trichloroethane	2015/12/05	NC		%	30
				1,1,2-Trichloroethane	2015/12/05	NC		%	30
				Trichloroethylene	2015/12/05	NC		%	30
				Trichlorofluoromethane (FREON 11)	2015/12/05	NC		%	30
				Vinyl Chloride	2015/12/05	NC		%	30
				p+m-Xylene	2015/12/05	NC		%	30
				o-Xylene	2015/12/05	NC		%	30
				Total Xylenes	2015/12/05	NC		%	30
4303777	JP5		Matrix Spike [BLR328-03]	1,4-Difluorobenzene	2015/12/08		101	%	70 - 130
				4-Bromofluorobenzene	2015/12/08		104	%	70 - 130
				D10-Ethylbenzene	2015/12/08		101	%	70 - 130
				D4-1,2-Dichloroethane	2015/12/08		94	%	70 - 130
				F1 (C6-C10)	2015/12/08		101	%	70 - 130
4303777	JP5		Spiked Blank	1,4-Difluorobenzene	2015/12/08		103	%	70 - 130
				4-Bromofluorobenzene	2015/12/08		104	%	70 - 130
				D10-Ethylbenzene	2015/12/08		100	%	70 - 130
				D4-1,2-Dichloroethane	2015/12/08		97	%	70 - 130
				F1 (C6-C10)	2015/12/08		101	%	70 - 130
4303777	JP5		Method Blank	1,4-Difluorobenzene	2015/12/08		102	%	70 - 130
				4-Bromofluorobenzene	2015/12/08		99	%	70 - 130
				D10-Ethylbenzene	2015/12/08		99	%	70 - 130
				D4-1,2-Dichloroethane	2015/12/08		97	%	70 - 130
				F1 (C6-C10)	2015/12/08	ND, RDL=25		ug/L	
				F1 (C6-C10) - BTEX	2015/12/08	ND, RDL=25		ug/L	
4303777	JP5		RPD [BLR328-03]	F1 (C6-C10)	2015/12/08	NC		%	30
				F1 (C6-C10) - BTEX	2015/12/08	NC		%	30
4303808	ZZ		Matrix Spike	o-Terphenyl	2015/12/09		100	%	60 - 130
				F2 (C10-C16 Hydrocarbons)	2015/12/09		104	%	50 - 130
				F3 (C16-C34 Hydrocarbons)	2015/12/09		94	%	50 - 130
				F4 (C34-C50 Hydrocarbons)	2015/12/09		93	%	50 - 130
4303808	ZZ		Spiked Blank	o-Terphenyl	2015/12/09		99	%	60 - 130
				F2 (C10-C16 Hydrocarbons)	2015/12/09		103	%	60 - 130
				F3 (C16-C34 Hydrocarbons)	2015/12/09		95	%	60 - 130
				F4 (C34-C50 Hydrocarbons)	2015/12/09		101	%	60 - 130
4303808	ZZ		Method Blank	o-Terphenyl	2015/12/09		98	%	60 - 130
				F2 (C10-C16 Hydrocarbons)	2015/12/09	ND, RDL=100		ug/L	
				F3 (C16-C34 Hydrocarbons)	2015/12/09	ND, RDL=200		ug/L	
				F4 (C34-C50 Hydrocarbons)	2015/12/09	ND, RDL=200		ug/L	
4303808	ZZ		RPD	F2 (C10-C16 Hydrocarbons)	2015/12/09	NC		%	30
				F3 (C16-C34 Hydrocarbons)	2015/12/09	NC		%	30

Maxxam Job #: B5O8903
Report Date: 2015/12/10

Terrapex Environmental Ltd
Client Project #: CB644.02
Site Location: 121 HUME STREET, COLLINGWOOD, ON
Your P.O. #: 4700000306
Sampler Initials: PA

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC	Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
				F4 (C34-C50 Hydrocarbons)	2015/12/09	NC		%	30
Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement. Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference. Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy. Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination. Surrogate: A pure or isotopically labeled compound whose behavior mirrors the analytes of interest. Used to evaluate extraction efficiency. NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spiked amount was too small to permit a reliable recovery calculation (matrix spike concentration was less than 2x that of the native sample concentration). NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (one or both samples < 5x RDL).									

VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by the following individual(s).



Brad Newman, Scientific Specialist

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

Your Project #: CB644.01
Site Location: 121 HUME STREET, COLLINGWOOD, ON
Your C.O.C. #: 38359205, 383592-05-01

Attention: Jeff Stevenson

Terrapex Environmental Ltd
920 Brant Street
Unit 16
Burlington, ON
CANADA L7R 4J1

Report Date: 2013/01/03

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B2K2191

Received: 2012/12/21, 16:20

Sample Matrix: Soil
Samples Received: 58

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Method Reference
Petroleum Hydro. CCME F1 & BTEX in Soil	29	2012/12/22	2012/12/31	CAM SOP-00315	CCME CWS
Petroleum Hydro. CCME F1 & BTEX in Soil	18	2012/12/22	2013/01/01	CAM SOP-00315	CCME CWS
Petroleum Hydro. CCME F1 & BTEX in Soil	10	2012/12/22	2013/01/02	CAM SOP-00315	CCME CWS
Petroleum Hydro. CCME F1 & BTEX in Soil	1	2012/12/22	2013/01/03	CAM SOP-00315	CCME CWS
Petroleum Hydrocarbons F2-F4 in Soil	20	2012/12/28	2012/12/29	CAM SOP-00316	CCME CWS
Petroleum Hydrocarbons F2-F4 in Soil	37	2012/12/28	2012/12/31	CAM SOP-00316	CCME CWS
F4G (CCME Hydrocarbons Gravimetric)	3	2013/01/02	2013/01/02	CAM SOP-00316	CCME CWS
Moisture	57	N/A	2012/12/28	CAM SOP-00445	R.Carter,1993

Remarks:

Maxxam Analytics has performed all analytical testing herein in accordance with ISO 17025 and the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act. All methodologies comply with this document and are validated for use in the laboratory. The methods and techniques employed in this analysis conform to the performance criteria (detection limits, accuracy and precision) as outlined in the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act. Reporting results to two significant figures at the RDL is to permit statistical evaluation and is not intended to be an indication of analytical precision.

The CWS PHC methods employed by Maxxam conform to all prescribed elements of the reference method and performance based elements have been validated. All modifications have been validated and proven equivalent following the 'Alberta Environment Draft Addenda to the CWS-PHC, Appendix 6, Validation of Alternate Methods'. Documentation is available upon request. Maxxam has made the following improvements to the CWS-PHC reference benchmark method: (i) Headspace for F1; and, (ii) Mechanical extraction for F2-F4. Note: F4G cannot be added to the C6 to C50 hydrocarbons. The extraction date for samples field preserved with methanol for F1 and Volatile Organic Compounds is considered to be the date sampled.

Maxxam Analytics is accredited for all specific parameters as required by Ontario Regulation 153/04. Maxxam Analytics is limited in liability to the actual cost of analysis unless otherwise agreed in writing. There is no other warranty expressed or implied. Samples will be retained at Maxxam Analytics for three weeks from receipt of data or as per contract.

../2

Your Project #: CB644.01
Site Location: 121 HUME STREET, COLLINGWOOD, ON
Your C.O.C. #: 38359205, 383592-05-01

Attention: Jeff Stevenson

Terrapex Environmental Ltd
920 Brant Street
Unit 16
Burlington, ON
CANADA L7R 4J1

Report Date: 2013/01/03

CERTIFICATE OF ANALYSIS

-2-

* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.

Maryam Arghandeh,
Email: mArghand@maxxam.ca
Phone# (905) 817-5700

=====
Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

Total cover pages: 2

Maxxam Job #: B2K2191
Report Date: 2013/01/03

Terrapex Environmental Ltd
Client Project #: CB644.01
Site Location: 121 HUME STREET, COLLINGWOOD, ON
Sampler Initials: SS

O'REG 153 PETROLEUM HYDROCARBONS (SOIL)

Maxxam ID		QB7333	QB7333	QB7334	QB7335	QB7336		
Sampling Date		2012/12/17	2012/12/17	2012/12/17	2012/12/17	2012/12/17		
COC Number		383592-05-01	383592-05-01	383592-05-01	383592-05-01	383592-05-01		
	Units	TP215-4	TP215-4 Lab-Dup	TP215-5	TP215-6	TP003	RDL	QC Batch

Inorganics								
Moisture	%	20		17	10	21	1.0	3081486
BTEX & F1 Hydrocarbons								
Benzene	ug/g	ND		ND	ND	ND	0.020	3082425
Toluene	ug/g	ND		ND	ND	ND	0.020	3082425
Ethylbenzene	ug/g	0.37		ND	0.17	0.043	0.020	3082425
o-Xylene	ug/g	2.1		ND	ND	0.26	0.020	3082425
p+m-Xylene	ug/g	3.6		0.16	0.97	0.26	0.040	3082425
Total Xylenes	ug/g	5.7		0.16	0.97	0.52	0.040	3082425
F1 (C6-C10)	ug/g	320		ND	ND	16	10	3082425
F1 (C6-C10) - BTEX	ug/g	320		ND	ND	15	10	3082425
F2-F4 Hydrocarbons								
F2 (C10-C16 Hydrocarbons)	ug/g	65	170 (1)	19	ND	41	10	3081876
F3 (C16-C34 Hydrocarbons)	ug/g	25	52	17	13	20	10	3081876
F4 (C34-C50 Hydrocarbons)	ug/g	ND	20	ND	ND	ND	10	3081876
Reached Baseline at C50	ug/g	Yes	Yes	Yes	Yes	Yes		3081876
Surrogate Recovery (%)								
1,4-Difluorobenzene	%	109		104	106	106		3082425
4-Bromofluorobenzene	%	104		103	99	102		3082425
D10-Ethylbenzene	%	102		80	82	77		3082425
D4-1,2-Dichloroethane	%	97		93	95	95		3082425
o-Terphenyl	%	93	94	94	93	93		3081876

ND = Not detected

RDL = Reportable Detection Limit

QC Batch = Quality Control Batch

(1) Recovery or RPD for this parameter is outside control limits. The overall quality control for this analysis meets acceptability criteria.

Maxxam Job #: B2K2191
Report Date: 2013/01/03

Terrapex Environmental Ltd
Client Project #: CB644.01
Site Location: 121 HUME STREET, COLLINGWOOD, ON
Sampler Initials: SS

O'REG 153 PETROLEUM HYDROCARBONS (SOIL)

Maxxam ID		QB7337		QB7338	QB7339		QB7340		
Sampling Date		2012/12/17		2012/12/17	2012/12/17		2012/12/17		
COC Number		383592-05-01		383592-05-01	383592-05-01		383592-05-01		
	Units	TP216-5	RDL	TP216-6	TP217-5	RDL	TP217-6	RDL	QC Batch

Inorganics									
Moisture	%	15	1.0	6.4	20	1.0	17	1.0	3081486
BTEX & F1 Hydrocarbons									
Benzene	ug/g	ND	0.10	ND	ND	0.020	ND	0.20	3082425
Toluene	ug/g	ND	0.10	ND	0.035	0.020	ND	0.20	3082425
Ethylbenzene	ug/g	ND	0.10	0.53	ND	0.020	ND	0.20	3082425
o-Xylene	ug/g	ND	0.10	0.19	ND	0.020	ND	0.20	3082425
p+m-Xylene	ug/g	ND	0.20	0.93	0.057	0.040	1.9	0.40	3082425
Total Xylenes	ug/g	ND	0.20	1.1	0.057	0.040	1.9	0.40	3082425
F1 (C6-C10)	ug/g	640	50	ND	240	10	1700	100	3082425
F1 (C6-C10) - BTEX	ug/g	640	50	ND	240	10	1700	100	3082425
F2-F4 Hydrocarbons									
F2 (C10-C16 Hydrocarbons)	ug/g	250	10	ND	360	10	960	10	3081876
F3 (C16-C34 Hydrocarbons)	ug/g	63	10	17	290	10	540	10	3081876
F4 (C34-C50 Hydrocarbons)	ug/g	61	10	ND	370	10	230	10	3081876
Reached Baseline at C50	ug/g	No		Yes	No		Yes		3081876
Surrogate Recovery (%)									
1,4-Difluorobenzene	%	107		106	107		107		3082425
4-Bromofluorobenzene	%	103		102	101		105		3082425
D10-Ethylbenzene	%	95		78	73		103		3082425
D4-1,2-Dichloroethane	%	99		94	96		97		3082425
o-Terphenyl	%	95		95	94		93		3081876

ND = Not detected
RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Maxxam Job #: B2K2191
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Terrapex Environmental Ltd
Client Project #: CB644.01
Site Location: 121 HUME STREET, COLLINGWOOD, ON
Sampler Initials: SS

O'REG 153 PETROLEUM HYDROCARBONS (SOIL)

Maxxam ID		QB7341	QB7342	QB7343	QB7343		QB7344		
Sampling Date		2012/12/17	2012/12/17	2012/12/17	2012/12/17		2012/12/17		
COC Number		383592-05-01	383592-05-01	383592-05-01	383592-05-01		383592-05-01		
	Units	TP218-5	TP219-5	TP219-6	TP219-6 Lab-Dup	RDL	TP220-5	RDL	QC Batch

Inorganics									
Moisture	%	20	21	13	14	1.0	13	1.0	3081486
BTEX & F1 Hydrocarbons									
Benzene	ug/g	ND	ND	ND		0.020	ND	0.040	3082425
Toluene	ug/g	ND	ND	ND		0.020	ND	0.040	3082425
Ethylbenzene	ug/g	ND	ND	ND		0.020	ND	0.040	3082425
o-Xylene	ug/g	ND	ND	ND		0.020	ND	0.040	3082425
p+m-Xylene	ug/g	0.073	ND	ND		0.040	ND	0.080	3082425
Total Xylenes	ug/g	0.073	ND	ND		0.040	ND	0.080	3082425
F1 (C6-C10)	ug/g	25	ND	ND		10	380	20	3082425
F1 (C6-C10) - BTEX	ug/g	25	ND	ND		10	380	20	3082425
F2-F4 Hydrocarbons									
F2 (C10-C16 Hydrocarbons)	ug/g	14	ND	ND		10	140	10	3081876
F3 (C16-C34 Hydrocarbons)	ug/g	16	ND	ND		10	14	10	3081876
F4 (C34-C50 Hydrocarbons)	ug/g	ND	ND	ND		10	ND	10	3081876
Reached Baseline at C50	ug/g	Yes	Yes	Yes			Yes		3081876
Surrogate Recovery (%)									
1,4-Difluorobenzene	%	104	105	104			105		3082425
4-Bromofluorobenzene	%	102	97	97			100		3082425
D10-Ethylbenzene	%	77	77	72			83		3082425
D4-1,2-Dichloroethane	%	95	94	94			98		3082425
o-Terphenyl	%	89	95	94			94		3081876

ND = Not detected
RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Maxxam Job #: B2K2191
Report Date: 2013/01/03

Terrapex Environmental Ltd
Client Project #: CB644.01
Site Location: 121 HUME STREET, COLLINGWOOD, ON
Sampler Initials: SS

O'REG 153 PETROLEUM HYDROCARBONS (SOIL)

Maxxam ID		QB7345		QB7346		QB7347		QB7348		
Sampling Date		2012/12/17		2012/12/17		2012/12/17		2012/12/17		
COC Number		383592-05-01		383592-05-01		383592-05-01		383592-05-01		
	Units	TP221-4	RDL	TP221-5	RDL	TP222-5	RDL	TP222-6	RDL	QC Batch
Inorganics										
Moisture	%	11	1.0	27	1.0	15	1.0	16	1.0	3081486
BTEX & F1 Hydrocarbons										
Benzene	ug/g	ND	0.10	ND	0.020	ND	0.20	ND	0.020	3082425
Toluene	ug/g	ND	0.10	ND	0.020	ND	0.20	ND	0.020	3082425
Ethylbenzene	ug/g	ND	0.10	ND	0.020	ND	0.20	ND	0.020	3082425
o-Xylene	ug/g	ND	0.10	ND	0.020	ND	0.20	ND	0.020	3082425
p+m-Xylene	ug/g	ND	0.20	ND	0.040	0.45	0.40	ND	0.040	3082425
Total Xylenes	ug/g	ND	0.20	ND	0.040	0.45	0.40	ND	0.040	3082425
F1 (C6-C10)	ug/g	1200	50	30	10	2300	100	ND	10	3082425
F1 (C6-C10) - BTEX	ug/g	1200	50	30	10	2300	100	ND	10	3082425
F2-F4 Hydrocarbons										
F2 (C10-C16 Hydrocarbons)	ug/g	130	10	ND	10	420	10	ND	10	3081876
F3 (C16-C34 Hydrocarbons)	ug/g	13	10	33	10	46	10	ND	10	3081876
F4 (C34-C50 Hydrocarbons)	ug/g	ND	10	ND	10	ND	10	ND	10	3081876
Reached Baseline at C50	ug/g	Yes		Yes		Yes		Yes		3081876
Surrogate Recovery (%)										
1,4-Difluorobenzene	%	106		104		106		105		3082425
4-Bromofluorobenzene	%	103		100		106		97		3082425
D10-Ethylbenzene	%	92		73		66		80		3082425
D4-1,2-Dichloroethane	%	98		94		97		94		3082425
o-Terphenyl	%	96		93		95		94		3081876
ND = Not detected RDL = Reportable Detection Limit QC Batch = Quality Control Batch										

Maxxam Job #: B2K2191
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O'REG 153 PETROLEUM HYDROCARBONS (SOIL)

Maxxam ID		QB7349	QB7350	QB7351	QB7352	QB7352		
Sampling Date		2012/12/17	2012/12/17	2012/12/18	2012/12/18	2012/12/18		
COC Number		383592-05-01	383592-05-01	383592-05-01	383592-05-01	383592-05-01		
	Units	TP223-5	TP223-7	TP224-5	TP224-6	TP224-6 Lab-Dup	RDL	QC Batch

Inorganics								
Moisture	%	11	13	18	20		1.0	3081486
BTEX & F1 Hydrocarbons								
Benzene	ug/g	ND	ND	ND	ND	ND	0.020	3082425
Toluene	ug/g	0.93	ND	ND	ND	ND	0.020	3082425
Ethylbenzene	ug/g	2.2	ND	0.094	0.23	0.24	0.020	3082425
o-Xylene	ug/g	1.8	ND	0.047	0.091	0.090	0.020	3082425
p+m-Xylene	ug/g	6.0	0.059	0.30	0.77	0.77	0.040	3082425
Total Xylenes	ug/g	7.8	0.059	0.34	0.86	0.86	0.040	3082425
F1 (C6-C10)	ug/g	140	ND	ND	99	96	10	3082425
F1 (C6-C10) - BTEX	ug/g	130	ND	ND	98	95	10	3082425
F2-F4 Hydrocarbons								
F2 (C10-C16 Hydrocarbons)	ug/g	97	ND	ND	12		10	3081876
F3 (C16-C34 Hydrocarbons)	ug/g	16	12	ND	10		10	3081876
F4 (C34-C50 Hydrocarbons)	ug/g	ND	ND	ND	ND		10	3081876
Reached Baseline at C50	ug/g	Yes	Yes	Yes	Yes			3081876
Surrogate Recovery (%)								
1,4-Difluorobenzene	%	104	104	104	104	104		3082425
4-Bromofluorobenzene	%	105	101	101	104	105		3082425
D10-Ethylbenzene	%	79	80	77	69	68		3082425
D4-1,2-Dichloroethane	%	92	96	96	95	96		3082425
o-Terphenyl	%	96	94	94	92			3081876

ND = Not detected
RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Maxxam Job #: B2K2191
Report Date: 2013/01/03

Terrapex Environmental Ltd
Client Project #: CB644.01
Site Location: 121 HUME STREET, COLLINGWOOD, ON
Sampler Initials: SS

O'REG 153 PETROLEUM HYDROCARBONS (SOIL)

Maxxam ID		QB7353	QB7354		QB7355		QB7356		
Sampling Date		2012/12/18	2012/12/18		2012/12/18		2012/12/18		
COC Number		383592-05-01	383592-05-01		383592-05-01		383592-05-01		
	Units	TP225-5	TP225-6	RDL	TP226-5	RDL	TP226-6	RDL	QC Batch
Inorganics									
Moisture	%	13	7.5	1.0	14	1.0	18	1.0	3081531
BTEX & F1 Hydrocarbons									
Benzene	ug/g	ND	ND	0.020	ND	0.10	ND	0.020	3082675
Toluene	ug/g	ND	ND	0.020	0.12	0.10	ND	0.020	3082675
Ethylbenzene	ug/g	ND	ND	0.020	ND	0.10	ND	0.020	3082675
o-Xylene	ug/g	ND	ND	0.020	ND	0.10	ND	0.020	3082675
p+m-Xylene	ug/g	ND	ND	0.040	0.24	0.20	ND	0.040	3082675
Total Xylenes	ug/g	ND	ND	0.040	0.24	0.20	ND	0.040	3082675
F1 (C6-C10)	ug/g	32	ND	10	860	50	ND	10	3082675
F1 (C6-C10) - BTEX	ug/g	32	ND	10	860	50	ND	10	3082675
F2-F4 Hydrocarbons									
F2 (C10-C16 Hydrocarbons)	ug/g	220	ND	10	86	10	ND	10	3081774
F3 (C16-C34 Hydrocarbons)	ug/g	ND	ND	10	ND	10	ND	10	3081774
F4 (C34-C50 Hydrocarbons)	ug/g	ND	ND	10	ND	10	ND	10	3081774
Reached Baseline at C50	ug/g	Yes	Yes		Yes		Yes		3081774
Surrogate Recovery (%)									
1,4-Difluorobenzene	%	110	106		114		106		3082675
4-Bromofluorobenzene	%	99	98		100		97		3082675
D10-Ethylbenzene	%	96	84		110		91		3082675
D4-1,2-Dichloroethane	%	93	91		104		91		3082675
o-Terphenyl	%	96	92		96		93		3081774
ND = Not detected RDL = Reportable Detection Limit QC Batch = Quality Control Batch									

Maxxam Job #: B2K2191
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O'REG 153 PETROLEUM HYDROCARBONS (SOIL)

Maxxam ID		QB7357		QB7358	QB7359		QB7360		
Sampling Date		2012/12/18		2012/12/18	2012/12/18		2012/12/18		
COC Number		383592-05-01		383592-05-01	383592-05-01		383592-05-01		
	Units	TP227-5	QC Batch	TP227-7	TP228-5	QC Batch	TP228-6	RDL	QC Batch
Inorganics									
Moisture	%	19	3081531	7.1	13	3081531	6.3	1.0	3081961
BTEX & F1 Hydrocarbons									
Benzene	ug/g	ND	3082675	ND	ND	3082675	ND	0.020	3082675
Toluene	ug/g	ND	3082675	ND	ND	3082675	ND	0.020	3082675
Ethylbenzene	ug/g	0.13	3082675	ND	ND	3082675	ND	0.020	3082675
o-Xylene	ug/g	0.060	3082675	ND	ND	3082675	ND	0.020	3082675
p+m-Xylene	ug/g	0.53	3082675	ND	ND	3082675	ND	0.040	3082675
Total Xylenes	ug/g	0.59	3082675	ND	ND	3082675	ND	0.040	3082675
F1 (C6-C10)	ug/g	27	3082675	ND	120	3082675	ND	10	3082675
F1 (C6-C10) - BTEX	ug/g	26	3082675	ND	120	3082675	ND	10	3082675
F2-F4 Hydrocarbons									
F2 (C10-C16 Hydrocarbons)	ug/g	17	3081605	ND	280	3081774	ND	10	3081605
F3 (C16-C34 Hydrocarbons)	ug/g	ND	3081605	ND	12	3081774	ND	10	3081605
F4 (C34-C50 Hydrocarbons)	ug/g	ND	3081605	ND	ND	3081774	ND	10	3081605
Reached Baseline at C50	ug/g	Yes	3081605	Yes	Yes	3081774	Yes		3081605
Surrogate Recovery (%)									
1,4-Difluorobenzene	%	106	3082675	106	113	3082675	107		3082675
4-Bromofluorobenzene	%	98	3082675	98	99	3082675	98		3082675
D10-Ethylbenzene	%	92	3082675	88	99	3082675	85		3082675
D4-1,2-Dichloroethane	%	90	3082675	90	96	3082675	91		3082675
o-Terphenyl	%	94	3081605	93	92	3081774	93		3081605
ND = Not detected RDL = Reportable Detection Limit QC Batch = Quality Control Batch									

Maxxam Job #: B2K2191
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Terrapex Environmental Ltd
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O'REG 153 PETROLEUM HYDROCARBONS (SOIL)

Maxxam ID		QB7361		QB7362			QB7363	QB7363		
Sampling Date		2012/12/18		2012/12/18			2012/12/18	2012/12/18		
COC Number		383592-05-01		383592-05-01			383592-05-01	383592-05-01		
	Units	TP004	RDL	TP229-5	RDL	QC Batch	TP229-6	TP229-6 Lab-Dup	RDL	QC Batch

Inorganics										
Moisture	%	11	1.0	15	1.0	3081961	9.3	8.1	1.0	3081531
BTEX & F1 Hydrocarbons										
Benzene	ug/g	ND	0.20	ND	0.10	3082675	ND		0.020	3082675
Toluene	ug/g	ND	0.20	0.10	0.10	3082675	ND		0.020	3082675
Ethylbenzene	ug/g	ND	0.20	ND	0.10	3082675	ND		0.020	3082675
o-Xylene	ug/g	ND	0.20	ND	0.10	3082675	ND		0.020	3082675
p+m-Xylene	ug/g	ND	0.40	ND	0.20	3082675	ND		0.040	3082675
Total Xylenes	ug/g	ND	0.40	ND	0.20	3082675	ND		0.040	3082675
F1 (C6-C10)	ug/g	2300	100	1100	50	3082675	ND		10	3082675
F1 (C6-C10) - BTEX	ug/g	2300	100	1100	50	3082675	ND		10	3082675
F2-F4 Hydrocarbons										
F2 (C10-C16 Hydrocarbons)	ug/g	290	10	1200	10	3081605	ND		10	3081774
F3 (C16-C34 Hydrocarbons)	ug/g	23	10	41	10	3081605	ND		10	3081774
F4 (C34-C50 Hydrocarbons)	ug/g	ND	10	ND	10	3081605	ND		10	3081774
Reached Baseline at C50	ug/g	Yes		Yes		3081605	Yes			3081774
Surrogate Recovery (%)										
1,4-Difluorobenzene	%	114		117		3082675	106			3082675
4-Bromofluorobenzene	%	106		101		3082675	96			3082675
D10-Ethylbenzene	%	113		106		3082675	92			3082675
D4-1,2-Dichloroethane	%	116		107		3082675	90			3082675
o-Terphenyl	%	91		92		3081605	95			3081774

ND = Not detected
RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Maxxam Job #: B2K2191
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O'REG 153 PETROLEUM HYDROCARBONS (SOIL)

Maxxam ID		QB7364		QB7365	QB7366			QB7367		
Sampling Date		2012/12/18		2012/12/18	2012/12/18			2012/12/18		
COC Number		383592-05-01		383592-05-01	383592-05-01			383592-05-01		
	Units	TP230-5	QC Batch	TP230-6	TP230-7	RDL	QC Batch	TP231-5	RDL	QC Batch
Inorganics										
Moisture	%	22	3081961	16	7.4	1.0	3081531	12	1.0	3081961
BTEX & F1 Hydrocarbons										
Benzene	ug/g	ND	3082675	ND	ND	0.020	3082675	ND	0.20	3082675
Toluene	ug/g	ND	3082675	ND	ND	0.020	3082675	ND	0.20	3082675
Ethylbenzene	ug/g	ND	3082675	0.037	0.46	0.020	3082675	ND	0.20	3082675
o-Xylene	ug/g	ND	3082675	0.024	0.15	0.020	3082675	ND	0.20	3082675
p+m-Xylene	ug/g	ND	3082675	0.19	2.2	0.040	3082675	ND	0.40	3082675
Total Xylenes	ug/g	ND	3082675	0.22	2.4	0.040	3082675	ND	0.40	3082675
F1 (C6-C10)	ug/g	ND	3082675	220	19	10	3082675	2500	100	3082675
F1 (C6-C10) - BTEX	ug/g	ND	3082675	220	16	10	3082675	2500	100	3082675
F2-F4 Hydrocarbons										
F2 (C10-C16 Hydrocarbons)	ug/g	25	3081605	500	ND	10	3081774	980	10	3081605
F3 (C16-C34 Hydrocarbons)	ug/g	ND	3081605	50	ND	10	3081774	35	10	3081605
F4 (C34-C50 Hydrocarbons)	ug/g	ND	3081605	29	ND	10	3081774	ND	10	3081605
Reached Baseline at C50	ug/g	Yes	3081605	Yes	Yes		3081774	Yes		3081605
Surrogate Recovery (%)										
1,4-Difluorobenzene	%	107	3082675	114	107		3082675	117		3082675
4-Bromofluorobenzene	%	97	3082675	101	98		3082675	103		3082675
D10-Ethylbenzene	%	97	3082675	111	85		3082675	103		3082675
D4-1,2-Dichloroethane	%	90	3082675	97	92		3082675	107		3082675
o-Terphenyl	%	94	3081605	88	95		3081774	95		3081605
ND = Not detected RDL = Reportable Detection Limit QC Batch = Quality Control Batch										

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O'REG 153 PETROLEUM HYDROCARBONS (SOIL)

Maxxam ID		QB7368			QB7369		QB7370		
Sampling Date		2012/12/18			2012/12/19		2012/12/19		
COC Number		383592-05-01			383592-05-01		383592-05-01		
	Units	TP231-6	RDL	QC Batch	TP232-5	QC Batch	TP232-6	RDL	QC Batch
Inorganics									
Moisture	%	6.9	1.0	3081531	11	3081961	15	1.0	3081531
BTEX & F1 Hydrocarbons									
Benzene	ug/g	ND	0.020	3082675	ND	3082675	ND	0.10	3082675
Toluene	ug/g	ND	0.020	3082675	ND	3082675	ND	0.10	3082675
Ethylbenzene	ug/g	ND	0.020	3082675	0.92	3082675	1.4	0.10	3082675
o-Xylene	ug/g	ND	0.020	3082675	0.29	3082675	0.21	0.10	3082675
p+m-Xylene	ug/g	ND	0.040	3082675	4.3	3082675	4.1	0.20	3082675
Total Xylenes	ug/g	ND	0.040	3082675	4.6	3082675	4.3	0.20	3082675
F1 (C6-C10)	ug/g	ND	10	3082675	930	3082675	550	50	3082675
F1 (C6-C10) - BTEX	ug/g	ND	10	3082675	920	3082675	540	50	3082675
F2-F4 Hydrocarbons									
F2 (C10-C16 Hydrocarbons)	ug/g	ND	10	3081774	69	3081605	420	10	3081774
F3 (C16-C34 Hydrocarbons)	ug/g	ND	10	3081774	100	3081605	290	10	3081774
F4 (C34-C50 Hydrocarbons)	ug/g	ND	10	3081774	48	3081605	860	10	3081774
Reached Baseline at C50	ug/g	Yes		3081774	Yes	3081605	No		3081774
Surrogate Recovery (%)									
1,4-Difluorobenzene	%	106		3082675	115	3082675	112		3082675
4-Bromofluorobenzene	%	97		3082675	102	3082675	101		3082675
D10-Ethylbenzene	%	91		3082675	116	3082675	109		3082675
D4-1,2-Dichloroethane	%	91		3082675	103	3082675	99		3082675
o-Terphenyl	%	94		3081774	94	3081605	90		3081774
ND = Not detected RDL = Reportable Detection Limit QC Batch = Quality Control Batch									

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O'REG 153 PETROLEUM HYDROCARBONS (SOIL)

Maxxam ID		QB7371		QB7372	QB7372		QB7373		
Sampling Date		2012/12/19		2012/12/19	2012/12/19		2012/12/19		
COC Number		383592-05-01		383592-05-01	383592-05-01		383592-05-01		
	Units	TP232-7	QC Batch	TP233-6	TP233-6 Lab-Dup	QC Batch	TP233-7	RDL	QC Batch

Inorganics									
Moisture	%	7.1	3081531	15		3081961	6.3	1.0	3081961
BTEX & F1 Hydrocarbons									
Benzene	ug/g	ND	3082675	ND	ND	3082675	ND	0.020	3082283
Toluene	ug/g	0.066	3082675	ND	ND	3082675	ND	0.020	3082283
Ethylbenzene	ug/g	1.2	3082675	ND	ND	3082675	ND	0.020	3082283
o-Xylene	ug/g	1.2	3082675	ND	ND	3082675	ND	0.020	3082283
p+m-Xylene	ug/g	5.5	3082675	ND	ND	3082675	ND	0.040	3082283
Total Xylenes	ug/g	6.8	3082675	ND	ND	3082675	ND	0.040	3082283
F1 (C6-C10)	ug/g	82	3082675	56	60	3082675	ND	10	3082283
F1 (C6-C10) - BTEX	ug/g	74	3082675	56	60	3082675	ND	10	3082283
F2-F4 Hydrocarbons									
F2 (C10-C16 Hydrocarbons)	ug/g	ND	3081774	11		3081605	ND	10	3081605
F3 (C16-C34 Hydrocarbons)	ug/g	ND	3081774	ND		3081605	14	10	3081605
F4 (C34-C50 Hydrocarbons)	ug/g	ND	3081774	ND		3081605	ND	10	3081605
Reached Baseline at C50	ug/g	Yes	3081774	Yes		3081605	Yes		3081605
Surrogate Recovery (%)									
1,4-Difluorobenzene	%	109	3082675	108	109	3082675	106		3082283
4-Bromofluorobenzene	%	99	3082675	98	97	3082675	95		3082283
D10-Ethylbenzene	%	95	3082675	96	100	3082675	71		3082283
D4-1,2-Dichloroethane	%	93	3082675	96	93	3082675	99		3082283
o-Terphenyl	%	98	3081774	94		3081605	95		3081605

ND = Not detected
RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Maxxam Job #: B2K2191
Report Date: 2013/01/03

Terrapex Environmental Ltd
Client Project #: CB644.01
Site Location: 121 HUME STREET, COLLINGWOOD, ON
Sampler Initials: SS

O'REG 153 PETROLEUM HYDROCARBONS (SOIL)

Maxxam ID		QB7373	QB7374	QB7374	QB7375	QB7376		
Sampling Date		2012/12/19	2012/12/19	2012/12/19	2012/12/19	2012/12/19		
COC Number		383592-05-01	383592-05-01	383592-05-01	383592-05-01	383592-05-01		
	Units	TP233-7 Lab-Dup	TP234-6	TP234-6 Lab-Dup	TP235-5	TP236-5	RDL	QC Batch

Inorganics								
Moisture	%		17		21	18	1.0	3081961
BTEX & F1 Hydrocarbons								
Benzene	ug/g	ND	ND		ND	ND	0.020	3082283
Toluene	ug/g	ND	ND		ND	ND	0.020	3082283
Ethylbenzene	ug/g	ND	ND		ND	ND	0.020	3082283
o-Xylene	ug/g	ND	ND		ND	ND	0.020	3082283
p+m-Xylene	ug/g	ND	ND		ND	ND	0.040	3082283
Total Xylenes	ug/g	ND	ND		ND	ND	0.040	3082283
F1 (C6-C10)	ug/g	ND	ND		ND	12	10	3082283
F1 (C6-C10) - BTEX	ug/g	ND	ND		ND	12	10	3082283
F2-F4 Hydrocarbons								
F2 (C10-C16 Hydrocarbons)	ug/g		ND	ND	ND	78	10	3081605
F3 (C16-C34 Hydrocarbons)	ug/g		99	110	13	110	10	3081605
F4 (C34-C50 Hydrocarbons)	ug/g		40	38	ND	34	10	3081605
Reached Baseline at C50	ug/g		Yes	Yes	Yes	Yes		3081605
Surrogate Recovery (%)								
1,4-Difluorobenzene	%	106	106		106	106		3082283
4-Bromofluorobenzene	%	96	84		90	98		3082283
D10-Ethylbenzene	%	71	66		74	79		3082283
D4-1,2-Dichloroethane	%	99	100		97	96		3082283
o-Terphenyl	%		92	90	89	91		3081605

ND = Not detected
RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Maxxam Job #: B2K2191
Report Date: 2013/01/03

Terrapex Environmental Ltd
Client Project #: CB644.01
Site Location: 121 HUME STREET, COLLINGWOOD, ON
Sampler Initials: SS

O'REG 153 PETROLEUM HYDROCARBONS (SOIL)

Maxxam ID		QB7377		QB7378	QB7379	QB7380		
Sampling Date		2012/12/19		2012/12/19	2012/12/19	2012/12/19		
COC Number		383592-05-01		383592-05-01	383592-05-01	383592-05-01		
	Units	TP236-7	QC Batch	TP237-5	TP237-7	TP238-5	RDL	QC Batch

Inorganics								
Moisture	%	14	3081531	18	14	25	1.0	3081961
BTEX & F1 Hydrocarbons								
Benzene	ug/g	ND	3082283	ND	ND	ND	0.020	3082283
Toluene	ug/g	ND	3082283	ND	ND	ND	0.020	3082283
Ethylbenzene	ug/g	ND	3082283	ND	ND	ND	0.020	3082283
o-Xylene	ug/g	ND	3082283	ND	ND	ND	0.020	3082283
p+m-Xylene	ug/g	0.051	3082283	ND	ND	ND	0.040	3082283
Total Xylenes	ug/g	0.051	3082283	ND	ND	ND	0.040	3082283
F1 (C6-C10)	ug/g	ND	3082283	ND	ND	ND	10	3082283
F1 (C6-C10) - BTEX	ug/g	ND	3082283	ND	ND	ND	10	3082283
F2-F4 Hydrocarbons								
F2 (C10-C16 Hydrocarbons)	ug/g	ND	3081605	ND	ND	ND	10	3081605
F3 (C16-C34 Hydrocarbons)	ug/g	14	3081605	21	100	29	10	3081605
F4 (C34-C50 Hydrocarbons)	ug/g	ND	3081605	ND	31	ND	10	3081605
Reached Baseline at C50	ug/g	Yes	3081605	Yes	Yes	Yes		3081605
Surrogate Recovery (%)								
1,4-Difluorobenzene	%	105	3082283	106	106	106		3082283
4-Bromofluorobenzene	%	97	3082283	97	97	93		3082283
D10-Ethylbenzene	%	78	3082283	73	73	69		3082283
D4-1,2-Dichloroethane	%	97	3082283	98	97	96		3082283
o-Terphenyl	%	87	3081605	90	93	91		3081605
ND = Not detected RDL = Reportable Detection Limit QC Batch = Quality Control Batch								

Maxxam Job #: B2K2191
Report Date: 2013/01/03

Terrapex Environmental Ltd
Client Project #: CB644.01
Site Location: 121 HUME STREET, COLLINGWOOD, ON
Sampler Initials: SS

O'REG 153 PETROLEUM HYDROCARBONS (SOIL)

Maxxam ID		QB7381	QB7382	QB7383		QB7384		
Sampling Date		2012/12/19	2012/12/19	2012/12/19		2012/12/19		
COC Number		383592-05-01	383592-05-01	383592-05-01		383592-05-01		
	Units	TP239-5	TP239-6	TP240-5	QC Batch	TP240-6	RDL	QC Batch

Inorganics								
Moisture	%	16	16	20	3081531	16	1.0	3081531
BTEX & F1 Hydrocarbons								
Benzene	ug/g	ND	ND	ND	3082283	ND	0.020	3082283
Toluene	ug/g	ND	ND	ND	3082283	ND	0.020	3082283
Ethylbenzene	ug/g	ND	ND	ND	3082283	ND	0.020	3082283
o-Xylene	ug/g	ND	ND	ND	3082283	ND	0.020	3082283
p+m-Xylene	ug/g	ND	ND	ND	3082283	ND	0.040	3082283
Total Xylenes	ug/g	ND	ND	ND	3082283	ND	0.040	3082283
F1 (C6-C10)	ug/g	ND	ND	ND	3082283	ND	10	3082283
F1 (C6-C10) - BTEX	ug/g	ND	ND	ND	3082283	ND	10	3082283
F2-F4 Hydrocarbons								
F2 (C10-C16 Hydrocarbons)	ug/g	ND	ND	ND	3081774	ND	10	3081605
F3 (C16-C34 Hydrocarbons)	ug/g	ND	ND	ND	3081774	16	10	3081605
F4 (C34-C50 Hydrocarbons)	ug/g	ND	ND	ND	3081774	ND	10	3081605
Reached Baseline at C50	ug/g	Yes	Yes	Yes	3081774	Yes		3081605
Surrogate Recovery (%)								
1,4-Difluorobenzene	%	108	107	106	3082283	106		3082283
4-Bromofluorobenzene	%	97	91	91	3082283	97		3082283
D10-Ethylbenzene	%	84	76	80	3082283	73		3082283
D4-1,2-Dichloroethane	%	96	96	99	3082283	97		3082283
o-Terphenyl	%	95	94	94	3081774	95		3081605
ND = Not detected RDL = Reportable Detection Limit QC Batch = Quality Control Batch								

Maxxam Job #: B2K2191
Report Date: 2013/01/03

Terrapex Environmental Ltd
Client Project #: CB644.01
Site Location: 121 HUME STREET, COLLINGWOOD, ON
Sampler Initials: SS

O'REG 153 PETROLEUM HYDROCARBONS (SOIL)

Maxxam ID		QB7385	QB7385	QB7386	QB7387		QB7388		
Sampling Date		2012/12/20	2012/12/20	2012/12/20	2012/12/20		2012/12/20		
COC Number		383592-05-01	383592-05-01	383592-05-01	383592-05-01		383592-05-01		
	Units	TP241-6	TP241-6 Lab-Dup	TP242-5	TP243-5	QC Batch	TP244-5	RDL	QC Batch

Inorganics									
Moisture	%	17	18	15	25	3081961	23	1.0	3081531
BTEX & F1 Hydrocarbons									
Benzene	ug/g	ND		ND	ND	3082283	ND	0.020	3082283
Toluene	ug/g	ND		ND	ND	3082283	ND	0.020	3082283
Ethylbenzene	ug/g	ND		ND	ND	3082283	ND	0.020	3082283
o-Xylene	ug/g	ND		ND	ND	3082283	ND	0.020	3082283
p+m-Xylene	ug/g	ND		ND	ND	3082283	ND	0.040	3082283
Total Xylenes	ug/g	ND		ND	ND	3082283	ND	0.040	3082283
F1 (C6-C10)	ug/g	ND		ND	ND	3082283	ND	10	3082283
F1 (C6-C10) - BTEX	ug/g	ND		ND	ND	3082283	ND	10	3082283
F2-F4 Hydrocarbons									
F2 (C10-C16 Hydrocarbons)	ug/g	ND		ND	ND	3081605	ND	10	3081774
F3 (C16-C34 Hydrocarbons)	ug/g	ND		15	ND	3081605	ND	10	3081774
F4 (C34-C50 Hydrocarbons)	ug/g	ND		ND	ND	3081605	ND	10	3081774
Reached Baseline at C50	ug/g	Yes		Yes	Yes	3081605	Yes		3081774
Surrogate Recovery (%)									
1,4-Difluorobenzene	%	106		108	106	3082283	108		3082283
4-Bromofluorobenzene	%	93		94	92	3082283	94		3082283
D10-Ethylbenzene	%	73		74	77	3082283	78		3082283
D4-1,2-Dichloroethane	%	98		96	97	3082283	98		3082283
o-Terphenyl	%	94		93	92	3081605	95		3081774

ND = Not detected
RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Maxxam Job #: B2K2191
Report Date: 2013/01/03

Terrapex Environmental Ltd
Client Project #: CB644.01
Site Location: 121 HUME STREET, COLLINGWOOD, ON
Sampler Initials: SS

O'REG 153 PETROLEUM HYDROCARBONS (SOIL)

Maxxam ID		QB7389	QB7390	QB7390		
Sampling Date		2012/12/20	2012/12/17	2012/12/17		
COC Number		383592-05-01	383592-05-01	383592-05-01		
	Units	FIELD BLANK	TP218-6	TP218-6 Lab-Dup	RDL	QC Batch

Inorganics						
Moisture	%		20		1.0	3081531
BTEX & F1 Hydrocarbons						
Benzene	ug/g	ND	ND		0.020	3082283
Toluene	ug/g	ND	ND		0.020	3082283
Ethylbenzene	ug/g	ND	ND		0.020	3082283
o-Xylene	ug/g	ND	ND		0.020	3082283
p+m-Xylene	ug/g	ND	ND		0.040	3082283
Total Xylenes	ug/g	ND	ND		0.040	3082283
F1 (C6-C10)	ug/g	ND	ND		10	3082283
F1 (C6-C10) - BTEX	ug/g	ND	ND		10	3082283
F2-F4 Hydrocarbons						
F2 (C10-C16 Hydrocarbons)	ug/g		ND	ND	10	3081774
F3 (C16-C34 Hydrocarbons)	ug/g		ND	ND	10	3081774
F4 (C34-C50 Hydrocarbons)	ug/g		ND	ND	10	3081774
Reached Baseline at C50	ug/g		Yes	Yes		3081774
Surrogate Recovery (%)						
1,4-Difluorobenzene	%	106	106			3082283
4-Bromofluorobenzene	%	87	93			3082283
D10-Ethylbenzene	%	71	74			3082283
D4-1,2-Dichloroethane	%	97	96			3082283
o-Terphenyl	%		93	96		3081774
ND = Not detected RDL = Reportable Detection Limit QC Batch = Quality Control Batch						

Maxxam Job #: B2K2191
Report Date: 2013/01/03

Terrapex Environmental Ltd
Client Project #: CB644.01
Site Location: 121 HUME STREET, COLLINGWOOD, ON
Sampler Initials: SS

PETROLEUM HYDROCARBONS (CCME)

Maxxam ID		QB7337	QB7339	QB7370		
Sampling Date		2012/12/17	2012/12/17	2012/12/19		
COC Number		383592-05-01	383592-05-01	383592-05-01		
	Units	TP216-5	TP217-5	TP232-6	RDL	QC Batch

F2-F4 Hydrocarbons						
F4G-sg (Grav. Heavy Hydrocarbons)	ug/g	170	1500	3900	100	3083849

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Maxxam Job #: B2K2191
Report Date: 2013/01/03

Terrapex Environmental Ltd
Client Project #: CB644.01
Site Location: 121 HUME STREET, COLLINGWOOD, ON
Sampler Initials: SS

Test Summary

Maxxam ID QB7333
Sample ID TP215-4
Matrix Soil

Collected 2012/12/17
Shipped
Received 2012/12/21

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	3082425	2012/12/22	2012/12/31	Haibin Wu
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	3081876	2012/12/28	2012/12/31	(Kent) Maolin Li
Moisture	BAL	3081486	N/A	2012/12/28	Thoai Truyen Huynh

Maxxam ID QB7333 Dup
Sample ID TP215-4
Matrix Soil

Collected 2012/12/17
Shipped
Received 2012/12/21

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	3081876	2012/12/28	2012/12/31	(Kent) Maolin Li

Maxxam ID QB7334
Sample ID TP215-5
Matrix Soil

Collected 2012/12/17
Shipped
Received 2012/12/21

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	3082425	2012/12/22	2012/12/31	Haibin Wu
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	3081876	2012/12/28	2012/12/31	(Kent) Maolin Li
Moisture	BAL	3081486	N/A	2012/12/28	Thoai Truyen Huynh

Maxxam ID QB7335
Sample ID TP215-6
Matrix Soil

Collected 2012/12/17
Shipped
Received 2012/12/21

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	3082425	2012/12/22	2012/12/31	Haibin Wu
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	3081876	2012/12/28	2012/12/31	(Kent) Maolin Li
Moisture	BAL	3081486	N/A	2012/12/28	Thoai Truyen Huynh

Maxxam ID QB7336
Sample ID TP003
Matrix Soil

Collected 2012/12/17
Shipped
Received 2012/12/21

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	3082425	2012/12/22	2012/12/31	Haibin Wu
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	3081876	2012/12/28	2012/12/31	(Kent) Maolin Li
Moisture	BAL	3081486	N/A	2012/12/28	Thoai Truyen Huynh

Maxxam ID QB7337
Sample ID TP216-5
Matrix Soil

Collected 2012/12/17
Shipped
Received 2012/12/21

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	3082425	2012/12/22	2013/01/02	Haibin Wu
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	3081876	2012/12/28	2012/12/31	(Kent) Maolin Li
F4G (CCME Hydrocarbons Gravimetric)	BAL	3083849	2013/01/02	2013/01/02	Raheela Usmani
Moisture	BAL	3081486	N/A	2012/12/28	Thoai Truyen Huynh

Maxxam Job #: B2K2191
Report Date: 2013/01/03

Terrapex Environmental Ltd
Client Project #: CB644.01
Site Location: 121 HUME STREET, COLLINGWOOD, ON
Sampler Initials: SS

Test Summary

Maxxam ID QB7338
Sample ID TP216-6
Matrix Soil

Collected 2012/12/17
Shipped
Received 2012/12/21

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	3082425	2012/12/22	2012/12/31	Haibin Wu
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	3081876	2012/12/28	2012/12/31	(Kent) Maolin Li
Moisture	BAL	3081486	N/A	2012/12/28	Thoai Truyen Huynh

Maxxam ID QB7339
Sample ID TP217-5
Matrix Soil

Collected 2012/12/17
Shipped
Received 2012/12/21

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	3082425	2012/12/22	2012/12/31	Haibin Wu
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	3081876	2012/12/28	2012/12/31	(Kent) Maolin Li
F4G (CCME Hydrocarbons Gravimetric)	BAL	3083849	2013/01/02	2013/01/02	Raheela Usmani
Moisture	BAL	3081486	N/A	2012/12/28	Thoai Truyen Huynh

Maxxam ID QB7340
Sample ID TP217-6
Matrix Soil

Collected 2012/12/17
Shipped
Received 2012/12/21

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	3082425	2012/12/22	2013/01/02	Haibin Wu
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	3081876	2012/12/28	2012/12/31	(Kent) Maolin Li
Moisture	BAL	3081486	N/A	2012/12/28	Thoai Truyen Huynh

Maxxam ID QB7341
Sample ID TP218-5
Matrix Soil

Collected 2012/12/17
Shipped
Received 2012/12/21

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	3082425	2012/12/22	2012/12/31	Haibin Wu
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	3081876	2012/12/28	2012/12/31	(Kent) Maolin Li
Moisture	BAL	3081486	N/A	2012/12/28	Thoai Truyen Huynh

Maxxam ID QB7342
Sample ID TP219-5
Matrix Soil

Collected 2012/12/17
Shipped
Received 2012/12/21

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	3082425	2012/12/22	2012/12/31	Haibin Wu
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	3081876	2012/12/28	2012/12/31	(Kent) Maolin Li
Moisture	BAL	3081486	N/A	2012/12/28	Thoai Truyen Huynh

Maxxam Job #: B2K2191
Report Date: 2013/01/03

Terrapex Environmental Ltd
Client Project #: CB644.01
Site Location: 121 HUME STREET, COLLINGWOOD, ON
Sampler Initials: SS

Test Summary

Maxxam ID QB7343
Sample ID TP219-6
Matrix Soil

Collected 2012/12/17
Shipped
Received 2012/12/21

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	3082425	2012/12/22	2012/12/31	Haibin Wu
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	3081876	2012/12/28	2012/12/31	(Kent) Maolin Li
Moisture	BAL	3081486	N/A	2012/12/28	Thoai Truyen Huynh

Maxxam ID QB7343 Dup
Sample ID TP219-6
Matrix Soil

Collected 2012/12/17
Shipped
Received 2012/12/21

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Moisture	BAL	3081486	N/A	2012/12/28	Thoai Truyen Huynh

Maxxam ID QB7344
Sample ID TP220-5
Matrix Soil

Collected 2012/12/17
Shipped
Received 2012/12/21

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	3082425	2012/12/22	2013/01/02	Haibin Wu
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	3081876	2012/12/28	2012/12/31	(Kent) Maolin Li
Moisture	BAL	3081486	N/A	2012/12/28	Thoai Truyen Huynh

Maxxam ID QB7345
Sample ID TP221-4
Matrix Soil

Collected 2012/12/17
Shipped
Received 2012/12/21

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	3082425	2012/12/22	2013/01/02	Haibin Wu
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	3081876	2012/12/28	2012/12/31	(Kent) Maolin Li
Moisture	BAL	3081486	N/A	2012/12/28	Thoai Truyen Huynh

Maxxam ID QB7346
Sample ID TP221-5
Matrix Soil

Collected 2012/12/17
Shipped
Received 2012/12/21

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	3082425	2012/12/22	2012/12/31	Haibin Wu
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	3081876	2012/12/28	2012/12/31	(Kent) Maolin Li
Moisture	BAL	3081486	N/A	2012/12/28	Thoai Truyen Huynh

Maxxam ID QB7347
Sample ID TP222-5
Matrix Soil

Collected 2012/12/17
Shipped
Received 2012/12/21

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	3082425	2012/12/22	2013/01/02	Haibin Wu
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	3081876	2012/12/28	2012/12/31	(Kent) Maolin Li
Moisture	BAL	3081486	N/A	2012/12/28	Thoai Truyen Huynh

Maxxam Job #: B2K2191
Report Date: 2013/01/03

Terrapex Environmental Ltd
Client Project #: CB644.01
Site Location: 121 HUME STREET, COLLINGWOOD, ON
Sampler Initials: SS

Test Summary

Maxxam ID QB7348
Sample ID TP222-6
Matrix Soil

Collected 2012/12/17
Shipped
Received 2012/12/21

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	3082425	2012/12/22	2012/12/31	Haibin Wu
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	3081876	2012/12/28	2012/12/31	(Kent) Maolin Li
Moisture	BAL	3081486	N/A	2012/12/28	Thoai Truyen Huynh

Maxxam ID QB7349
Sample ID TP223-5
Matrix Soil

Collected 2012/12/17
Shipped
Received 2012/12/21

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	3082425	2012/12/22	2012/12/31	Haibin Wu
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	3081876	2012/12/28	2012/12/31	(Kent) Maolin Li
Moisture	BAL	3081486	N/A	2012/12/28	Thoai Truyen Huynh

Maxxam ID QB7350
Sample ID TP223-7
Matrix Soil

Collected 2012/12/17
Shipped
Received 2012/12/21

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	3082425	2012/12/22	2012/12/31	Haibin Wu
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	3081876	2012/12/28	2012/12/31	(Kent) Maolin Li
Moisture	BAL	3081486	N/A	2012/12/28	Thoai Truyen Huynh

Maxxam ID QB7351
Sample ID TP224-5
Matrix Soil

Collected 2012/12/18
Shipped
Received 2012/12/21

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	3082425	2012/12/22	2012/12/31	Haibin Wu
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	3081876	2012/12/28	2012/12/31	(Kent) Maolin Li
Moisture	BAL	3081486	N/A	2012/12/28	Thoai Truyen Huynh

Maxxam ID QB7352
Sample ID TP224-6
Matrix Soil

Collected 2012/12/18
Shipped
Received 2012/12/21

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	3082425	2012/12/22	2012/12/31	Haibin Wu
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	3081876	2012/12/28	2012/12/31	(Kent) Maolin Li
Moisture	BAL	3081486	N/A	2012/12/28	Thoai Truyen Huynh

Maxxam Job #: B2K2191
Report Date: 2013/01/03

Terrapex Environmental Ltd
Client Project #: CB644.01
Site Location: 121 HUME STREET, COLLINGWOOD, ON
Sampler Initials: SS

Test Summary

Maxxam ID QB7352 Dup
Sample ID TP224-6
Matrix Soil

Collected 2012/12/18
Shipped
Received 2012/12/21

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	3082425	2012/12/22	2012/12/31	Haibin Wu

Maxxam ID QB7353
Sample ID TP225-5
Matrix Soil

Collected 2012/12/18
Shipped
Received 2012/12/21

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	3082675	2012/12/22	2012/12/31	Georgeta Rusu
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	3081774	2012/12/28	2012/12/31	Jolanta Kawzowicz
Moisture	BAL	3081531	N/A	2012/12/28	Thoai Truyen Huynh

Maxxam ID QB7354
Sample ID TP225-6
Matrix Soil

Collected 2012/12/18
Shipped
Received 2012/12/21

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	3082675	2012/12/22	2012/12/31	Georgeta Rusu
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	3081774	2012/12/28	2012/12/31	Jolanta Kawzowicz
Moisture	BAL	3081531	N/A	2012/12/28	Thoai Truyen Huynh

Maxxam ID QB7355
Sample ID TP226-5
Matrix Soil

Collected 2012/12/18
Shipped
Received 2012/12/21

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	3082675	2012/12/22	2013/01/02	Georgeta Rusu
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	3081774	2012/12/28	2012/12/31	Jolanta Kawzowicz
Moisture	BAL	3081531	N/A	2012/12/28	Thoai Truyen Huynh

Maxxam ID QB7356
Sample ID TP226-6
Matrix Soil

Collected 2012/12/18
Shipped
Received 2012/12/21

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	3082675	2012/12/22	2012/12/31	Georgeta Rusu
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	3081774	2012/12/28	2012/12/31	Jolanta Kawzowicz
Moisture	BAL	3081531	N/A	2012/12/28	Thoai Truyen Huynh

Maxxam ID QB7357
Sample ID TP227-5
Matrix Soil

Collected 2012/12/18
Shipped
Received 2012/12/21

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	3082675	2012/12/22	2012/12/31	Georgeta Rusu
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	3081605	2012/12/28	2012/12/29	(Kent) Maolin Li
Moisture	BAL	3081531	N/A	2012/12/28	Thoai Truyen Huynh

Maxxam Job #: B2K2191
Report Date: 2013/01/03

Terrapex Environmental Ltd
Client Project #: CB644.01
Site Location: 121 HUME STREET, COLLINGWOOD, ON
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Test Summary

Maxxam ID QB7358
Sample ID TP227-7
Matrix Soil

Collected 2012/12/18
Shipped
Received 2012/12/21

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	3082675	2012/12/22	2012/12/31	Georgeta Rusu
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	3081774	2012/12/28	2012/12/31	Jolanta Kawzowicz
Moisture	BAL	3081531	N/A	2012/12/28	Thoai Truyen Huynh

Maxxam ID QB7359
Sample ID TP228-5
Matrix Soil

Collected 2012/12/18
Shipped
Received 2012/12/21

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	3082675	2012/12/22	2012/12/31	Georgeta Rusu
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	3081774	2012/12/28	2012/12/31	Jolanta Kawzowicz
Moisture	BAL	3081531	N/A	2012/12/28	Thoai Truyen Huynh

Maxxam ID QB7360
Sample ID TP228-6
Matrix Soil

Collected 2012/12/18
Shipped
Received 2012/12/21

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	3082675	2012/12/22	2012/12/31	Georgeta Rusu
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	3081605	2012/12/28	2012/12/29	(Kent) Maolin Li
Moisture	BAL	3081961	N/A	2012/12/28	Chamika Deeyagaha

Maxxam ID QB7361
Sample ID TP004
Matrix Soil

Collected 2012/12/18
Shipped
Received 2012/12/21

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	3082675	2012/12/22	2013/01/03	Georgeta Rusu
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	3081605	2012/12/28	2012/12/29	(Kent) Maolin Li
Moisture	BAL	3081961	N/A	2012/12/28	Chamika Deeyagaha

Maxxam ID QB7362
Sample ID TP229-5
Matrix Soil

Collected 2012/12/18
Shipped
Received 2012/12/21

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	3082675	2012/12/22	2013/01/02	Georgeta Rusu
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	3081605	2012/12/28	2012/12/29	(Kent) Maolin Li
Moisture	BAL	3081961	N/A	2012/12/28	Chamika Deeyagaha

Maxxam Job #: B2K2191
Report Date: 2013/01/03

Terrapex Environmental Ltd
Client Project #: CB644.01
Site Location: 121 HUME STREET, COLLINGWOOD, ON
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Test Summary

Maxxam ID QB7363
Sample ID TP229-6
Matrix Soil

Collected 2012/12/18
Shipped
Received 2012/12/21

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	3082675	2012/12/22	2012/12/31	Georgeta Rusu
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	3081774	2012/12/28	2012/12/31	Jolanta Kawzowicz
Moisture	BAL	3081531	N/A	2012/12/28	Thoai Truyen Huynh

Maxxam ID QB7363 Dup
Sample ID TP229-6
Matrix Soil

Collected 2012/12/18
Shipped
Received 2012/12/21

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Moisture	BAL	3081531	N/A	2012/12/28	Thoai Truyen Huynh

Maxxam ID QB7364
Sample ID TP230-5
Matrix Soil

Collected 2012/12/18
Shipped
Received 2012/12/21

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	3082675	2012/12/22	2012/12/31	Georgeta Rusu
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	3081605	2012/12/28	2012/12/29	(Kent) Maolin Li
Moisture	BAL	3081961	N/A	2012/12/28	Chamika Deeyagaha

Maxxam ID QB7365
Sample ID TP230-6
Matrix Soil

Collected 2012/12/18
Shipped
Received 2012/12/21

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	3082675	2012/12/22	2012/12/31	Georgeta Rusu
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	3081774	2012/12/28	2012/12/31	Jolanta Kawzowicz
Moisture	BAL	3081531	N/A	2012/12/28	Thoai Truyen Huynh

Maxxam ID QB7366
Sample ID TP230-7
Matrix Soil

Collected 2012/12/18
Shipped
Received 2012/12/21

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	3082675	2012/12/22	2012/12/31	Georgeta Rusu
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	3081774	2012/12/28	2012/12/31	Jolanta Kawzowicz
Moisture	BAL	3081531	N/A	2012/12/28	Thoai Truyen Huynh

Maxxam ID QB7367
Sample ID TP231-5
Matrix Soil

Collected 2012/12/18
Shipped
Received 2012/12/21

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	3082675	2012/12/22	2013/01/02	Georgeta Rusu
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	3081605	2012/12/28	2012/12/29	(Kent) Maolin Li
Moisture	BAL	3081961	N/A	2012/12/28	Chamika Deeyagaha

Maxxam Job #: B2K2191
Report Date: 2013/01/03

Terrapex Environmental Ltd
Client Project #: CB644.01
Site Location: 121 HUME STREET, COLLINGWOOD, ON
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Test Summary

Maxxam ID QB7368
Sample ID TP231-6
Matrix Soil

Collected 2012/12/18
Shipped
Received 2012/12/21

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	3082675	2012/12/22	2013/01/01	Georgeta Rusu
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	3081774	2012/12/28	2012/12/31	Jolanta Kawzowicz
Moisture	BAL	3081531	N/A	2012/12/28	Thoi Truyen Huynh

Maxxam ID QB7369
Sample ID TP232-5
Matrix Soil

Collected 2012/12/19
Shipped
Received 2012/12/21

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	3082675	2012/12/22	2013/01/02	Georgeta Rusu
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	3081605	2012/12/28	2012/12/29	(Kent) Maolin Li
Moisture	BAL	3081961	N/A	2012/12/28	Chamika Deeyagaha

Maxxam ID QB7370
Sample ID TP232-6
Matrix Soil

Collected 2012/12/19
Shipped
Received 2012/12/21

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	3082675	2012/12/22	2013/01/02	Georgeta Rusu
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	3081774	2012/12/28	2012/12/31	Jolanta Kawzowicz
F4G (CCME Hydrocarbons Gravimetric)	BAL	3083849	2013/01/02	2013/01/02	Raheela Usmani
Moisture	BAL	3081531	N/A	2012/12/28	Thoi Truyen Huynh

Maxxam ID QB7371
Sample ID TP232-7
Matrix Soil

Collected 2012/12/19
Shipped
Received 2012/12/21

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	3082675	2012/12/22	2013/01/01	Georgeta Rusu
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	3081774	2012/12/28	2012/12/31	Jolanta Kawzowicz
Moisture	BAL	3081531	N/A	2012/12/28	Thoi Truyen Huynh

Maxxam ID QB7372
Sample ID TP233-6
Matrix Soil

Collected 2012/12/19
Shipped
Received 2012/12/21

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	3082675	2012/12/22	2012/12/31	Georgeta Rusu
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	3081605	2012/12/28	2012/12/29	(Kent) Maolin Li
Moisture	BAL	3081961	N/A	2012/12/28	Chamika Deeyagaha

Maxxam Job #: B2K2191
Report Date: 2013/01/03

Terrapex Environmental Ltd
Client Project #: CB644.01
Site Location: 121 HUME STREET, COLLINGWOOD, ON
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Test Summary

Maxxam ID QB7372 Dup
Sample ID TP233-6
Matrix Soil

Collected 2012/12/19
Shipped
Received 2012/12/21

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	3082675	2012/12/22	2012/12/31	Georgeta Rusu

Maxxam ID QB7373
Sample ID TP233-7
Matrix Soil

Collected 2012/12/19
Shipped
Received 2012/12/21

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	3082283	2012/12/22	2012/12/31	Haibin Wu
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	3081605	2012/12/28	2012/12/29	(Kent) Maolin Li
Moisture	BAL	3081961	N/A	2012/12/28	Chamika Deeyagaha

Maxxam ID QB7373 Dup
Sample ID TP233-7
Matrix Soil

Collected 2012/12/19
Shipped
Received 2012/12/21

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	3082283	2012/12/22	2012/12/31	Haibin Wu

Maxxam ID QB7374
Sample ID TP234-6
Matrix Soil

Collected 2012/12/19
Shipped
Received 2012/12/21

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	3082283	2012/12/22	2012/12/31	Haibin Wu
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	3081605	2012/12/28	2012/12/29	(Kent) Maolin Li
Moisture	BAL	3081961	N/A	2012/12/28	Chamika Deeyagaha

Maxxam ID QB7374 Dup
Sample ID TP234-6
Matrix Soil

Collected 2012/12/19
Shipped
Received 2012/12/21

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	3081605	2012/12/28	2012/12/29	(Kent) Maolin Li

Maxxam ID QB7375
Sample ID TP235-5
Matrix Soil

Collected 2012/12/19
Shipped
Received 2012/12/21

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	3082283	2012/12/22	2013/01/01	Haibin Wu
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	3081605	2012/12/28	2012/12/29	(Kent) Maolin Li
Moisture	BAL	3081961	N/A	2012/12/28	Chamika Deeyagaha

Maxxam Job #: B2K2191
Report Date: 2013/01/03

Terrapex Environmental Ltd
Client Project #: CB644.01
Site Location: 121 HUME STREET, COLLINGWOOD, ON
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Test Summary

Maxxam ID QB7376
Sample ID TP236-5
Matrix Soil

Collected 2012/12/19
Shipped
Received 2012/12/21

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	3082283	2012/12/22	2013/01/01	Haibin Wu
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	3081605	2012/12/28	2012/12/29	(Kent) Maolin Li
Moisture	BAL	3081961	N/A	2012/12/28	Chamika Deeyagaha

Maxxam ID QB7377
Sample ID TP236-7
Matrix Soil

Collected 2012/12/19
Shipped
Received 2012/12/21

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	3082283	2012/12/22	2013/01/01	Haibin Wu
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	3081605	2012/12/28	2012/12/29	(Kent) Maolin Li
Moisture	BAL	3081531	N/A	2012/12/28	Thoi Truyen Huynh

Maxxam ID QB7378
Sample ID TP237-5
Matrix Soil

Collected 2012/12/19
Shipped
Received 2012/12/21

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	3082283	2012/12/22	2013/01/01	Haibin Wu
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	3081605	2012/12/28	2012/12/29	(Kent) Maolin Li
Moisture	BAL	3081961	N/A	2012/12/28	Chamika Deeyagaha

Maxxam ID QB7379
Sample ID TP237-7
Matrix Soil

Collected 2012/12/19
Shipped
Received 2012/12/21

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	3082283	2012/12/22	2013/01/01	Haibin Wu
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	3081605	2012/12/28	2012/12/29	(Kent) Maolin Li
Moisture	BAL	3081961	N/A	2012/12/28	Chamika Deeyagaha

Maxxam ID QB7380
Sample ID TP238-5
Matrix Soil

Collected 2012/12/19
Shipped
Received 2012/12/21

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	3082283	2012/12/22	2013/01/01	Haibin Wu
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	3081605	2012/12/28	2012/12/29	(Kent) Maolin Li
Moisture	BAL	3081961	N/A	2012/12/28	Chamika Deeyagaha

Maxxam Job #: B2K2191
Report Date: 2013/01/03

Terrapex Environmental Ltd
Client Project #: CB644.01
Site Location: 121 HUME STREET, COLLINGWOOD, ON
Sampler Initials: SS

Test Summary

Maxxam ID QB7381
Sample ID TP239-5
Matrix Soil

Collected 2012/12/19
Shipped
Received 2012/12/21

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	3082283	2012/12/22	2013/01/01	Haibin Wu
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	3081774	2012/12/28	2012/12/31	Jolanta Kawzowicz
Moisture	BAL	3081531	N/A	2012/12/28	Thoai Truyen Huynh

Maxxam ID QB7382
Sample ID TP239-6
Matrix Soil

Collected 2012/12/19
Shipped
Received 2012/12/21

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	3082283	2012/12/22	2013/01/01	Haibin Wu
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	3081774	2012/12/28	2012/12/31	Jolanta Kawzowicz
Moisture	BAL	3081531	N/A	2012/12/28	Thoai Truyen Huynh

Maxxam ID QB7383
Sample ID TP240-5
Matrix Soil

Collected 2012/12/19
Shipped
Received 2012/12/21

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	3082283	2012/12/22	2013/01/01	Haibin Wu
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	3081774	2012/12/28	2012/12/31	Jolanta Kawzowicz
Moisture	BAL	3081531	N/A	2012/12/28	Thoai Truyen Huynh

Maxxam ID QB7384
Sample ID TP240-6
Matrix Soil

Collected 2012/12/19
Shipped
Received 2012/12/21

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	3082283	2012/12/22	2013/01/01	Haibin Wu
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	3081605	2012/12/28	2012/12/29	(Kent) Maolin Li
Moisture	BAL	3081531	N/A	2012/12/28	Thoai Truyen Huynh

Maxxam ID QB7385
Sample ID TP241-6
Matrix Soil

Collected 2012/12/20
Shipped
Received 2012/12/21

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	3082283	2012/12/22	2013/01/01	Haibin Wu
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	3081605	2012/12/28	2012/12/29	(Kent) Maolin Li
Moisture	BAL	3081961	N/A	2012/12/28	Chamika Deeyagaha

Maxxam Job #: B2K2191
Report Date: 2013/01/03

Terrapex Environmental Ltd
Client Project #: CB644.01
Site Location: 121 HUME STREET, COLLINGWOOD, ON
Sampler Initials: SS

Test Summary

Maxxam ID QB7385 Dup
Sample ID TP241-6
Matrix Soil

Collected 2012/12/20
Shipped
Received 2012/12/21

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Moisture	BAL	3081961	N/A	2012/12/28	Chamika Deeyagaha

Maxxam ID QB7386
Sample ID TP242-5
Matrix Soil

Collected 2012/12/20
Shipped
Received 2012/12/21

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	3082283	2012/12/22	2013/01/01	Haibin Wu
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	3081605	2012/12/28	2012/12/29	(Kent) Maolin Li
Moisture	BAL	3081961	N/A	2012/12/28	Chamika Deeyagaha

Maxxam ID QB7387
Sample ID TP243-5
Matrix Soil

Collected 2012/12/20
Shipped
Received 2012/12/21

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	3082283	2012/12/22	2013/01/01	Haibin Wu
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	3081605	2012/12/28	2012/12/29	(Kent) Maolin Li
Moisture	BAL	3081961	N/A	2012/12/28	Chamika Deeyagaha

Maxxam ID QB7388
Sample ID TP244-5
Matrix Soil

Collected 2012/12/20
Shipped
Received 2012/12/21

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	3082283	2012/12/22	2013/01/01	Haibin Wu
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	3081774	2012/12/28	2012/12/31	Jolanta Kawzowicz
Moisture	BAL	3081531	N/A	2012/12/28	Thoi Truyen Huynh

Maxxam ID QB7389
Sample ID FIELD BLANK
Matrix Soil

Collected 2012/12/20
Shipped
Received 2012/12/21

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	3082283	2012/12/22	2013/01/01	Haibin Wu

Maxxam ID QB7390
Sample ID TP218-6
Matrix Soil

Collected 2012/12/17
Shipped
Received 2012/12/21

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	3082283	2012/12/22	2013/01/01	Haibin Wu
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	3081774	2012/12/28	2012/12/31	Jolanta Kawzowicz
Moisture	BAL	3081531	N/A	2012/12/28	Thoi Truyen Huynh

Maxxam Job #: B2K2191
Report Date: 2013/01/03

Terrapex Environmental Ltd
Client Project #: CB644.01
Site Location: 121 HUME STREET, COLLINGWOOD, ON
Sampler Initials: SS

Test Summary

Maxxam ID QB7390 Dup
Sample ID TP218-6
Matrix Soil

Collected 2012/12/17
Shipped
Received 2012/12/21

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	3081774	2012/12/28	2012/12/31	Jolanta Kawzowicz

Maxxam Job #: B2K2191
Report Date: 2013/01/03

Terrapex Environmental Ltd
Client Project #: CB644.01
Site Location: 121 HUME STREET, COLLINGWOOD, ON
Sampler Initials: SS

Package 1	-1.3°C
Package 2	1.0°C

Each temperature is the average of up to three cooler temperatures taken at receipt

GENERAL COMMENTS

Cooler custody seal was present and intact.

Sample QB7337-01: F1-BTEX analysis: Due to high concentration of target analytes, sample required dilution. Reporting limits were adjusted accordingly.

Sample QB7340-01: F1-BTEX analysis: Due to high concentration of target analytes, sample required dilution. Reporting limits were adjusted accordingly.

Sample QB7344-01: F1-BTEX analysis: Due to high concentration of target analytes, sample required dilution. Reporting limits were adjusted accordingly.

Sample QB7345-01: F1-BTEX analysis: Due to high concentration of target analytes, sample required dilution. Reporting limits were adjusted accordingly.

Sample QB7347-01: F1-BTEX analysis: Due to high concentration of target analytes, sample required dilution. Reporting limits were adjusted accordingly.

Sample QB7355-01: F1BTEX Analysis: Due to high amount of late eluting hydrocarbons, sample required dilution. Reporting limits were adjusted accordingly.

Sample QB7361-01: F1BTEX Analysis: Due to high amount of late eluting hydrocarbons, sample required dilution. Reporting limits were adjusted accordingly.

Sample QB7362-01: F1BTEX Analysis: Due to high amount of late eluting hydrocarbons, sample required dilution. Reporting limits were adjusted accordingly.

Sample QB7367-01: F1BTEX Analysis: Due to high amount of late eluting hydrocarbons, sample required dilution. Reporting limits were adjusted accordingly.

Sample QB7369-01: F1BTEX Analysis: Due to high amount of late eluting hydrocarbons, sample required dilution. Reporting limits were adjusted accordingly.

Sample QB7370-01: F1BTEX Analysis: Due to high amount of late eluting hydrocarbons, sample required dilution. Reporting limits were adjusted accordingly.

Results relate only to the items tested.

Terrapex Environmental Ltd
Attention: Jeff Stevenson
Client Project #: CB644.01
P.O. #:
Site Location: 121 HUME STREET, COLLINGWOOD, ON

Quality Assurance Report

Maxxam Job Number: MB2K2191

QA/QC Batch Num Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QC Limits
3081486 N_P	RPD [QB7343-01]	Moisture	2012/12/28	5.3		%	20
3081531 JK1	RPD [QB7363-01]	Moisture	2012/12/28	13.8		%	20
3081605 KLI	Matrix Spike [QB7374-01]	o-Terphenyl	2012/12/29		96	%	50 - 130
		F2 (C10-C16 Hydrocarbons)	2012/12/29		101	%	50 - 130
		F3 (C16-C34 Hydrocarbons)	2012/12/29		107	%	50 - 130
		F4 (C34-C50 Hydrocarbons)	2012/12/29		105	%	50 - 130
	Spiked Blank	o-Terphenyl	2012/12/29		92	%	50 - 130
		F2 (C10-C16 Hydrocarbons)	2012/12/29		95	%	80 - 120
		F3 (C16-C34 Hydrocarbons)	2012/12/29		98	%	80 - 120
		F4 (C34-C50 Hydrocarbons)	2012/12/29		97	%	80 - 120
	Method Blank	o-Terphenyl	2012/12/29		95	%	50 - 130
		F2 (C10-C16 Hydrocarbons)	2012/12/29	ND, RDL=10		ug/g	
		F3 (C16-C34 Hydrocarbons)	2012/12/29	ND, RDL=10		ug/g	
		F4 (C34-C50 Hydrocarbons)	2012/12/29	ND, RDL=10		ug/g	
	RPD [QB7374-01]	F2 (C10-C16 Hydrocarbons)	2012/12/29	NC		%	30
		F3 (C16-C34 Hydrocarbons)	2012/12/29	6.0		%	30
		F4 (C34-C50 Hydrocarbons)	2012/12/29	NC		%	30
3081774 JKA	Matrix Spike [QB7390-01]	o-Terphenyl	2012/12/31		94	%	50 - 130
		F2 (C10-C16 Hydrocarbons)	2012/12/31		96	%	50 - 130
		F3 (C16-C34 Hydrocarbons)	2012/12/31		95	%	50 - 130
		F4 (C34-C50 Hydrocarbons)	2012/12/31		102	%	50 - 130
	Spiked Blank	o-Terphenyl	2012/12/31		90	%	50 - 130
		F2 (C10-C16 Hydrocarbons)	2012/12/31		91	%	80 - 120
		F3 (C16-C34 Hydrocarbons)	2012/12/31		91	%	80 - 120
		F4 (C34-C50 Hydrocarbons)	2012/12/31		95	%	80 - 120
	Method Blank	o-Terphenyl	2012/12/31		91	%	50 - 130
		F2 (C10-C16 Hydrocarbons)	2012/12/31	ND, RDL=10		ug/g	
		F3 (C16-C34 Hydrocarbons)	2012/12/31	ND, RDL=10		ug/g	
		F4 (C34-C50 Hydrocarbons)	2012/12/31	ND, RDL=10		ug/g	
	RPD [QB7390-01]	F2 (C10-C16 Hydrocarbons)	2012/12/31	NC		%	30
		F3 (C16-C34 Hydrocarbons)	2012/12/31	NC		%	30
		F4 (C34-C50 Hydrocarbons)	2012/12/31	NC		%	30
3081876 KLI	Matrix Spike [QB7333-01]	o-Terphenyl	2012/12/31		87	%	50 - 130
		F2 (C10-C16 Hydrocarbons)	2012/12/31		104	%	50 - 130
		F3 (C16-C34 Hydrocarbons)	2012/12/31		100	%	50 - 130
		F4 (C34-C50 Hydrocarbons)	2012/12/31		101	%	50 - 130
	Spiked Blank	o-Terphenyl	2012/12/31		86	%	50 - 130
		F2 (C10-C16 Hydrocarbons)	2012/12/31		94	%	80 - 120
		F3 (C16-C34 Hydrocarbons)	2012/12/31		98	%	80 - 120
		F4 (C34-C50 Hydrocarbons)	2012/12/31		97	%	80 - 120
	Method Blank	o-Terphenyl	2012/12/31		97	%	50 - 130
		F2 (C10-C16 Hydrocarbons)	2012/12/31	ND, RDL=10		ug/g	
		F3 (C16-C34 Hydrocarbons)	2012/12/31	ND, RDL=10		ug/g	
		F4 (C34-C50 Hydrocarbons)	2012/12/31	ND, RDL=10		ug/g	
	RPD [QB7333-01]	F2 (C10-C16 Hydrocarbons)	2012/12/31	88.0 (1)		%	30
		F3 (C16-C34 Hydrocarbons)	2012/12/31	NC		%	30
		F4 (C34-C50 Hydrocarbons)	2012/12/31	NC		%	30
3081961 N_P	RPD [QB7385-01]	Moisture	2012/12/28	2.3		%	20
3082283 H_W	Matrix Spike [QB7374-02]	1,4-Difluorobenzene	2012/12/31		106	%	60 - 140
		4-Bromofluorobenzene	2012/12/31		100	%	60 - 140
		D10-Ethylbenzene	2012/12/31		74	%	60 - 140

Terrapex Environmental Ltd
Attention: Jeff Stevenson
Client Project #: CB644.01
P.O. #:
Site Location: 121 HUME STREET, COLLINGWOOD, ON

Quality Assurance Report (Continued)

Maxxam Job Number: MB2K2191

QA/QC Batch Num Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QC Limits
3082283 H_W	Matrix Spike [QB7374-02]	D4-1,2-Dichloroethane	2012/12/31		96	%	60 - 140
		Benzene	2012/12/31		70	%	60 - 140
		Toluene	2012/12/31		68	%	60 - 140
		Ethylbenzene	2012/12/31		73	%	60 - 140
		o-Xylene	2012/12/31		71	%	60 - 140
		p+m-Xylene	2012/12/31		66	%	60 - 140
	Spiked Blank	F1 (C6-C10)	2012/12/31		73	%	60 - 140
		1,4-Difluorobenzene	2012/12/31		106	%	60 - 140
		4-Bromofluorobenzene	2012/12/31		102	%	60 - 140
		D10-Ethylbenzene	2012/12/31		90	%	60 - 140
		D4-1,2-Dichloroethane	2012/12/31		100	%	60 - 140
		Benzene	2012/12/31		99	%	60 - 130
		Toluene	2012/12/31		93	%	60 - 130
		Ethylbenzene	2012/12/31		98	%	60 - 130
		o-Xylene	2012/12/31		93	%	60 - 130
		p+m-Xylene	2012/12/31		88	%	60 - 130
		F1 (C6-C10)	2012/12/31		96	%	80 - 120
		1,4-Difluorobenzene	2012/12/31		107	%	60 - 140
		4-Bromofluorobenzene	2012/12/31		89	%	60 - 140
		D10-Ethylbenzene	2012/12/31		77	%	60 - 140
		D4-1,2-Dichloroethane	2012/12/31		98	%	60 - 140
	Method Blank	Benzene	2012/12/31	ND, RDL=0.020		ug/g	
		Toluene	2012/12/31	ND, RDL=0.020		ug/g	
		Ethylbenzene	2012/12/31	ND, RDL=0.020		ug/g	
		o-Xylene	2012/12/31	ND, RDL=0.020		ug/g	
		p+m-Xylene	2012/12/31	ND, RDL=0.040		ug/g	
		Total Xylenes	2012/12/31	ND, RDL=0.040		ug/g	
		F1 (C6-C10)	2012/12/31	ND, RDL=10		ug/g	
		F1 (C6-C10) - BTEX	2012/12/31	ND, RDL=10		ug/g	
	RPD [QB7373-02]	Benzene	2012/12/31	NC		%	50
		Toluene	2012/12/31	NC		%	50
		Ethylbenzene	2012/12/31	NC		%	50
		o-Xylene	2012/12/31	NC		%	50
		p+m-Xylene	2012/12/31	NC		%	50
		Total Xylenes	2012/12/31	NC		%	50
		F1 (C6-C10)	2012/12/31	NC		%	50
		F1 (C6-C10) - BTEX	2012/12/31	NC		%	50
3082425 H_W	Matrix Spike [QB7352-02]	1,4-Difluorobenzene	2012/12/31		105	%	60 - 140
		4-Bromofluorobenzene	2012/12/31		103	%	60 - 140
		D10-Ethylbenzene	2012/12/31		74	%	60 - 140
		D4-1,2-Dichloroethane	2012/12/31		95	%	60 - 140
		Benzene	2012/12/31		74	%	60 - 140
		Toluene	2012/12/31		71	%	60 - 140
	Spiked Blank	Ethylbenzene	2012/12/31		NC	%	60 - 140
		o-Xylene	2012/12/31		65	%	60 - 140
		p+m-Xylene	2012/12/31		NC	%	60 - 140
		F1 (C6-C10)	2012/12/31		NC	%	60 - 140
		1,4-Difluorobenzene	2012/12/31		106	%	60 - 140
		4-Bromofluorobenzene	2012/12/31		100	%	60 - 140
		D10-Ethylbenzene	2012/12/31		77	%	60 - 140
		D4-1,2-Dichloroethane	2012/12/31		95	%	60 - 140
		Benzene	2012/12/31		83	%	60 - 130
		Toluene	2012/12/31		80	%	60 - 130

Terrapex Environmental Ltd
Attention: Jeff Stevenson
Client Project #: CB644.01
P.O. #:
Site Location: 121 HUME STREET, COLLINGWOOD, ON

Quality Assurance Report (Continued)

Maxxam Job Number: MB2K2191

QA/QC Batch Num Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QC Limits
3082425 H_W	Spiked Blank	Ethylbenzene	2012/12/31		87	%	60 - 130
		o-Xylene	2012/12/31		84	%	60 - 130
		p+m-Xylene	2012/12/31		78	%	60 - 130
	Method Blank	F1 (C6-C10)	2012/12/31		81	%	80 - 120
		1,4-Difluorobenzene	2012/12/31		105	%	60 - 140
		4-Bromofluorobenzene	2012/12/31		94	%	60 - 140
		D10-Ethylbenzene	2012/12/31		73	%	60 - 140
		D4-1,2-Dichloroethane	2012/12/31		95	%	60 - 140
		Benzene	2012/12/31	ND, RDL=0.020		ug/g	
		Toluene	2012/12/31	ND, RDL=0.020		ug/g	
		Ethylbenzene	2012/12/31	ND, RDL=0.020		ug/g	
		o-Xylene	2012/12/31	ND, RDL=0.020		ug/g	
		p+m-Xylene	2012/12/31	ND, RDL=0.040		ug/g	
		Total Xylenes	2012/12/31	ND, RDL=0.040		ug/g	
	RPD [QB7352-02]	F1 (C6-C10)	2012/12/31	ND, RDL=10		ug/g	
		F1 (C6-C10) - BTEX	2012/12/31	ND, RDL=10		ug/g	
		Benzene	2012/12/31	NC		%	50
		Toluene	2012/12/31	NC		%	50
		Ethylbenzene	2012/12/31	0.8		%	50
		o-Xylene	2012/12/31	NC		%	50
		p+m-Xylene	2012/12/31	0		%	50
		Total Xylenes	2012/12/31	0.2		%	50
		F1 (C6-C10)	2012/12/31	3.8		%	50
		F1 (C6-C10) - BTEX	2012/12/31	3.8		%	50
3082675 GRU	Matrix Spike [QB7372-02]	1,4-Difluorobenzene	2012/12/31		107	%	60 - 140
		4-Bromofluorobenzene	2012/12/31		99	%	60 - 140
		D10-Ethylbenzene	2012/12/31		102	%	60 - 140
		D4-1,2-Dichloroethane	2012/12/31		94	%	60 - 140
		Benzene	2012/12/31		104	%	60 - 140
		Toluene	2012/12/31		89	%	60 - 140
		Ethylbenzene	2012/12/31		98	%	60 - 140
		o-Xylene	2012/12/31		91	%	60 - 140
		p+m-Xylene	2012/12/31		85	%	60 - 140
		F1 (C6-C10)	2012/12/31		NC	%	60 - 140
	Spiked Blank	1,4-Difluorobenzene	2012/12/31		108	%	60 - 140
		4-Bromofluorobenzene	2012/12/31		100	%	60 - 140
		D10-Ethylbenzene	2012/12/31		92	%	60 - 140
		D4-1,2-Dichloroethane	2012/12/31		96	%	60 - 140
		Benzene	2012/12/31		115	%	60 - 130
		Toluene	2012/12/31		96	%	60 - 130
		Ethylbenzene	2012/12/31		107	%	60 - 130
		o-Xylene	2012/12/31		102	%	60 - 130
		p+m-Xylene	2012/12/31		92	%	60 - 130
		F1 (C6-C10)	2012/12/31		104	%	80 - 120
	Method Blank	1,4-Difluorobenzene	2012/12/31		108	%	60 - 140
		4-Bromofluorobenzene	2012/12/31		98	%	60 - 140
		D10-Ethylbenzene	2012/12/31		93	%	60 - 140
		D4-1,2-Dichloroethane	2012/12/31		94	%	60 - 140
		Benzene	2012/12/31	ND, RDL=0.020		ug/g	
		Toluene	2012/12/31	ND, RDL=0.020		ug/g	
		Ethylbenzene	2012/12/31	ND, RDL=0.020		ug/g	
		o-Xylene	2012/12/31	ND, RDL=0.020		ug/g	
		p+m-Xylene	2012/12/31	ND, RDL=0.040		ug/g	
		Total Xylenes	2012/12/31	ND, RDL=0.040		ug/g	

Terrapex Environmental Ltd
Attention: Jeff Stevenson
Client Project #: CB644.01
P.O. #:
Site Location: 121 HUME STREET, COLLINGWOOD, ON

Quality Assurance Report (Continued)

Maxxam Job Number: MB2K2191

QA/QC Batch Num Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QC Limits
3082675 GRU	Method Blank	F1 (C6-C10)	2012/12/31	ND, RDL=10		ug/g	
		F1 (C6-C10) - BTEX	2012/12/31	ND, RDL=10		ug/g	
	RPD [QB7372-02]	Benzene	2012/12/31	NC		%	50
		Toluene	2012/12/31	NC		%	50
		Ethylbenzene	2012/12/31	NC		%	50
		o-Xylene	2012/12/31	NC		%	50
		p+m-Xylene	2012/12/31	NC		%	50
		Total Xylenes	2012/12/31	NC		%	50
		F1 (C6-C10)	2012/12/31	6.2		%	50
		F1 (C6-C10) - BTEX	2012/12/31	6.2		%	50
3083849 RUS	Matrix Spike	F4G-sg (Grav. Heavy Hydrocarbons)	2013/01/02		76	%	65 - 135
	Spiked Blank	F4G-sg (Grav. Heavy Hydrocarbons)	2013/01/02		86	%	65 - 135
	Method Blank	F4G-sg (Grav. Heavy Hydrocarbons)	2013/01/02	ND, RDL=100		ug/g	
	RPD	F4G-sg (Grav. Heavy Hydrocarbons)	2013/01/02	35.9		%	50

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.

Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.

Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.

Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.

Surrogate: A pure or isotopically labeled compound whose behavior mirrors the analytes of interest. Used to evaluate extraction efficiency.

NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spiked amount was not sufficiently significant to permit a reliable recovery calculation.

NC (RPD): The RPD was not calculated. The level of analyte detected in the parent sample and its duplicate was not sufficiently significant to permit a reliable calculation.

(1) Recovery or RPD for this parameter is outside control limits. The overall quality control for this analysis meets acceptability criteria.

Validation Signature Page

Maxxam Job #: B2K2191

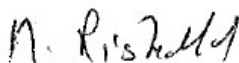
The analytical data and all QC contained in this report were reviewed and validated by the following individual(s).



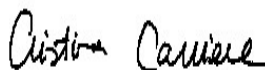
Mamdouh Salib, Analyst, Hydrocarbons



Abdi Mohamud, Senior Analyst



Medhat Riskallah, Manager, Hydrocarbon Department



Cristina Carriere, Scientific Services

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Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

Your Project #: CB644.01
Site Location: 121 HUME STREET, COLLINGWOOD, ON
Your C.O.C. #: 38359203, 383592-03-01

Attention: Jeff Stevenson

Terrapex Environmental Ltd
920 Brant Street
Unit 16
Burlington, ON
CANADA L7R 4J1

Report Date: 2012/12/28

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B2J8051

Received: 2012/12/14, 19:20

Sample Matrix: Soil
Samples Received: 31

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Method Reference
1,3-Dichloropropene Sum	17	N/A	2012/12/21	CAM SOP-00226	EPA 8260
Petroleum Hydro. CCME F1 & BTEX in Soil	12	2012/12/15	2012/12/21	CAM SOP-00315	CCME CWS
Petroleum Hydro. CCME F1 & BTEX in Soil	17	2012/12/15	2012/12/22	CAM SOP-00315	CCME CWS
Petroleum Hydro. CCME F1 & BTEX in Soil	2	2012/12/15	2012/12/23	CAM SOP-00315	CCME CWS
Petroleum Hydrocarbons F2-F4 in Soil	11	2012/12/20	2012/12/20	CAM SOP-00316	CCME CWS
Petroleum Hydrocarbons F2-F4 in Soil	20	2012/12/21	2012/12/22	CAM SOP-00316	CCME CWS
F4G (CCME Hydrocarbons Gravimetric)	1	2012/12/27	2012/12/28	CAM SOP-00316	CCME CWS
Moisture	31	N/A	2012/12/20	CAM SOP-00445	R.Carter,1993
Volatile Organic Compounds in Soil	2	2012/12/17	2012/12/19	CAM SOP-00226	EPA 8260 modified
Volatile Organic Compounds in Soil	13	2012/12/17	2012/12/20	CAM SOP-00226	EPA 8260 modified
Volatile Organic Compounds in Soil	2	2012/12/17	2012/12/21	CAM SOP-00226	EPA 8260 modified

Remarks:

Maxxam Analytics has performed all analytical testing herein in accordance with ISO 17025 and the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act. All methodologies comply with this document and are validated for use in the laboratory. The methods and techniques employed in this analysis conform to the performance criteria (detection limits, accuracy and precision) as outlined in the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act. Reporting results to two significant figures at the RDL is to permit statistical evaluation and is not intended to be an indication of analytical precision.

The CWS PHC methods employed by Maxxam conform to all prescribed elements of the reference method and performance based elements have been validated. All modifications have been validated and proven equivalent following the 'Alberta Environment Draft Addenda to the CWS-PHC, Appendix 6, Validation of Alternate Methods'. Documentation is available upon request. Maxxam has made the following improvements to the CWS-PHC reference benchmark method: (i) Headspace for F1; and, (ii) Mechanical extraction for F2-F4. Note: F4G cannot be added to the C6 to C50 hydrocarbons. The extraction date for samples field preserved with methanol for F1 and Volatile Organic Compounds is considered to be the date sampled.

Maxxam Analytics is accredited by SCC (Lab ID 97) for all specific parameters as required by Ontario Regulation 153/04.

Your Project #: CB644.01
Site Location: 121 HUME STREET, COLLINGWOOD, ON
Your C.O.C. #: 38359203, 383592-03-01

Attention: Jeff Stevenson

Terrapex Environmental Ltd
920 Brant Street
Unit 16
Burlington, ON
CANADA L7R 4J1

Report Date: 2012/12/28

CERTIFICATE OF ANALYSIS

-2-

Maxxam Analytics is limited in liability to the actual cost of analysis unless otherwise agreed in writing. There is no other warranty expressed or implied. Samples will be retained at Maxxam Analytics for three weeks from receipt of data or as per contract.

* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.

Maryam Arghandeh,
Email: mArghand@maxxam.ca
Phone# (905) 817-5700

=====
Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

Total cover pages: 2

Maxxam Job #: B2J8051
Report Date: 2012/12/28

Terrapex Environmental Ltd
Client Project #: CB644.01
Site Location: 121 HUME STREET, COLLINGWOOD, ON
Sampler Initials: SS

O'REG 153 PETROLEUM HYDROCARBONS (SOIL)

Maxxam ID		PZ5098	PZ5098	PZ5099		PZ5100	PZ5101		
Sampling Date		2012/12/13	2012/12/13	2012/12/13		2012/12/13	2012/12/13		
COC Number		383592-03-01	383592-03-01	383592-03-01		383592-03-01	383592-03-01		
	Units	TP201-4	TP201-4 Lab-Dup	TP201-5	QC Batch	TP202-4	TP202-6	RDL	QC Batch

Inorganics									
Moisture	%	21		18	3076506	22	8.5	1.0	3076276
BTEX & F1 Hydrocarbons									
Benzene	ug/g	ND		ND	3077606	ND	0.22	0.020	3077606
Toluene	ug/g	ND		ND	3077606	ND	ND	0.020	3077606
Ethylbenzene	ug/g	ND		ND	3077606	ND	ND	0.020	3077606
o-Xylene	ug/g	ND		ND	3077606	ND	ND	0.020	3077606
p+m-Xylene	ug/g	ND		ND	3077606	ND	ND	0.040	3077606
Total Xylenes	ug/g	ND		ND	3077606	ND	ND	0.040	3077606
F1 (C6-C10)	ug/g	ND		ND	3077606	ND	ND	10	3077606
F1 (C6-C10) - BTEX	ug/g	ND		ND	3077606	ND	ND	10	3077606
F2-F4 Hydrocarbons									
F2 (C10-C16 Hydrocarbons)	ug/g	ND	ND	ND	3076227	ND	ND	10	3077802
F3 (C16-C34 Hydrocarbons)	ug/g	ND	ND	ND	3076227	ND	ND	10	3077802
F4 (C34-C50 Hydrocarbons)	ug/g	ND	ND	ND	3076227	ND	ND	10	3077802
Reached Baseline at C50	ug/g	Yes	Yes	Yes	3076227	Yes	Yes		3077802
Surrogate Recovery (%)									
1,4-Difluorobenzene	%	99		101	3077606	103	100		3077606
4-Bromofluorobenzene	%	100		103	3077606	102	101		3077606
D10-Ethylbenzene	%	84		91	3077606	92	79		3077606
D4-1,2-Dichloroethane	%	97		100	3077606	100	99		3077606
o-Terphenyl	%	95	96	95	3076227	94	94		3077802

ND = Not detected
RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Maxxam Job #: B2J8051
Report Date: 2012/12/28

Terrapex Environmental Ltd
Client Project #: CB644.01
Site Location: 121 HUME STREET, COLLINGWOOD, ON
Sampler Initials: SS

O'REG 153 PETROLEUM HYDROCARBONS (SOIL)

Maxxam ID		PZ5102	PZ5103	PZ5104	PZ5104	PZ5105		
Sampling Date		2012/12/13	2012/12/13	2012/12/13	2012/12/13	2012/12/13		
COC Number		383592-03-01	383592-03-01	383592-03-01	383592-03-01	383592-03-01		
	Units	TP203-5	TP203-6	TP204-5	TP204-5 Lab-Dup	TP204-6	RDL	QC Batch

Inorganics								
Moisture	%	20	21	21	21	6.6	1.0	3076276
BTEX & F1 Hydrocarbons								
Benzene	ug/g	ND	ND				0.020	3077606
Toluene	ug/g	ND	ND				0.020	3077606
Ethylbenzene	ug/g	ND	ND				0.020	3077606
o-Xylene	ug/g	ND	ND				0.020	3077606
p+m-Xylene	ug/g	ND	ND				0.040	3077606
Total Xylenes	ug/g	ND	ND				0.040	3077606
F1 (C6-C10)	ug/g	ND	ND	ND		ND	10	3077606
F1 (C6-C10) - BTEX	ug/g	ND	ND	ND		ND	10	3077606
F2-F4 Hydrocarbons								
F2 (C10-C16 Hydrocarbons)	ug/g	ND	ND	ND		ND	10	3077802
F3 (C16-C34 Hydrocarbons)	ug/g	ND	ND	ND		16	10	3077802
F4 (C34-C50 Hydrocarbons)	ug/g	ND	ND	ND		ND	10	3077802
Reached Baseline at C50	ug/g	Yes	Yes	Yes		Yes		3077802
Surrogate Recovery (%)								
1,4-Difluorobenzene	%	100	98	99		101		3077606
4-Bromofluorobenzene	%	99	102	103		102		3077606
D10-Ethylbenzene	%	85	78	79		78		3077606
D4-1,2-Dichloroethane	%	96	99	101		98		3077606
o-Terphenyl	%	94	97	97		96		3077802

ND = Not detected
RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Maxxam Job #: B2J8051
Report Date: 2012/12/28

Terrapex Environmental Ltd
Client Project #: CB644.01
Site Location: 121 HUME STREET, COLLINGWOOD, ON
Sampler Initials: SS

O'REG 153 PETROLEUM HYDROCARBONS (SOIL)

Maxxam ID		PZ5106	PZ5107	PZ5108		PZ5109		
Sampling Date		2012/12/13	2012/12/13	2012/12/13		2012/12/13		
COC Number		383592-03-01	383592-03-01	383592-03-01		383592-03-01		
	Units	TP205-4	TP205-5	TP206-4	QC Batch	TP206-5	RDL	QC Batch

Inorganics								
Moisture	%	20	7.0	15	3076506	21	1.0	3076276
BTEX & F1 Hydrocarbons								
F1 (C6-C10)	ug/g	ND	ND	ND	3077606	ND	10	3077606
F1 (C6-C10) - BTEX	ug/g	ND	ND	ND	3077606	ND	10	3077606
F2-F4 Hydrocarbons								
F2 (C10-C16 Hydrocarbons)	ug/g	ND	ND	ND	3076227	ND	10	3077802
F3 (C16-C34 Hydrocarbons)	ug/g	ND	ND	ND	3076227	ND	10	3077802
F4 (C34-C50 Hydrocarbons)	ug/g	ND	ND	ND	3076227	ND	10	3077802
Reached Baseline at C50	ug/g	Yes	Yes	Yes	3076227	Yes		3077802
Surrogate Recovery (%)								
1,4-Difluorobenzene	%	98	102	101	3077606	107		3077606
4-Bromofluorobenzene	%	102	102	101	3077606	94		3077606
D10-Ethylbenzene	%	75	77	68	3077606	68		3077606
D4-1,2-Dichloroethane	%	98	116	117	3077606	130		3077606
o-Terphenyl	%	96	99	93	3076227	94		3077802

ND = Not detected
RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Maxxam Job #: B2J8051
Report Date: 2012/12/28

Terrapex Environmental Ltd
Client Project #: CB644.01
Site Location: 121 HUME STREET, COLLINGWOOD, ON
Sampler Initials: SS

O'REG 153 PETROLEUM HYDROCARBONS (SOIL)

Maxxam ID		PZ5110		PZ5111	PZ5112		PZ5113		
Sampling Date		2012/12/13		2012/12/13	2012/12/14		2012/12/14		
COC Number		383592-03-01		383592-03-01	383592-03-01		383592-03-01		
	Units	TP207-4	RDL	TP207-6	TP208-5	RDL	TP208-6	RDL	QC Batch

Inorganics									
Moisture	%	45	1.0	9.8	16	1.0	31	1.0	3076276
BTEX & F1 Hydrocarbons									
Benzene	ug/g		0.020		ND	0.020	ND	0.40	3077606
Toluene	ug/g		0.020		ND	0.020	ND	0.40	3077606
Ethylbenzene	ug/g		0.020		ND	0.020	2.8	0.40	3077606
o-Xylene	ug/g		0.020		ND	0.020	3.0	0.40	3077606
p+m-Xylene	ug/g		0.040		0.092	0.040	12	0.80	3077606
Total Xylenes	ug/g		0.040		0.092	0.040	15	0.80	3077606
F1 (C6-C10)	ug/g	ND	10	ND	120	10	3200	200	3077606
F1 (C6-C10) - BTEX	ug/g	ND	10	ND	120	10	3200	200	3077606
F2-F4 Hydrocarbons									
F2 (C10-C16 Hydrocarbons)	ug/g	ND	20	ND	270	10	390	10	3077802
F3 (C16-C34 Hydrocarbons)	ug/g	45	20	ND	87	10	52	10	3077802
F4 (C34-C50 Hydrocarbons)	ug/g	ND	20	ND	63	10	24	10	3077802
Reached Baseline at C50	ug/g	Yes		Yes	Yes		Yes		3077802
Surrogate Recovery (%)									
1,4-Difluorobenzene	%	100		100	103		104		3077606
4-Bromofluorobenzene	%	101		102	101		102		3077606
D10-Ethylbenzene	%	88		84	94		NC (1)		3077606
D4-1,2-Dichloroethane	%	99		100	102		104		3077606
o-Terphenyl	%	95		95	100		98		3077802

ND = Not detected

RDL = Reportable Detection Limit

QC Batch = Quality Control Batch

(1) The extraction surrogate recovery is not calculated due to Matrix interferences.

Maxxam Job #: B2J8051
Report Date: 2012/12/28

Terrapex Environmental Ltd
Client Project #: CB644.01
Site Location: 121 HUME STREET, COLLINGWOOD, ON
Sampler Initials: SS

O'REG 153 PETROLEUM HYDROCARBONS (SOIL)

Maxxam ID		PZ5114	PZ5115	PZ5116	PZ5116		PZ5117		
Sampling Date		2012/12/14	2012/12/14	2012/12/14	2012/12/14		2012/12/14		
COC Number		383592-03-01	383592-03-01	383592-03-01	383592-03-01		383592-03-01		
	Units	TP208-7	TP001	TP209-5	TP209-5 Lab-Dup	QC Batch	TP209-7	RDL	QC Batch

Inorganics									
Moisture	%	19	17	22		3076506	9.9	1.0	3076276
BTEX & F1 Hydrocarbons									
Benzene	ug/g	ND	ND	ND	ND	3077606	0.026	0.020	3077606
Toluene	ug/g	ND	ND	ND	ND	3077606	ND	0.020	3077606
Ethylbenzene	ug/g	ND	0.034	ND	ND	3077606	0.18	0.020	3077606
o-Xylene	ug/g	ND	0.033	ND	ND	3077606	0.021	0.020	3077606
p+m-Xylene	ug/g	0.12	0.20	ND	ND	3077606	0.74	0.040	3077606
Total Xylenes	ug/g	0.12	0.23	ND	ND	3077606	0.76	0.040	3077606
F1 (C6-C10)	ug/g	12	300	ND	ND	3077606	ND	10	3077606
F1 (C6-C10) - BTEX	ug/g	11	300	ND	ND	3077606	ND	10	3077606
F2-F4 Hydrocarbons									
F2 (C10-C16 Hydrocarbons)	ug/g	ND	32	ND		3076227	ND	10	3077802
F3 (C16-C34 Hydrocarbons)	ug/g	ND	12	ND		3076227	12	10	3077802
F4 (C34-C50 Hydrocarbons)	ug/g	ND	ND	ND		3076227	ND	10	3077802
Reached Baseline at C50	ug/g	Yes	Yes	Yes		3076227	Yes		3077802
Surrogate Recovery (%)									
1,4-Difluorobenzene	%	103	101	101	100	3077606	101		3077606
4-Bromofluorobenzene	%	104	102	102	99	3077606	101		3077606
D10-Ethylbenzene	%	93	105	84	85	3077606	82		3077606
D4-1,2-Dichloroethane	%	100	98	99	98	3077606	100		3077606
o-Terphenyl	%	95	96	92		3076227	100		3077802

ND = Not detected
RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Maxxam Job #: B2J8051
Report Date: 2012/12/28

Terrapex Environmental Ltd
Client Project #: CB644.01
Site Location: 121 HUME STREET, COLLINGWOOD, ON
Sampler Initials: SS

O'REG 153 PETROLEUM HYDROCARBONS (SOIL)

Maxxam ID		PZ5118	PZ5119	PZ5120	PZ5120	PZ5121		
Sampling Date		2012/12/14	2012/12/14	2012/12/14	2012/12/14	2012/12/14		
COC Number		383592-03-01	383592-03-01	383592-03-01	383592-03-01	383592-03-01		
	Units	TP210-4	TP210-6	TP211-6	TP211-6 Lab-Dup	TP211-7	RDL	QC Batch

Inorganics								
Moisture	%	24	9.7	19		6.6	1.0	3076276
BTEX & F1 Hydrocarbons								
Benzene	ug/g	ND	ND				0.020	3077232
Toluene	ug/g	ND	ND				0.020	3077232
Ethylbenzene	ug/g	ND	ND				0.020	3077232
o-Xylene	ug/g	ND	ND				0.020	3077232
p+m-Xylene	ug/g	ND	ND				0.040	3077232
Total Xylenes	ug/g	ND	ND				0.040	3077232
F1 (C6-C10)	ug/g	ND	ND	ND		ND	10	3077232
F1 (C6-C10) - BTEX	ug/g	ND	ND	ND		ND	10	3077232
F2-F4 Hydrocarbons								
F2 (C10-C16 Hydrocarbons)	ug/g	14	ND	ND	ND	ND	10	3077802
F3 (C16-C34 Hydrocarbons)	ug/g	36	11	ND	ND	13	10	3077802
F4 (C34-C50 Hydrocarbons)	ug/g	ND	ND	ND	ND	ND	10	3077802
Reached Baseline at C50	ug/g	Yes	Yes	Yes	Yes	Yes		3077802
Surrogate Recovery (%)								
1,4-Difluorobenzene	%	99	100	98		97		3077232
4-Bromofluorobenzene	%	96	99	96		95		3077232
D10-Ethylbenzene	%	111	95	103		92		3077232
D4-1,2-Dichloroethane	%	94	97	97		97		3077232
o-Terphenyl	%	96	101	100	103	102		3077802

ND = Not detected
RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Maxxam Job #: B2J8051
Report Date: 2012/12/28

Terrapex Environmental Ltd
Client Project #: CB644.01
Site Location: 121 HUME STREET, COLLINGWOOD, ON
Sampler Initials: SS

O'REG 153 PETROLEUM HYDROCARBONS (SOIL)

Maxxam ID		PZ5122	PZ5123	PZ5124		PZ5125	PZ5126		
Sampling Date		2012/12/14	2012/12/14	2012/12/14		2012/12/14	2012/12/14		
COC Number		383592-03-01	383592-03-01	383592-03-01		383592-03-01	383592-03-01		
	Units	TP212-5	TP212-6	TP213-5	QC Batch	TP213-6	TP002	RDL	QC Batch

Inorganics									
Moisture	%	20	6.1	16	3076506	14	17	1.0	3076276
BTEX & F1 Hydrocarbons									
F1 (C6-C10)	ug/g	ND	ND	ND	3077232	ND	ND	10	3077232
F1 (C6-C10) - BTEX	ug/g	ND	ND	ND	3077232	ND	ND	10	3077232
F2-F4 Hydrocarbons									
F2 (C10-C16 Hydrocarbons)	ug/g	ND	ND	ND	3076227	ND	ND	10	3077802
F3 (C16-C34 Hydrocarbons)	ug/g	ND	ND	120	3076227	ND	200	10	3077802
F4 (C34-C50 Hydrocarbons)	ug/g	ND	ND	28	3076227	ND	56	10	3077802
Reached Baseline at C50	ug/g	Yes	Yes	Yes	3076227	Yes	No		3077802
Surrogate Recovery (%)									
1,4-Difluorobenzene	%	98	96	100	3077232	97	97		3077232
4-Bromofluorobenzene	%	97	95	98	3077232	94	98		3077232
D10-Ethylbenzene	%	95	94	110	3077232	102	90		3077232
D4-1,2-Dichloroethane	%	97	94	96	3077232	97	97		3077232
o-Terphenyl	%	93	93	91	3076227	104	101		3077802

ND = Not detected
RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Maxxam Job #: B2J8051
Report Date: 2012/12/28

Terrapex Environmental Ltd
Client Project #: CB644.01
Site Location: 121 HUME STREET, COLLINGWOOD, ON
Sampler Initials: SS

O'REG 153 PETROLEUM HYDROCARBONS (SOIL)

Maxxam ID		PZ5127	PZ5128		
Sampling Date		2012/12/14	2012/12/14		
COC Number		383592-03-01	383592-03-01		
	Units	TP214-4	TP214-5	RDL	QC Batch

Inorganics					
Moisture	%	25	16	1.0	3076276
BTEX & F1 Hydrocarbons					
F1 (C6-C10)	ug/g	ND	ND	10	3077232
F1 (C6-C10) - BTEX	ug/g	ND	ND	10	3077232
F2-F4 Hydrocarbons					
F2 (C10-C16 Hydrocarbons)	ug/g	ND	ND	10	3077802
F3 (C16-C34 Hydrocarbons)	ug/g	19	ND	10	3077802
F4 (C34-C50 Hydrocarbons)	ug/g	ND	ND	10	3077802
Reached Baseline at C50	ug/g	Yes	Yes		3077802
Surrogate Recovery (%)					
1,4-Difluorobenzene	%	99	97		3077232
4-Bromofluorobenzene	%	99	100		3077232
D10-Ethylbenzene	%	110	91		3077232
D4-1,2-Dichloroethane	%	98	96		3077232
o-Terphenyl	%	100	103		3077802
ND = Not detected RDL = Reportable Detection Limit QC Batch = Quality Control Batch					

Maxxam Job #: B2J8051
Report Date: 2012/12/28

Terrapex Environmental Ltd
Client Project #: CB644.01
Site Location: 121 HUME STREET, COLLINGWOOD, ON
Sampler Initials: SS

O'REG 153 VOLATILE ORGANICS (SOIL)

Maxxam ID		PZ5104	PZ5105	PZ5106	PZ5107	PZ5108		
Sampling Date		2012/12/13	2012/12/13	2012/12/13	2012/12/13	2012/12/13		
COC Number		383592-03-01	383592-03-01	383592-03-01	383592-03-01	383592-03-01		
	Units	TP204-5	TP204-6	TP205-4	TP205-5	TP206-4	RDL	QC Batch

Calculated Parameters								
1,3-Dichloropropene (cis+trans)	ug/g	ND	ND	ND	ND	ND	0.050	3071106
Volatile Organics								
Acetone (2-Propanone)	ug/g	ND	ND	ND	ND	ND	0.50	3071732
Benzene	ug/g	ND	0.048	ND	0.048	ND	0.020	3071732
Bromodichloromethane	ug/g	ND	ND	ND	ND	ND	0.050	3071732
Bromoform	ug/g	ND	ND	ND	ND	ND	0.050	3071732
Bromomethane	ug/g	ND	ND	ND	ND	ND	0.050	3071732
Carbon Tetrachloride	ug/g	ND	ND	ND	ND	ND	0.050	3071732
Chlorobenzene	ug/g	ND	ND	ND	ND	ND	0.050	3071732
Chloroform	ug/g	ND	ND	ND	ND	ND	0.050	3071732
Dibromochloromethane	ug/g	ND	ND	ND	ND	ND	0.050	3071732
1,2-Dichlorobenzene	ug/g	ND	ND	ND	ND	ND	0.050	3071732
1,3-Dichlorobenzene	ug/g	ND	ND	ND	ND	ND	0.050	3071732
1,4-Dichlorobenzene	ug/g	ND	ND	ND	ND	ND	0.050	3071732
Dichlorodifluoromethane (FREON 12)	ug/g	ND	ND	ND	ND	ND	0.050	3071732
1,1-Dichloroethane	ug/g	ND	ND	ND	ND	ND	0.050	3071732
1,2-Dichloroethane	ug/g	ND	ND	ND	ND	ND	0.050	3071732
1,1-Dichloroethylene	ug/g	ND	ND	ND	ND	ND	0.050	3071732
cis-1,2-Dichloroethylene	ug/g	ND	ND	ND	ND	ND	0.050	3071732
trans-1,2-Dichloroethylene	ug/g	ND	ND	ND	ND	ND	0.050	3071732
1,2-Dichloropropane	ug/g	ND	ND	ND	ND	ND	0.050	3071732
cis-1,3-Dichloropropene	ug/g	ND	ND	ND	ND	ND	0.030	3071732
trans-1,3-Dichloropropene	ug/g	ND	ND	ND	ND	ND	0.040	3071732
Ethylbenzene	ug/g	ND	ND	ND	ND	ND	0.020	3071732
Ethylene Dibromide	ug/g	ND	ND	ND	ND	ND	0.050	3071732
Hexane	ug/g	ND	ND	ND	ND	ND	0.050	3071732
Methylene Chloride(Dichloromethane)	ug/g	ND	ND	ND	ND	ND	0.050	3071732
Methyl Isobutyl Ketone	ug/g	ND	ND	ND	ND	ND	0.50	3071732
Methyl Ethyl Ketone (2-Butanone)	ug/g	ND	ND	ND	ND	ND	0.50	3071732
Methyl t-butyl ether (MTBE)	ug/g	ND	ND	ND	ND	ND	0.050	3071732
Styrene	ug/g	ND	ND	ND	ND	ND	0.050	3071732
1,1,1,2-Tetrachloroethane	ug/g	ND	ND	ND	ND	ND	0.050	3071732
ND = Not detected RDL = Reportable Detection Limit QC Batch = Quality Control Batch								

Maxxam Job #: B2J8051
Report Date: 2012/12/28

Terrapex Environmental Ltd
Client Project #: CB644.01
Site Location: 121 HUME STREET, COLLINGWOOD, ON
Sampler Initials: SS

O'REG 153 VOLATILE ORGANICS (SOIL)

Maxxam ID		PZ5104	PZ5105	PZ5106	PZ5107	PZ5108		
Sampling Date		2012/12/13	2012/12/13	2012/12/13	2012/12/13	2012/12/13		
COC Number		383592-03-01	383592-03-01	383592-03-01	383592-03-01	383592-03-01		
	Units	TP204-5	TP204-6	TP205-4	TP205-5	TP206-4	RDL	QC Batch
1,1,2,2-Tetrachloroethane	ug/g	ND	ND	ND	ND	ND	0.050	3071732
Tetrachloroethylene	ug/g	ND	ND	ND	ND	ND	0.050	3071732
Toluene	ug/g	ND	ND	ND	ND	ND	0.020	3071732
1,1,1-Trichloroethane	ug/g	ND	ND	ND	ND	ND	0.050	3071732
1,1,2-Trichloroethane	ug/g	ND	ND	ND	ND	ND	0.050	3071732
Trichloroethylene	ug/g	ND	ND	ND	ND	ND	0.050	3071732
Vinyl Chloride	ug/g	ND	ND	ND	ND	ND	0.020	3071732
p+m-Xylene	ug/g	ND	ND	ND	ND	ND	0.020	3071732
o-Xylene	ug/g	ND	ND	ND	ND	ND	0.020	3071732
Xylene (Total)	ug/g	ND	ND	ND	ND	ND	0.020	3071732
Trichlorofluoromethane (FREON 11)	ug/g	ND	ND	ND	ND	ND	0.050	3071732
Surrogate Recovery (%)								
4-Bromofluorobenzene	%	96	100	100	101	98		3071732
D10-o-Xylene	%	100	98	102	96	95		3071732
D4-1,2-Dichloroethane	%	108	103	102	103	102		3071732
D8-Toluene	%	107	99	99	100	99		3071732
ND = Not detected RDL = Reportable Detection Limit QC Batch = Quality Control Batch								

Maxxam Job #: B2J8051
Report Date: 2012/12/28

Terrapex Environmental Ltd
Client Project #: CB644.01
Site Location: 121 HUME STREET, COLLINGWOOD, ON
Sampler Initials: SS

O'REG 153 VOLATILE ORGANICS (SOIL)

Maxxam ID		PZ5109	PZ5110	PZ5111	PZ5120	PZ5121		
Sampling Date		2012/12/13	2012/12/13	2012/12/13	2012/12/14	2012/12/14		
COC Number		383592-03-01	383592-03-01	383592-03-01	383592-03-01	383592-03-01		
	Units	TP206-5	TP207-4	TP207-6	TP211-6	TP211-7	RDL	QC Batch

Calculated Parameters								
1,3-Dichloropropene (cis+trans)	ug/g	ND	ND	ND	ND	ND	0.050	3071106
Volatile Organics								
Acetone (2-Propanone)	ug/g	ND	ND	ND	ND	ND	0.50	3071732
Benzene	ug/g	ND	ND	ND	ND	ND	0.020	3071732
Bromodichloromethane	ug/g	ND	ND	ND	ND	ND	0.050	3071732
Bromoform	ug/g	ND	ND	ND	ND	ND	0.050	3071732
Bromomethane	ug/g	ND	ND	ND	ND	ND	0.050	3071732
Carbon Tetrachloride	ug/g	ND	ND	ND	ND	ND	0.050	3071732
Chlorobenzene	ug/g	ND	ND	ND	ND	ND	0.050	3071732
Chloroform	ug/g	ND	ND	ND	ND	ND	0.050	3071732
Dibromochloromethane	ug/g	ND	ND	ND	ND	ND	0.050	3071732
1,2-Dichlorobenzene	ug/g	ND	ND	ND	ND	ND	0.050	3071732
1,3-Dichlorobenzene	ug/g	ND	ND	ND	ND	ND	0.050	3071732
1,4-Dichlorobenzene	ug/g	ND	ND	ND	ND	ND	0.050	3071732
Dichlorodifluoromethane (FREON 12)	ug/g	ND	ND	ND	ND	ND	0.050	3071732
1,1-Dichloroethane	ug/g	ND	ND	ND	ND	ND	0.050	3071732
1,2-Dichloroethane	ug/g	ND	ND	ND	ND	ND	0.050	3071732
1,1-Dichloroethylene	ug/g	ND	ND	ND	ND	ND	0.050	3071732
cis-1,2-Dichloroethylene	ug/g	ND	ND	ND	ND	ND	0.050	3071732
trans-1,2-Dichloroethylene	ug/g	ND	ND	ND	ND	ND	0.050	3071732
1,2-Dichloropropane	ug/g	ND	ND	ND	ND	ND	0.050	3071732
cis-1,3-Dichloropropene	ug/g	ND	ND	ND	ND	ND	0.030	3071732
trans-1,3-Dichloropropene	ug/g	ND	ND	ND	ND	ND	0.040	3071732
Ethylbenzene	ug/g	ND	ND	ND	ND	ND	0.020	3071732
Ethylene Dibromide	ug/g	ND	ND	ND	ND	ND	0.050	3071732
Hexane	ug/g	ND	ND	ND	ND	ND	0.050	3071732
Methylene Chloride(Dichloromethane)	ug/g	ND	ND	ND	ND	ND	0.050	3071732
Methyl Isobutyl Ketone	ug/g	ND	ND	ND	ND	ND	0.50	3071732
Methyl Ethyl Ketone (2-Butanone)	ug/g	ND	ND	ND	ND	ND	0.50	3071732
Methyl t-butyl ether (MTBE)	ug/g	ND	ND	ND	ND	ND	0.050	3071732
Styrene	ug/g	ND	ND	ND	ND	ND	0.050	3071732
1,1,1,2-Tetrachloroethane	ug/g	ND	ND	ND	ND	ND	0.050	3071732
ND = Not detected RDL = Reportable Detection Limit QC Batch = Quality Control Batch								

Maxxam Job #: B2J8051
Report Date: 2012/12/28

Terrapex Environmental Ltd
Client Project #: CB644.01
Site Location: 121 HUME STREET, COLLINGWOOD, ON
Sampler Initials: SS

O'REG 153 VOLATILE ORGANICS (SOIL)

Maxxam ID		PZ5109	PZ5110	PZ5111	PZ5120	PZ5121		
Sampling Date		2012/12/13	2012/12/13	2012/12/13	2012/12/14	2012/12/14		
COC Number		383592-03-01	383592-03-01	383592-03-01	383592-03-01	383592-03-01		
	Units	TP206-5	TP207-4	TP207-6	TP211-6	TP211-7	RDL	QC Batch
1,1,2,2-Tetrachloroethane	ug/g	ND	ND	ND	ND	ND	0.050	3071732
Tetrachloroethylene	ug/g	ND	ND	ND	ND	ND	0.050	3071732
Toluene	ug/g	ND	ND	ND	ND	ND	0.020	3071732
1,1,1-Trichloroethane	ug/g	ND	ND	ND	ND	ND	0.050	3071732
1,1,2-Trichloroethane	ug/g	ND	ND	ND	ND	ND	0.050	3071732
Trichloroethylene	ug/g	ND	ND	ND	ND	ND	0.050	3071732
Vinyl Chloride	ug/g	ND	ND	ND	ND	ND	0.020	3071732
p+m-Xylene	ug/g	ND	ND	ND	ND	ND	0.020	3071732
o-Xylene	ug/g	ND	ND	ND	ND	ND	0.020	3071732
Xylene (Total)	ug/g	ND	ND	ND	ND	ND	0.020	3071732
Trichlorofluoromethane (FREON 11)	ug/g	ND	ND	ND	ND	ND	0.050	3071732
Surrogate Recovery (%)								
4-Bromofluorobenzene	%	100	102	100	99	100		3071732
D10-o-Xylene	%	100	96	102	101	95		3071732
D4-1,2-Dichloroethane	%	102	99	101	102	103		3071732
D8-Toluene	%	100	96	99	99	99		3071732
ND = Not detected RDL = Reportable Detection Limit QC Batch = Quality Control Batch								

Maxxam Job #: B2J8051
Report Date: 2012/12/28

Terrapex Environmental Ltd
Client Project #: CB644.01
Site Location: 121 HUME STREET, COLLINGWOOD, ON
Sampler Initials: SS

O'REG 153 VOLATILE ORGANICS (SOIL)

Maxxam ID		PZ5122	PZ5123	PZ5124	PZ5125	PZ5126		
Sampling Date		2012/12/14	2012/12/14	2012/12/14	2012/12/14	2012/12/14		
COC Number		383592-03-01	383592-03-01	383592-03-01	383592-03-01	383592-03-01		
	Units	TP212-5	TP212-6	TP213-5	TP213-6	TP002	RDL	QC Batch

Calculated Parameters								
1,3-Dichloropropene (cis+trans)	ug/g	ND	ND	ND	ND	ND	0.050	3071106
Volatile Organics								
Acetone (2-Propanone)	ug/g	ND	ND	ND	ND	ND	0.50	3071732
Benzene	ug/g	ND	ND	ND	ND	ND	0.020	3071732
Bromodichloromethane	ug/g	ND	ND	ND	ND	ND	0.050	3071732
Bromoform	ug/g	ND	ND	ND	ND	ND	0.050	3071732
Bromomethane	ug/g	ND	ND	ND	ND	ND	0.050	3071732
Carbon Tetrachloride	ug/g	ND	ND	ND	ND	ND	0.050	3071732
Chlorobenzene	ug/g	ND	ND	ND	ND	ND	0.050	3071732
Chloroform	ug/g	ND	ND	ND	ND	ND	0.050	3071732
Dibromochloromethane	ug/g	ND	ND	ND	ND	ND	0.050	3071732
1,2-Dichlorobenzene	ug/g	ND	ND	ND	ND	ND	0.050	3071732
1,3-Dichlorobenzene	ug/g	ND	ND	ND	ND	ND	0.050	3071732
1,4-Dichlorobenzene	ug/g	ND	ND	ND	ND	ND	0.050	3071732
Dichlorodifluoromethane (FREON 12)	ug/g	ND	ND	ND	ND	ND	0.050	3071732
1,1-Dichloroethane	ug/g	ND	ND	ND	ND	ND	0.050	3071732
1,2-Dichloroethane	ug/g	ND	ND	ND	ND	ND	0.050	3071732
1,1-Dichloroethylene	ug/g	ND	ND	ND	ND	ND	0.050	3071732
cis-1,2-Dichloroethylene	ug/g	ND	ND	ND	ND	ND	0.050	3071732
trans-1,2-Dichloroethylene	ug/g	ND	ND	ND	ND	ND	0.050	3071732
1,2-Dichloropropane	ug/g	ND	ND	ND	ND	ND	0.050	3071732
cis-1,3-Dichloropropene	ug/g	ND	ND	ND	ND	ND	0.030	3071732
trans-1,3-Dichloropropene	ug/g	ND	ND	ND	ND	ND	0.040	3071732
Ethylbenzene	ug/g	ND	ND	ND	ND	ND	0.020	3071732
Ethylene Dibromide	ug/g	ND	ND	ND	ND	ND	0.050	3071732
Hexane	ug/g	ND	ND	ND	ND	ND	0.050	3071732
Methylene Chloride(Dichloromethane)	ug/g	ND	ND	ND	ND	ND	0.050	3071732
Methyl Isobutyl Ketone	ug/g	ND	ND	ND	ND	ND	0.50	3071732
Methyl Ethyl Ketone (2-Butanone)	ug/g	ND	ND	ND	ND	ND	0.50	3071732
Methyl t-butyl ether (MTBE)	ug/g	ND	ND	ND	ND	ND	0.050	3071732
Styrene	ug/g	ND	ND	ND	ND	ND	0.050	3071732
1,1,1,2-Tetrachloroethane	ug/g	ND	ND	ND	ND	ND	0.050	3071732
ND = Not detected RDL = Reportable Detection Limit QC Batch = Quality Control Batch								

Maxxam Job #: B2J8051
Report Date: 2012/12/28

Terrapex Environmental Ltd
Client Project #: CB644.01
Site Location: 121 HUME STREET, COLLINGWOOD, ON
Sampler Initials: SS

O'REG 153 VOLATILE ORGANICS (SOIL)

Maxxam ID		PZ5122	PZ5123	PZ5124	PZ5125	PZ5126		
Sampling Date		2012/12/14	2012/12/14	2012/12/14	2012/12/14	2012/12/14		
COC Number		383592-03-01	383592-03-01	383592-03-01	383592-03-01	383592-03-01		
	Units	TP212-5	TP212-6	TP213-5	TP213-6	TP002	RDL	QC Batch

1,1,2,2-Tetrachloroethane	ug/g	ND	ND	ND	ND	ND	0.050	3071732
Tetrachloroethylene	ug/g	ND	ND	ND	ND	ND	0.050	3071732
Toluene	ug/g	ND	ND	ND	ND	ND	0.020	3071732
1,1,1-Trichloroethane	ug/g	ND	ND	ND	ND	ND	0.050	3071732
1,1,2-Trichloroethane	ug/g	ND	ND	ND	ND	ND	0.050	3071732
Trichloroethylene	ug/g	ND	ND	ND	ND	ND	0.050	3071732
Vinyl Chloride	ug/g	ND	ND	ND	ND	ND	0.020	3071732
p+m-Xylene	ug/g	ND	ND	ND	ND	ND	0.020	3071732
o-Xylene	ug/g	ND	ND	ND	ND	ND	0.020	3071732
Xylene (Total)	ug/g	ND	ND	ND	ND	ND	0.020	3071732
Trichlorofluoromethane (FREON 11)	ug/g	ND	ND	ND	ND	ND	0.050	3071732
Surrogate Recovery (%)								
4-Bromofluorobenzene	%	99	100	100	99	101		3071732
D10-o-Xylene	%	100	99	92	92	111		3071732
D4-1,2-Dichloroethane	%	103	103	102	102	102		3071732
D8-Toluene	%	99	100	100	99	99		3071732

ND = Not detected
RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Maxxam Job #: B2J8051
Report Date: 2012/12/28

Terrapex Environmental Ltd
Client Project #: CB644.01
Site Location: 121 HUME STREET, COLLINGWOOD, ON
Sampler Initials: SS

O'REG 153 VOLATILE ORGANICS (SOIL)

Maxxam ID		PZ5127	PZ5128	PZ5128		
Sampling Date		2012/12/14	2012/12/14	2012/12/14		
COC Number		383592-03-01	383592-03-01	383592-03-01		
	Units	TP214-4	TP214-5	TP214-5 Lab-Dup	RDL	QC Batch

Calculated Parameters						
1,3-Dichloropropene (cis+trans)	ug/g	ND	ND		0.050	3071106
Volatile Organics						
Acetone (2-Propanone)	ug/g	ND	ND	ND	0.50	3071732
Benzene	ug/g	ND	ND	ND	0.020	3071732
Bromodichloromethane	ug/g	ND	ND	ND	0.050	3071732
Bromoform	ug/g	ND	ND	ND	0.050	3071732
Bromomethane	ug/g	ND	ND	ND	0.050	3071732
Carbon Tetrachloride	ug/g	ND	ND	ND	0.050	3071732
Chlorobenzene	ug/g	ND	ND	ND	0.050	3071732
Chloroform	ug/g	ND	ND	ND	0.050	3071732
Dibromochloromethane	ug/g	ND	ND	ND	0.050	3071732
1,2-Dichlorobenzene	ug/g	ND	ND	ND	0.050	3071732
1,3-Dichlorobenzene	ug/g	ND	ND	ND	0.050	3071732
1,4-Dichlorobenzene	ug/g	ND	ND	ND	0.050	3071732
Dichlorodifluoromethane (FREON 12)	ug/g	ND	ND	ND	0.050	3071732
1,1-Dichloroethane	ug/g	ND	ND	ND	0.050	3071732
1,2-Dichloroethane	ug/g	ND	ND	ND	0.050	3071732
1,1-Dichloroethylene	ug/g	ND	ND	ND	0.050	3071732
cis-1,2-Dichloroethylene	ug/g	ND	ND	ND	0.050	3071732
trans-1,2-Dichloroethylene	ug/g	ND	ND	ND	0.050	3071732
1,2-Dichloropropane	ug/g	ND	ND	ND	0.050	3071732
cis-1,3-Dichloropropene	ug/g	ND	ND	ND	0.030	3071732
trans-1,3-Dichloropropene	ug/g	ND	ND	ND	0.040	3071732
Ethylbenzene	ug/g	ND	ND	ND	0.020	3071732
Ethylene Dibromide	ug/g	ND	ND	ND	0.050	3071732
Hexane	ug/g	ND	ND	ND	0.050	3071732
Methylene Chloride(Dichloromethane)	ug/g	ND	ND	ND	0.050	3071732
Methyl Isobutyl Ketone	ug/g	ND	ND	ND	0.50	3071732
Methyl Ethyl Ketone (2-Butanone)	ug/g	ND	ND	ND	0.50	3071732
Methyl t-butyl ether (MTBE)	ug/g	ND	ND	ND	0.050	3071732
Styrene	ug/g	ND	ND	ND	0.050	3071732
ND = Not detected RDL = Reportable Detection Limit QC Batch = Quality Control Batch						

Maxxam Job #: B2J8051
Report Date: 2012/12/28

Terrapex Environmental Ltd
Client Project #: CB644.01
Site Location: 121 HUME STREET, COLLINGWOOD, ON
Sampler Initials: SS

O'REG 153 VOLATILE ORGANICS (SOIL)

Maxxam ID		PZ5127	PZ5128	PZ5128		
Sampling Date		2012/12/14	2012/12/14	2012/12/14		
COC Number		383592-03-01	383592-03-01	383592-03-01		
	Units	TP214-4	TP214-5	TP214-5 Lab-Dup	RDL	QC Batch

1,1,1,2-Tetrachloroethane	ug/g	ND	ND	ND	0.050	3071732
1,1,2,2-Tetrachloroethane	ug/g	ND	ND	ND	0.050	3071732
Tetrachloroethylene	ug/g	ND	ND	ND	0.050	3071732
Toluene	ug/g	ND	ND	ND	0.020	3071732
1,1,1-Trichloroethane	ug/g	ND	ND	ND	0.050	3071732
1,1,2-Trichloroethane	ug/g	ND	ND	ND	0.050	3071732
Trichloroethylene	ug/g	ND	ND	ND	0.050	3071732
Vinyl Chloride	ug/g	ND	ND	ND	0.020	3071732
p+m-Xylene	ug/g	ND	ND	ND	0.020	3071732
o-Xylene	ug/g	ND	ND	ND	0.020	3071732
Xylene (Total)	ug/g	ND	ND	ND	0.020	3071732
Trichlorofluoromethane (FREON 11)	ug/g	ND	ND	ND	0.050	3071732
Surrogate Recovery (%)						
4-Bromofluorobenzene	%	100	98	100		3071732
D10-o-Xylene	%	108	93	89		3071732
D4-1,2-Dichloroethane	%	103	102	104		3071732
D8-Toluene	%	99	99	99		3071732

ND = Not detected
RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Maxxam Job #: B2J8051
Report Date: 2012/12/28

Terrapex Environmental Ltd
Client Project #: CB644.01
Site Location: 121 HUME STREET, COLLINGWOOD, ON
Sampler Initials: SS

PETROLEUM HYDROCARBONS (CCME)

Maxxam ID		PZ5126	PZ5126		
Sampling Date		2012/12/14	2012/12/14		
COC Number		383592-03-01	383592-03-01		
	Units	TP002	TP002 Lab-Dup	RDL	QC Batch

F2-F4 Hydrocarbons					
F4G-sg (Grav. Heavy Hydrocarbons)	ug/g	320	320	200	3080710
RDL = Reportable Detection Limit QC Batch = Quality Control Batch					

Maxxam Job #: B2J8051
Report Date: 2012/12/28

Terrapex Environmental Ltd
Client Project #: CB644.01
Site Location: 121 HUME STREET, COLLINGWOOD, ON
Sampler Initials: SS

Test Summary

Maxxam ID PZ5098
Sample ID TP201-4
Matrix Soil

Collected 2012/12/13
Shipped
Received 2012/12/14

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	3077606	2012/12/15	2012/12/22	Abdi Mohamud
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	3076227	2012/12/20	2012/12/20	Zhiyue (Frank) Zhu
Moisture	BAL	3076506	N/A	2012/12/20	Shivani Desai

Maxxam ID PZ5098 Dup
Sample ID TP201-4
Matrix Soil

Collected 2012/12/13
Shipped
Received 2012/12/14

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	3076227	2012/12/20	2012/12/20	Zhiyue (Frank) Zhu

Maxxam ID PZ5099
Sample ID TP201-5
Matrix Soil

Collected 2012/12/13
Shipped
Received 2012/12/14

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	3077606	2012/12/15	2012/12/22	Abdi Mohamud
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	3076227	2012/12/20	2012/12/20	Zhiyue (Frank) Zhu
Moisture	BAL	3076506	N/A	2012/12/20	Shivani Desai

Maxxam ID PZ5100
Sample ID TP202-4
Matrix Soil

Collected 2012/12/13
Shipped
Received 2012/12/14

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	3077606	2012/12/15	2012/12/22	Abdi Mohamud
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	3077802	2012/12/21	2012/12/22	(Kent) Maolin Li
Moisture	BAL	3076276	N/A	2012/12/20	Bonali Patel

Maxxam ID PZ5101
Sample ID TP202-6
Matrix Soil

Collected 2012/12/13
Shipped
Received 2012/12/14

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	3077606	2012/12/15	2012/12/22	Abdi Mohamud
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	3077802	2012/12/21	2012/12/22	(Kent) Maolin Li
Moisture	BAL	3076276	N/A	2012/12/20	Bonali Patel

Maxxam ID PZ5102
Sample ID TP203-5
Matrix Soil

Collected 2012/12/13
Shipped
Received 2012/12/14

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	3077606	2012/12/15	2012/12/22	Abdi Mohamud
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	3077802	2012/12/21	2012/12/22	(Kent) Maolin Li
Moisture	BAL	3076276	N/A	2012/12/20	Bonali Patel

Maxxam Job #: B2J8051
Report Date: 2012/12/28

Terrapex Environmental Ltd
Client Project #: CB644.01
Site Location: 121 HUME STREET, COLLINGWOOD, ON
Sampler Initials: SS

Test Summary

Maxxam ID PZ5103
Sample ID TP203-6
Matrix Soil

Collected 2012/12/13
Shipped
Received 2012/12/14

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	3077606	2012/12/15	2012/12/22	Abdi Mohamud
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	3077802	2012/12/21	2012/12/22	(Kent) Maolin Li
Moisture	BAL	3076276	N/A	2012/12/20	Bonali Patel

Maxxam ID PZ5104
Sample ID TP204-5
Matrix Soil

Collected 2012/12/13
Shipped
Received 2012/12/14

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
1,3-Dichloropropene Sum	CALC	3071106	N/A	2012/12/21	Automated Statchk
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	3077606	2012/12/15	2012/12/22	Abdi Mohamud
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	3077802	2012/12/21	2012/12/22	(Kent) Maolin Li
Moisture	BAL	3076276	N/A	2012/12/20	Bonali Patel
Volatile Organic Compounds in Soil	GC/MS	3071732	2012/12/17	2012/12/21	Rebecca Schultz

Maxxam ID PZ5104 Dup
Sample ID TP204-5
Matrix Soil

Collected 2012/12/13
Shipped
Received 2012/12/14

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Moisture	BAL	3076276	N/A	2012/12/20	Bonali Patel

Maxxam ID PZ5105
Sample ID TP204-6
Matrix Soil

Collected 2012/12/13
Shipped
Received 2012/12/14

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
1,3-Dichloropropene Sum	CALC	3071106	N/A	2012/12/21	Automated Statchk
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	3077606	2012/12/15	2012/12/22	Abdi Mohamud
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	3077802	2012/12/21	2012/12/22	(Kent) Maolin Li
Moisture	BAL	3076276	N/A	2012/12/20	Bonali Patel
Volatile Organic Compounds in Soil	GC/MS	3071732	2012/12/17	2012/12/19	Rebecca Schultz

Maxxam ID PZ5106
Sample ID TP205-4
Matrix Soil

Collected 2012/12/13
Shipped
Received 2012/12/14

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
1,3-Dichloropropene Sum	CALC	3071106	N/A	2012/12/21	Automated Statchk
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	3077606	2012/12/15	2012/12/22	Abdi Mohamud
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	3076227	2012/12/20	2012/12/20	Zhiyue (Frank) Zhu
Moisture	BAL	3076506	N/A	2012/12/20	Shivani Desai
Volatile Organic Compounds in Soil	GC/MS	3071732	2012/12/17	2012/12/19	Rebecca Schultz

Maxxam Job #: B2J8051
Report Date: 2012/12/28

Terrapex Environmental Ltd
Client Project #: CB644.01
Site Location: 121 HUME STREET, COLLINGWOOD, ON
Sampler Initials: SS

Test Summary

Maxxam ID PZ5107
Sample ID TP205-5
Matrix Soil

Collected 2012/12/13
Shipped
Received 2012/12/14

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
1,3-Dichloropropene Sum	CALC	3071106	N/A	2012/12/21	Automated Statchk
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	3077606	2012/12/15	2012/12/22	Abdi Mohamud
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	3076227	2012/12/20	2012/12/20	Zhiyue (Frank) Zhu
Moisture	BAL	3076506	N/A	2012/12/20	Shivani Desai
Volatile Organic Compounds in Soil	GC/MS	3071732	2012/12/17	2012/12/20	Rebecca Schultz

Maxxam ID PZ5108
Sample ID TP206-4
Matrix Soil

Collected 2012/12/13
Shipped
Received 2012/12/14

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
1,3-Dichloropropene Sum	CALC	3071106	N/A	2012/12/21	Automated Statchk
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	3077606	2012/12/15	2012/12/22	Abdi Mohamud
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	3076227	2012/12/20	2012/12/20	Zhiyue (Frank) Zhu
Moisture	BAL	3076506	N/A	2012/12/20	Shivani Desai
Volatile Organic Compounds in Soil	GC/MS	3071732	2012/12/17	2012/12/20	Rebecca Schultz

Maxxam ID PZ5109
Sample ID TP206-5
Matrix Soil

Collected 2012/12/13
Shipped
Received 2012/12/14

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
1,3-Dichloropropene Sum	CALC	3071106	N/A	2012/12/21	Automated Statchk
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	3077606	2012/12/15	2012/12/22	Abdi Mohamud
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	3077802	2012/12/21	2012/12/22	(Kent) Maolin Li
Moisture	BAL	3076276	N/A	2012/12/20	Bonali Patel
Volatile Organic Compounds in Soil	GC/MS	3071732	2012/12/17	2012/12/20	Rebecca Schultz

Maxxam ID PZ5110
Sample ID TP207-4
Matrix Soil

Collected 2012/12/13
Shipped
Received 2012/12/14

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
1,3-Dichloropropene Sum	CALC	3071106	N/A	2012/12/21	Automated Statchk
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	3077606	2012/12/15	2012/12/22	Abdi Mohamud
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	3077802	2012/12/21	2012/12/22	(Kent) Maolin Li
Moisture	BAL	3076276	N/A	2012/12/20	Bonali Patel
Volatile Organic Compounds in Soil	GC/MS	3071732	2012/12/17	2012/12/21	Rebecca Schultz

Maxxam ID PZ5111
Sample ID TP207-6
Matrix Soil

Collected 2012/12/13
Shipped
Received 2012/12/14

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
1,3-Dichloropropene Sum	CALC	3071106	N/A	2012/12/21	Automated Statchk
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	3077606	2012/12/15	2012/12/22	Abdi Mohamud
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	3077802	2012/12/21	2012/12/22	(Kent) Maolin Li
Moisture	BAL	3076276	N/A	2012/12/20	Bonali Patel
Volatile Organic Compounds in Soil	GC/MS	3071732	2012/12/17	2012/12/20	Rebecca Schultz

Maxxam Job #: B2J8051
Report Date: 2012/12/28

Terrapex Environmental Ltd
Client Project #: CB644.01
Site Location: 121 HUME STREET, COLLINGWOOD, ON
Sampler Initials: SS

Test Summary

Maxxam ID PZ5112
Sample ID TP208-5
Matrix Soil

Collected 2012/12/14
Shipped
Received 2012/12/14

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	3077606	2012/12/15	2012/12/22	Abdi Mohamud
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	3077802	2012/12/21	2012/12/22	(Kent) Maolin Li
Moisture	BAL	3076276	N/A	2012/12/20	Bonali Patel

Maxxam ID PZ5113
Sample ID TP208-6
Matrix Soil

Collected 2012/12/14
Shipped
Received 2012/12/14

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	3077606	2012/12/15	2012/12/23	Abdi Mohamud
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	3077802	2012/12/21	2012/12/22	(Kent) Maolin Li
Moisture	BAL	3076276	N/A	2012/12/20	Bonali Patel

Maxxam ID PZ5114
Sample ID TP208-7
Matrix Soil

Collected 2012/12/14
Shipped
Received 2012/12/14

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	3077606	2012/12/15	2012/12/23	Abdi Mohamud
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	3076227	2012/12/20	2012/12/20	Zhiyue (Frank) Zhu
Moisture	BAL	3076506	N/A	2012/12/20	Shivani Desai

Maxxam ID PZ5115
Sample ID TP001
Matrix Soil

Collected 2012/12/14
Shipped
Received 2012/12/14

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	3077606	2012/12/15	2012/12/22	Abdi Mohamud
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	3076227	2012/12/20	2012/12/20	Zhiyue (Frank) Zhu
Moisture	BAL	3076506	N/A	2012/12/20	Shivani Desai

Maxxam ID PZ5116
Sample ID TP209-5
Matrix Soil

Collected 2012/12/14
Shipped
Received 2012/12/14

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	3077606	2012/12/15	2012/12/21	Abdi Mohamud
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	3076227	2012/12/20	2012/12/20	Zhiyue (Frank) Zhu
Moisture	BAL	3076506	N/A	2012/12/20	Shivani Desai

Maxxam Job #: B2J8051
Report Date: 2012/12/28

Terrapex Environmental Ltd
Client Project #: CB644.01
Site Location: 121 HUME STREET, COLLINGWOOD, ON
Sampler Initials: SS

Test Summary

Maxxam ID PZ5116 Dup
Sample ID TP209-5
Matrix Soil

Collected 2012/12/14
Shipped
Received 2012/12/14

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	3077606	2012/12/15	2012/12/22	Abdi Mohamud

Maxxam ID PZ5117
Sample ID TP209-7
Matrix Soil

Collected 2012/12/14
Shipped
Received 2012/12/14

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	3077606	2012/12/15	2012/12/22	Abdi Mohamud
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	3077802	2012/12/21	2012/12/22	(Kent) Maolin Li
Moisture	BAL	3076276	N/A	2012/12/20	Bonali Patel

Maxxam ID PZ5118
Sample ID TP210-4
Matrix Soil

Collected 2012/12/14
Shipped
Received 2012/12/14

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	3077232	2012/12/15	2012/12/21	Mamdouh Salib
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	3077802	2012/12/21	2012/12/22	(Kent) Maolin Li
Moisture	BAL	3076276	N/A	2012/12/20	Bonali Patel

Maxxam ID PZ5119
Sample ID TP210-6
Matrix Soil

Collected 2012/12/14
Shipped
Received 2012/12/14

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	3077232	2012/12/15	2012/12/21	Mamdouh Salib
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	3077802	2012/12/21	2012/12/22	(Kent) Maolin Li
Moisture	BAL	3076276	N/A	2012/12/20	Bonali Patel

Maxxam ID PZ5120
Sample ID TP211-6
Matrix Soil

Collected 2012/12/14
Shipped
Received 2012/12/14

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
1,3-Dichloropropene Sum	CALC	3071106	N/A	2012/12/21	Automated Statchk
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	3077232	2012/12/15	2012/12/21	Mamdouh Salib
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	3077802	2012/12/21	2012/12/22	(Kent) Maolin Li
Moisture	BAL	3076276	N/A	2012/12/20	Bonali Patel
Volatile Organic Compounds in Soil	GC/MS	3071732	2012/12/17	2012/12/20	Rebecca Schultz

Maxxam Job #: B2J8051
Report Date: 2012/12/28

Terrapex Environmental Ltd
Client Project #: CB644.01
Site Location: 121 HUME STREET, COLLINGWOOD, ON
Sampler Initials: SS

Test Summary

Maxxam ID PZ5120 Dup
Sample ID TP211-6
Matrix Soil

Collected 2012/12/14
Shipped
Received 2012/12/14

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	3077802	2012/12/21	2012/12/22	(Kent) Maolin Li

Maxxam ID PZ5121
Sample ID TP211-7
Matrix Soil

Collected 2012/12/14
Shipped
Received 2012/12/14

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
1,3-Dichloropropene Sum	CALC	3071106	N/A	2012/12/21	Automated Statchk
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	3077232	2012/12/15	2012/12/21	Mamdouh Salib
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	3077802	2012/12/21	2012/12/22	(Kent) Maolin Li
Moisture	BAL	3076276	N/A	2012/12/20	Bonali Patel
Volatile Organic Compounds in Soil	GC/MS	3071732	2012/12/17	2012/12/20	Rebecca Schultz

Maxxam ID PZ5122
Sample ID TP212-5
Matrix Soil

Collected 2012/12/14
Shipped
Received 2012/12/14

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
1,3-Dichloropropene Sum	CALC	3071106	N/A	2012/12/21	Automated Statchk
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	3077232	2012/12/15	2012/12/21	Mamdouh Salib
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	3076227	2012/12/20	2012/12/20	Zhiyue (Frank) Zhu
Moisture	BAL	3076506	N/A	2012/12/20	Shivani Desai
Volatile Organic Compounds in Soil	GC/MS	3071732	2012/12/17	2012/12/20	Rebecca Schultz

Maxxam ID PZ5123
Sample ID TP212-6
Matrix Soil

Collected 2012/12/14
Shipped
Received 2012/12/14

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
1,3-Dichloropropene Sum	CALC	3071106	N/A	2012/12/21	Automated Statchk
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	3077232	2012/12/15	2012/12/21	Mamdouh Salib
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	3076227	2012/12/20	2012/12/20	Zhiyue (Frank) Zhu
Moisture	BAL	3076506	N/A	2012/12/20	Shivani Desai
Volatile Organic Compounds in Soil	GC/MS	3071732	2012/12/17	2012/12/20	Rebecca Schultz

Maxxam ID PZ5124
Sample ID TP213-5
Matrix Soil

Collected 2012/12/14
Shipped
Received 2012/12/14

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
1,3-Dichloropropene Sum	CALC	3071106	N/A	2012/12/21	Automated Statchk
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	3077232	2012/12/15	2012/12/21	Mamdouh Salib
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	3076227	2012/12/20	2012/12/20	Zhiyue (Frank) Zhu
Moisture	BAL	3076506	N/A	2012/12/20	Shivani Desai
Volatile Organic Compounds in Soil	GC/MS	3071732	2012/12/17	2012/12/20	Rebecca Schultz

Maxxam Job #: B2J8051
Report Date: 2012/12/28

Terrapex Environmental Ltd
Client Project #: CB644.01
Site Location: 121 HUME STREET, COLLINGWOOD, ON
Sampler Initials: SS

Test Summary

Maxxam ID PZ5125
Sample ID TP213-6
Matrix Soil

Collected 2012/12/14
Shipped
Received 2012/12/14

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
1,3-Dichloropropene Sum	CALC	3071106	N/A	2012/12/21	Automated Statchk
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	3077232	2012/12/15	2012/12/21	Mamdouh Salib
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	3077802	2012/12/21	2012/12/22	(Kent) Maolin Li
Moisture	BAL	3076276	N/A	2012/12/20	Bonali Patel
Volatile Organic Compounds in Soil	GC/MS	3071732	2012/12/17	2012/12/20	Rebecca Schultz

Maxxam ID PZ5126
Sample ID TP002
Matrix Soil

Collected 2012/12/14
Shipped
Received 2012/12/14

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
1,3-Dichloropropene Sum	CALC	3071106	N/A	2012/12/21	Automated Statchk
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	3077232	2012/12/15	2012/12/21	Mamdouh Salib
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	3077802	2012/12/21	2012/12/22	(Kent) Maolin Li
F4G (CCME Hydrocarbons Gravimetric)	BAL	3080710	2012/12/27	2012/12/28	Rajni Tyagi
Moisture	BAL	3076276	N/A	2012/12/20	Bonali Patel
Volatile Organic Compounds in Soil	GC/MS	3071732	2012/12/17	2012/12/20	Rebecca Schultz

Maxxam ID PZ5126 Dup
Sample ID TP002
Matrix Soil

Collected 2012/12/14
Shipped
Received 2012/12/14

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
F4G (CCME Hydrocarbons Gravimetric)	BAL	3080710	2012/12/27	2012/12/28	Rajni Tyagi

Maxxam ID PZ5127
Sample ID TP214-4
Matrix Soil

Collected 2012/12/14
Shipped
Received 2012/12/14

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
1,3-Dichloropropene Sum	CALC	3071106	N/A	2012/12/21	Automated Statchk
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	3077232	2012/12/15	2012/12/21	Mamdouh Salib
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	3077802	2012/12/21	2012/12/22	(Kent) Maolin Li
Moisture	BAL	3076276	N/A	2012/12/20	Bonali Patel
Volatile Organic Compounds in Soil	GC/MS	3071732	2012/12/17	2012/12/20	Rebecca Schultz

Maxxam ID PZ5128
Sample ID TP214-5
Matrix Soil

Collected 2012/12/14
Shipped
Received 2012/12/14

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
1,3-Dichloropropene Sum	CALC	3071106	N/A	2012/12/21	Automated Statchk
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	3077232	2012/12/15	2012/12/21	Mamdouh Salib
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	3077802	2012/12/21	2012/12/22	(Kent) Maolin Li
Moisture	BAL	3076276	N/A	2012/12/20	Bonali Patel
Volatile Organic Compounds in Soil	GC/MS	3071732	2012/12/17	2012/12/20	Rebecca Schultz

Maxxam Job #: B2J8051
Report Date: 2012/12/28

Terrapex Environmental Ltd
Client Project #: CB644.01
Site Location: 121 HUME STREET, COLLINGWOOD, ON
Sampler Initials: SS

Test Summary

Maxxam ID PZ5128 Dup
Sample ID TP214-5
Matrix Soil

Collected 2012/12/14
Shipped
Received 2012/12/14

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Volatile Organic Compounds in Soil	GC/MS	3071732	2012/12/17	2012/12/20	Rebecca Schultz

Maxxam Job #: B2J8051
Report Date: 2012/12/28

Terrapex Environmental Ltd
Client Project #: CB644.01
Site Location: 121 HUME STREET, COLLINGWOOD, ON
Sampler Initials: SS

Package 1	2.0°C

Each temperature is the average of up to three cooler temperatures taken at receipt

GENERAL COMMENTS

Sample PZ5110-01: F2-F4 Analysis: Detection limits were adjusted for high moisture content.

Sample PZ5113-01: F1-BTEX Analysis: Due to high concentration of target analytes, sample required dilution. Reporting limits were adjusted accordingly.

Results relate only to the items tested.

Terrapex Environmental Ltd
Attention: Jeff Stevenson
Client Project #: CB644.01
P.O. #:
Site Location: 121 HUME STREET, COLLINGWOOD, ON

Quality Assurance Report

Maxxam Job Number: MB2J8051

QA/QC Batch Num Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QC Limits
3071732 RSC	Matrix Spike [PZ5128-02]	4-Bromofluorobenzene	2012/12/20		100	%	60 - 140
		D10-o-Xylene	2012/12/20		91	%	60 - 130
		D4-1,2-Dichloroethane	2012/12/20		102	%	60 - 140
		D8-Toluene	2012/12/20		99	%	60 - 140
		Acetone (2-Propanone)	2012/12/20		92	%	60 - 140
		Benzene	2012/12/20		106	%	60 - 140
		Bromodichloromethane	2012/12/20		98	%	60 - 140
		Bromoform	2012/12/20		99	%	60 - 140
		Bromomethane	2012/12/20		137	%	60 - 140
		Carbon Tetrachloride	2012/12/20		105	%	60 - 140
		Chlorobenzene	2012/12/20		95	%	60 - 140
		Chloroform	2012/12/20		110	%	60 - 140
		Dibromochloromethane	2012/12/20		101	%	60 - 140
		1,2-Dichlorobenzene	2012/12/20		93	%	60 - 140
		1,3-Dichlorobenzene	2012/12/20		94	%	60 - 140
		1,4-Dichlorobenzene	2012/12/20		95	%	60 - 140
		Dichlorodifluoromethane (FREON 12)	2012/12/20		106	%	60 - 140
		1,1-Dichloroethane	2012/12/20		95	%	60 - 140
		1,2-Dichloroethane	2012/12/20		103	%	60 - 140
		1,1-Dichloroethylene	2012/12/20		118	%	60 - 140
		cis-1,2-Dichloroethylene	2012/12/20		103	%	60 - 140
		trans-1,2-Dichloroethylene	2012/12/20		112	%	60 - 140
		1,2-Dichloropropane	2012/12/20		96	%	60 - 140
		cis-1,3-Dichloropropene	2012/12/20		94	%	60 - 140
		trans-1,3-Dichloropropene	2012/12/20		95	%	60 - 140
		Ethylbenzene	2012/12/20		97	%	60 - 140
		Ethylene Dibromide	2012/12/20		98	%	60 - 140
		Hexane	2012/12/20		102	%	60 - 140
		Methylene Chloride(Dichloromethane)	2012/12/20		102	%	60 - 140
		Methyl Isobutyl Ketone	2012/12/20		74	%	60 - 140
		Methyl Ethyl Ketone (2-Butanone)	2012/12/20		108	%	60 - 140
		Methyl t-butyl ether (MTBE)	2012/12/20		108	%	60 - 140
		Styrene	2012/12/20		97	%	60 - 140
		1,1,1,2-Tetrachloroethane	2012/12/20		95	%	60 - 140
		1,1,2,2-Tetrachloroethane	2012/12/20		91	%	60 - 140
		Tetrachloroethylene	2012/12/20		96	%	60 - 140
		Toluene	2012/12/20		98	%	60 - 140
		1,1,1-Trichloroethane	2012/12/20		99	%	60 - 140
		1,1,2-Trichloroethane	2012/12/20		98	%	60 - 140
		Trichloroethylene	2012/12/20		100	%	60 - 140
		Vinyl Chloride	2012/12/20		121	%	60 - 140
		p+m-Xylene	2012/12/20		101	%	60 - 140
		o-Xylene	2012/12/20		101	%	60 - 140
		Trichlorofluoromethane (FREON 11)	2012/12/20		141 (1)	%	60 - 140
	Spiked Blank	4-Bromofluorobenzene	2012/12/19		102	%	60 - 140
		D10-o-Xylene	2012/12/19		99	%	60 - 130
		D4-1,2-Dichloroethane	2012/12/19		100	%	60 - 140
		D8-Toluene	2012/12/19		100	%	60 - 140
		Acetone (2-Propanone)	2012/12/19		105	%	60 - 140
		Benzene	2012/12/19		107	%	60 - 130
		Bromodichloromethane	2012/12/19		100	%	60 - 130
		Bromoform	2012/12/19		102	%	60 - 130
		Bromomethane	2012/12/19		132	%	60 - 140
		Carbon Tetrachloride	2012/12/19		108	%	60 - 130

Terrapex Environmental Ltd
Attention: Jeff Stevenson
Client Project #: CB644.01
P.O. #:
Site Location: 121 HUME STREET, COLLINGWOOD, ON

Quality Assurance Report (Continued)

Maxxam Job Number: MB2J8051

QA/QC Batch Num Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QC Limits
3071732 RSC	Spiked Blank	Chlorobenzene	2012/12/19		97	%	60 - 130
		Chloroform	2012/12/19		112	%	60 - 130
		Dibromochloromethane	2012/12/19		104	%	60 - 130
		1,2-Dichlorobenzene	2012/12/19		98	%	60 - 130
		1,3-Dichlorobenzene	2012/12/19		99	%	60 - 130
		1,4-Dichlorobenzene	2012/12/19		100	%	60 - 130
		Dichlorodifluoromethane (FREON 12)	2012/12/19		107	%	60 - 140
		1,1-Dichloroethane	2012/12/19		96	%	60 - 130
		1,2-Dichloroethane	2012/12/19		105	%	60 - 130
		1,1-Dichloroethylene	2012/12/19		141 (1)	%	60 - 130
		cis-1,2-Dichloroethylene	2012/12/19		105	%	60 - 130
		trans-1,2-Dichloroethylene	2012/12/19		115	%	60 - 130
		1,2-Dichloropropane	2012/12/19		97	%	60 - 130
		cis-1,3-Dichloropropene	2012/12/19		101	%	60 - 130
		trans-1,3-Dichloropropene	2012/12/19		102	%	60 - 130
		Ethylbenzene	2012/12/19		100	%	60 - 130
		Ethylene Dibromide	2012/12/19		100	%	60 - 130
		Hexane	2012/12/19		112	%	60 - 130
		Methylene Chloride(Dichloromethane)	2012/12/19		103	%	60 - 130
		Methyl Isobutyl Ketone	2012/12/19		73	%	60 - 130
		Methyl Ethyl Ketone (2-Butanone)	2012/12/19		108	%	60 - 140
		Methyl t-butyl ether (MTBE)	2012/12/19		109	%	60 - 130
		Styrene	2012/12/19		99	%	60 - 130
		1,1,1,2-Tetrachloroethane	2012/12/19		99	%	60 - 130
		1,1,2,2-Tetrachloroethane	2012/12/19		92	%	60 - 130
		Tetrachloroethylene	2012/12/19		100	%	60 - 130
		Toluene	2012/12/19		101	%	60 - 130
		1,1,1-Trichloroethane	2012/12/19		101	%	60 - 130
		1,1,2-Trichloroethane	2012/12/19		99	%	60 - 130
		Trichloroethylene	2012/12/19		102	%	60 - 130
		Vinyl Chloride	2012/12/19		122	%	60 - 130
		p+m-Xylene	2012/12/19		103	%	60 - 130
		o-Xylene	2012/12/19		103	%	60 - 130
		Trichlorofluoromethane (FREON 11)	2012/12/19		123	%	60 - 130
	Method Blank	4-Bromofluorobenzene	2012/12/19		100	%	60 - 140
		D10-o-Xylene	2012/12/19		98	%	60 - 130
		D4-1,2-Dichloroethane	2012/12/19		99	%	60 - 140
		D8-Toluene	2012/12/19		102	%	60 - 140
		Acetone (2-Propanone)	2012/12/19	ND, RDL=0.50		ug/g	
		Benzene	2012/12/19	ND, RDL=0.020		ug/g	
		Bromodichloromethane	2012/12/19	ND, RDL=0.050		ug/g	
		Bromoform	2012/12/19	ND, RDL=0.050		ug/g	
		Bromomethane	2012/12/19	ND, RDL=0.050		ug/g	
		Carbon Tetrachloride	2012/12/19	ND, RDL=0.050		ug/g	
		Chlorobenzene	2012/12/19	ND, RDL=0.050		ug/g	
		Chloroform	2012/12/19	ND, RDL=0.050		ug/g	
		Dibromochloromethane	2012/12/19	ND, RDL=0.050		ug/g	
		1,2-Dichlorobenzene	2012/12/19	ND, RDL=0.050		ug/g	
		1,3-Dichlorobenzene	2012/12/19	ND, RDL=0.050		ug/g	
		1,4-Dichlorobenzene	2012/12/19	ND, RDL=0.050		ug/g	
		Dichlorodifluoromethane (FREON 12)	2012/12/19	ND, RDL=0.050		ug/g	
		1,1-Dichloroethane	2012/12/19	ND, RDL=0.050		ug/g	
		1,2-Dichloroethane	2012/12/19	ND, RDL=0.050		ug/g	
		1,1-Dichloroethylene	2012/12/19	ND, RDL=0.050		ug/g	
		cis-1,2-Dichloroethylene	2012/12/19	ND, RDL=0.050		ug/g	

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Quality Assurance Report (Continued)

Maxxam Job Number: MB2J8051

QA/QC Batch	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QC Limits
3071732	RSC	Method Blank	2012/12/19	ND, RDL=0.050		ug/g	
		trans-1,2-Dichloroethylene	2012/12/19	ND, RDL=0.050		ug/g	
		1,2-Dichloropropane	2012/12/19	ND, RDL=0.030		ug/g	
		cis-1,3-Dichloropropene	2012/12/19	ND, RDL=0.040		ug/g	
		trans-1,3-Dichloropropene	2012/12/19	ND, RDL=0.020		ug/g	
		Ethylbenzene	2012/12/19	ND, RDL=0.050		ug/g	
		Ethylene Dibromide	2012/12/19	ND, RDL=0.050		ug/g	
		Hexane	2012/12/19	ND, RDL=0.050		ug/g	
		Methylene Chloride(Dichloromethane)	2012/12/19	ND, RDL=0.50		ug/g	
		Methyl Isobutyl Ketone	2012/12/19	ND, RDL=0.50		ug/g	
		Methyl Ethyl Ketone (2-Butanone)	2012/12/19	ND, RDL=0.050		ug/g	
		Methyl t-butyl ether (MTBE)	2012/12/19	ND, RDL=0.050		ug/g	
		Styrene	2012/12/19	ND, RDL=0.050		ug/g	
		1,1,1,2-Tetrachloroethane	2012/12/19	ND, RDL=0.050		ug/g	
		1,1,2,2-Tetrachloroethane	2012/12/19	ND, RDL=0.050		ug/g	
		Tetrachloroethylene	2012/12/19	ND, RDL=0.020		ug/g	
		Toluene	2012/12/19	ND, RDL=0.050		ug/g	
		1,1,1-Trichloroethane	2012/12/19	ND, RDL=0.050		ug/g	
		1,1,2-Trichloroethane	2012/12/19	ND, RDL=0.050		ug/g	
		Trichloroethylene	2012/12/19	ND, RDL=0.020		ug/g	
		Vinyl Chloride	2012/12/19	ND, RDL=0.020		ug/g	
		p+m-Xylene	2012/12/19	ND, RDL=0.020		ug/g	
		o-Xylene	2012/12/19	ND, RDL=0.020		ug/g	
		Xylene (Total)	2012/12/19	ND, RDL=0.050		ug/g	
		Trichlorofluoromethane (FREON 11)	2012/12/19	ND, RDL=0.050		ug/g	
	RPD [PZ5128-02]	Acetone (2-Propanone)	2012/12/20	NC		%	50
		Benzene	2012/12/20	NC		%	50
		Bromodichloromethane	2012/12/20	NC		%	50
		Bromoform	2012/12/20	NC		%	50
		Bromomethane	2012/12/20	NC		%	50
		Carbon Tetrachloride	2012/12/20	NC		%	50
		Chlorobenzene	2012/12/20	NC		%	50
		Chloroform	2012/12/20	NC		%	50
		Dibromochloromethane	2012/12/20	NC		%	50
		1,2-Dichlorobenzene	2012/12/20	NC		%	50
		1,3-Dichlorobenzene	2012/12/20	NC		%	50
		1,4-Dichlorobenzene	2012/12/20	NC		%	50
		Dichlorodifluoromethane (FREON 12)	2012/12/20	NC		%	50
		1,1-Dichloroethane	2012/12/20	NC		%	50
		1,2-Dichloroethane	2012/12/20	NC		%	50
		1,1-Dichloroethylene	2012/12/20	NC		%	50
		cis-1,2-Dichloroethylene	2012/12/20	NC		%	50
		trans-1,2-Dichloroethylene	2012/12/20	NC		%	50
		1,2-Dichloropropane	2012/12/20	NC		%	50
		cis-1,3-Dichloropropene	2012/12/20	NC		%	50
		trans-1,3-Dichloropropene	2012/12/20	NC		%	50
		Ethylbenzene	2012/12/20	NC		%	50
		Ethylene Dibromide	2012/12/20	NC		%	50
		Hexane	2012/12/20	NC		%	50
		Methylene Chloride(Dichloromethane)	2012/12/20	NC		%	50
		Methyl Isobutyl Ketone	2012/12/20	NC		%	50
		Methyl Ethyl Ketone (2-Butanone)	2012/12/20	NC		%	50
		Methyl t-butyl ether (MTBE)	2012/12/20	NC		%	50
		Styrene	2012/12/20	NC		%	50
		1,1,1,2-Tetrachloroethane	2012/12/20	NC		%	50
		1,1,2,2-Tetrachloroethane	2012/12/20	NC		%	50

Terrapex Environmental Ltd
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Quality Assurance Report (Continued)

Maxxam Job Number: MB2J8051

QA/QC Batch Num Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QC Limits
3071732 RSC	RPD [PZ5128-02]	Tetrachloroethylene	2012/12/20	NC		%	50
		Toluene	2012/12/20	NC		%	50
		1,1,1-Trichloroethane	2012/12/20	NC		%	50
		1,1,2-Trichloroethane	2012/12/20	NC		%	50
		Trichloroethylene	2012/12/20	NC		%	50
		Vinyl Chloride	2012/12/20	NC		%	50
		p+m-Xylene	2012/12/20	NC		%	50
		o-Xylene	2012/12/20	NC		%	50
		Xylene (Total)	2012/12/20	NC		%	50
		Trichlorofluoromethane (FREON 11)	2012/12/20	NC		%	50
3076227 ZZ	Matrix Spike [PZ5098-01]	o-Terphenyl	2012/12/20		95	%	50 - 130
		F2 (C10-C16 Hydrocarbons)	2012/12/20		92	%	50 - 130
		F3 (C16-C34 Hydrocarbons)	2012/12/20		96	%	50 - 130
		F4 (C34-C50 Hydrocarbons)	2012/12/20		101	%	50 - 130
	Spiked Blank	o-Terphenyl	2012/12/20		93	%	50 - 130
		F2 (C10-C16 Hydrocarbons)	2012/12/20		90	%	80 - 120
		F3 (C16-C34 Hydrocarbons)	2012/12/20		93	%	80 - 120
		F4 (C34-C50 Hydrocarbons)	2012/12/20		97	%	80 - 120
	Method Blank	o-Terphenyl	2012/12/20		96	%	50 - 130
		F2 (C10-C16 Hydrocarbons)	2012/12/20	ND, RDL=10		ug/g	
		F3 (C16-C34 Hydrocarbons)	2012/12/20	ND, RDL=10		ug/g	
		F4 (C34-C50 Hydrocarbons)	2012/12/20	ND, RDL=10		ug/g	
	RPD [PZ5098-01]	F2 (C10-C16 Hydrocarbons)	2012/12/20	NC		%	30
		F3 (C16-C34 Hydrocarbons)	2012/12/20	NC		%	30
		F4 (C34-C50 Hydrocarbons)	2012/12/20	NC		%	30
3076276 N_P	RPD [PZ5104-01]	Moisture	2012/12/20	1.4		%	20
3076506 JL2	RPD	Moisture	2012/12/20	2.1		%	20
3077232 MSB	Matrix Spike	1,4-Difluorobenzene	2012/12/21		98	%	60 - 140
		4-Bromofluorobenzene	2012/12/21		100	%	60 - 140
		D10-Ethylbenzene	2012/12/21		95	%	60 - 140
		D4-1,2-Dichloroethane	2012/12/21		90	%	60 - 140
		Benzene	2012/12/21		101	%	60 - 140
		Toluene	2012/12/21		96	%	60 - 140
		Ethylbenzene	2012/12/21		94	%	60 - 140
		o-Xylene	2012/12/21		107	%	60 - 140
		p+m-Xylene	2012/12/21		90	%	60 - 140
		F1 (C6-C10)	2012/12/21		101	%	60 - 140
	Spiked Blank	1,4-Difluorobenzene	2012/12/21		99	%	60 - 140
		4-Bromofluorobenzene	2012/12/21		102	%	60 - 140
		D10-Ethylbenzene	2012/12/21		105	%	60 - 140
		D4-1,2-Dichloroethane	2012/12/21		102	%	60 - 140
		Benzene	2012/12/21		114	%	60 - 130
		Toluene	2012/12/21		101	%	60 - 130
		Ethylbenzene	2012/12/21		102	%	60 - 130
		o-Xylene	2012/12/21		107	%	60 - 130
		p+m-Xylene	2012/12/21		99	%	60 - 130
		F1 (C6-C10)	2012/12/21		87	%	80 - 120
	Method Blank	1,4-Difluorobenzene	2012/12/21		98	%	60 - 140
		4-Bromofluorobenzene	2012/12/21		100	%	60 - 140
		D10-Ethylbenzene	2012/12/21		94	%	60 - 140
		D4-1,2-Dichloroethane	2012/12/21		101	%	60 - 140
		Benzene	2012/12/21	ND, RDL=0.020		ug/g	
		Toluene	2012/12/21	ND, RDL=0.020		ug/g	
		Ethylbenzene	2012/12/21	ND, RDL=0.020		ug/g	

Terrapex Environmental Ltd
Attention: Jeff Stevenson
Client Project #: CB644.01
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Quality Assurance Report (Continued)

Maxxam Job Number: MB2J8051

QA/QC Batch Num Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QC Limits
3077232 MSB	Method Blank	o-Xylene	2012/12/21	ND, RDL=0.020		ug/g	
		p+m-Xylene	2012/12/21	ND, RDL=0.040		ug/g	
		Total Xylenes	2012/12/21	ND, RDL=0.040		ug/g	
		F1 (C6-C10)	2012/12/21	ND, RDL=10		ug/g	
		F1 (C6-C10) - BTEX	2012/12/21	ND, RDL=10		ug/g	
		Benzene	2012/12/21	NC		%	50
		Toluene	2012/12/21	NC		%	50
		Ethylbenzene	2012/12/21	NC		%	50
		o-Xylene	2012/12/21	NC		%	50
		p+m-Xylene	2012/12/21	NC		%	50
		Total Xylenes	2012/12/21	NC		%	50
		F1 (C6-C10)	2012/12/21	NC		%	50
		F1 (C6-C10) - BTEX	2012/12/21	NC		%	50
3077606 ABD	Matrix Spike [PZ5117-02]	1,4-Difluorobenzene	2012/12/22		96	%	60 - 140
		4-Bromofluorobenzene	2012/12/22		100	%	60 - 140
		D10-Ethylbenzene	2012/12/22		87	%	60 - 140
		D4-1,2-Dichloroethane	2012/12/22		96	%	60 - 140
		Benzene	2012/12/22		87	%	60 - 140
		Toluene	2012/12/22		77	%	60 - 140
		Ethylbenzene	2012/12/22		90	%	60 - 140
		o-Xylene	2012/12/22		78	%	60 - 140
		p+m-Xylene	2012/12/22		76	%	60 - 140
		F1 (C6-C10)	2012/12/22		74	%	60 - 140
	Spiked Blank	1,4-Difluorobenzene	2012/12/21		102	%	60 - 140
		4-Bromofluorobenzene	2012/12/21		103	%	60 - 140
		D10-Ethylbenzene	2012/12/21		104	%	60 - 140
		D4-1,2-Dichloroethane	2012/12/21		101	%	60 - 140
		Benzene	2012/12/21		110	%	60 - 130
		Toluene	2012/12/21		103	%	60 - 130
		Ethylbenzene	2012/12/21		110	%	60 - 130
		o-Xylene	2012/12/21		108	%	60 - 130
		p+m-Xylene	2012/12/21		95	%	60 - 130
		F1 (C6-C10)	2012/12/21		107	%	80 - 120
	Method Blank	1,4-Difluorobenzene	2012/12/21		103	%	60 - 140
		4-Bromofluorobenzene	2012/12/21		102	%	60 - 140
		D10-Ethylbenzene	2012/12/21		84	%	60 - 140
		D4-1,2-Dichloroethane	2012/12/21		100	%	60 - 140
		Benzene	2012/12/21	ND, RDL=0.020		ug/g	
		Toluene	2012/12/21	ND, RDL=0.020		ug/g	
		Ethylbenzene	2012/12/21	ND, RDL=0.020		ug/g	
		o-Xylene	2012/12/21	ND, RDL=0.020		ug/g	
		p+m-Xylene	2012/12/21	ND, RDL=0.040		ug/g	
		Total Xylenes	2012/12/21	ND, RDL=0.040		ug/g	
		F1 (C6-C10)	2012/12/21	ND, RDL=10		ug/g	
		F1 (C6-C10) - BTEX	2012/12/21	ND, RDL=10		ug/g	
	RPD [PZ5116-02]	Benzene	2012/12/22	NC		%	50
		Toluene	2012/12/22	NC		%	50
		Ethylbenzene	2012/12/22	NC		%	50
		o-Xylene	2012/12/22	NC		%	50
		p+m-Xylene	2012/12/22	NC		%	50
		Total Xylenes	2012/12/22	NC		%	50
		F1 (C6-C10)	2012/12/22	NC		%	50
		F1 (C6-C10) - BTEX	2012/12/22	NC		%	50
3077802 KLI	Matrix Spike [PZ5120-01]	o-Terphenyl	2012/12/22		92	%	50 - 130

Terrapex Environmental Ltd
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Quality Assurance Report (Continued)

Maxxam Job Number: MB2J8051

QA/QC Batch Num Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QC Limits
3077802 KLI	Matrix Spike [PZ5120-01]	F2 (C10-C16 Hydrocarbons)	2012/12/22		93	%	50 - 130
		F3 (C16-C34 Hydrocarbons)	2012/12/22		94	%	50 - 130
		F4 (C34-C50 Hydrocarbons)	2012/12/22		94	%	50 - 130
	Spiked Blank	o-Terphenyl	2012/12/22		91	%	50 - 130
		F2 (C10-C16 Hydrocarbons)	2012/12/22		89	%	80 - 120
		F3 (C16-C34 Hydrocarbons)	2012/12/22		92	%	80 - 120
	Method Blank	F4 (C34-C50 Hydrocarbons)	2012/12/22		91	%	80 - 120
		o-Terphenyl	2012/12/22		97	%	50 - 130
		F2 (C10-C16 Hydrocarbons)	2012/12/22	ND, RDL=10		ug/g	
	RPD [PZ5120-01]	F3 (C16-C34 Hydrocarbons)	2012/12/22	ND, RDL=10		ug/g	
		F4 (C34-C50 Hydrocarbons)	2012/12/22	ND, RDL=10		ug/g	
		F2 (C10-C16 Hydrocarbons)	2012/12/22	NC		%	30
		F3 (C16-C34 Hydrocarbons)	2012/12/22	NC		%	30
		F4 (C34-C50 Hydrocarbons)	2012/12/22	NC		%	30
3080710 RTY	Matrix Spike [PZ5126-01]	F4G-sg (Grav. Heavy Hydrocarbons)	2012/12/28		93	%	65 - 135
	Spiked Blank	F4G-sg (Grav. Heavy Hydrocarbons)	2012/12/28		96	%	65 - 135
	Method Blank	F4G-sg (Grav. Heavy Hydrocarbons)	2012/12/28	ND, RDL=100		ug/g	
	RPD [PZ5126-01]	F4G-sg (Grav. Heavy Hydrocarbons)	2012/12/28	NC		%	50

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.

Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.

Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.

Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.

Surrogate: A pure or isotopically labeled compound whose behavior mirrors the analytes of interest. Used to evaluate extraction efficiency.

NC (RPD): The RPD was not calculated. The level of analyte detected in the parent sample and its duplicate was not sufficiently significant to permit a reliable calculation.

(1) The recovery was above the upper control limit. This may represent a high bias in some results for this specific analyte. For results that were not detected (ND), this potential bias has no impact.

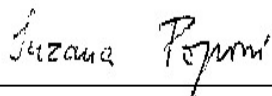
Validation Signature Page

Maxxam Job #: B2J8051

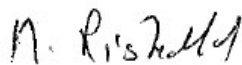
The analytical data and all QC contained in this report were reviewed and validated by the following individual(s).

Ewa Pranjić, M.Sc., C.Chem, Scientific Specialist



Suzana Popović, Supervisor, Hydrocarbons



Medhat Riskallah, Manager, Hydrocarbon Department

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Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

Your Project #: CB644.01
Site Location: 121 HUME STREET, COLLINGWOOD, ON
Your C.O.C. #: 38359201, 383592-01-01

Attention: Jeff Stevenson

Terrapex Environmental Ltd
920 Brant Street
Unit 16
Burlington, ON
CANADA L7R 4J1

Report Date: 2012/12/24

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B2J8143

Received: 2012/12/14, 19:20

Sample Matrix: Water
Samples Received: 15

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Method Reference
1,3-Dichloropropene Sum	11	N/A	2012/12/20	CAM SOP-00226	EPA 8260
1,3-Dichloropropene Sum	4	N/A	2012/12/21	CAM SOP-00226	EPA 8260
Petroleum Hydro. CCME F1 & BTEX in Water	1	N/A	2012/12/21	CAM SOP-00315	CCME CWS
Petroleum Hydro. CCME F1 & BTEX in Water	8	N/A	2012/12/22	CAM SOP-00315	CCME CWS
Petroleum Hydro. CCME F1 & BTEX in Water	6	N/A	2012/12/23	CAM SOP-00315	CCME CWS
Petroleum Hydrocarbons F2-F4 in Water	15	2012/12/20	2012/12/21	CAM SOP-00316	CCME Hydrocarbons
Volatile Organic Compounds in Water	1	N/A	2012/12/19	CAM SOP 00226	EPA 8260 modified
Volatile Organic Compounds in Water	14	N/A	2012/12/20	CAM SOP 00226	EPA 8260 modified

Remarks:

Maxxam Analytics has performed all analytical testing herein in accordance with ISO 17025 and the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act. All methodologies comply with this document and are validated for use in the laboratory. The methods and techniques employed in this analysis conform to the performance criteria (detection limits, accuracy and precision) as outlined in the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act. Reporting results to two significant figures at the RDL is to permit statistical evaluation and is not intended to be an indication of analytical precision.

The CWS PHC methods employed by Maxxam conform to all prescribed elements of the reference method and performance based elements have been validated. All modifications have been validated and proven equivalent following the 'Alberta Environment Draft Addenda to the CWS-PHC, Appendix 6, Validation of Alternate Methods'. Documentation is available upon request. Maxxam has made the following improvements to the CWS-PHC reference benchmark method: (i) Headspace for F1; and, (ii) Mechanical extraction for F2-F4. Note: F4G cannot be added to the C6 to C50 hydrocarbons. The extraction date for samples field preserved with methanol for F1 and Volatile Organic Compounds is considered to be the date sampled.

Maxxam Analytics is accredited by SCC (Lab ID 97) for all specific parameters as required by Ontario Regulation 153/04. Maxxam Analytics is limited in liability to the actual cost of analysis unless otherwise agreed in writing. There is no other warranty expressed or implied. Samples will be retained at Maxxam Analytics for three weeks from receipt of data or as

Your Project #: CB644.01
Site Location: 121 HUME STREET, COLLINGWOOD, ON
Your C.O.C. #: 38359201, 383592-01-01

Attention: Jeff Stevenson

Terrapex Environmental Ltd
920 Brant Street
Unit 16
Burlington, ON
CANADA L7R 4J1

Report Date: 2012/12/24

CERTIFICATE OF ANALYSIS

-2-

per contract.

* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.

Maryam Arghandeh,
Email: mArghand@maxxam.ca
Phone# (905) 817-5700

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Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

Total cover pages: 2

Maxxam Job #: B2J8143
Report Date: 2012/12/24

Terrapex Environmental Ltd
Client Project #: CB644.01
Site Location: 121 HUME STREET, COLLINGWOOD, ON
Sampler Initials: SS

O'REG 153 PETROLEUM HYDROCARBONS (WATER)

Maxxam ID		PZ5726	PZ5726	PZ5727	PZ5728	PZ5729	PZ5729		
Sampling Date		2012/12/12	2012/12/12	2012/12/12	2012/12/12	2012/12/12	2012/12/12		
COC Number		383592-01-01	383592-01-01	383592-01-01	383592-01-01	383592-01-01	383592-01-01		
	Units	MW101	MW101 Lab-Dup	MW102	MW103	MW106	MW106 Lab-Dup	RDL	QC Batch

BTEX & F1 Hydrocarbons									
F1 (C6-C10)	ug/L	ND	ND	ND	ND	34		25	3078227
F1 (C6-C10) - BTEX	ug/L	ND	ND	ND	ND	28		25	3078227
F2-F4 Hydrocarbons									
F2 (C10-C16 Hydrocarbons)	ug/L	ND		ND	ND	ND	ND	100	3077139
F3 (C16-C34 Hydrocarbons)	ug/L	ND		ND	ND	ND	ND	100	3077139
F4 (C34-C50 Hydrocarbons)	ug/L	ND		ND	ND	ND	ND	100	3077139
Reached Baseline at C50	ug/L	Yes		Yes	Yes	Yes	Yes		3077139
Surrogate Recovery (%)									
1,4-Difluorobenzene	%	101	101	101	62 (1)	102			3078227
4-Bromofluorobenzene	%	95	100	94	105	102			3078227
D10-Ethylbenzene	%	98	99	97	97	99			3078227
D4-1,2-Dichloroethane	%	100	101	103	71	104			3078227
o-Terphenyl	%	102		99	100	95	96		3077139

ND = Not detected

RDL = Reportable Detection Limit

QC Batch = Quality Control Batch

(1) The recovery of the Instrument surrogate 1,4-Difluorobenzene is outside the acceptance limits. However this has no significant effect on the results since the recovery of the other Instrument surrogate is within acceptable limits.

Maxxam Job #: B2J8143
Report Date: 2012/12/24

Terrapex Environmental Ltd
Client Project #: CB644.01
Site Location: 121 HUME STREET, COLLINGWOOD, ON
Sampler Initials: SS

O'REG 153 PETROLEUM HYDROCARBONS (WATER)

Maxxam ID		PZ5730		PZ5731	PZ5732	PZ5733	PZ5734		
Sampling Date		2012/12/12		2012/12/12	2012/12/12	2012/12/12	2012/12/12		
COC Number		383592-01-01		383592-01-01	383592-01-01	383592-01-01	383592-01-01		
	Units	MW107	RDL	MW201	MW202	MW203	MW204	RDL	QC Batch

BTEX & F1 Hydrocarbons									
F1 (C6-C10)	ug/L	4400	130	110	2100	ND	ND	25	3078227
F1 (C6-C10) - BTEX	ug/L	2600	130	100	1800	ND	ND	25	3078227
F2-F4 Hydrocarbons									
F2 (C10-C16 Hydrocarbons)	ug/L	990	100	150	640	ND	ND	100	3077139
F3 (C16-C34 Hydrocarbons)	ug/L	ND	100	ND	ND	ND	ND	100	3077139
F4 (C34-C50 Hydrocarbons)	ug/L	ND	100	ND	ND	ND	ND	100	3077139
Reached Baseline at C50	ug/L	Yes		Yes	Yes	Yes	Yes		3077139
Surrogate Recovery (%)									
1,4-Difluorobenzene	%	99		100	100	100	101		3078227
4-Bromofluorobenzene	%	108		102	106	96	97		3078227
D10-Ethylbenzene	%	95		102	100	98	98		3078227
D4-1,2-Dichloroethane	%	98		100	102	101	103		3078227
o-Terphenyl	%	96		95	96	97	97		3077139

ND = Not detected
RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Maxxam Job #: B2J8143
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Terrapex Environmental Ltd
Client Project #: CB644.01
Site Location: 121 HUME STREET, COLLINGWOOD, ON
Sampler Initials: SS

O'REG 153 PETROLEUM HYDROCARBONS (WATER)

Maxxam ID		PZ5735	PZ5736	PZ5737	PZ5738	PZ5739		
Sampling Date		2012/12/12	2012/12/12	2012/12/13	2012/12/13	2012/12/13		
COC Number		383592-01-01	383592-01-01	383592-01-01	383592-01-01	383592-01-01		
	Units	MW205	MW206	MW207	MW208	FIELD BLANK	RDL	QC Batch

BTEX & F1 Hydrocarbons								
F1 (C6-C10)	ug/L	ND	ND	120	89	ND	25	3078667
F1 (C6-C10) - BTEX	ug/L	ND	ND	120	88	ND	25	3078667
F2-F4 Hydrocarbons								
F2 (C10-C16 Hydrocarbons)	ug/L	ND	ND	ND	ND	ND	100	3077139
F3 (C16-C34 Hydrocarbons)	ug/L	ND	ND	ND	ND	ND	100	3077139
F4 (C34-C50 Hydrocarbons)	ug/L	ND	ND	ND	ND	ND	100	3077139
Reached Baseline at C50	ug/L	Yes	Yes	Yes	Yes	Yes		3077139
Surrogate Recovery (%)								
1,4-Difluorobenzene	%	100	102	100	100	101		3078667
4-Bromofluorobenzene	%	98	99	98	98	97		3078667
D10-Ethylbenzene	%	103	103	103	104	105		3078667
D4-1,2-Dichloroethane	%	102	103	103	103	102		3078667
o-Terphenyl	%	97	94	95	98	96		3077139

ND = Not detected
RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Maxxam Job #: B2J8143
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Terrapex Environmental Ltd
Client Project #: CB644.01
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Sampler Initials: SS

O'REG 153 PETROLEUM HYDROCARBONS (WATER)

Maxxam ID		PZ5740		
Sampling Date				
COC Number		383592-01-01		
	Units	TBLK-F24B-12-1860	RDL	QC Batch

BTEX & F1 Hydrocarbons				
F1 (C6-C10)	ug/L	ND	25	3078667
F1 (C6-C10) - BTEX	ug/L	ND	25	3078667
F2-F4 Hydrocarbons				
F2 (C10-C16 Hydrocarbons)	ug/L	ND	100	3077139
F3 (C16-C34 Hydrocarbons)	ug/L	ND	100	3077139
F4 (C34-C50 Hydrocarbons)	ug/L	ND	100	3077139
Reached Baseline at C50	ug/L	Yes		3077139
Surrogate Recovery (%)				
1,4-Difluorobenzene	%	103		3078667
4-Bromofluorobenzene	%	98		3078667
D10-Ethylbenzene	%	105		3078667
D4-1,2-Dichloroethane	%	103		3078667
o-Terphenyl	%	96		3077139
ND = Not detected RDL = Reportable Detection Limit QC Batch = Quality Control Batch				

Maxxam Job #: B2J8143
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Terrapex Environmental Ltd
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O'REG 153 VOLATILE ORGANICS (WATER)

Maxxam ID		PZ5726	PZ5727	PZ5728	PZ5729		
Sampling Date		2012/12/12	2012/12/12	2012/12/12	2012/12/12		
COC Number		383592-01-01	383592-01-01	383592-01-01	383592-01-01		
	Units	MW101	MW102	MW103	MW106	RDL	QC Batch

Calculated Parameters							
1,3-Dichloropropene (cis+trans)	ug/L	ND	ND	ND	ND	0.50	3071299
Volatile Organics							
Acetone (2-Propanone)	ug/L	ND	ND	ND	ND	10	3073126
Benzene	ug/L	ND	ND	ND	ND	0.20	3073126
Bromodichloromethane	ug/L	ND	ND	ND	ND	0.50	3073126
Bromoform	ug/L	ND	ND	ND	ND	1.0	3073126
Bromomethane	ug/L	ND	ND	ND	ND	0.50	3073126
Carbon Tetrachloride	ug/L	ND	ND	ND	ND	0.20	3073126
Chlorobenzene	ug/L	ND	ND	ND	ND	0.20	3073126
Chloroform	ug/L	ND	ND	ND	ND	0.20	3073126
Dibromochloromethane	ug/L	ND	ND	ND	ND	0.50	3073126
1,2-Dichlorobenzene	ug/L	ND	ND	ND	ND	0.50	3073126
1,3-Dichlorobenzene	ug/L	ND	ND	ND	ND	0.50	3073126
1,4-Dichlorobenzene	ug/L	ND	ND	ND	ND	0.50	3073126
Dichlorodifluoromethane (FREON 12)	ug/L	ND	ND	ND	ND	1.0	3073126
1,1-Dichloroethane	ug/L	ND	ND	ND	ND	0.20	3073126
1,2-Dichloroethane	ug/L	ND	ND	ND	ND	0.50	3073126
1,1-Dichloroethylene	ug/L	ND	ND	ND	ND	0.20	3073126
cis-1,2-Dichloroethylene	ug/L	ND	ND	ND	ND	0.50	3073126
trans-1,2-Dichloroethylene	ug/L	ND	ND	ND	ND	0.50	3073126
1,2-Dichloropropane	ug/L	ND	ND	ND	ND	0.20	3073126
cis-1,3-Dichloropropene	ug/L	ND	ND	ND	ND	0.30	3073126
trans-1,3-Dichloropropene	ug/L	ND	ND	ND	ND	0.40	3073126
Ethylbenzene	ug/L	ND	ND	ND	ND	0.20	3073126
Ethylene Dibromide	ug/L	ND	ND	ND	ND	0.20	3073126
Hexane	ug/L	ND	ND	ND	ND	1.0	3073126
Methylene Chloride(Dichloromethane)	ug/L	ND	ND	ND	ND	2.0	3073126
Methyl Isobutyl Ketone	ug/L	ND	ND	ND	ND	5.0	3073126
Methyl Ethyl Ketone (2-Butanone)	ug/L	ND	ND	ND	ND	10	3073126
Methyl t-butyl ether (MTBE)	ug/L	ND	ND	ND	ND	0.50	3073126
Styrene	ug/L	ND	ND	ND	ND	0.50	3073126
1,1,1,2-Tetrachloroethane	ug/L	ND	ND	ND	ND	0.50	3073126
ND = Not detected RDL = Reportable Detection Limit QC Batch = Quality Control Batch							

Maxxam Job #: B2J8143
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O'REG 153 VOLATILE ORGANICS (WATER)

Maxxam ID		PZ5726	PZ5727	PZ5728	PZ5729		
Sampling Date		2012/12/12	2012/12/12	2012/12/12	2012/12/12		
COC Number		383592-01-01	383592-01-01	383592-01-01	383592-01-01		
	Units	MW101	MW102	MW103	MW106	RDL	QC Batch
1,1,2,2-Tetrachloroethane	ug/L	ND	ND	ND	ND	0.50	3073126
Tetrachloroethylene	ug/L	ND	ND	ND	ND	0.20	3073126
Toluene	ug/L	ND	ND	ND	ND	0.20	3073126
1,1,1-Trichloroethane	ug/L	ND	ND	ND	ND	0.20	3073126
1,1,2-Trichloroethane	ug/L	ND	ND	ND	ND	0.50	3073126
Trichloroethylene	ug/L	ND	ND	ND	ND	0.20	3073126
Vinyl Chloride	ug/L	ND	ND	ND	ND	0.20	3073126
p+m-Xylene	ug/L	ND	ND	ND	6.3	0.20	3073126
o-Xylene	ug/L	ND	ND	ND	ND	0.20	3073126
Xylene (Total)	ug/L	ND	ND	ND	6.3	0.20	3073126
Trichlorofluoromethane (FREON 11)	ug/L	ND	ND	ND	ND	0.50	3073126
Surrogate Recovery (%)							
4-Bromofluorobenzene	%	86	85	86	92		3073126
D4-1,2-Dichloroethane	%	89	89	92	88		3073126
D8-Toluene	%	108	107	109	107		3073126
ND = Not detected RDL = Reportable Detection Limit QC Batch = Quality Control Batch							

Maxxam Job #: B2J8143
Report Date: 2012/12/24

Terrapex Environmental Ltd
Client Project #: CB644.01
Site Location: 121 HUME STREET, COLLINGWOOD, ON
Sampler Initials: SS

O'REG 153 VOLATILE ORGANICS (WATER)

Maxxam ID		PZ5730			PZ5731			PZ5732		
Sampling Date		2012/12/12			2012/12/12			2012/12/12		
COC Number		383592-01-01			383592-01-01			383592-01-01		
	Units	MW107	RDL	QC Batch	MW201	RDL	QC Batch	MW202	RDL	QC Batch

Calculated Parameters										
1,3-Dichloropropene (cis+trans)	ug/L	ND	0.50	3071299	ND	0.50	3071299	ND	0.50	3071299
Volatile Organics										
Acetone (2-Propanone)	ug/L	ND	200	3073118	ND	10	3073126	ND	50	3073118
Benzene	ug/L	7.2	4.0	3073118	ND	0.20	3073126	ND	1.0	3073118
Bromodichloromethane	ug/L	ND	10	3073118	ND	0.50	3073126	ND	2.5	3073118
Bromoform	ug/L	ND	20	3073118	ND	1.0	3073126	ND	5.0	3073118
Bromomethane	ug/L	ND	0.50	3073118	ND	0.50	3073126	ND	0.50	3073118
Carbon Tetrachloride	ug/L	ND	0.20	3073118	ND	0.20	3073126	ND	0.20	3073118
Chlorobenzene	ug/L	ND	4.0	3073118	ND	0.20	3073126	ND	1.0	3073118
Chloroform	ug/L	ND	0.20	3073118	ND	0.20	3073126	ND	1.0	3073118
Dibromochloromethane	ug/L	ND	10	3073118	ND	0.50	3073126	ND	2.5	3073118
1,2-Dichlorobenzene	ug/L	ND	0.50	3073118	ND	0.50	3073126	ND	2.5	3073118
1,3-Dichlorobenzene	ug/L	ND	10	3073118	ND	0.50	3073126	ND	2.5	3073118
1,4-Dichlorobenzene	ug/L	ND	0.50	3073118	ND	0.50	3073126	ND	0.50	3073118
Dichlorodifluoromethane (FREON 12)	ug/L	ND	20	3073118	ND	1.0	3073126	ND	5.0	3073118
1,1-Dichloroethane	ug/L	ND	4.0	3073118	ND	0.20	3073126	ND	1.0	3073118
1,2-Dichloroethane	ug/L	ND	0.50	3073118	ND	0.50	3073126	ND	0.50	3073118
1,1-Dichloroethylene	ug/L	ND	0.20	3073118	ND	0.20	3073126	ND	1.0	3073118
cis-1,2-Dichloroethylene	ug/L	ND	0.50	3073118	ND	0.50	3073126	ND	0.50	3073118
trans-1,2-Dichloroethylene	ug/L	ND	0.50	3073118	ND	0.50	3073126	ND	0.50	3073118
1,2-Dichloropropane	ug/L	ND	4.0	3073118	ND	0.20	3073126	ND	1.0	3073118
cis-1,3-Dichloropropene	ug/L	ND	0.30	3073118	ND	0.30	3073126	ND	0.30	3073118
trans-1,3-Dichloropropene	ug/L	ND	0.40	3073118	ND	0.40	3073126	ND	0.40	3073118
Ethylbenzene	ug/L	390	4.0	3073118	4.9	0.20	3073126	11	1.0	3073118
Ethylene Dibromide	ug/L	ND	0.20	3073118	ND	0.20	3073126	ND	0.20	3073118
Hexane	ug/L	ND	20	3073118	ND	1.0	3073126	8.5	5.0	3073118
Methylene Chloride(Dichloromethane)	ug/L	ND	40	3073118	ND	2.0	3073126	ND	10	3073118
Methyl Isobutyl Ketone	ug/L	ND	100	3073118	ND	5.0	3073126	ND	25	3073118
Methyl Ethyl Ketone (2-Butanone)	ug/L	ND	200	3073118	ND	10	3073126	ND	50	3073118
Methyl t-butyl ether (MTBE)	ug/L	ND	10	3073118	ND	0.50	3073126	ND	2.5	3073118
Styrene	ug/L	ND	0.50	3073118	ND	0.50	3073126	ND	2.5	3073118
1,1,1,2-Tetrachloroethane	ug/L	ND	0.50	3073118	ND	0.50	3073126	ND	0.50	3073118

ND = Not detected
RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Maxxam Job #: B2J8143
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Terrapex Environmental Ltd
Client Project #: CB644.01
Site Location: 121 HUME STREET, COLLINGWOOD, ON
Sampler Initials: SS

O'REG 153 VOLATILE ORGANICS (WATER)

Maxxam ID		PZ5730			PZ5731			PZ5732		
Sampling Date		2012/12/12			2012/12/12			2012/12/12		
COC Number		383592-01-01			383592-01-01			383592-01-01		
	Units	MW107	RDL	QC Batch	MW201	RDL	QC Batch	MW202	RDL	QC Batch
1,1,2,2-Tetrachloroethane	ug/L	ND	0.50	3073118	ND	0.50	3073126	ND	0.50	3073118
Tetrachloroethylene	ug/L	ND	0.20	3073118	ND	0.20	3073126	ND	1.0	3073118
Toluene	ug/L	14	4.0	3073118	ND	0.20	3073126	ND	1.0	3073118
1,1,1-Trichloroethane	ug/L	ND	4.0	3073118	ND	0.20	3073126	ND	1.0	3073118
1,1,2-Trichloroethane	ug/L	ND	0.50	3073118	ND	0.50	3073126	ND	2.5	3073118
Trichloroethylene	ug/L	ND	0.20	3073118	ND	0.20	3073126	ND	1.0	3073118
Vinyl Chloride	ug/L	ND	0.20	3073118	ND	0.20	3073126	ND	0.20	3073118
p+m-Xylene	ug/L	1500	4.0	3073118	0.77	0.20	3073126	370	1.0	3073118
o-Xylene	ug/L	35	4.0	3073118	1.3	0.20	3073126	4.2	1.0	3073118
Xylene (Total)	ug/L	1600	4.0	3073118	2.1	0.20	3073126	380	1.0	3073118
Trichlorofluoromethane (FREON 11)	ug/L	ND	10	3073118	ND	0.50	3073126	ND	2.5	3073118
Surrogate Recovery (%)										
4-Bromofluorobenzene	%	107		3073118	98		3073126	105		3073118
D4-1,2-Dichloroethane	%	93		3073118	86		3073126	93		3073118
D8-Toluene	%	97		3073118	108		3073126	96		3073118
ND = Not detected RDL = Reportable Detection Limit QC Batch = Quality Control Batch										

Maxxam Job #: B2J8143
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Terrapex Environmental Ltd
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Site Location: 121 HUME STREET, COLLINGWOOD, ON
Sampler Initials: SS

O'REG 153 VOLATILE ORGANICS (WATER)

Maxxam ID		PZ5733	PZ5734	PZ5735	PZ5736		
Sampling Date		2012/12/12	2012/12/12	2012/12/12	2012/12/12		
COC Number		383592-01-01	383592-01-01	383592-01-01	383592-01-01		
	Units	MW203	MW204	MW205	MW206	RDL	QC Batch

Calculated Parameters							
1,3-Dichloropropene (cis+trans)	ug/L	ND	ND	ND	ND	0.50	3071299
Volatile Organics							
Acetone (2-Propanone)	ug/L	ND	ND	ND	ND	10	3073126
Benzene	ug/L	ND	ND	ND	ND	0.20	3073126
Bromodichloromethane	ug/L	ND	ND	ND	ND	0.50	3073126
Bromoform	ug/L	ND	ND	ND	ND	1.0	3073126
Bromomethane	ug/L	ND	ND	ND	ND	0.50	3073126
Carbon Tetrachloride	ug/L	ND	ND	ND	ND	0.20	3073126
Chlorobenzene	ug/L	ND	ND	ND	ND	0.20	3073126
Chloroform	ug/L	ND	ND	ND	ND	0.20	3073126
Dibromochloromethane	ug/L	ND	ND	ND	ND	0.50	3073126
1,2-Dichlorobenzene	ug/L	ND	ND	ND	ND	0.50	3073126
1,3-Dichlorobenzene	ug/L	ND	ND	ND	ND	0.50	3073126
1,4-Dichlorobenzene	ug/L	ND	ND	ND	ND	0.50	3073126
Dichlorodifluoromethane (FREON 12)	ug/L	ND	ND	ND	ND	1.0	3073126
1,1-Dichloroethane	ug/L	ND	ND	ND	ND	0.20	3073126
1,2-Dichloroethane	ug/L	ND	ND	ND	ND	0.50	3073126
1,1-Dichloroethylene	ug/L	ND	ND	ND	ND	0.20	3073126
cis-1,2-Dichloroethylene	ug/L	ND	ND	ND	ND	0.50	3073126
trans-1,2-Dichloroethylene	ug/L	ND	ND	ND	ND	0.50	3073126
1,2-Dichloropropane	ug/L	ND	ND	ND	ND	0.20	3073126
cis-1,3-Dichloropropene	ug/L	ND	ND	ND	ND	0.30	3073126
trans-1,3-Dichloropropene	ug/L	ND	ND	ND	ND	0.40	3073126
Ethylbenzene	ug/L	ND	ND	ND	ND	0.20	3073126
Ethylene Dibromide	ug/L	ND	ND	ND	ND	0.20	3073126
Hexane	ug/L	ND	ND	ND	ND	1.0	3073126
Methylene Chloride(Dichloromethane)	ug/L	ND	ND	ND	ND	2.0	3073126
Methyl Isobutyl Ketone	ug/L	ND	ND	ND	ND	5.0	3073126
Methyl Ethyl Ketone (2-Butanone)	ug/L	ND	ND	ND	ND	10	3073126
Methyl t-butyl ether (MTBE)	ug/L	ND	ND	ND	ND	0.50	3073126
Styrene	ug/L	ND	ND	ND	ND	0.50	3073126
1,1,1,2-Tetrachloroethane	ug/L	ND	ND	ND	ND	0.50	3073126
ND = Not detected RDL = Reportable Detection Limit QC Batch = Quality Control Batch							

Maxxam Job #: B2J8143
Report Date: 2012/12/24

Terrapex Environmental Ltd
Client Project #: CB644.01
Site Location: 121 HUME STREET, COLLINGWOOD, ON
Sampler Initials: SS

O'REG 153 VOLATILE ORGANICS (WATER)

Maxxam ID		PZ5733	PZ5734	PZ5735	PZ5736		
Sampling Date		2012/12/12	2012/12/12	2012/12/12	2012/12/12		
COC Number		383592-01-01	383592-01-01	383592-01-01	383592-01-01		
	Units	MW203	MW204	MW205	MW206	RDL	QC Batch
1,1,2,2-Tetrachloroethane	ug/L	ND	ND	ND	ND	0.50	3073126
Tetrachloroethylene	ug/L	ND	ND	ND	ND	0.20	3073126
Toluene	ug/L	ND	ND	ND	ND	0.20	3073126
1,1,1-Trichloroethane	ug/L	ND	ND	ND	ND	0.20	3073126
1,1,2-Trichloroethane	ug/L	ND	ND	ND	ND	0.50	3073126
Trichloroethylene	ug/L	ND	ND	ND	ND	0.20	3073126
Vinyl Chloride	ug/L	ND	ND	ND	ND	0.20	3073126
p+m-Xylene	ug/L	ND	ND	ND	ND	0.20	3073126
o-Xylene	ug/L	ND	ND	ND	ND	0.20	3073126
Xylene (Total)	ug/L	ND	ND	ND	ND	0.20	3073126
Trichlorofluoromethane (FREON 11)	ug/L	ND	ND	ND	ND	0.50	3073126
Surrogate Recovery (%)							
4-Bromofluorobenzene	%	90	89	85	88		3073126
D4-1,2-Dichloroethane	%	83	86	86	86		3073126
D8-Toluene	%	108	108	108	110		3073126
ND = Not detected RDL = Reportable Detection Limit QC Batch = Quality Control Batch							

Maxxam Job #: B2J8143
Report Date: 2012/12/24

Terrapex Environmental Ltd
Client Project #: CB644.01
Site Location: 121 HUME STREET, COLLINGWOOD, ON
Sampler Initials: SS

O'REG 153 VOLATILE ORGANICS (WATER)

Maxxam ID		PZ5737		PZ5738	PZ5738		PZ5739		
Sampling Date		2012/12/13		2012/12/13	2012/12/13		2012/12/13		
COC Number		383592-01-01		383592-01-01	383592-01-01		383592-01-01		
	Units	MW207	RDL	MW208	MW208 Lab-Dup	QC Batch	FIELD BLANK	RDL	QC Batch

Calculated Parameters									
1,3-Dichloropropene (cis+trans)	ug/L	ND	0.50	ND		3071299	ND	0.50	3071299
Volatile Organics									
Acetone (2-Propanone)	ug/L	ND	10	ND	ND	3073118	ND	10	3073126
Benzene	ug/L	ND	0.20	ND	ND	3073118	ND	0.20	3073126
Bromodichloromethane	ug/L	ND	0.50	ND	ND	3073118	ND	0.50	3073126
Bromoform	ug/L	ND	1.0	ND	ND	3073118	ND	1.0	3073126
Bromomethane	ug/L	ND	0.50	ND	ND	3073118	ND	0.50	3073126
Carbon Tetrachloride	ug/L	ND	0.20	ND	ND	3073118	ND	0.20	3073126
Chlorobenzene	ug/L	ND	0.20	ND	ND	3073118	ND	0.20	3073126
Chloroform	ug/L	ND (1)	0.40	ND	ND	3073118	ND	0.20	3073126
Dibromochloromethane	ug/L	ND	0.50	ND	ND	3073118	ND	0.50	3073126
1,2-Dichlorobenzene	ug/L	ND	0.50	ND	ND	3073118	ND	0.50	3073126
1,3-Dichlorobenzene	ug/L	ND	0.50	ND	ND	3073118	ND	0.50	3073126
1,4-Dichlorobenzene	ug/L	ND	0.50	ND	ND	3073118	ND	0.50	3073126
Dichlorodifluoromethane (FREON 12)	ug/L	ND	1.0	ND	ND	3073118	ND	1.0	3073126
1,1-Dichloroethane	ug/L	ND	0.20	ND	ND	3073118	ND	0.20	3073126
1,2-Dichloroethane	ug/L	ND	0.50	ND	ND	3073118	ND	0.50	3073126
1,1-Dichloroethylene	ug/L	ND	0.20	ND	ND	3073118	ND	0.20	3073126
cis-1,2-Dichloroethylene	ug/L	ND	0.50	ND	ND	3073118	ND	0.50	3073126
trans-1,2-Dichloroethylene	ug/L	ND	0.50	ND	ND	3073118	ND	0.50	3073126
1,2-Dichloropropane	ug/L	ND	0.20	ND	ND	3073118	ND	0.20	3073126
cis-1,3-Dichloropropene	ug/L	ND	0.30	ND	ND	3073118	ND	0.30	3073126
trans-1,3-Dichloropropene	ug/L	ND	0.40	ND	ND	3073118	ND	0.40	3073126
Ethylbenzene	ug/L	0.60	0.20	0.56	0.59	3073118	ND	0.20	3073126
Ethylene Dibromide	ug/L	ND	0.20	ND	ND	3073118	ND	0.20	3073126
Hexane	ug/L	1.5	1.0	1.5	1.6	3073118	ND	1.0	3073126
Methylene Chloride(Dichloromethane)	ug/L	ND	2.0	ND	ND	3073118	ND	2.0	3073126
Methyl Isobutyl Ketone	ug/L	ND	5.0	ND	ND	3073118	ND	5.0	3073126
Methyl Ethyl Ketone (2-Butanone)	ug/L	ND	10	ND	ND	3073118	ND	10	3073126
Methyl t-butyl ether (MTBE)	ug/L	ND	0.50	ND	ND	3073118	ND	0.50	3073126

ND = Not detected
RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
(1) Detection limit was raised due to matrix interferences.

Maxxam Job #: B2J8143
Report Date: 2012/12/24

Terrapex Environmental Ltd
Client Project #: CB644.01
Site Location: 121 HUME STREET, COLLINGWOOD, ON
Sampler Initials: SS

O'REG 153 VOLATILE ORGANICS (WATER)

Maxxam ID		PZ5737		PZ5738	PZ5738		PZ5739		
Sampling Date		2012/12/13		2012/12/13	2012/12/13		2012/12/13		
COC Number		383592-01-01		383592-01-01	383592-01-01		383592-01-01		
	Units	MW207	RDL	MW208	MW208 Lab-Dup	QC Batch	FIELD BLANK	RDL	QC Batch

Styrene	ug/L	ND	0.50	ND	ND	3073118	ND	0.50	3073126
1,1,1,2-Tetrachloroethane	ug/L	ND	0.50	ND	ND	3073118	ND	0.50	3073126
1,1,2,2-Tetrachloroethane	ug/L	ND	0.50	ND	ND	3073118	ND	0.50	3073126
Tetrachloroethylene	ug/L	ND	0.20	ND	ND	3073118	ND	0.20	3073126
Toluene	ug/L	ND	0.20	ND	ND	3073118	ND	0.20	3073126
1,1,1-Trichloroethane	ug/L	ND	0.20	ND	ND	3073118	ND	0.20	3073126
1,1,2-Trichloroethane	ug/L	ND	0.50	ND	ND	3073118	ND	0.50	3073126
Trichloroethylene	ug/L	ND	0.20	ND	ND	3073118	ND	0.20	3073126
Vinyl Chloride	ug/L	ND	0.20	ND	ND	3073118	ND	0.20	3073126
p+m-Xylene	ug/L	0.38	0.20	0.35	0.31	3073118	ND	0.20	3073126
o-Xylene	ug/L	0.27	0.20	0.28	0.28	3073118	ND	0.20	3073126
Xylene (Total)	ug/L	0.65	0.20	0.62	0.58	3073118	ND	0.20	3073126
Trichlorofluoromethane (FREON 11)	ug/L	ND	0.50	ND	ND	3073118	ND	0.50	3073126
Surrogate Recovery (%)									
4-Bromofluorobenzene	%	106		105	102	3073118	83		3073126
D4-1,2-Dichloroethane	%	95		93	93	3073118	88		3073126
D8-Toluene	%	96		95	93	3073118	106		3073126

ND = Not detected
RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Maxxam Job #: B2J8143
Report Date: 2012/12/24

Terrapex Environmental Ltd
Client Project #: CB644.01
Site Location: 121 HUME STREET, COLLINGWOOD, ON
Sampler Initials: SS

O'REG 153 VOLATILE ORGANICS (WATER)

Maxxam ID		PZ5740		
Sampling Date				
COC Number		383592-01-01		
	Units	TBLK-F24B-12-1860	RDL	QC Batch

Calculated Parameters				
1,3-Dichloropropene (cis+trans)	ug/L	ND	0.50	3071299
Volatile Organics				
Acetone (2-Propanone)	ug/L	ND	10	3073126
Benzene	ug/L	ND	0.20	3073126
Bromodichloromethane	ug/L	ND	0.50	3073126
Bromoform	ug/L	ND	1.0	3073126
Bromomethane	ug/L	ND	0.50	3073126
Carbon Tetrachloride	ug/L	ND	0.20	3073126
Chlorobenzene	ug/L	ND	0.20	3073126
Chloroform	ug/L	ND	0.20	3073126
Dibromochloromethane	ug/L	ND	0.50	3073126
1,2-Dichlorobenzene	ug/L	ND	0.50	3073126
1,3-Dichlorobenzene	ug/L	ND	0.50	3073126
1,4-Dichlorobenzene	ug/L	ND	0.50	3073126
Dichlorodifluoromethane (FREON 12)	ug/L	ND	1.0	3073126
1,1-Dichloroethane	ug/L	ND	0.20	3073126
1,2-Dichloroethane	ug/L	ND	0.50	3073126
1,1-Dichloroethylene	ug/L	ND	0.20	3073126
cis-1,2-Dichloroethylene	ug/L	ND	0.50	3073126
trans-1,2-Dichloroethylene	ug/L	ND	0.50	3073126
1,2-Dichloropropane	ug/L	ND	0.20	3073126
cis-1,3-Dichloropropene	ug/L	ND	0.30	3073126
trans-1,3-Dichloropropene	ug/L	ND	0.40	3073126
Ethylbenzene	ug/L	ND	0.20	3073126
Ethylene Dibromide	ug/L	ND	0.20	3073126
Hexane	ug/L	ND	1.0	3073126
Methylene Chloride(Dichloromethane)	ug/L	ND	2.0	3073126
Methyl Isobutyl Ketone	ug/L	ND	5.0	3073126
Methyl Ethyl Ketone (2-Butanone)	ug/L	ND	10	3073126
Methyl t-butyl ether (MTBE)	ug/L	ND	0.50	3073126
Styrene	ug/L	ND	0.50	3073126
1,1,1,2-Tetrachloroethane	ug/L	ND	0.50	3073126
ND = Not detected RDL = Reportable Detection Limit QC Batch = Quality Control Batch				

Maxxam Job #: B2J8143
Report Date: 2012/12/24

Terrapex Environmental Ltd
Client Project #: CB644.01
Site Location: 121 HUME STREET, COLLINGWOOD, ON
Sampler Initials: SS

O'REG 153 VOLATILE ORGANICS (WATER)

Maxxam ID		PZ5740		
Sampling Date				
COC Number		383592-01-01		
	Units	TBLK-F24B-12-1860	RDL	QC Batch
1,1,2,2-Tetrachloroethane	ug/L	ND	0.50	3073126
Tetrachloroethylene	ug/L	ND	0.20	3073126
Toluene	ug/L	ND	0.20	3073126
1,1,1-Trichloroethane	ug/L	ND	0.20	3073126
1,1,2-Trichloroethane	ug/L	ND	0.50	3073126
Trichloroethylene	ug/L	ND	0.20	3073126
Vinyl Chloride	ug/L	ND	0.20	3073126
p+m-Xylene	ug/L	ND	0.20	3073126
o-Xylene	ug/L	ND	0.20	3073126
Xylene (Total)	ug/L	ND	0.20	3073126
Trichlorofluoromethane (FREON 11)	ug/L	ND	0.50	3073126
Surrogate Recovery (%)				
4-Bromofluorobenzene	%	85		3073126
D4-1,2-Dichloroethane	%	88		3073126
D8-Toluene	%	106		3073126
ND = Not detected RDL = Reportable Detection Limit QC Batch = Quality Control Batch				

Maxxam Job #: B2J8143
Report Date: 2012/12/24

Terrapex Environmental Ltd
Client Project #: CB644.01
Site Location: 121 HUME STREET, COLLINGWOOD, ON
Sampler Initials: SS

Test Summary

Maxxam ID PZ5726
Sample ID MW101
Matrix Water

Collected 2012/12/12
Shipped
Received 2012/12/14

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
1,3-Dichloropropene Sum	CALC	3071299	N/A	2012/12/20	Automated Statchk
Petroleum Hydro. CCME F1 & BTEX in Wat	HSGC/MSFD	3078227	N/A	2012/12/21	Haibin Wu
Petroleum Hydrocarbons F2-F4 in Water	GC/FID	3077139	2012/12/20	2012/12/21	Zhiyue (Frank) Zhu
Volatile Organic Compounds in Water	GC/MS	3073126	N/A	2012/12/20	Serena Lentz

Maxxam ID PZ5726 Dup
Sample ID MW101
Matrix Water

Collected 2012/12/12
Shipped
Received 2012/12/14

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Petroleum Hydro. CCME F1 & BTEX in Wat	HSGC/MSFD	3078227	N/A	2012/12/22	Haibin Wu

Maxxam ID PZ5727
Sample ID MW102
Matrix Water

Collected 2012/12/12
Shipped
Received 2012/12/14

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
1,3-Dichloropropene Sum	CALC	3071299	N/A	2012/12/20	Automated Statchk
Petroleum Hydro. CCME F1 & BTEX in Wat	HSGC/MSFD	3078227	N/A	2012/12/22	Haibin Wu
Petroleum Hydrocarbons F2-F4 in Water	GC/FID	3077139	2012/12/20	2012/12/21	Zhiyue (Frank) Zhu
Volatile Organic Compounds in Water	GC/MS	3073126	N/A	2012/12/20	Serena Lentz

Maxxam ID PZ5728
Sample ID MW103
Matrix Water

Collected 2012/12/12
Shipped
Received 2012/12/14

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
1,3-Dichloropropene Sum	CALC	3071299	N/A	2012/12/20	Automated Statchk
Petroleum Hydro. CCME F1 & BTEX in Wat	HSGC/MSFD	3078227	N/A	2012/12/22	Haibin Wu
Petroleum Hydrocarbons F2-F4 in Water	GC/FID	3077139	2012/12/20	2012/12/21	Zhiyue (Frank) Zhu
Volatile Organic Compounds in Water	GC/MS	3073126	N/A	2012/12/20	Serena Lentz

Maxxam ID PZ5729
Sample ID MW106
Matrix Water

Collected 2012/12/12
Shipped
Received 2012/12/14

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
1,3-Dichloropropene Sum	CALC	3071299	N/A	2012/12/20	Automated Statchk
Petroleum Hydro. CCME F1 & BTEX in Wat	HSGC/MSFD	3078227	N/A	2012/12/22	Haibin Wu
Petroleum Hydrocarbons F2-F4 in Water	GC/FID	3077139	2012/12/20	2012/12/21	Zhiyue (Frank) Zhu
Volatile Organic Compounds in Water	GC/MS	3073126	N/A	2012/12/20	Serena Lentz

Maxxam Job #: B2J8143
Report Date: 2012/12/24

Terrapex Environmental Ltd
Client Project #: CB644.01
Site Location: 121 HUME STREET, COLLINGWOOD, ON
Sampler Initials: SS

Test Summary

Maxxam ID PZ5729 Dup
Sample ID MW106
Matrix Water

Collected 2012/12/12
Shipped
Received 2012/12/14

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Petroleum Hydrocarbons F2-F4 in Water	GC/FID	3077139	2012/12/20	2012/12/21	Zhiyue (Frank) Zhu

Maxxam ID PZ5730
Sample ID MW107
Matrix Water

Collected 2012/12/12
Shipped
Received 2012/12/14

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
1,3-Dichloropropene Sum	CALC	3071299	N/A	2012/12/21	Automated Statchk
Petroleum Hydro. CCME F1 & BTEX in Wat	HSGC/MSFD	3078227	N/A	2012/12/22	Haibin Wu
Petroleum Hydrocarbons F2-F4 in Water	GC/FID	3077139	2012/12/20	2012/12/21	Zhiyue (Frank) Zhu
Volatile Organic Compounds in Water	GC/MS	3073118	N/A	2012/12/20	John Wu

Maxxam ID PZ5731
Sample ID MW201
Matrix Water

Collected 2012/12/12
Shipped
Received 2012/12/14

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
1,3-Dichloropropene Sum	CALC	3071299	N/A	2012/12/20	Automated Statchk
Petroleum Hydro. CCME F1 & BTEX in Wat	HSGC/MSFD	3078227	N/A	2012/12/22	Haibin Wu
Petroleum Hydrocarbons F2-F4 in Water	GC/FID	3077139	2012/12/20	2012/12/21	Zhiyue (Frank) Zhu
Volatile Organic Compounds in Water	GC/MS	3073126	N/A	2012/12/20	Serena Lentz

Maxxam ID PZ5732
Sample ID MW202
Matrix Water

Collected 2012/12/12
Shipped
Received 2012/12/14

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
1,3-Dichloropropene Sum	CALC	3071299	N/A	2012/12/21	Automated Statchk
Petroleum Hydro. CCME F1 & BTEX in Wat	HSGC/MSFD	3078227	N/A	2012/12/22	Haibin Wu
Petroleum Hydrocarbons F2-F4 in Water	GC/FID	3077139	2012/12/20	2012/12/21	Zhiyue (Frank) Zhu
Volatile Organic Compounds in Water	GC/MS	3073118	N/A	2012/12/20	John Wu

Maxxam ID PZ5733
Sample ID MW203
Matrix Water

Collected 2012/12/12
Shipped
Received 2012/12/14

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
1,3-Dichloropropene Sum	CALC	3071299	N/A	2012/12/20	Automated Statchk
Petroleum Hydro. CCME F1 & BTEX in Wat	HSGC/MSFD	3078227	N/A	2012/12/22	Haibin Wu
Petroleum Hydrocarbons F2-F4 in Water	GC/FID	3077139	2012/12/20	2012/12/21	Zhiyue (Frank) Zhu
Volatile Organic Compounds in Water	GC/MS	3073126	N/A	2012/12/20	Serena Lentz

Maxxam Job #: B2J8143
Report Date: 2012/12/24

Terrapex Environmental Ltd
Client Project #: CB644.01
Site Location: 121 HUME STREET, COLLINGWOOD, ON
Sampler Initials: SS

Test Summary

Maxxam ID PZ5734
Sample ID MW204
Matrix Water

Collected 2012/12/12
Shipped
Received 2012/12/14

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
1,3-Dichloropropene Sum	CALC	3071299	N/A	2012/12/20	Automated Statchk
Petroleum Hydro. CCME F1 & BTEX in Wat	HSGC/MSFD	3078227	N/A	2012/12/22	Haibin Wu
Petroleum Hydrocarbons F2-F4 in Water	GC/FID	3077139	2012/12/20	2012/12/21	Zhiyue (Frank) Zhu
Volatile Organic Compounds in Water	GC/MS	3073126	N/A	2012/12/20	Serena Lentz

Maxxam ID PZ5735
Sample ID MW205
Matrix Water

Collected 2012/12/12
Shipped
Received 2012/12/14

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
1,3-Dichloropropene Sum	CALC	3071299	N/A	2012/12/20	Automated Statchk
Petroleum Hydro. CCME F1 & BTEX in Wat	HSGC/MSFD	3078667	N/A	2012/12/23	Abdikarim Ali
Petroleum Hydrocarbons F2-F4 in Water	GC/FID	3077139	2012/12/20	2012/12/21	Zhiyue (Frank) Zhu
Volatile Organic Compounds in Water	GC/MS	3073126	N/A	2012/12/20	Serena Lentz

Maxxam ID PZ5736
Sample ID MW206
Matrix Water

Collected 2012/12/12
Shipped
Received 2012/12/14

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
1,3-Dichloropropene Sum	CALC	3071299	N/A	2012/12/20	Automated Statchk
Petroleum Hydro. CCME F1 & BTEX in Wat	HSGC/MSFD	3078667	N/A	2012/12/23	Abdikarim Ali
Petroleum Hydrocarbons F2-F4 in Water	GC/FID	3077139	2012/12/20	2012/12/21	Zhiyue (Frank) Zhu
Volatile Organic Compounds in Water	GC/MS	3073126	N/A	2012/12/20	Serena Lentz

Maxxam ID PZ5737
Sample ID MW207
Matrix Water

Collected 2012/12/13
Shipped
Received 2012/12/14

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
1,3-Dichloropropene Sum	CALC	3071299	N/A	2012/12/21	Automated Statchk
Petroleum Hydro. CCME F1 & BTEX in Wat	HSGC/MSFD	3078667	N/A	2012/12/23	Abdikarim Ali
Petroleum Hydrocarbons F2-F4 in Water	GC/FID	3077139	2012/12/20	2012/12/21	Zhiyue (Frank) Zhu
Volatile Organic Compounds in Water	GC/MS	3073118	N/A	2012/12/20	John Wu

Maxxam ID PZ5738
Sample ID MW208
Matrix Water

Collected 2012/12/13
Shipped
Received 2012/12/14

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
1,3-Dichloropropene Sum	CALC	3071299	N/A	2012/12/21	Automated Statchk
Petroleum Hydro. CCME F1 & BTEX in Wat	HSGC/MSFD	3078667	N/A	2012/12/23	Abdikarim Ali
Petroleum Hydrocarbons F2-F4 in Water	GC/FID	3077139	2012/12/20	2012/12/21	Zhiyue (Frank) Zhu
Volatile Organic Compounds in Water	GC/MS	3073118	N/A	2012/12/19	John Wu

Maxxam Job #: B2J8143
Report Date: 2012/12/24

Terrapex Environmental Ltd
Client Project #: CB644.01
Site Location: 121 HUME STREET, COLLINGWOOD, ON
Sampler Initials: SS

Test Summary

Maxxam ID PZ5738 Dup
Sample ID MW208
Matrix Water

Collected 2012/12/13
Shipped
Received 2012/12/14

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Volatile Organic Compounds in Water	GC/MS	3073118	N/A	2012/12/19	John Wu

Maxxam ID PZ5739
Sample ID FIELD BLANK
Matrix Water

Collected 2012/12/13
Shipped
Received 2012/12/14

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
1,3-Dichloropropene Sum	CALC	3071299	N/A	2012/12/20	Automated Statchk
Petroleum Hydro. CCME F1 & BTEX in Wat	HSGC/MSFD	3078667	N/A	2012/12/23	Abdikarim Ali
Petroleum Hydrocarbons F2-F4 in Water	GC/FID	3077139	2012/12/20	2012/12/21	Zhiyue (Frank) Zhu
Volatile Organic Compounds in Water	GC/MS	3073126	N/A	2012/12/20	Serena Lentz

Maxxam ID PZ5740
Sample ID TBLK-F24B-12-1860
Matrix Water

Collected
Shipped
Received 2012/12/14

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
1,3-Dichloropropene Sum	CALC	3071299	N/A	2012/12/20	Automated Statchk
Petroleum Hydro. CCME F1 & BTEX in Wat	HSGC/MSFD	3078667	N/A	2012/12/23	Abdikarim Ali
Petroleum Hydrocarbons F2-F4 in Water	GC/FID	3077139	2012/12/20	2012/12/21	Zhiyue (Frank) Zhu
Volatile Organic Compounds in Water	GC/MS	3073126	N/A	2012/12/20	Serena Lentz

Maxxam Job #: B2J8143
Report Date: 2012/12/24

Terrapex Environmental Ltd
Client Project #: CB644.01
Site Location: 121 HUME STREET, COLLINGWOOD, ON
Sampler Initials: SS

Package 1	3.0°C
Package 2	2.3°C

Each temperature is the average of up to three cooler temperatures taken at receipt

GENERAL COMMENTS

VOC Analysis: Due to high concentrations of target analytes, some samples required dilution. Detection limits were adjusted accordingly. In order to meet required regulatory criteria or to achieve lower reporting limits, results for selected compounds (obtained by a separate analysis using an appropriate low dilution) are included in the report.

F1 BTEX analysis: The BTEX results used for the F1-BTEX calculation were obtained from Headspace-GC analysis.

Results relate only to the items tested.

Terrapex Environmental Ltd
Attention: Jeff Stevenson
Client Project #: CB644.01
P.O. #:
Site Location: 121 HUME STREET, COLLINGWOOD, ON

Quality Assurance Report

Maxxam Job Number: MB2J8143

QA/QC Batch Num Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QC Limits
3073118 J_W	Matrix Spike [PZ5738-02]	4-Bromofluorobenzene	2012/12/19		107	%	70 - 130
		D4-1,2-Dichloroethane	2012/12/19		97	%	70 - 130
		D8-Toluene	2012/12/19		100	%	70 - 130
		Acetone (2-Propanone)	2012/12/19		70	%	60 - 140
		Benzene	2012/12/19		103	%	70 - 130
		Bromodichloromethane	2012/12/19		96	%	70 - 130
		Bromoform	2012/12/19		99	%	70 - 130
		Bromomethane	2012/12/19		101	%	60 - 140
		Carbon Tetrachloride	2012/12/19		97	%	70 - 130
		Chlorobenzene	2012/12/19		92	%	70 - 130
		Chloroform	2012/12/19		102	%	70 - 130
		Dibromochloromethane	2012/12/19		104	%	70 - 130
		1,2-Dichlorobenzene	2012/12/19		100	%	70 - 130
		1,3-Dichlorobenzene	2012/12/19		90	%	70 - 130
		1,4-Dichlorobenzene	2012/12/19		89	%	70 - 130
		Dichlorodifluoromethane (FREON 12)	2012/12/19		79	%	60 - 140
		1,1-Dichloroethane	2012/12/19		81	%	70 - 130
		1,2-Dichloroethane	2012/12/19		91	%	70 - 130
		1,1-Dichloroethylene	2012/12/19		93	%	70 - 130
		cis-1,2-Dichloroethylene	2012/12/19		88	%	70 - 130
		trans-1,2-Dichloroethylene	2012/12/19		93	%	70 - 130
		1,2-Dichloropropane	2012/12/19		92	%	70 - 130
		cis-1,3-Dichloropropene	2012/12/19		93	%	70 - 130
		trans-1,3-Dichloropropene	2012/12/19		92	%	70 - 130
		Ethylbenzene	2012/12/19		92	%	70 - 130
		Ethylene Dibromide	2012/12/19		98	%	70 - 130
		Hexane	2012/12/19		96	%	70 - 130
		Methylene Chloride(Dichloromethane)	2012/12/19		102	%	70 - 130
		Methyl Isobutyl Ketone	2012/12/19		82	%	70 - 130
		Methyl Ethyl Ketone (2-Butanone)	2012/12/19		81	%	60 - 140
		Methyl t-butyl ether (MTBE)	2012/12/19		93	%	70 - 130
		Styrene	2012/12/19		88	%	70 - 130
		1,1,1,2-Tetrachloroethane	2012/12/19		98	%	70 - 130
		1,1,2,2-Tetrachloroethane	2012/12/19		86	%	70 - 130
		Tetrachloroethylene	2012/12/19		101	%	70 - 130
		Toluene	2012/12/19		92	%	70 - 130
		1,1,1-Trichloroethane	2012/12/19		87	%	70 - 130
		1,1,2-Trichloroethane	2012/12/19		97	%	70 - 130
		Trichloroethylene	2012/12/19		103	%	70 - 130
		Vinyl Chloride	2012/12/19		89	%	70 - 130
		p+m-Xylene	2012/12/19		93	%	70 - 130
		o-Xylene	2012/12/19		93	%	70 - 130
		Trichlorofluoromethane (FREON 11)	2012/12/19		98	%	70 - 130
	Spiked Blank	4-Bromofluorobenzene	2012/12/19		105	%	70 - 130
		D4-1,2-Dichloroethane	2012/12/19		96	%	70 - 130
		D8-Toluene	2012/12/19		99	%	70 - 130
		Acetone (2-Propanone)	2012/12/19		72	%	60 - 140
		Benzene	2012/12/19		102	%	70 - 130
		Bromodichloromethane	2012/12/19		97	%	70 - 130
		Bromoform	2012/12/19		98	%	70 - 130
		Bromomethane	2012/12/19		101	%	60 - 140
		Carbon Tetrachloride	2012/12/19		98	%	70 - 130
		Chlorobenzene	2012/12/19		90	%	70 - 130
		Chloroform	2012/12/19		103	%	70 - 130

Terrapex Environmental Ltd
Attention: Jeff Stevenson
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P.O. #:
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Quality Assurance Report (Continued)

Maxxam Job Number: MB2J8143

QA/QC Batch Num Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QC Limits
3073118 J_W	Spiked Blank	Dibromochloromethane	2012/12/19		102	%	70 - 130
		1,2-Dichlorobenzene	2012/12/19		102	%	70 - 130
		1,3-Dichlorobenzene	2012/12/19		91	%	70 - 130
		1,4-Dichlorobenzene	2012/12/19		90	%	70 - 130
		Dichlorodifluoromethane (FREON 12)	2012/12/19		80	%	60 - 140
		1,1-Dichloroethane	2012/12/19		82	%	70 - 130
		1,2-Dichloroethane	2012/12/19		91	%	70 - 130
		1,1-Dichloroethylene	2012/12/19		93	%	70 - 130
		cis-1,2-Dichloroethylene	2012/12/19		88	%	70 - 130
		trans-1,2-Dichloroethylene	2012/12/19		94	%	70 - 130
		1,2-Dichloropropane	2012/12/19		92	%	70 - 130
		cis-1,3-Dichloropropene	2012/12/19		88	%	70 - 130
		trans-1,3-Dichloropropene	2012/12/19		87	%	70 - 130
		Ethylbenzene	2012/12/19		90	%	70 - 130
		Ethylene Dibromide	2012/12/19		96	%	70 - 130
		Hexane	2012/12/19		92	%	70 - 130
		Methylene Chloride(Dichloromethane)	2012/12/19		102	%	70 - 130
		Methyl Isobutyl Ketone	2012/12/19		83	%	70 - 130
		Methyl Ethyl Ketone (2-Butanone)	2012/12/19		82	%	60 - 140
		Methyl t-butyl ether (MTBE)	2012/12/19		92	%	70 - 130
		Styrene	2012/12/19		87	%	70 - 130
		1,1,1,2-Tetrachloroethane	2012/12/19		96	%	70 - 130
		1,1,2,2-Tetrachloroethane	2012/12/19		85	%	70 - 130
		Tetrachloroethylene	2012/12/19		99	%	70 - 130
		Toluene	2012/12/19		90	%	70 - 130
		1,1,1-Trichloroethane	2012/12/19		88	%	70 - 130
		1,1,2-Trichloroethane	2012/12/19		95	%	70 - 130
		Trichloroethylene	2012/12/19		103	%	70 - 130
		Vinyl Chloride	2012/12/19		90	%	70 - 130
		p+m-Xylene	2012/12/19		91	%	70 - 130
		o-Xylene	2012/12/19		91	%	70 - 130
		Trichlorofluoromethane (FREON 11)	2012/12/19		99	%	70 - 130
	Method Blank	4-Bromofluorobenzene	2012/12/19		103	%	70 - 130
		D4-1,2-Dichloroethane	2012/12/19		95	%	70 - 130
		D8-Toluene	2012/12/19		97	%	70 - 130
		Acetone (2-Propanone)	2012/12/19	ND, RDL=10		ug/L	
		Benzene	2012/12/19	ND, RDL=0.20		ug/L	
		Bromodichloromethane	2012/12/19	ND, RDL=0.50		ug/L	
		Bromoform	2012/12/19	ND, RDL=1.0		ug/L	
		Bromomethane	2012/12/19	ND, RDL=0.50		ug/L	
		Carbon Tetrachloride	2012/12/19	ND, RDL=0.20		ug/L	
		Chlorobenzene	2012/12/19	ND, RDL=0.20		ug/L	
		Chloroform	2012/12/19	ND, RDL=0.20		ug/L	
		Dibromochloromethane	2012/12/19	ND, RDL=0.50		ug/L	
		1,2-Dichlorobenzene	2012/12/19	ND, RDL=0.50		ug/L	
		1,3-Dichlorobenzene	2012/12/19	ND, RDL=0.50		ug/L	
		1,4-Dichlorobenzene	2012/12/19	ND, RDL=0.50		ug/L	
		Dichlorodifluoromethane (FREON 12)	2012/12/19	ND, RDL=1.0		ug/L	
		1,1-Dichloroethane	2012/12/19	ND, RDL=0.20		ug/L	
		1,2-Dichloroethane	2012/12/19	ND, RDL=0.50		ug/L	
		1,1-Dichloroethylene	2012/12/19	ND, RDL=0.20		ug/L	
		cis-1,2-Dichloroethylene	2012/12/19	ND, RDL=0.50		ug/L	
		trans-1,2-Dichloroethylene	2012/12/19	ND, RDL=0.50		ug/L	
		1,2-Dichloropropane	2012/12/19	ND, RDL=0.20		ug/L	
		cis-1,3-Dichloropropene	2012/12/19	ND, RDL=0.30		ug/L	

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QA/QC Batch	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QC Limits
3073118 J_W	Method Blank	trans-1,3-Dichloropropene	2012/12/19	ND, RDL=0.40		ug/L	
		Ethylbenzene	2012/12/19	ND, RDL=0.20		ug/L	
		Ethylene Dibromide	2012/12/19	ND, RDL=0.20		ug/L	
		Hexane	2012/12/19	ND, RDL=1.0		ug/L	
		Methylene Chloride(Dichloromethane)	2012/12/19	ND, RDL=2.0		ug/L	
		Methyl Isobutyl Ketone	2012/12/19	ND, RDL=5.0		ug/L	
		Methyl Ethyl Ketone (2-Butanone)	2012/12/19	ND, RDL=10		ug/L	
		Methyl t-butyl ether (MTBE)	2012/12/19	ND, RDL=0.50		ug/L	
		Styrene	2012/12/19	ND, RDL=0.50		ug/L	
		1,1,1,2-Tetrachloroethane	2012/12/19	ND, RDL=0.50		ug/L	
		1,1,2,2-Tetrachloroethane	2012/12/19	ND, RDL=0.50		ug/L	
		Tetrachloroethylene	2012/12/19	ND, RDL=0.20		ug/L	
		Toluene	2012/12/19	ND, RDL=0.20		ug/L	
		1,1,1-Trichloroethane	2012/12/19	ND, RDL=0.20		ug/L	
		1,1,2-Trichloroethane	2012/12/19	ND, RDL=0.50		ug/L	
		Trichloroethylene	2012/12/19	ND, RDL=0.20		ug/L	
		Vinyl Chloride	2012/12/19	ND, RDL=0.20		ug/L	
		p+m-Xylene	2012/12/19	ND, RDL=0.20		ug/L	
		o-Xylene	2012/12/19	ND, RDL=0.20		ug/L	
		Xylene (Total)	2012/12/19	ND, RDL=0.20		ug/L	
		Trichlorofluoromethane (FREON 11)	2012/12/19	ND, RDL=0.50		ug/L	
	RPD [PZ5738-02]	Acetone (2-Propanone)	2012/12/19	NC		%	30
		Benzene	2012/12/19	NC		%	30
		Bromodichloromethane	2012/12/19	NC		%	30
		Bromoform	2012/12/19	NC		%	30
		Bromomethane	2012/12/19	NC		%	30
		Carbon Tetrachloride	2012/12/19	NC		%	30
		Chlorobenzene	2012/12/19	NC		%	30
		Chloroform	2012/12/19	NC		%	30
		Dibromochloromethane	2012/12/19	NC		%	30
		1,2-Dichlorobenzene	2012/12/19	NC		%	30
		1,3-Dichlorobenzene	2012/12/19	NC		%	30
		1,4-Dichlorobenzene	2012/12/19	NC		%	30
		Dichlorodifluoromethane (FREON 12)	2012/12/19	NC		%	30
		1,1-Dichloroethane	2012/12/19	NC		%	30
		1,2-Dichloroethane	2012/12/19	NC		%	30
		1,1-Dichloroethylene	2012/12/19	NC		%	30
		cis-1,2-Dichloroethylene	2012/12/19	NC		%	30
		trans-1,2-Dichloroethylene	2012/12/19	NC		%	30
		1,2-Dichloropropane	2012/12/19	NC		%	30
		cis-1,3-Dichloropropene	2012/12/19	NC		%	30
		trans-1,3-Dichloropropene	2012/12/19	NC		%	30
		Ethylbenzene	2012/12/19	NC		%	30
		Ethylene Dibromide	2012/12/19	NC		%	30
		Hexane	2012/12/19	NC		%	30
		Methylene Chloride(Dichloromethane)	2012/12/19	NC		%	30
		Methyl Isobutyl Ketone	2012/12/19	NC		%	30
		Methyl Ethyl Ketone (2-Butanone)	2012/12/19	NC		%	30
		Methyl t-butyl ether (MTBE)	2012/12/19	NC		%	30
		Styrene	2012/12/19	NC		%	30
		1,1,1,2-Tetrachloroethane	2012/12/19	NC		%	30
		1,1,2,2-Tetrachloroethane	2012/12/19	NC		%	30
		Tetrachloroethylene	2012/12/19	NC		%	30
		Toluene	2012/12/19	NC		%	30
		1,1,1-Trichloroethane	2012/12/19	NC		%	30

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Quality Assurance Report (Continued)

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QA/QC Batch	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QC Limits
3073118 J_W	RPD [PZ5738-02]	1,1,2-Trichloroethane	2012/12/19	NC		%	30
		Trichloroethylene	2012/12/19	NC		%	30
		Vinyl Chloride	2012/12/19	NC		%	30
		p+m-Xylene	2012/12/19	NC		%	30
		o-Xylene	2012/12/19	NC		%	30
		Xylene (Total)	2012/12/19	NC		%	30
		Trichlorofluoromethane (FREON 11)	2012/12/19	NC		%	30
3073126 SLE	Matrix Spike	4-Bromofluorobenzene	2012/12/20		94	%	70 - 130
		D4-1,2-Dichloroethane	2012/12/20		90	%	70 - 130
		D8-Toluene	2012/12/20		103	%	70 - 130
		Acetone (2-Propanone)	2012/12/20		79	%	60 - 140
		Benzene	2012/12/20		84	%	70 - 130
		Bromodichloromethane	2012/12/20		89	%	70 - 130
		Bromoform	2012/12/20		103	%	70 - 130
		Bromomethane	2012/12/20		81	%	60 - 140
		Carbon Tetrachloride	2012/12/20		87	%	70 - 130
		Chlorobenzene	2012/12/20		89	%	70 - 130
		Chloroform	2012/12/20		95	%	70 - 130
		Dibromochloromethane	2012/12/20		102	%	70 - 130
		1,2-Dichlorobenzene	2012/12/20		91	%	70 - 130
		1,3-Dichlorobenzene	2012/12/20		91	%	70 - 130
		1,4-Dichlorobenzene	2012/12/20		85	%	70 - 130
		Dichlorodifluoromethane (FREON 12)	2012/12/20		71	%	60 - 140
		1,1-Dichloroethane	2012/12/20		73	%	70 - 130
		1,2-Dichloroethane	2012/12/20		90	%	70 - 130
		1,1-Dichloroethylene	2012/12/20		85	%	70 - 130
		cis-1,2-Dichloroethylene	2012/12/20		82	%	70 - 130
		trans-1,2-Dichloroethylene	2012/12/20		86	%	70 - 130
		1,2-Dichloropropane	2012/12/20		81	%	70 - 130
		cis-1,3-Dichloropropene	2012/12/20		83	%	70 - 130
		trans-1,3-Dichloropropene	2012/12/20		90	%	70 - 130
		Ethylbenzene	2012/12/20		88	%	70 - 130
		Ethylene Dibromide	2012/12/20		94	%	70 - 130
		Hexane	2012/12/20		69 (1)	%	70 - 130
		Methylene Chloride(Dichloromethane)	2012/12/20		81	%	70 - 130
		Methyl Isobutyl Ketone	2012/12/20		87	%	70 - 130
		Methyl Ethyl Ketone (2-Butanone)	2012/12/20		80	%	60 - 140
		Methyl t-butyl ether (MTBE)	2012/12/20		84	%	70 - 130
		Styrene	2012/12/20		78	%	70 - 130
		1,1,1,2-Tetrachloroethane	2012/12/20		95	%	70 - 130
		1,1,2,2-Tetrachloroethane	2012/12/20		86	%	70 - 130
		Tetrachloroethylene	2012/12/20		89	%	70 - 130
		Toluene	2012/12/20		92	%	70 - 130
		1,1,1-Trichloroethane	2012/12/20		78	%	70 - 130
		1,1,2-Trichloroethane	2012/12/20		92	%	70 - 130
		Trichloroethylene	2012/12/20		85	%	70 - 130
		Vinyl Chloride	2012/12/20		77	%	70 - 130
		p+m-Xylene	2012/12/20		83	%	70 - 130
		o-Xylene	2012/12/20		85	%	70 - 130
		Trichlorofluoromethane (FREON 11)	2012/12/20		88	%	70 - 130
	Spiked Blank	4-Bromofluorobenzene	2012/12/20		94	%	70 - 130
		D4-1,2-Dichloroethane	2012/12/20		89	%	70 - 130
		D8-Toluene	2012/12/20		105	%	70 - 130
		Acetone (2-Propanone)	2012/12/20		77	%	60 - 140
		Benzene	2012/12/20		82	%	70 - 130

Terrapex Environmental Ltd
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Quality Assurance Report (Continued)

Maxxam Job Number: MB2J8143

QA/QC Batch				Date Analyzed				
Num Init	QC Type	Parameter		yyyy/mm/dd	Value	Recovery	Units	QC Limits
3073126	SLE	Spiked Blank	Bromodichloromethane	2012/12/20		86	%	70 - 130
			Bromoform	2012/12/20		99	%	70 - 130
			Bromomethane	2012/12/20		84	%	60 - 140
			Carbon Tetrachloride	2012/12/20		85	%	70 - 130
			Chlorobenzene	2012/12/20		88	%	70 - 130
			Chloroform	2012/12/20		92	%	70 - 130
			Dibromochloromethane	2012/12/20		98	%	70 - 130
			1,2-Dichlorobenzene	2012/12/20		89	%	70 - 130
			1,3-Dichlorobenzene	2012/12/20		89	%	70 - 130
			1,4-Dichlorobenzene	2012/12/20		83	%	70 - 130
			Dichlorodifluoromethane (FREON 12)	2012/12/20		71	%	60 - 140
			1,1-Dichloroethane	2012/12/20		72	%	70 - 130
			1,2-Dichloroethane	2012/12/20		86	%	70 - 130
			1,1-Dichloroethylene	2012/12/20		83	%	70 - 130
			cis-1,2-Dichloroethylene	2012/12/20		79	%	70 - 130
			trans-1,2-Dichloroethylene	2012/12/20		84	%	70 - 130
			1,2-Dichloropropane	2012/12/20		80	%	70 - 130
			cis-1,3-Dichloropropene	2012/12/20		80	%	70 - 130
			trans-1,3-Dichloropropene	2012/12/20		87	%	70 - 130
			Ethylbenzene	2012/12/20		87	%	70 - 130
			Ethylene Dibromide	2012/12/20		92	%	70 - 130
			Hexane	2012/12/20		69 (1)	%	70 - 130
			Methylene Chloride(Dichloromethane)	2012/12/20		77	%	70 - 130
			Methyl Isobutyl Ketone	2012/12/20		82	%	70 - 130
			Methyl Ethyl Ketone (2-Butanone)	2012/12/20		77	%	60 - 140
			Methyl t-butyl ether (MTBE)	2012/12/20		79	%	70 - 130
			Styrene	2012/12/20		76	%	70 - 130
			1,1,1,2-Tetrachloroethane	2012/12/20		92	%	70 - 130
			1,1,2,2-Tetrachloroethane	2012/12/20		82	%	70 - 130
			Tetrachloroethylene	2012/12/20		88	%	70 - 130
			Toluene	2012/12/20		91	%	70 - 130
			1,1,1-Trichloroethane	2012/12/20		77	%	70 - 130
			1,1,2-Trichloroethane	2012/12/20		87	%	70 - 130
			Trichloroethylene	2012/12/20		83	%	70 - 130
			Vinyl Chloride	2012/12/20		75	%	70 - 130
			p+m-Xylene	2012/12/20		79	%	70 - 130
			o-Xylene	2012/12/20		83	%	70 - 130
			Trichlorofluoromethane (FREON 11)	2012/12/20		87	%	70 - 130
		Method Blank	4-Bromofluorobenzene	2012/12/19		87	%	70 - 130
			D4-1,2-Dichloroethane	2012/12/19		91	%	70 - 130
			D8-Toluene	2012/12/19		110	%	70 - 130
			Acetone (2-Propanone)	2012/12/19	ND, RDL=10		ug/L	
			Benzene	2012/12/19	ND, RDL=0.20		ug/L	
			Bromodichloromethane	2012/12/19	ND, RDL=0.50		ug/L	
	Bromoform		2012/12/19	ND, RDL=1.0		ug/L		
	Bromomethane		2012/12/19	ND, RDL=0.50		ug/L		
	Carbon Tetrachloride		2012/12/19	ND, RDL=0.20		ug/L		
	Chlorobenzene		2012/12/19	ND, RDL=0.20		ug/L		
	Chloroform		2012/12/19	ND, RDL=0.20		ug/L		
	Dibromochloromethane		2012/12/19	ND, RDL=0.50		ug/L		
	1,2-Dichlorobenzene		2012/12/19	ND, RDL=0.50		ug/L		
	1,3-Dichlorobenzene		2012/12/19	ND, RDL=0.50		ug/L		
	1,4-Dichlorobenzene		2012/12/19	ND, RDL=0.50		ug/L		
	Dichlorodifluoromethane (FREON 12)		2012/12/19	ND, RDL=1.0		ug/L		
	1,1-Dichloroethane	2012/12/19	ND, RDL=0.20		ug/L			

Terrapex Environmental Ltd
Attention: Jeff Stevenson
Client Project #: CB644.01
P.O. #:
Site Location: 121 HUME STREET, COLLINGWOOD, ON

Quality Assurance Report (Continued)

Maxxam Job Number: MB2J8143

QA/QC Batch	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QC Limits
3073126	SLE	Method Blank	2012/12/19	ND, RDL=0.50		ug/L	
		1,2-Dichloroethane	2012/12/19	ND, RDL=0.20		ug/L	
		1,1-Dichloroethylene	2012/12/19	ND, RDL=0.50		ug/L	
		cis-1,2-Dichloroethylene	2012/12/19	ND, RDL=0.50		ug/L	
		trans-1,2-Dichloroethylene	2012/12/19	ND, RDL=0.50		ug/L	
		1,2-Dichloropropane	2012/12/19	ND, RDL=0.20		ug/L	
		cis-1,3-Dichloropropene	2012/12/19	ND, RDL=0.30		ug/L	
		trans-1,3-Dichloropropene	2012/12/19	ND, RDL=0.40		ug/L	
		Ethylbenzene	2012/12/19	ND, RDL=0.20		ug/L	
		Ethylene Dibromide	2012/12/19	ND, RDL=0.20		ug/L	
		Hexane	2012/12/19	ND, RDL=1.0		ug/L	
		Methylene Chloride(Dichloromethane)	2012/12/19	ND, RDL=2.0		ug/L	
		Methyl Isobutyl Ketone	2012/12/19	ND, RDL=5.0		ug/L	
		Methyl Ethyl Ketone (2-Butanone)	2012/12/19	ND, RDL=10		ug/L	
		Methyl t-butyl ether (MTBE)	2012/12/19	ND, RDL=0.50		ug/L	
		Styrene	2012/12/19	ND, RDL=0.50		ug/L	
		1,1,1,2-Tetrachloroethane	2012/12/19	ND, RDL=0.50		ug/L	
		1,1,2,2-Tetrachloroethane	2012/12/19	ND, RDL=0.50		ug/L	
		Tetrachloroethylene	2012/12/19	ND, RDL=0.20		ug/L	
		Toluene	2012/12/19	ND, RDL=0.20		ug/L	
		1,1,1-Trichloroethane	2012/12/19	ND, RDL=0.20		ug/L	
		1,1,2-Trichloroethane	2012/12/19	ND, RDL=0.50		ug/L	
		Trichloroethylene	2012/12/19	ND, RDL=0.20		ug/L	
		Vinyl Chloride	2012/12/19	ND, RDL=0.20		ug/L	
		p+m-Xylene	2012/12/19	ND, RDL=0.20		ug/L	
		o-Xylene	2012/12/19	ND, RDL=0.20		ug/L	
		Xylene (Total)	2012/12/19	ND, RDL=0.20		ug/L	
		Trichlorofluoromethane (FREON 11)	2012/12/19	ND, RDL=0.50		ug/L	
	RPD	Acetone (2-Propanone)	2012/12/20	NC		%	30
		Benzene	2012/12/20	NC		%	30
		Bromodichloromethane	2012/12/20	NC		%	30
		Bromoform	2012/12/20	NC		%	30
		Bromomethane	2012/12/20	NC		%	30
		Carbon Tetrachloride	2012/12/20	NC		%	30
		Chlorobenzene	2012/12/20	NC		%	30
		Chloroform	2012/12/20	NC		%	30
		Dibromochloromethane	2012/12/20	NC		%	30
		1,2-Dichlorobenzene	2012/12/20	NC		%	30
		1,3-Dichlorobenzene	2012/12/20	NC		%	30
		1,4-Dichlorobenzene	2012/12/20	NC		%	30
		Dichlorodifluoromethane (FREON 12)	2012/12/20	NC		%	30
		1,1-Dichloroethane	2012/12/20	NC		%	30
		1,2-Dichloroethane	2012/12/20	NC		%	30
		1,1-Dichloroethylene	2012/12/20	NC		%	30
		cis-1,2-Dichloroethylene	2012/12/20	NC		%	30
		trans-1,2-Dichloroethylene	2012/12/20	NC		%	30
		1,2-Dichloropropane	2012/12/20	NC		%	30
		cis-1,3-Dichloropropene	2012/12/20	NC		%	30
		trans-1,3-Dichloropropene	2012/12/20	NC		%	30
		Ethylbenzene	2012/12/20	NC		%	30
		Ethylene Dibromide	2012/12/20	NC		%	30
		Hexane	2012/12/20	NC		%	30
		Methylene Chloride(Dichloromethane)	2012/12/20	NC		%	30
		Methyl Isobutyl Ketone	2012/12/20	NC		%	30
		Methyl Ethyl Ketone (2-Butanone)	2012/12/20	NC		%	30
		Methyl t-butyl ether (MTBE)	2012/12/20	NC		%	30

Terrapex Environmental Ltd
Attention: Jeff Stevenson
Client Project #: CB644.01
P.O. #:
Site Location: 121 HUME STREET, COLLINGWOOD, ON

Quality Assurance Report (Continued)

Maxxam Job Number: MB2J8143

QA/QC Batch Num Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QC Limits
3073126 SLE	RPD	Styrene	2012/12/20	NC		%	30
		1,1,1,2-Tetrachloroethane	2012/12/20	NC		%	30
		1,1,2,2-Tetrachloroethane	2012/12/20	NC		%	30
		Tetrachloroethylene	2012/12/20	NC		%	30
		Toluene	2012/12/20	NC		%	30
		1,1,1-Trichloroethane	2012/12/20	NC		%	30
		1,1,2-Trichloroethane	2012/12/20	NC		%	30
		Trichloroethylene	2012/12/20	NC		%	30
		Vinyl Chloride	2012/12/20	NC		%	30
		p+m-Xylene	2012/12/20	NC		%	30
		o-Xylene	2012/12/20	NC		%	30
		Xylene (Total)	2012/12/20	NC		%	30
		Trichlorofluoromethane (FREON 11)	2012/12/20	NC		%	30
3077139 ZZ	Matrix Spike [PZ5728-03]	o-Terphenyl	2012/12/21		99	%	50 - 130
		F2 (C10-C16 Hydrocarbons)	2012/12/21		107	%	50 - 130
		F3 (C16-C34 Hydrocarbons)	2012/12/21		92	%	50 - 130
		F4 (C34-C50 Hydrocarbons)	2012/12/21		119	%	50 - 130
	Spiked Blank	o-Terphenyl	2012/12/21		101	%	50 - 130
		F2 (C10-C16 Hydrocarbons)	2012/12/21		98	%	70 - 130
		F3 (C16-C34 Hydrocarbons)	2012/12/21		89	%	70 - 130
		F4 (C34-C50 Hydrocarbons)	2012/12/21		112	%	70 - 130
	Method Blank	o-Terphenyl	2012/12/21		97	%	50 - 130
		F2 (C10-C16 Hydrocarbons)	2012/12/21	ND, RDL=100		ug/L	
		F3 (C16-C34 Hydrocarbons)	2012/12/21	ND, RDL=100		ug/L	
		F4 (C34-C50 Hydrocarbons)	2012/12/21	ND, RDL=100		ug/L	
	RPD [PZ5729-03]	F2 (C10-C16 Hydrocarbons)	2012/12/21	NC		%	30
		F3 (C16-C34 Hydrocarbons)	2012/12/21	NC		%	30
		F4 (C34-C50 Hydrocarbons)	2012/12/21	NC		%	30
3078227 H_W	Matrix Spike [PZ5726-01]	1,4-Difluorobenzene	2012/12/22		97	%	70 - 130
		4-Bromofluorobenzene	2012/12/22		105	%	70 - 130
		D10-Ethylbenzene	2012/12/22		99	%	70 - 130
		D4-1,2-Dichloroethane	2012/12/22		103	%	70 - 130
		F1 (C6-C10)	2012/12/22		85	%	70 - 130
	Spiked Blank	1,4-Difluorobenzene	2012/12/21		100	%	70 - 130
		4-Bromofluorobenzene	2012/12/21		104	%	70 - 130
		D10-Ethylbenzene	2012/12/21		105	%	70 - 130
		D4-1,2-Dichloroethane	2012/12/21		102	%	70 - 130
		F1 (C6-C10)	2012/12/21		101	%	70 - 130
	Method Blank	1,4-Difluorobenzene	2012/12/21		102	%	70 - 130
		4-Bromofluorobenzene	2012/12/21		95	%	70 - 130
		D10-Ethylbenzene	2012/12/21		97	%	70 - 130
		D4-1,2-Dichloroethane	2012/12/21		101	%	70 - 130
		F1 (C6-C10)	2012/12/21	ND, RDL=25		ug/L	
		F1 (C6-C10) - BTEX	2012/12/21	ND, RDL=25		ug/L	
	RPD [PZ5726-01]	F1 (C6-C10)	2012/12/22	NC		%	30
		F1 (C6-C10) - BTEX	2012/12/22	NC		%	30
3078667 AAI	Matrix Spike	1,4-Difluorobenzene	2012/12/24		93	%	70 - 130
		4-Bromofluorobenzene	2012/12/24		101	%	70 - 130
		D10-Ethylbenzene	2012/12/24		111	%	70 - 130
		D4-1,2-Dichloroethane	2012/12/24		100	%	70 - 130
		F1 (C6-C10)	2012/12/24		107	%	70 - 130
	Spiked Blank	1,4-Difluorobenzene	2012/12/23		97	%	70 - 130
		4-Bromofluorobenzene	2012/12/23		102	%	70 - 130

Terrapex Environmental Ltd
Attention: Jeff Stevenson
Client Project #: CB644.01
P.O. #:
Site Location: 121 HUME STREET, COLLINGWOOD, ON

Quality Assurance Report (Continued)

Maxxam Job Number: MB2J8143

QA/QC Batch Num Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QC Limits
3078667 AAI	Spiked Blank	D10-Ethylbenzene	2012/12/23		104	%	70 - 130
		D4-1,2-Dichloroethane	2012/12/23		97	%	70 - 130
		F1 (C6-C10)	2012/12/23		78	%	70 - 130
	Method Blank	1,4-Difluorobenzene	2012/12/23		102	%	70 - 130
		4-Bromofluorobenzene	2012/12/23		99	%	70 - 130
		D10-Ethylbenzene	2012/12/23		101	%	70 - 130
		D4-1,2-Dichloroethane	2012/12/23		101	%	70 - 130
		F1 (C6-C10)	2012/12/23	ND, RDL=25		ug/L	
		F1 (C6-C10) - BTEX	2012/12/23	ND, RDL=25		ug/L	

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.

Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.

Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.

Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.

Surrogate: A pure or isotopically labeled compound whose behavior mirrors the analytes of interest. Used to evaluate extraction efficiency.

NC (RPD): The RPD was not calculated. The level of analyte detected in the parent sample and its duplicate was not sufficiently significant to permit a reliable calculation.

(1) The recovery was below the lower control limit. This may represent a low bias in some results for this specific analyte.

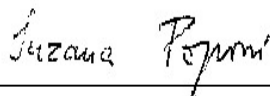
Validation Signature Page

Maxxam Job #: B2J8143

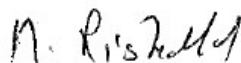
The analytical data and all QC contained in this report were reviewed and validated by the following individual(s).

Ewa Pranjic, M.Sc., C.Chem, Scientific Specialist



Suzana Popovic, Supervisor, Hydrocarbons



Medhat Riskallah, Manager, Hydrocarbon Department

=====

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

APPENDIX VI
REMEDIAL EXCAVATION REPORT



SUNCOR ENERGY PRODUCTS PARTNERSHIP

REMEDIAL EXCAVATION REPORT

121 HUME STREET, COLLINGWOOD, ONTARIO

FINAL REPORT

October 5, 2016

Terrapex Environmental Ltd.
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**DISTRIBUTION: SUNCOR ENERGY PRODUCTS PARTNERSHIP
TERRAPEX ENVIRONMENTAL LTD.**

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PROJECT # CB644.02

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1.0 EXECUTIVE SUMMARY

Terrapex Environmental Ltd. (Terrapex) was retained by Suncor Energy Products Partnership (Suncor), to conduct a remedial excavation at the property located at 121 Hume Street in Collingwood, Ontario (referenced as the “phase one property” or the “site”). The site is located at the northwest corner of Market Street and Hume Street.

Written authorization to proceed with the work program was provided by the site owner, Suncor. It is understood that the work documented herein is conducted to facilitate the filing of a Record of Site Condition (RSC) prior to the proposed redevelopment of the site.

The objective of the project was to remediate petroleum hydrocarbon impacts identified in soil and groundwater at the site during a previous Phase Two ESA work program. The findings of the Phase Two ESA program are documented in Terrapex's report entitled *Phase Two Environmental Site Assessment, 121 Hume Street South, Collingwood, Ontario, Draft Report*, dated October 5, 2016 (finalized October 11, 2016).

The generic Site Condition Standards listed in Table 3 of the April 15, 2011 *Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act* (MOE, 2011) that are applicable to residential/institutional/parkland (R/I/P) land use, coarse-textured soils, in a non-potable groundwater condition (MOE Table 3 SCS) were selected for evaluating laboratory analytical results.

Between January 11 and March 16, 2016, Terrapex completed a remedial excavations at the site. The excavation was extended laterally to the property boundary and vertically to the bedrock until all soils exhibiting field evidence of impacts exceeding the Table 3 SCS were removed. SV concentrations in soil samples collected from the completed walls of the excavation ranged from <5 parts per million by volume (ppm) to 12% LEL. No visible evidence of PHC impact was noted along the completed walls and floor of the excavation. The excavation was advanced to a depth of approximately 3.0 m and 3.5 meters below grade (m bg) on the west portion of the property.

Selected confirmatory soil samples were submitted for laboratory analyses of benzene, toluene, ethylbenzene, and xylenes (BTEX), and petroleum hydrocarbon (PHC) F1 to F4 fraction parameters, which were the sole contaminants of concern (COCs) for the site. Post-remediation groundwater sampling was also conducted and analysis for BTEX and PHC completed. Concentrations of all analytes in confirmatory soil and post-remediation groundwater samples were less than the applicable Table 3 SCS for the site.

Based on field observations, SV measurements, and results of the laboratory analyses of confirmatory soil samples collected from the completed remedial excavations, soil stockpiles, imported fill, and test pits, Terrapex concludes that petroleum hydrocarbon impacts previously present in soils at the site have been successfully remediated to meet the applicable O. Reg. 153/04 Table 3 SCS as per the objective of the project. Sediment is not present at the Site, and therefore contaminants of concern are not present within sediment. Concentrations of all other

potential COCs in soil and groundwater, identified in the Phase One and Two ESAs for the site, are also less than the applicable Table 3 SCS.

2.0 INTRODUCTION

Terrapex Environmental Ltd. (Terrapex) was retained by Suncor Energy Products Partnership (Suncor), to conduct a remedial excavation at the property located at 121 Hume Street in Collingwood, Ontario (referenced as the “phase one property” or the “site”). It is understood that the study documented herein is being undertaken for the purposes of filing a Record of Site Condition (RSC).

The objective of the project was to remediate petroleum hydrocarbon impacts identified during a previous Phase Two ESAs work program at the site. The findings of the Phase Two ESAs program are documented in Terrapex's report entitled *Phase Two Environmental Site Assessment, 121 Hume Street South, Collingwood, Ontario, Draft Report*, dated October 5, 2016 (finalized October 11, 2016).

2.1 SITE BACKGROUND

The site was operated as a retail fuel outlet and service garage from 1949 to 2007, at which time it was decommissioned under the supervision of Terrapex. The site currently consists of approximately 2,464.8 m² of land with no buildings. The site has been vacant since 2007.

The generic Site Condition Standards listed in Table 3 of the April 15, 2011 Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act (MOE, 2011) that are applicable to Residential/Parkland/Institutional (R/P/I) land use, coarse soils, in a non-potable groundwater condition (MOE Table 3 SCS) were selected for evaluating laboratory analytical results

The Phase Two ESA activities completed at the property comprised a combination of past and more current investigations including, drilling of boreholes and installation of monitoring wells in 2007, 2012, 2015, and 2016, groundwater sampling events in 2015 and 2016, and a test-pitting program in 2012. During these investigations soil and groundwater sampling and analysis was conducted to assess COCs at the site including benzene, toluene, ethylbenzene, and xylenes (BTEX), petroleum hydrocarbons (PHC) F1 to F4 fractions parameters, volatile organic compounds (VOCs), polycyclic aromatic hydrocarbons (PAHs), and metals and Inorganic parameters.

The Phase Two ESA identified concentrations of xylenes, and petroleum hydrocarbon parameters in the soil and groundwater, resulting from the on-site activities, at concentrations in excess of MOE Table 3 Site Condition Standards. These impacts were situated in the vicinity of the former fuel storage and distribution facilities and service garage area and were characterized by a layer of impacted media situated along the surface of the bedrock. Concentrations of all other COCs in soil and groundwater were less than the applicable Table 3 SCS. Sediment is not present at the site, and therefore contaminants of concern are not present within sediment.

2.2 PROJECT OBJECTIVE

The objective of the project was to remediate petroleum hydrocarbon impacts identified during a previous Phase Two ESA work program at the site. The findings of the Phase Two ESA are documented in Terrapex's report entitled *Phase Two Environmental Site Assessment, 121 Hume Street, Collingwood, Ontario, Draft Report*, dated October 5, 2016.

2.3 SCOPE OF WORK

Terrapex' scope of work included:

- directing the remedial excavation to remove any petroleum hydrocarbon impacts identified during the test pitting program;
- logging and sampling of the subsurface conditions in the resulting excavation;
- collecting confirmatory soil samples from the remedial excavation and segregated soil stockpiles for laboratory analyses of BTEX and PHC F1 to F4 fractions; and,
- preparation of a report documenting field observations and the results of all analyses in comparison to the applicable MOE Table 2 SCS.

For this project, Clarkway Construction Ltd. (Clarkway) was retained by Suncor to provide excavation and site restoration services. Laboratory analytical services were provided by Maxxam Analytics Inc. (Maxxam).

The project was conducted in accordance with industry accepted protocols and applicable sections of O. Reg. 153/04 (as amended).

2.4 SITE CONDITION STANDARDS

Site Condition Standards applicable for the site were determined by Terrapex to be the Table 3 SCS for use in a non-potable groundwater situation at residential/institutional/parkland (R/I/P) sites in a coarse-grained soil condition.

2.5 SUBSURFACE CONDITIONS

The stratigraphy encountered during the Phase Two ESA comprised approximately silty sand and fine sand with gravel from 0.0 m to 2.4 m bg. Bedrock was encountered at depths between 2.4 m and 3.6 m bg. Groundwater is situated at approximately 2.0 m below grade.

3.0 PRE-REMEDIATION ACTIVITIES

3.1 PRE-REMEDIATION GROUNDWATER SAMPLING

On November 5, 2015 groundwater samples were collected from the all existing monitoring wells at the site. The samples were submitted for laboratory analysis of BTEX and PHC F1 to F4 fractions, and VOCs. Liquid-phase petroleum hydrocarbons were not detected in any of the wells. On December 1, 2015, groundwater samples were collected from the 300 series wells, and concentrations of BTEX, PHC F1 to F4 and VOCs did not exceed Table 3 SCS. The groundwater monitoring data and results of chemical analysis are shown in Tables 11 through 14.

4.0 REMEDIAL ACTIONS

4.1 SOIL EXCAVATION

Between January 11 and March 16, 2016, Terrapex completed a remedial excavation at the site. The extent of the excavation is shown on Figure 2.

The excavation was extended laterally to the property boundary and vertically to the bedrock until all soils exhibiting field evidence of impacts exceeding the Table 3 SCS were removed. SV concentrations in soil samples collected from the completed walls of the excavation ranged from <5 parts per million by volume (ppm) to 12% LEL. No visible evidence of PHC impact was noted along the completed walls of the excavation. The excavation was advanced to a depth of approximately between 3.0 m on the central and south portion of site and 3.5 meters below grade (m bg) on the west portion of the property.

4.2 SOIL SEGREGATION AND REMOVAL

A total of approximately 7,198 tonnes of soil was removed from the excavation. The soil was segregated on-site into stockpiles corresponding to field evidence of impact. "Worst-case" soil samples were collected from the stockpiles and submitted for analysis of BTEX, and PHC F1 to F4 fractions. None of the samples collected from the stockpiles exhibiting no evidence of impact had concentrations of analytes that exceeded the Table 3 SCS. Approximately 3,910 tonnes of soil did not exceed the Table 3 SCS and was considered suitable for re-use on-site. Approximately 3,288 tonnes of soil exhibited olfactory evidence of impact and was removed for off-site disposal.

A total of approximately 3,288 metric tonnes of soil that was impacted with concentrations of petroleum hydrocarbons exceeding the applicable Table 3 SCS, was removed off-site for disposal at Green for Life Landfill in North York, Ontario.

4.3 GROUNDWATER TREATMENT AND REMOVAL

No groundwater treatment was necessary at this site. All Impacted groundwater was entrained in the soil and was removed off-site.

4.4 SEDIMENT TREATMENT AND REMOVAL

Sediment was not present at the site, therefore no sediment treatment or removal was necessary.

4.5 FEDERAL AND PROVINCIAL PERMITS

All soil removed from the site was disposed of at a licensed facility. No federal or provincial permits were required.

4.6 CONTAMINANTS CREATED OR INTRODUCED TO THE PROPERTY

The method of remediation at the site did not involve the creation or introduction of contaminants to the subsurface of the property.

4.7 BASELINE AND BACKGROUND CONDITIONS

The Phase Two ESA identified concentrations of xylenes, and petroleum hydrocarbon parameters in the soil and groundwater, resulting from the on-site activities, at concentrations in excess of MOE Table 3 Site Condition Standards. These impacts were situated in the vicinity of the former fuel storage and distribution facilities and service garage area and were characterized by a layer of impacted media situated along the surface of the bedrock. Concentrations of all other COCs in soil and groundwater were less than the applicable Table 3 SCS. Sediment is not present at the site, and therefore contaminants of concern are not present within sediment.

Through confirmatory sampling, it was determined that the actual volume of material exhibiting impacts at the phase two property was more than that estimated during the preceding Phase Two ESA.

5.0 FREE FLOWING PRODUCT

No free flowing liquid-phase petroleum hydrocarbons were observed during the remedial activities, or the preceding Phase Two ESA program.

6.0 CONFIRMATION SAMPLING AND ANALYSIS

6.1 CONFIRMATION SAMPLING ACTIVITIES

6.1.1 SOIL SAMPLING

Confirmatory soil samples from the walls of the remedial excavations were collected in a grid format, as outlined in O. Reg. 153/04, as well as the Terrapex standard operating procedure (SOP), using the excavator bucket. Confirmatory soil samples were not collected from the excavation floor as it comprised bedrock.

Each recovered sample was divided into two portions, with one portion placed in a clear sampling bag for field screening/logging, and the second portion placed in a laboratory supplied sampling container for possible laboratory analysis. Soil descriptions were recorded based on the Unified Soil Classification System (USCS). To minimize cross-contamination, soil samples were collected manually from the excavator bucket at base of the teeth, from undisturbed material removed from floor or wall of the remedial excavation. Fresh latex or nitrile gloves were worn for the handling of each sample. Samples for analyses were placed in a cooler with ice packs and delivered under signed chain of custody to the project laboratory for analysis.

Soil vapour concentrations were measured in each soil sample using an RKI EAGLE 2 hydrocarbon surveyor (RKI Eagle) calibrated to n-hexane and operated in methane elimination mode. The RKI Eagle can measure combustible organic compounds to a nominal detection level of 5 ppm, with an accuracy of $\pm 10\%$. The RKI Eagle was calibrated according to the manufacturer's instructions before the field investigation.

Measures to minimize cross-contamination or other potential bias are described in Terrapex's SOPs. There were no deviations from the SOPs regarding excavation activities during this investigation.

6.1.2 GROUNDWATER SAMPLING

Prior to sampling, monitoring activities included the measurement of combustible vapours within the headspace of the well immediately upon removal of the well standpipe cap, using a RKI Eagle calibrated to n-hexane and operated in methane elimination mode. The depth to water in the well was measured using a Heron interface probe. The presence, and apparent thickness (if applicable), of any light non-aqueous phase liquids (LNAPL) in the well was also assessed using the interface probe.

To mitigate cross-contamination, the interface probe was washed with a liquid solution of Alconox detergent and rinsed with fresh water between each monitoring well. A fresh pair of latex or nitrile gloves was donned at each well location.

Sampling was conducted using a peristaltic pump as per Terrapex's SOP. Groundwater samples were collected directly into pre-cleaned, laboratory supplied bottles, placed in a cooler with ice, and shipped within one day of collection under chain of custody to the laboratory for analysis.

6.2 CONFIRMATION SAMPLING RATIONALE

Confirmatory soil samples from the walls of the completed excavation, stockpiles, and imported fill were selected for analysis of BTEX and PHC F1 to F4 fractions on the basis of field observations and SV concentrations to provide representative coverage of remaining “worst-case” conditions and/or to provide spatial coverage. Selected soil samples were also submitted for analysis of VOC, PAH, and metals parameters to supplement Phase Two ESA data.

“Worst-case” soil samples from the walls of the remedial excavations, as well as, stockpile samples, were selected on the basis of vapour screening, visual and olfactory evidence of contamination, and sample location in relation to potential point sources of impact. Please note that there were no floors samples taken during the remedial excavation as it was vertically extended to the bedrock.

Groundwater with concentrations of PHCs exceeding the Table 3 SCS was present on the site during pre-remediation sampling events, therefore four post-remediation wells were installed at the site and groundwater samples collected and analyzed for COCs.

6.3 CONFIRMATION SAMPLING ANALYSIS

6.3.1 REMEDIAL EXCAVATION

The remedial excavation measured approximately 672 m², extending vertically to bedrock at depths of 3.5 m bg on the west portion and to 3.0 m bg at central and south portion of site. There were no floor samples collected during the remedial activity.

The samples were collected as follows:

- 21 soil samples (including three field duplicates for QA/QC purposes) analysed for BTEX and PHC F1 to F4 fraction parameters;
- 8 soil samples (including one field duplicate for QA/QC purposes) analysed for VOCs;
- 7 soil samples (including one field duplicate for QA/QC purposes) analysed for PAHs; and,
- 7 soil samples (including one field duplicate for QA/QC purposes) analysed for Inorganics.

As shown in Tables 2 through 5, concentrations of BTEX and PHC F1 to F4 fractions, VOCs, PAHs and Inorganic parameters, in all confirmatory soil samples collected from the walls of the completed excavation were less than the Table 3 SCS.

6.3.2 STOCKPILE SAMPLES

A total of 29 soil samples collected from the stockpiled material re-used as backfill were submitted to Maxxam for analysis of BTEX and PHC F1 to F4 fraction parameters.

As shown in Table 6, concentrations of BTEX and PHC F1 to F4 fractions in samples collected from the stockpiles were less than the applicable Table 3 SCS. The material was therefore considered of suitable chemical quality to remain on-site for re-use as backfill in the remedial excavations.

6.3.3 IMPORTED FILL SAMPLES

Eight soil samples collected from the imported fill used to backfill the remedial excavations were submitted to Maxxam for analysis of BTEX and PHC F1 to F4 fractions, VOCs, PAHs, and Inorganic parameters.

As shown in Tables 7 through 10, concentrations of all analyzed parameters in all imported fill samples were less than the applicable Table 3 SCS. The imported fill was therefore considered of suitable chemical quality to for use as backfill in the remedial excavation.

6.4 SITE RESTORATION AND BACKILLING

Following completion of the remedial activities, the on-site excavation was backfilled using the non-impacted stockpiled material from the remedial excavations, as well as imported sand fill and gravel. The excavation backfill was placed in lifts and nominally compacted by Clarkway. Terrapex was on-site to supervise the majority of the backfilling activities.

6.5 POST-REMEDIATION GROUNDWATER SAMPLING

During the remedial excavation, temporary sumps were installed to facilitate groundwater removal. Grab samples were collected from the recovery sumps on February 22 and March 8, 2016 and submitted for analysis of BTEX and PHC F1-F4 fractions. Concentrations of BTEX and PHC F1-F4 fractions did not exceed Table 3 SCS, as shown in Table 11.

On May 25, 2016, four additional monitoring wells (400-series) were installed at locations where PHC impacts in groundwater were identified during the Phase Two ESAs. As shown in Figure 2, MW401 was installed on the east portion of the property to provide additional site coverage.

All newly installed wells were sampled on June 23, 2016 and September 27, 2016. Four groundwater samples, as well as one duplicate, was collected and submitted for analysis of BTEX and PHC F1 to F4 parameters on each sampling date. During the June 23, 2016 sampling event, selected samples were also submitted for laboratory analysis of VOC, PAH, and metals in order to supplement the Phase Two ESA.

As shown in Tables 11 through 14, concentrations of all analytes were less than the applicable Table 3 SCS in all samples, and in fact most results indicated no detectable concentrations of analytes.

7.0 CONCLUSIONS

Based on field observations, SV measurements, and results of the laboratory analyses of confirmatory soil samples collected from the completed remedial excavations, soil stockpiles, imported fill, and post-remediation groundwater samples, Terrapex concludes that petroleum hydrocarbon impacts previously present in soils and groundwater at the site have been successfully remediated to meet the applicable O. Reg. 153/04 Table 3 SCS as per the objective of the project. Sediment is not present at the Site, and therefore contaminants of concern are not present within sediment. Concentrations of all other potential contaminants of concern in soil, identified in the Phase One and Two ESAs for the site, are also less than the applicable Table 3 SCS.

In our opinion, no further testing is required at this time.

8.0 CLOSURE

The reported information described herein was conducted in accordance with the terms of reference for this project, agreed upon by Suncor Energy Products Partnership and Terrapex Environmental Ltd.

The remedial excavation work program completed at the property located at 11 Hume Street, Collingwood, Ontario was conducted in accordance with O. Reg. 153/04 by, or under the supervision of a qualified person as required by the regulation.

Terrapex Environmental Ltd. has exercised due care, diligence, and judgement in the performance of this remedial work program; however, studies of this nature have inherent limitations. The reported information is believed to provide a reasonable representation of the general environmental conditions at the site, at the time the work was conducted. However, the data was collected at discrete locations and conditions may vary at other locations or with the passage of time. The remedial program was also limited to a study of those chemical parameters specifically addressed in this report.

In addition, our comments, conclusions, and recommendations are based in part on the observations and data documented by third parties. By necessity, except where explicitly noted, we have relied upon the accuracy and completeness of information presented by said third parties, regardless of any disclaimers regarding reliance provided in the documentation subjected to peer review. Terrapex Environmental Ltd. does not assume any responsibility for errors, omissions, or other limitations pertaining to third party work programs.

This report has been prepared for the sole use of Suncor Energy Products Partnership. Terrapex Environmental Ltd. accepts no liability for claims arising from the use of this report, or from actions taken or decisions made as a result of this report, by parties other than the Suncor Energy Products Partnership.

Sincerely,

TERRAPEX ENVIRONMENTAL LTD.



Philip John Arlos, B.Sc.,
Environmental Scientist



Jeff Stevenson, P.Geo.
Senior Project Manager
Qualified Person (QP_{ESA})

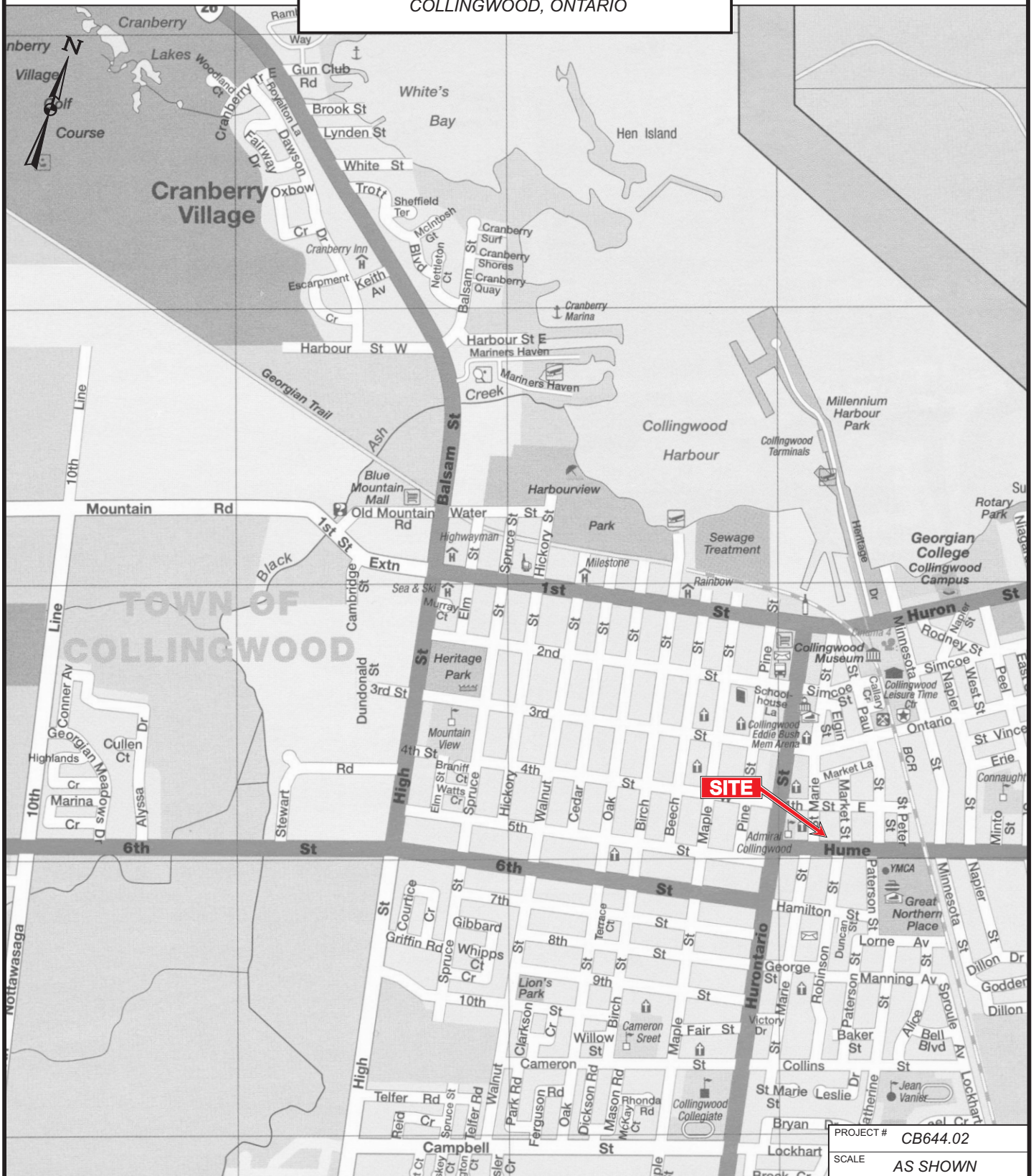
FIGURES



SITE LOCATION

121 HUME STREET
COLLINGWOOD, ONTARIO

CLIENT

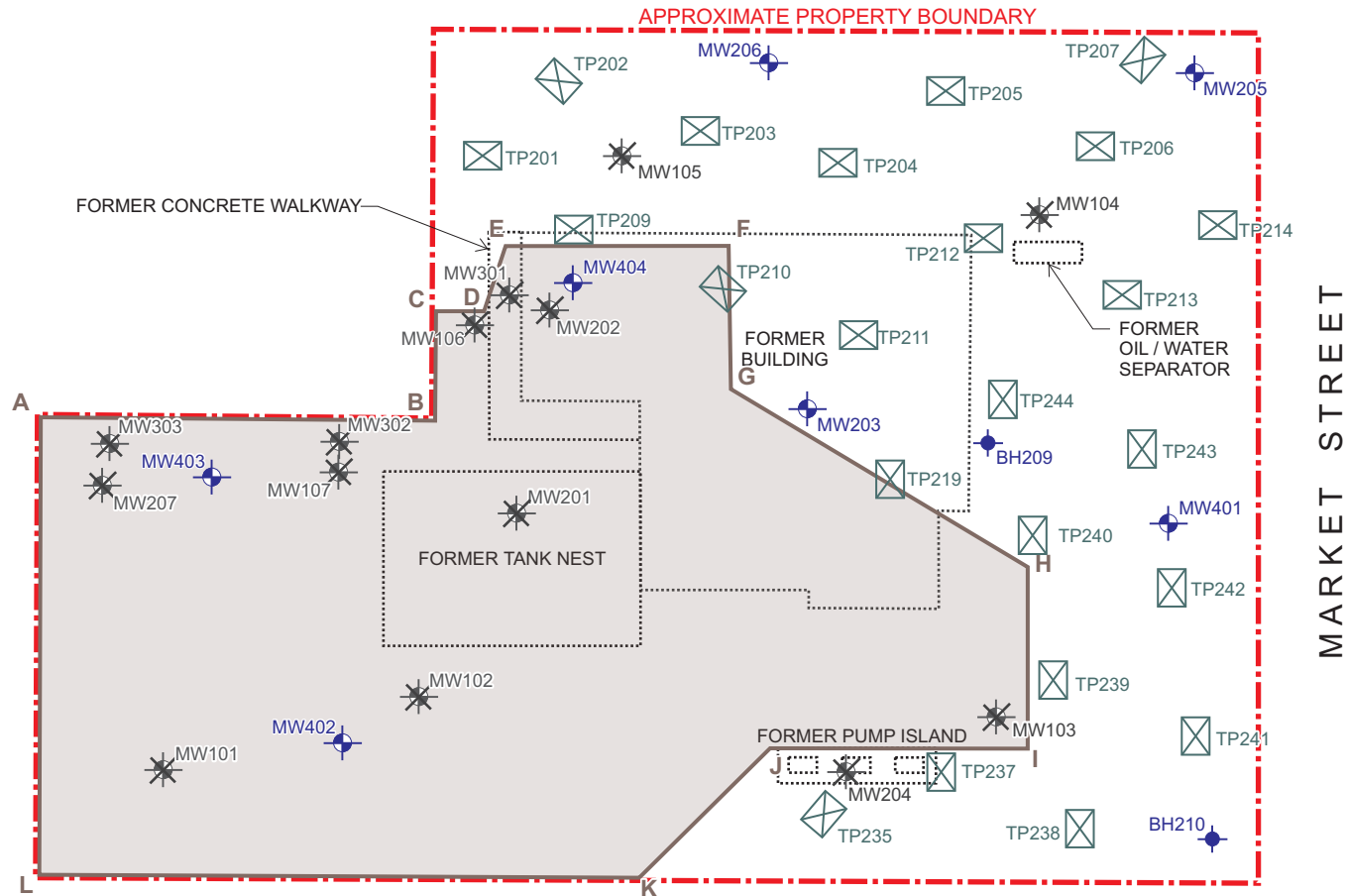


0 500m 1km
(APPROXIMATE)

SOURCE: MAPART'S NORTHERN ONTARIO & COTTAGE COUNTRY 2007 EDITION, PAGE 60.

PROJECT #	CB644.02
SCALE	AS SHOWN
DATE	MAY 2016
DRAWN	SF
CHECKED	JS
DRAWING #	

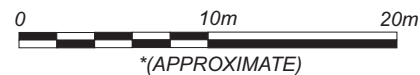
FIGURE 1



LEGEND

-  EXCAVATION
-  BOREHOLE
-  MONITORING WELL (2012 / 2015)
-  EXISTING MONITORING WELL (2007)
-  DECOMMISSIONED / DESTROYED MONITORING WELL
-  TEST PIT

HUME STREET

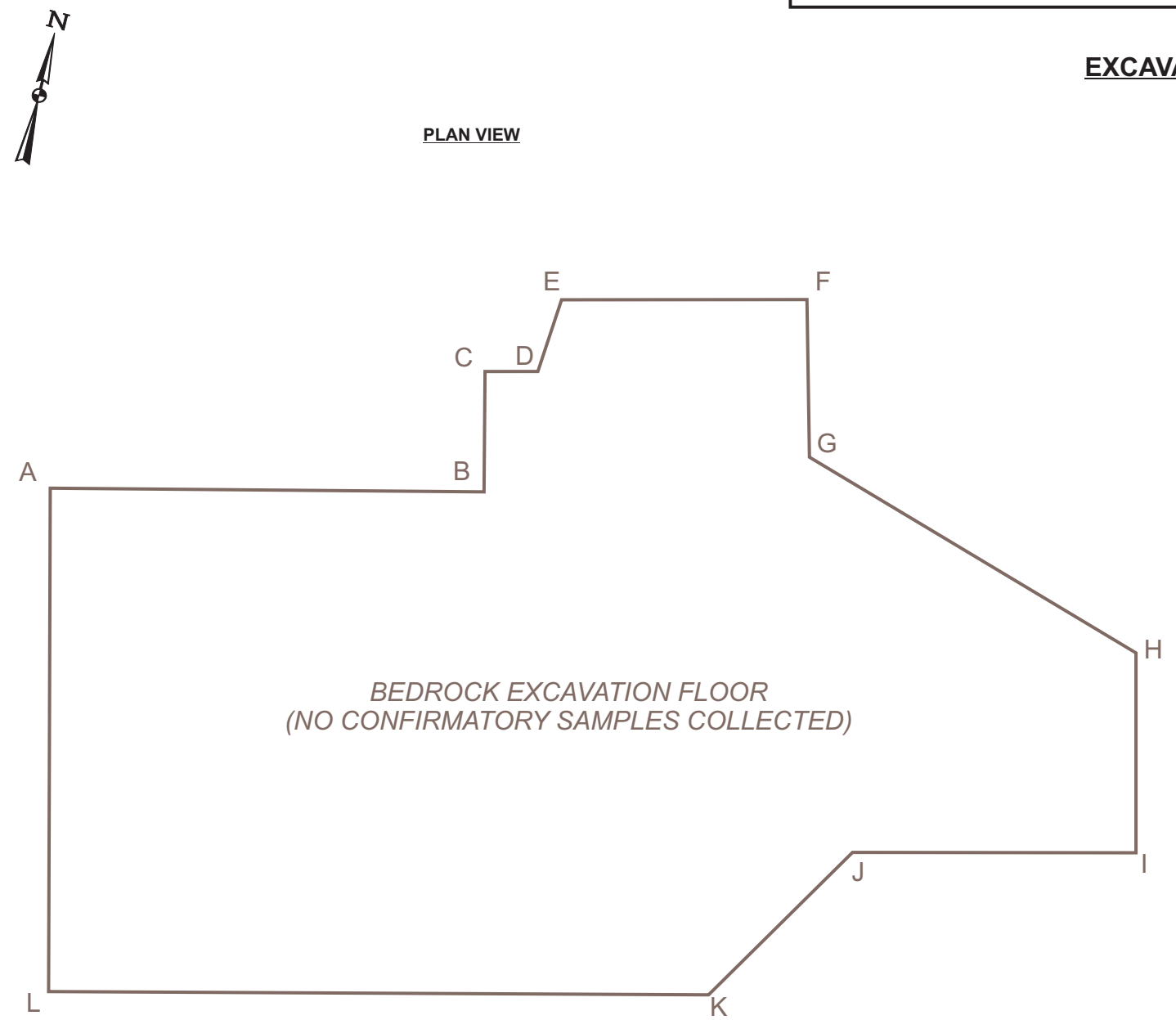


*NOTE: DRAWING TAKEN FROM SITE PLAN PROVIDED BY CLIENT, AND FROM FIELD MEASUREMENTS AND OBSERVATIONS. SCALE IS APPROXIMATE.

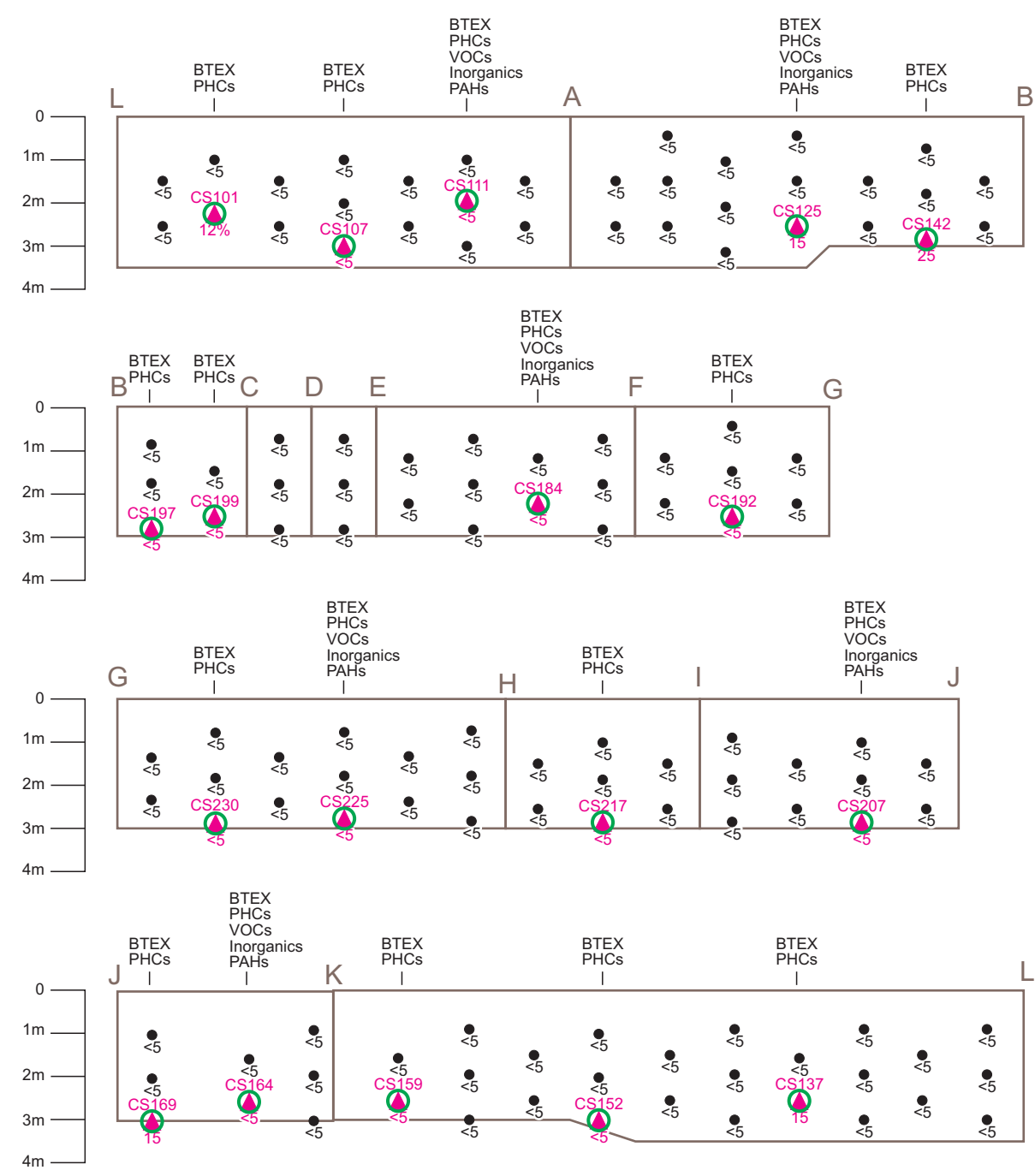
PROJECT #	CB644.02
SCALE	AS SHOWN
DATE	MAY 2016
DRAWN	ECV/SF
CHECKED	JS
DRAWING #	FIGURE 2

EXCAVATION

PLAN VIEW



WALL DIAGRAM



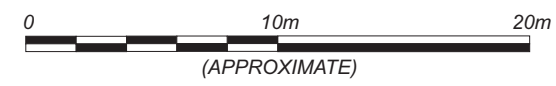
LEGEND

- 50 SOIL VAPOUR (SV) READING (PPM)
- 5% SOIL VAPOUR (SV) READING (%LEL)
- ▲ CONFIRMATORY SOIL SAMPLE AND SV READING

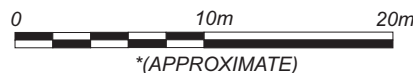
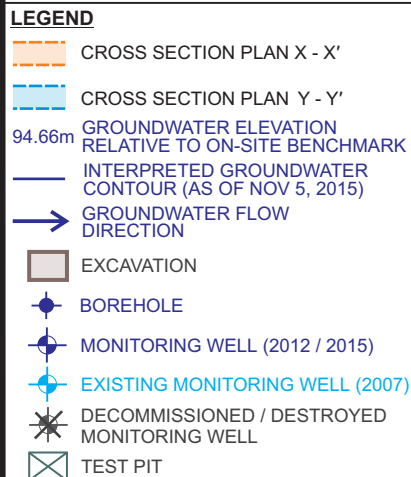
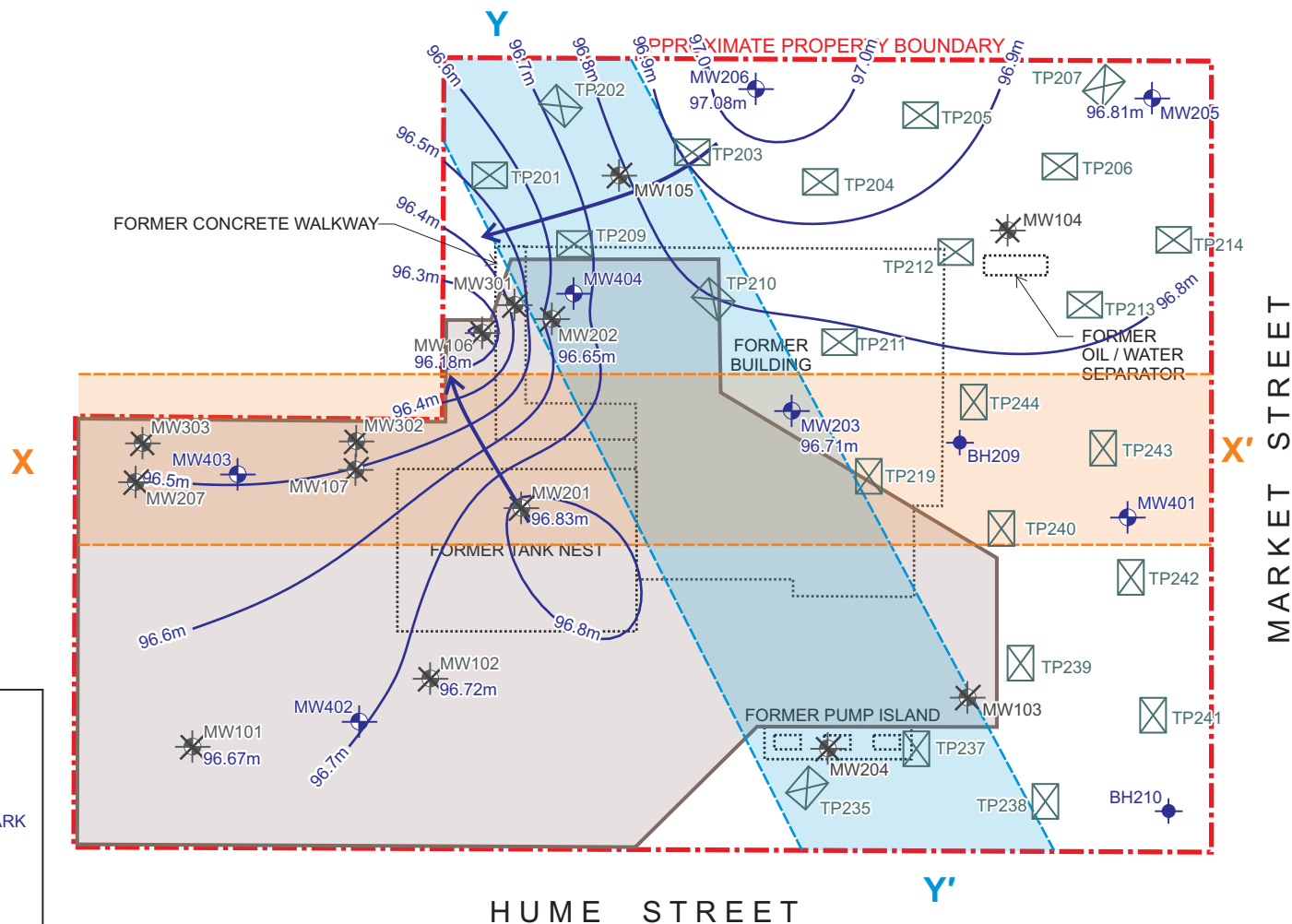
ANALYSIS INFORMATION

- Less than or equal to Table 3 SCS
- Greater than Table 3 SCS

SCS (Site Conditions Standards) refer to Standards from Table 3 of April 15, 2011 Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act; Industrial / Commercial / Community land use, coarse textured soil

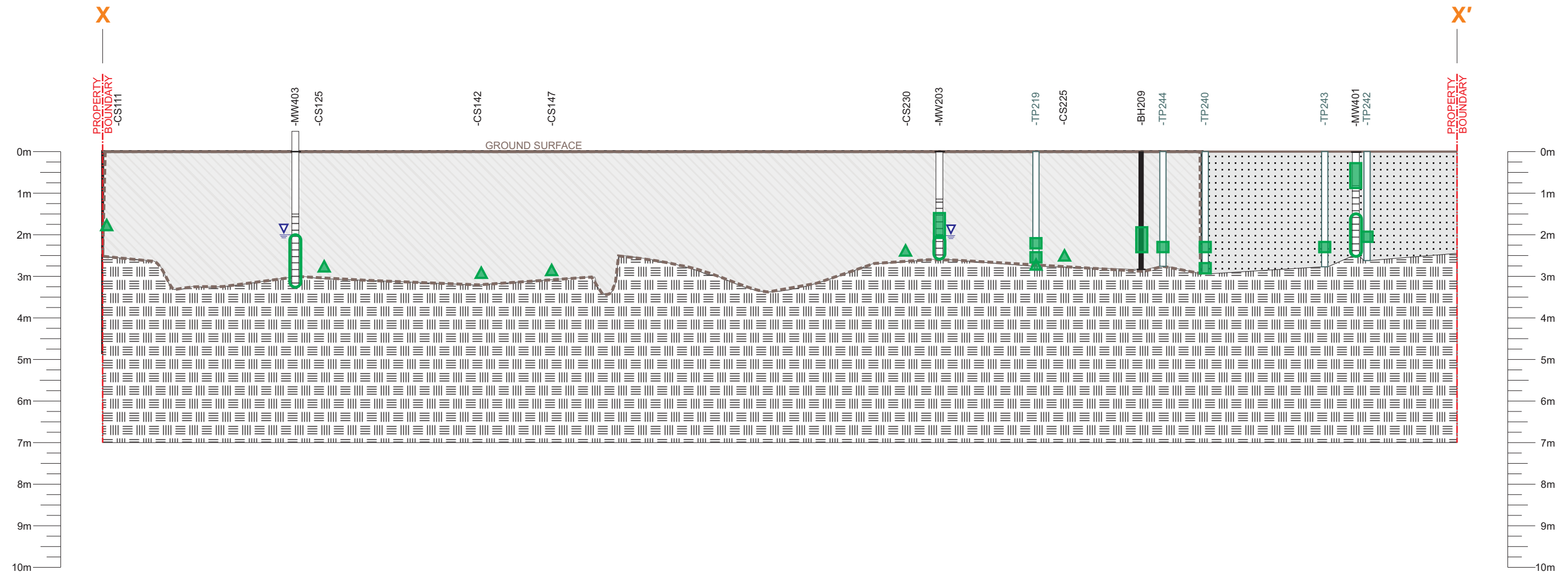


PROJECT #	CB644.02	
SCALE	AS SHOWN	
DATE	JULY 2016	
DRAWN	SF	CHECKED JS
DRAWING #	FIGURE 3	



*NOTE: DRAWING TAKEN FROM SITE PLAN PROVIDED BY CLIENT, AND FROM FIELD MEASUREMENTS AND OBSERVATIONS. SCALE IS APPROXIMATE.

PROJECT #	CB644.02
SCALE	AS SHOWN
DATE	JULY 2016
DRAWN	ECV/SF
CHECKED	JS
DRAWING #	
FIGURE 4	



LEGEND

- FINE SAND
- FINE SAND AND COARSE GRAVEL
- BEDROCK
- GROUNDWATER LEVEL
- LIMITS OF REMEDIAL EXCAVATION
- MONITORING WELL
- BOREHOLE
- TEST PIT
- SCREENED LEVEL

SOIL ANALYSIS INFORMATION

- Less than or equal to Table 3 SCS
- Greater than Table 3 SCS
- CSS Less than or equal to Table 3 SCS

SCS (Site Conditions Standards) refer to Standards from Table 3 of April 15, 2011 Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act, Industrial / Commercial / Community land use, coarse textured soil

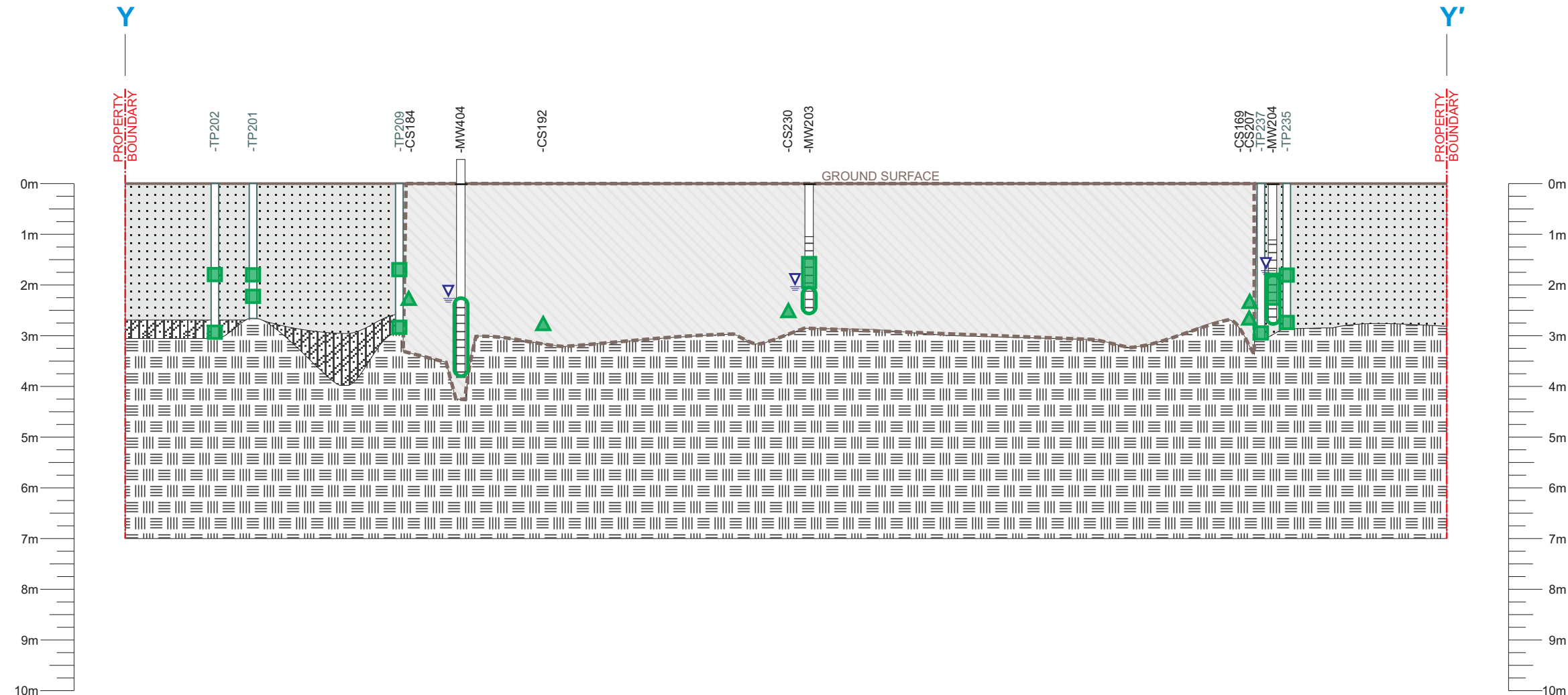
GROUNDWATER ANALYSIS INFORMATION

- Less than or equal to Table 3 SCS
- Greater than Table 3 SCS

SCS (Site Conditions Standards) refer to Standards from Table 3 of April 15, 2011 Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act, coarse textured soil

PROJECT #	CB644.02
SCALE	AS SHOWN
DATE	JULY 2016
DRAWN	SF
CHECKED	JS
DRAWING #	

FIGURE 5



VERTICAL SCALE:



HORIZONTAL SCALE:



LEGEND

- FINE SAND
- FINE SAND AND COARSE GRAVEL
- CLAY WITH SILT AND GRAVEL WITH COBBLES
- BEDROCK
- GROUNDWATER LEVEL
- LIMITS OF REMEDIAL EXCAVATION
- MONITORING WELL
- BOREHOLE
- TEST PIT
- SCREENED LEVEL

SOIL ANALYSIS INFORMATION

- Less than or equal to Table 3 SCS
- Greater than Table 3 SCS
- CSS Less than or equal to Table 3 SCS

SCS (Site Conditions Standards) refer to Standards from Table 3 of April 15, 2011 Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act, Industrial / Commercial / Community land use, coarse textured soil

GROUNDWATER ANALYSIS INFORMATION

- Less than or equal to Table 3 SCS
- Greater than Table 3 SCS

SCS (Site Conditions Standards) refer to Standards from Table 3 of April 15, 2011 Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act, coarse textured soil

PROJECT #	CB644.02
SCALE	AS SHOWN
DATE	JULY 2016
DRAWN	SF
CHECKED	JS
DRAWING #	FIGURE 6

TABLES

TABLE 1 GROUNDWATER MONITORING DATA
121 Hume Street, Collingwood, ON

WELL NUMBER	DATE	GROUND ELEVATION ¹	T.O.P. ELEVATION ²	CV ³	DEPTH TO WATER FROM T.O.P. ⁴	DEPTH TO WATER FROM GROUND ⁵	GROUNDWATER ELEVATION ⁶	LPH THICKNESS ⁷
MW101	24-Aug-12	183.86	183.69	15 ppm	2.02	2.18	181.68	None
	12-Dec-12			<10 ppm	1.93	2.09	181.77	None
	5-Nov-15			<5 ppm	2.03	2.19	181.67	None
	26-May-16			-	Destroyed	-	-	-
MW102	24-Aug-12	183.91	183.81	50 ppm	2.15	2.24	181.67	None
	12-Dec-12			25 ppm	2.04	2.13	181.78	None
	5-Nov-15			<5 ppm	2.10	2.20	181.72	None
	26-May-16			-	Destroyed	-	-	-
MW103	24-Aug-12	184.05	183.96	75 ppm	2.18	2.27	181.78	None
	12-Dec-12			35 ppm	2.13	2.22	181.83	None
	5-Nov-15			-	Destroyed	-	-	-
	26-May-16			-	Destroyed	-	-	-
MW106	24-Aug-12	183.84	183.77	80 ppm	2.49	2.55	181.29	None
	12-Dec-12			55 ppm	2.42	2.49	181.35	None
	5-Nov-15			<5 ppm	2.60	2.66	181.18	None
	26-May-16			-	Destroyed	-	-	-
MW107	24-Aug-12	183.85	183.69	75 ppm	2.14	2.30	181.55	None
	12-Dec-12			50 ppm	2.00	2.15	181.69	None
	5-Nov-15			<5 ppm	Destroyed	-	-	-
	26-May-16			-	Destroyed	-	-	-
MW201	24-Aug-12	183.73	183.58	5% LEL	2.03	2.17	181.55	None
	12-Dec-12			25 ppm	1.84	1.99	181.74	None
	5-Nov-15			<5 ppm	1.95	2.09	181.64	None
	26-May-16			-	Destroyed	1.56	181.77	-
MW202	24-Aug-12	183.65	183.51	275 ppm	2.03	2.17	181.48	None
	12-Dec-12			45 ppm	1.86	1.99	181.66	None
	5-Nov-15			<5 ppm	2.04	2.18	181.47	None
	26-May-16			-	Destroyed	-	-	-
MW203	24-Aug-12	183.61	183.48	115 ppm	1.86	1.99	181.62	None
	12-Dec-12			25 ppm	1.75	1.88	181.73	None
	5-Nov-15			<5 ppm	1.88	2.00	181.61	None
	26-May-16			<5 ppm	1.62	1.75	181.86	None
	23-Jun-16			<5 ppm	1.96	2.09	181.52	None

MW204	24-Aug-12	183.98	183.79	10% LEL	2.03	2.22	181.76	None
	12-Dec-12			15 ppm	1.98	2.16	181.81	None
	5-Nov-15			-	Destroyed	-	-	-
	26-May-16			-	Destroyed	-	-	-
MW205	24-Aug-12	183.39	183.23	7% LEL	1.68	1.84	181.54	None
	12-Dec-12			30 ppm	1.59	1.75	181.64	None
	5-Nov-15			<5 ppm	1.68	1.84	181.55	None
	26-May-16			<5 ppm	1.44	1.60	181.79	None
MW206	24-Aug-12	183.33	183.20	240 ppm	1.72	1.85	181.48	None
	12-Dec-12			25 ppm	1.55	1.67	181.66	None
	5-Nov-15			<5 ppm	1.71	1.84	181.49	None
	26-May-16			<5 ppm	1.43	1.56	181.77	None
MW207	24-Aug-12	183.59	183.50	48% LEL	1.99	2.08	181.51	None
	12-Dec-12			75 ppm	1.83	1.91	181.67	None
	5-Nov-15			<5 ppm	Dry	-	-	-
	May-26-16			-	Destroyed	-	-	-
MW301	2-Dec-15	-	-	<5 ppm	6.71	-	-	None
	26-May-16			-	Destroyed	-	-	-
MW302	2-Dec-15	-	-	<5 ppm	1.82	-	-	None
	26-May-16			-	Destroyed	-	-	-
MW303	2-Dec-15	-	-	25 ppm	1.66	-	-	None
	26-May-16			-	Destroyed	-	-	-
MW401	26-May-16	-	-	<5 ppm	2.74	-	-	None
	23-Jun-16			<5 ppm	2.88	-	-	-
MW402	26-May-16	-	-	<5 ppm	3.17	-	-	None
	23-Jun-16			<5 ppm	3.29	-	-	-
MW403	26-May-16	-	-	<5 ppm	2.99	-	-	None
	23-Jun-16			<5 ppm	3.12	-	-	-
MW404	26-May-16	-	-	<5 ppm	3.09	-	-	None
	23-Jun-16			<5 ppm	3.27	-	-	-

¹ Elevation of ground surface at well location in metres, relative to on-site benchmark.

² Elevation of highest point of well pipe in metres, relative to on-site benchmark.

³ Combustible vapour concentration in well headspace in parts per million (ppm) or percent of lower explosive limit (%LEL).

⁴ Corrected depth to groundwater, in metres from top of PVC pipe, assuming an LPH relative density of 0.8.

⁵ Corrected depth to groundwater, in metres from ground surface, assuming an LPH relative density of 0.8.

⁶ Corrected elevation of groundwater, in metres relative to on-site benchmark, assuming an LPH relative density of 0.8.

⁷ Measured thickness of liquid petroleum hydrocarbons in metres, if any.

- Not measured.

TABLE 2 SOIL ANALYTICAL RESULTS - PHCs
121 Hume Street, Collingwood, ON

Terrapex Sample Name			STANDARDS ¹ 2011 Table 3 R / P / I coarse	CS101	CS1010 Field Duplicate of CS101	CS107	CS111	CS125
	Units	RDL						
Sample Depth	m bg	-	-	2.25	-	2.75	2.0	2.5
Sample Location	-	-	-	AL Wall	AL Wall	AL Wall	AL Wall	AB Wall
SV Reading	-	-	-	12% LEL	-	<5 ppm	<5 ppm	15 ppm
Sampling Date	-	-	-	12-Jan-16	12-Jan-16	15-Jan-16	18-Jan-16	19-Jan-16
Analysis Date	-	-	-	12-Jan-16	12-Jan-16	18-Jan-16	20-Jan-16	22-Jan-16
Certificate of Analysis No.	-	-	-	B607582	B607582	B609023	B610258	B612414
Benzene	µg/g	0.02	0.21	ND	ND	ND	ND	ND
Toluene	µg/g	0.02	2.3	ND	ND	ND	ND	ND
Ethylbenzene	µg/g	0.02	2	ND	ND	ND	0.10	ND
Xylenes (total)	µg/g	0.04	3.1	ND	ND	ND	0.57	ND
Petroleum Hydrocarbons, F1	µg/g	10	55	ND	15	ND	21	ND
Petroleum Hydrocarbons, F2	µg/g	10	98	ND	ND	ND	ND	ND
Petroleum Hydrocarbons, F3	µg/g	50	300	ND	ND	ND	ND	ND
Petroleum Hydrocarbons, F4	µg/g	50	2,800	ND	ND	ND	ND	ND

- ¹ Standards from Table 3 of April 15, 2011 *Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act*; Residential / Parkland / Institutional land use, coarse textured soil
- ns No standard
- m bg Meters below grade
- SV Reading Soil vapour reading (ppm or % LEL)
- ppm Parts per million (by volume)
- % LEL Percent of the lower explosive limit
- BOLD** Exceeds standard

TABLE 2 SOIL ANALYTICAL RESULTS - PHCs
121 Hume Street, Collingwood, ON

CONTINUED

Terrapex Sample Name			STANDARDS ¹ 2011 Table 3 R / P / I coarse	CS1250 Field Duplicate of CS125	CS137	CS142	CS152	CS159
	Units	RDL						
Sample Depth	m bg	-	-	-	2.5	3.0	3.0	2.5
Sample Location	-	-	-	AB Wall	LK Wall	AB Wall	LK Wall	LK Wall
SV Reading	-	-	-	-	15 ppm	25 ppm	<5 ppm	<5 ppm
Sampling Date	-	-	-	19-Jan-16	19-Jan-16	1-Feb-16	1-Feb-16	8-Feb-16
Analysis Date	-	-	-	22-Jan-16	22-Jan-16	4-Feb-16	4-Feb-16	16-Feb-16
Certificate of Analysis No.	-	-	-	B612414	B612414	B622158	B622158	B62903
Benzene	µg/g	0.02	0.21	ND	ND	ND	ND	ND
Toluene	µg/g	0.02	2.3	ND	ND	ND	ND	ND
Ethylbenzene	µg/g	0.02	2	ND	ND	ND	0.11	ND
Xylenes (total)	µg/g	0.04	3.1	ND	ND	ND	0.27	ND
Petroleum Hydrocarbons, F1	µg/g	10	55	ND	ND	ND	ND	ND
Petroleum Hydrocarbons, F2	µg/g	10	98	ND	ND	ND	ND	ND
Petroleum Hydrocarbons, F3	µg/g	50	300	ND	ND	ND	ND	ND
Petroleum Hydrocarbons, F4	µg/g	50	2,800	ND	ND	ND	ND	ND

¹ Standards from Table 3 of April 15, 2011 *Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act*; Residential / Parkland / Institutional land use, coarse textured soil

ns No standard
m bg Meters below grade
SV Reading Soil vapour reading (ppm or % LEL)
ppm Parts per million (by volume)
% LEL Percent of the lower explosive limit
BOLD Exceeds standard

TABLE 2 SOIL ANALYTICAL RESULTS - PHCs
121 Hume Street, Collingwood, ON

CONTINUED

Terrapex Sample Name			STANDARDS ¹ 2011 Table 3 R / P / I coarse	CS164	CS169	CS184	CS192	CS197
	Units	RDL						
Sample Depth	m bg	-	-	2.5	2.8	2.5	2.8	2.8
Sample Location	-	-	-	KJ Wall	KJ Wall	EF Wall	FG Wall	BC Wall
SV Reading	-	-	-	100 ppm	15 ppm	<5 ppm	<5 ppm	<5 ppm
Sampling Date	-	-	-	18-Feb-16	18-Feb-16	24-Feb-16	24-Feb-16	1-Mar-16
Analysis Date	-	-	-	20-Feb-16	20-Feb-16	26-Feb-16	26-Feb-16	3-Mar-16
Certificate of Analysis No.	-	-	-	B634064	B634064	B638341	B638341	B642303
Benzene	µg/g	0.02	0.21	ND	ND	ND	ND	ND
Toluene	µg/g	0.02	2.3	ND	ND	ND	ND	ND
Ethylbenzene	µg/g	0.02	2	ND	ND	ND	ND	ND
Xylenes (total)	µg/g	0.04	3.1	ND	ND	ND	ND	ND
Petroleum Hydrocarbons, F1	µg/g	10	55	24	19	ND	ND	ND
Petroleum Hydrocarbons, F2	µg/g	10	98	12	11	ND	ND	ND
Petroleum Hydrocarbons, F3	µg/g	50	300	75	ND	ND	ND	ND
Petroleum Hydrocarbons, F4	µg/g	50	2,800	ND	ND	ND	ND	ND

¹ Standards from Table 3 of April 15, 2011 *Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act*; Residential / Parkland / Institutional land use, coarse textured soil

ns No standard
m bg Meters below grade
SV Reading Soil vapour reading (ppm or % LEL)
ppm Parts per million (by volume)
% LEL Percent of the lower explosive limit
BOLD Exceeds standard

TABLE 2 SOIL ANALYTICAL RESULTS - PHCs
121 Hume Street, Collingwood, ON

CONTINUED

Terrapex Sample Name			STANDARDS ¹ 2011 Table 3 R / P / I coarse	CS199	CS207	CS217	CS225	CS230
	Units	RDL						
Sample Depth	m bg	-	-	2.5	2.8	2.8	2.8	2.8
Sample Location	-	-	-	BC Wall	JI Wall	IH Wall	HG Wall	HG Wall
SV Reading	-	-	-	<5 ppm	<5 ppm	<5 ppm	<5 ppm	<5 ppm
Sampling Date	-	-	-	1-Mar-16	1-Mar-16	1-Mar-16	7-Mar-15	7-Mar-15
Analysis Date	-	-	-	3-Mar-16	3-Mar-16	3-Mar-16	10-Mar-16	10-Mar-16
Certificate of Analysis No.	-	-	-	B642303	B642303	B642303	B647433	B647433
Benzene	µg/g	0.02	0.21	ND	ND	ND	ND	ND
Toluene	µg/g	0.02	2.3	ND	ND	ND	ND	ND
Ethylbenzene	µg/g	0.02	2	ND	ND	ND	ND	ND
Xylenes (total)	µg/g	0.04	3.1	0.093	ND	ND	ND	ND
Petroleum Hydrocarbons, F1	µg/g	10	55	ND	ND	ND	ND	ND
Petroleum Hydrocarbons, F2	µg/g	10	98	ND	ND	ND	ND	ND
Petroleum Hydrocarbons, F3	µg/g	50	300	ND	ND	ND	ND	ND
Petroleum Hydrocarbons, F4	µg/g	50	2,800	ND	ND	ND	ND	ND

¹ Standards from Table 3 of April 15, 2011 *Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act*; Residential / Parkland / Institutional land use, coarse textured soil

ns No standard
m bg Meters below grade
SV Reading Soil vapour reading (ppm or % LEL)
ppm Parts per million (by volume)
% LEL Percent of the lower explosive limit
BOLD Exceeds standard

TABLE 2 SOIL ANALYTICAL RESULTS - PHCs
121 Hume Street, Collingwood, ON

CONTINUED

Terrapex Sample Name			STANDARDS ¹ 2011 Table 3 R / P / I coarse	CS2300 Field Duplicate of CS230
	Units	RDL		
Sample Depth	m bg	-	-	5.8
Sample Location	-	-	-	HG Wall
SV Reading	-	-	-	<5 ppm
Sampling Date	-	-	-	7-Mar-15
Analysis Date	-	-	-	10-Mar-16
Certificate of Analysis No.	-	-	-	B647433
Benzene	µg/g	0.02	0.21	ND
Toluene	µg/g	0.02	2.3	ND
Ethylbenzene	µg/g	0.02	2	ND
Xylenes (total)	µg/g	0.04	3.1	ND
Petroleum Hydrocarbons, F1	µg/g	10	55	ND
Petroleum Hydrocarbons, F2	µg/g	10	98	ND
Petroleum Hydrocarbons, F3	µg/g	50	300	ND
Petroleum Hydrocarbons, F4	µg/g	50	2,800	ND

¹ Standards from Table 3 of April 15, 2011 *Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act*; Residential / Parkland / Institutional land use, coarse textured soil

ns No standard
m bg Meters below grade
SV Reading Soil vapour reading (ppm or % LEL)
ppm Parts per million (by volume)
% LEL Percent of the lower explosive limit
BOLD Exceeds standard

TABLE 3 SOIL ANALYTICAL RESULTS - VOCs
121 Hume Street, Collingwood, ON

Terrapex Sample Name			STANDARDS ¹ 2011 Table 3 R / P / I coarse	CS111	CS125
	Units	RDL			
Sample Depth	m bg	-	-	2.0	2.5
Sample Location	-	-	-	AL Wall	AB Wall
SV Reading	-	-	-	<5 ppm	15 ppm
Sampling Date	-	-	-	18-Jan-16	19-Jan-01
Analysis Date	-	-	-	20-Jan-16	22-Jan-16
Certificate of Analysis No.	-	-	-	B610258	B612414
Acetone	µg/g	0.5	16	ND	ND
Benzene	µg/g	0.02	0.21	ND	ND
Bromodichloromethane	µg/g	0.05	13	ND	ND
Bromoform	µg/g	0.05	0.27	ND	ND
Bromomethane	µg/g	0.05	0.05	ND	ND
Carbon tetrachloride	µg/g	0.05	0.05	ND	ND
Chlorobenzene	µg/g	0.05	2.4	ND	ND
Chloroform	µg/g	0.05	0.05	ND	ND
Dibromochloromethane	µg/g	0.05	9.4	ND	ND
Dichlorobenzene 1,2-	µg/g	0.05	3.4	ND	ND
Dichlorobenzene, 1,3-	µg/g	0.05	4.8	ND	ND
Dichlorobenzene, 1,4-	µg/g	0.05	0.083	ND	ND
Dichlorodifluoromethane	µg/g	0.05	16	ND	ND
Dichloroethane, 1,1-	µg/g	0.05	3.5	ND	ND
Dichloroethane, 1,2-	µg/g	0.05	0.05	ND	ND
Dichloroethylene, 1,1-	µg/g	0.05	0.05	ND	ND
Dichloroethylene, cis-1,2-	µg/g	0.05	3.4	ND	ND
Dichloroethylene, trans-1,2-	µg/g	0.05	0.084	ND	ND
Dichloropropane, 1,2-	µg/g	0.05	0.05	ND	ND
Dichloropropene, cis-1,3-	µg/g	0.03	-	ND	ND
Dichloropropene, trans-1,3-	µg/g	0.04	-	ND	ND
Dichloropropene, 1,3-	µg/g	0.05	0.05	ND	ND
Ethylbenzene	µg/g	0.02	2	0.10	ND
Ethylene dibromide	µg/g	0.05	0.05	ND	ND
Hexane	µg/g	0.05	2.8	0.27	ND
Methyl ethyl ketone	µg/g	0.5	16	ND	ND
Methyl isobutyl ketone	µg/g	0.5	1.7	ND	ND
Methyl tert butyl ether	µg/g	0.05	0.75	ND	ND
Methylene Chloride	µg/g	0.05	0.1	ND	ND
Styrene	µg/g	0.05	0.7	ND	ND
Tetrachloroethane, 1,1,1,2-	µg/g	0.05	0.058	ND	ND
Tetrachloroethane, 1,1,2,2-	µg/g	0.05	0.05	ND	ND
Tetrachloroethylene	µg/g	0.05	0.28	ND	ND
Toluene	µg/g	0.02	2.3	ND	ND
Trichloroethane, 1,1,1-	µg/g	0.05	0.38	ND	ND
Trichloroethane, 1,1,2-	µg/g	0.05	0.05	ND	ND
Trichloroethylene	µg/g	0.05	0.061	ND	ND
Trichlorofluoromethane	µg/g	0.05	4	ND	ND
Vinyl chloride	µg/g	0.02	0.02	ND	ND
m,p-Xylenes	µg/g	0.02	-	ND	ND
o-Xylene	µg/g	0.02	-	ND	ND
Xylenes (total)	µg/g	0.02	3.1	0.57	ND

¹ Standards from Table 3 of April 15, 2011 *Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act*; Residential / Parkland / Institutional land use, coarse textured soil

ns No standard

m bg Meters below grade

SV Reading Soil vapour reading (ppm or % LEL)

ppm Parts per million (by volume)

% LEL Percent of the lower explosive limit

BOLD Exceeds standard

TABLE 3 SOIL ANALYTICAL RESULTS - VOCs
121 Hume Street, Collingwood, ON

CONTINUED

Terrapex Sample Name			STANDARDS ¹ 2011 Table 3 R / P / I coarse	CS1250 Field Duplicate of CS125	CS164
	Units	RDL			
Sample Depth	m bg	-	-	2.5	2.5 m
Sample Location	-	-	-	AB Wall	KJ Wall
SV Reading	-	-	-	15 ppm	100 ppm
Sampling Date	-	-	-	19-Jan-16	18-Feb-16
Analysis Date	-	-	-	22-Jan-16	20-Feb-16
Certificate of Analysis No.	-	-	-	B612414	B634064
Acetone	µg/g	0.5	16	ND	ND
Benzene	µg/g	0.02	0.21	ND	ND
Bromodichloromethane	µg/g	0.05	13	ND	ND
Bromoform	µg/g	0.05	0.27	ND	ND
Bromomethane	µg/g	0.05	0.05	ND	ND
Carbon tetrachloride	µg/g	0.05	0.05	ND	ND
Chlorobenzene	µg/g	0.05	2.4	ND	ND
Chloroform	µg/g	0.05	0.05	ND	ND
Dibromochloromethane	µg/g	0.05	9.4	ND	ND
Dichlorobenzene 1,2-	µg/g	0.05	3.4	ND	ND
Dichlorobenzene, 1,3-	µg/g	0.05	4.8	ND	ND
Dichlorobenzene, 1,4-	µg/g	0.05	0.083	ND	ND
Dichlorodifluoromethane	µg/g	0.05	16	ND	ND
Dichloroethane, 1,1-	µg/g	0.05	3.5	ND	ND
Dichloroethane, 1,2-	µg/g	0.05	0.05	ND	ND
Dichloroethylene, 1,1-	µg/g	0.05	0.05	ND	ND
Dichloroethylene, cis-1,2-	µg/g	0.05	3.4	ND	ND
Dichloroethylene, trans-1,2-	µg/g	0.05	0.084	ND	ND
Dichloropropane, 1,2-	µg/g	0.05	0.05	ND	ND
Dichloropropene, cis-1,3-	µg/g	0.03	-	ND	ND
Dichloropropene, trans-1,3-	µg/g	0.04	-	ND	ND
Dichloropropene, 1,3-	µg/g	0.05	0.05	ND	ND
Ethylbenzene	µg/g	0.02	2	ND	ND
Ethylene dibromide	µg/g	0.05	0.05	ND	ND
Hexane	µg/g	0.05	2.8	ND	ND
Methyl ethyl ketone	µg/g	0.5	16	ND	ND
Methyl isobutyl ketone	µg/g	0.5	1.7	ND	ND
Methyl tert butyl ether	µg/g	0.05	0.75	ND	ND
Methylene Chloride	µg/g	0.05	0.1	ND	ND
Styrene	µg/g	0.05	0.7	ND	ND
Tetrachloroethane, 1,1,1,2-	µg/g	0.05	0.058	ND	ND
Tetrachloroethane, 1,1,2,2-	µg/g	0.05	0.05	ND	ND
Tetrachloroethylene	µg/g	0.05	0.28	ND	ND
Toluene	µg/g	0.02	2.3	ND	ND
Trichloroethane, 1,1,1-	µg/g	0.05	0.38	ND	ND
Trichloroethane, 1,1,2-	µg/g	0.05	0.05	ND	ND
Trichloroethylene	µg/g	0.05	0.061	ND	ND
Trichlorofluoromethane	µg/g	0.05	4	ND	ND
Vinyl chloride	µg/g	0.02	0.02	ND	ND
m,p-Xylenes	µg/g	0.02	-	ND	ND
o-Xylene	µg/g	0.02	-	ND	ND
Xylenes (total)	µg/g	0.02	3.1	ND	ND

¹ Standards from Table 3 of April 15, 2011 *Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act*; Residential / Parkland / Institutional land use, coarse textured soil

ns No standard

m bg Meters below grade

SV Reading Soil vapour reading (ppm or % LEL)

ppm Parts per million (by volume)

% LEL Percent of the lower explosive limit

BOLD Exceeds standard

TABLE 3 SOIL ANALYTICAL RESULTS - VOCs
121 Hume Street, Collingwood, ON

CONTINUED

Terrapex Sample Name			STANDARDS ¹ 2011 Table 3 R / P / I coarse	CS184	CS207
	Units	RDL			
Sample Depth	m bg	-	-	2-Jan-00	2.8
Sample Location	-	-	-	EF Wall	JI Wall
SV Reading	-	-	-	<5 ppm	<5 ppm
Sampling Date	-	-	-	24-Feb-16	1-Mar-16
Analysis Date	-	-	-	26-Feb-16	03-Mar-16
Certificate of Analysis No.	-	-	-	B638341	B642303
Acetone	µg/g	0.5	16	ND	ND
Benzene	µg/g	0.02	0.21	ND	ND
Bromodichloromethane	µg/g	0.05	13	ND	ND
Bromoform	µg/g	0.05	0.27	ND	ND
Bromomethane	µg/g	0.05	0.05	ND	ND
Carbon tetrachloride	µg/g	0.05	0.05	ND	ND
Chlorobenzene	µg/g	0.05	2.4	ND	ND
Chloroform	µg/g	0.05	0.05	ND	ND
Dibromochloromethane	µg/g	0.05	9.4	ND	ND
Dichlorobenzene 1,2-	µg/g	0.05	3.4	ND	ND
Dichlorobenzene, 1,3-	µg/g	0.05	4.8	ND	ND
Dichlorobenzene, 1,4-	µg/g	0.05	0.083	ND	ND
Dichlorodifluoromethane	µg/g	0.05	16	ND	ND
Dichloroethane, 1,1-	µg/g	0.05	3.5	ND	ND
Dichloroethane, 1,2-	µg/g	0.05	0.05	ND	ND
Dichloroethylene, 1,1-	µg/g	0.05	0.05	ND	ND
Dichloroethylene, cis-1,2-	µg/g	0.05	3.4	ND	ND
Dichloroethylene, trans-1,2-	µg/g	0.05	0.084	ND	ND
Dichloropropane, 1,2-	µg/g	0.05	0.05	ND	ND
Dichloropropene, cis-1,3-	µg/g	0.03	-	ND	ND
Dichloropropene, trans-1,3-	µg/g	0.04	-	ND	ND
Dichloropropene, 1,3-	µg/g	0.05	0.05	ND	ND
Ethylbenzene	µg/g	0.02	2	ND	ND
Ethylene dibromide	µg/g	0.05	0.05	ND	ND
Hexane	µg/g	0.05	2.8	ND	ND
Methyl ethyl ketone	µg/g	0.5	16	ND	ND
Methyl isobutyl ketone	µg/g	0.5	1.7	ND	ND
Methyl tert butyl ether	µg/g	0.05	0.75	ND	ND
Methylene Chloride	µg/g	0.05	0.1	ND	ND
Styrene	µg/g	0.05	0.7	ND	ND
Tetrachloroethane, 1,1,1,2-	µg/g	0.05	0.058	ND	ND
Tetrachloroethane, 1,1,2,2-	µg/g	0.05	0.05	ND	ND
Tetrachloroethylene	µg/g	0.05	0.28	ND	ND
Toluene	µg/g	0.02	2.3	ND	ND
Trichloroethane, 1,1,1-	µg/g	0.05	0.38	ND	ND
Trichloroethane, 1,1,2-	µg/g	0.05	0.05	ND	ND
Trichloroethylene	µg/g	0.05	0.061	ND	ND
Trichlorofluoromethane	µg/g	0.05	4	ND	ND
Vinyl chloride	µg/g	0.02	0.02	ND	ND
m,p-Xylenes	µg/g	0.02	-	ND	ND
o-Xylene	µg/g	0.02	-	ND	ND
Xylenes (total)	µg/g	0.02	3.1	ND	ND

¹ Standards from Table 3 of April 15, 2011 *Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act*; Residential / Parkland / Institutional land use, coarse textured soil

ns No standard

m bg Meters below grade

SV Reading Soil vapour reading (ppm or % LEL)

ppm Parts per million (by volume)

% LEL Percent of the lower explosive limit

BOLD Exceeds standard

TABLE 3 SOIL ANALYTICAL RESULTS - VOCs
121 Hume Street, Collingwood, ON

CONTINUED

Terrapex Sample Name			STANDARDS ¹ 2011 Table 3 R / P / I coarse	CS225	MW401-3
	Units	RDL			
Sample Depth	m bg	-	-	2.8	2.1-2.4
Sample Location	-	-	-	HG Wall	-
SV Reading	-	-	-	<5 ppm	<5 ppm
Sampling Date	-	-	-	7-Mar-16	25-May-16
Analysis Date	-	-	-	10-Mar-16	02-Jun-16
Certificate of Analysis No.	-	-	-	B647433	B6A7201
Acetone	µg/g	0.5	16	ND	ND
Benzene	µg/g	0.02	0.21	ND	ND
Bromodichloromethane	µg/g	0.05	13	ND	ND
Bromoform	µg/g	0.05	0.27	ND	ND
Bromomethane	µg/g	0.05	0.05	ND	ND
Carbon tetrachloride	µg/g	0.05	0.05	ND	ND
Chlorobenzene	µg/g	0.05	2.4	ND	ND
Chloroform	µg/g	0.05	0.05	ND	ND
Dibromochloromethane	µg/g	0.05	9.4	ND	ND
Dichlorobenzene 1,2-	µg/g	0.05	3.4	ND	ND
Dichlorobenzene, 1,3-	µg/g	0.05	4.8	ND	ND
Dichlorobenzene,1,4-	µg/g	0.05	0.083	ND	ND
Dichlorodifluoromethane	µg/g	0.05	16	ND	ND
Dichloroethane, 1,1-	µg/g	0.05	3.5	ND	ND
Dichloroethane, 1,2-	µg/g	0.05	0.05	ND	ND
Dichloroethylene, 1,1-	µg/g	0.05	0.05	ND	ND
Dichloroethylene, cis-1,2-	µg/g	0.05	3.4	ND	ND
Dichloroethylene, trans-1,2-	µg/g	0.05	0.084	ND	ND
Dichloropropane, 1,2-	µg/g	0.05	0.05	ND	ND
Dichloropropene, cis-1,3-	µg/g	0.03	-	ND	ND
Dichloropropene, trans-1,3-	µg/g	0.04	-	ND	ND
Dichloropropene, 1,3-	µg/g	0.05	0.05	ND	ND
Ethylbenzene	µg/g	0.02	2	ND	ND
Ethylene dibromide	µg/g	0.05	0.05	ND	ND
Hexane	µg/g	0.05	2.8	ND	ND
Methyl ethyl ketone	µg/g	0.5	16	ND	ND
Methyl isobutyl ketone	µg/g	0.5	1.7	ND	ND
Methyl tert butyl ether	µg/g	0.05	0.75	ND	ND
Methylene Chloride	µg/g	0.05	0.1	ND	ND
Styrene	µg/g	0.05	0.7	ND	ND
Tetrachloroethane, 1,1,1,2-	µg/g	0.05	0.058	ND	ND
Tetrachloroethane, 1,1,2,2-	µg/g	0.05	0.05	ND	ND
Tetrachloroethylene	µg/g	0.05	0.28	ND	ND
Toluene	µg/g	0.02	2.3	ND	ND
Trichloroethane, 1,1,1-	µg/g	0.05	0.38	ND	ND
Trichloroethane, 1,1,2-	µg/g	0.05	0.05	ND	ND
Trichloroethylene	µg/g	0.05	0.061	ND	ND
Trichlorofluoromethane	µg/g	0.05	4	ND	ND
Vinyl chloride	µg/g	0.02	0.02	ND	ND
m,p-Xylenes	µg/g	0.02	-	ND	ND
o-Xylene	µg/g	0.02	-	ND	ND
Xylenes (total)	µg/g	0.02	3.1	ND	ND

¹ Standards from Table 3 of April 15, 2011 *Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act*; Residential / Parkland / Institutional land use, coarse textured soil

ns No standard

m bg Meters below grade

SV Reading Soil vapour reading (ppm or % LEL)

ppm Parts per million (by volume)

% LEL Percent of the lower explosive limit

BOLD Exceeds standard

TABLE 4 SOIL ANALYTICAL RESULTS - PAHs
121 Hume Street, Collingwood, ON

Terrapex Sample Name			STANDARDS ² 2011 Table 3 R / P / I coarse	CS111	CS125
	Units	RDL			
Sample Depth	m bg	-	-	2.0	2.5
Sample Location	-	-	-	AL Wall	AB Wall
SV Reading	-	-	-	<5 ppm	15 ppm
Sampling Date	-	-	-	18-Jan-16	19-Jan-16
Analysis Date	-	-	-	20-Jan-16	22-Jan-16
Certificate of Analysis No.	-	-	-	B610258	B612414
Acenaphthene	µg/g	0.005	7.9	ND	ND
Acenaphthylene	µg/g	0.005	0.15	ND	ND
Anthracene	µg/g	0.005	0.67	ND	ND
Benzo(a)anthracene	µg/g	0.005	0.5	ND	ND
Benzo(a)pyrene	µg/g	0.005	0.3	ND	ND
Benzo(b)fluoranthene	µg/g	0.005	0.78	ND	ND
Benzo(g,h,i)perylene	µg/g	0.005	6.6	ND	ND
Benzo(k)fluoranthene	µg/g	0.005	0.78	ND	ND
Chrysene	µg/g	0.005	7	ND	ND
Dibenzo(a,h)anthracene	µg/g	0.005	0.1	ND	ND
Fluoranthene	µg/g	0.005	0.69	ND	ND
Fluorene	µg/g	0.005	62	0.0063	ND
Indeno(1,2,3-cd)pyrene	µg/g	0.005	0.38	ND	ND
Methylnaphthalene, 1- ¹	µg/g	0.005	0.99	0.11	0.0057
Methylnaphthalene, 2- ¹	µg/g	0.005	0.99	0.67	ND
Methylnaphthalene, 1- & 2- ¹	µg/g	0.0071	0.99	0.78	ND
Naphthalene	µg/g	0.005	0.6	ND	ND
Phenanthrene	µg/g	0.005	6.2	0.0052	0.0056
Pyrene	µg/g	0.005	78	ND	ND

² Standards from Table 3 of April 15, 2011 *Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act*; Residential / Parkland / Institutional land use, coarse textured soil

¹ 2-methylnaphthalene standard applicable to 1-methylnaphthalene with the provision that if both are detected, the sum of the two concentrations cannot exceed the standard

ns No standard

m bg Meters below grade

SV Reading Soil vapour reading (ppm or % LEL)

ppm Parts per million (by volume)

% LEL Percent of the lower explosive limit

BOLD Exceeds standard

TABLE 4 SOIL ANALYTICAL RESULTS - PAHs
121 Hume Street, Collingwood, ON

CONTINUED

Terrapex Sample Name			STANDARDS ² 2011 Table 3 R / P / I coarse	CS1250 Field Duplicate of CS125	CS164
	Units	RDL			
Sample Depth	m bg	-	-	2.5	2.5
Sample Location	-	-	-	AB Wall	KJ Wall
SV Reading	-	-	-	15 ppm	100 ppm
Sampling Date	-	-	-	19-Jan-16	18-Feb-16
Analysis Date	-	-	-	22-Jan-16	20-Feb-16
Certificate of Analysis No.	-	-	-	B612414	B634064
Acenaphthene	µg/g	0.005	7.9	ND	ND
Acenaphthylene	µg/g	0.005	0.15	ND	ND
Anthracene	µg/g	0.005	0.67	ND	ND
Benzo(a)anthracene	µg/g	0.005	0.5	ND	ND
Benzo(a)pyrene	µg/g	0.005	0.3	ND	ND
Benzo(b)fluoranthene	µg/g	0.005	0.78	ND	ND
Benzo(g,h,i)perylene	µg/g	0.005	6.6	ND	ND
Benzo(k)fluoranthene	µg/g	0.005	0.78	ND	ND
Chrysene	µg/g	0.005	7	ND	ND
Dibenzo(a,h)anthracene	µg/g	0.005	0.1	ND	ND
Fluoranthene	µg/g	0.005	0.69	ND	ND
Fluorene	µg/g	0.005	62	ND	ND
Indeno(1,2,3-cd)pyrene	µg/g	0.005	0.38	ND	ND
Methylnaphthalene, 1- ¹	µg/g	0.005	0.99	ND	ND
Methylnaphthalene, 2- ¹	µg/g	0.005	0.99	ND	ND
Methylnaphthalene, 1- & 2- ¹	µg/g	0.0071	0.99	ND	ND
Naphthalene	µg/g	0.005	0.6	ND	ND
Phenanthrene	µg/g	0.005	6.2	ND	ND
Pyrene	µg/g	0.005	78	ND	0.0050

² Standards from Table 3 of April 15, 2011 *Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act*; Residential / Parkland / Institutional land use, coarse textured soil

¹ 2-methylnaphthalene standard applicable to 1-methylnaphthalene with the provision that if both are detected, the sum of the two concentrations cannot exceed the standard

ns No standard

m bg Meters below grade

SV Reading Soil vapour reading (ppm or % LEL)

ppm Parts per million (by volume)

% LEL Percent of the lower explosive limit

BOLD Exceeds standard

TABLE 4 SOIL ANALYTICAL RESULTS - PAHs
121 Hume Street, Collingwood, ON

CONTINUED

Terrapex Sample Name			STANDARDS ² 2011 Table 3 R / P / I coarse	CS184	CS207
	Units	RDL			
Sample Depth	m bg	-	-	2.5	2.8
Sample Location	-	-	-	EF Wall	JI Wall
SV Reading	-	-	-	<5 ppm	<5 ppm
Sampling Date	-	-	-	24-Feb-16	1-Mar-16
Analysis Date	-	-	-	26-Feb-16	42,432.00
Certificate of Analysis No.	-	-	-	B638341	B642303
Acenaphthene	µg/g	0.005	7.9	ND	ND
Acenaphthylene	µg/g	0.005	0.15	ND	ND
Anthracene	µg/g	0.005	0.67	ND	ND
Benzo(a)anthracene	µg/g	0.005	0.5	ND	ND
Benzo(a)pyrene	µg/g	0.005	0.3	ND	ND
Benzo(b)fluoranthene	µg/g	0.005	0.78	ND	ND
Benzo(g,h,i)perylene	µg/g	0.005	6.6	ND	ND
Benzo(k)fluoranthene	µg/g	0.005	0.78	ND	ND
Chrysene	µg/g	0.005	7	ND	ND
Dibenzo(a,h)anthracene	µg/g	0.005	0.1	ND	ND
Fluoranthene	µg/g	0.005	0.69	ND	ND
Fluorene	µg/g	0.005	62	ND	ND
Indeno(1,2,3-cd)pyrene	µg/g	0.005	0.38	ND	ND
Methylnaphthalene, 1- ¹	µg/g	0.005	0.99	ND	ND
Methylnaphthalene, 2- ¹	µg/g	0.005	0.99	ND	ND
Methylnaphthalene, 1- & 2- ¹	µg/g	0.0071	0.99	ND	ND
Naphthalene	µg/g	0.005	0.6	ND	ND
Phenanthrene	µg/g	0.005	6.2	ND	ND
Pyrene	µg/g	0.005	78	ND	ND

² Standards from Table 3 of April 15, 2011 *Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act*; Residential / Parkland / Institutional land use, coarse textured soil

¹ 2-methylnaphthalene standard applicable to 1-methylnaphthalene with the provision that if both are detected, the sum of the two concentrations cannot exceed the standard

ns No standard

m bg Meters below grade

SV Reading Soil vapour reading (ppm or % LEL)

ppm Parts per million (by volume)

% LEL Percent of the lower explosive limit

BOLD Exceeds standard

TABLE 4 SOIL ANALYTICAL RESULTS - PAHs
121 Hume Street, Collingwood, ON

CONTINUED

Terrapex Sample Name			STANDARDS ² 2011 Table 3 R / P / I coarse	CS225	MW401-2B
	Units	RDL			
Sample Depth	m bg	-	-	2.8	1.5-2.1
Sample Location	-	-	-	HG Wall	-
SV Reading	-	-	-	<5 ppm	<5 ppm
Sampling Date	-	-	-	7-Mar-16	25-May-16
Analysis Date	-	-	-	10-Mar-16	2-Jun-16
Certificate of Analysis No.	-	-	-	B647433	B6A7201
Acenaphthene	µg/g	0.005	7.9	ND	ND
Acenaphthylene	µg/g	0.005	0.15	ND	ND
Anthracene	µg/g	0.005	0.67	ND	ND
Benzo(a)anthracene	µg/g	0.005	0.5	ND	ND
Benzo(a)pyrene	µg/g	0.005	0.3	ND	ND
Benzo(b)fluoranthene	µg/g	0.005	0.78	ND	ND
Benzo(g,h,i)perylene	µg/g	0.005	6.6	ND	ND
Benzo(k)fluoranthene	µg/g	0.005	0.78	ND	ND
Chrysene	µg/g	0.005	7	ND	ND
Dibenzo(a,h)anthracene	µg/g	0.005	0.1	ND	ND
Fluoranthene	µg/g	0.005	0.69	ND	ND
Fluorene	µg/g	0.005	62	ND	ND
Indeno(1,2,3-cd)pyrene	µg/g	0.005	0.38	ND	ND
Methylnaphthalene, 1- ¹	µg/g	0.005	0.99	ND	ND
Methylnaphthalene, 2- ¹	µg/g	0.005	0.99	ND	ND
Methylnaphthalene, 1- & 2- ¹	µg/g	0.0071	0.99	ND	ND
Naphthalene	µg/g	0.005	0.6	ND	ND
Phenanthrene	µg/g	0.005	6.2	ND	ND
Pyrene	µg/g	0.005	78	ND	ND

² Standards from Table 3 of April 15, 2011 *Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act*; Residential / Parkland / Institutional land use, coarse textured soil

¹ 2-methylnaphthalene standard applicable to 1-methylnaphthalene with the provision that if both are detected, the sum of the two concentrations cannot exceed the standard

ns No standard

m bg Meters below grade

SV Reading Soil vapour reading (ppm or % LEL)

ppm Parts per million (by volume)

% LEL Percent of the lower explosive limit

BOLD Exceeds standard

TABLE 5 SOIL ANALYTICAL RESULTS - INORGANICS
121 Hume Street, Collingwood, ON

Terrapex Sample Name			STANDARDS ² 2011 Table 3 R / P / I coarse	CS111	CS125
	Units	RDL			
Sample Depth	m bg	-	-	2.0	2.5
Sample Location	-	-	-	AL Wall	AB Wall
SV Reading	-	-	-	<5 ppm	15 ppm
Sampling Date	-	-	-	18-Jan-16	19-Jan-16
Analysis Date	-	-	-	20-Jan-16	22-Jan-16
Certificate of Analysis No.	-	-	-	B610258	B612414
Antimony	µg/g	0.2	7.5	ND	ND
Arsenic	µg/g	1.0	18	ND	ND
Barium	µg/g	0.5	390	4.1	4.4
Beryllium	µg/g	0.2	4	ND	ND
Boron (Hot Water Soluble) ¹	µg/g	0.05	1.5	ND	ND
Boron (Total) ¹	µg/g	5.0	120	ND	ND
Cadmium	µg/g	0.10	1.2	ND	ND
Chromium	µg/g	1.0	160	3.4	4.1
Hexavalent Chromium	µg/g	0.2	8	ND	ND
Cobalt	µg/g	0.1	22	2.6	1.2
Copper	µg/g	0.5	140	1.9	1.4
Cyanide (CN-)	µg/g	0.01	0.051	ND	ND
Lead	µg/g	1.0	120	2.5	1.7
Mercury	µg/g	0.05	0.27	ND	ND
Molybdenum	µg/g	0.5	6.9	ND	ND
Nickel	µg/g	0.5	100	3.7	2.3
Selenium	µg/g	0.5	2.4	ND	ND
Silver	µg/g	0.2	20	ND	ND
Thallium	µg/g	0.05	1	ND	ND
Uranium	µg/g	0.05	23	0.20	0.22
Vanadium	µg/g	5.0	86	5.1	7.8
Zinc	µg/g	5.0	340	11	5.9
pH	-	-	-	7.36	7.8
Sodium Adsorption Ratio	-	-	5	1.8	0.84

² Standards from Table 3 of April 15, 2011 *Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act*; Residential / Parkland / Institutional land use, coarse textured soil

¹ Hot Water Soluble Boron standard applies to surface soils; for subsurface soils, the Total Boron standard applies

ns No standard

m bg Meters below grade

SV Reading Soil vapour reading (ppm or % LEL)

ppm Parts per million (by volume)

% LEL Percent of the lower explosive limit

BOLD Exceeds standard

TABLE 5 SOIL ANALYTICAL RESULTS - INORGANICS
121 Hume Street, Collingwood, ON

CONTINUED

Terrapex Sample Name			STANDARDS ² 2011 Table 3 R / P / I coarse	CS1250 Field Duplicate of CS125	CS164
	Units	RDL			
Sample Depth	m bg	-	-	2.5	2.5
Sample Location	-	-	-	AB Wall	KJ Wall
SV Reading	-	-	-	-	100 ppm
Sampling Date	-	-	-	19-Jan-16	18-Feb-16
Analysis Date	-	-	-	22-Jan-16	20-Feb-16
Certificate of Analysis No.	-	-	-	B612414	B634064
Antimony	µg/g	0.2	7.5	ND	ND
Arsenic	µg/g	1.0	18	ND	ND
Barium	µg/g	0.5	390	3.2	3.5
Beryllium	µg/g	0.2	4	ND	ND
Boron (Hot Water Soluble) ¹	µg/g	0.05	1.5	ND	ND
Boron (Total) ¹	µg/g	5.0	120	ND	ND
Cadmium	µg/g	0.10	1.2	ND	ND
Chromium	µg/g	1.0	160	3.4	7.7
Hexavalent Chromium	µg/g	0.2	8	ND	ND
Cobalt	µg/g	0.1	22	1.1	1.4
Copper	µg/g	0.5	140	1.1	1.2
Cyanide (CN-)	µg/g	0.01	0.051	ND	ND
Lead	µg/g	1.0	120	1.5	2.3
Mercury	µg/g	0.05	0.27	ND	ND
Molybdenum	µg/g	0.5	6.9	ND	ND
Nickel	µg/g	0.5	100	2.0	2.8
Selenium	µg/g	0.5	2.4	ND	ND
Silver	µg/g	0.2	20	ND	ND
Thallium	µg/g	0.05	1	ND	ND
Uranium	µg/g	0.05	23	0.22	0.33
Vanadium	µg/g	5.0	86	5.7	16
Zinc	µg/g	5.0	340	6.2	1.8
pH	-	-	-	7.53	7.7
Sodium Adsorption Ratio	-	-	5	0.81	3.9

² Standards from Table 3 of April 15, 2011 *Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act*; Residential / Parkland / Institutional land use, coarse textured soil

¹ Hot Water Soluble Boron standard applies to surface soils; for subsurface soils, the Total Boron standard applies

ns No standard

m bg Meters below grade

SV Reading Soil vapour reading (ppm or % LEL)

ppm Parts per million (by volume)

% LEL Percent of the lower explosive limit

BOLD Exceeds standard

TABLE 5 SOIL ANALYTICAL RESULTS - INORGANICS
121 Hume Street, Collingwood, ON

CONTINUED

Terrapex Sample Name			STANDARDS ² 2011 Table 3 R / P / I coarse	CS184	CS207
	Units	RDL			
Sample Depth	m bg	-	-	2.5	2.8
Sample Location	-	-	-	EF Wall	JI Wall
SV Reading	-	-	-	<5 ppm	<5 ppm
Sampling Date	-	-	-	24-Feb-15	1-Mar-16
Analysis Date	-	-	-	26-Feb-16	03-Mar-16
Certificate of Analysis No.	-	-	-	B638341	B642303
Antimony	µg/g	0.2	7.5	ND	ND
Arsenic	µg/g	1.0	18	ND	ND
Barium	µg/g	0.5	390	4.0	5.9
Beryllium	µg/g	0.2	4	ND	ND
Boron (Hot Water Soluble) ¹	µg/g	0.05	1.5	ND	ND
Boron (Total) ¹	µg/g	5.0	120	ND	ND
Cadmium	µg/g	0.10	1.2	ND	ND
Chromium	µg/g	1.0	160	3.0	3.5
Hexavalent Chromium	µg/g	0.2	8	ND	ND
Cobalt	µg/g	0.1	22	1.2	1.8
Copper	µg/g	0.5	140	1.0	1.9
Cyanide (CN-)	µg/g	0.01	0.051	ND	ND
Lead	µg/g	1.0	120	1.5	2.1
Mercury	µg/g	0.05	0.27	ND	ND
Molybdenum	µg/g	0.5	6.9	0.88	ND
Nickel	µg/g	0.5	100	2.3	2.7
Selenium	µg/g	0.5	2.4	ND	ND
Silver	µg/g	0.2	20	ND	ND
Thallium	µg/g	0.05	1	ND	ND
Uranium	µg/g	0.05	23	0.19	0.23
Vanadium	µg/g	5.0	86	ND	5.9
Zinc	µg/g	5.0	340	6.1	8.2
pH	-	-	-	7.83	7.76
Sodium Adsorption Ratio	-	-	5	1.7	1.9

² Standards from Table 3 of April 15, 2011 *Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act*; Residential / Parkland / Institutional land use, coarse textured soil

¹ Hot Water Soluble Boron standard applies to surface soils; for subsurface soils, the Total Boron standard applies

ns No standard

m bg Meters below grade

SV Reading Soil vapour reading (ppm or % LEL)

ppm Parts per million (by volume)

% LEL Percent of the lower explosive limit

BOLD Exceeds standard

TABLE 5 SOIL ANALYTICAL RESULTS - INORGANICS
121 Hume Street, Collingwood, ON

CONTINUED

Terrapex Sample Name			STANDARDS ² 2011 Table 3 R / P / I coarse	CS225	MW401-1
	Units	RDL			
Sample Depth	m bg	-	-	2.8	0-0.9
Sample Location	-	-	-	HG Wall	-
SV Reading	-	-	-	<5 ppm	<5 ppm
Sampling Date	-	-	-	7-Mar-16	25-May-16
Analysis Date	-	-	-	10-Mar-16	02-Jun-16
Certificate of Analysis No.	-	-	-	B647433	B6A7201
Antimony	µg/g	0.2	7.5	ND	ND
Arsenic	µg/g	1.0	18	ND	1.0
Barium	µg/g	0.5	390	4.6	4.8
Beryllium	µg/g	0.2	4	ND	ND
Boron (Hot Water Soluble) ¹	µg/g	0.05	1.5	ND	0.13
Boron (Total) ¹	µg/g	5.0	120	ND	ND
Cadmium	µg/g	0.10	1.2	ND	ND
Chromium	µg/g	1.0	160	5.3	4.2
Hexavalent Chromium	µg/g	0.2	8	ND	ND
Cobalt	µg/g	0.1	22	1.4	1.0
Copper	µg/g	0.5	140	1.3	1.4
Cyanide (CN-)	µg/g	0.01	0.051	ND	ND
Lead	µg/g	1.0	120	1.9	3.2
Mercury	µg/g	0.05	0.27	ND	ND
Molybdenum	µg/g	0.5	6.9	ND	ND
Nickel	µg/g	0.5	100	2.7	2.1
Selenium	µg/g	0.5	2.4	ND	ND
Silver	µg/g	0.2	20	ND	ND
Thallium	µg/g	0.05	1	ND	ND
Uranium	µg/g	0.05	23	0.29	0.20
Vanadium	µg/g	5.0	86	11	7
Zinc	µg/g	5.0	340	8.9	7.6
pH	-	-	-	7.80	0.17
Sodium Adsorption Ratio	-	-	5	2.2	0.8

² Standards from Table 3 of April 15, 2011 *Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act*; Residential / Parkland / Institutional land use, coarse textured soil

¹ Hot Water Soluble Boron standard applies to surface soils; for subsurface soils, the Total Boron standard applies

ns No standard

m bg Meters below grade

SV Reading Soil vapour reading (ppm or % LEL)

ppm Parts per million (by volume)

% LEL Percent of the lower explosive limit

BOLD Exceeds standard

TABLE 6 SOIL ANALYTICAL RESULTS - PHCs
121 Hume Street, Collingwood, ON

Terrapex Sample Name			STANDARDS ¹ 2011 Table 3 R / P / I coarse	SP105	SP107	SP201	SP305	SP403
	Units	RDL						
SV Reading	-	-	-	145 ppm	210 ppm	<5 ppm	<5 ppm	<5 ppm
Sampling Date	-	-	-	12-Jan-16	12-Jan-16	15-Jan-16	15-Jan-16	18-Jan-16
Analysis Date	-	-	-	16-Jan-16	16-Jan-16	18-Jan-16	18-Jan-16	20-Jan-16
Certificate of Analysis No.	-	-	-	B607582	B607582	B609023	B609023	B610258
Benzene	µg/g	0.02	0.21	ND	ND	ND	ND	ND
Toluene	µg/g	0.02	2.3	ND	ND	ND	ND	ND
Ethylbenzene	µg/g	0.02	2	ND	ND	ND	ND	ND
Xylenes (total)	µg/g	0.04	3.1	ND	ND	ND	ND	ND
Petroleum Hydrocarbons, F1	µg/g	10	55	ND	ND	ND	ND	ND
Petroleum Hydrocarbons, F2	µg/g	10	98	ND	12	ND	ND	ND
Petroleum Hydrocarbons, F3	µg/g	50	300	ND	ND	ND	ND	ND
Petroleum Hydrocarbons, F4	µg/g	50	2,800	ND	ND	ND	ND	ND

¹ Standards from Table 3 of April 15, 2011 *Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act* ; Residential / Parkland / Institutional land use, coarse textured soil

ns No standard

m bg Meters below grade

SV Reading Soil vapour reading (ppm or % LEL)

ppm Parts per million (by volume)

% LEL Percent of the lower explosive limit

BOLD Exceeds standard

TABLE 6 SOIL ANALYTICAL RESULTS - PHCs
121 Hume Street, Collingwood, ON

CONTINUED

Terrapex Sample Name			STANDARDS ¹ 2011 Table 3 R / P / I coarse	SP504	SP601	SP701	SP803	SP902
	Units	RDL						
SV Reading	-	-	-	<5 ppm	<5 ppm	<5 ppm	<5 ppm	<5 ppm
Sampling Date	-	-	-	18-Jan-16	19-Jan-16	19-Jan-16	20-Jan-16	27-Jan-16
Analysis Date	-	-	-	20-Jan-16	22-Jan-16	22-Jan-16	22-Jan-16	30-Jan-16
Certificate of Analysis No.	-	-	-	B610258	B612414	B612414	B612414	B618689
Benzene	µg/g	0.02	0.21	ND	ND	ND	ND	ND
Toluene	µg/g	0.02	2.3	ND	ND	ND	ND	ND
Ethylbenzene	µg/g	0.02	2	ND	ND	ND	ND	ND
Xylenes (total)	µg/g	0.04	3.1	ND	ND	ND	ND	ND
Petroleum Hydrocarbons, F1	µg/g	10	55	ND	ND	ND	ND	ND
Petroleum Hydrocarbons, F2	µg/g	10	98	ND	ND	ND	ND	54
Petroleum Hydrocarbons, F3	µg/g	50	300	ND	ND	ND	ND	53
Petroleum Hydrocarbons, F4	µg/g	50	2,800	ND	ND	ND	ND	ND

¹ Standards from Table 3 of April 15, 2011 *Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act*; Residential / Parkland / Institutional land use, coarse textured soil

ns No standard

m bg Meters below grade

SV Reading Soil vapour reading (ppm or % LEL)

ppm Parts per million (by volume)

% LEL Percent of the lower explosive limit

BOLD Exceeds standard

TABLE 6 SOIL ANALYTICAL RESULTS - PHCs
121 Hume Street, Collingwood, ON

CONTINUED

Terrapex Sample Name			STANDARDS ¹ 2011 Table 3 R / P / I coarse	SP908	SP9081 Field Duplicate of SP908	SP912	SP920	SP1003
	Units	RDL						
SV Reading	-	-	-	<5 ppm	<5 ppm	<5 ppm	<5 ppm	<5 ppm
Sampling Date	-	-	-	27-Jan-16	27-Jan-16	27-Jan-16	27-Jan-16	5-Feb-16
Analysis Date	-	-	-	30-Jan-16	30-Jan-16	30-Jan-16	30-Jan-16	9-Feb-16
Certificate of Analysis No.	-	-	-	B618689	B618689	B618689	B618689	B624773
Benzene	µg/g	0.02	0.21	ND	ND	ND	ND	ND
Toluene	µg/g	0.02	2.3	ND	ND	ND	ND	ND
Ethylbenzene	µg/g	0.02	2	ND	ND	ND	ND	ND
Xylenes (total)	µg/g	0.04	3.1	ND	ND	ND	ND	ND
Petroleum Hydrocarbons, F1	µg/g	10	55	11	ND	ND	ND	ND
Petroleum Hydrocarbons, F2	µg/g	10	98	ND	ND	ND	ND	ND
Petroleum Hydrocarbons, F3	µg/g	50	300	ND	ND	ND	ND	ND
Petroleum Hydrocarbons, F4	µg/g	50	2,800	ND	ND	ND	ND	ND

¹ Standards from Table 3 of April 15, 2011 *Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act*; Residential / Parkland / Institutional land use, coarse textured soil

ns No standard

m bg Meters below grade

SV Reading Soil vapour reading (ppm or % LEL)

ppm Parts per million (by volume)

% LEL Percent of the lower explosive limit

BOLD Exceeds standard

TABLE 6 SOIL ANALYTICAL RESULTS - PHCs
121 Hume Street, Collingwood, ON

CONTINUED

Terrapex Sample Name			STANDARDS ¹ 2011 Table 3 R / P / I coarse	SP1007	SP2003	SP3004	SP4002	SP5001
	Units	RDL						
SV Reading	-	-	-	<5 ppm	160 ppm	<5 ppm	<5 ppm	<5 ppm
Sampling Date	-	-	-	5-Feb-16	12-Feb-16	12-Feb-16	12-Feb-16	18-Feb-16
Analysis Date	-	-	-	9-Feb-16	13-Feb-16	13-Feb-16	13-Feb-16	20-Feb-16
Certificate of Analysis No.	-	-	-	B624773	B630303	B630303	B630303	B634064
Benzene	µg/g	0.02	0.21	ND	ND	ND	ND	ND
Toluene	µg/g	0.02	2.3	ND	ND	ND	ND	ND
Ethylbenzene	µg/g	0.02	2	ND	ND	ND	ND	ND
Xylenes (total)	µg/g	0.04	3.1	ND	ND	ND	ND	ND
Petroleum Hydrocarbons, F1	µg/g	10	55	ND	ND	ND	ND	ND
Petroleum Hydrocarbons, F2	µg/g	10	98	ND	ND	ND	ND	ND
Petroleum Hydrocarbons, F3	µg/g	50	300	ND	ND	ND	91	ND
Petroleum Hydrocarbons, F4	µg/g	50	2,800	ND	ND	ND	67	ND

¹ Standards from Table 3 of April 15, 2011 *Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act*; Residential / Parkland / Institutional land use, coarse textured soil

ns No standard

m bg Meters below grade

SV Reading Soil vapour reading (ppm or % LEL)

ppm Parts per million (by volume)

% LEL Percent of the lower explosive limit

BOLD Exceeds standard

TABLE 6 SOIL ANALYTICAL RESULTS - PHCs
121 Hume Street, Collingwood, ON

CONTINUED

Terrapex Sample Name			STANDARDS ¹ 2011 Table 3 R / P / I coarse	SP6001	SP7001	CS8001	CS8003	SP9001
	Units	RDL						
SV Reading	-	-	-	<5 ppm	<5 ppm	<5 ppm	<5 ppm	<5 ppm
Sampling Date	-	-	-	18-Feb-16	18-Feb-16	23-Feb-16	23-Feb-16	24-Feb-16
Analysis Date	-	-	-	20-Feb-16	20-Feb-16	25-Feb-16	25-Feb-16	26-Feb-16
Certificate of Analysis No.	-	-	-	B634064	B634064	B637323	B637323	B638341
Benzene	µg/g	0.02	0.21	ND	ND	ND	ND	ND
Toluene	µg/g	0.02	2.3	0.027	ND	ND	ND	ND
Ethylbenzene	µg/g	0.02	2	ND	ND	ND	ND	ND
Xylenes (total)	µg/g	0.04	3.1	ND	ND	ND	ND	ND
Petroleum Hydrocarbons, F1	µg/g	10	55	ND	ND	ND	ND	ND
Petroleum Hydrocarbons, F2	µg/g	10	98	ND	ND	ND	ND	ND
Petroleum Hydrocarbons, F3	µg/g	50	300	ND	ND	ND	ND	62
Petroleum Hydrocarbons, F4	µg/g	50	2,800	ND	ND	ND	ND	ND

¹ Standards from Table 3 of April 15, 2011 *Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act*; Residential / Parkland / Institutional land use, coarse textured soil

ns No standard

m bg Meters below grade

SV Reading Soil vapour reading (ppm or % LEL)

ppm Parts per million (by volume)

% LEL Percent of the lower explosive limit

BOLD Exceeds standard

TABLE 6 SOIL ANALYTICAL RESULTS - PHCs
121 Hume Street, Collingwood, ON

CONTINUED

Terrapex Sample Name			STANDARDS ¹ 2011 Table 3 R / P / I coarse	SP110D1	SP100D1	SP200D1	SP300D1
	Units	RDL					
SV Reading	-	-	-	<5 ppm	<5 ppm	<5 ppm	<5 ppm
Sampling Date	-	-	-	1-Mar-16	1-Mar-16	7-Mar-16	7-Mar-16
Analysis Date	-	-	-	3-Mar-16	3-Mar-16	10-Mar-16	10-Mar-16
Certificate of Analysis No.	-	-	-	B642303	B642303	B647443	B647443
Benzene	µg/g	0.02	0.21	ND	ND	ND	ND
Toluene	µg/g	0.02	2.3	ND	ND	ND	ND
Ethylbenzene	µg/g	0.02	2	ND	ND	ND	ND
Xylenes (total)	µg/g	0.04	3.1	ND	ND	ND	ND
Petroleum Hydrocarbons, F1	µg/g	10	55	ND	ND	ND	ND
Petroleum Hydrocarbons, F2	µg/g	10	98	ND	ND	ND	ND
Petroleum Hydrocarbons, F3	µg/g	50	300	63	64	ND	ND
Petroleum Hydrocarbons, F4	µg/g	50	2,800	ND	ND	ND	ND

¹ Standards from Table 3 of April 15, 2011 *Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act*; Residential / Parkland / Institutional land use, coarse textured soil

ns No standard

m bg Meters below grade

SV Reading Soil vapour reading (ppm or % LEL)

ppm Parts per million (by volume)

% LEL Percent of the lower explosive limit

BOLD Exceeds standard

TABLE 7 SOIL ANALYTICAL RESULTS - PHCs
121 Hume Street, Collingwood, ON

Terrapex Sample Name			STANDARDS ¹ 2011 Table 3 R / P / I coarse	PIT1	PIT2	PIT3	PIT4	PIT5
	Units	RDL						
SV Reading	-	-	-	<5 ppm	<5 ppm	<5 ppm	<5 ppm	<5 ppm
Sampling Date	-	-	-	19-Jan-16	19-Jan-16	19-Jan-16	19-Jan-16	19-Jan-16
Analysis Date	-	-	-	27-Jan-16	27-Jan-16	27-Jan-16	27-Jan-16	27-Jan-16
Certificate of Analysis No.	-	-	-	B612675	B612675	B612675	B612675	B612675
Benzene	µg/g	0.02	0.21	ND	ND	ND	ND	ND
Toluene	µg/g	0.02	2.3	ND	ND	ND	ND	ND
Ethylbenzene	µg/g	0.02	2	ND	ND	ND	ND	ND
Xylenes (total)	µg/g	0.02	3.1	ND	ND	ND	ND	ND
Petroleum Hydrocarbons, F1	µg/g	10	55	ND	ND	ND	ND	ND
Petroleum Hydrocarbons, F2	µg/g	10	98	ND	ND	ND	ND	ND
Petroleum Hydrocarbons, F3	µg/g	50	300	ND	ND	ND	ND	ND
Petroleum Hydrocarbons, F4	µg/g	50	2,800	ND	ND	ND	ND	ND

¹ Standards from Table 3 of April 15, 2011 *Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act* ; Residential / Parkland / Institutional land use, coarse textured soil

ns No standard

m bg Meters below grade

SV Reading Soil vapour reading (ppm or % LEL)

ppm Parts per million (by volume)

% LEL Percent of the lower explosive limit

BOLD Exceeds standard

TABLE 7 SOIL ANALYTICAL RESULTS - PHCs
121 Hume Street, Collingwood, ON

CONTINUED

Terrapex Sample Name			STANDARDS ¹ 2011 Table 3 R / P / I coarse	PIT6	PIT7	PIT8
	Units	RDL				
SV Reading	-	-	-	<5 ppm	<5 ppm	<5 ppm
Sampling Date	-	-	-	19-Jan-16	19-Jan-16	19-Jan-16
Analysis Date	-	-	-	27-Jan-16	27-Jan-16	27-Jan-16
Certificate of Analysis No.	-	-	-	B612675	B612675	B612675
Benzene	µg/g	0.02	0.21	ND	ND	ND
Toluene	µg/g	0.02	2.3	ND	ND	ND
Ethylbenzene	µg/g	0.02	2	ND	ND	ND
Xylenes (total)	µg/g	0.02	3.1	ND	ND	ND
Petroleum Hydrocarbons, F1	µg/g	10	55	ND	ND	ND
Petroleum Hydrocarbons, F2	µg/g	10	98	ND	ND	ND
Petroleum Hydrocarbons, F3	µg/g	50	300	ND	ND	ND
Petroleum Hydrocarbons, F4	µg/g	50	2,800	ND	ND	ND

¹ Standards from Table 3 of April 15, 2011 *Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act*; Residential / Parkland / Institutional land use, coarse textured soil

ns No standard

m bg Meters below grade

SV Reading Soil vapour reading (ppm or % LEL)

ppm Parts per million (by volume)

% LEL Percent of the lower explosive limit

BOLD Exceeds standard

TABLE 8 SOIL ANALYTICAL RESULTS - VOCs
121 Hume Street, Collingwood, ON

Terrapex Sample Name			STANDARDS ¹	PIT1	PIT2
	Units	RDL	2011 Table 3 R / P / I coarse		
SV Reading	-	-	-	<5 ppm	<5 ppm
Sampling Date	-	-	-	19-Jan-16	19-Jan-16
Analysis Date	-	-	-	27-Jan-16	27-Jan-16
Certificate of Analysis No.	-	-	-	B612675	B612675
Acetone	µg/g	0.50	16	ND	ND
Benzene	µg/g	0.020	0.21	ND	ND
Bromodichloromethane	µg/g	0.050	13	ND	ND
Bromoform	µg/g	0.050	0.27	ND	ND
Bromomethane	µg/g	0.050	0.05	ND	ND
Carbon tetrachloride	µg/g	0.050	0.05	ND	ND
Chlorobenzene	µg/g	0.050	2.4	ND	ND
Chloroform	µg/g	0.050	0.05	ND	ND
Dibromochloromethane	µg/g	0.050	9.4	ND	ND
Dichlorobenzene, 1,2-	µg/g	0.050	3.4	ND	ND
Dichlorobenzene, 1,3-	µg/g	0.050	4.8	ND	ND
Dichlorobenzene, 1,4-	µg/g	0.050	0.083	ND	ND
Dichlorodifluoromethane	µg/g	0.050	16	ND	ND
Dichloroethane, 1,1-	µg/g	0.050	3.5	ND	ND
Dichloroethane, 1,2-	µg/g	0.050	0.05	ND	ND
Dichloroethylene, 1,1-	µg/g	0.050	0.05	ND	ND
Dichloroethylene, cis-1,2-	µg/g	0.050	3.4	ND	ND
Dichloroethylene, trans-1,2-	µg/g	0.050	0.084	ND	ND
Dichloropropane, 1,2-	µg/g	0.050	0.05	ND	ND
Dichloropropene, cis-1,3-	µg/g	0.030	-	ND	ND
Dichloropropene, trans-1,3-	µg/g	0.040	-	ND	ND
Ethylbenzene	µg/g	0.020	2	ND	ND
Ethylene dibromide	µg/g	0.050	0.05	ND	ND
Hexane	µg/g	0.050	2.8	ND	ND
Methyl ethyl ketone	µg/g	0.50	16	ND	ND
Methyl isobutyl ketone	µg/g	0.50	1.7	ND	ND
Methyl tert butyl ether	µg/g	0.050	0.75	ND	ND
Methylene Chloride	µg/g	0.050	0.1	ND	ND
Styrene	µg/g	0.050	0.7	ND	ND
Tetrachloroethane, 1,1,1,2-	µg/g	0.050	0.058	ND	ND
Tetrachloroethane, 1,1,2,2-	µg/g	0.050	0.05	ND	ND
Tetrachloroethylene	µg/g	0.050	0.28	ND	ND
Toluene	µg/g	0.020	2.3	ND	ND
Trichloroethane, 1,1,1-	µg/g	0.050	0.38	ND	ND
Trichloroethane, 1,1,2-	µg/g	0.050	0.05	ND	ND
Trichloroethylene	µg/g	0.050	0.061	ND	ND
Trichlorofluoromethane	µg/g	0.050	4	ND	ND
Vinyl chloride	µg/g	0.020	0.02	ND	ND
m,p-Xylenes	µg/g	0.020	-	ND	ND
o-Xylene	µg/g	0.020	-	ND	ND
Xylenes (total)	µg/g	0.020	3.1	ND	ND

¹ Standards from Table 3 of April 15, 2011 *Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act* ; Residential / Parkland / Institutional land use, coarse textured soil

ns No standard
m bg Meters below grade
SV Reading Soil vapour reading (ppm or % LEL)
ppm Parts per million (by volume)
% LEL Percent of the lower explosive limit
BOLD Exceeds standard

TABLE 8 SOIL ANALYTICAL RESULTS - VOCs
121 Hume Street, Collingwood, ON

CONTINUED

Terrapex Sample Name			STANDARDS ¹ 2011 Table 3 R / P / I coarse	PIT3	PIT4
	Units	RDL			
SV Reading	-	-	-	<5 ppm	<5 ppm
Sampling Date	-	-	-	19-Jan-16	19-Jan-16
Analysis Date	-	-	-	27-Jan-16	27-Jan-16
Certificate of Analysis No.	-	-	-	B612675	B612675
Acetone	µg/g	0.50	16	ND	ND
Benzene	µg/g	0.020	0.21	ND	ND
Bromodichloromethane	µg/g	0.050	13	ND	ND
Bromoform	µg/g	0.050	0.27	ND	ND
Bromomethane	µg/g	0.050	0.05	ND	ND
Carbon tetrachloride	µg/g	0.050	0.05	ND	ND
Chlorobenzene	µg/g	0.050	2.4	ND	ND
Chloroform	µg/g	0.050	0.05	ND	ND
Dibromochloromethane	µg/g	0.050	9.4	ND	ND
Dichlorobenzene, 1,2-	µg/g	0.050	3.4	ND	ND
Dichlorobenzene, 1,3-	µg/g	0.050	4.8	ND	ND
Dichlorobenzene, 1,4-	µg/g	0.050	0.083	ND	ND
Dichlorodifluoromethane	µg/g	0.050	16	ND	ND
Dichloroethane, 1,1-	µg/g	0.050	3.5	ND	ND
Dichloroethane, 1,2-	µg/g	0.050	0.05	ND	ND
Dichloroethylene, 1,1-	µg/g	0.050	0.05	ND	ND
Dichloroethylene, cis-1,2-	µg/g	0.050	3.4	ND	ND
Dichloroethylene, trans-1,2-	µg/g	0.050	0.084	ND	ND
Dichloropropane, 1,2-	µg/g	0.050	0.05	ND	ND
Dichloropropene, cis-1,3-	µg/g	0.030	-	ND	ND
Dichloropropene, trans-1,3-	µg/g	0.040	-	ND	ND
Ethylbenzene	µg/g	0.020	2	ND	ND
Ethylene dibromide	µg/g	0.050	0.05	ND	ND
Hexane	µg/g	0.050	2.8	ND	ND
Methyl ethyl ketone	µg/g	0.50	16	ND	ND
Methyl isobutyl ketone	µg/g	0.50	1.7	ND	ND
Methyl tert butyl ether	µg/g	0.050	0.75	ND	ND
Methylene Chloride	µg/g	0.050	0.1	ND	ND
Styrene	µg/g	0.050	0.7	ND	ND
Tetrachloroethane, 1,1,1,2-	µg/g	0.050	0.058	ND	ND
Tetrachloroethane, 1,1,2,2-	µg/g	0.050	0.05	ND	ND
Tetrachloroethylene	µg/g	0.050	0.28	ND	ND
Toluene	µg/g	0.020	2.3	ND	ND
Trichloroethane, 1,1,1-	µg/g	0.050	0.38	ND	ND
Trichloroethane, 1,1,2-	µg/g	0.050	0.05	ND	ND
Trichloroethylene	µg/g	0.050	0.061	ND	ND
Trichlorofluoromethane	µg/g	0.050	4	ND	ND
Vinyl chloride	µg/g	0.020	0.02	ND	ND
m,p-Xylenes	µg/g	0.020	-	ND	ND
o-Xylene	µg/g	0.020	-	ND	ND
Xylenes (total)	µg/g	0.020	3.1	ND	ND

¹ Standards from Table 3 of April 15, 2011 *Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act* ; Residential / Parkland / Institutional land use, coarse textured soil

ns No standard

m bg Meters below grade

SV Reading Soil vapour reading (ppm or % LEL)

ppm Parts per million (by volume)

% LEL Percent of the lower explosive limit

BOLD Exceeds standard

TABLE 8 SOIL ANALYTICAL RESULTS - VOCs
121 Hume Street, Collingwood, ON

CONTINUED

Terrapex Sample Name			STANDARDS ¹ 2011 Table 3 R / P / I coarse	PIT5	PIT6
	Units	RDL			
SV Reading	-	-	-	<5 ppm	<5 ppm
Sampling Date	-	-	-	19-Jan-16	19-Jan-16
Analysis Date	-	-	-	27-Jan-16	27-Jan-16
Certificate of Analysis No.	-	-	-	B612675	B612675
Acetone	µg/g	0.50	16	ND	ND
Benzene	µg/g	0.020	0.21	ND	ND
Bromodichloromethane	µg/g	0.050	13	ND	ND
Bromoform	µg/g	0.050	0.27	ND	ND
Bromomethane	µg/g	0.050	0.05	ND	ND
Carbon tetrachloride	µg/g	0.050	0.05	ND	ND
Chlorobenzene	µg/g	0.050	2.4	ND	ND
Chloroform	µg/g	0.050	0.05	ND	ND
Dibromochloromethane	µg/g	0.050	9.4	ND	ND
Dichlorobenzene, 1,2-	µg/g	0.050	3.4	ND	ND
Dichlorobenzene, 1,3-	µg/g	0.050	4.8	ND	ND
Dichlorobenzene, 1,4-	µg/g	0.050	0.083	ND	ND
Dichlorodifluoromethane	µg/g	0.050	16	ND	ND
Dichloroethane, 1,1-	µg/g	0.050	3.5	ND	ND
Dichloroethane, 1,2-	µg/g	0.050	0.05	ND	ND
Dichloroethylene, 1,1-	µg/g	0.050	0.05	ND	ND
Dichloroethylene, cis-1,2-	µg/g	0.050	3.4	ND	ND
Dichloroethylene, trans-1,2-	µg/g	0.050	0.084	ND	ND
Dichloropropane, 1,2-	µg/g	0.050	0.05	ND	ND
Dichloropropene, cis-1,3-	µg/g	0.030	-	ND	ND
Dichloropropene, trans-1,3-	µg/g	0.040	-	ND	ND
Ethylbenzene	µg/g	0.020	2	ND	ND
Ethylene dibromide	µg/g	0.050	0.05	ND	ND
Hexane	µg/g	0.050	2.8	ND	ND
Methyl ethyl ketone	µg/g	0.50	16	ND	ND
Methyl isobutyl ketone	µg/g	0.50	1.7	ND	ND
Methyl tert butyl ether	µg/g	0.050	0.75	ND	ND
Methylene Chloride	µg/g	0.050	0.1	ND	ND
Styrene	µg/g	0.050	0.7	ND	ND
Tetrachloroethane, 1,1,1,2-	µg/g	0.050	0.058	ND	ND
Tetrachloroethane, 1,1,2,2-	µg/g	0.050	0.05	ND	ND
Tetrachloroethylene	µg/g	0.050	0.28	ND	ND
Toluene	µg/g	0.020	2.3	ND	ND
Trichloroethane, 1,1,1-	µg/g	0.050	0.38	ND	ND
Trichloroethane, 1,1,2-	µg/g	0.050	0.05	ND	ND
Trichloroethylene	µg/g	0.050	0.061	ND	ND
Trichlorofluoromethane	µg/g	0.050	4	ND	ND
Vinyl chloride	µg/g	0.020	0.02	ND	ND
m,p-Xylenes	µg/g	0.020	-	ND	ND
o-Xylene	µg/g	0.020	-	ND	ND
Xylenes (total)	µg/g	0.020	3.1	ND	ND

¹ Standards from Table 3 of April 15, 2011 *Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act* ; Residential / Parkland / Institutional land use, coarse textured soil

ns No standard

m bg Meters below grade

SV Reading Soil vapour reading (ppm or % LEL)

ppm Parts per million (by volume)

% LEL Percent of the lower explosive limit

BOLD Exceeds standard

TABLE 8 SOIL ANALYTICAL RESULTS - VOCs
121 Hume Street, Collingwood, ON

CONTINUED

Terrapex Sample Name			STANDARDS ¹ 2011 Table 3 R / P / I coarse	PIT7	PIT8
	Units	RDL			
SV Reading	-	-	-	<5 ppm	<5 ppm
Sampling Date	-	-	-	19-Jan-16	19-Jan-16
Analysis Date	-	-	-	27-Jan-16	27-Jan-16
Certificate of Analysis No.	-	-	-	B612675	B612675
Acetone	µg/g	0.50	16	ND	ND
Benzene	µg/g	0.020	0.21	ND	ND
Bromodichloromethane	µg/g	0.050	13	ND	ND
Bromoform	µg/g	0.050	0.27	ND	ND
Bromomethane	µg/g	0.050	0.05	ND	ND
Carbon tetrachloride	µg/g	0.050	0.05	ND	ND
Chlorobenzene	µg/g	0.050	2.4	ND	ND
Chloroform	µg/g	0.050	0.05	ND	ND
Dibromochloromethane	µg/g	0.050	9.4	ND	ND
Dichlorobenzene, 1,2-	µg/g	0.050	3.4	ND	ND
Dichlorobenzene, 1,3-	µg/g	0.050	4.8	ND	ND
Dichlorobenzene, 1,4-	µg/g	0.050	0.083	ND	ND
Dichlorodifluoromethane	µg/g	0.050	16	ND	ND
Dichloroethane, 1,1-	µg/g	0.050	3.5	ND	ND
Dichloroethane, 1,2-	µg/g	0.050	0.05	ND	ND
Dichloroethylene, 1,1-	µg/g	0.050	0.05	ND	ND
Dichloroethylene, cis-1,2-	µg/g	0.050	3.4	ND	ND
Dichloroethylene, trans-1,2-	µg/g	0.050	0.084	ND	ND
Dichloropropane, 1,2-	µg/g	0.050	0.05	ND	ND
Dichloropropene, cis-1,3-	µg/g	0.030	-	ND	ND
Dichloropropene, trans-1,3-	µg/g	0.040	-	ND	ND
Ethylbenzene	µg/g	0.020	2	ND	ND
Ethylene dibromide	µg/g	0.050	0.05	ND	ND
Hexane	µg/g	0.050	2.8	ND	ND
Methyl ethyl ketone	µg/g	0.50	16	ND	ND
Methyl isobutyl ketone	µg/g	0.50	1.7	ND	ND
Methyl tert butyl ether	µg/g	0.050	0.75	ND	ND
Methylene Chloride	µg/g	0.050	0.1	ND	ND
Styrene	µg/g	0.050	0.7	ND	ND
Tetrachloroethane, 1,1,1,2-	µg/g	0.050	0.058	ND	ND
Tetrachloroethane, 1,1,2,2-	µg/g	0.050	0.05	ND	ND
Tetrachloroethylene	µg/g	0.050	0.28	ND	ND
Toluene	µg/g	0.020	2.3	ND	ND
Trichloroethane, 1,1,1-	µg/g	0.050	0.38	ND	ND
Trichloroethane, 1,1,2-	µg/g	0.050	0.05	ND	ND
Trichloroethylene	µg/g	0.050	0.061	ND	ND
Trichlorofluoromethane	µg/g	0.050	4	ND	ND
Vinyl chloride	µg/g	0.020	0.02	ND	ND
m,p-Xylenes	µg/g	0.020	-	ND	ND
o-Xylene	µg/g	0.020	-	ND	ND
Xylenes (total)	µg/g	0.020	3.1	ND	ND

¹ Standards from Table 3 of April 15, 2011 *Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act* ; Residential / Parkland / Institutional land use, coarse textured soil

ns No standard
m bg Meters below grade
SV Reading Soil vapour reading (ppm or % LEL)
ppm Parts per million (by volume)
% LEL Percent of the lower explosive limit
BOLD Exceeds standard

TABLE 9 SOIL ANALYTICAL RESULTS - PAHs
121 Hume Street, Collingwood, ON

Terrapex Sample Name			STANDARDS ² 2011 Table 3 R / P / I coarse	PIT1	PIT2
	Units	RDL			
SV Reading	-	-	-	<5 ppm	<5 ppm
Sampling Date	-	-	-	19-Jan-16	19-Jan-16
Analysis Date	-	-	-	27-Jan-16	27-Jan-16
Certificate of Analysis No.	-	-	-	B612675	B612675
Acenaphthene	µg/g	0.0050	7.9	ND	ND
Acenaphthylene	µg/g	0.0050	0.15	ND	ND
Anthracene	µg/g	0.0050	0.67	ND	ND
Benzo(a)anthracene	µg/g	0.0050	0.5	ND	ND
Benzo(a)pyrene	µg/g	0.0050	0.3	ND	ND
Benzo(b)fluoranthene	µg/g	0.0050	0.78	ND	ND
Benzo(g,h,i)perylene	µg/g	0.0050	6.6	ND	ND
Benzo(k)fluoranthene	µg/g	0.0050	0.78	ND	ND
Chrysene	µg/g	0.0050	7	ND	ND
Dibenzo(a,h)anthracene	µg/g	0.0050	0.1	ND	ND
Fluoranthene	µg/g	0.0050	0.69	ND	ND
Fluorene	µg/g	0.0050	62	ND	ND
Indeno(1,2,3-cd)pyrene	µg/g	0.0050	0.38	ND	ND
Methylnapthalene, 1- ¹	µg/g	0.0050	0.99	ND	ND
Methylnapthalene, 2- ¹	µg/g	0.0050	0.99	ND	ND
Napthalene	µg/g	0.0050	0.6	ND	ND
Phenanthrene	µg/g	0.0050	6.2	ND	ND
Pyrene	µg/g	0.0050	78	ND	ND

² Standards from Table 3 of April 15, 2011 *Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act* ; Residential / Parkland / Institutional land use, coarse textured soil

¹ 2-methylnapthalene standard applicable to 1-methylnapthalene with the provision that if both are detected, the sum of the two concentrations cannot exceed the standard

ns No standard

m bg Meters below grade

SV Reading Soil vapour reading (ppm or % LEL)

ppm Parts per million (by volume)

% LEL Percent of the lower explosive limit

BOLD Exceeds standard

TABLE 9 SOIL ANALYTICAL RESULTS - PAHs
121 Hume Street, Collingwood, ON

CONTINUED

Terrapex Sample Name			STANDARDS ² 2011 Table 3 R / P / I coarse	PIT3	PIT4
	Units	RDL			
SV Reading	-	-	-	<5 ppm	<5 ppm
Sampling Date	-	-	-	19-Jan-16	19-Jan-16
Analysis Date	-	-	-	27-Jan-16	27-Jan-16
Certificate of Analysis No.	-	-	-	B612675	B612675
Acenaphthene	µg/g	0.0050	7.9	ND	ND
Acenaphthylene	µg/g	0.0050	0.15	ND	ND
Anthracene	µg/g	0.0050	0.67	ND	ND
Benzo(a)anthracene	µg/g	0.0050	0.5	ND	ND
Benzo(a)pyrene	µg/g	0.0050	0.3	ND	ND
Benzo(b)fluoranthene	µg/g	0.0050	0.78	ND	ND
Benzo(g,h,i)perylene	µg/g	0.0050	6.6	ND	ND
Benzo(k)fluoranthene	µg/g	0.0050	0.78	ND	ND
Chrysene	µg/g	0.0050	7	ND	ND
Dibenzo(a,h)anthracene	µg/g	0.0050	0.1	ND	ND
Fluoranthene	µg/g	0.0050	0.69	ND	ND
Fluorene	µg/g	0.0050	62	ND	ND
Indeno(1,2,3-cd)pyrene	µg/g	0.0050	0.38	ND	ND
Methylnaphthalene, 1- ¹	µg/g	0.0050	0.99	ND	ND
Methylnaphthalene, 2- ¹	µg/g	0.0050	0.99	ND	ND
Naphthalene	µg/g	0.0050	0.6	ND	ND
Phenanthrene	µg/g	0.0050	6.2	ND	ND
Pyrene	µg/g	0.0050	78	ND	ND

² Standards from Table 3 of April 15, 2011 *Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act* ; Residential / Parkland / Institutional land use, coarse textured soil

¹ 2-methylnaphthalene standard applicable to 1-methylnaphthalene with the provision that if both are detected, the sum of the two concentrations cannot exceed the standard

ns No standard

m bg Meters below grade

SV Reading Soil vapour reading (ppm or % LEL)

ppm Parts per million (by volume)

% LEL Percent of the lower explosive limit

BOLD Exceeds standard

TABLE 9 SOIL ANALYTICAL RESULTS - PAHs
121 Hume Street, Collingwood, ON

CONTINUED

Terrapex Sample Name			STANDARDS ² 2011 Table 3 R / P / I coarse	PIT5	PIT6
	Units	RDL			
SV Reading	-	-	-	<5 ppm	<5 ppm
Sampling Date	-	-	-	19-Jan-16	19-Jan-16
Analysis Date	-	-	-	27-Jan-16	27-Jan-16
Certificate of Analysis No.	-	-	-	B612675	B612675
Acenaphthene	µg/g	0.0050	7.9	ND	ND
Acenaphthylene	µg/g	0.0050	0.15	ND	ND
Anthracene	µg/g	0.0050	0.67	ND	ND
Benzo(a)anthracene	µg/g	0.0050	0.5	ND	ND
Benzo(a)pyrene	µg/g	0.0050	0.3	ND	ND
Benzo(b)fluoranthene	µg/g	0.0050	0.78	ND	ND
Benzo(g,h,i)perylene	µg/g	0.0050	6.6	ND	ND
Benzo(k)fluoranthene	µg/g	0.0050	0.78	ND	ND
Chrysene	µg/g	0.0050	7	ND	ND
Dibenzo(a,h)anthracene	µg/g	0.0050	0.1	ND	ND
Fluoranthene	µg/g	0.0050	0.69	ND	ND
Fluorene	µg/g	0.0050	62	ND	ND
Indeno(1,2,3-cd)pyrene	µg/g	0.0050	0.38	ND	ND
Methylnaphthalene, 1- ¹	µg/g	0.0050	0.99	ND	ND
Methylnaphthalene, 2- ¹	µg/g	0.0050	0.99	ND	ND
Naphthalene	µg/g	0.0050	0.6	ND	ND
Phenanthrene	µg/g	0.0050	6.2	ND	ND
Pyrene	µg/g	0.0050	78	ND	ND

² Standards from Table 3 of April 15, 2011 *Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act* ; Residential / Parkland / Institutional land use, coarse textured soil

¹ 2-methylnaphthalene standard applicable to 1-methylnaphthalene with the provision that if both are detected, the sum of the two concentrations cannot exceed the standard

ns No standard

m bg Meters below grade

SV Reading Soil vapour reading (ppm or % LEL)

ppm Parts per million (by volume)

% LEL Percent of the lower explosive limit

BOLD Exceeds standard

TABLE 9 SOIL ANALYTICAL RESULTS - PAHs
121 Hume Street, Collingwood, ON

CONTINUED

Terrapex Sample Name			STANDARDS ² 2011 Table 3 R / P / I coarse	PIT7	PIT8
	Units	RDL			
SV Reading	-	-	-	<5 ppm	<5 ppm
Sampling Date	-	-	-	19-Jan-16	19-Jan-16
Analysis Date	-	-	-	27-Jan-16	27-Jan-16
Certificate of Analysis No.	-	-	-	B612675	B612675
Acenaphthene	µg/g	0.0050	7.9	ND	ND
Acenaphthylene	µg/g	0.0050	0.15	ND	ND
Anthracene	µg/g	0.0050	0.67	ND	ND
Benzo(a)anthracene	µg/g	0.0050	0.5	ND	ND
Benzo(a)pyrene	µg/g	0.0050	0.3	ND	ND
Benzo(b)fluoranthene	µg/g	0.0050	0.78	ND	ND
Benzo(g,h,i)perylene	µg/g	0.0050	6.6	ND	ND
Benzo(k)fluoranthene	µg/g	0.0050	0.78	ND	ND
Chrysene	µg/g	0.0050	7	ND	ND
Dibenzo(a,h)anthracene	µg/g	0.0050	0.1	ND	ND
Fluoranthene	µg/g	0.0050	0.69	ND	ND
Fluorene	µg/g	0.0050	62	ND	ND
Indeno(1,2,3-cd)pyrene	µg/g	0.0050	0.38	ND	ND
Methylnaphthalene, 1- ¹	µg/g	0.0050	0.99	ND	ND
Methylnaphthalene, 2- ¹	µg/g	0.0050	0.99	ND	ND
Naphthalene	µg/g	0.0050	0.6	ND	ND
Phenanthrene	µg/g	0.0050	6.2	ND	ND
Pyrene	µg/g	0.0050	78	ND	ND

² Standards from Table 3 of April 15, 2011 *Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act* ; Residential / Parkland / Institutional land use, coarse textured soil

¹ 2-methylnaphthalene standard applicable to 1-methylnaphthalene with the provision that if both are detected, the sum of the two concentrations cannot exceed the standard

ns No standard

m bg Meters below grade

SV Reading Soil vapour reading (ppm or % LEL)

ppm Parts per million (by volume)

% LEL Percent of the lower explosive limit

BOLD Exceeds standard

TABLE 10 SOIL ANALYTICAL RESULTS - INORGANICS
121 Hume Street, Collinwood, ON

Terrapex Sample Name			STANDARDS ² 2011 Table 3 R / P / I coarse	PIT1	PIT2
	Units	RDL			
SV Reading	-	-	-	<5 ppm	<5 ppm
Sampling Date	-	-	-	19-Jan-16	19-Jan-16
Analysis Date	-	-	-	27-Jan-16	27-Jan-16
Certificate of Analysis No.	-	-	-	B612675	B612675
Antimony	µg/g	0.20	7.5	ND	ND
Arsenic	µg/g	1.0	18	ND	ND
Barium	µg/g	0.50	390	9.6	11
Beryllium	µg/g	0.20	4	ND	ND
Boron (Hot Water Soluble) ¹	µg/g	0.050	1.5	0.057	ND
Boron (Total) ¹	µg/g	5.0	120	ND	ND
Cadmium	µg/g	0.10	1.2	ND	ND
Chromium	µg/g	1.0	160	7.2	8.4
Hexavalent Chromium	µg/g	0.2	8	ND	ND
Cobalt	µg/g	0.10	22	1.7	1.9
Copper	µg/g	0.50	140	2.2	2.1
Cyanide (CN-)	µg/g	0.01	0.051	ND	ND
Lead	µg/g	1.0	120	1.7	1.8
Mercury	µg/g	0.050	0.27	ND	ND
Molybdenum	µg/g	0.50	6.9	ND	ND
Nickel	µg/g	0.50	100	2.9	3.3
Selenium	µg/g	0.50	2.4	ND	ND
Silver	µg/g	0.20	20	ND	ND
Thallium	µg/g	0.050	1	ND	ND
Uranium	µg/g	0.050	23	0.28	0.27
Vanadium	µg/g	5.0	86	23	30
Zinc	µg/g	5.0	340	7.9	8.9
pH	-	-	-	7.30	7.39
Electrical Conductivity	mS/cm	0.002	0.7	0.10	0.098
Sodium Adsorption Ratio	-	-	5	0.29	0.29

² Standards from Table 3 of April 15, 2011 *Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act* ; Residential / Parkland / Institutional land use, coarse textured soil

¹ Hot Water Soluble Boron standard applies to surface soils; for subsurface soils, the Total Boron standard applies

ns No standard

m bg Meters below grade

SV Reading Soil vapour reading (ppm or % LEL)

ppm Parts per million (by volume)

% LEL Percent of the lower explosive limit

BOLD Exceeds standard

TABLE 10 SOIL ANALYTICAL RESULTS - INORGANICS
121 Hume Street, Collinwood, ON

CONTINUED

Terrapex Sample Name			STANDARDS ² 2011 Table 3 R / P / I coarse	PIT3	PIT4
	Units	RDL			
SV Reading	-	-	-	<5 ppm	<5 ppm
Sampling Date	-	-	-	19-Jan-16	19-Jan-16
Analysis Date	-	-	-	27-Jan-16	27-Jan-16
Certificate of Analysis No.	-	-	-	B612675	B612675
Antimony	µg/g	0.20	7.5	ND	ND
Arsenic	µg/g	1.0	18	ND	ND
Barium	µg/g	0.50	390	9.6	9.8
Beryllium	µg/g	0.20	4	ND	ND
Boron (Hot Water Soluble) ¹	µg/g	0.050	1.5	ND	0.069
Boron (Total) ¹	µg/g	5.0	120	ND	ND
Cadmium	µg/g	0.10	1.2	ND	ND
Chromium	µg/g	1.0	160	7.6	6.9
Hexavalent Chromium	µg/g	0.2	8	ND	ND
Cobalt	µg/g	0.10	22	1.8	1.7
Copper	µg/g	0.50	140	2.2	2.3
Cyanide (CN-)	µg/g	0.01	0.051	ND	ND
Lead	µg/g	1.0	120	1.7	1.6
Mercury	µg/g	0.050	0.27	ND	ND
Molybdenum	µg/g	0.50	6.9	ND	ND
Nickel	µg/g	0.50	100	3.5	2.9
Selenium	µg/g	0.50	2.4	ND	ND
Silver	µg/g	0.20	20	ND	ND
Thallium	µg/g	0.050	1	ND	ND
Uranium	µg/g	0.050	23	0.31	0.25
Vanadium	µg/g	5.0	86	27	24
Zinc	µg/g	5.0	340	9.1	8.6
pH	-	-	-	7.47	7.42
Electrical Conductivity	mS/cm	0.002	0.7	0.10	0.099
Sodium Adsorption Ratio	-	-	5	0.29	0.29

² Standards from Table 3 of April 15, 2011 *Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act* ; Residential / Parkland / Institutional land use, coarse textured soil

¹ Hot Water Soluble Boron standard applies to surface soils; for subsurface soils, the Total Boron standard applies

ns No standard

m bg Meters below grade

SV Reading Soil vapour reading (ppm or % LEL)

ppm Parts per million (by volume)

% LEL Percent of the lower explosive limit

BOLD Exceeds standard

TABLE 10 SOIL ANALYTICAL RESULTS - INORGANICS
121 Hume Street, Collinwood, ON

CONTINUED

Terrapex Sample Name			STANDARDS ² 2011 Table 3 R / P / I coarse	PIT5	PIT6
	Units	RDL			
SV Reading	-	-	-	<5 ppm	<5 ppm
Sampling Date	-	-	-	19-Jan-16	19-Jan-16
Analysis Date	-	-	-	27-Jan-16	27-Jan-16
Certificate of Analysis No.	-	-	-	B612675	B612675
Antimony	µg/g	0.20	7.5	ND	ND
Arsenic	µg/g	1.0	18	ND	ND
Barium	µg/g	0.50	390	12	11
Beryllium	µg/g	0.20	4	ND	ND
Boron (Hot Water Soluble) ¹	µg/g	0.050	1.5	ND	0.068
Boron (Total) ¹	µg/g	5.0	120	ND	ND
Cadmium	µg/g	0.10	1.2	ND	ND
Chromium	µg/g	1.0	160	10	8.5
Hexavalent Chromium	µg/g	0.2	8	ND	ND
Cobalt	µg/g	0.10	22	2.0	1.9
Copper	µg/g	0.50	140	2.5	2.4
Cyanide (CN-)	µg/g	0.01	0.051	ND	ND
Lead	µg/g	1.0	120	2.0	1.9
Mercury	µg/g	0.050	0.27	ND	ND
Molybdenum	µg/g	0.50	6.9	ND	ND
Nickel	µg/g	0.50	100	3.5	3.6
Selenium	µg/g	0.50	2.4	ND	ND
Silver	µg/g	0.20	20	ND	ND
Thallium	µg/g	0.050	1	ND	ND
Uranium	µg/g	0.050	23	0.32	0.38
Vanadium	µg/g	5.0	86	32	28
Zinc	µg/g	5.0	340	11	9.0
pH	-	-	-	7.42	7.34
Electrical Conductivity	mS/cm	0.002	0.7	0.10	0.10
Sodium Adsorption Ratio	-	-	5	0.29	0.28

² Standards from Table 3 of April 15, 2011 *Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act* ; Residential / Parkland / Institutional land use, coarse textured soil

¹ Hot Water Soluble Boron standard applies to surface soils; for subsurface soils, the Total Boron standard applies

ns No standard

m bg Meters below grade

SV Reading Soil vapour reading (ppm or % LEL)

ppm Parts per million (by volume)

% LEL Percent of the lower explosive limit

BOLD Exceeds standard

TABLE 10 SOIL ANALYTICAL RESULTS - INORGANICS
121 Hume Street, Collinwood, ON

CONTINUED

Terrapex Sample Name			STANDARDS ² 2011 Table 3 R / P / I coarse	PIT7	PIT8
	Units	RDL			
SV Reading	-	-	-	<5 ppm	<5 ppm
Sampling Date	-	-	-	19-Jan-16	19-Jan-16
Analysis Date	-	-	-	27-Jan-16	27-Jan-16
Certificate of Analysis No.	-	-	-	B612675	B612675
Antimony	µg/g	0.20	7.5	ND	ND
Arsenic	µg/g	1.0	18	ND	ND
Barium	µg/g	0.50	390	10	10
Beryllium	µg/g	0.20	4	ND	ND
Boron (Hot Water Soluble) ¹	µg/g	0.050	1.5	ND	0.059
Boron (Total) ¹	µg/g	5.0	120	ND	ND
Cadmium	µg/g	0.10	1.2	ND	ND
Chromium	µg/g	1.0	160	7.9	6.9
Hexavalent Chromium	µg/g	0.2	8	ND	ND
Cobalt	µg/g	0.10	22	1.9	1.6
Copper	µg/g	0.50	140	2.3	2.1
Cyanide (CN-)	µg/g	0.01	0.051	ND	ND
Lead	µg/g	1.0	120	1.7	1.7
Mercury	µg/g	0.050	0.27	ND	ND
Molybdenum	µg/g	0.50	6.9	ND	ND
Nickel	µg/g	0.50	100	3.4	3.1
Selenium	µg/g	0.50	2.4	ND	ND
Silver	µg/g	0.20	20	ND	ND
Thallium	µg/g	0.050	1	ND	ND
Uranium	µg/g	0.050	23	0.28	0.26
Vanadium	µg/g	5.0	86	26	24
Zinc	µg/g	5.0	340	8.7	8.6
pH	-	-	-	7.41	7.44
Electrical Conductivity	mS/cm	0.002	0.7	0.098	0.11
Sodium Adsorption Ratio	-	-	5	0.28	0.28

² Standards from Table 3 of April 15, 2011 *Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act* ; Residential / Parkland / Institutional land use, coarse textured soil

¹ Hot Water Soluble Boron standard applies to surface soils; for subsurface soils, the Total Boron standard applies

ns No standard

m bg Meters below grade

SV Reading Soil vapour reading (ppm or % LEL)

ppm Parts per million (by volume)

% LEL Percent of the lower explosive limit

BOLD Exceeds standard

TABLE 11 GROUNDWATER ANALYTICAL RESULTS - PHCs
121 Hume Street, Collingwood, Ontario

Terrapex Sample Name			STANDARDS ¹ 2011 Table 3	MW401	MW402	MW402	MW403	MW403
	Units	RDL	coarse					
Headspace Reading	-	-	-	<5 ppm	<5 ppm	<5 ppm	<5 ppm	<5 ppm
Sampling Date	-	-	-	26-May-16	26-May-16	27-Sep-16	26-May-16	27-Sep-16
Analysis Date	-	-	-	02-Jun-16	02-Jun-16	03-Oct-16	02-Jun-16	03-Oct-16
Certificate of Analysis No.	-	-	-	B6A7201	B6A7201	B6K8915	B6A7201	B6K8915
Petroleum Hydrocarbons, F1	µg/L	25	750	ND	ND	ND	ND	ND
Petroleum Hydrocarbons, F2	µg/L	100	150	ND	ND	ND	ND	ND
Petroleum Hydrocarbons, F3	µg/L	200	500	ND	ND	ND	ND	ND
Petroleum Hydrocarbons, F4	µg/L	200	500	ND	ND	ND	ND	ND

¹ Standards from Table 3 of April 15, 2011 *Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act*; coarse textured soil

ns No standard
ppm Parts per million (by volume)
% LEL Percent of the lower explosive limit
BOLD Exceeds standard

TABLE 11 GROUNDWATER ANALYTICAL RESULTS - PHCs
121 Hume Street, Collingwood, Ontario

CONTINUED

Terrapex Sample Name			STANDARDS ¹ 2011 Table 3	MW404	MW404	MW1000 Field Duplicate of MW404	MW1000 Field Duplicate of MW404
	Units	RDL	coarse				
Headspace Reading	-	-	-	<5 ppm	<5 ppm	-	-
Sampling Date	-	-	-	26-May-16	27-Sep-16	26-May-16	27-Sep-16
Analysis Date	-	-	-	02-Jun-16	03-Oct-16	02-Jun-16	03-Oct-16
Certificate of Analysis No.	-	-	-	B6A7201	B6K8915	B6A7201	B6K8915
Petroleum Hydrocarbons, F1	µg/L	25	750	ND	ND	ND	ND
Petroleum Hydrocarbons, F2	µg/L	100	150	ND	ND	ND	ND
Petroleum Hydrocarbons, F3	µg/L	200	500	ND	ND	ND	ND
Petroleum Hydrocarbons, F4	µg/L	200	500	ND	ND	ND	ND

¹ Standards from Table 3 of April 15, 2011 *Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act*; coarse textured soil

ns No standard
 ppm Parts per million (by volume)
 % LEL Percent of the lower explosive limit
BOLD Exceeds standard

TABLE 12 GROUNDWATER ANALYTICAL RESULTS - VOCs
121 Hume Street, Collingwood, Ontario

Terrapex Sample Name			STANDARDS 2011 Table 3	MW401	MW402
	Units	RDL	coarse		
Headspace Reading	-	-	-	<5 ppm	<5 ppm
Sampling Date	-	-	-	26-May-16	26-May-16
Analysis Date	-	-	-	02-Jun-16	02-Jun-16
Certificate of Analysis No.	-	-	-	B6A7363	B6A7363
Acetone	µg/L	10	130,000	ND	ND
Benzene	µg/L	0.20	44	0.57	0.25
Bromodichloromethane	µg/L	0.50	85,000	ND	ND
Bromoform	µg/L	1.0	380	ND	ND
Bromomethane	µg/L	0.50	5.6	ND	ND
Carbon tetrachloride	µg/L	0.20	0.79	ND	ND
Chlorobenzene	µg/L	0.20	630	ND	ND
Chloroform	µg/L	0.20	2.4	ND	ND
Dibromochloromethane	µg/L	0.50	82,000	ND	ND
Dichlorobenzene 1,2-	µg/L	0.50	4,600	ND	ND
Dichlorobenzene, 1,3-	µg/L	0.50	9,600	ND	ND
Dichlorobenzene, 1,4-	µg/L	0.50	8	ND	ND
Dichlorodifluoromethane	µg/L	1.0	4,400	ND	ND
Dichloroethane, 1,1-	µg/L	0.20	320	ND	ND
Dichloroethane, 1,2-	µg/L	0.50	1.6	ND	ND
Dichloroethylene, 1,1-	µg/L	0.20	1.6	ND	ND
Dichloroethylene, cis-1,2-	µg/L	0.50	1.6	ND	ND
Dichloroethylene, trans-1,2-	µg/L	0.50	1.6	ND	ND
Dichloropropane, 1,2-	µg/L	0.20	16	ND	ND
Ethylbenzene	µg/L	0.20	2,300	ND	0.27
Ethylene dibromide	µg/L	0.20	0.25	ND	ND
Hexane	µg/L	1.0	51	ND	ND
Methyl ethyl ketone	µg/L	10	470,000	ND	ND
Methyl isobutyl ketone	µg/L	5.0	140,000	ND	ND
Methyl tert butyl ether	µg/L	0.50	190	ND	ND
Methylene Chloride	µg/L	2.0	610	ND	ND
Styrene	µg/L	0.50	1,300	ND	ND
Tetrachloroethane, 1,1,1,2-	µg/L	0.50	3.3	ND	ND
Tetrachloroethane, 1,1,2,2-	µg/L	0.50	3.2	ND	ND
Tetrachloroethylene	µg/L	0.20	1.6	ND	ND
Toluene	µg/L	0.20	18,000	0.69	0.39
Trichloroethane, 1,1,1-	µg/L	0.20	640	ND	ND
Trichloroethane, 1,1,2-	µg/L	0.50	4.7	ND	ND
Trichloroethylene	µg/L	0.20	1.6	ND	ND
Trichlorofluoromethane	µg/L	0.50	2,500	ND	ND
Vinyl chloride	µg/L	0.20	0.5	ND	ND
m,p-Xylenes	µg/L	0.20	-	ND	1.0
o-Xylene	µg/L	0.20	-	ND	0.72
Xylenes (total)	µg/L	0.20	4,200	ND	1.7

¹ Standards from Table 3 of April 15, 2011 *Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act*; coarse textured soil

ns No standard

ppm Parts per million (by volume)

% LEL Percent of the lower explosive limit

BOLD Exceeds standard

TABLE 12 GROUNDWATER ANALYTICAL RESULTS - VOCs
121 Hume Street, Collingwood, Ontario

Terrapex Sample Name			STANDARDS 2011 Table 3	MW2000 Field Duplicate of MW401	MW402	MW403
	Units	RDL	coarse			
Headspace Reading	-	-	-	-	<5 ppm	<5 ppm
Sampling Date	-	-	-	26-May-16	27-Sep-16	26-May-16
Analysis Date	-	-	-	02-Jun-16	03-Oct-16	02-Jun-16
Certificate of Analysis No.	-	-	-	B6A7363	B6K8915	B6A7363
Acetone	µg/L	10	130,000	ND	-	31
Benzene	µg/L	0.20	44	0.60	ND	ND
Bromodichloromethane	µg/L	0.50	85,000	ND	-	ND
Bromoform	µg/L	1.0	380	ND	-	ND
Bromomethane	µg/L	0.50	5.6	ND	-	ND
Carbon tetrachloride	µg/L	0.20	0.79	ND	-	ND
Chlorobenzene	µg/L	0.20	630	ND	-	ND
Chloroform	µg/L	0.20	2.4	ND	-	ND
Dibromochloromethane	µg/L	0.50	82,000	ND	-	ND
Dichlorobenzene 1,2-	µg/L	0.50	4,600	ND	-	ND
Dichlorobenzene, 1,3-	µg/L	0.50	9,600	ND	-	ND
Dichlorobenzene, 1,4-	µg/L	0.50	8	ND	-	ND
Dichlorodifluoromethane	µg/L	1.0	4,400	ND	-	ND
Dichloroethane, 1,1-	µg/L	0.20	320	ND	-	ND
Dichloroethane, 1,2-	µg/L	0.50	1.6	ND	-	ND
Dichloroethylene, 1,1-	µg/L	0.20	1.6	ND	-	ND
Dichloroethylene, cis-1,2-	µg/L	0.50	1.6	ND	-	ND
Dichloroethylene, trans-1,2-	µg/L	0.50	1.6	ND	-	ND
Dichloropropane, 1,2-	µg/L	0.20	16	ND	-	ND
Ethylbenzene	µg/L	0.20	2,300	ND	ND	0.23
Ethylene dibromide	µg/L	0.20	0.25	ND	-	ND
Hexane	µg/L	1.0	51	ND	-	ND
Methyl ethyl ketone	µg/L	10	470,000	ND	-	ND
Methyl isobutyl ketone	µg/L	5.0	140,000	ND	-	ND
Methyl tert butyl ether	µg/L	0.50	190	ND	-	ND
Methylene Chloride	µg/L	2.0	610	ND	-	ND
Styrene	µg/L	0.50	1,300	ND	-	ND
Tetrachloroethane, 1,1,1,2-	µg/L	0.50	3.3	ND	-	ND
Tetrachloroethane, 1,1,2,2-	µg/L	0.50	3.2	ND	-	ND
Tetrachloroethylene	µg/L	0.20	1.6	ND	-	ND
Toluene	µg/L	0.20	18,000	0.69	ND	ND
Trichloroethane, 1,1,1-	µg/L	0.20	640	ND	-	ND
Trichloroethane, 1,1,2-	µg/L	0.50	4.7	ND	-	ND
Trichloroethylene	µg/L	0.20	1.6	ND	-	ND
Trichlorofluoromethane	µg/L	0.50	2,500	ND	-	ND
Vinyl chloride	µg/L	0.20	0.5	ND	-	ND
m,p-Xylenes	µg/L	0.20	-	ND	-	0.35
o-Xylene	µg/L	0.20	-	ND	-	ND
Xylenes (total)	µg/L	0.20	4,200	ND	ND	0.35

¹ Standards from Table 3 of April 15, 2011 *Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act*; coarse textured soil

ns No standard

ppm Parts per million (by volume)

% LEL Percent of the lower explosive limit

BOLD Exceeds standard

TABLE 12 GROUNDWATER ANALYTICAL RESULTS - VOCs
121 Hume Street, Collingwood, Ontario

Terrapex Sample Name			STANDARDS 2011 Table 3	MW403	MW404	MW3000 Field Blank
	Units	RDL	coarse			
Headspace Reading	-	-	-	<5 ppm	<5 ppm	<5 ppm
Sampling Date	-	-	-	27-Sep-16	26-May-16	26-May-16
Analysis Date	-	-	-	03-Oct-16	02-Jun-16	02-Jun-16
Certificate of Analysis No.	-	-	-	B6K8915	B6A7363	B6A7363
Acetone	µg/L	10	130,000	-	ND	ND
Benzene	µg/L	0.20	44	ND	2.2	ND
Bromodichloromethane	µg/L	0.50	85,000	-	ND	ND
Bromoform	µg/L	1.0	380	-	ND	ND
Bromomethane	µg/L	0.50	5.6	-	ND	ND
Carbon tetrachloride	µg/L	0.20	0.79	-	ND	ND
Chlorobenzene	µg/L	0.20	630	-	ND	ND
Chloroform	µg/L	0.20	2.4	-	ND	ND
Dibromochloromethane	µg/L	0.50	82,000	-	ND	ND
Dichlorobenzene, 1,2-	µg/L	0.50	4,600	-	ND	ND
Dichlorobenzene, 1,3-	µg/L	0.50	9,600	-	ND	ND
Dichlorobenzene, 1,4-	µg/L	0.50	8	-	ND	ND
Dichlorodifluoromethane	µg/L	1.0	4,400	-	ND	ND
Dichloroethane, 1,1-	µg/L	0.20	320	-	ND	ND
Dichloroethane, 1,2-	µg/L	0.50	1.6	-	ND	ND
Dichloroethylene, 1,1-	µg/L	0.20	1.6	-	ND	ND
Dichloroethylene, cis-1,2-	µg/L	0.50	1.6	-	ND	ND
Dichloroethylene, trans-1,2-	µg/L	0.50	1.6	-	ND	ND
Dichloropropane, 1,2-	µg/L	0.20	16	-	ND	ND
Ethylbenzene	µg/L	0.20	2,300	ND	ND	ND
Ethylene dibromide	µg/L	0.20	0.25	-	ND	ND
Hexane	µg/L	1.0	51	-	ND	ND
Methyl ethyl ketone	µg/L	10	470,000	-	ND	ND
Methyl isobutyl ketone	µg/L	5.0	140,000	-	ND	ND
Methyl tert butyl ether	µg/L	0.50	190	-	ND	ND
Methylene Chloride	µg/L	2.0	610	-	ND	ND
Styrene	µg/L	0.50	1,300	-	ND	ND
Tetrachloroethane, 1,1,1,2-	µg/L	0.50	3.3	-	ND	ND
Tetrachloroethane, 1,1,2,2-	µg/L	0.50	3.2	-	ND	ND
Tetrachloroethylene	µg/L	0.20	1.6	-	ND	ND
Toluene	µg/L	0.20	18,000	ND	0.43	ND
Trichloroethane, 1,1,1-	µg/L	0.20	640	-	ND	ND
Trichloroethane, 1,1,2-	µg/L	0.50	4.7	-	ND	ND
Trichloroethylene	µg/L	0.20	1.6	-	ND	ND
Trichlorofluoromethane	µg/L	0.50	2,500	-	ND	ND
Vinyl chloride	µg/L	0.20	0.5	-	ND	ND
m,p-Xylenes	µg/L	0.20	-	-	ND	ND
o-Xylene	µg/L	0.20	-	-	ND	ND
Xylenes (total)	µg/L	0.20	4,200	ND	ND	ND

¹ Standards from Table 3 of April 15, 2011 *Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act*; coarse textured soil

ns No standard

ppm Parts per million (by volume)

% LEL Percent of the lower explosive limit

BOLD Exceeds standard

TABLE 12 GROUNDWATER ANALYTICAL RESULTS - VOCs
121 Hume Street, Collingwood, Ontario

Terrapex Sample Name			STANDARDS 2011 Table 3	MW404	MW1000 Field Duplicate of MW401	MW2000 Field Blank
	Units	RDL	coarse			
Headspace Reading	-	-	-	<5 ppm	-	-
Sampling Date	-	-	-	27-Sep-16	27-Sep-16	27-Sep-16
Analysis Date	-	-	-	03-Oct-16	03-Oct-16	03-Oct-16
Certificate of Analysis No.	-	-	-	B6K8915	B6K8915	B6K8915
Acetone	µg/L	10	130,000	-	-	-
Benzene	µg/L	0.20	44	ND	ND	ND
Bromodichloromethane	µg/L	0.50	85,000	-	-	-
Bromoform	µg/L	1.0	380	-	-	-
Bromomethane	µg/L	0.50	5.6	-	-	-
Carbon tetrachloride	µg/L	0.20	0.79	-	-	-
Chlorobenzene	µg/L	0.20	630	-	-	-
Chloroform	µg/L	0.20	2.4	-	-	-
Dibromochloromethane	µg/L	0.50	82,000	-	-	-
Dichlorobenzene 1,2-	µg/L	0.50	4,600	-	-	-
Dichlorobenzene, 1,3-	µg/L	0.50	9,600	-	-	-
Dichlorobenzene, 1,4-	µg/L	0.50	8	-	-	-
Dichlorodifluoromethane	µg/L	1.0	4,400	-	-	-
Dichloroethane, 1,1-	µg/L	0.20	320	-	-	-
Dichloroethane, 1,2-	µg/L	0.50	1.6	-	-	-
Dichloroethylene, 1,1-	µg/L	0.20	1.6	-	-	-
Dichloroethylene, cis-1,2-	µg/L	0.50	1.6	-	-	-
Dichloroethylene, trans-1,2-	µg/L	0.50	1.6	-	-	-
Dichloropropane, 1,2-	µg/L	0.20	16	-	-	-
Ethylbenzene	µg/L	0.20	2,300	ND	ND	ND
Ethylene dibromide	µg/L	0.20	0.25	-	-	-
Hexane	µg/L	1.0	51	-	-	-
Methyl ethyl ketone	µg/L	10	470,000	-	-	-
Methyl isobutyl ketone	µg/L	5.0	140,000	-	-	-
Methyl tert butyl ether	µg/L	0.50	190	-	-	-
Methylene Chloride	µg/L	2.0	610	-	-	-
Styrene	µg/L	0.50	1,300	-	-	-
Tetrachloroethane, 1,1,1,2-	µg/L	0.50	3.3	-	-	-
Tetrachloroethane, 1,1,2,2-	µg/L	0.50	3.2	-	-	-
Tetrachloroethylene	µg/L	0.20	1.6	-	-	-
Toluene	µg/L	0.20	18,000	ND	ND	ND
Trichloroethane, 1,1,1-	µg/L	0.20	640	-	-	-
Trichloroethane, 1,1,2-	µg/L	0.50	4.7	-	-	-
Trichloroethylene	µg/L	0.20	1.6	-	-	-
Trichlorofluoromethane	µg/L	0.50	2,500	-	-	-
Vinyl chloride	µg/L	0.20	0.5	-	-	-
m,p-Xylenes	µg/L	0.20	-	-	-	-
o-Xylene	µg/L	0.20	-	-	-	-
Xylenes (total)	µg/L	0.20	4,200	ND	ND	ND

¹ Standards from Table 3 of April 15, 2011 *Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act*; coarse textured soil

ns No standard

ppm Parts per million (by volume)

% LEL Percent of the lower explosive limit

BOLD Exceeds standard

TABLE 12 GROUNDWATER ANALYTICAL RESULTS - VOCs
121 Hume Street, Collingwood, Ontario

Terrapex Sample Name			STANDARDS 2011 Table 3	Trip Blank
	Units	RDL	coarse	
Headspace Reading	-	-	-	-
Sampling Date	-	-	-	27-Sep-16
Analysis Date	-	-	-	03-Oct-16
Certificate of Analysis No.	-	-	-	B6K8915
Acetone	µg/L	10	130,000	-
Benzene	µg/L	0.20	44	ND
Bromodichloromethane	µg/L	0.50	85,000	-
Bromoform	µg/L	1.0	380	-
Bromomethane	µg/L	0.50	5.6	-
Carbon tetrachloride	µg/L	0.20	0.79	-
Chlorobenzene	µg/L	0.20	630	-
Chloroform	µg/L	0.20	2.4	-
Dibromochloromethane	µg/L	0.50	82,000	-
Dichlorobenzene 1,2-	µg/L	0.50	4,600	-
Dichlorobenzene, 1,3-	µg/L	0.50	9,600	-
Dichlorobenzene, 1,4-	µg/L	0.50	8	-
Dichlorodifluoromethane	µg/L	1.0	4,400	-
Dichloroethane, 1,1-	µg/L	0.20	320	-
Dichloroethane, 1,2-	µg/L	0.50	1.6	-
Dichloroethylene, 1,1-	µg/L	0.20	1.6	-
Dichloroethylene, cis-1,2-	µg/L	0.50	1.6	-
Dichloroethylene, trans-1,2-	µg/L	0.50	1.6	-
Dichloropropane, 1,2-	µg/L	0.20	16	-
Ethylbenzene	µg/L	0.20	2,300	ND
Ethylene dibromide	µg/L	0.20	0.25	-
Hexane	µg/L	1.0	51	-
Methyl ethyl ketone	µg/L	10	470,000	-
Methyl isobutyl ketone	µg/L	5.0	140,000	-
Methyl tert butyl ether	µg/L	0.50	190	-
Methylene Chloride	µg/L	2.0	610	-
Styrene	µg/L	0.50	1,300	-
Tetrachloroethane, 1,1,1,2-	µg/L	0.50	3.3	-
Tetrachloroethane, 1,1,2,2-	µg/L	0.50	3.2	-
Tetrachloroethylene	µg/L	0.20	1.6	-
Toluene	µg/L	0.20	18,000	ND
Trichloroethane, 1,1,1-	µg/L	0.20	640	-
Trichloroethane, 1,1,2-	µg/L	0.50	4.7	-
Trichloroethylene	µg/L	0.20	1.6	-
Trichlorofluoromethane	µg/L	0.50	2,500	-
Vinyl chloride	µg/L	0.20	0.5	-
m,p-Xylenes	µg/L	0.20	-	-
o-Xylene	µg/L	0.20	-	-
Xylenes (total)	µg/L	0.20	4,200	ND

¹ Standards from Table 3 of April 15, 2011 *Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act*; coarse textured soil

ns No standard

ppm Parts per million (by volume)

% LEL Percent of the lower explosive limit

BOLD Exceeds standard

TABLE 13 GROUNDWATER ANALYTICAL RESULTS - PAHs
121 Hume Street, Collingwood, Ontario

Terrapex Sample Name			STANDARDS ² 2011 Table 3	MW203	MW401
	Units	RDL	coarse		
Headspace Reading	-	-	-	<5 ppm	<5 ppm
Sampling Date	-	-	-	26-May-16	26-May-16
Analysis Date	-	-	-	2-Jun-16	2-Jun-16
Certificate of Analysis No.	-	-	-	B6A7201	B6A7201
Acenaphthene	µg/L	0.05	600	ND	ND
Acenaphthylene	µg/L	0.05	1.8	ND	ND
Anthracene	µg/L	0.05	2.4	ND	ND
Benzo(a)anthracene	µg/L	0.05	4.7	ND	ND
Benzo(a)pyrene	µg/L	0.01	0.81	ND	0.019
Benzo(b)fluoranthene	µg/L	0.05	0.75	ND	ND
Benzo(g,h,i)perylene	µg/L	0.05	0.2	ND	ND
Benzo(k)fluoranthene	µg/L	0.05	0.4	ND	ND
Chrysene	µg/L	0.05	1	ND	ND
Dibenzo(a,h)anthracene	µg/L	0.05	0.52	ND	ND
Fluoranthene	µg/L	0.05	130	ND	ND
Fluorene	µg/L	0.05	400	ND	ND
Indeno(1,2,3-cd)pyrene	µg/L	0.05	0.2	ND	ND
Methylnaphthalene, 1- ¹	µg/L	0.05	1,800	ND	ND
Methylnaphthalene, 2- ¹	µg/L	0.05	1,800	ND	ND
Methylnaphthalene, 1- & 2- ¹	µg/L	0.05	1,800	ND	ND
Naphthalene	µg/L	0.05	1,400	ND	ND
Phenanthrene	µg/L	0.03	580	ND	ND
Pyrene	µg/L	0.05	68	ND	ND

² Standards from Table 3 of April 15, 2011 *Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act*; coarse textured soil

¹ 2-methylnaphthalene standard applicable to 1-methylnaphthalene with the provision that if both are detected, the sum of the two concentrations cannot exceed the standard

ns No standard

ppm Parts per million (by volume)

% LEL Percent of the lower explosive limit

BOLD Exceeds standard

TABLE 13 GROUNDWATER ANALYTICAL RESULTS - PAHs
121 Hume Street, Collingwood, Ontario

Terrapex Sample Name			STANDARDS ² 2011 Table 3 coarse	MW404	MW1000 Field Duplicate of MW404
	Units	RDL			
Headspace Reading	-	-	-	<5 ppm	-
Sampling Date	-	-	-	26-May-16	26-May-16
Analysis Date	-	-	-	2-Jun-16	2-Jun-16
Certificate of Analysis No.	-	-	-	B6A7201	B6A7201
Acenaphthene	µg/L	0.05	600	ND	ND
Acenaphthylene	µg/L	0.05	1.8	ND	ND
Anthracene	µg/L	0.05	2.4	ND	ND
Benzo(a)anthracene	µg/L	0.05	4.7	ND	ND
Benzo(a)pyrene	µg/L	0.01	0.81	ND	ND
Benzo(b)fluoranthene	µg/L	0.05	0.75	ND	ND
Benzo(g,h,i)perylene	µg/L	0.05	0.2	ND	ND
Benzo(k)fluoranthene	µg/L	0.05	0.4	ND	ND
Chrysene	µg/L	0.05	1	ND	ND
Dibenzo(a,h)anthracene	µg/L	0.05	0.52	ND	ND
Fluoranthene	µg/L	0.05	130	ND	ND
Fluorene	µg/L	0.05	400	ND	ND
Indeno(1,2,3-cd)pyrene	µg/L	0.05	0.2	ND	ND
Methylnaphthalene, 1- ¹	µg/L	0.05	1,800	ND	ND
Methylnaphthalene, 2- ¹	µg/L	0.05	1,800	ND	ND
Methylnaphthalene, 1- & 2- ¹	µg/L	0.05	1,800	ND	ND
Naphthalene	µg/L	0.05	1,400	ND	ND
Phenanthrene	µg/L	0.03	580	ND	ND
Pyrene	µg/L	0.05	68	ND	ND

² Standards from Table 3 of April 15, 2011 *Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act*; coarse textured soil

¹ 2-methylnaphthalene standard applicable to 1-methylnaphthalene with the provision that if both are detected, the sum of the two concentrations cannot exceed the standard

ns No standard

ppm Parts per million (by volume)

% LEL Percent of the lower explosive limit

BOLD Exceeds standard

TABLE 14 GROUNDWATER ANALYTICAL RESULTS - INORGANICS
121 Hume Street, Collingwood, Ontario

Terrapex Sample Name			STANDARDS ¹ 2011 Table 3	MW401	MW403
	Units	RDL	coarse		
Headspace Reading	-	-	-	<5 ppm	<5 ppm
Sampling Date	-	-	-	26-May-16	26-May-16
Analysis Date	-	-	-	02-Jun-06	02-Jun-06
Certificate of Analysis No.	-	-	-	B6A7363	B6A7363
Antimony	µg/L	0.50	20,000	2.1	ND
Arsenic	µg/L	1.0	1,900	ND	3.8
Barium	µg/L	2.0	29,000	86	94
Beryllium	µg/L	0.50	67	ND	ND
Boron	µg/L	10	45,000	51	87
Cadmium	µg/L	0.10	2.7	ND	ND
Chromium	µg/L	5.0	810	ND	ND
Hexavalent Chromium	µg/L	0.50	140	ND	ND
Cobalt	µg/L	0.50	66	ND	1.4
Copper	µg/L	1.0	87	1.2	1.6
Cyanide (CN-)	µg/L	2	66	ND	ND
Lead	µg/L	0.50	25	ND	0.58
Mercury	µg/L	0.1	0.29	ND	ND
Molybdenum	µg/L	0.50	9,200	8.2	5.9
Nickel	µg/L	1.0	490	ND	1.8
Selenium	µg/L	2.0	63	ND	ND
Silver	µg/L	0.10	1.5	ND	ND
Sodium	µg/L	100	2,300,000	120000	62000
Thallium	µg/L	0.050	510	ND	ND
Uranium	µg/L	0.10	420	2.7	1.2
Vanadium	µg/L	0.50	250	1.5	1.0
Zinc	µg/L	5.0	1,100	11	7.1
Chloride	µg/L	3.0	2,300,000	260	87

¹ Standards from Table 3 of April 15, 2011 *Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act*; coarse textured soil

ns No standard

ppm Parts per million (by volume)

% LEL Percent of the lower explosive limit

BOLD Exceeds standard

TABLE 14 GROUNDWATER ANALYTICAL RESULTS - INORGANICS
121 Hume Street, Collingwood, Ontario

Terrapex Sample Name			STANDARDS ¹ 2011 Table 3 coarse	MW404	MW1000 Field Duplicate of MW401
	Units	RDL			
Headspace Reading	-	-	-	<5 ppm	-
Sampling Date	-	-	-	26-May-16	26-May-16
Analysis Date	-	-	-	02-Jun-06	02-Jun-06
Certificate of Analysis No.	-	-	-	B6A7363	B6A7363
Antimony	µg/L	0.50	20,000	ND	0.64
Arsenic	µg/L	1.0	1,900	ND	1.4
Barium	µg/L	2.0	29,000	ND	76
Beryllium	µg/L	0.50	67	ND	ND
Boron	µg/L	10	45,000	ND	150
Cadmium	µg/L	0.10	2.7	ND	ND
Chromium	µg/L	5.0	810	ND	ND
Hexavalent Chromium	µg/L	0.50	140	ND	ND
Cobalt	µg/L	0.50	66	ND	0.54
Copper	µg/L	1.0	87	ND	1.2
Cyanide (CN-)	µg/L	2	66	ND	ND
Lead	µg/L	0.50	25	ND	ND
Mercury	µg/L	0.1	0.29	ND	ND
Molybdenum	µg/L	0.50	9,200	ND	4.4
Nickel	µg/L	1.0	490	ND	1.1
Selenium	µg/L	2.0	63	ND	ND
Silver	µg/L	0.10	1.5	ND	ND
Sodium	µg/L	100	2,300,000	380	54000
Thallium	µg/L	0.050	510	ND	ND
Uranium	µg/L	0.10	420	ND	1.2
Vanadium	µg/L	0.50	250	ND	1.0
Zinc	µg/L	5.0	1,100	ND	ND
Chloride	µg/L	3.0	2,300,000	96	97

¹ Standards from Table 3 of April 15, 2011 *Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act*; coarse textured soil

ns No standard

ppm Parts per million (by volume)

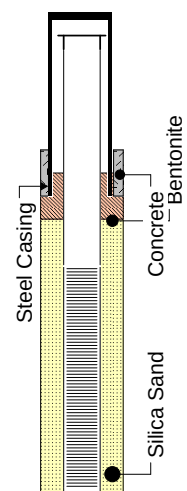
% LEL Percent of the lower explosive limit

BOLD Exceeds standard

APPENDIX I
BOREHOLE/MONITORING WELL LOGS

RECORD OF: MW401PROJECT NO: **CB644.02**CLIENT: **SUNCOR ENERGY PRODUCTS PARTNERSHIP**ADDRESS LINE 1: **121 HUME STREET**CITY / PROVINCE: **COLLINGWOOD, ONTARIO**BORING DATE: **MAY 25, 2016**TYPE OF AUGER: **DIRECT PUSH**TYPE OF RIG: **GEOPROBE**CONTRACTOR: **PONTIL DRILLING**VAPOUR MONITOR: **RKI EAGLE 2**BOREHOLE DIAMETER: **150 mm**WELL DIAMETER: **50 mm**PIPE SCHEDULE: **40**SCREEN SLOT #: **10**SCREEN LENGTH: **1.5**RISER LENGTH: **1.6**SAND TYPE: **#2 SILICA SAND**SEALANT TYPE: **3/8 BENTONITE**

SUBSURFACE PROFILE			SAMPLE							Piezometer or Monitoring Well Installation
Depth	Strataplot	Description	Elevation	Number	Type	% Recovery	SPT (n)	SV (ppm or %LEL - if applicable)	Laboratory Testing	
ft m										
-5										
-4										
-3										
-2										
-1										
0		Ground Surface	0.00							
1		FINE SAND SOME GRAVEL BROWN		1	DP	70	-	<5 PPM	METALS	
2			-0.91							
3		FINE SAND, TRACE SILT BROWN, MOIST TO WET		2A	DP	80	-	<5 PPM		
4										
5										
6		GREY, WET		2B	DP	60	-	<5 PPM	PAHs	
7										
8			-2.44	3	DP	60	-	<5 PPM	VOCs	
9		END OF BOREHOLE (REFUSAL)								
10										
11										
12										
13										
14										
15										
16										
17										
18										
19										
20										

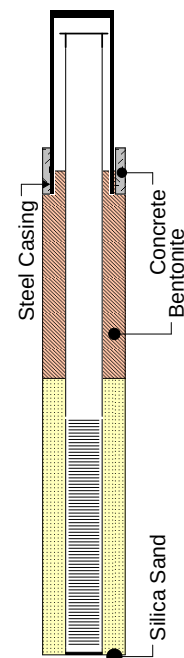
LOGGED BY: **PA**INPUT BY: **PA**

CHECKED BY:

INPUT DATE: **JUNE 9, 2016**

RECORD OF: MW402PROJECT NO: **CB644.02**CLIENT: **SUNCOR ENERGY PRODUCTS PARTNERSHIP**ADDRESS LINE 1: **121 HUME STREET**CITY / PROVINCE: **COLLINGWOOD, ONTARIO**BORING DATE: **MAY 25, 2016**TYPE OF AUGER: **DIRECT PUSH**TYPE OF RIG: **GEOPROBE**CONTRACTOR: **PONTIL DRILLING**VAPOUR MONITOR: **RKI EAGLE 2**BOREHOLE DIAMETER: **150 mm**WELL DIAMETER: **50 mm**PIPE SCHEDULE: **40**SCREEN SLOT #: **10**SCREEN LENGTH: **1.5**RISER LENGTH: **2.7**SAND TYPE: **#2 SILICA SAND**SEALANT TYPE: **3/8 BENTONITE**

SUBSURFACE PROFILE			SAMPLE						Laboratory Testing	Piezometer or Monitoring Well Installation
Depth	Strataplot	Description	Elevation	Number	Type	% Recovery	SPT (n)	SV (ppm or %LEL - if applicable)		
-5 ft -5 m										
-4										
-3										
-2										
-1										
0		Ground Surface	0.00							
1		FINE SAND (FILL) BROWN, MOIST		1	DP	20	-	<5 PPM		
2										
3		MOIST TO WET		2A	DP	60	-	<5 PPM		
4										
5		WET		2B	DP	60	-	<5 PPM		
6										
7		SOME GRAVEL, BROWN, WET		3A	DP	80	-	<5 PPM		
8										
9				3B	SS	80	-	<5 PPM		
10										
11										
12										
13										
14										
15										
16										
17										
18										
19										
20										

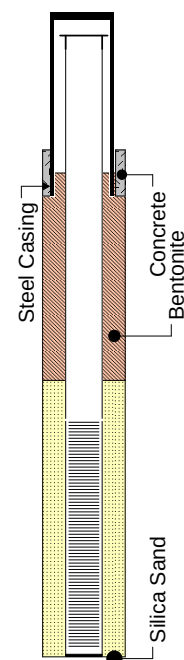
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CHECKED BY:

INPUT DATE: **JUNE 9, 2016**

RECORD OF: MW403PROJECT NO: **CB644.02**CLIENT: **SUNCOR ENERGY PRODUCTS PARTNERSHIP**ADDRESS LINE 1: **121 HUME STREET**CITY / PROVINCE: **COLLINGWOOD, ONTARIO**BORING DATE: **MAY 25, 2016**TYPE OF AUGER: **DIRECT PUSH**TYPE OF RIG: **GEOPROBE**CONTRACTOR: **PONTIL DRILLING**VAPOUR MONITOR: **RKI EAGLE 2**BOREHOLE DIAMETER: **150 mm**WELL DIAMETER: **50 mm**PIPE SCHEDULE: **40**SCREEN SLOT #: **10**SCREEN LENGTH: **1.5**RISER LENGTH: **2.7**SAND TYPE: **#2 SILICA SAND**SEALANT TYPE: **3/8 BENTONITE**

SUBSURFACE PROFILE			SAMPLE						Piezometer or Monitoring Well Installation
Depth	Strataplot	Description	Elevation	Number	Type	% Recovery	SPT (n)	SV (ppm or %LEL - if applicable)	
ft m									
-5									
-4									
-3									
-2									
-1									
0		Ground Surface	0.00						
1		FINE SAND (FILL) TRACE SILT AND GRAVEL		1	DP	20	-	<5 PPM	
2		BROWN, MOIST							
3									
4				2A	DP	60	-	<5 PPM	
5									
6		WET		2B	DP	60	-	<5 PPM	
7									
8									
9									
10									
11									
12									
13									
14									
15									
16									
17									
18									
19									
20									

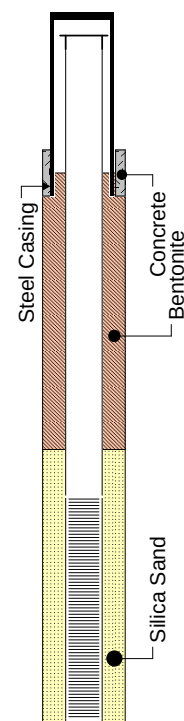
LOGGED BY: **PA**INPUT BY: **PA**

CHECKED BY:

INPUT DATE: **JUNE 9, 2016**

RECORD OF: MW404PROJECT NO: **CB644.02**CLIENT: **SUNCOR ENERGY PRODUCTS PARTNERSHIP**ADDRESS LINE 1: **121 HUME STREET**CITY / PROVINCE: **COLLINGWOOD, ONTARIO**BORING DATE: **MAY 25, 2016**TYPE OF AUGER: **DIRECT PUSH**TYPE OF RIG: **GEOPROBE**CONTRACTOR: **PONTIL DRILLING**VAPOUR MONITOR: **RKI EAGLE 2**BOREHOLE DIAMETER: **150 mm**WELL DIAMETER: **50 mm**PIPE SCHEDULE: **40**SCREEN SLOT #: **10**SCREEN LENGTH: **1.5**RISER LENGTH: **2.9**SAND TYPE: **#2 SILICA SAND**SEALANT TYPE: **3/8 BENTONITE**

SUBSURFACE PROFILE			SAMPLE						Piezometer or Monitoring Well Installation
Depth	Strataplot	Description	Elevation	Number	Type	% Recovery	SPT (n)	SV (ppm or %LEL - if applicable)	
ft m									
-5									
-4									
-3									
-2									
-1									
0		Ground Surface	0.00						
1		FINE SAND (FILL) TRACE SILT AND GRAVEL		1	DP	20	-	<5 PPM	
2		BROWN, MOIST							
3									
4				2A	DP	60	-	<5 PPM	
5									
6		WET		2B	DP	60	-	<5 PPM	
7									
8									
9									
10									
11									
12									
13									
14									
15									
16									
17									
18									
19									
20									

LOGGED BY: **PA**INPUT BY: **PA**

CHECKED BY:

INPUT DATE: **JUNE 9, 2016**

APPENDIX II

LABORATORY CERTIFICATES OF ANALYSIS

RUSHCorporation o/a Maxxam Analytics
1000 Highway 10, Unit 10, Oakville, Ontario Canada L5N 2L8 Tel: (905) 817-5700 Toll-Free: (800) 563-6296 Fax: (905) 817-5777 www.maxxam.ca

CHAIN OF CUSTODY REPORT

09-Mar-16 08:54

Marissa Oddi



B647443

MAF ENV-573

Page 1 of 1

Bottle Order #:



546524

Project Manager:

Marissa Oddi

Company Name: #14539 Suncor Energy Products Partnership
Contact Name: Ken Tedder
Address: 3275 Rebecca St
Oakville ON L6L 6N5
Phone: (905) 469-3754
Email: ktedder@suncor.comCompany Name: #6557 Terrapex Environmental Ltd
Contact Name: Jeff Stevenson
Address: 920 Brant Street Unit 16
Burlington ON L7R 4J1
Phone: (905) 632-5939 x 226
Email: j.stevenson@terrapex.comQuotation #: B43750
Task Order #: CB644.02
Project #: 121 Hume Street, Collingwood, ON
Site Location: 60680
Outlet #: PA
Sampled By: PA

MOE REGULATED DRINKING WATER OR WATER INTENDED FOR HUMAN CONSUMPTION MUST BE SUBMITTED ON THE MAXXAM DRINKING WATER CHAIN OF CUSTODY

ANALYSIS REQUESTED (PLEASE BE SPECIFIC)

Turnaround Time (TAT) Required:

Please provide advance notice for rush projects

Regular (Standard) TAT:

(will be applied if Rush TAT is not specified)

Standard TAT = 5-7 Working days for most tests.

Please note: Standard TAT for certain tests such as BOD and Dioxins/Furans are > 5 days - contact your Project Manager for details

Rush TAT

2 Day

1 DAY

Same Day

Date Required:

Mar 10-16 Thursday

9:00 am

Rush Confirmation Number:

MO20160308-01

(call lab for #)

Regulation 153 (2011)		Other Regulations		Activity
☐ Table 1	☐ Res/Park	☐ CCME	☐ Sanitary Sewer Bylaw	Assessment (circle one) A1, A2, AR, AV Remediations (circle one) RE, RX, RI, RA Contaminant Management (circle one) M, MW, MV
☒ Table 2	☒ Ind/Comm	☐ Reg 558	☐ Storm Sewer Bylaw	
☐ Table 3	☐ Agri/Other	☐ MISA	Municipality	
☐ Table		☐ PWQO		
		☐ Other		
☒ For RSC				

Include Criteria on Certificate of Analysis (Y/N)? N

Field Filtered (please circle):

Metals / Hg / Cr / VI

Reg 153 BTEX
Reg 153 PHCs (F₁-F₄)

Sample Barcode Label	Sample (Location) Identification	Date Sampled	Time Sampled	Matrix	Field Filtered (please circle):	Metals / Hg / Cr / VI	Analysis Requested (Please be Specific)	# of Bottles	Comments
1	Culvert 3	Mar 8-16	11:30	GW		X X		4	
2	SP300 D1	Mar 7-16	14:30	Soil		X X		3	
3	SP200 D1	Mar 7-16	14:30	Soil		X X		3	
4									
5									
6									
7									
8									
9									
10									

* RELINQUISHED BY: (Signature/Print)

Date: (YY/MM/DD)

Time

RECEIVED BY: (Signature/Print)

Date: (YY/MM/DD)

Time

jars used and not submitted

Laboratory Use Only

Time Sensitive

* Temperature (°C) on Receipt

Custody Seal

Yes

No

Philip Arks

01/6/08

12:00

Jeff Stevenson

20160309

08:54

0

37.5

Present

Intact

E

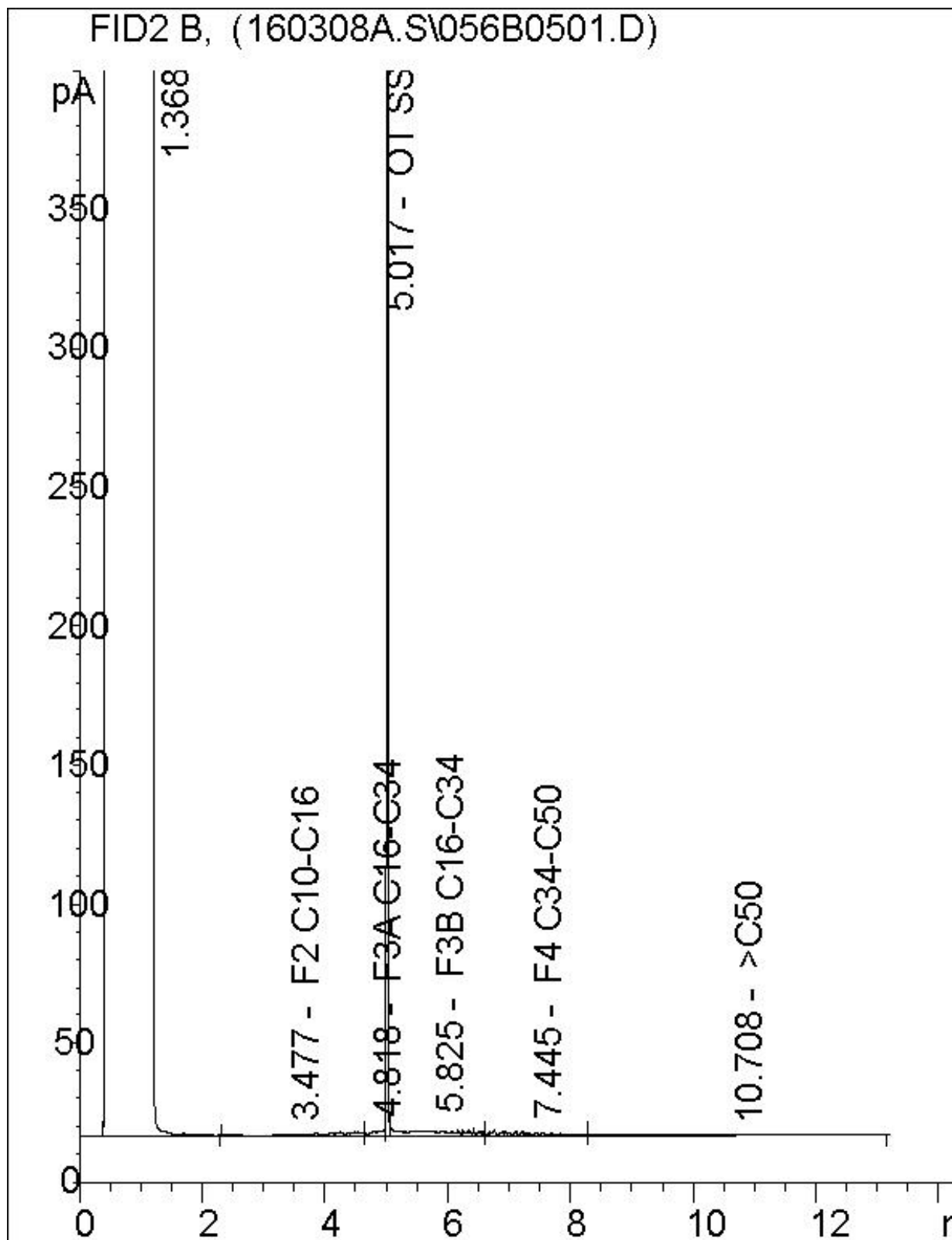
IT IS THE RESPONSIBILITY OF THE RELINQUISHER TO ENSURE THE ACCURACY OF THE CHAIN OF CUSTODY RECORD. AN INCOMPLETE CHAIN OF CUSTODY MAY RESULT IN ANALYTICAL TAT DELAYS.

SAMPLES MUST BE KEPT COOL (< 10°C) FROM TIME OF SAMPLING UNTIL DELIVERY TO MAXXAM

White: Maxxam Yellow: Client

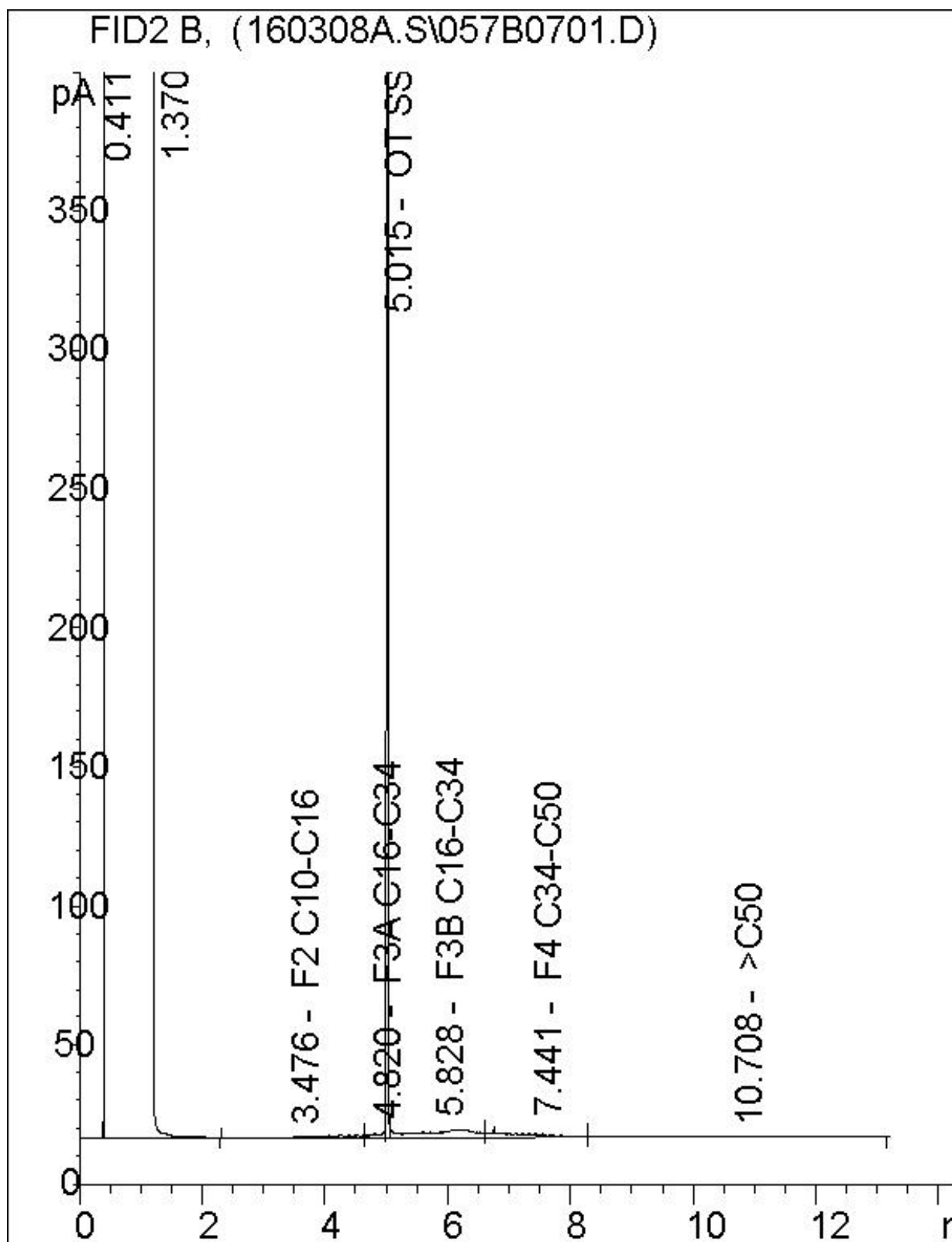
Maxxam Analytics International Corporation o/a Maxxam Analytics

Petroleum Hydrocarbons F2-F4 in Water Chromatogram



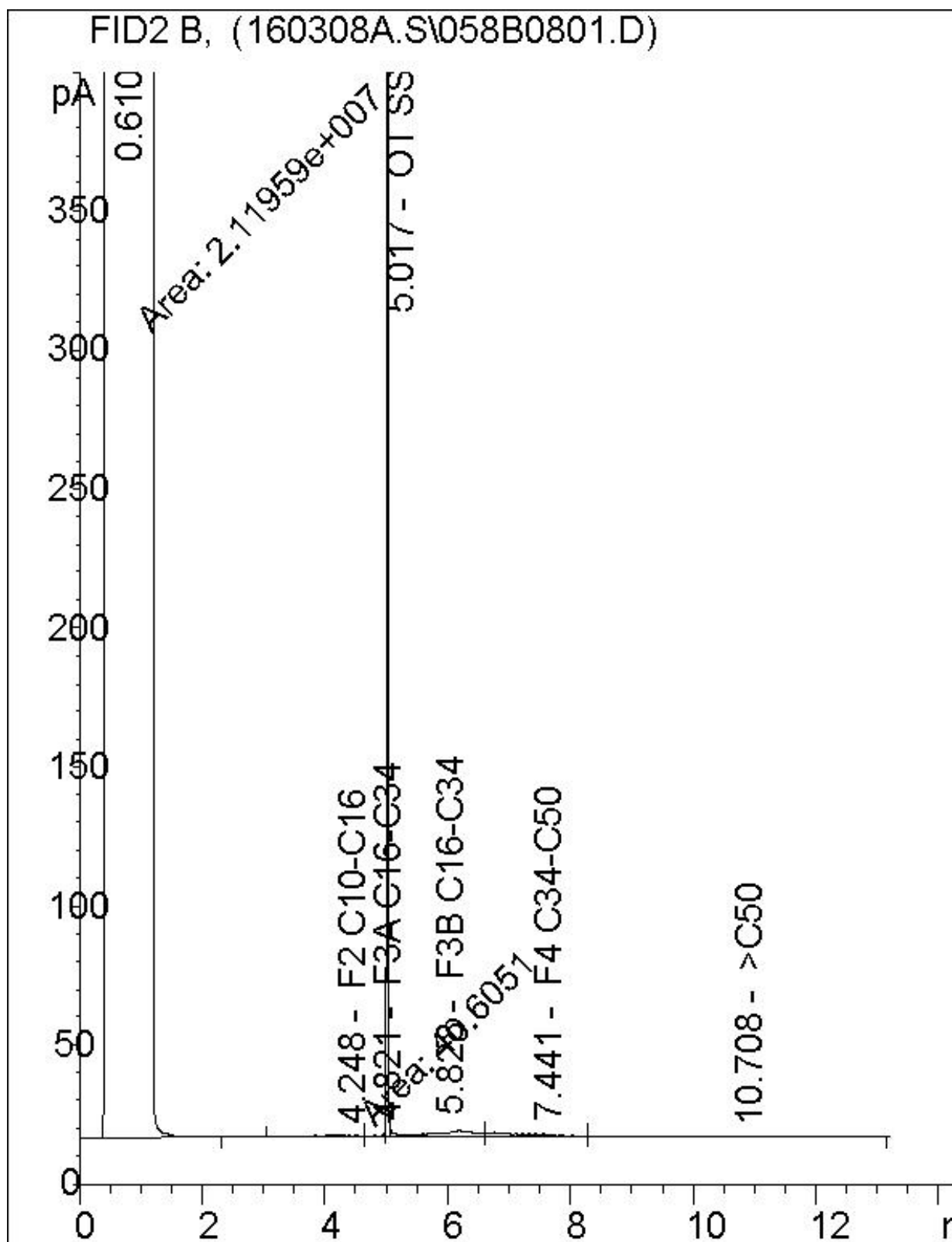
Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Petroleum Hydrocarbons F2-F4 in Soil Chromatogram



Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Petroleum Hydrocarbons F2-F4 in Soil Chromatogram



Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Attention: Jeff Stevenson

Terrapex Environmental Ltd
920 Brant Street
Unit 16
Burlington, ON
CANADA L7R 4J1

Your P.O. #: 4700001396

Your Project #: CB644.02

Site#: 60680

Site Location: 121 Hume Street, Collingwood, ON

Your C.O.C. #: 546624-11-01

Report Date: 2016/03/09

Report #: R3922782

Version: 1 - Final

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B647443

Received: 2016/03/09, 08:54

Sample Matrix: Soil
Samples Received: 2

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Reference
Petroleum Hydro. CCME F1 & BTEX in Soil (1)	2	N/A	2016/03/09	CAM SOP-00315	CCME PHC-CWS m
Petroleum Hydrocarbons F2-F4 in Soil (2)	2	2016/03/09	2016/03/09	CAM SOP-00316	CCME CWS m
Moisture	2	N/A	2016/03/09	CAM SOP-00445	Carter 2nd ed 51.2 m

Sample Matrix: Water
Samples Received: 1

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Reference
Petroleum Hydro. CCME F1 & BTEX in Water	1	N/A	2016/03/09	CAM SOP-00315	CCME PHC-CWS m
Petroleum Hydrocarbons F2-F4 in Water (2)	1	2016/03/09	2016/03/09	CAM SOP-00316	CCME PHC-CWS m

Remarks:

Maxxam Analytics has performed all analytical testing herein in accordance with ISO 17025 and the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act. All methodologies comply with this document and are validated for use in the laboratory. The methods and techniques employed in this analysis conform to the performance criteria (detection limits, accuracy and precision) as outlined in the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act.

Maxxam Analytics is accredited for all specific parameters as required by Ontario Regulation 153/04. Maxxam Analytics is limited in liability to the actual cost of analysis unless otherwise agreed in writing. There is no other warranty expressed or implied. Samples will be retained at Maxxam Analytics for three weeks from receipt of data or as per contract.

Reference Method suffix "m" indicates test methods incorporate validated modifications from specific reference methods to improve performance.

* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.

(1) No lab extraction date is given for F1BTEX & VOC samples that are field preserved with methanol. Extraction date is the date sampled unless otherwise stated.

(2) All CCME PHC results met required criteria unless otherwise stated in the report. The CWS PHC methods employed by Maxxam conform to all prescribed elements of the reference method and performance based elements have been validated. All modifications have been validated and proven equivalent following "Alberta Environment's Interpretation of the Reference Method for the Canada-Wide Standard for Petroleum Hydrocarbons in Soil Validation of Performance-Based Alternative Methods September 2003". Documentation is available upon request. Modifications from Reference Method for the Canada-wide Standard for Petroleum Hydrocarbons in Soil-Tier 1 Method: F2/F3/F4 data reported using validated cold solvent extraction instead of Soxhlet extraction.

Attention: Jeff Stevenson

Terrapex Environmental Ltd
920 Brant Street
Unit 16
Burlington, ON
CANADA L7R 4J1

Your P.O. #: 4700001396
Your Project #: CB644.02
Site#: 60680
Site Location: 121 Hume Street, Collingwood, ON
Your C.O.C. #: 546624-11-01

Report Date: 2016/03/09
Report #: R3922782
Version: 1 - Final

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B647443
Received: 2016/03/09, 08:54

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.
Marissa Oddi, Customer Service Representative
Email: moddi@maxxam.ca
Phone# (905) 817-5700

=====

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

O.REG 153 PETROLEUM HYDROCARBONS (SOIL)

Maxxam ID		BZI322	BZI323	BZI323		
Sampling Date		2016/03/07 14:30	2016/03/07 14:30	2016/03/07 14:30		
COC Number		546624-11-01	546624-11-01	546624-11-01		
	UNITS	SP300D1	SP200D1	SP200D1 Lab-Dup	RDL	QC Batch
Inorganics						
Moisture	%	13	20		1.0	4410822
BTEX & F1 Hydrocarbons						
Benzene	ug/g	ND	ND	ND	0.020	4410829
Toluene	ug/g	ND	ND	ND	0.020	4410829
Ethylbenzene	ug/g	ND	ND	ND	0.020	4410829
o-Xylene	ug/g	ND	ND	ND	0.020	4410829
p+m-Xylene	ug/g	ND	ND	ND	0.040	4410829
Total Xylenes	ug/g	ND	ND	ND	0.040	4410829
F1 (C6-C10)	ug/g	ND	ND	ND	10	4410829
F1 (C6-C10) - BTEX	ug/g	ND	ND	ND	10	4410829
F2-F4 Hydrocarbons						
F2 (C10-C16 Hydrocarbons)	ug/g	ND	ND		10	4410802
F3 (C16-C34 Hydrocarbons)	ug/g	ND	ND		50	4410802
F4 (C34-C50 Hydrocarbons)	ug/g	ND	ND		50	4410802
Reached Baseline at C50	ug/g	Yes	Yes			4410802
Surrogate Recovery (%)						
1,4-Difluorobenzene	%	102	105	104		4410829
4-Bromofluorobenzene	%	97	99	99		4410829
D10-Ethylbenzene	%	88	92	85		4410829
D4-1,2-Dichloroethane	%	98	101	101		4410829
o-Terphenyl	%	88	91			4410802
RDL = Reportable Detection Limit QC Batch = Quality Control Batch Lab-Dup = Laboratory Initiated Duplicate ND = Not detected						

O.REG 153 PETROLEUM HYDROCARBONS (WATER)

Maxxam ID		BZI321	BZI321		
Sampling Date		2016/03/08 11:30	2016/03/08 11:30		
COC Number		546624-11-01	546624-11-01		
	UNITS	CULVERT 3	CULVERT 3 Lab-Dup	RDL	QC Batch
BTEX & F1 Hydrocarbons					
Benzene	ug/L	ND	ND	0.20	4410681
Toluene	ug/L	ND	ND	0.20	4410681
Ethylbenzene	ug/L	0.26	0.24	0.20	4410681
o-Xylene	ug/L	0.26	0.26	0.20	4410681
p+m-Xylene	ug/L	0.63	0.66	0.40	4410681
Total Xylenes	ug/L	0.89	0.92	0.40	4410681
F1 (C6-C10)	ug/L	ND	ND	25	4410681
F1 (C6-C10) - BTEX	ug/L	ND	ND	25	4410681
F2-F4 Hydrocarbons					
F2 (C10-C16 Hydrocarbons)	ug/L	ND		100	4410704
F3 (C16-C34 Hydrocarbons)	ug/L	ND		200	4410704
F4 (C34-C50 Hydrocarbons)	ug/L	ND		200	4410704
Reached Baseline at C50	ug/L	Yes			4410704
Surrogate Recovery (%)					
1,4-Difluorobenzene	%	101	100		4410681
4-Bromofluorobenzene	%	99	100		4410681
D10-Ethylbenzene	%	98	97		4410681
D4-1,2-Dichloroethane	%	98	98		4410681
o-Terphenyl	%	97			4410704
RDL = Reportable Detection Limit QC Batch = Quality Control Batch Lab-Dup = Laboratory Initiated Duplicate ND = Not detected					

Maxxam Job #: B647443
Report Date: 2016/03/09

Terrapex Environmental Ltd
Client Project #: CB644.02
Site Location: 121 Hume Street, Collingwood, ON
Your P.O. #: 4700001396
Sampler Initials: PA

TEST SUMMARY

Maxxam ID: BZI321
Sample ID: CULVERT 3
Matrix: Water

Collected: 2016/03/08
Shipped:
Received: 2016/03/09

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Petroleum Hydro. CCME F1 & BTEX in Water	HSGC/MSFD	4410681	N/A	2016/03/09	Abdikarim Ali
Petroleum Hydrocarbons F2-F4 in Water	GC/FID	4410704	2016/03/09	2016/03/09	Margaret Kulczyk-Stanko

Maxxam ID: BZI321 Dup
Sample ID: CULVERT 3
Matrix: Water

Collected: 2016/03/08
Shipped:
Received: 2016/03/09

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Petroleum Hydro. CCME F1 & BTEX in Water	HSGC/MSFD	4410681	N/A	2016/03/09	Abdikarim Ali

Maxxam ID: BZI322
Sample ID: SP300D1
Matrix: Soil

Collected: 2016/03/07
Shipped:
Received: 2016/03/09

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	4410829	N/A	2016/03/09	Anca Ganea
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	4410802	2016/03/09	2016/03/09	Biljana Lazovic
Moisture	BAL	4410822	N/A	2016/03/09	Min Yang

Maxxam ID: BZI323
Sample ID: SP200D1
Matrix: Soil

Collected: 2016/03/07
Shipped:
Received: 2016/03/09

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	4410829	N/A	2016/03/09	Anca Ganea
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	4410802	2016/03/09	2016/03/09	Biljana Lazovic
Moisture	BAL	4410822	N/A	2016/03/09	Min Yang

Maxxam ID: BZI323 Dup
Sample ID: SP200D1
Matrix: Soil

Collected: 2016/03/07
Shipped:
Received: 2016/03/09

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	4410829	N/A	2016/03/09	Anca Ganea

Maxxam Job #: B647443
Report Date: 2016/03/09

Terrapex Environmental Ltd
Client Project #: CB644.02
Site Location: 121 Hume Street, Collingwood, ON
Your P.O. #: 4700001396
Sampler Initials: PA

GENERAL COMMENTS

Each temperature is the average of up to three cooler temperatures taken at receipt

Package 1	3.7°C

Results relate only to the items tested.

Maxxam Job #: B647443
Report Date: 2016/03/09

Terrapex Environmental Ltd
Client Project #: CB644.02
Site Location: 121 Hume Street, Collingwood, ON
Your P.O. #: 4700001396
Sampler Initials: PA

QUALITY ASSURANCE REPORT

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
4410681	AAI	Matrix Spike [BZI321-02]	1,4-Difluorobenzene	2016/03/09		100	%	70 - 130
			4-Bromofluorobenzene	2016/03/09		101	%	70 - 130
			D10-Ethylbenzene	2016/03/09		96	%	70 - 130
			D4-1,2-Dichloroethane	2016/03/09		100	%	70 - 130
			Benzene	2016/03/09		113	%	70 - 130
			Toluene	2016/03/09		113	%	70 - 130
			Ethylbenzene	2016/03/09		119	%	70 - 130
			o-Xylene	2016/03/09		121	%	70 - 130
			p+m-Xylene	2016/03/09		109	%	70 - 130
			F1 (C6-C10)	2016/03/09		100	%	70 - 130
4410681	AAI	Spiked Blank	1,4-Difluorobenzene	2016/03/09		100	%	70 - 130
			4-Bromofluorobenzene	2016/03/09		101	%	70 - 130
			D10-Ethylbenzene	2016/03/09		87	%	70 - 130
			D4-1,2-Dichloroethane	2016/03/09		99	%	70 - 130
			Benzene	2016/03/09		89	%	70 - 130
			Toluene	2016/03/09		91	%	70 - 130
			Ethylbenzene	2016/03/09		97	%	70 - 130
			o-Xylene	2016/03/09		99	%	70 - 130
			p+m-Xylene	2016/03/09		89	%	70 - 130
			F1 (C6-C10)	2016/03/09		90	%	70 - 130
4410681	AAI	Method Blank	1,4-Difluorobenzene	2016/03/09		102	%	70 - 130
			4-Bromofluorobenzene	2016/03/09		99	%	70 - 130
			D10-Ethylbenzene	2016/03/09		99	%	70 - 130
			D4-1,2-Dichloroethane	2016/03/09		99	%	70 - 130
			Benzene	2016/03/09	ND, RDL=0.20		ug/L	
			Toluene	2016/03/09	ND, RDL=0.20		ug/L	
			Ethylbenzene	2016/03/09	ND, RDL=0.20		ug/L	
			o-Xylene	2016/03/09	ND, RDL=0.20		ug/L	
			p+m-Xylene	2016/03/09	ND, RDL=0.40		ug/L	
			Total Xylenes	2016/03/09	ND, RDL=0.40		ug/L	
			F1 (C6-C10)	2016/03/09	ND, RDL=25		ug/L	
			F1 (C6-C10) - BTEX	2016/03/09	ND, RDL=25		ug/L	
			Benzene	2016/03/09	NC		%	30
			Toluene	2016/03/09	NC		%	30
			Ethylbenzene	2016/03/09	NC		%	30
			o-Xylene	2016/03/09	NC		%	30
			p+m-Xylene	2016/03/09	NC		%	30
			Total Xylenes	2016/03/09	NC		%	30
			F1 (C6-C10)	2016/03/09	NC		%	30
			F1 (C6-C10) - BTEX	2016/03/09	NC		%	30
4410704	MKS	Matrix Spike [BZI321-01]	o-Terphenyl	2016/03/09		97	%	60 - 130
			F2 (C10-C16 Hydrocarbons)	2016/03/09		103	%	50 - 130

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
4410704	MKS	Spiked Blank	F3 (C16-C34 Hydrocarbons)	2016/03/09		99	%	50 - 130
			F4 (C34-C50 Hydrocarbons)	2016/03/09		100	%	50 - 130
			o-Terphenyl	2016/03/09		103	%	60 - 130
			F2 (C10-C16 Hydrocarbons)	2016/03/09		107	%	60 - 130
			F3 (C16-C34 Hydrocarbons)	2016/03/09		107	%	60 - 130
4410704	MKS	RPD	F4 (C34-C50 Hydrocarbons)	2016/03/09		106	%	60 - 130
			F2 (C10-C16 Hydrocarbons)	2016/03/09	2.5		%	30
			F3 (C16-C34 Hydrocarbons)	2016/03/09	4.1		%	30
			F4 (C34-C50 Hydrocarbons)	2016/03/09	4.5		%	30
4410704	MKS	Method Blank	o-Terphenyl	2016/03/09		98	%	60 - 130
			F2 (C10-C16 Hydrocarbons)	2016/03/09	ND, RDL=100		ug/L	
			F3 (C16-C34 Hydrocarbons)	2016/03/09	ND, RDL=200		ug/L	
			F4 (C34-C50 Hydrocarbons)	2016/03/09	ND, RDL=200		ug/L	
4410802	BLZ	Matrix Spike	o-Terphenyl	2016/03/09		99	%	60 - 130
			F2 (C10-C16 Hydrocarbons)	2016/03/09		101	%	50 - 130
			F3 (C16-C34 Hydrocarbons)	2016/03/09		101	%	50 - 130
			F4 (C34-C50 Hydrocarbons)	2016/03/09		106	%	50 - 130
4410802	BLZ	Spiked Blank	o-Terphenyl	2016/03/09		99	%	60 - 130
			F2 (C10-C16 Hydrocarbons)	2016/03/09		98	%	80 - 120
			F3 (C16-C34 Hydrocarbons)	2016/03/09		98	%	80 - 120
			F4 (C34-C50 Hydrocarbons)	2016/03/09		101	%	80 - 120
4410802	BLZ	Method Blank	o-Terphenyl	2016/03/09		97	%	60 - 130
			F2 (C10-C16 Hydrocarbons)	2016/03/09	ND, RDL=10		ug/g	
			F3 (C16-C34 Hydrocarbons)	2016/03/09	ND, RDL=50		ug/g	
			F4 (C34-C50 Hydrocarbons)	2016/03/09	ND, RDL=50		ug/g	
4410802	BLZ	RPD	F2 (C10-C16 Hydrocarbons)	2016/03/09	13		%	30
			F3 (C16-C34 Hydrocarbons)	2016/03/09	NC		%	30
			F4 (C34-C50 Hydrocarbons)	2016/03/09	NC		%	30
4410822	SDE	RPD	Moisture	2016/03/09	3.4		%	20
4410829	AGA	Matrix Spike [BZI323-02]	1,4-Difluorobenzene	2016/03/09		105	%	60 - 140
			4-Bromofluorobenzene	2016/03/09		100	%	60 - 140
			D10-Ethylbenzene	2016/03/09		96	%	60 - 140
			D4-1,2-Dichloroethane	2016/03/09		102	%	60 - 140
			Benzene	2016/03/09		88	%	60 - 140
			Toluene	2016/03/09		93	%	60 - 140
			Ethylbenzene	2016/03/09		92	%	60 - 140
			o-Xylene	2016/03/09		99	%	60 - 140
			p+m-Xylene	2016/03/09		85	%	60 - 140
			F1 (C6-C10)	2016/03/09		90	%	60 - 140
			1,4-Difluorobenzene	2016/03/09		106	%	60 - 140
			4-Bromofluorobenzene	2016/03/09		100	%	60 - 140
			D10-Ethylbenzene	2016/03/09		84	%	60 - 140
			D4-1,2-Dichloroethane	2016/03/09		102	%	60 - 140
			Benzene	2016/03/09		90	%	60 - 140
			Toluene	2016/03/09		94	%	60 - 140

Maxxam Job #: B647443
Report Date: 2016/03/09

Terrapex Environmental Ltd
Client Project #: CB644.02
Site Location: 121 Hume Street, Collingwood, ON
Your P.O. #: 4700001396
Sampler Initials: PA

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
4410829	AGA	Method Blank	Ethylbenzene	2016/03/09		94	%	60 - 140
			o-Xylene	2016/03/09		101	%	60 - 140
			p+m-Xylene	2016/03/09		88	%	60 - 140
			F1 (C6-C10)	2016/03/09		105	%	80 - 120
			1,4-Difluorobenzene	2016/03/09		105	%	60 - 140
			4-Bromofluorobenzene	2016/03/09		97	%	60 - 140
			D10-Ethylbenzene	2016/03/09		92	%	60 - 140
			D4-1,2-Dichloroethane	2016/03/09		99	%	60 - 140
			Benzene	2016/03/09	ND, RDL=0.020		ug/g	
			Toluene	2016/03/09	ND, RDL=0.020		ug/g	
			Ethylbenzene	2016/03/09	ND, RDL=0.020		ug/g	
			o-Xylene	2016/03/09	ND, RDL=0.020		ug/g	
			p+m-Xylene	2016/03/09	ND, RDL=0.040		ug/g	
			Total Xylenes	2016/03/09	ND, RDL=0.040		ug/g	
			F1 (C6-C10)	2016/03/09	ND, RDL=10		ug/g	
			F1 (C6-C10) - BTEX	2016/03/09	ND, RDL=10		ug/g	
4410829	AGA	RPD [BZI323-02]	Benzene	2016/03/09	NC		%	50
			Toluene	2016/03/09	NC		%	50
			Ethylbenzene	2016/03/09	NC		%	50
			o-Xylene	2016/03/09	NC		%	50
			p+m-Xylene	2016/03/09	NC		%	50
			Total Xylenes	2016/03/09	NC		%	50
			F1 (C6-C10)	2016/03/09	NC		%	30
			F1 (C6-C10) - BTEX	2016/03/09	NC		%	30
Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.								
Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.								
Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.								
Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.								
Surrogate: A pure or isotopically labeled compound whose behavior mirrors the analytes of interest. Used to evaluate extraction efficiency.								
NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (one or both samples < 5x RDL).								

VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by the following individual(s).

Cristina Carriere

Cristina Carriere, Scientific Services

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

**RUSH**Maxxam Analytics
Canada L5N 2L8 Tel: (905) 817-5700 Toll-Free: (800) 563-6266 Fax: (905) 817-5777 www.maxxam.ca

CHAIN OF CUSTODY FORM

09-Mar-16 08:49

Marissa Oddi

B647433

MAF ENV-573

COC #:

C#546624-10-01

Page 1 of 1

ly:

Bottle Order #:

546624

Project Manager:

Marissa Oddi

Company Name: #14539 Suncor Energy Products Partnership
Contact Name: Ken Tedder
Address: 3275 Rebecca St
Oakville ON L6L 6N5
Phone: (905) 469-3754
Email: ktedder@suncor.com

Company Name: #6557 Terrapex Environmental Ltd
Contact Name: Jeff Stevenson
Address: 920 Brant Street Unit 16
Burlington ON L7R 4J1
Phone: (905) 632-5939 x 226
Email: j.stevenson@terrapex.com

Quotation #: B43750
Task Order #: CB644.02
Project #: 121 Hume Street, Collingwood, ON
Site Location: 60680
Outlet #: 38
Sampled By: 38

MOE REGULATED DRINKING WATER OR WATER INTENDED FOR HUMAN CONSUMPTION MUST BE SUBMITTED ON THE MAXXAM DRINKING WATER CHAIN OF CUSTODY

ANALYSIS REQUESTED (PLEASE BE SPECIFIC)

Turnaround Time (TAT) Required

Please provide advance notice for rush projects

Regulation 153 (2011)		Other Regulations		Activity
☒ Table 1	☒ Res/Park	☐ CCME	☐ Sanitary Sewer Bylaw	☒ RE
☒ Table 2	☒ Ind/Comm	☐ Reg 55B	☐ Storm Sewer Bylaw	Assessment (circle one)
☐ Table 3	☐ Agri/Other	☐ MISA	Municipality	A1, A2, AR, AV
☐ Table	☒ For RSC	☐ PWQO		Remediations (circle one)
		☐ Other		RE RX, RI, RA
Include Criteria on Certificate of Analysis (Y/N)?				Contaminant Management (circle one)
				M, MW, MV

Field Filtered (please circle)
Metals / Hg / Cr VI

Reg 153 VOCs
Reg 153 PAHs
Reg 153 Metals Full List
Reg 153 PCBs (F-Kel)
Reg 153 BTEX

Regular (Standard) TAT:
(will be applied if Rush TAT is not specified)
Standard TAT = 5-7 Working days for most tests.
Please note: Standard TAT for certain tests such as BOD and Dioxins/Furans are > 5 days - contact your Project Manager for details.

Rush TAT
2 Day ☐ 1 DAY ☒ Same Day ☐
Date Required: Thursday Time Required: Mar-16-16
Rush Confirmation Number: MOD20160308-01 (call lab for #)

Sample Barcode Label	Sample (Location) Identification	Date Sampled	Time Sampled	Matrix	Field Filtered (please circle)	Metals / Hg / Cr VI	VOCs	PAHs	Metals Full List	PCBs (F-Kel)	BTEX	# of Bottles	Comments
1	CS225	Mar-7-16	13:20	Soil	1	X	X	X	X			45	
2	CS2300	Mar-7-16	13:40	Soil	1				X	X		3	
3	CS230	Mar-7-16	13:40	Soil	1				X	X		3	
4													
5													
6													
7													
8													
9													
10													

* RELINQUISHED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	RECEIVED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	# jars used and not submitted	Laboratory Use Only
Philip Aris	16/03/08	12:00	ASAP BIAFV	2016/3/09	08:49	0	Time Sensitive: 4/2/4 Temperature (°C) on Receipt: 4/2/4
							Custody Seal: Present Intact: 5

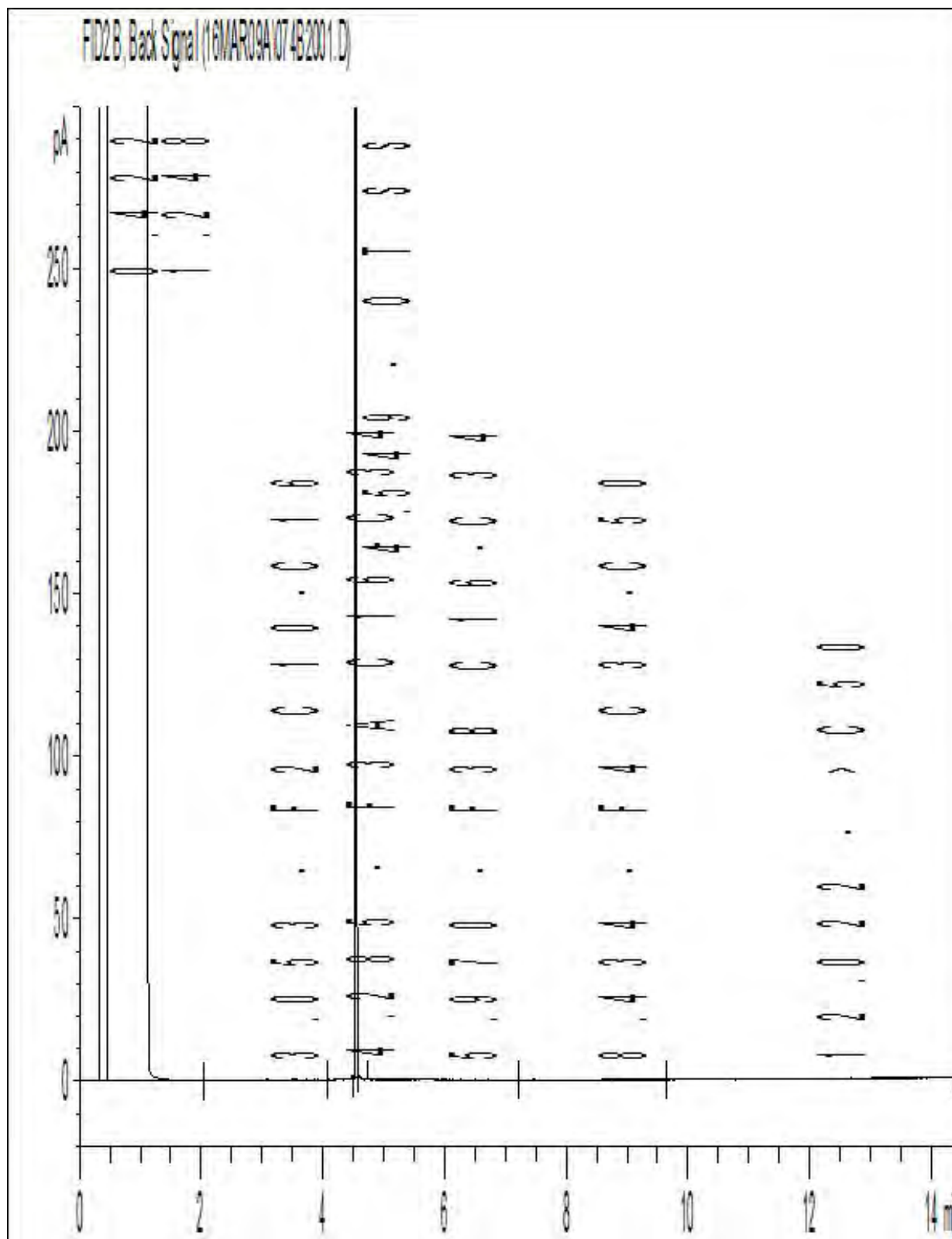
* IT IS THE RESPONSIBILITY OF THE RELINQUISHER TO ENSURE THE ACCURACY OF THE CHAIN OF CUSTODY RECORD. AN INCOMPLETE CHAIN OF CUSTODY MAY RESULT IN ANALYTICAL TAT DELAYS.

SAMPLES MUST BE KEPT COOL (< 10° C) FROM TIME OF SAMPLING UNTIL DELIVERY TO MAXXAM.

White: Maxxam Yellow: Client

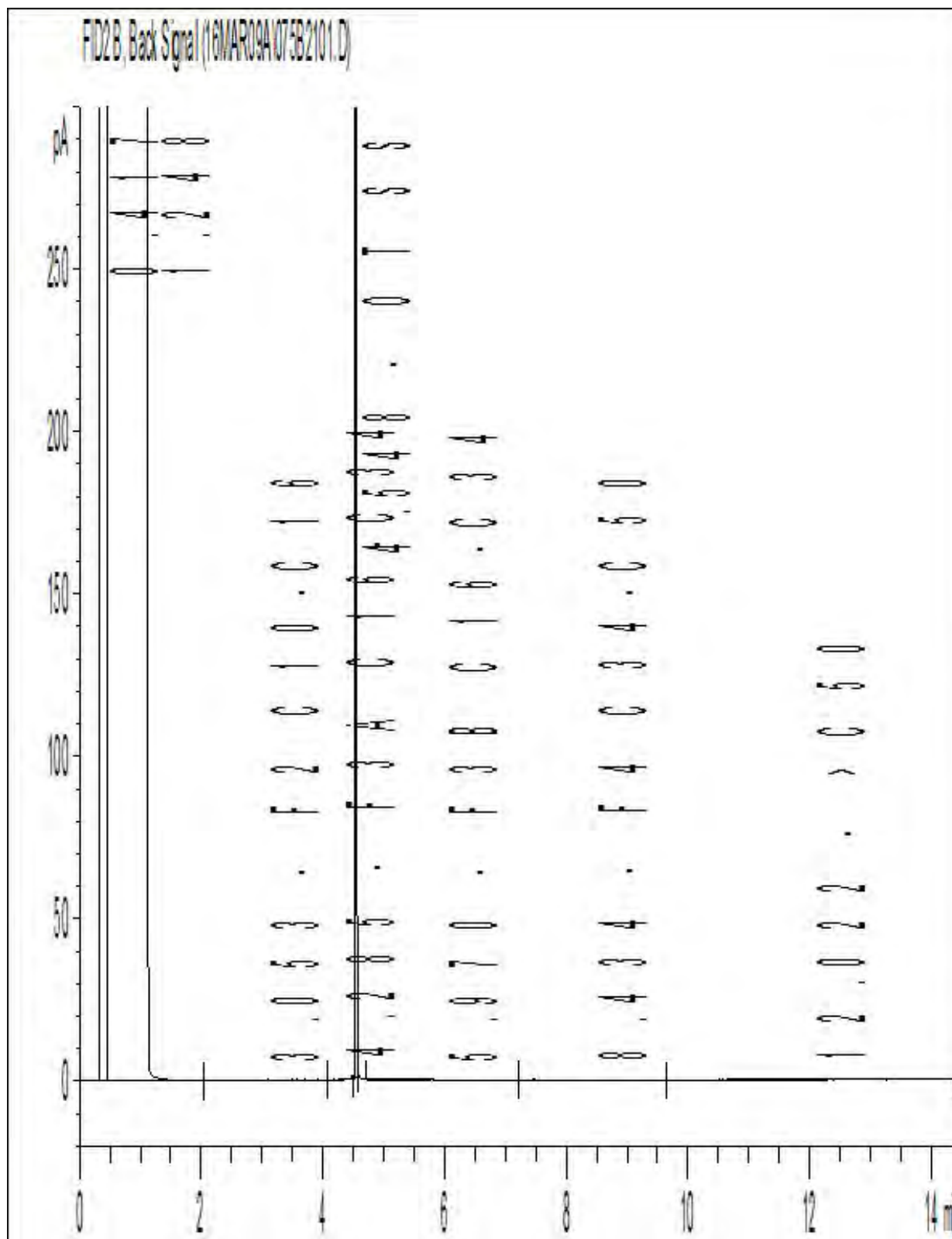
Maxxam Analytics International Corporation o/a Maxxam Analytics

Petroleum Hydrocarbons F2-F4 in Soil Chromatogram



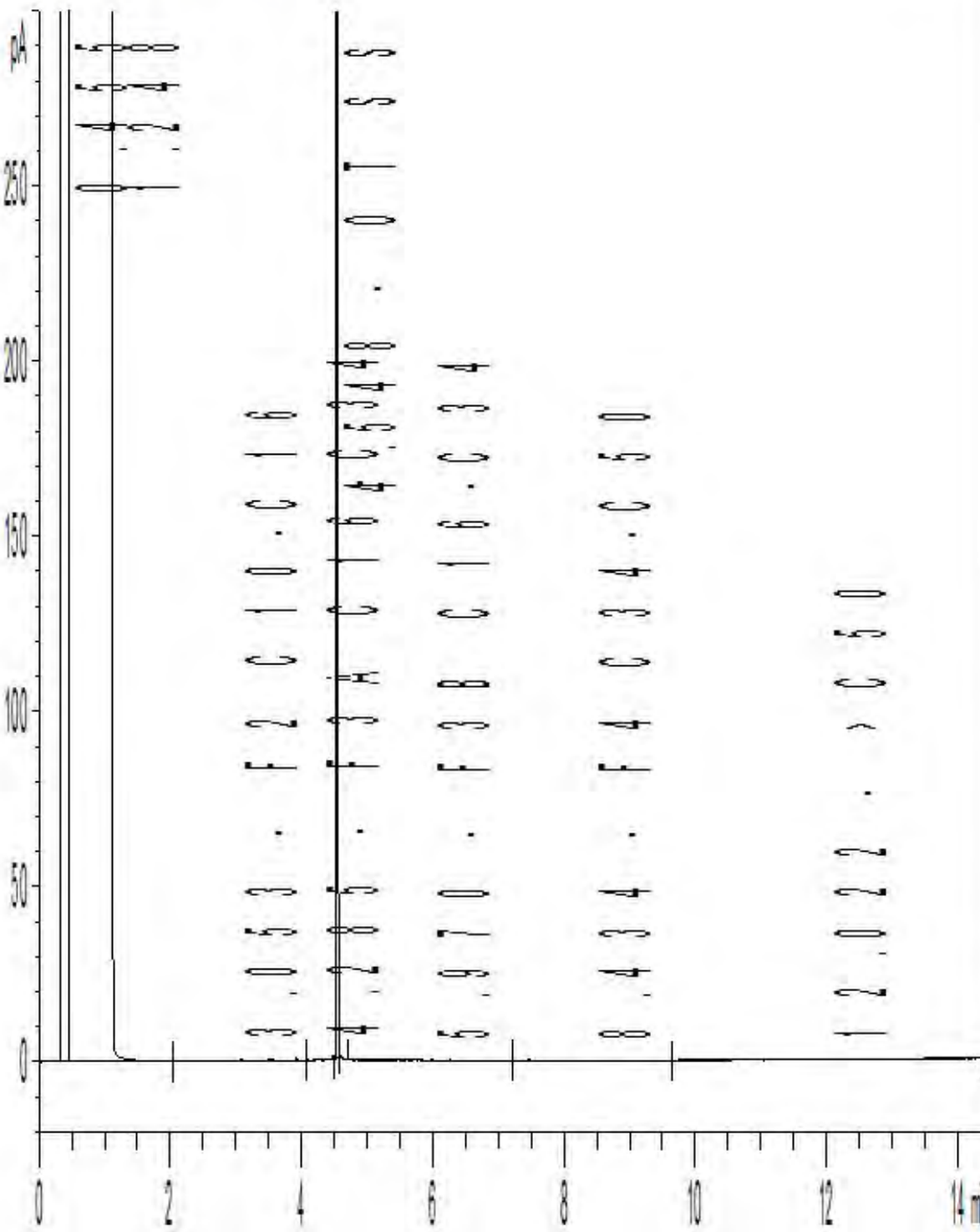
Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Petroleum Hydrocarbons F2-F4 in Soil Chromatogram



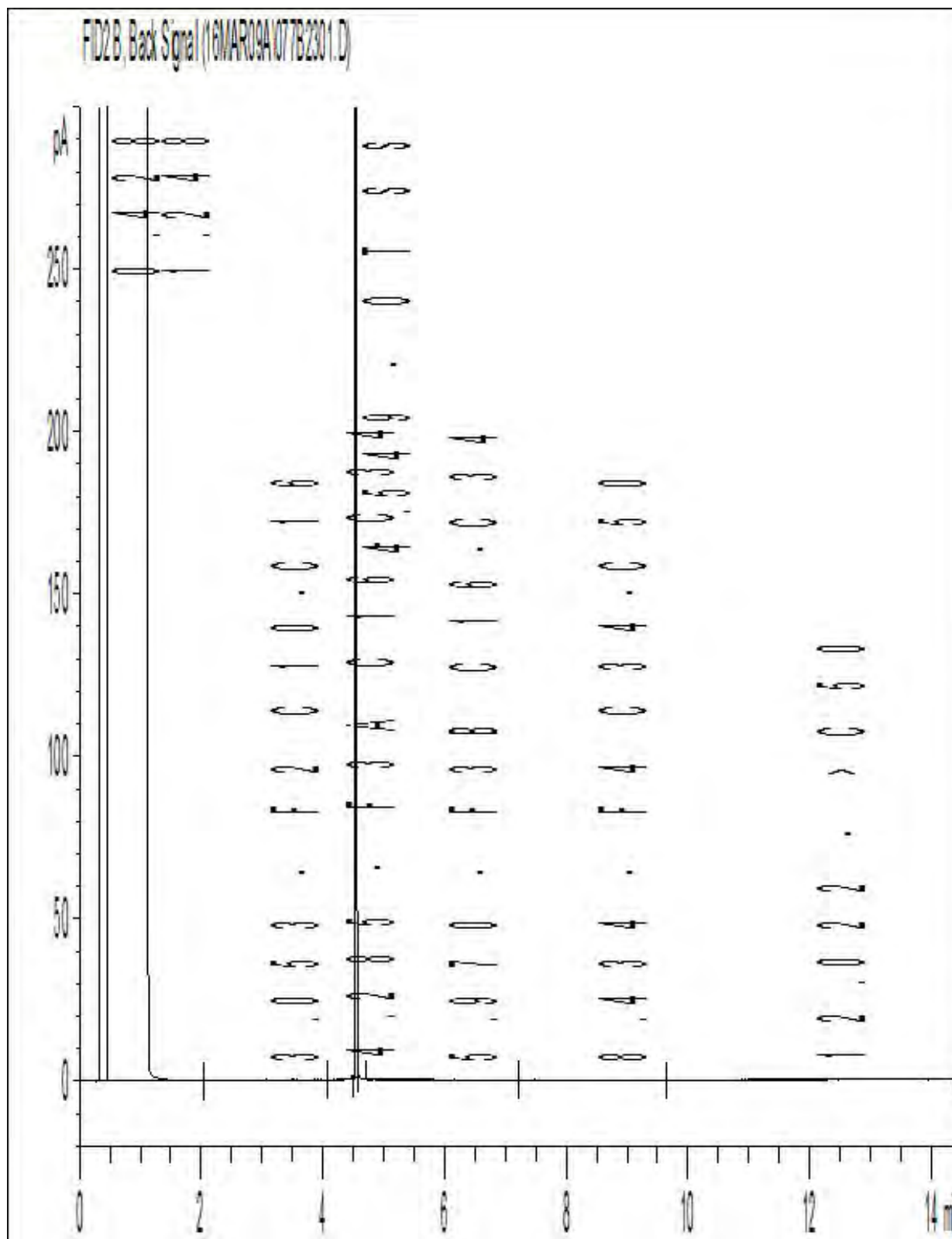
Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Petroleum Hydrocarbons F2-F4 in Soil Chromatogram



or fingerprinting be required, please contact the laboratory.

Petroleum Hydrocarbons F2-F4 in Soil Chromatogram



Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Attention: Jeff Stevenson

Terrapex Environmental Ltd
920 Brant Street
Unit 16
Burlington, ON
CANADA L7R 4J1

Your P.O. #: 4700001396

Your Project #: CB644.02

Site#: 60680

Site Location: 121 Hume Street, Collingwood, ON

Your C.O.C. #: 546624-10-01

Report Date: 2016/03/10

Report #: R3923809

Version: 1 - Final

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B647433

Received: 2016/03/09, 08:49

Sample Matrix: Soil
Samples Received: 3

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Reference
Methylnaphthalene Sum	1	N/A	2016/03/10	CAM SOP-00301	EPA 8270D m
Hot Water Extractable Boron	1	2016/03/09	2016/03/09	CAM SOP-00408	R153 Ana. Prot. 2011
1,3-Dichloropropene Sum	1	N/A	2016/03/10		EPA 8260C m
Free (WAD) Cyanide	1	2016/03/09	2016/03/09	CAM SOP-00457	OMOE E3015 m
Conductivity	1	2016/03/09	2016/03/09	CAM SOP-00414	OMOE E3138 v2 m
Hexavalent Chromium in Soil by IC (1)	1	2016/03/09	2016/03/09	CAM SOP-00436	EPA 3060/7199 m
Petroleum Hydro. CCME F1 & BTEX in Soil (2)	1	N/A	2016/03/09	CAM SOP-00315	CCME PHC-CWS m
Petroleum Hydro. CCME F1 & BTEX in Soil (2)	2	N/A	2016/03/10	CAM SOP-00315	CCME PHC-CWS m
Petroleum Hydrocarbons F2-F4 in Soil (3)	3	2016/03/09	2016/03/10	CAM SOP-00316	CCME CWS m
Strong Acid Leachable Metals by ICPMS	1	2016/03/09	2016/03/09	CAM SOP-00447	EPA 6020A m
Moisture	3	N/A	2016/03/09	CAM SOP-00445	Carter 2nd ed 51.2 m
PAH Compounds in Soil by GC/MS (SIM)	1	2016/03/09	2016/03/10	CAM SOP-00318	EPA 8270D m
pH CaCl2 EXTRACT	1	2016/03/09	2016/03/09	CAM SOP-00413	EPA 9045 D m
Sodium Adsorption Ratio (SAR)	1	N/A	2016/03/09	CAM SOP-00102	EPA 6010
SAR - ICP Metals	1	2016/03/09	2016/03/09	CAM SOP-00408	EPA 6010 m
Volatile Organic Compounds in Soil	1	N/A	2016/03/09	CAM SOP000228	EPA 8260C m

Remarks:

Maxxam Analytics has performed all analytical testing herein in accordance with ISO 17025 and the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act. All methodologies comply with this document and are validated for use in the laboratory. The methods and techniques employed in this analysis conform to the performance criteria (detection limits, accuracy and precision) as outlined in the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act.

Maxxam Analytics is accredited for all specific parameters as required by Ontario Regulation 153/04. Maxxam Analytics is limited in liability to the actual cost of analysis unless otherwise agreed in writing. There is no other warranty expressed or implied. Samples will be retained at Maxxam Analytics for three weeks from receipt of data or as per contract.

Reference Method suffix "m" indicates test methods incorporate validated modifications from specific reference methods to improve performance.

* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.

Attention: Jeff Stevenson

Terrapex Environmental Ltd
920 Brant Street
Unit 16
Burlington, ON
CANADA L7R 4J1

Your P.O. #: 4700001396

Your Project #: CB644.02

Site#: 60680

Site Location: 121 Hume Street, Collingwood, ON

Your C.O.C. #: 546624-10-01

Report Date: 2016/03/10

Report #: R3923809

Version: 1 - Final

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B647433

Received: 2016/03/09, 08:49

- (1) Soils are reported on a dry weight basis unless otherwise specified.
- (2) No lab extraction date is given for F1BTX & VOC samples that are field preserved with methanol. Extraction date is the date sampled unless otherwise stated.
- (3) All CCME PHC results met required criteria unless otherwise stated in the report. The CWS PHC methods employed by Maxxam conform to all prescribed elements of the reference method and performance based elements have been validated. All modifications have been validated and proven equivalent following "Alberta Environment's Interpretation of the Reference Method for the Canada-Wide Standard for Petroleum Hydrocarbons in Soil Validation of Performance-Based Alternative Methods September 2003". Documentation is available upon request. Modifications from Reference Method for the Canada-wide Standard for Petroleum Hydrocarbons in Soil-Tier 1 Method: F2/F3/F4 data reported using validated cold solvent extraction instead of Soxhlet extraction.

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.

Marissa Oddi, Customer Service Representative

Email: moddi@maxxam.ca

Phone# (905) 817-5700

=====

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

O.REG 153 METALS & INORGANICS PKG (SOIL)

Maxxam ID		BZI293	BZI293		
Sampling Date		2016/03/07 13:20	2016/03/07 13:20		
COC Number		546624-10-01	546624-10-01		
	UNITS	CS225	CS225 Lab-Dup	RDL	QC Batch
Calculated Parameters					
Sodium Adsorption Ratio	N/A	2.2			4410660
Inorganics					
Conductivity	mS/cm	0.19	0.19	0.002	4411266
Free Cyanide	ug/g	ND	ND	0.01	4410728
Moisture	%	18		1.0	4410822
Available (CaCl2) pH	pH	7.80			4410707
Metals					
Soluble Calcium (Ca)	mg/L	9.0	8.8	0.5	4411263
Soluble Magnesium (Mg)	mg/L	0.7	0.6	0.5	4411263
Soluble Sodium (Na)	mg/L	25	26	5	4411263
Inorganics					
Chromium (VI)	ug/g	ND		0.2	4410667
Metals					
Hot Water Ext. Boron (B)	ug/g	ND		0.050	4411298
Acid Extractable Antimony (Sb)	ug/g	ND	ND	0.20	4411279
Acid Extractable Arsenic (As)	ug/g	ND	ND	1.0	4411279
Acid Extractable Barium (Ba)	ug/g	4.6	4.3	0.50	4411279
Acid Extractable Beryllium (Be)	ug/g	ND	ND	0.20	4411279
Acid Extractable Boron (B)	ug/g	ND	ND	5.0	4411279
Acid Extractable Cadmium (Cd)	ug/g	ND	ND	0.10	4411279
Acid Extractable Chromium (Cr)	ug/g	5.3	5.6	1.0	4411279
Acid Extractable Cobalt (Co)	ug/g	1.4	1.3	0.10	4411279
Acid Extractable Copper (Cu)	ug/g	1.3	1.6	0.50	4411279
Acid Extractable Lead (Pb)	ug/g	1.9	1.7	1.0	4411279
Acid Extractable Molybdenum (Mo)	ug/g	ND	ND	0.50	4411279
Acid Extractable Nickel (Ni)	ug/g	2.7	2.3	0.50	4411279
Acid Extractable Selenium (Se)	ug/g	ND	ND	0.50	4411279
Acid Extractable Silver (Ag)	ug/g	ND	ND	0.20	4411279
Acid Extractable Thallium (Tl)	ug/g	ND	ND	0.050	4411279
Acid Extractable Uranium (U)	ug/g	0.29	0.28	0.050	4412145
Acid Extractable Vanadium (V)	ug/g	11	12	5.0	4411279
RDL = Reportable Detection Limit					
QC Batch = Quality Control Batch					
Lab-Dup = Laboratory Initiated Duplicate					
ND = Not detected					

Maxxam Job #: B647433
Report Date: 2016/03/10

Terrapex Environmental Ltd
Client Project #: CB644.02
Site Location: 121 Hume Street, Collingwood, ON
Your P.O. #: 4700001396
Sampler Initials: PA

O.REG 153 METALS & INORGANICS PKG (SOIL)

Maxxam ID		BZI293	BZI293		
Sampling Date		2016/03/07 13:20	2016/03/07 13:20		
COC Number		546624-10-01	546624-10-01		
	UNITS	CS225	CS225 Lab-Dup	RDL	QC Batch
Acid Extractable Zinc (Zn)	ug/g	8.9	8.8	5.0	4411279
Acid Extractable Mercury (Hg)	ug/g	ND	ND	0.050	4411279
RDL = Reportable Detection Limit QC Batch = Quality Control Batch Lab-Dup = Laboratory Initiated Duplicate ND = Not detected					

O.REG 153 PAHS (SOIL)

Maxxam ID		BZI293	BZI293		
Sampling Date		2016/03/07 13:20	2016/03/07 13:20		
COC Number		546624-10-01	546624-10-01		
	UNITS	CS225	CS225 Lab-Dup	RDL	QC Batch
Calculated Parameters					
Methylnaphthalene, 2-(1-)	ug/g	ND		0.0071	4410658
Polyaromatic Hydrocarbons					
Acenaphthene	ug/g	ND	ND	0.0050	4412020
Acenaphthylene	ug/g	ND	ND	0.0050	4412020
Anthracene	ug/g	ND	ND	0.0050	4412020
Benzo(a)anthracene	ug/g	ND	ND	0.0050	4412020
Benzo(a)pyrene	ug/g	ND	ND	0.0050	4412020
Benzo(b/j)fluoranthene	ug/g	ND	ND	0.0050	4412020
Benzo(g,h,i)perylene	ug/g	ND	ND	0.0050	4412020
Benzo(k)fluoranthene	ug/g	ND	ND	0.0050	4412020
Chrysene	ug/g	ND	ND	0.0050	4412020
Dibenz(a,h)anthracene	ug/g	ND	ND	0.0050	4412020
Fluoranthene	ug/g	ND	ND	0.0050	4412020
Fluorene	ug/g	ND	ND	0.0050	4412020
Indeno(1,2,3-cd)pyrene	ug/g	ND	ND	0.0050	4412020
1-Methylnaphthalene	ug/g	ND	ND	0.0050	4412020
2-Methylnaphthalene	ug/g	ND	ND	0.0050	4412020
Naphthalene	ug/g	ND	ND	0.0050	4412020
Phenanthrene	ug/g	ND	ND	0.0050	4412020
Pyrene	ug/g	ND	ND	0.0050	4412020
Surrogate Recovery (%)					
D10-Anthracene	%	98	101		4412020
D14-Terphenyl (FS)	%	95	96		4412020
D8-Acenaphthylene	%	79	78		4412020
RDL = Reportable Detection Limit QC Batch = Quality Control Batch Lab-Dup = Laboratory Initiated Duplicate ND = Not detected					

O.REG 153 PETROLEUM HYDROCARBONS (SOIL)

Maxxam ID		BZI293	BZI293	BZI294	BZI294	BZI295		
Sampling Date		2016/03/07 13:20	2016/03/07 13:20	2016/03/07 13:40	2016/03/07 13:40	2016/03/07 13:40		
COC Number		546624-10-01	546624-10-01	546624-10-01	546624-10-01	546624-10-01		
	UNITS	CS225	CS225 Lab-Dup	CS2300	CS2300 Lab-Dup	CS230	RDL	QC Batch
Inorganics								
Moisture	%			21	20	20	1.0	4410822
BTEX & F1 Hydrocarbons								
Benzene	ug/g			ND		ND	0.020	4411590
Toluene	ug/g			ND		ND	0.020	4411590
Ethylbenzene	ug/g			ND		ND	0.020	4411590
o-Xylene	ug/g			ND		ND	0.020	4411590
p+m-Xylene	ug/g			ND		ND	0.040	4411590
Total Xylenes	ug/g			ND		ND	0.040	4411590
F1 (C6-C10)	ug/g	ND		ND		ND	10	4411590
F1 (C6-C10) - BTEX	ug/g	ND		ND		ND	10	4411590
F2-F4 Hydrocarbons								
F2 (C10-C16 Hydrocarbons)	ug/g	ND	ND	ND		ND	10	4411305
F3 (C16-C34 Hydrocarbons)	ug/g	ND	ND	ND		ND	50	4411305
F4 (C34-C50 Hydrocarbons)	ug/g	ND	ND	ND		ND	50	4411305
Reached Baseline at C50	ug/g	Yes	Yes	Yes		Yes		4411305
Surrogate Recovery (%)								
1,4-Difluorobenzene	%	99		99		100		4411590
4-Bromofluorobenzene	%	103		101		103		4411590
D10-Ethylbenzene	%	99		102		101		4411590
D4-1,2-Dichloroethane	%	107		106		106		4411590
o-Terphenyl	%	96	95	96		99		4411305
RDL = Reportable Detection Limit QC Batch = Quality Control Batch Lab-Dup = Laboratory Initiated Duplicate ND = Not detected								

O.REG 153 VOLATILE ORGANICS (SOIL)

Maxxam ID		BZI293		
Sampling Date		2016/03/07 13:20		
COC Number		546624-10-01		
	UNITS	CS225	RDL	QC Batch
Calculated Parameters				
1,3-Dichloropropene (cis+trans)	ug/g	ND	0.050	4410659
Volatile Organics				
Acetone (2-Propanone)	ug/g	ND	0.50	4410129
Benzene	ug/g	ND	0.020	4410129
Bromodichloromethane	ug/g	ND	0.050	4410129
Bromoform	ug/g	ND	0.050	4410129
Bromomethane	ug/g	ND	0.050	4410129
Carbon Tetrachloride	ug/g	ND	0.050	4410129
Chlorobenzene	ug/g	ND	0.050	4410129
Chloroform	ug/g	ND	0.050	4410129
Dibromochloromethane	ug/g	ND	0.050	4410129
1,2-Dichlorobenzene	ug/g	ND	0.050	4410129
1,3-Dichlorobenzene	ug/g	ND	0.050	4410129
1,4-Dichlorobenzene	ug/g	ND	0.050	4410129
Dichlorodifluoromethane (FREON 12)	ug/g	ND	0.050	4410129
1,1-Dichloroethane	ug/g	ND	0.050	4410129
1,2-Dichloroethane	ug/g	ND	0.050	4410129
1,1-Dichloroethylene	ug/g	ND	0.050	4410129
cis-1,2-Dichloroethylene	ug/g	ND	0.050	4410129
trans-1,2-Dichloroethylene	ug/g	ND	0.050	4410129
1,2-Dichloropropane	ug/g	ND	0.050	4410129
cis-1,3-Dichloropropene	ug/g	ND	0.030	4410129
trans-1,3-Dichloropropene	ug/g	ND	0.040	4410129
Ethylbenzene	ug/g	ND	0.020	4410129
Ethylene Dibromide	ug/g	ND	0.050	4410129
Hexane	ug/g	ND	0.050	4410129
Methylene Chloride(Dichloromethane)	ug/g	ND	0.050	4410129
Methyl Ethyl Ketone (2-Butanone)	ug/g	ND	0.50	4410129
Methyl Isobutyl Ketone	ug/g	ND	0.50	4410129
Methyl t-butyl ether (MTBE)	ug/g	ND	0.050	4410129
Styrene	ug/g	ND	0.050	4410129
1,1,1,2-Tetrachloroethane	ug/g	ND	0.050	4410129
RDL = Reportable Detection Limit				
QC Batch = Quality Control Batch				
ND = Not detected				

O.REG 153 VOLATILE ORGANICS (SOIL)

Maxxam ID		BZI293		
Sampling Date		2016/03/07 13:20		
COC Number		546624-10-01		
	UNITS	CS225	RDL	QC Batch
1,1,2,2-Tetrachloroethane	ug/g	ND	0.050	4410129
Tetrachloroethylene	ug/g	ND	0.050	4410129
Toluene	ug/g	ND	0.020	4410129
1,1,1-Trichloroethane	ug/g	ND	0.050	4410129
1,1,2-Trichloroethane	ug/g	ND	0.050	4410129
Trichloroethylene	ug/g	ND	0.050	4410129
Trichlorofluoromethane (FREON 11)	ug/g	ND	0.050	4410129
Vinyl Chloride	ug/g	ND	0.020	4410129
p+m-Xylene	ug/g	ND	0.020	4410129
o-Xylene	ug/g	ND	0.020	4410129
Total Xylenes	ug/g	ND	0.020	4410129
Surrogate Recovery (%)				
4-Bromofluorobenzene	%	93		4410129
D10-o-Xylene	%	91		4410129
D4-1,2-Dichloroethane	%	96		4410129
D8-Toluene	%	97		4410129
RDL = Reportable Detection Limit QC Batch = Quality Control Batch ND = Not detected				

Maxxam Job #: B647433
Report Date: 2016/03/10

Terrapex Environmental Ltd
Client Project #: CB644.02
Site Location: 121 Hume Street, Collingwood, ON
Your P.O. #: 4700001396
Sampler Initials: PA

TEST SUMMARY

Maxxam ID: BZI293
Sample ID: CS225
Matrix: Soil

Collected: 2016/03/07
Shipped:
Received: 2016/03/09

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	4410658	N/A	2016/03/10	Automated Statchk
Hot Water Extractable Boron	ICP	4411298	2016/03/09	2016/03/09	Suban Kanapathipplai
1,3-Dichloropropene Sum	CALC	4410659	N/A	2016/03/10	Automated Statchk
Free (WAD) Cyanide	TECH	4410728	2016/03/09	2016/03/09	Christine Pham
Conductivity	AT	4411266	2016/03/09	2016/03/09	Lemeneh Addis
Hexavalent Chromium in Soil by IC	IC/SPEC	4410667	2016/03/09	2016/03/09	Sally Coughlin
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	4411590	N/A	2016/03/09	Georgeta Rusu
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	4411305	2016/03/09	2016/03/10	Barbara Wowk
Strong Acid Leachable Metals by ICPMS	ICP/MS	4411279	2016/03/09	2016/03/09	Viviana Canzonieri
Moisture	BAL	4410822	N/A	2016/03/09	Min Yang
PAH Compounds in Soil by GC/MS (SIM)	GC/MS	4412020	2016/03/09	2016/03/10	Jett Wu
pH CaCl2 EXTRACT	AT	4410707	2016/03/09	2016/03/09	Neil Dassanayake
Sodium Adsorption Ratio (SAR)	CALC/MET	4410660	N/A	2016/03/09	Automated Statchk
SAR - ICP Metals	ICP	4411263	2016/03/09	2016/03/09	Suban Kanapathipplai
Volatile Organic Compounds in Soil	GC/MS	4410129	N/A	2016/03/09	Karen Hughes

Maxxam ID: BZI293 Dup
Sample ID: CS225
Matrix: Soil

Collected: 2016/03/07
Shipped:
Received: 2016/03/09

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Free (WAD) Cyanide	TECH	4410728	2016/03/09	2016/03/09	Christine Pham
Conductivity	AT	4411266	2016/03/09	2016/03/09	Lemeneh Addis
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	4411305	2016/03/09	2016/03/10	Barbara Wowk
Strong Acid Leachable Metals by ICPMS	ICP/MS	4411279	2016/03/09	2016/03/09	Viviana Canzonieri
PAH Compounds in Soil by GC/MS (SIM)	GC/MS	4412020	2016/03/09	2016/03/10	Jett Wu
SAR - ICP Metals	ICP	4411263	2016/03/09	2016/03/09	Suban Kanapathipplai

Maxxam ID: BZI294
Sample ID: CS2300
Matrix: Soil

Collected: 2016/03/07
Shipped:
Received: 2016/03/09

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	4411590	N/A	2016/03/10	Georgeta Rusu
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	4411305	2016/03/09	2016/03/10	Barbara Wowk
Moisture	BAL	4410822	N/A	2016/03/09	Min Yang

Maxxam ID: BZI294 Dup
Sample ID: CS2300
Matrix: Soil

Collected: 2016/03/07
Shipped:
Received: 2016/03/09

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Moisture	BAL	4410822	N/A	2016/03/09	Min Yang

Maxxam Job #: B647433
Report Date: 2016/03/10

Terrapex Environmental Ltd
Client Project #: CB644.02
Site Location: 121 Hume Street, Collingwood, ON
Your P.O. #: 4700001396
Sampler Initials: PA

TEST SUMMARY

Maxxam ID: BZI295
Sample ID: CS230
Matrix: Soil

Collected: 2016/03/07
Shipped:
Received: 2016/03/09

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	4411590	N/A	2016/03/10	Georgeta Rusu
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	4411305	2016/03/09	2016/03/10	Barbara Wowk
Moisture	BAL	4410822	N/A	2016/03/09	Min Yang

Maxxam Job #: B647433
Report Date: 2016/03/10

Terrapex Environmental Ltd
Client Project #: CB644.02
Site Location: 121 Hume Street, Collingwood, ON
Your P.O. #: 4700001396
Sampler Initials: PA

GENERAL COMMENTS

Each temperature is the average of up to three cooler temperatures taken at receipt

Package 1	3.3°C

Sample BZI293, Strong Acid Leachable Metals by ICPMS: Test repeated.

Results relate only to the items tested.

QUALITY ASSURANCE REPORT

QA/QC				Date				
Batch	Init	QC Type	Parameter	Analyzed	Value	Recovery	UNITS	QC Limits
4410129	KH2	Matrix Spike	4-Bromofluorobenzene	2016/03/09		100	%	60 - 140
			D10-o-Xylene	2016/03/09		104	%	60 - 130
			D4-1,2-Dichloroethane	2016/03/09		92	%	60 - 140
			D8-Toluene	2016/03/09		104	%	60 - 140
			Acetone (2-Propanone)	2016/03/09		97	%	60 - 140
			Benzene	2016/03/09		104	%	60 - 140
			Bromodichloromethane	2016/03/09		97	%	60 - 140
			Bromoform	2016/03/09		90	%	60 - 140
			Bromomethane	2016/03/09		85	%	60 - 140
			Carbon Tetrachloride	2016/03/09		102	%	60 - 140
			Chlorobenzene	2016/03/09		103	%	60 - 140
			Chloroform	2016/03/09		99	%	60 - 140
			Dibromochloromethane	2016/03/09		95	%	60 - 140
			1,2-Dichlorobenzene	2016/03/09		102	%	60 - 140
			1,3-Dichlorobenzene	2016/03/09		107	%	60 - 140
			1,4-Dichlorobenzene	2016/03/09		110	%	60 - 140
			Dichlorodifluoromethane (FREON 12)	2016/03/09		99	%	60 - 140
			1,1-Dichloroethane	2016/03/09		101	%	60 - 140
			1,2-Dichloroethane	2016/03/09		97	%	60 - 140
			1,1-Dichloroethylene	2016/03/09		107	%	60 - 140
			cis-1,2-Dichloroethylene	2016/03/09		103	%	60 - 140
			trans-1,2-Dichloroethylene	2016/03/09		101	%	60 - 140
			1,2-Dichloropropane	2016/03/09		100	%	60 - 140
			cis-1,3-Dichloropropene	2016/03/09		94	%	60 - 140
			trans-1,3-Dichloropropene	2016/03/09		90	%	60 - 140
			Ethylbenzene	2016/03/09		110	%	60 - 140
			Ethylene Dibromide	2016/03/09		96	%	60 - 140
			Hexane	2016/03/09		116	%	60 - 140
			Methylene Chloride(Dichloromethane)	2016/03/09		106	%	60 - 140
			Methyl Ethyl Ketone (2-Butanone)	2016/03/09		98	%	60 - 140
			Methyl Isobutyl Ketone	2016/03/09		97	%	60 - 140
			Methyl t-butyl ether (MTBE)	2016/03/09		102	%	60 - 140
			Styrene	2016/03/09		108	%	60 - 140
			1,1,1,2-Tetrachloroethane	2016/03/09		98	%	60 - 140
			1,1,2,2-Tetrachloroethane	2016/03/09		94	%	60 - 140
			Tetrachloroethylene	2016/03/09		103	%	60 - 140
			Toluene	2016/03/09		106	%	60 - 140
			1,1,1-Trichloroethane	2016/03/09		99	%	60 - 140
			1,1,2-Trichloroethane	2016/03/09		95	%	60 - 140
			Trichloroethylene	2016/03/09		101	%	60 - 140
			Trichlorofluoromethane (FREON 11)	2016/03/09		102	%	60 - 140
			Vinyl Chloride	2016/03/09		102	%	60 - 140
			p+m-Xylene	2016/03/09		110	%	60 - 140
			o-Xylene	2016/03/09		110	%	60 - 140
4410129	KH2	Spiked Blank	4-Bromofluorobenzene	2016/03/09		102	%	60 - 140
			D10-o-Xylene	2016/03/09		102	%	60 - 130
			D4-1,2-Dichloroethane	2016/03/09		100	%	60 - 140
			D8-Toluene	2016/03/09		103	%	60 - 140
			Acetone (2-Propanone)	2016/03/09		106	%	60 - 140
			Benzene	2016/03/09		107	%	60 - 130
			Bromodichloromethane	2016/03/09		105	%	60 - 130

Maxxam Job #: B647433
Report Date: 2016/03/10

Terrapex Environmental Ltd
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Sampler Initials: PA

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC	Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
				Bromoform	2016/03/09		103	%	60 - 130
				Bromomethane	2016/03/09		93	%	60 - 140
				Carbon Tetrachloride	2016/03/09		103	%	60 - 130
				Chlorobenzene	2016/03/09		106	%	60 - 130
				Chloroform	2016/03/09		104	%	60 - 130
				Dibromochloromethane	2016/03/09		105	%	60 - 130
				1,2-Dichlorobenzene	2016/03/09		105	%	60 - 130
				1,3-Dichlorobenzene	2016/03/09		106	%	60 - 130
				1,4-Dichlorobenzene	2016/03/09		110	%	60 - 130
				Dichlorodifluoromethane (FREON 12)	2016/03/09		105	%	60 - 140
				1,1-Dichloroethane	2016/03/09		105	%	60 - 130
				1,2-Dichloroethane	2016/03/09		106	%	60 - 130
				1,1-Dichloroethylene	2016/03/09		108	%	60 - 130
				cis-1,2-Dichloroethylene	2016/03/09		109	%	60 - 130
				trans-1,2-Dichloroethylene	2016/03/09		103	%	60 - 130
				1,2-Dichloropropane	2016/03/09		106	%	60 - 130
				cis-1,3-Dichloropropene	2016/03/09		106	%	60 - 130
				trans-1,3-Dichloropropene	2016/03/09		106	%	60 - 130
				Ethylbenzene	2016/03/09		110	%	60 - 130
				Ethylene Dibromide	2016/03/09		107	%	60 - 130
				Hexane	2016/03/09		115	%	60 - 130
				Methylene Chloride(Dichloromethane)	2016/03/09		113	%	60 - 130
				Methyl Ethyl Ketone (2-Butanone)	2016/03/09		114	%	60 - 140
				Methyl Isobutyl Ketone	2016/03/09		115	%	60 - 130
				Methyl t-butyl ether (MTBE)	2016/03/09		109	%	60 - 130
				Styrene	2016/03/09		113	%	60 - 130
				1,1,1,2-Tetrachloroethane	2016/03/09		103	%	60 - 130
				1,1,2,2-Tetrachloroethane	2016/03/09		107	%	60 - 130
				Tetrachloroethylene	2016/03/09		102	%	60 - 130
				Toluene	2016/03/09		108	%	60 - 130
				1,1,1-Trichloroethane	2016/03/09		100	%	60 - 130
				1,1,2-Trichloroethane	2016/03/09		105	%	60 - 130
				Trichloroethylene	2016/03/09		103	%	60 - 130
				Trichlorofluoromethane (FREON 11)	2016/03/09		103	%	60 - 130
				Vinyl Chloride	2016/03/09		105	%	60 - 130
				p+m-Xylene	2016/03/09		109	%	60 - 130
				o-Xylene	2016/03/09		111	%	60 - 130
4410129	KH2	Method Blank		4-Bromofluorobenzene	2016/03/09		96	%	60 - 140
				D10-o-Xylene	2016/03/09		100	%	60 - 130
				D4-1,2-Dichloroethane	2016/03/09		104	%	60 - 140
				D8-Toluene	2016/03/09		93	%	60 - 140
				Acetone (2-Propanone)	2016/03/09	ND, RDL=0.50		ug/g	
				Benzene	2016/03/09	ND, RDL=0.020		ug/g	
				Bromodichloromethane	2016/03/09	ND, RDL=0.050		ug/g	
				Bromoform	2016/03/09	ND, RDL=0.050		ug/g	
				Bromomethane	2016/03/09	ND, RDL=0.050		ug/g	

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Carbon Tetrachloride	2016/03/09	ND, RDL=0.050		ug/g	
			Chlorobenzene	2016/03/09	ND, RDL=0.050		ug/g	
			Chloroform	2016/03/09	ND, RDL=0.050		ug/g	
			Dibromochloromethane	2016/03/09	ND, RDL=0.050		ug/g	
			1,2-Dichlorobenzene	2016/03/09	ND, RDL=0.050		ug/g	
			1,3-Dichlorobenzene	2016/03/09	ND, RDL=0.050		ug/g	
			1,4-Dichlorobenzene	2016/03/09	ND, RDL=0.050		ug/g	
			Dichlorodifluoromethane (FREON 12)	2016/03/09	ND, RDL=0.050		ug/g	
			1,1-Dichloroethane	2016/03/09	ND, RDL=0.050		ug/g	
			1,2-Dichloroethane	2016/03/09	ND, RDL=0.050		ug/g	
			1,1-Dichloroethylene	2016/03/09	ND, RDL=0.050		ug/g	
			cis-1,2-Dichloroethylene	2016/03/09	ND, RDL=0.050		ug/g	
			trans-1,2-Dichloroethylene	2016/03/09	ND, RDL=0.050		ug/g	
			1,2-Dichloropropane	2016/03/09	ND, RDL=0.050		ug/g	
			cis-1,3-Dichloropropene	2016/03/09	ND, RDL=0.030		ug/g	
			trans-1,3-Dichloropropene	2016/03/09	ND, RDL=0.040		ug/g	
			Ethylbenzene	2016/03/09	ND, RDL=0.020		ug/g	
			Ethylene Dibromide	2016/03/09	ND, RDL=0.050		ug/g	
			Hexane	2016/03/09	ND, RDL=0.050		ug/g	
			Methylene Chloride(Dichloromethane)	2016/03/09	ND, RDL=0.050		ug/g	
			Methyl Ethyl Ketone (2-Butanone)	2016/03/09	ND, RDL=0.50		ug/g	
			Methyl Isobutyl Ketone	2016/03/09	ND, RDL=0.50		ug/g	
			Methyl t-butyl ether (MTBE)	2016/03/09	ND, RDL=0.050		ug/g	
			Styrene	2016/03/09	ND, RDL=0.050		ug/g	

Maxxam Job #: B647433
Report Date: 2016/03/10

Terrapex Environmental Ltd
Client Project #: CB644.02
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Sampler Initials: PA

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC	Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
				1,1,1,2-Tetrachloroethane	2016/03/09	ND, RDL=0.050		ug/g	
				1,1,2,2-Tetrachloroethane	2016/03/09	ND, RDL=0.050		ug/g	
				Tetrachloroethylene	2016/03/09	ND, RDL=0.050		ug/g	
				Toluene	2016/03/09	ND, RDL=0.020		ug/g	
				1,1,1-Trichloroethane	2016/03/09	ND, RDL=0.050		ug/g	
				1,1,2-Trichloroethane	2016/03/09	ND, RDL=0.050		ug/g	
				Trichloroethylene	2016/03/09	ND, RDL=0.050		ug/g	
				Trichlorofluoromethane (FREON 11)	2016/03/09	ND, RDL=0.050		ug/g	
				Vinyl Chloride	2016/03/09	ND, RDL=0.020		ug/g	
				p+m-Xylene	2016/03/09	ND, RDL=0.020		ug/g	
				o-Xylene	2016/03/09	ND, RDL=0.020		ug/g	
				Total Xylenes	2016/03/09	ND, RDL=0.020		ug/g	
4410129	KH2	RPD		Acetone (2-Propanone)	2016/03/09	NC		%	50
				Benzene	2016/03/09	NC		%	50
				Bromodichloromethane	2016/03/09	NC		%	50
				Bromoform	2016/03/09	NC		%	50
				Bromomethane	2016/03/09	NC		%	50
				Carbon Tetrachloride	2016/03/09	NC		%	50
				Chlorobenzene	2016/03/09	NC		%	50
				Chloroform	2016/03/09	NC		%	50
				Dibromochloromethane	2016/03/09	NC		%	50
				1,2-Dichlorobenzene	2016/03/09	NC		%	50
				1,3-Dichlorobenzene	2016/03/09	NC		%	50
				1,4-Dichlorobenzene	2016/03/09	NC		%	50
				Dichlorodifluoromethane (FREON 12)	2016/03/09	NC		%	50
				1,1-Dichloroethane	2016/03/09	NC		%	50
				1,2-Dichloroethane	2016/03/09	NC		%	50
				1,1-Dichloroethylene	2016/03/09	NC		%	50
				cis-1,2-Dichloroethylene	2016/03/09	NC		%	50
				trans-1,2-Dichloroethylene	2016/03/09	NC		%	50
				1,2-Dichloropropane	2016/03/09	NC		%	50
				cis-1,3-Dichloropropene	2016/03/09	NC		%	50
				trans-1,3-Dichloropropene	2016/03/09	NC		%	50
				Ethylbenzene	2016/03/09	NC		%	50
				Ethylene Dibromide	2016/03/09	NC		%	50
				Hexane	2016/03/09	NC		%	50
				Methylene Chloride(Dichloromethane)	2016/03/09	NC		%	50
				Methyl Ethyl Ketone (2-Butanone)	2016/03/09	NC		%	50

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Methyl Isobutyl Ketone	2016/03/09	NC		%	50
			Methyl t-butyl ether (MTBE)	2016/03/09	NC		%	50
			Styrene	2016/03/09	NC		%	50
			1,1,1,2-Tetrachloroethane	2016/03/09	NC		%	50
			1,1,2,2-Tetrachloroethane	2016/03/09	NC		%	50
			Tetrachloroethylene	2016/03/09	NC		%	50
			Toluene	2016/03/09	NC		%	50
			1,1,1-Trichloroethane	2016/03/09	NC		%	50
			1,1,2-Trichloroethane	2016/03/09	NC		%	50
			Trichloroethylene	2016/03/09	NC		%	50
			Trichlorofluoromethane (FREON 11)	2016/03/09	NC		%	50
			Vinyl Chloride	2016/03/09	NC		%	50
			p+m-Xylene	2016/03/09	NC		%	50
			o-Xylene	2016/03/09	NC		%	50
			Total Xylenes	2016/03/09	NC		%	50
4410667	SAC	Matrix Spike	Chromium (VI)	2016/03/09		65 (1)	%	75 - 125
4410667	SAC	QC Standard	Chromium (VI)	2016/03/09		77	%	75 - 125
4410667	SAC	Spiked Blank	Chromium (VI)	2016/03/09		91	%	80 - 120
4410667	SAC	Method Blank	Chromium (VI)	2016/03/09	ND, RDL=0.2		ug/g	
4410667	SAC	RPD	Chromium (VI)	2016/03/09	NC		%	35
4410707	NYS	Spiked Blank	Available (CaCl2) pH	2016/03/09		99	%	97 - 103
4410707	NYS	RPD	Available (CaCl2) pH	2016/03/09	0.34		%	N/A
4410728	CP	Matrix Spike [BZI293-01]	Free Cyanide	2016/03/09		106	%	75 - 125
4410728	CP	Spiked Blank	Free Cyanide	2016/03/09		105	%	80 - 120
4410728	CP	Method Blank	Free Cyanide	2016/03/09	ND, RDL=0.01		ug/g	
4410728	CP	RPD [BZI293-01]	Free Cyanide	2016/03/09	NC		%	35
4410822	SDE	RPD [BZI294-01]	Moisture	2016/03/09	3.4		%	20
4411263	SUK	Spiked Blank	Soluble Calcium (Ca)	2016/03/09		94	%	80 - 120
			Soluble Magnesium (Mg)	2016/03/09		96	%	80 - 120
			Soluble Sodium (Na)	2016/03/09		98	%	80 - 120
4411263	SUK	Method Blank	Soluble Calcium (Ca)	2016/03/09	ND, RDL=0.5		mg/L	
			Soluble Magnesium (Mg)	2016/03/09	ND, RDL=0.5		mg/L	
			Soluble Sodium (Na)	2016/03/09	ND,RDL=5		mg/L	
4411263	SUK	RPD [BZI293-01]	Soluble Calcium (Ca)	2016/03/09	2.0		%	30
			Soluble Magnesium (Mg)	2016/03/09	NC		%	30
			Soluble Sodium (Na)	2016/03/09	NC		%	30
4411266	L_A	Spiked Blank	Conductivity	2016/03/09		99	%	90 - 110
4411266	L_A	Method Blank	Conductivity	2016/03/09	ND, RDL=0.002		mS/cm	
4411266	L_A	RPD [BZI293-01]	Conductivity	2016/03/09	3.1		%	10
4411279	VIV	Matrix Spike [BZI293-01]	Acid Extractable Antimony (Sb)	2016/03/09		96	%	75 - 125
			Acid Extractable Arsenic (As)	2016/03/09		99	%	75 - 125
			Acid Extractable Barium (Ba)	2016/03/09		98	%	75 - 125
			Acid Extractable Beryllium (Be)	2016/03/09		100	%	75 - 125
			Acid Extractable Boron (B)	2016/03/09		99	%	75 - 125
			Acid Extractable Cadmium (Cd)	2016/03/09		100	%	75 - 125
			Acid Extractable Chromium (Cr)	2016/03/09		110	%	75 - 125

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC				Date				
Batch	Init	QC Type	Parameter	Analyzed	Value	Recovery	UNITS	QC Limits
4411279	VIV	Spiked Blank	Acid Extractable Cobalt (Co)	2016/03/09		101	%	75 - 125
			Acid Extractable Copper (Cu)	2016/03/09		101	%	75 - 125
			Acid Extractable Lead (Pb)	2016/03/09		98	%	75 - 125
			Acid Extractable Molybdenum (Mo)	2016/03/09		106	%	75 - 125
			Acid Extractable Nickel (Ni)	2016/03/09		106	%	75 - 125
			Acid Extractable Selenium (Se)	2016/03/09		102	%	75 - 125
			Acid Extractable Silver (Ag)	2016/03/09		101	%	75 - 125
			Acid Extractable Thallium (Tl)	2016/03/09		96	%	75 - 125
			Acid Extractable Vanadium (V)	2016/03/09		106	%	75 - 125
			Acid Extractable Zinc (Zn)	2016/03/09		96	%	75 - 125
			Acid Extractable Mercury (Hg)	2016/03/09		102	%	75 - 125
			Acid Extractable Antimony (Sb)	2016/03/09		97	%	80 - 120
			Acid Extractable Arsenic (As)	2016/03/09		98	%	80 - 120
			Acid Extractable Barium (Ba)	2016/03/09		97	%	80 - 120
			Acid Extractable Beryllium (Be)	2016/03/09		97	%	80 - 120
			Acid Extractable Boron (B)	2016/03/09		97	%	80 - 120
			Acid Extractable Cadmium (Cd)	2016/03/09		97	%	80 - 120
			Acid Extractable Chromium (Cr)	2016/03/09		99	%	80 - 120
			Acid Extractable Cobalt (Co)	2016/03/09		99	%	80 - 120
			Acid Extractable Copper (Cu)	2016/03/09		102	%	80 - 120
			Acid Extractable Lead (Pb)	2016/03/09		102	%	80 - 120
			Acid Extractable Molybdenum (Mo)	2016/03/09		101	%	80 - 120
			Acid Extractable Nickel (Ni)	2016/03/09		98	%	80 - 120
			Acid Extractable Selenium (Se)	2016/03/09		99	%	80 - 120
Acid Extractable Silver (Ag)	2016/03/09		100	%	80 - 120			
Acid Extractable Thallium (Tl)	2016/03/09		102	%	80 - 120			
Acid Extractable Vanadium (V)	2016/03/09		95	%	80 - 120			
Acid Extractable Zinc (Zn)	2016/03/09		106	%	80 - 120			
4411279	VIV	Method Blank	Acid Extractable Mercury (Hg)	2016/03/09		102	%	80 - 120
			Acid Extractable Antimony (Sb)	2016/03/09	ND, RDL=0.20		ug/g	
			Acid Extractable Arsenic (As)	2016/03/09	ND, RDL=1.0		ug/g	
			Acid Extractable Barium (Ba)	2016/03/09	ND, RDL=0.50		ug/g	
			Acid Extractable Beryllium (Be)	2016/03/09	ND, RDL=0.20		ug/g	
			Acid Extractable Boron (B)	2016/03/09	ND, RDL=5.0		ug/g	
			Acid Extractable Cadmium (Cd)	2016/03/09	ND, RDL=0.10		ug/g	
			Acid Extractable Chromium (Cr)	2016/03/09	ND, RDL=1.0		ug/g	
			Acid Extractable Cobalt (Co)	2016/03/09	ND, RDL=0.10		ug/g	
			Acid Extractable Copper (Cu)	2016/03/09	ND, RDL=0.50		ug/g	
			Acid Extractable Lead (Pb)	2016/03/09	ND, RDL=1.0		ug/g	

Maxxam Job #: B647433
Report Date: 2016/03/10

Terrapex Environmental Ltd
Client Project #: CB644.02
Site Location: 121 Hume Street, Collingwood, ON
Your P.O. #: 4700001396
Sampler Initials: PA

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Acid Extractable Molybdenum (Mo)	2016/03/09	ND, RDL=0.50		ug/g	
			Acid Extractable Nickel (Ni)	2016/03/09	ND, RDL=0.50		ug/g	
			Acid Extractable Selenium (Se)	2016/03/09	ND, RDL=0.50		ug/g	
			Acid Extractable Silver (Ag)	2016/03/09	ND, RDL=0.20		ug/g	
			Acid Extractable Thallium (Tl)	2016/03/09	ND, RDL=0.050		ug/g	
			Acid Extractable Vanadium (V)	2016/03/09	ND, RDL=5.0		ug/g	
			Acid Extractable Zinc (Zn)	2016/03/09	ND, RDL=5.0		ug/g	
			Acid Extractable Mercury (Hg)	2016/03/09	ND, RDL=0.050		ug/g	
4411279	VIV	RPD [BZI293-01]	Acid Extractable Antimony (Sb)	2016/03/09	NC		%	30
			Acid Extractable Arsenic (As)	2016/03/09	NC		%	30
			Acid Extractable Barium (Ba)	2016/03/09	8.6		%	30
			Acid Extractable Beryllium (Be)	2016/03/09	NC		%	30
			Acid Extractable Boron (B)	2016/03/09	NC		%	30
			Acid Extractable Cadmium (Cd)	2016/03/09	NC		%	30
			Acid Extractable Chromium (Cr)	2016/03/09	6.0		%	30
			Acid Extractable Cobalt (Co)	2016/03/09	11		%	30
			Acid Extractable Copper (Cu)	2016/03/09	NC		%	30
			Acid Extractable Lead (Pb)	2016/03/09	NC		%	30
			Acid Extractable Molybdenum (Mo)	2016/03/09	NC		%	30
			Acid Extractable Nickel (Ni)	2016/03/09	NC		%	30
			Acid Extractable Selenium (Se)	2016/03/09	NC		%	30
			Acid Extractable Silver (Ag)	2016/03/09	NC		%	30
			Acid Extractable Thallium (Tl)	2016/03/09	NC		%	30
			Acid Extractable Vanadium (V)	2016/03/09	NC		%	30
			Acid Extractable Zinc (Zn)	2016/03/09	NC		%	30
			Acid Extractable Mercury (Hg)	2016/03/09	NC		%	30
4411298	SUK	Matrix Spike	Hot Water Ext. Boron (B)	2016/03/09		91	%	75 - 125
4411298	SUK	Spiked Blank	Hot Water Ext. Boron (B)	2016/03/09		90	%	75 - 125
4411298	SUK	Method Blank	Hot Water Ext. Boron (B)	2016/03/09	ND, RDL=0.050		ug/g	
4411298	SUK	RPD	Hot Water Ext. Boron (B)	2016/03/09	NC		%	40
4411305	BWW	Matrix Spike [BZI293-03]	o-Terphenyl	2016/03/09		97	%	60 - 130
			F2 (C10-C16 Hydrocarbons)	2016/03/09		86	%	50 - 130
			F3 (C16-C34 Hydrocarbons)	2016/03/09		92	%	50 - 130
			F4 (C34-C50 Hydrocarbons)	2016/03/09		90	%	50 - 130
4411305	BWW	Spiked Blank	o-Terphenyl	2016/03/09		99	%	60 - 130
			F2 (C10-C16 Hydrocarbons)	2016/03/09		90	%	80 - 120
			F3 (C16-C34 Hydrocarbons)	2016/03/09		95	%	80 - 120
			F4 (C34-C50 Hydrocarbons)	2016/03/09		90	%	80 - 120
4411305	BWW	Method Blank	o-Terphenyl	2016/03/09		95	%	60 - 130
			F2 (C10-C16 Hydrocarbons)	2016/03/09	ND, RDL=10		ug/g	

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC	Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
				F3 (C16-C34 Hydrocarbons)	2016/03/09	ND, RDL=50		ug/g	
				F4 (C34-C50 Hydrocarbons)	2016/03/09	ND, RDL=50		ug/g	
4411305	BWW	RPD	[BZI293-03]	F2 (C10-C16 Hydrocarbons)	2016/03/10	NC		%	30
				F3 (C16-C34 Hydrocarbons)	2016/03/10	NC		%	30
				F4 (C34-C50 Hydrocarbons)	2016/03/10	NC		%	30
4411590	GRU	Matrix Spike		1,4-Difluorobenzene	2016/03/09		100	%	60 - 140
				4-Bromofluorobenzene	2016/03/09		102	%	60 - 140
				D10-Ethylbenzene	2016/03/09		93	%	60 - 140
				D4-1,2-Dichloroethane	2016/03/09		106	%	60 - 140
				Benzene	2016/03/09		87	%	60 - 140
				Toluene	2016/03/09		88	%	60 - 140
				Ethylbenzene	2016/03/09		95	%	60 - 140
				o-Xylene	2016/03/09		100	%	60 - 140
				p+m-Xylene	2016/03/09		88	%	60 - 140
				F1 (C6-C10)	2016/03/09		78	%	60 - 140
4411590	GRU	Spiked Blank		1,4-Difluorobenzene	2016/03/09		99	%	60 - 140
				4-Bromofluorobenzene	2016/03/09		102	%	60 - 140
				D10-Ethylbenzene	2016/03/09		97	%	60 - 140
				D4-1,2-Dichloroethane	2016/03/09		105	%	60 - 140
				Benzene	2016/03/09		97	%	60 - 140
				Toluene	2016/03/09		100	%	60 - 140
				Ethylbenzene	2016/03/09		108	%	60 - 140
				o-Xylene	2016/03/09		113	%	60 - 140
				p+m-Xylene	2016/03/09		100	%	60 - 140
				F1 (C6-C10)	2016/03/09		85	%	80 - 120
4411590	GRU	Method Blank		1,4-Difluorobenzene	2016/03/09		100	%	60 - 140
				4-Bromofluorobenzene	2016/03/09		102	%	60 - 140
				D10-Ethylbenzene	2016/03/09		98	%	60 - 140
				D4-1,2-Dichloroethane	2016/03/09		108	%	60 - 140
				Benzene	2016/03/09	ND, RDL=0.020		ug/g	
				Toluene	2016/03/09	ND, RDL=0.020		ug/g	
				Ethylbenzene	2016/03/09	ND, RDL=0.020		ug/g	
				o-Xylene	2016/03/09	ND, RDL=0.020		ug/g	
				p+m-Xylene	2016/03/09	ND, RDL=0.040		ug/g	
				Total Xylenes	2016/03/09	ND, RDL=0.040		ug/g	
				F1 (C6-C10)	2016/03/09	ND, RDL=10		ug/g	
				F1 (C6-C10) - BTEX	2016/03/09	ND, RDL=10		ug/g	
4411590	GRU	RPD		Benzene	2016/03/09	NC		%	50
				Toluene	2016/03/09	NC		%	50
				Ethylbenzene	2016/03/09	NC		%	50

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
4412020	JET	Matrix Spike [BZI293-02]	o-Xylene	2016/03/09	NC		%	50
			p+m-Xylene	2016/03/09	NC		%	50
			Total Xylenes	2016/03/09	NC		%	50
			F1 (C6-C10)	2016/03/09	NC		%	30
			F1 (C6-C10) - BTEX	2016/03/09	NC		%	30
			D10-Anthracene	2016/03/10		94	%	50 - 130
			D14-Terphenyl (FS)	2016/03/10		94	%	50 - 130
			D8-Acenaphthylene	2016/03/10		82	%	50 - 130
			Acenaphthene	2016/03/10		81	%	50 - 130
			Acenaphthylene	2016/03/10		77	%	50 - 130
			Anthracene	2016/03/10		77	%	50 - 130
			Benzo(a)anthracene	2016/03/10		89	%	50 - 130
			Benzo(a)pyrene	2016/03/10		90	%	50 - 130
			Benzo(b/j)fluoranthene	2016/03/10		100	%	50 - 130
			Benzo(g,h,i)perylene	2016/03/10		68	%	50 - 130
			Benzo(k)fluoranthene	2016/03/10		93	%	50 - 130
			Chrysene	2016/03/10		91	%	50 - 130
			Dibenz(a,h)anthracene	2016/03/10		71	%	50 - 130
			Fluoranthene	2016/03/10		94	%	50 - 130
			Fluorene	2016/03/10		86	%	50 - 130
			Indeno(1,2,3-cd)pyrene	2016/03/10		76	%	50 - 130
			1-Methylnaphthalene	2016/03/10		67	%	50 - 130
			2-Methylnaphthalene	2016/03/10		61	%	50 - 130
			Naphthalene	2016/03/10		52	%	50 - 130
			Phenanthrene	2016/03/10		85	%	50 - 130
			Pyrene	2016/03/10		91	%	50 - 130
4412020	JET	Spiked Blank	D10-Anthracene	2016/03/10		93	%	50 - 130
			D14-Terphenyl (FS)	2016/03/10		94	%	50 - 130
			D8-Acenaphthylene	2016/03/10		82	%	50 - 130
			Acenaphthene	2016/03/10		84	%	50 - 130
			Acenaphthylene	2016/03/10		81	%	50 - 130
			Anthracene	2016/03/10		80	%	50 - 130
			Benzo(a)anthracene	2016/03/10		89	%	50 - 130
			Benzo(a)pyrene	2016/03/10		86	%	50 - 130
			Benzo(b/j)fluoranthene	2016/03/10		102	%	50 - 130
			Benzo(g,h,i)perylene	2016/03/10		67	%	50 - 130
			Benzo(k)fluoranthene	2016/03/10		93	%	50 - 130
			Chrysene	2016/03/10		92	%	50 - 130
			Dibenz(a,h)anthracene	2016/03/10		67	%	50 - 130
			Fluoranthene	2016/03/10		94	%	50 - 130
			Fluorene	2016/03/10		89	%	50 - 130
			Indeno(1,2,3-cd)pyrene	2016/03/10		73	%	50 - 130
			1-Methylnaphthalene	2016/03/10		78	%	50 - 130
			2-Methylnaphthalene	2016/03/10		73	%	50 - 130
			Naphthalene	2016/03/10		63	%	50 - 130
			Phenanthrene	2016/03/10		85	%	50 - 130
			Pyrene	2016/03/10		92	%	50 - 130
4412020	JET	Method Blank	D10-Anthracene	2016/03/10		99	%	50 - 130
			D14-Terphenyl (FS)	2016/03/10		97	%	50 - 130
			D8-Acenaphthylene	2016/03/10		81	%	50 - 130

Maxxam Job #: B647433
Report Date: 2016/03/10

Terrapex Environmental Ltd
Client Project #: CB644.02
Site Location: 121 Hume Street, Collingwood, ON
Your P.O. #: 4700001396
Sampler Initials: PA

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Acenaphthene	2016/03/10	ND, RDL=0.0050		ug/g	
			Acenaphthylene	2016/03/10	ND, RDL=0.0050		ug/g	
			Anthracene	2016/03/10	ND, RDL=0.0050		ug/g	
			Benzo(a)anthracene	2016/03/10	ND, RDL=0.0050		ug/g	
			Benzo(a)pyrene	2016/03/10	ND, RDL=0.0050		ug/g	
			Benzo(b/j)fluoranthene	2016/03/10	ND, RDL=0.0050		ug/g	
			Benzo(g,h,i)perylene	2016/03/10	ND, RDL=0.0050		ug/g	
			Benzo(k)fluoranthene	2016/03/10	ND, RDL=0.0050		ug/g	
			Chrysene	2016/03/10	ND, RDL=0.0050		ug/g	
			Dibenz(a,h)anthracene	2016/03/10	ND, RDL=0.0050		ug/g	
			Fluoranthene	2016/03/10	ND, RDL=0.0050		ug/g	
			Fluorene	2016/03/10	ND, RDL=0.0050		ug/g	
			Indeno(1,2,3-cd)pyrene	2016/03/10	ND, RDL=0.0050		ug/g	
			1-Methylnaphthalene	2016/03/10	ND, RDL=0.0050		ug/g	
			2-Methylnaphthalene	2016/03/10	ND, RDL=0.0050		ug/g	
			Naphthalene	2016/03/10	ND, RDL=0.0050		ug/g	
			Phenanthrene	2016/03/10	ND, RDL=0.0050		ug/g	
			Pyrene	2016/03/10	ND, RDL=0.0050		ug/g	
4412020	JET	RPD [BZI293-02]	Acenaphthene	2016/03/10	NC		%	40
			Acenaphthylene	2016/03/10	NC		%	40
			Anthracene	2016/03/10	NC		%	40
			Benzo(a)anthracene	2016/03/10	NC		%	40
			Benzo(a)pyrene	2016/03/10	NC		%	40
			Benzo(b/j)fluoranthene	2016/03/10	NC		%	40
			Benzo(g,h,i)perylene	2016/03/10	NC		%	40
			Benzo(k)fluoranthene	2016/03/10	NC		%	40
			Chrysene	2016/03/10	NC		%	40
			Dibenz(a,h)anthracene	2016/03/10	NC		%	40
			Fluoranthene	2016/03/10	NC		%	40
			Fluorene	2016/03/10	NC		%	40
			Indeno(1,2,3-cd)pyrene	2016/03/10	NC		%	40

Maxxam Job #: B647433
Report Date: 2016/03/10

Terrapex Environmental Ltd
Client Project #: CB644.02
Site Location: 121 Hume Street, Collingwood, ON
Your P.O. #: 4700001396
Sampler Initials: PA

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			1-Methylnaphthalene	2016/03/10	NC		%	40
			2-Methylnaphthalene	2016/03/10	NC		%	40
			Naphthalene	2016/03/10	NC		%	40
			Phenanthrene	2016/03/10	NC		%	40
			Pyrene	2016/03/10	NC		%	40
4412145	VIV	Matrix Spike [BZI293-01]	Acid Extractable Uranium (U)	2016/03/10		98	%	75 - 125
4412145	VIV	Spiked Blank	Acid Extractable Uranium (U)	2016/03/10		96	%	80 - 120
4412145	VIV	Method Blank	Acid Extractable Uranium (U)	2016/03/10	ND, RDL=0.050		ug/g	
4412145	VIV	RPD [BZI293-01]	Acid Extractable Uranium (U)	2016/03/10	1.7		%	30
N/A = Not Applicable Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement. Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference. QC Standard: A sample of known concentration prepared by an external agency under stringent conditions. Used as an independent check of method accuracy. Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy. Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination. Surrogate: A pure or isotopically labeled compound whose behavior mirrors the analytes of interest. Used to evaluate extraction efficiency. NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (one or both samples < 5x RDL). (1) Recovery or RPD for this parameter is outside control limits. The overall quality control for this analysis meets acceptability criteria.								

VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by the following individual(s).



Brad Newman, Scientific Specialist

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

RUSHMaxxam Analytics International Corporation o/a Maxxam Analytics
1000 Highway 7 East, Unit 10, Mississauga, Ontario Canada L5N 2L8 Tel: (905) 817-5700 Toll-Free (800) 563-6266 Fax: (905) 817-5777 www.maxxam.ca

CHAIN OF CUSTODY RE

02-Mar-16 09:20

Marissa Oddi

B642303

MAF ENV-885

COC #:

Page 1 of 1

Bottle Order #:

345624

Project Manager:

Marissa Oddi

INVOICE INFORMATION:		REPORT INFORMATION (if differs from invoice):		PROJECT INFORMATION:	
Company Name:	#14539 Suncor Energy Products Partnership	Company Name:	#6557 Terrapex Environmental Ltd	Quotation #:	B43750
Contact Name:	Ken Tedder	Contact Name:	Jeff Stevenson	Task Order #:	
Address:	3275 Rebecca St Oakville ON L6L 6N5	Address:	920 Brant Street Unit 16 Burlington ON L7R 4J1	Project #:	CB644.02
Phone:	(905) 469-3754	Phone:	(905) 632-5939 x 226	Site Location:	121 Hume Street, Collingwood, ON
Email:	ktedder@suncor.com	Email:	j.stevenson@terrapex.com	Outlet #:	60680
				Sampled By:	BA

MOE REGULATED DRINKING WATER OR WATER INTENDED FOR HUMAN CONSUMPTION MUST BE SUBMITTED ON THE MAXXAM DRINKING WATER CHAIN OF CUSTODY

Regulation 153 (2011)		Other Regulations		Activity		ANALYSIS REQUESTED (PLEASE BE SPECIFIC)										Turnaround Time (TAT) Required		
☐ Table 1	☐ Res/Park	☐ Medium/Fine	☐ CCME	☐ Sanitary Sewer Bylaw	Assessment (circle one) A1, A2, AR, AV Remediations (circle one) RX, RI, RA Contaminant Management (circle one) M, MW, MV	Field Filtered (please circle): Metals / Hg / Cr VI Pg 153 VOCs Pg 153 PAHs (F-F4) Pg 153 Metals Full List Pg 153 PAHs Pg 153 PTEX										Regular (Standard) TAT:		
☒ Table 2	☒ Ind/Comm	☒ Coarse	☐ Reg 558	☐ Storm Sewer Bylaw												Please provide advance notice for rush projects		
☐ Table 3	☐ Agri/Other	☐ For RSC	☐ MISA	☐ Municipality												Regular (Standard) TAT: (will be applied if Rush TAT is not specified) Standard TAT = 5-7 Working days for most tests. Please note: Standard TAT for certain tests such as BOD and Clovins/Furans are > 5 days - contact your Project Manager for details.		
Include Criteria on Certificate of Analysis (Y/N)? ☒																Rush TAT		
Sample Barcode Label		Sample (Location) Identification		Date Sampled	Time Sampled	Matrix											# of Bottles	Comments
1		CS197	Feb-29-16	10:36	Soil											3		
2		CS199	Feb-29-16	10:30	Soil											3		
3		SPC5217	Mar-1-16	11:00	Soil											3		
4		CS207	Mar-1-16	10:30	Soil											5		
5		SP1001	Mar-1-16	11:30	Soil											3		
6		SP1001	Mar-1-16	11:30	Soil											3		
7																		
8																		
9																		
10																		

RELINQUISHED BY: (Signature/Print)		Date: (YY/MM/DD)	Time	RECEIVED BY: (Signature/Print)		Date: (YY/MM/DD)	Time	# Jars used and not submitted	Laboratory Use Only				
Philip Arles		16/03/01	12:30	Jat MURROT NAL		2016/03/02	09:20	0	Time Sensitive	Temperature (°C) on Receipt	Custody Seal	Yes	No
										5/0/2	Present		
											Intact		

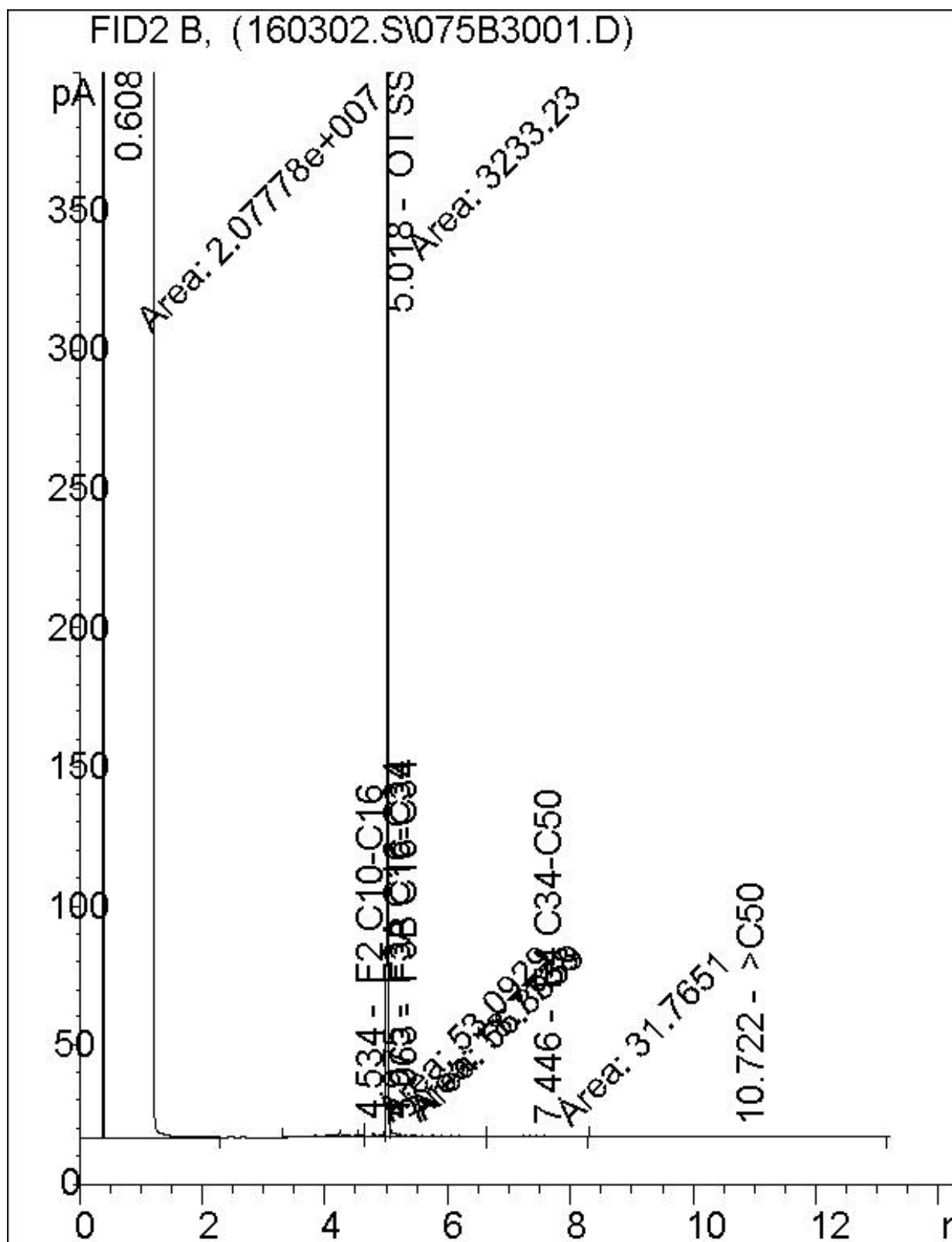
* IT IS THE RESPONSIBILITY OF THE RELINQUISHER TO ENSURE THE ACCURACY OF THE CHAIN OF CUSTODY RECORD. AN INCOMPLETE CHAIN OF CUSTODY MAY RESULT IN ANALYTICAL DELAYS.

SAMPLES MUST BE KEPT COOL (< 10° C) FROM TIME OF SAMPLING UNTIL DELIVERY TO MAXXAM

White: Maxxam Yellow: Client

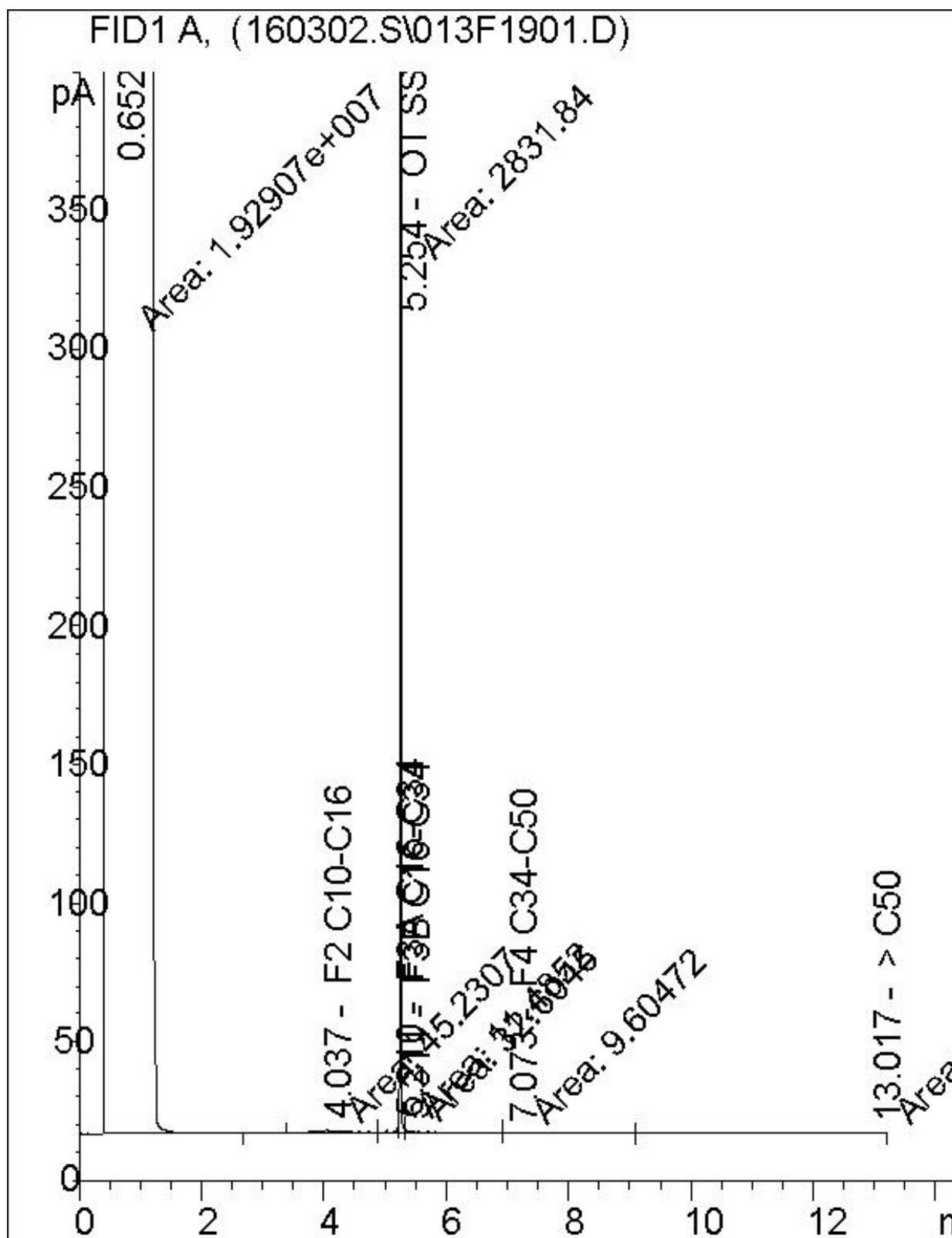
Maxxam Analytics International Corporation o/a Maxxam Analytics

Petroleum Hydrocarbons F2-F4 in Soil Chromatogram



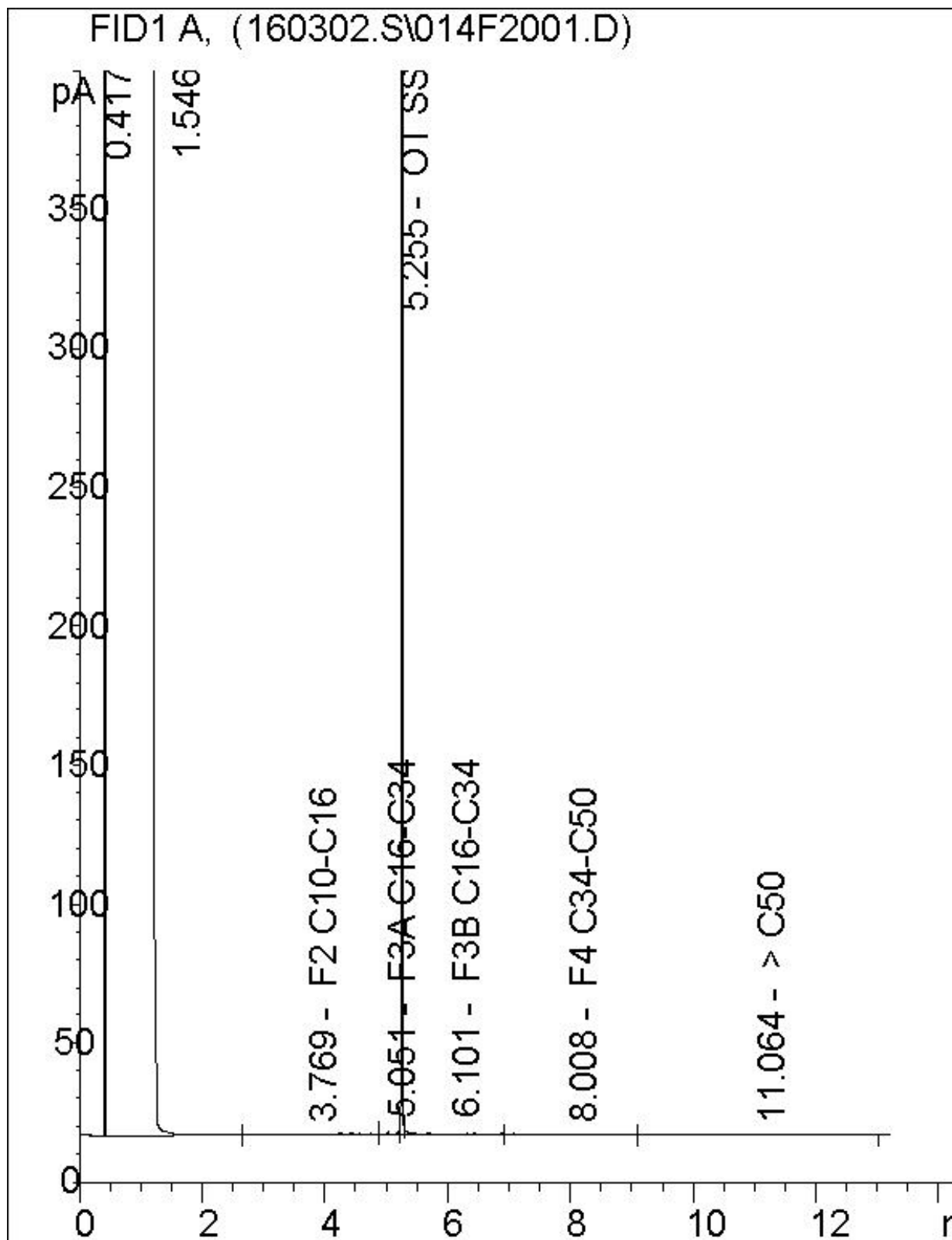
Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Petroleum Hydrocarbons F2-F4 in Soil Chromatogram



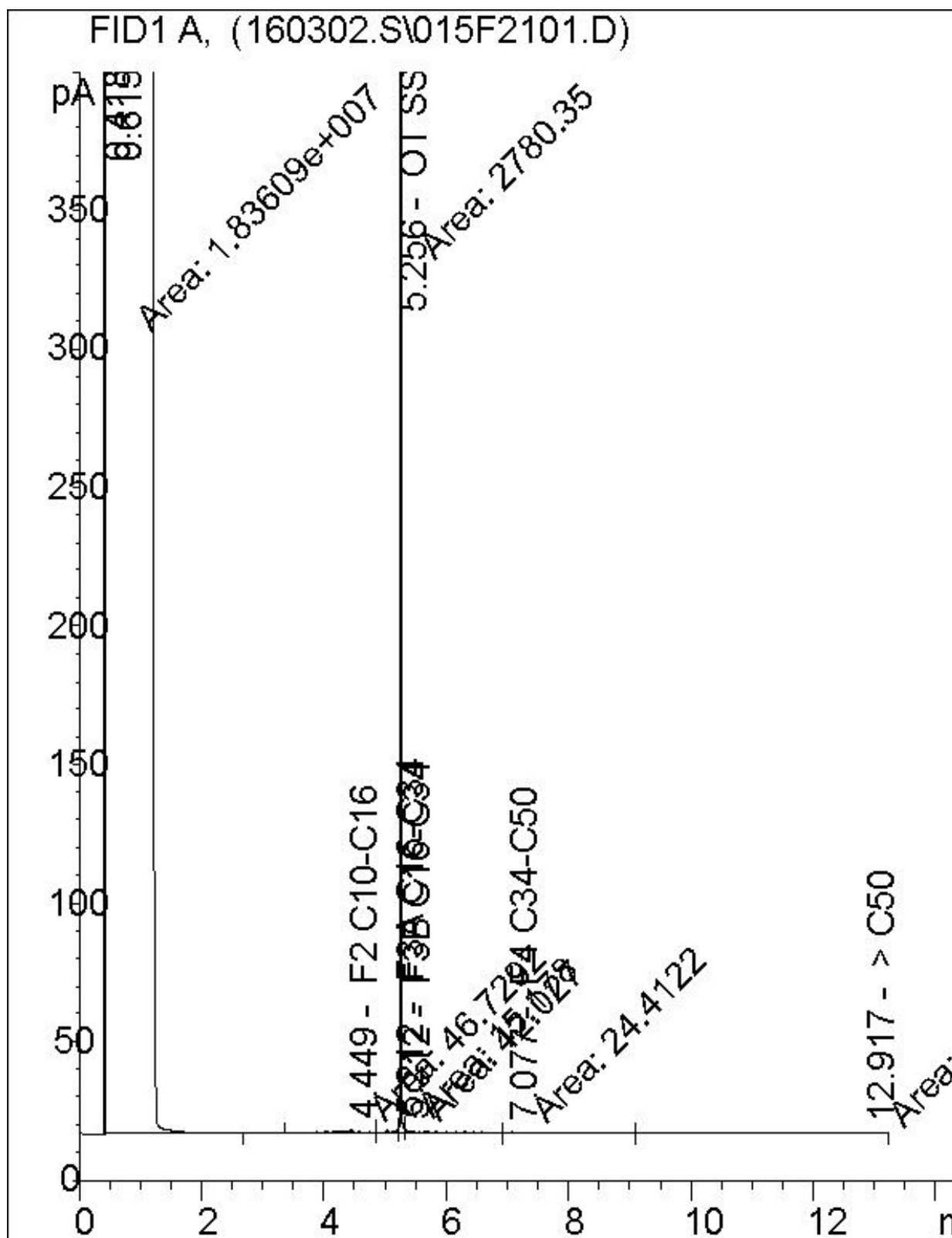
Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Petroleum Hydrocarbons F2-F4 in Soil Chromatogram



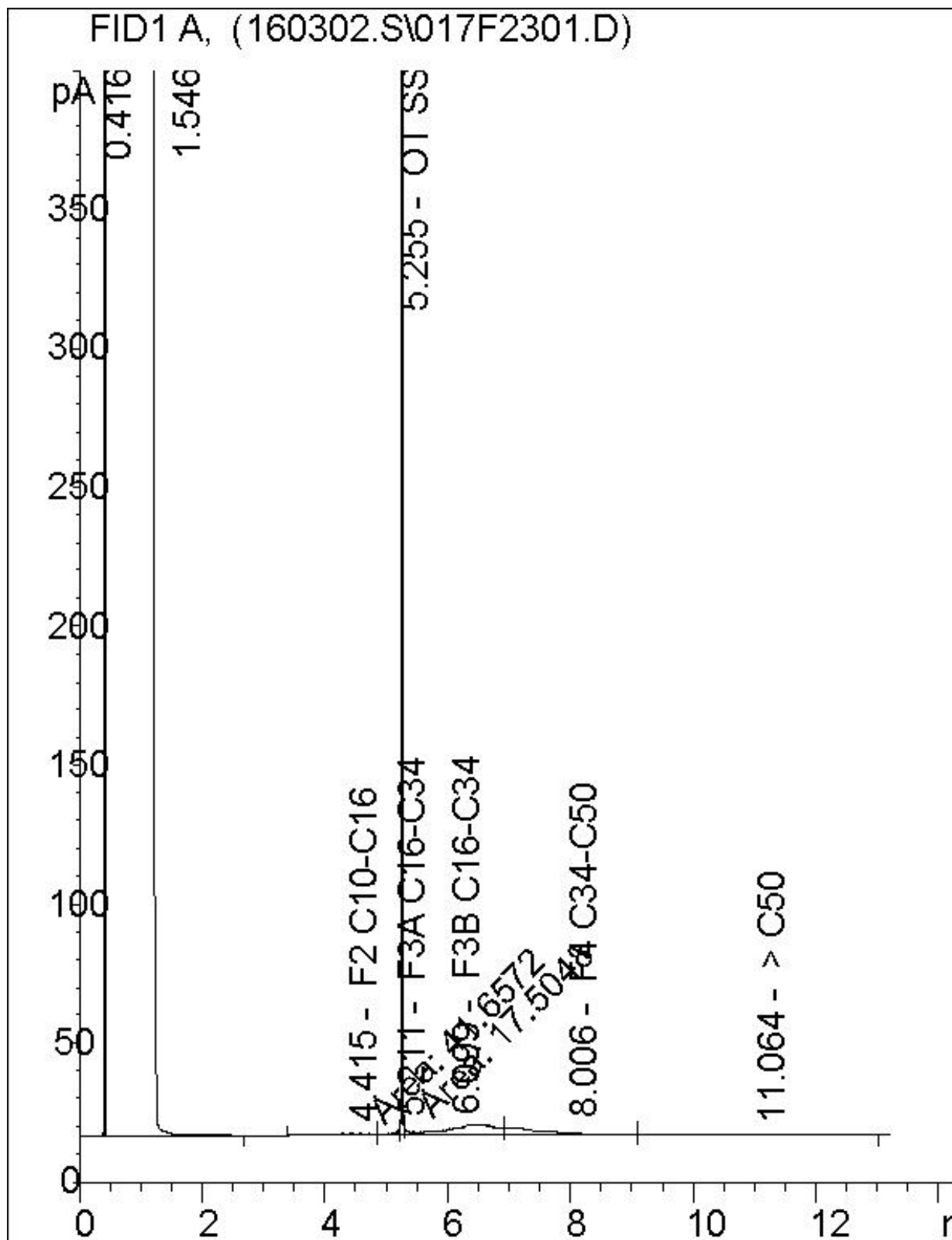
Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Petroleum Hydrocarbons F2-F4 in Soil Chromatogram



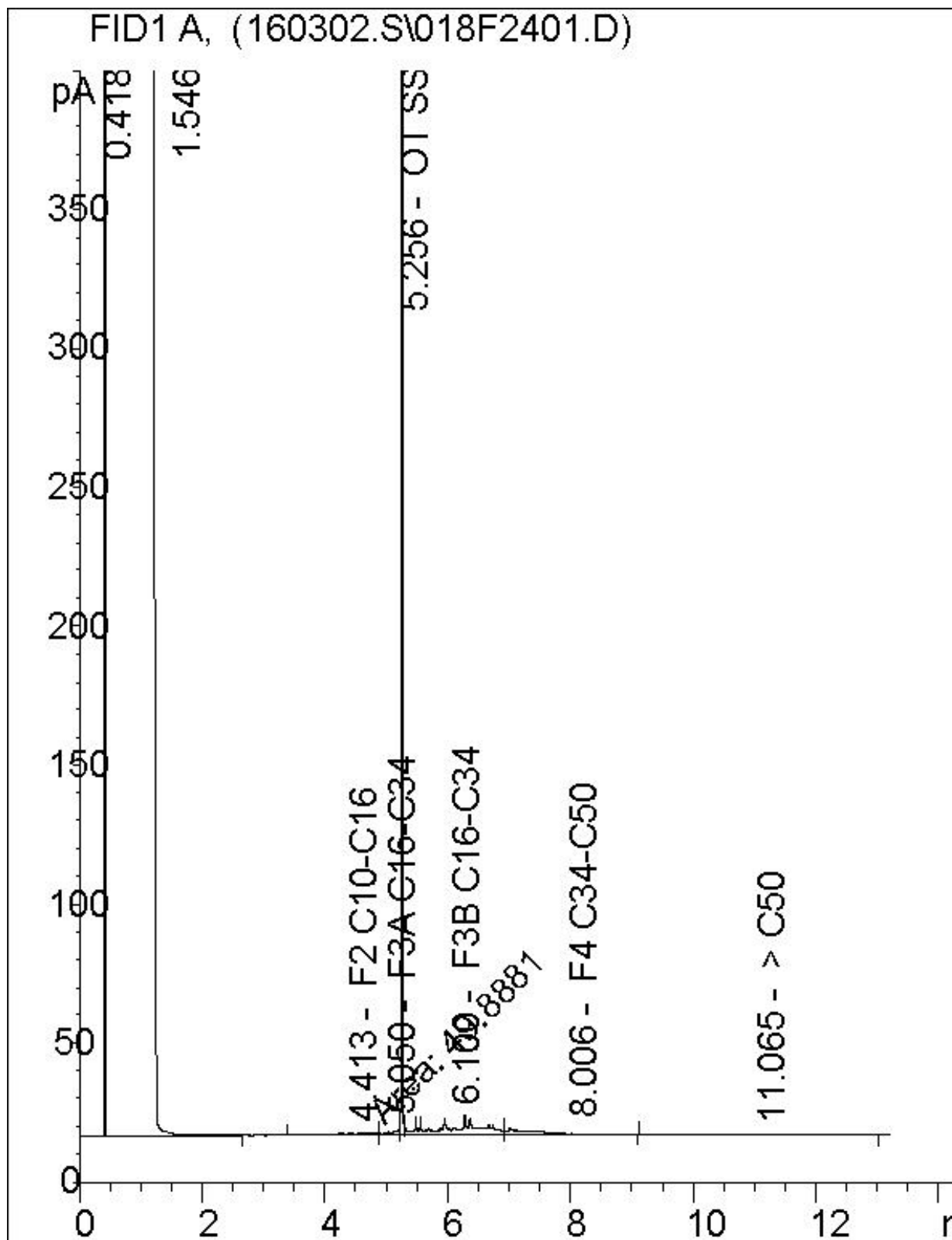
Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Petroleum Hydrocarbons F2-F4 in Soil Chromatogram



Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Petroleum Hydrocarbons F2-F4 in Soil Chromatogram



Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Attention: Jeff Stevenson

Terrapex Environmental Ltd
920 Brant Street
Unit 16
Burlington, ON
CANADA L7R 4J1

Your P.O. #: 4700001396

Your Project #: CB644.02

Site#: 60680

Site Location: 121 Hume Street, Collingwood, ON

Your C.O.C. #: 546624-09-01

Report Date: 2016/03/03

Report #: R3916322

Version: 1 - Final

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B642303

Received: 2016/03/02, 09:20

Sample Matrix: Soil
Samples Received: 6

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Reference
Methylnaphthalene Sum	1	N/A	2016/03/03	CAM SOP-00301	EPA 8270D m
Hot Water Extractable Boron	1	2016/03/03	2016/03/03	CAM SOP-00408	R153 Ana. Prot. 2011
1,3-Dichloropropene Sum	1	N/A	2016/03/03		EPA 8260C m
Free (WAD) Cyanide	1	2016/03/02	2016/03/03	CAM SOP-00457	OMOE E3015 m
Conductivity	1	2016/03/03	2016/03/03	CAM SOP-00414	OMOE E3138 v2 m
Hexavalent Chromium in Soil by IC (1)	1	2016/03/02	2016/03/03	CAM SOP-00436	EPA 3060/7199 m
Petroleum Hydro. CCME F1 & BTEX in Soil (2)	6	N/A	2016/03/03	CAM SOP-00315	CCME PHC-CWS m
Petroleum Hydrocarbons F2-F4 in Soil (3)	6	2016/03/02	2016/03/03	CAM SOP-00316	CCME CWS m
Strong Acid Leachable Metals by ICPMS	1	2016/03/03	2016/03/03	CAM SOP-00447	EPA 6020A m
Moisture	6	N/A	2016/03/02	CAM SOP-00445	Carter 2nd ed 51.2 m
PAH Compounds in Soil by GC/MS (SIM)	1	2016/03/02	2016/03/03	CAM SOP-00318	EPA 8270D m
pH CaCl2 EXTRACT	1	2016/03/03	2016/03/03	CAM SOP-00413	EPA 9045 D m
Sodium Adsorption Ratio (SAR)	1	N/A	2016/03/03	CAM SOP-00102	EPA 6010
SAR - ICP Metals	1	2016/03/03	2016/03/03	CAM SOP-00408	EPA 6010 m
Volatile Organic Compounds in Soil	1	N/A	2016/03/02	CAM SOP000228	EPA 8260C m

Remarks:

Maxxam Analytics has performed all analytical testing herein in accordance with ISO 17025 and the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act. All methodologies comply with this document and are validated for use in the laboratory. The methods and techniques employed in this analysis conform to the performance criteria (detection limits, accuracy and precision) as outlined in the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act.

Maxxam Analytics is accredited for all specific parameters as required by Ontario Regulation 153/04. Maxxam Analytics is limited in liability to the actual cost of analysis unless otherwise agreed in writing. There is no other warranty expressed or implied. Samples will be retained at Maxxam Analytics for three weeks from receipt of data or as per contract.

Reference Method suffix "m" indicates test methods incorporate validated modifications from specific reference methods to improve performance.

* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.

Attention: Jeff Stevenson

Terrapex Environmental Ltd
920 Brant Street
Unit 16
Burlington, ON
CANADA L7R 4J1

Your P.O. #: 4700001396

Your Project #: CB644.02

Site#: 60680

Site Location: 121 Hume Street, Collingwood, ON

Your C.O.C. #: 546624-09-01

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Version: 1 - Final

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B642303

Received: 2016/03/02, 09:20

- (1) Soils are reported on a dry weight basis unless otherwise specified.
- (2) No lab extraction date is given for F1BTX & VOC samples that are field preserved with methanol. Extraction date is the date sampled unless otherwise stated.
- (3) All CCME PHC results met required criteria unless otherwise stated in the report. The CWS PHC methods employed by Maxxam conform to all prescribed elements of the reference method and performance based elements have been validated. All modifications have been validated and proven equivalent following "Alberta Environment's Interpretation of the Reference Method for the Canada-Wide Standard for Petroleum Hydrocarbons in Soil Validation of Performance-Based Alternative Methods September 2003". Documentation is available upon request. Modifications from Reference Method for the Canada-wide Standard for Petroleum Hydrocarbons in Soil-Tier 1 Method: F2/F3/F4 data reported using validated cold solvent extraction instead of Soxhlet extraction.

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.

Marissa Oddi, Customer Service Representative

Email: moddi@maxxam.ca

Phone# (905) 817-5700

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Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

O.REG 153 METALS & INORGANICS PKG (SOIL)

Maxxam ID		BYH528	BYH528		
Sampling Date		2016/03/01 10:30	2016/03/01 10:30		
COC Number		546624-09-01	546624-09-01		
	UNITS	CS207	CS207 Lab-Dup	RDL	QC Batch
Calculated Parameters					
Sodium Adsorption Ratio	N/A	1.9			4401378
Inorganics					
Conductivity	mS/cm	0.19	0.19	0.002	4403214
Free Cyanide	ug/g	ND	ND	0.01	4401828
Available (CaCl2) pH	pH	7.76			4403138
Metals					
Soluble Calcium (Ca)	mg/L	11.4	11.7	0.5	4403212
Soluble Magnesium (Mg)	mg/L	1.0	0.9	0.5	4403212
Soluble Sodium (Na)	mg/L	25	24	5	4403212
Inorganics					
Chromium (VI)	ug/g	ND		0.2	4401547
Metals					
Hot Water Ext. Boron (B)	ug/g	ND	ND	0.050	4403215
Acid Extractable Antimony (Sb)	ug/g	ND	ND	0.20	4403303
Acid Extractable Arsenic (As)	ug/g	ND	ND	1.0	4403303
Acid Extractable Barium (Ba)	ug/g	5.9	5.4	0.50	4403303
Acid Extractable Beryllium (Be)	ug/g	ND	ND	0.20	4403303
Acid Extractable Boron (B)	ug/g	ND	ND	5.0	4403303
Acid Extractable Cadmium (Cd)	ug/g	ND	ND	0.10	4403303
Acid Extractable Chromium (Cr)	ug/g	3.5	3.7	1.0	4403303
Acid Extractable Cobalt (Co)	ug/g	1.8	1.7	0.10	4403303
Acid Extractable Copper (Cu)	ug/g	1.9	0.94	0.50	4403303
Acid Extractable Lead (Pb)	ug/g	2.1	2.1	1.0	4403303
Acid Extractable Molybdenum (Mo)	ug/g	ND	ND	0.50	4403303
Acid Extractable Nickel (Ni)	ug/g	2.7	2.7	0.50	4403303
Acid Extractable Selenium (Se)	ug/g	ND	ND	0.50	4403303
Acid Extractable Silver (Ag)	ug/g	ND	ND	0.20	4403303
Acid Extractable Thallium (Tl)	ug/g	ND	ND	0.050	4403303
Acid Extractable Uranium (U)	ug/g	0.23	0.23	0.050	4403303
Acid Extractable Vanadium (V)	ug/g	5.9	6.5	5.0	4403303
Acid Extractable Zinc (Zn)	ug/g	8.2	7.7	5.0	4403303
RDL = Reportable Detection Limit					
QC Batch = Quality Control Batch					
Lab-Dup = Laboratory Initiated Duplicate					
ND = Not detected					

Maxxam Job #: B642303
Report Date: 2016/03/03

Terrapex Environmental Ltd
Client Project #: CB644.02
Site Location: 121 Hume Street, Collingwood, ON
Your P.O. #: 4700001396
Sampler Initials: PA

O.REG 153 METALS & INORGANICS PKG (SOIL)

Maxxam ID		BYH528	BYH528		
Sampling Date		2016/03/01 10:30	2016/03/01 10:30		
COC Number		546624-09-01	546624-09-01		
	UNITS	CS207	CS207 Lab-Dup	RDL	QC Batch
Acid Extractable Mercury (Hg)	ug/g	ND	ND	0.050	4403303
RDL = Reportable Detection Limit QC Batch = Quality Control Batch Lab-Dup = Laboratory Initiated Duplicate ND = Not detected					

O.REG 153 PAHS (SOIL)

Maxxam ID		BYH528	BYH528		
Sampling Date		2016/03/01 10:30	2016/03/01 10:30		
COC Number		546624-09-01	546624-09-01		
	UNITS	CS207	CS207 Lab-Dup	RDL	QC Batch
Calculated Parameters					
Methylnaphthalene, 2-(1-)	ug/g	ND		0.0071	4401375
Polyaromatic Hydrocarbons					
Acenaphthene	ug/g	ND	ND	0.0050	4402938
Acenaphthylene	ug/g	ND	ND	0.0050	4402938
Anthracene	ug/g	ND	ND	0.0050	4402938
Benzo(a)anthracene	ug/g	ND	ND	0.0050	4402938
Benzo(a)pyrene	ug/g	ND	ND	0.0050	4402938
Benzo(b/j)fluoranthene	ug/g	ND	ND	0.0050	4402938
Benzo(g,h,i)perylene	ug/g	ND	ND	0.0050	4402938
Benzo(k)fluoranthene	ug/g	ND	ND	0.0050	4402938
Chrysene	ug/g	ND	ND	0.0050	4402938
Dibenz(a,h)anthracene	ug/g	ND	ND	0.0050	4402938
Fluoranthene	ug/g	ND	ND	0.0050	4402938
Fluorene	ug/g	ND	ND	0.0050	4402938
Indeno(1,2,3-cd)pyrene	ug/g	ND	ND	0.0050	4402938
1-Methylnaphthalene	ug/g	ND	ND	0.0050	4402938
2-Methylnaphthalene	ug/g	ND	ND	0.0050	4402938
Naphthalene	ug/g	ND	ND	0.0050	4402938
Phenanthrene	ug/g	ND	ND	0.0050	4402938
Pyrene	ug/g	ND	ND	0.0050	4402938
Surrogate Recovery (%)					
D10-Anthracene	%	98	95		4402938
D14-Terphenyl (FS)	%	95	93		4402938
D8-Acenaphthylene	%	80	80		4402938
RDL = Reportable Detection Limit QC Batch = Quality Control Batch Lab-Dup = Laboratory Initiated Duplicate ND = Not detected					

O.REG 153 PETROLEUM HYDROCARBONS (SOIL)

Maxxam ID		BYH525	BYH525	BYH526	BYH527	BYH528	BYH528		
Sampling Date		2016/02/29 10:36	2016/02/29 10:36	2016/02/29 10:30	2016/03/01 11:00	2016/03/01 10:30	2016/03/01 10:30		
COC Number		546624-09-01	546624-09-01	546624-09-01	546624-09-01	546624-09-01	546624-09-01		
	UNITS	CS197	CS197 Lab-Dup	CS199	CS217	CS207	CS207 Lab-Dup	RDL	QC Batch

Inorganics									
Moisture	%	20	20	21	20			1.0	4401819
BTEX & F1 Hydrocarbons									
Benzene	ug/g	ND		ND	ND			0.020	4402877
Toluene	ug/g	ND		ND	ND			0.020	4402877
Ethylbenzene	ug/g	ND		ND	ND			0.020	4402877
o-Xylene	ug/g	ND		ND	ND			0.020	4402877
p+m-Xylene	ug/g	ND		0.093	ND			0.040	4402877
Total Xylenes	ug/g	ND		0.093	ND			0.040	4402877
F1 (C6-C10)	ug/g	ND		ND	ND	ND		10	4402877
F1 (C6-C10) - BTEX	ug/g	ND		ND	ND	ND		10	4402877
F2-F4 Hydrocarbons									
F2 (C10-C16 Hydrocarbons)	ug/g	ND		ND	ND	ND	ND	10	4402737
F3 (C16-C34 Hydrocarbons)	ug/g	ND		ND	ND	ND	ND	50	4402737
F4 (C34-C50 Hydrocarbons)	ug/g	ND		ND	ND	ND	ND	50	4402737
Reached Baseline at C50	ug/g	Yes		Yes	Yes	Yes	Yes		4402737
Surrogate Recovery (%)									
1,4-Difluorobenzene	%	102		102	103	102			4402877
4-Bromofluorobenzene	%	96		98	93	95			4402877
D10-Ethylbenzene	%	85		94	82	85			4402877
D4-1,2-Dichloroethane	%	105		104	105	105			4402877
o-Terphenyl	%	108		107	106	105	107		4402737

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate
ND = Not detected

O.REG 153 PETROLEUM HYDROCARBONS (SOIL)

Maxxam ID		BYH529	BYH530		
Sampling Date		2016/03/01 11:30	2016/03/01 11:30		
COC Number		546624-09-01	546624-09-01		
	UNITS	SP110D1	SP100D1	RDL	QC Batch
Inorganics					
Moisture	%	9.3	9.2	1.0	4401819
BTEX & F1 Hydrocarbons					
Benzene	ug/g	ND	ND	0.020	4402877
Toluene	ug/g	ND	ND	0.020	4402877
Ethylbenzene	ug/g	ND	ND	0.020	4402877
o-Xylene	ug/g	ND	ND	0.020	4402877
p+m-Xylene	ug/g	ND	ND	0.040	4402877
Total Xylenes	ug/g	ND	ND	0.040	4402877
F1 (C6-C10)	ug/g	ND	ND	10	4402877
F1 (C6-C10) - BTEX	ug/g	ND	ND	10	4402877
F2-F4 Hydrocarbons					
F2 (C10-C16 Hydrocarbons)	ug/g	ND	ND	10	4402737
F3 (C16-C34 Hydrocarbons)	ug/g	ND	ND	50	4402737
F4 (C34-C50 Hydrocarbons)	ug/g	ND	ND	50	4402737
Reached Baseline at C50	ug/g	Yes	Yes		4402737
Surrogate Recovery (%)					
1,4-Difluorobenzene	%	102	101		4402877
4-Bromofluorobenzene	%	93	93		4402877
D10-Ethylbenzene	%	81	80		4402877
D4-1,2-Dichloroethane	%	105	104		4402877
o-Terphenyl	%	111	112		4402737
RDL = Reportable Detection Limit QC Batch = Quality Control Batch ND = Not detected					

O.REG 153 VOLATILE ORGANICS (SOIL)

Maxxam ID		BYH528	BYH528		
Sampling Date		2016/03/01 10:30	2016/03/01 10:30		
COC Number		546624-09-01	546624-09-01		
	UNITS	CS207	CS207 Lab-Dup	RDL	QC Batch
Inorganics					
Moisture	%	18	18	1.0	4401998
Calculated Parameters					
1,3-Dichloropropene (cis+trans)	ug/g	ND		0.050	4401376
Volatile Organics					
Acetone (2-Propanone)	ug/g	ND	ND	0.50	4400252
Benzene	ug/g	ND	ND	0.020	4400252
Bromodichloromethane	ug/g	ND	ND	0.050	4400252
Bromoform	ug/g	ND	ND	0.050	4400252
Bromomethane	ug/g	ND	ND	0.050	4400252
Carbon Tetrachloride	ug/g	ND	ND	0.050	4400252
Chlorobenzene	ug/g	ND	ND	0.050	4400252
Chloroform	ug/g	ND	ND	0.050	4400252
Dibromochloromethane	ug/g	ND	ND	0.050	4400252
1,2-Dichlorobenzene	ug/g	ND	ND	0.050	4400252
1,3-Dichlorobenzene	ug/g	ND	ND	0.050	4400252
1,4-Dichlorobenzene	ug/g	ND	ND	0.050	4400252
Dichlorodifluoromethane (FREON 12)	ug/g	ND	ND	0.050	4400252
1,1-Dichloroethane	ug/g	ND	ND	0.050	4400252
1,2-Dichloroethane	ug/g	ND	ND	0.050	4400252
1,1-Dichloroethylene	ug/g	ND	ND	0.050	4400252
cis-1,2-Dichloroethylene	ug/g	ND	ND	0.050	4400252
trans-1,2-Dichloroethylene	ug/g	ND	ND	0.050	4400252
1,2-Dichloropropane	ug/g	ND	ND	0.050	4400252
cis-1,3-Dichloropropene	ug/g	ND	ND	0.030	4400252
trans-1,3-Dichloropropene	ug/g	ND	ND	0.040	4400252
Ethylbenzene	ug/g	ND	ND	0.020	4400252
Ethylene Dibromide	ug/g	ND	ND	0.050	4400252
Hexane	ug/g	ND	ND	0.050	4400252
Methylene Chloride(Dichloromethane)	ug/g	ND	ND	0.050	4400252
Methyl Ethyl Ketone (2-Butanone)	ug/g	ND	ND	0.50	4400252
Methyl Isobutyl Ketone	ug/g	ND	ND	0.50	4400252
RDL = Reportable Detection Limit QC Batch = Quality Control Batch Lab-Dup = Laboratory Initiated Duplicate ND = Not detected					

O.REG 153 VOLATILE ORGANICS (SOIL)

Maxxam ID		BYH528	BYH528		
Sampling Date		2016/03/01 10:30	2016/03/01 10:30		
COC Number		546624-09-01	546624-09-01		
	UNITS	CS207	CS207 Lab-Dup	RDL	QC Batch
Methyl t-butyl ether (MTBE)	ug/g	ND	ND	0.050	4400252
Styrene	ug/g	ND	ND	0.050	4400252
1,1,1,2-Tetrachloroethane	ug/g	ND	ND	0.050	4400252
1,1,2,2-Tetrachloroethane	ug/g	ND	ND	0.050	4400252
Tetrachloroethylene	ug/g	ND	ND	0.050	4400252
Toluene	ug/g	ND	ND	0.020	4400252
1,1,1-Trichloroethane	ug/g	ND	ND	0.050	4400252
1,1,2-Trichloroethane	ug/g	ND	ND	0.050	4400252
Trichloroethylene	ug/g	ND	ND	0.050	4400252
Trichlorofluoromethane (FREON 11)	ug/g	ND	ND	0.050	4400252
Vinyl Chloride	ug/g	ND	ND	0.020	4400252
p+m-Xylene	ug/g	ND	ND	0.020	4400252
o-Xylene	ug/g	ND	ND	0.020	4400252
Total Xylenes	ug/g	ND	ND	0.020	4400252
Surrogate Recovery (%)					
4-Bromofluorobenzene	%	101	101		4400252
D10-o-Xylene	%	96	97		4400252
D4-1,2-Dichloroethane	%	93	93		4400252
D8-Toluene	%	98	98		4400252
RDL = Reportable Detection Limit QC Batch = Quality Control Batch Lab-Dup = Laboratory Initiated Duplicate ND = Not detected					

TEST SUMMARY

Maxxam ID: BYH525
Sample ID: CS197
Matrix: Soil

Collected: 2016/02/29
Shipped:
Received: 2016/03/02

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	4402877	N/A	2016/03/03	Georgeta Rusu
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	4402737	2016/03/02	2016/03/03	Margaret Kulczyk-Stanko
Moisture	BAL	4401819	N/A	2016/03/02	Valentina Kaftani

Maxxam ID: BYH525 Dup
Sample ID: CS197
Matrix: Soil

Collected: 2016/02/29
Shipped:
Received: 2016/03/02

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Moisture	BAL	4401819	N/A	2016/03/02	Valentina Kaftani

Maxxam ID: BYH526
Sample ID: CS199
Matrix: Soil

Collected: 2016/02/29
Shipped:
Received: 2016/03/02

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	4402877	N/A	2016/03/03	Georgeta Rusu
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	4402737	2016/03/02	2016/03/03	Margaret Kulczyk-Stanko
Moisture	BAL	4401819	N/A	2016/03/02	Valentina Kaftani

Maxxam ID: BYH527
Sample ID: CS217
Matrix: Soil

Collected: 2016/03/01
Shipped:
Received: 2016/03/02

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	4402877	N/A	2016/03/03	Georgeta Rusu
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	4402737	2016/03/02	2016/03/03	Margaret Kulczyk-Stanko
Moisture	BAL	4401819	N/A	2016/03/02	Valentina Kaftani

Maxxam ID: BYH528
Sample ID: CS207
Matrix: Soil

Collected: 2016/03/01
Shipped:
Received: 2016/03/02

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	4401375	N/A	2016/03/03	Automated Statchk
Hot Water Extractable Boron	ICP	4403215	2016/03/03	2016/03/03	Archana Patel
1,3-Dichloropropene Sum	CALC	4401376	N/A	2016/03/03	Automated Statchk
Free (WAD) Cyanide	TECH	4401828	2016/03/02	2016/03/03	Xuanhong Qiu
Conductivity	AT	4403214	2016/03/03	2016/03/03	Lemeneh Addis
Hexavalent Chromium in Soil by IC	IC/SPEC	4401547	2016/03/02	2016/03/03	Sally Coughlin
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	4402877	N/A	2016/03/03	Georgeta Rusu
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	4402737	2016/03/02	2016/03/03	Margaret Kulczyk-Stanko
Strong Acid Leachable Metals by ICPMS	ICP/MS	4403303	2016/03/03	2016/03/03	Viviana Canzonieri
Moisture	BAL	4401998	N/A	2016/03/02	Valentina Kaftani

Maxxam Job #: B642303
Report Date: 2016/03/03

Terrapex Environmental Ltd
Client Project #: CB644.02
Site Location: 121 Hume Street, Collingwood, ON
Your P.O. #: 4700001396
Sampler Initials: PA

TEST SUMMARY

Maxxam ID: BYH528
Sample ID: CS207
Matrix: Soil

Collected: 2016/03/01
Shipped:
Received: 2016/03/02

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
PAH Compounds in Soil by GC/MS (SIM)	GC/MS	4402938	2016/03/02	2016/03/03	Lingyun Feng
pH CaCl2 EXTRACT	AT	4403138	2016/03/03	2016/03/03	Neil Dassanayake
Sodium Adsorption Ratio (SAR)	CALC/MET	4401378	N/A	2016/03/03	Automated Statchk
SAR - ICP Metals	ICP	4403212	2016/03/03	2016/03/03	Archana Patel
Volatile Organic Compounds in Soil	GC/MS	4400252	N/A	2016/03/02	Xueming Jiang

Maxxam ID: BYH528 Dup
Sample ID: CS207
Matrix: Soil

Collected: 2016/03/01
Shipped:
Received: 2016/03/02

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hot Water Extractable Boron	ICP	4403215	2016/03/03	2016/03/03	Archana Patel
Free (WAD) Cyanide	TECH	4401828	2016/03/02	2016/03/03	Xuanhong Qiu
Conductivity	AT	4403214	2016/03/03	2016/03/03	Lemeneh Addis
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	4402737	2016/03/02	2016/03/03	Margaret Kulczyk-Stanko
Strong Acid Leachable Metals by ICPMS	ICP/MS	4403303	2016/03/03	2016/03/03	Viviana Canzonieri
Moisture	BAL	4401998	N/A	2016/03/02	Valentina Kaftani
PAH Compounds in Soil by GC/MS (SIM)	GC/MS	4402938	2016/03/02	2016/03/03	Lingyun Feng
SAR - ICP Metals	ICP	4403212	2016/03/03	2016/03/03	Archana Patel
Volatile Organic Compounds in Soil	GC/MS	4400252	N/A	2016/03/02	Xueming Jiang

Maxxam ID: BYH529
Sample ID: SP110D1
Matrix: Soil

Collected: 2016/03/01
Shipped:
Received: 2016/03/02

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	4402877	N/A	2016/03/03	Georgeta Rusu
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	4402737	2016/03/02	2016/03/03	Margaret Kulczyk-Stanko
Moisture	BAL	4401819	N/A	2016/03/02	Valentina Kaftani

Maxxam ID: BYH530
Sample ID: SP100D1
Matrix: Soil

Collected: 2016/03/01
Shipped:
Received: 2016/03/02

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	4402877	N/A	2016/03/03	Georgeta Rusu
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	4402737	2016/03/02	2016/03/03	Margaret Kulczyk-Stanko
Moisture	BAL	4401819	N/A	2016/03/02	Valentina Kaftani

Maxxam Job #: B642303
Report Date: 2016/03/03

Terrapex Environmental Ltd
Client Project #: CB644.02
Site Location: 121 Hume Street, Collingwood, ON
Your P.O. #: 4700001396
Sampler Initials: PA

GENERAL COMMENTS

Each temperature is the average of up to three cooler temperatures taken at receipt

Package 1	2.3°C

Results relate only to the items tested.

Maxxam Job #: B642303
Report Date: 2016/03/03

Terrapex Environmental Ltd
Client Project #: CB644.02
Site Location: 121 Hume Street, Collingwood, ON
Your P.O. #: 4700001396
Sampler Initials: PA

QUALITY ASSURANCE REPORT

QA/QC	Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
4400252	XII	Matrix Spike [BYH528-03]	4-Bromofluorobenzene		2016/03/02		100	%	60 - 140
			D10-o-Xylene		2016/03/02		96	%	60 - 130
			D4-1,2-Dichloroethane		2016/03/02		92	%	60 - 140
			D8-Toluene		2016/03/02		102	%	60 - 140
			Acetone (2-Propanone)		2016/03/02		79	%	60 - 140
			Benzene		2016/03/02		87	%	60 - 140
			Bromodichloromethane		2016/03/02		87	%	60 - 140
			Bromoform		2016/03/02		88	%	60 - 140
			Bromomethane		2016/03/02		81	%	60 - 140
			Carbon Tetrachloride		2016/03/02		92	%	60 - 140
			Chlorobenzene		2016/03/02		92	%	60 - 140
			Chloroform		2016/03/02		88	%	60 - 140
			Dibromochloromethane		2016/03/02		90	%	60 - 140
			1,2-Dichlorobenzene		2016/03/02		92	%	60 - 140
			1,3-Dichlorobenzene		2016/03/02		93	%	60 - 140
			1,4-Dichlorobenzene		2016/03/02		94	%	60 - 140
			Dichlorodifluoromethane (FREON 12)		2016/03/02		106	%	60 - 140
			1,1-Dichloroethane		2016/03/02		87	%	60 - 140
			1,2-Dichloroethane		2016/03/02		86	%	60 - 140
			1,1-Dichloroethylene		2016/03/02		92	%	60 - 140
			cis-1,2-Dichloroethylene		2016/03/02		88	%	60 - 140
			trans-1,2-Dichloroethylene		2016/03/02		88	%	60 - 140
			1,2-Dichloropropane		2016/03/02		86	%	60 - 140
			cis-1,3-Dichloropropene		2016/03/02		87	%	60 - 140
			trans-1,3-Dichloropropene		2016/03/02		84	%	60 - 140
			Ethylbenzene		2016/03/02		93	%	60 - 140
			Ethylene Dibromide		2016/03/02		88	%	60 - 140
			Hexane		2016/03/02		97	%	60 - 140
			Methylene Chloride(Dichloromethane)		2016/03/02		87	%	60 - 140
			Methyl Ethyl Ketone (2-Butanone)		2016/03/02		83	%	60 - 140
			Methyl Isobutyl Ketone		2016/03/02		83	%	60 - 140
			Methyl t-butyl ether (MTBE)		2016/03/02		90	%	60 - 140
			Styrene		2016/03/02		90	%	60 - 140
			1,1,1,2-Tetrachloroethane		2016/03/02		91	%	60 - 140
			1,1,2,2-Tetrachloroethane		2016/03/02		87	%	60 - 140
			Tetrachloroethylene		2016/03/02		90	%	60 - 140
			Toluene		2016/03/02		87	%	60 - 140
			1,1,1-Trichloroethane		2016/03/02		87	%	60 - 140
			1,1,2-Trichloroethane		2016/03/02		86	%	60 - 140
			Trichloroethylene		2016/03/02		89	%	60 - 140
			Trichlorofluoromethane (FREON 11)		2016/03/02		94	%	60 - 140
			Vinyl Chloride		2016/03/02		96	%	60 - 140
			p+m-Xylene		2016/03/02		90	%	60 - 140
			o-Xylene		2016/03/02		92	%	60 - 140
4400252	XII	Spiked Blank	4-Bromofluorobenzene		2016/03/02		101	%	60 - 140
			D10-o-Xylene		2016/03/02		105	%	60 - 130
			D4-1,2-Dichloroethane		2016/03/02		96	%	60 - 140
			D8-Toluene		2016/03/02		101	%	60 - 140
			Acetone (2-Propanone)		2016/03/02		77	%	60 - 140
			Benzene		2016/03/02		93	%	60 - 130
			Bromodichloromethane		2016/03/02		94	%	60 - 130

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC	Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
				Bromoform	2016/03/02		96	%	60 - 130
				Bromomethane	2016/03/02		89	%	60 - 140
				Carbon Tetrachloride	2016/03/02		98	%	60 - 130
				Chlorobenzene	2016/03/02		98	%	60 - 130
				Chloroform	2016/03/02		94	%	60 - 130
				Dibromochloromethane	2016/03/02		98	%	60 - 130
				1,2-Dichlorobenzene	2016/03/02		97	%	60 - 130
				1,3-Dichlorobenzene	2016/03/02		96	%	60 - 130
				1,4-Dichlorobenzene	2016/03/02		97	%	60 - 130
				Dichlorodifluoromethane (FREON 12)	2016/03/02		114	%	60 - 140
				1,1-Dichloroethane	2016/03/02		93	%	60 - 130
				1,2-Dichloroethane	2016/03/02		93	%	60 - 130
				1,1-Dichloroethylene	2016/03/02		98	%	60 - 130
				cis-1,2-Dichloroethylene	2016/03/02		94	%	60 - 130
				trans-1,2-Dichloroethylene	2016/03/02		94	%	60 - 130
				1,2-Dichloropropane	2016/03/02		93	%	60 - 130
				cis-1,3-Dichloropropene	2016/03/02		94	%	60 - 130
				trans-1,3-Dichloropropene	2016/03/02		92	%	60 - 130
				Ethylbenzene	2016/03/02		97	%	60 - 130
				Ethylene Dibromide	2016/03/02		95	%	60 - 130
				Hexane	2016/03/02		102	%	60 - 130
				Methylene Chloride(Dichloromethane)	2016/03/02		93	%	60 - 130
				Methyl Ethyl Ketone (2-Butanone)	2016/03/02		86	%	60 - 140
				Methyl Isobutyl Ketone	2016/03/02		91	%	60 - 130
				Methyl t-butyl ether (MTBE)	2016/03/02		93	%	60 - 130
				Styrene	2016/03/02		96	%	60 - 130
				1,1,1,2-Tetrachloroethane	2016/03/02		98	%	60 - 130
				1,1,2,2-Tetrachloroethane	2016/03/02		95	%	60 - 130
				Tetrachloroethylene	2016/03/02		95	%	60 - 130
				Toluene	2016/03/02		92	%	60 - 130
				1,1,1-Trichloroethane	2016/03/02		92	%	60 - 130
				1,1,2-Trichloroethane	2016/03/02		93	%	60 - 130
				Trichloroethylene	2016/03/02		94	%	60 - 130
				Trichlorofluoromethane (FREON 11)	2016/03/02		99	%	60 - 130
				Vinyl Chloride	2016/03/02		103	%	60 - 130
				p+m-Xylene	2016/03/02		94	%	60 - 130
				o-Xylene	2016/03/02		96	%	60 - 130
4400252	XII	Method Blank		4-Bromofluorobenzene	2016/03/02		99	%	60 - 140
				D10-o-Xylene	2016/03/02		89	%	60 - 130
				D4-1,2-Dichloroethane	2016/03/02		96	%	60 - 140
				D8-Toluene	2016/03/02		98	%	60 - 140
				Acetone (2-Propanone)	2016/03/02	ND, RDL=0.50		ug/g	
				Benzene	2016/03/02	ND, RDL=0.020		ug/g	
				Bromodichloromethane	2016/03/02	ND, RDL=0.050		ug/g	
				Bromoform	2016/03/02	ND, RDL=0.050		ug/g	
				Bromomethane	2016/03/02	ND, RDL=0.050		ug/g	

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Carbon Tetrachloride	2016/03/02	ND, RDL=0.050		ug/g	
			Chlorobenzene	2016/03/02	ND, RDL=0.050		ug/g	
			Chloroform	2016/03/02	ND, RDL=0.050		ug/g	
			Dibromochloromethane	2016/03/02	ND, RDL=0.050		ug/g	
			1,2-Dichlorobenzene	2016/03/02	ND, RDL=0.050		ug/g	
			1,3-Dichlorobenzene	2016/03/02	ND, RDL=0.050		ug/g	
			1,4-Dichlorobenzene	2016/03/02	ND, RDL=0.050		ug/g	
			Dichlorodifluoromethane (FREON 12)	2016/03/02	ND, RDL=0.050		ug/g	
			1,1-Dichloroethane	2016/03/02	ND, RDL=0.050		ug/g	
			1,2-Dichloroethane	2016/03/02	ND, RDL=0.050		ug/g	
			1,1-Dichloroethylene	2016/03/02	ND, RDL=0.050		ug/g	
			cis-1,2-Dichloroethylene	2016/03/02	ND, RDL=0.050		ug/g	
			trans-1,2-Dichloroethylene	2016/03/02	ND, RDL=0.050		ug/g	
			1,2-Dichloropropane	2016/03/02	ND, RDL=0.050		ug/g	
			cis-1,3-Dichloropropene	2016/03/02	ND, RDL=0.030		ug/g	
			trans-1,3-Dichloropropene	2016/03/02	ND, RDL=0.040		ug/g	
			Ethylbenzene	2016/03/02	ND, RDL=0.020		ug/g	
			Ethylene Dibromide	2016/03/02	ND, RDL=0.050		ug/g	
			Hexane	2016/03/02	ND, RDL=0.050		ug/g	
			Methylene Chloride(Dichloromethane)	2016/03/02	ND, RDL=0.050		ug/g	
			Methyl Ethyl Ketone (2-Butanone)	2016/03/02	ND, RDL=0.50		ug/g	
			Methyl Isobutyl Ketone	2016/03/02	ND, RDL=0.50		ug/g	
			Methyl t-butyl ether (MTBE)	2016/03/02	ND, RDL=0.050		ug/g	
			Styrene	2016/03/02	ND, RDL=0.050		ug/g	

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC	Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
				1,1,1,2-Tetrachloroethane	2016/03/02	ND, RDL=0.050		ug/g	
				1,1,2,2-Tetrachloroethane	2016/03/02	ND, RDL=0.050		ug/g	
				Tetrachloroethylene	2016/03/02	ND, RDL=0.050		ug/g	
				Toluene	2016/03/02	ND, RDL=0.020		ug/g	
				1,1,1-Trichloroethane	2016/03/02	ND, RDL=0.050		ug/g	
				1,1,2-Trichloroethane	2016/03/02	ND, RDL=0.050		ug/g	
				Trichloroethylene	2016/03/02	ND, RDL=0.050		ug/g	
				Trichlorofluoromethane (FREON 11)	2016/03/02	ND, RDL=0.050		ug/g	
				Vinyl Chloride	2016/03/02	ND, RDL=0.020		ug/g	
				p+m-Xylene	2016/03/02	ND, RDL=0.020		ug/g	
				o-Xylene	2016/03/02	ND, RDL=0.020		ug/g	
				Total Xylenes	2016/03/02	ND, RDL=0.020		ug/g	
4400252	XJI		RPD [BYH528-03]	Acetone (2-Propanone)	2016/03/02	NC		%	50
				Benzene	2016/03/02	NC		%	50
				Bromodichloromethane	2016/03/02	NC		%	50
				Bromoform	2016/03/02	NC		%	50
				Bromomethane	2016/03/02	NC		%	50
				Carbon Tetrachloride	2016/03/02	NC		%	50
				Chlorobenzene	2016/03/02	NC		%	50
				Chloroform	2016/03/02	NC		%	50
				Dibromochloromethane	2016/03/02	NC		%	50
				1,2-Dichlorobenzene	2016/03/02	NC		%	50
				1,3-Dichlorobenzene	2016/03/02	NC		%	50
				1,4-Dichlorobenzene	2016/03/02	NC		%	50
				Dichlorodifluoromethane (FREON 12)	2016/03/02	NC		%	50
				1,1-Dichloroethane	2016/03/02	NC		%	50
				1,2-Dichloroethane	2016/03/02	NC		%	50
				1,1-Dichloroethylene	2016/03/02	NC		%	50
				cis-1,2-Dichloroethylene	2016/03/02	NC		%	50
				trans-1,2-Dichloroethylene	2016/03/02	NC		%	50
				1,2-Dichloropropane	2016/03/02	NC		%	50
				cis-1,3-Dichloropropene	2016/03/02	NC		%	50
				trans-1,3-Dichloropropene	2016/03/02	NC		%	50
				Ethylbenzene	2016/03/02	NC		%	50
				Ethylene Dibromide	2016/03/02	NC		%	50
				Hexane	2016/03/02	NC		%	50
				Methylene Chloride(Dichloromethane)	2016/03/02	NC		%	50
				Methyl Ethyl Ketone (2-Butanone)	2016/03/02	NC		%	50

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Methyl Isobutyl Ketone	2016/03/02	NC		%	50
			Methyl t-butyl ether (MTBE)	2016/03/02	NC		%	50
			Styrene	2016/03/02	NC		%	50
			1,1,1,2-Tetrachloroethane	2016/03/02	NC		%	50
			1,1,2,2-Tetrachloroethane	2016/03/02	NC		%	50
			Tetrachloroethylene	2016/03/02	NC		%	50
			Toluene	2016/03/02	NC		%	50
			1,1,1-Trichloroethane	2016/03/02	NC		%	50
			1,1,2-Trichloroethane	2016/03/02	NC		%	50
			Trichloroethylene	2016/03/02	NC		%	50
			Trichlorofluoromethane (FREON 11)	2016/03/02	NC		%	50
			Vinyl Chloride	2016/03/02	NC		%	50
			p+m-Xylene	2016/03/02	NC		%	50
			o-Xylene	2016/03/02	NC		%	50
			Total Xylenes	2016/03/02	NC		%	50
4401547	SAC	Matrix Spike	Chromium (VI)	2016/03/03		65 (1)	%	75 - 125
4401547	SAC	QC Standard	Chromium (VI)	2016/03/03		83	%	75 - 125
4401547	SAC	Spiked Blank	Chromium (VI)	2016/03/03		100	%	80 - 120
4401547	SAC	Method Blank	Chromium (VI)	2016/03/03	ND, RDL=0.2		ug/g	
4401547	SAC	RPD	Chromium (VI)	2016/03/03	NC		%	35
4401819	NS3	RPD [BYH525-01]	Moisture	2016/03/02	4.5		%	20
4401828	XQI	Matrix Spike [BYH528-02]	Free Cyanide	2016/03/03		98	%	75 - 125
4401828	XQI	Spiked Blank	Free Cyanide	2016/03/03		95	%	80 - 120
4401828	XQI	Method Blank	Free Cyanide	2016/03/03	ND, RDL=0.01		ug/g	
4401828	XQI	RPD [BYH528-02]	Free Cyanide	2016/03/03	NC		%	35
4401998	NS3	RPD [BYH528-02]	Moisture	2016/03/02	2.2		%	20
4402737	MKS	Matrix Spike [BYH528-01]	o-Terphenyl	2016/03/03		102	%	60 - 130
			F2 (C10-C16 Hydrocarbons)	2016/03/03		94	%	50 - 130
			F3 (C16-C34 Hydrocarbons)	2016/03/03		92	%	50 - 130
			F4 (C34-C50 Hydrocarbons)	2016/03/03		93	%	50 - 130
4402737	MKS	Spiked Blank	o-Terphenyl	2016/03/03		102	%	60 - 130
			F2 (C10-C16 Hydrocarbons)	2016/03/03		104	%	80 - 120
			F3 (C16-C34 Hydrocarbons)	2016/03/03		95	%	80 - 120
			F4 (C34-C50 Hydrocarbons)	2016/03/03		95	%	80 - 120
4402737	MKS	Method Blank	o-Terphenyl	2016/03/03		100	%	60 - 130
			F2 (C10-C16 Hydrocarbons)	2016/03/03	ND, RDL=10		ug/g	
			F3 (C16-C34 Hydrocarbons)	2016/03/03	ND, RDL=50		ug/g	
			F4 (C34-C50 Hydrocarbons)	2016/03/03	ND, RDL=50		ug/g	
4402737	MKS	RPD [BYH528-01]	F2 (C10-C16 Hydrocarbons)	2016/03/03	NC		%	30
			F3 (C16-C34 Hydrocarbons)	2016/03/03	NC		%	30
			F4 (C34-C50 Hydrocarbons)	2016/03/03	NC		%	30
4402877	GRU	Matrix Spike	1,4-Difluorobenzene	2016/03/02		100	%	60 - 140
			4-Bromofluorobenzene	2016/03/02		98	%	60 - 140
			D10-Ethylbenzene	2016/03/02		87	%	60 - 140
			D4-1,2-Dichloroethane	2016/03/02		102	%	60 - 140
			Benzene	2016/03/02		87	%	60 - 140

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC	Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
4402877	GRU	Spiked Blank		Toluene	2016/03/02		93	%	60 - 140
				Ethylbenzene	2016/03/02		91	%	60 - 140
				o-Xylene	2016/03/02		93	%	60 - 140
				p+m-Xylene	2016/03/02		83	%	60 - 140
				F1 (C6-C10)	2016/03/02		82	%	60 - 140
				1,4-Difluorobenzene	2016/03/02		102	%	60 - 140
				4-Bromofluorobenzene	2016/03/02		100	%	60 - 140
				D10-Ethylbenzene	2016/03/02		90	%	60 - 140
				D4-1,2-Dichloroethane	2016/03/02		104	%	60 - 140
				Benzene	2016/03/02		103	%	60 - 140
				Toluene	2016/03/02		109	%	60 - 140
				Ethylbenzene	2016/03/02		105	%	60 - 140
				o-Xylene	2016/03/02		108	%	60 - 140
				p+m-Xylene	2016/03/02		97	%	60 - 140
4402877	GRU	Method Blank		F1 (C6-C10)	2016/03/02		95	%	80 - 120
				1,4-Difluorobenzene	2016/03/02		103	%	60 - 140
				4-Bromofluorobenzene	2016/03/02		93	%	60 - 140
				D10-Ethylbenzene	2016/03/02		86	%	60 - 140
				D4-1,2-Dichloroethane	2016/03/02		104	%	60 - 140
				Benzene	2016/03/02	ND, RDL=0.020		ug/g	
				Toluene	2016/03/02	ND, RDL=0.020		ug/g	
				Ethylbenzene	2016/03/02	ND, RDL=0.020		ug/g	
				o-Xylene	2016/03/02	ND, RDL=0.020		ug/g	
				p+m-Xylene	2016/03/02	ND, RDL=0.040		ug/g	
				Total Xylenes	2016/03/02	ND, RDL=0.040		ug/g	
				F1 (C6-C10)	2016/03/02	ND, RDL=10		ug/g	
				F1 (C6-C10) - BTEX	2016/03/02	ND, RDL=10		ug/g	
4402877	GRU	RPD		Benzene	2016/03/02	NC		%	50
				Toluene	2016/03/02	NC		%	50
				Ethylbenzene	2016/03/02	NC		%	50
				o-Xylene	2016/03/02	NC		%	50
				p+m-Xylene	2016/03/02	NC		%	50
				Total Xylenes	2016/03/02	NC		%	50
				F1 (C6-C10)	2016/03/02	NC		%	30
				F1 (C6-C10) - BTEX	2016/03/02	NC		%	30
4402938	LFE	Matrix Spike [BYH528-01]		D10-Anthracene	2016/03/03		92	%	50 - 130
				D14-Terphenyl (FS)	2016/03/03		92	%	50 - 130
				D8-Acenaphthylene	2016/03/03		81	%	50 - 130
				Acenaphthene	2016/03/03		89	%	50 - 130
				Acenaphthylene	2016/03/03		86	%	50 - 130
				Anthracene	2016/03/03		83	%	50 - 130
				Benzo(a)anthracene	2016/03/03		91	%	50 - 130

Maxxam Job #: B642303
Report Date: 2016/03/03

Terrapex Environmental Ltd
Client Project #: CB644.02
Site Location: 121 Hume Street, Collingwood, ON
Your P.O. #: 4700001396
Sampler Initials: PA

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC	Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
4402938	LFE	Spiked Blank		Benzo(a)pyrene	2016/03/03		92	%	50 - 130
				Benzo(b/j)fluoranthene	2016/03/03		99	%	50 - 130
				Benzo(g,h,i)perylene	2016/03/03		95	%	50 - 130
				Benzo(k)fluoranthene	2016/03/03		91	%	50 - 130
				Chrysene	2016/03/03		91	%	50 - 130
				Dibenz(a,h)anthracene	2016/03/03		96	%	50 - 130
				Fluoranthene	2016/03/03		96	%	50 - 130
				Fluorene	2016/03/03		89	%	50 - 130
				Indeno(1,2,3-cd)pyrene	2016/03/03		102	%	50 - 130
				1-Methylnaphthalene	2016/03/03		92	%	50 - 130
				2-Methylnaphthalene	2016/03/03		86	%	50 - 130
				Naphthalene	2016/03/03		79	%	50 - 130
				Phenanthrene	2016/03/03		86	%	50 - 130
				Pyrene	2016/03/03		95	%	50 - 130
				D10-Anthracene	2016/03/03		93	%	50 - 130
				D14-Terphenyl (FS)	2016/03/03		93	%	50 - 130
				D8-Acenaphthylene	2016/03/03		82	%	50 - 130
				Acenaphthene	2016/03/03		91	%	50 - 130
				Acenaphthylene	2016/03/03		85	%	50 - 130
				Anthracene	2016/03/03		85	%	50 - 130
				Benzo(a)anthracene	2016/03/03		93	%	50 - 130
				Benzo(a)pyrene	2016/03/03		90	%	50 - 130
				Benzo(b/j)fluoranthene	2016/03/03		102	%	50 - 130
				Benzo(g,h,i)perylene	2016/03/03		98	%	50 - 130
				Benzo(k)fluoranthene	2016/03/03		91	%	50 - 130
				Chrysene	2016/03/03		92	%	50 - 130
				Dibenz(a,h)anthracene	2016/03/03		97	%	50 - 130
				Fluoranthene	2016/03/03		98	%	50 - 130
				Fluorene	2016/03/03		89	%	50 - 130
				Indeno(1,2,3-cd)pyrene	2016/03/03		104	%	50 - 130
				1-Methylnaphthalene	2016/03/03		92	%	50 - 130
				2-Methylnaphthalene	2016/03/03		87	%	50 - 130
				Naphthalene	2016/03/03		82	%	50 - 130
				Phenanthrene	2016/03/03		86	%	50 - 130
				Pyrene	2016/03/03		96	%	50 - 130
4402938	LFE	Method Blank		D10-Anthracene	2016/03/03		96	%	50 - 130
				D14-Terphenyl (FS)	2016/03/03		94	%	50 - 130
				D8-Acenaphthylene	2016/03/03		81	%	50 - 130
				Acenaphthene	2016/03/03	ND, RDL=0.0050		ug/g	
				Acenaphthylene	2016/03/03	ND, RDL=0.0050		ug/g	
				Anthracene	2016/03/03	ND, RDL=0.0050		ug/g	
				Benzo(a)anthracene	2016/03/03	ND, RDL=0.0050		ug/g	
				Benzo(a)pyrene	2016/03/03	ND, RDL=0.0050		ug/g	
				Benzo(b/j)fluoranthene	2016/03/03	ND, RDL=0.0050		ug/g	

Maxxam Job #: B642303
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Terrapex Environmental Ltd
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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Benzo(g,h,i)perylene	2016/03/03	ND, RDL=0.0050		ug/g	
			Benzo(k)fluoranthene	2016/03/03	ND, RDL=0.0050		ug/g	
			Chrysene	2016/03/03	ND, RDL=0.0050		ug/g	
			Dibenz(a,h)anthracene	2016/03/03	ND, RDL=0.0050		ug/g	
			Fluoranthene	2016/03/03	ND, RDL=0.0050		ug/g	
			Fluorene	2016/03/03	ND, RDL=0.0050		ug/g	
			Indeno(1,2,3-cd)pyrene	2016/03/03	ND, RDL=0.0050		ug/g	
			1-Methylnaphthalene	2016/03/03	ND, RDL=0.0050		ug/g	
			2-Methylnaphthalene	2016/03/03	ND, RDL=0.0050		ug/g	
			Naphthalene	2016/03/03	ND, RDL=0.0050		ug/g	
			Phenanthrene	2016/03/03	ND, RDL=0.0050		ug/g	
			Pyrene	2016/03/03	ND, RDL=0.0050		ug/g	
4402938	LFE	RPD [BYH528-01]	Acenaphthene	2016/03/03	NC		%	40
			Acenaphthylene	2016/03/03	NC		%	40
			Anthracene	2016/03/03	NC		%	40
			Benzo(a)anthracene	2016/03/03	NC		%	40
			Benzo(a)pyrene	2016/03/03	NC		%	40
			Benzo(b,j)fluoranthene	2016/03/03	NC		%	40
			Benzo(g,h,i)perylene	2016/03/03	NC		%	40
			Benzo(k)fluoranthene	2016/03/03	NC		%	40
			Chrysene	2016/03/03	NC		%	40
			Dibenz(a,h)anthracene	2016/03/03	NC		%	40
			Fluoranthene	2016/03/03	NC		%	40
			Fluorene	2016/03/03	NC		%	40
			Indeno(1,2,3-cd)pyrene	2016/03/03	NC		%	40
			1-Methylnaphthalene	2016/03/03	NC		%	40
			2-Methylnaphthalene	2016/03/03	NC		%	40
			Naphthalene	2016/03/03	NC		%	40
			Phenanthrene	2016/03/03	NC		%	40
			Pyrene	2016/03/03	NC		%	40
4403138	NYS	Spiked Blank	Available (CaCl2) pH	2016/03/03		98	%	97 - 103
4403138	NYS	RPD	Available (CaCl2) pH	2016/03/03	0.0013		%	N/A
4403212	APT	Spiked Blank	Soluble Calcium (Ca)	2016/03/03		100	%	80 - 120
			Soluble Magnesium (Mg)	2016/03/03		98	%	80 - 120
			Soluble Sodium (Na)	2016/03/03		106	%	80 - 120
4403212	APT	Method Blank	Soluble Calcium (Ca)	2016/03/03	ND, RDL=0.5		mg/L	

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
4403212	APT	RPD [BYH528-02]	Soluble Magnesium (Mg)	2016/03/03	ND, RDL=0.5		mg/L	
			Soluble Sodium (Na)	2016/03/03	ND,RDL=5		mg/L	
			Soluble Calcium (Ca)	2016/03/03	2.9		%	30
			Soluble Magnesium (Mg)	2016/03/03	NC		%	30
			Soluble Sodium (Na)	2016/03/03	NC		%	30
4403214	L_A	Spiked Blank	Conductivity	2016/03/03		101	%	90 - 110
4403214	L_A	Method Blank	Conductivity	2016/03/03	ND, RDL=0.002		mS/cm	
4403214	L_A	RPD [BYH528-02]	Conductivity	2016/03/03	0.57		%	10
4403215	APT	Matrix Spike [BYH528-02]	Hot Water Ext. Boron (B)	2016/03/03		98	%	75 - 125
4403215	APT	Spiked Blank	Hot Water Ext. Boron (B)	2016/03/03		101	%	75 - 125
4403215	APT	Method Blank	Hot Water Ext. Boron (B)	2016/03/03	ND, RDL=0.050		ug/g	
4403215	APT	RPD [BYH528-02]	Hot Water Ext. Boron (B)	2016/03/03	NC		%	40
4403303	VIV	Matrix Spike [BYH528-02]	Acid Extractable Antimony (Sb)	2016/03/03		97	%	75 - 125
			Acid Extractable Arsenic (As)	2016/03/03		100	%	75 - 125
			Acid Extractable Barium (Ba)	2016/03/03		93	%	75 - 125
			Acid Extractable Beryllium (Be)	2016/03/03		95	%	75 - 125
			Acid Extractable Boron (B)	2016/03/03		93	%	75 - 125
			Acid Extractable Cadmium (Cd)	2016/03/03		100	%	75 - 125
			Acid Extractable Chromium (Cr)	2016/03/03		97	%	75 - 125
			Acid Extractable Cobalt (Co)	2016/03/03		93	%	75 - 125
			Acid Extractable Copper (Cu)	2016/03/03		86	%	75 - 125
			Acid Extractable Lead (Pb)	2016/03/03		90	%	75 - 125
			Acid Extractable Molybdenum (Mo)	2016/03/03		102	%	75 - 125
			Acid Extractable Nickel (Ni)	2016/03/03		90	%	75 - 125
			Acid Extractable Selenium (Se)	2016/03/03		96	%	75 - 125
			Acid Extractable Silver (Ag)	2016/03/03		96	%	75 - 125
			Acid Extractable Thallium (Tl)	2016/03/03		91	%	75 - 125
			Acid Extractable Uranium (U)	2016/03/03		91	%	75 - 125
			Acid Extractable Vanadium (V)	2016/03/03		95	%	75 - 125
			Acid Extractable Zinc (Zn)	2016/03/03		121	%	75 - 125
			Acid Extractable Mercury (Hg)	2016/03/03		94	%	75 - 125
			Acid Extractable Antimony (Sb)	2016/03/03		100	%	80 - 120
			Acid Extractable Arsenic (As)	2016/03/03		106	%	80 - 120
			Acid Extractable Barium (Ba)	2016/03/03		99	%	80 - 120
			Acid Extractable Beryllium (Be)	2016/03/03		95	%	80 - 120
			Acid Extractable Boron (B)	2016/03/03		92	%	80 - 120
			Acid Extractable Cadmium (Cd)	2016/03/03		103	%	80 - 120
			Acid Extractable Chromium (Cr)	2016/03/03		104	%	80 - 120
			Acid Extractable Cobalt (Co)	2016/03/03		100	%	80 - 120
			Acid Extractable Copper (Cu)	2016/03/03		99	%	80 - 120
			Acid Extractable Lead (Pb)	2016/03/03		96	%	80 - 120
			Acid Extractable Molybdenum (Mo)	2016/03/03		102	%	80 - 120
			Acid Extractable Nickel (Ni)	2016/03/03		101	%	80 - 120
			Acid Extractable Selenium (Se)	2016/03/03		102	%	80 - 120
			Acid Extractable Silver (Ag)	2016/03/03		101	%	80 - 120
			Acid Extractable Thallium (Tl)	2016/03/03		95	%	80 - 120
			Acid Extractable Uranium (U)	2016/03/03		94	%	80 - 120
			Acid Extractable Vanadium (V)	2016/03/03		98	%	80 - 120

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
4403303	VIV	Method Blank	Acid Extractable Zinc (Zn)	2016/03/03		100	%	80 - 120
			Acid Extractable Mercury (Hg)	2016/03/03		106	%	80 - 120
			Acid Extractable Antimony (Sb)	2016/03/03	ND, RDL=0.20		ug/g	
			Acid Extractable Arsenic (As)	2016/03/03	ND, RDL=1.0		ug/g	
			Acid Extractable Barium (Ba)	2016/03/03	ND, RDL=0.50		ug/g	
			Acid Extractable Beryllium (Be)	2016/03/03	ND, RDL=0.20		ug/g	
			Acid Extractable Boron (B)	2016/03/03	ND, RDL=5.0		ug/g	
			Acid Extractable Cadmium (Cd)	2016/03/03	ND, RDL=0.10		ug/g	
			Acid Extractable Chromium (Cr)	2016/03/03	ND, RDL=1.0		ug/g	
			Acid Extractable Cobalt (Co)	2016/03/03	ND, RDL=0.10		ug/g	
			Acid Extractable Copper (Cu)	2016/03/03	ND, RDL=0.50		ug/g	
			Acid Extractable Lead (Pb)	2016/03/03	ND, RDL=1.0		ug/g	
			Acid Extractable Molybdenum (Mo)	2016/03/03	ND, RDL=0.50		ug/g	
			Acid Extractable Nickel (Ni)	2016/03/03	ND, RDL=0.50		ug/g	
			Acid Extractable Selenium (Se)	2016/03/03	ND, RDL=0.50		ug/g	
			Acid Extractable Silver (Ag)	2016/03/03	ND, RDL=0.20		ug/g	
			Acid Extractable Thallium (Tl)	2016/03/03	ND, RDL=0.050		ug/g	
			Acid Extractable Uranium (U)	2016/03/03	ND, RDL=0.050		ug/g	
			Acid Extractable Vanadium (V)	2016/03/03	ND, RDL=5.0		ug/g	
			Acid Extractable Zinc (Zn)	2016/03/03	ND, RDL=5.0		ug/g	
			Acid Extractable Mercury (Hg)	2016/03/03	ND, RDL=0.050		ug/g	
4403303	VIV	RPD [BYH528-02]	Acid Extractable Antimony (Sb)	2016/03/03	NC		%	30
			Acid Extractable Arsenic (As)	2016/03/03	NC		%	30
			Acid Extractable Barium (Ba)	2016/03/03	8.3		%	30
			Acid Extractable Beryllium (Be)	2016/03/03	NC		%	30
			Acid Extractable Boron (B)	2016/03/03	NC		%	30
			Acid Extractable Cadmium (Cd)	2016/03/03	NC		%	30
			Acid Extractable Chromium (Cr)	2016/03/03	NC		%	30
			Acid Extractable Cobalt (Co)	2016/03/03	6.3		%	30
			Acid Extractable Copper (Cu)	2016/03/03	NC		%	30

Maxxam Job #: B642303
Report Date: 2016/03/03

Terrapex Environmental Ltd
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Sampler Initials: PA

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Acid Extractable Lead (Pb)	2016/03/03	NC		%	30
			Acid Extractable Molybdenum (Mo)	2016/03/03	NC		%	30
			Acid Extractable Nickel (Ni)	2016/03/03	0.11		%	30
			Acid Extractable Selenium (Se)	2016/03/03	NC		%	30
			Acid Extractable Silver (Ag)	2016/03/03	NC		%	30
			Acid Extractable Thallium (Tl)	2016/03/03	NC		%	30
			Acid Extractable Uranium (U)	2016/03/03	NC		%	30
			Acid Extractable Vanadium (V)	2016/03/03	NC		%	30
			Acid Extractable Zinc (Zn)	2016/03/03	NC		%	30
			Acid Extractable Mercury (Hg)	2016/03/03	NC		%	30
N/A = Not Applicable Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement. Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference. QC Standard: A sample of known concentration prepared by an external agency under stringent conditions. Used as an independent check of method accuracy. Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy. Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination. Surrogate: A pure or isotopically labeled compound whose behavior mirrors the analytes of interest. Used to evaluate extraction efficiency. NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (one or both samples < 5x RDL). (1) The matrix spike recovery was below the lower control limit. This may be due in part to the reducing environment of the sample. The matrix spike was reanalyzed to confirm result.								

VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by the following individual(s).

Cristina Carriere

Cristina Carriere, Scientific Services

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

RUSH

CHAIN OF CUSTODY RECORD SUNCOR DOWNSTREAM

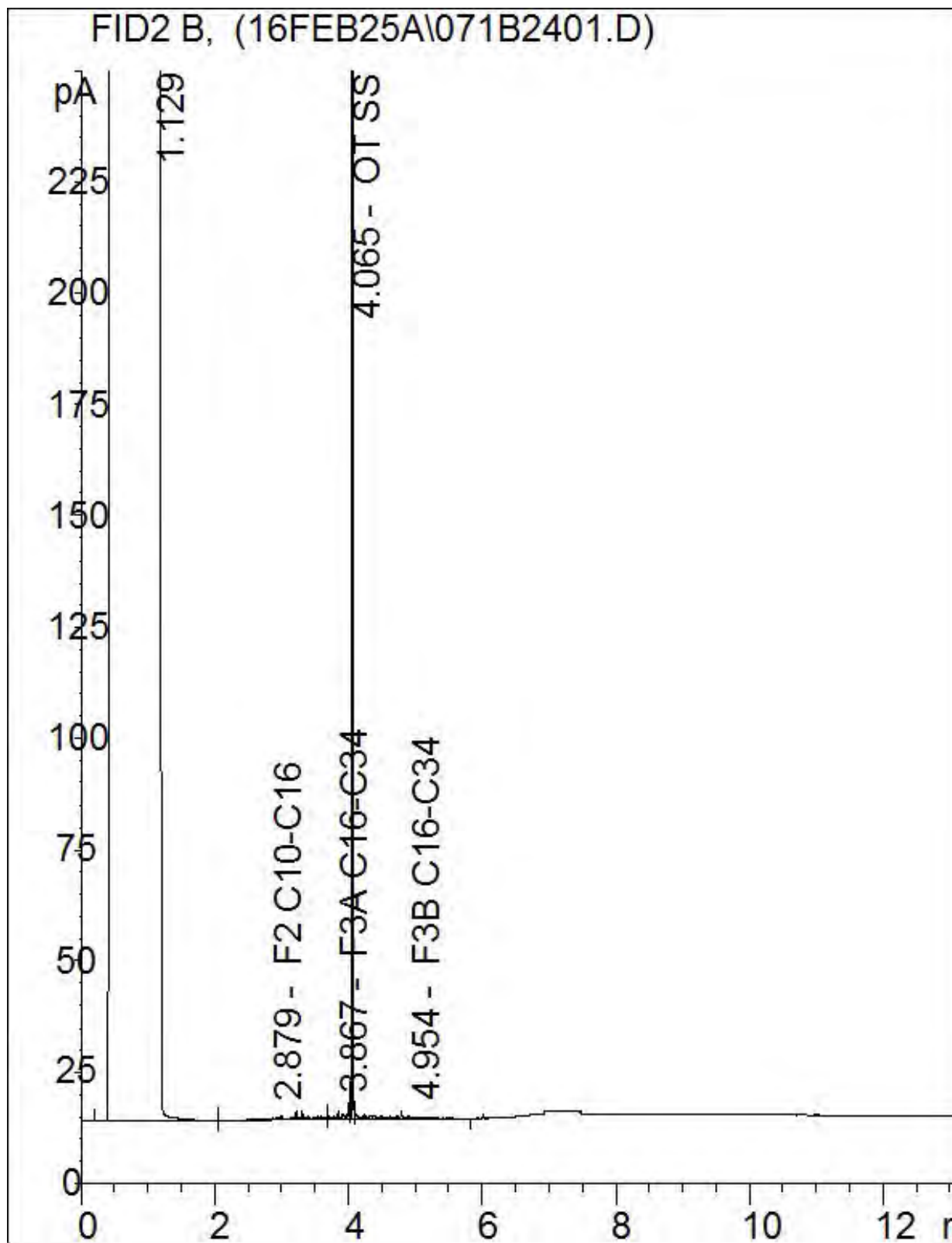
Page 1 of 1

INVOICE INFORMATION:		REPORT INFORMATION (if differs from invoice):		PROJECT INFORMATION:		Laboratory Use Only:	
Company Name: #14539 Suncor Energy Products Partnership	Company Name: #6557 Terrapex Environmental Ltd	Quotation #: B43750	Maxxam Job #: 545524	Contact Name: Ken Tedder	Contact Name: Jeff Stevenson	Task Order #: CB644.02	Bottle Order #:
Address: 3275 Rebecca St, Oakville ON L6L 6N5	Address: 920 Brant Street Unit 16, Burlington ON L7R 4J1	Project #: 121 Hume Street, Collingwood, ON	COC #:	Phone: (905) 469-3754	Phone: (905) 632-5939 x 226	Site Location: 50680	Project Manager:
Email: ktedder@suncor.com	Email: j.stevenson@terrapex.com	Customer: PA	Sampled By:	Barcode: C6549624-08-01			
MOE REGULATED DRINKING WATER OR WATER INTENDED FOR HUMAN CONSUMPTION MUST BE SUBMITTED ON THE MAXXAM DRINKING WATER CHAIN OF CUSTODY							
Regulation 153 (2011)		Other Regulations		Activity		ANALYSIS REQUESTED (PLEASE BE SPECIFIC)	
☒ Table 1	☒ Res/Park	☒ Medium/Fine	☐ CCME	☐ Sanitary Sewer Bylaw	☐ Assessment (circle one)	Field Filled (please circle): Metals: Hg, Cr, V Pay 153 NRs Pay 153 PMS Pay 153 PMS Pay 153 Metals Follow BTEX	
☒ Table 2	☒ Ind/Comm	☒ Coarse	☐ Reg 558	☐ Storm Sewer Bylaw	☐ A1, A2, AR, AV		
☐ Table 3	☐ Agri/Other	☐ For RSC	☐ MISA	☐ Municipality	☐ Remediations (circle one)		
☐ Table 4	☐ Other	☐ Other	☐ PWQO	☐ Contaminant Management (circle one)			
Include Criteria on Certificate of Analysis (Y/N)? ☒ N				M, MW, MV			
Sample Barcode Label	Sample Location/Identification	Date Sampled	Time Sampled	Matrix			
1	CS184	Feb-24-16	11:30	Soil	X	X	X
2	CS192	Feb-24-16	12:30	Soil	X	X	X
3	SP9001	Feb-24-16	12:30	Soil	X	X	X
4							
5							
6							
7							
8							
9							
10							
RELINQUISHED BY: (Signature/Print)		Date: (YY/MM/DD)	Time	RECEIVED BY: (Signature/Print)		Date: (YY/MM/DD)	Time
Philip John		16/02/24	12:30	J. MURPHY		2016/02/25	09:20
# jars used and not submitted				# jars used and not submitted			
Time Sensitive				Temperature (°C) on Receipt		7/7/17	
Custody Seal				Custody Seal		Yes No	
Present				Intact		Yes No	
White: Maxxam Yellow: Client				White: Maxxam Yellow: Client			

* IT IS THE RESPONSIBILITY OF THE RELINQUISHER TO ENSURE THE ACCURACY OF THE CHAIN OF CUSTODY RECORD. AN INCOMPLETE CHAIN OF CUSTODY MAY RESULT IN ANALYTICAL TAT DELAYS. SAMPLES MUST BE KEPT COOL (< 10° C) FROM TIME OF SAMPLING UNTIL DELIVERY TO MAXXAM

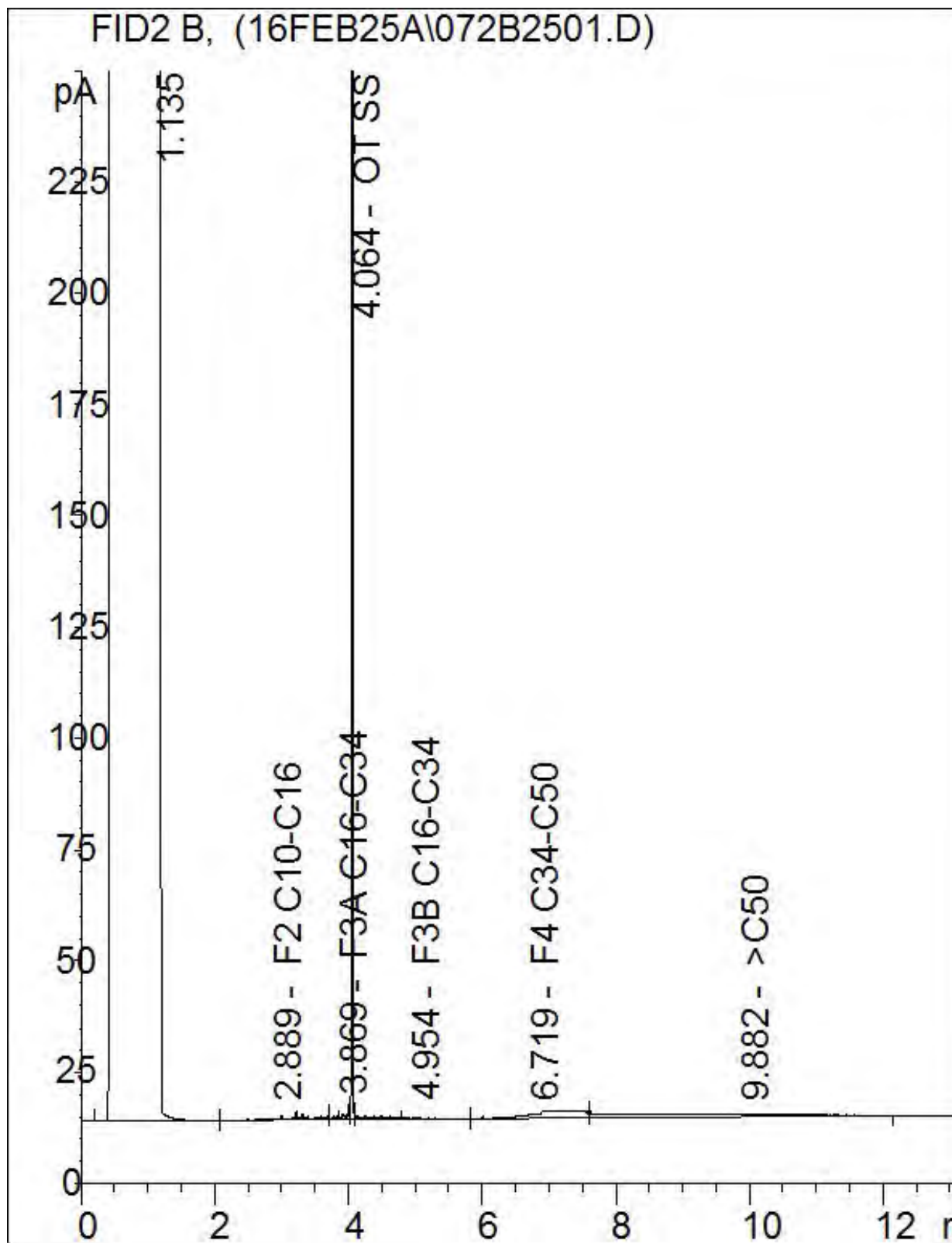
Maxxam Analytics International Corporation o/a Maxxam Analytics

Petroleum Hydrocarbons F2-F4 in Soil Chromatogram



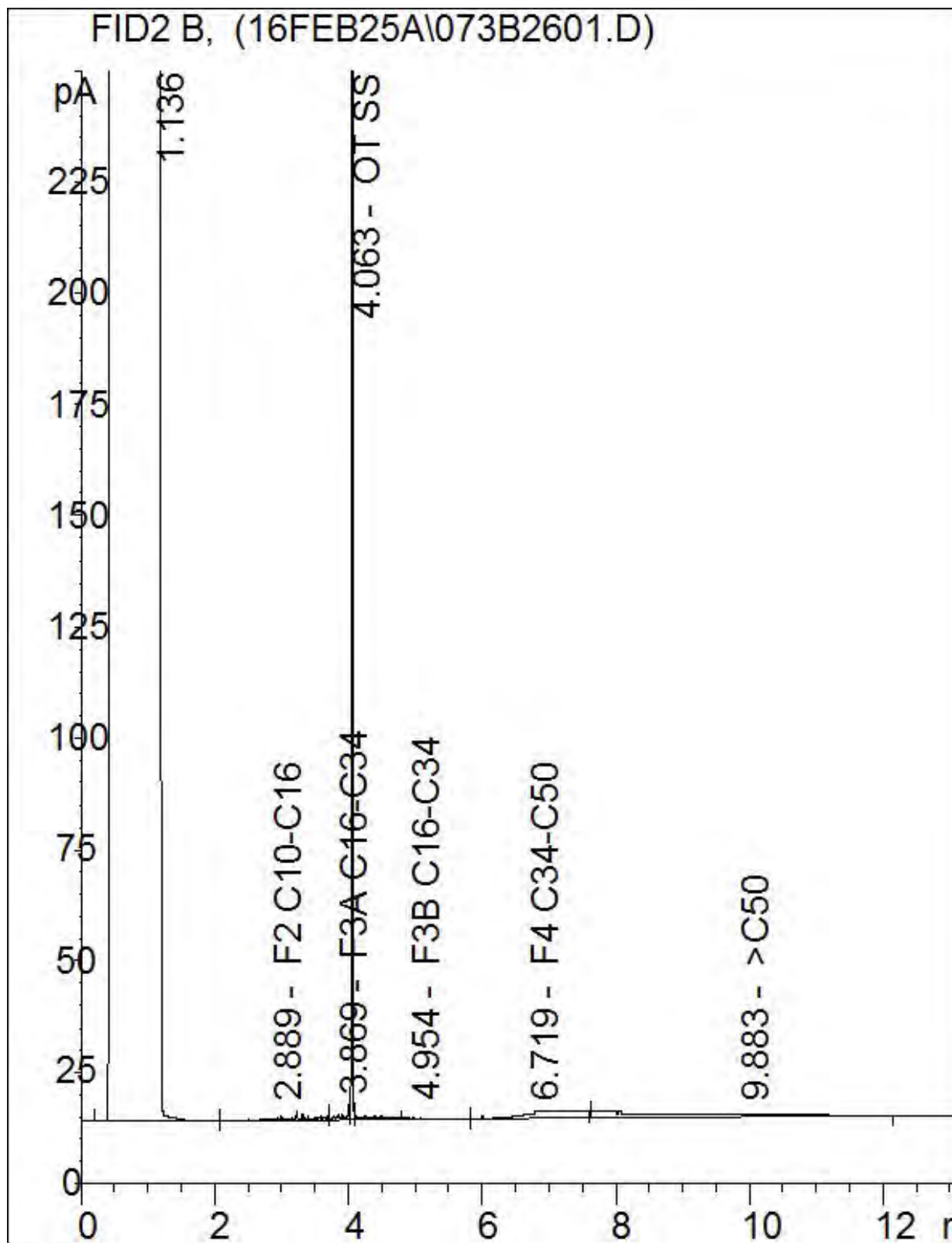
Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Petroleum Hydrocarbons F2-F4 in Soil Chromatogram



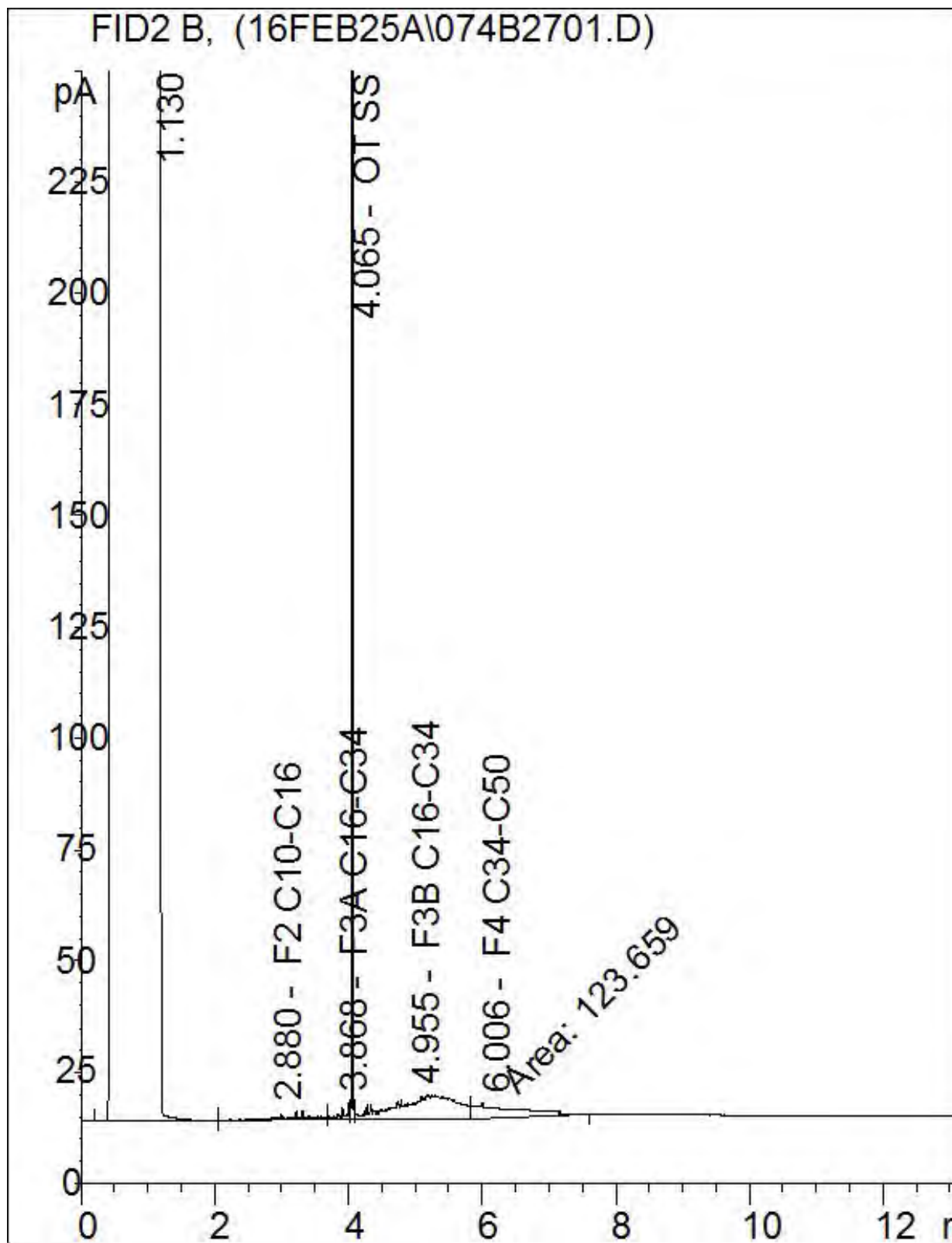
Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Petroleum Hydrocarbons F2-F4 in Soil Chromatogram



Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Petroleum Hydrocarbons F2-F4 in Soil Chromatogram



Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Attention: Jeff Stevenson

Terrapex Environmental Ltd
920 Brant Street
Unit 16
Burlington, ON
CANADA L7R 4J1

Your P.O. #: 4700001396

Your Project #: CB644.02

Site#: 60680

Site Location: 121 Hume Street, Collingwood, ON

Your C.O.C. #: 546624-08-01

Report Date: 2016/02/26

Report #: R3910085

Version: 1 - Final

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B638341

Received: 2016/02/25, 09:20

Sample Matrix: Soil
Samples Received: 3

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Reference
Methylnaphthalene Sum	1	N/A	2016/02/26	CAM SOP-00301	EPA 8270D m
Hot Water Extractable Boron	1	2016/02/26	2016/02/26	CAM SOP-00408	R153 Ana. Prot. 2011
1,3-Dichloropropene Sum	1	N/A	2016/02/26		EPA 8260C m
Free (WAD) Cyanide	1	2016/02/25	2016/02/26	CAM SOP-00457	OMOE E3015 m
Conductivity	1	2016/02/26	2016/02/26	CAM SOP-00414	OMOE E3138 v2 m
Hexavalent Chromium in Soil by IC (1)	1	2016/02/25	2016/02/25	CAM SOP-00436	EPA 3060/7199 m
Petroleum Hydro. CCME F1 & BTEX in Soil (2)	3	N/A	2016/02/25	CAM SOP-00315	CCME PHC-CWS m
Petroleum Hydrocarbons F2-F4 in Soil (3)	3	2016/02/25	2016/02/26	CAM SOP-00316	CCME CWS m
Strong Acid Leachable Metals by ICPMS	1	2016/02/26	2016/02/26	CAM SOP-00447	EPA 6020A m
Moisture	3	N/A	2016/02/25	CAM SOP-00445	Carter 2nd ed 51.2 m
PAH Compounds in Soil by GC/MS (SIM)	1	2016/02/25	2016/02/26	CAM SOP-00318	EPA 8270D m
pH CaCl2 EXTRACT	1	2016/02/26	2016/02/26	CAM SOP-00413	EPA 9045 D m
Sodium Adsorption Ratio (SAR)	1	N/A	2016/02/26	CAM SOP-00102	EPA 6010
SAR - ICP Metals	1	2016/02/26	2016/02/26	CAM SOP-00408	EPA 6010 m
Volatile Organic Compounds in Soil	1	N/A	2016/02/25	CAM SOP000228	EPA 8260C m

Remarks:

Maxxam Analytics has performed all analytical testing herein in accordance with ISO 17025 and the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act. All methodologies comply with this document and are validated for use in the laboratory. The methods and techniques employed in this analysis conform to the performance criteria (detection limits, accuracy and precision) as outlined in the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act.

Maxxam Analytics is accredited for all specific parameters as required by Ontario Regulation 153/04. Maxxam Analytics is limited in liability to the actual cost of analysis unless otherwise agreed in writing. There is no other warranty expressed or implied. Samples will be retained at Maxxam Analytics for three weeks from receipt of data or as per contract.

Reference Method suffix "m" indicates test methods incorporate validated modifications from specific reference methods to improve performance.

* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.

Attention: Jeff Stevenson

Terrapex Environmental Ltd
920 Brant Street
Unit 16
Burlington, ON
CANADA L7R 4J1

Your P.O. #: 4700001396

Your Project #: CB644.02

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Site Location: 121 Hume Street, Collingwood, ON

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CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B638341

Received: 2016/02/25, 09:20

- (1) Soils are reported on a dry weight basis unless otherwise specified.
- (2) No lab extraction date is given for F1BTX & VOC samples that are field preserved with methanol. Extraction date is the date sampled unless otherwise stated.
- (3) All CCME PHC results met required criteria unless otherwise stated in the report. The CWS PHC methods employed by Maxxam conform to all prescribed elements of the reference method and performance based elements have been validated. All modifications have been validated and proven equivalent following "Alberta Environment's Interpretation of the Reference Method for the Canada-Wide Standard for Petroleum Hydrocarbons in Soil Validation of Performance-Based Alternative Methods September 2003". Documentation is available upon request. Modifications from Reference Method for the Canada-wide Standard for Petroleum Hydrocarbons in Soil-Tier 1 Method: F2/F3/F4 data reported using validated cold solvent extraction instead of Soxhlet extraction.

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.

Marissa Oddi, Customer Service Representative

Email: moddi@maxxam.ca

Phone# (905) 817-5700

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Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

O.REG 153 METALS & INORGANICS PKG (SOIL)

Maxxam ID		BXL318	BXL318		
Sampling Date		2016/02/24 11:30	2016/02/24 11:30		
COC Number		546624-08-01	546624-08-01		
	UNITS	CS184	CS184 Lab-Dup	RDL	QC Batch
Calculated Parameters					
Sodium Adsorption Ratio	N/A	1.7			4394378
Inorganics					
Conductivity	mS/cm	0.20		0.002	4396010
Free Cyanide	ug/g	ND	ND	0.01	4395670
Moisture	%	20		1.0	4395187
Available (CaCl2) pH	pH	7.83	7.74		4396202
Metals					
Soluble Calcium (Ca)	mg/L	12.3		0.5	4395998
Soluble Magnesium (Mg)	mg/L	1.1		0.5	4395998
Soluble Sodium (Na)	mg/L	24		5	4395998
Inorganics					
Chromium (VI)	ug/g	ND		0.2	4394608
Metals					
Hot Water Ext. Boron (B)	ug/g	ND		0.050	4396065
Acid Extractable Antimony (Sb)	ug/g	ND		0.20	4396075
Acid Extractable Arsenic (As)	ug/g	ND		1.0	4396075
Acid Extractable Barium (Ba)	ug/g	4.0		0.50	4396075
Acid Extractable Beryllium (Be)	ug/g	ND		0.20	4396075
Acid Extractable Boron (B)	ug/g	ND		5.0	4396075
Acid Extractable Cadmium (Cd)	ug/g	ND		0.10	4396075
Acid Extractable Chromium (Cr)	ug/g	3.0		1.0	4396075
Acid Extractable Cobalt (Co)	ug/g	1.2		0.10	4396075
Acid Extractable Copper (Cu)	ug/g	1.0		0.50	4396075
Acid Extractable Lead (Pb)	ug/g	1.5		1.0	4396075
Acid Extractable Molybdenum (Mo)	ug/g	0.88		0.50	4396075
Acid Extractable Nickel (Ni)	ug/g	2.3		0.50	4396075
Acid Extractable Selenium (Se)	ug/g	ND		0.50	4396075
Acid Extractable Silver (Ag)	ug/g	ND		0.20	4396075
Acid Extractable Thallium (Tl)	ug/g	ND		0.050	4396075
Acid Extractable Uranium (U)	ug/g	0.19		0.050	4396075
Acid Extractable Vanadium (V)	ug/g	ND		5.0	4396075
RDL = Reportable Detection Limit					
QC Batch = Quality Control Batch					
Lab-Dup = Laboratory Initiated Duplicate					
ND = Not detected					

Maxxam Job #: B638341
Report Date: 2016/02/26

Terrapex Environmental Ltd
Client Project #: CB644.02
Site Location: 121 Hume Street, Collingwood, ON
Your P.O. #: 4700001396
Sampler Initials: PA

O.REG 153 METALS & INORGANICS PKG (SOIL)

Maxxam ID		BXL318	BXL318		
Sampling Date		2016/02/24 11:30	2016/02/24 11:30		
COC Number		546624-08-01	546624-08-01		
	UNITS	CS184	CS184 Lab-Dup	RDL	QC Batch
Acid Extractable Zinc (Zn)	ug/g	6.1		5.0	4396075
Acid Extractable Mercury (Hg)	ug/g	ND		0.050	4396075
RDL = Reportable Detection Limit QC Batch = Quality Control Batch Lab-Dup = Laboratory Initiated Duplicate ND = Not detected					

O.REG 153 PAHS (SOIL)

Maxxam ID		BXL318	BXL318		
Sampling Date		2016/02/24 11:30	2016/02/24 11:30		
COC Number		546624-08-01	546624-08-01		
	UNITS	CS184	CS184 Lab-Dup	RDL	QC Batch
Calculated Parameters					
Methylnaphthalene, 2-(1-)	ug/g	ND		0.0071	4394377
Polyaromatic Hydrocarbons					
Acenaphthene	ug/g	ND	ND	0.0050	4395756
Acenaphthylene	ug/g	ND	ND	0.0050	4395756
Anthracene	ug/g	ND	ND	0.0050	4395756
Benzo(a)anthracene	ug/g	ND	ND	0.0050	4395756
Benzo(a)pyrene	ug/g	ND	ND	0.0050	4395756
Benzo(b/j)fluoranthene	ug/g	ND	ND	0.0050	4395756
Benzo(g,h,i)perylene	ug/g	ND	ND	0.0050	4395756
Benzo(k)fluoranthene	ug/g	ND	ND	0.0050	4395756
Chrysene	ug/g	ND	ND	0.0050	4395756
Dibenz(a,h)anthracene	ug/g	ND	ND	0.0050	4395756
Fluoranthene	ug/g	ND	ND	0.0050	4395756
Fluorene	ug/g	ND	ND	0.0050	4395756
Indeno(1,2,3-cd)pyrene	ug/g	ND	ND	0.0050	4395756
1-Methylnaphthalene	ug/g	ND	ND	0.0050	4395756
2-Methylnaphthalene	ug/g	ND	ND	0.0050	4395756
Naphthalene	ug/g	ND	ND	0.0050	4395756
Phenanthrene	ug/g	ND	ND	0.0050	4395756
Pyrene	ug/g	ND	ND	0.0050	4395756
Surrogate Recovery (%)					
D10-Anthracene	%	87	86		4395756
D14-Terphenyl (FS)	%	79	80		4395756
D8-Acenaphthylene	%	81	80		4395756
RDL = Reportable Detection Limit					
QC Batch = Quality Control Batch					
Lab-Dup = Laboratory Initiated Duplicate					
ND = Not detected					

O.REG 153 PETROLEUM HYDROCARBONS (SOIL)

Maxxam ID		BXL318	BXL318	BXL319	BXL320	BXL320		
Sampling Date		2016/02/24 11:30	2016/02/24 11:30	2016/02/24 12:00	2016/02/24 12:30	2016/02/24 12:30		
COC Number		546624-08-01	546624-08-01	546624-08-01	546624-08-01	546624-08-01		
	UNITS	CS184	CS184 Lab-Dup	CS192	SP9001	SP9001 Lab-Dup	RDL	QC Batch
Inorganics								
Moisture	%			21	20		1.0	4394962
BTEX & F1 Hydrocarbons								
Benzene	ug/g			ND	ND	ND	0.020	4395746
Toluene	ug/g			ND	ND	ND	0.020	4395746
Ethylbenzene	ug/g			ND	ND	ND	0.020	4395746
o-Xylene	ug/g			ND	ND	ND	0.020	4395746
p+m-Xylene	ug/g			ND	ND	ND	0.040	4395746
Total Xylenes	ug/g			ND	ND	ND	0.040	4395746
F1 (C6-C10)	ug/g	ND		ND	ND	ND	10	4395746
F1 (C6-C10) - BTEX	ug/g	ND		ND	ND	ND	10	4395746
F2-F4 Hydrocarbons								
F2 (C10-C16 Hydrocarbons)	ug/g	ND	ND	ND	ND		10	4395544
F3 (C16-C34 Hydrocarbons)	ug/g	ND	ND	ND	62		50	4395544
F4 (C34-C50 Hydrocarbons)	ug/g	ND	ND	ND	ND		50	4395544
Reached Baseline at C50	ug/g	Yes	Yes	Yes	Yes			4395544
Surrogate Recovery (%)								
1,4-Difluorobenzene	%	96		95	96	96		4395746
4-Bromofluorobenzene	%	95		97	96	96		4395746
D10-Ethylbenzene	%	68		74	70	74		4395746
D4-1,2-Dichloroethane	%	95		95	95	95		4395746
o-Terphenyl	%	97	96	94	98			4395544
RDL = Reportable Detection Limit QC Batch = Quality Control Batch Lab-Dup = Laboratory Initiated Duplicate ND = Not detected								

O.REG 153 VOLATILE ORGANICS (SOIL)

Maxxam ID		BXL318		
Sampling Date		2016/02/24 11:30		
COC Number		546624-08-01		
	UNITS	CS184	RDL	QC Batch
Calculated Parameters				
1,3-Dichloropropene (cis+trans)	ug/g	ND	0.050	4394376
Volatile Organics				
Acetone (2-Propanone)	ug/g	ND	0.50	4391875
Benzene	ug/g	ND	0.020	4391875
Bromodichloromethane	ug/g	ND	0.050	4391875
Bromoform	ug/g	ND	0.050	4391875
Bromomethane	ug/g	ND	0.050	4391875
Carbon Tetrachloride	ug/g	ND	0.050	4391875
Chlorobenzene	ug/g	ND	0.050	4391875
Chloroform	ug/g	ND	0.050	4391875
Dibromochloromethane	ug/g	ND	0.050	4391875
1,2-Dichlorobenzene	ug/g	ND	0.050	4391875
1,3-Dichlorobenzene	ug/g	ND	0.050	4391875
1,4-Dichlorobenzene	ug/g	ND	0.050	4391875
Dichlorodifluoromethane (FREON 12)	ug/g	ND	0.050	4391875
1,1-Dichloroethane	ug/g	ND	0.050	4391875
1,2-Dichloroethane	ug/g	ND	0.050	4391875
1,1-Dichloroethylene	ug/g	ND	0.050	4391875
cis-1,2-Dichloroethylene	ug/g	ND	0.050	4391875
trans-1,2-Dichloroethylene	ug/g	ND	0.050	4391875
1,2-Dichloropropane	ug/g	ND	0.050	4391875
cis-1,3-Dichloropropene	ug/g	ND	0.030	4391875
trans-1,3-Dichloropropene	ug/g	ND	0.040	4391875
Ethylbenzene	ug/g	ND	0.020	4391875
Ethylene Dibromide	ug/g	ND	0.050	4391875
Hexane	ug/g	ND	0.050	4391875
Methylene Chloride(Dichloromethane)	ug/g	ND	0.050	4391875
Methyl Ethyl Ketone (2-Butanone)	ug/g	ND	0.50	4391875
Methyl Isobutyl Ketone	ug/g	ND	0.50	4391875
Methyl t-butyl ether (MTBE)	ug/g	ND	0.050	4391875
Styrene	ug/g	ND	0.050	4391875
1,1,1,2-Tetrachloroethane	ug/g	ND	0.050	4391875
RDL = Reportable Detection Limit				
QC Batch = Quality Control Batch				
ND = Not detected				

O.REG 153 VOLATILE ORGANICS (SOIL)

Maxxam ID		BXL318		
Sampling Date		2016/02/24 11:30		
COC Number		546624-08-01		
	UNITS	CS184	RDL	QC Batch
1,1,2,2-Tetrachloroethane	ug/g	ND	0.050	4391875
Tetrachloroethylene	ug/g	ND	0.050	4391875
Toluene	ug/g	ND	0.020	4391875
1,1,1-Trichloroethane	ug/g	ND	0.050	4391875
1,1,2-Trichloroethane	ug/g	ND	0.050	4391875
Trichloroethylene	ug/g	ND	0.050	4391875
Trichlorofluoromethane (FREON 11)	ug/g	ND	0.050	4391875
Vinyl Chloride	ug/g	ND	0.020	4391875
p+m-Xylene	ug/g	ND	0.020	4391875
o-Xylene	ug/g	ND	0.020	4391875
Total Xylenes	ug/g	ND	0.020	4391875
Surrogate Recovery (%)				
4-Bromofluorobenzene	%	98		4391875
D10-o-Xylene	%	88		4391875
D4-1,2-Dichloroethane	%	96		4391875
D8-Toluene	%	99		4391875
RDL = Reportable Detection Limit QC Batch = Quality Control Batch ND = Not detected				

Maxxam Job #: B638341
Report Date: 2016/02/26

Terrapex Environmental Ltd
Client Project #: CB644.02
Site Location: 121 Hume Street, Collingwood, ON
Your P.O. #: 4700001396
Sampler Initials: PA

TEST SUMMARY

Maxxam ID: BXL318
Sample ID: CS184
Matrix: Soil

Collected: 2016/02/24
Shipped:
Received: 2016/02/25

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	4394377	N/A	2016/02/26	Automated Statchk
Hot Water Extractable Boron	ICP	4396065	2016/02/26	2016/02/26	Archana Patel
1,3-Dichloropropene Sum	CALC	4394376	N/A	2016/02/26	Automated Statchk
Free (WAD) Cyanide	TECH	4395670	2016/02/25	2016/02/26	Xuanhong Qiu
Conductivity	AT	4396010	2016/02/26	2016/02/26	Lemeneh Addis
Hexavalent Chromium in Soil by IC	IC/SPEC	4394608	2016/02/25	2016/02/25	Lang Le
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	4395746	N/A	2016/02/25	Georgeta Rusu
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	4395544	2016/02/25	2016/02/26	Zhiyue (Frank) Zhu
Strong Acid Leachable Metals by ICPMS	ICP/MS	4396075	2016/02/26	2016/02/26	Viviana Canzonieri
Moisture	BAL	4395187	N/A	2016/02/25	Valentina Kaftani
PAH Compounds in Soil by GC/MS (SIM)	GC/MS	4395756	2016/02/25	2016/02/26	Lingyun Feng
pH CaCl2 EXTRACT	AT	4396202	2016/02/26	2016/02/26	Neil Dassanayake
Sodium Adsorption Ratio (SAR)	CALC/MET	4394378	N/A	2016/02/26	Automated Statchk
SAR - ICP Metals	ICP	4395998	2016/02/26	2016/02/26	Azita Fazaali
Volatile Organic Compounds in Soil	GC/MS	4391875	N/A	2016/02/25	John Wu

Maxxam ID: BXL318 Dup
Sample ID: CS184
Matrix: Soil

Collected: 2016/02/24
Shipped:
Received: 2016/02/25

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Free (WAD) Cyanide	TECH	4395670	2016/02/25	2016/02/26	Xuanhong Qiu
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	4395544	2016/02/25	2016/02/26	Zhiyue (Frank) Zhu
PAH Compounds in Soil by GC/MS (SIM)	GC/MS	4395756	2016/02/25	2016/02/26	Lingyun Feng
pH CaCl2 EXTRACT	AT	4396202	2016/02/26	2016/02/26	Neil Dassanayake

Maxxam ID: BXL319
Sample ID: CS192
Matrix: Soil

Collected: 2016/02/24
Shipped:
Received: 2016/02/25

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	4395746	N/A	2016/02/25	Georgeta Rusu
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	4395544	2016/02/25	2016/02/26	Zhiyue (Frank) Zhu
Moisture	BAL	4394962	N/A	2016/02/25	Valentina Kaftani

Maxxam ID: BXL320
Sample ID: SP9001
Matrix: Soil

Collected: 2016/02/24
Shipped:
Received: 2016/02/25

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	4395746	N/A	2016/02/25	Georgeta Rusu
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	4395544	2016/02/25	2016/02/26	Zhiyue (Frank) Zhu
Moisture	BAL	4394962	N/A	2016/02/25	Valentina Kaftani

Maxxam Job #: B638341
Report Date: 2016/02/26

Terrapex Environmental Ltd
Client Project #: CB644.02
Site Location: 121 Hume Street, Collingwood, ON
Your P.O. #: 4700001396
Sampler Initials: PA

TEST SUMMARY

Maxxam ID: BXL320 Dup
Sample ID: SP9001
Matrix: Soil

Collected: 2016/02/24
Shipped:
Received: 2016/02/25

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	4395746	N/A	2016/02/25	Georgeta Rusu

GENERAL COMMENTS

Each temperature is the average of up to three cooler temperatures taken at receipt

Package 1	7.0°C

Results relate only to the items tested.

Maxxam Job #: B638341
Report Date: 2016/02/26

Terrapex Environmental Ltd
Client Project #: CB644.02
Site Location: 121 Hume Street, Collingwood, ON
Your P.O. #: 4700001396
Sampler Initials: PA

QUALITY ASSURANCE REPORT

QA/QC				Date				
Batch	Init	QC Type	Parameter	Analyzed	Value	Recovery	UNITS	QC Limits
4391875	J_W	Matrix Spike	4-Bromofluorobenzene	2016/02/24		99	%	60 - 140
			D10-o-Xylene	2016/02/24		92	%	60 - 130
			D4-1,2-Dichloroethane	2016/02/24		93	%	60 - 140
			D8-Toluene	2016/02/24		103	%	60 - 140
			Acetone (2-Propanone)	2016/02/24		73	%	60 - 140
			Benzene	2016/02/24		91	%	60 - 140
			Bromodichloromethane	2016/02/24		90	%	60 - 140
			Bromoform	2016/02/24		87	%	60 - 140
			Bromomethane	2016/02/24		83	%	60 - 140
			Carbon Tetrachloride	2016/02/24		97	%	60 - 140
			Chlorobenzene	2016/02/24		97	%	60 - 140
			Chloroform	2016/02/24		92	%	60 - 140
			Dibromochloromethane	2016/02/24		92	%	60 - 140
			1,2-Dichlorobenzene	2016/02/24		96	%	60 - 140
			1,3-Dichlorobenzene	2016/02/24		97	%	60 - 140
			1,4-Dichlorobenzene	2016/02/24		98	%	60 - 140
			Dichlorodifluoromethane (FREON 12)	2016/02/24		108	%	60 - 140
			1,1-Dichloroethane	2016/02/24		91	%	60 - 140
			1,2-Dichloroethane	2016/02/24		88	%	60 - 140
			1,1-Dichloroethylene	2016/02/24		98	%	60 - 140
			cis-1,2-Dichloroethylene	2016/02/24		92	%	60 - 140
			trans-1,2-Dichloroethylene	2016/02/24		94	%	60 - 140
			1,2-Dichloropropane	2016/02/24		89	%	60 - 140
			cis-1,3-Dichloropropene	2016/02/24		80	%	60 - 140
			trans-1,3-Dichloropropene	2016/02/24		78	%	60 - 140
			Ethylbenzene	2016/02/24		97	%	60 - 140
			Ethylene Dibromide	2016/02/24		89	%	60 - 140
			Hexane	2016/02/24		103	%	60 - 140
			Methylene Chloride(Dichloromethane)	2016/02/24		90	%	60 - 140
			Methyl Ethyl Ketone (2-Butanone)	2016/02/24		77	%	60 - 140
			Methyl Isobutyl Ketone	2016/02/24		79	%	60 - 140
			Methyl t-butyl ether (MTBE)	2016/02/24		90	%	60 - 140
			Styrene	2016/02/24		93	%	60 - 140
			1,1,1,2-Tetrachloroethane	2016/02/24		95	%	60 - 140
			1,1,2,2-Tetrachloroethane	2016/02/24		86	%	60 - 140
			Tetrachloroethylene	2016/02/24		96	%	60 - 140
			Toluene	2016/02/24		92	%	60 - 140
			1,1,1-Trichloroethane	2016/02/24		91	%	60 - 140
			1,1,2-Trichloroethane	2016/02/24		88	%	60 - 140
			Trichloroethylene	2016/02/24		93	%	60 - 140
			Trichlorofluoromethane (FREON 11)	2016/02/24		100	%	60 - 140
			Vinyl Chloride	2016/02/24		103	%	60 - 140
			p+m-Xylene	2016/02/24		94	%	60 - 140
			o-Xylene	2016/02/24		95	%	60 - 140
4391875	J_W	Spiked Blank	4-Bromofluorobenzene	2016/02/24		100	%	60 - 140
			D10-o-Xylene	2016/02/24		82	%	60 - 130
			D4-1,2-Dichloroethane	2016/02/24		98	%	60 - 140
			D8-Toluene	2016/02/24		101	%	60 - 140
			Acetone (2-Propanone)	2016/02/24		100	%	60 - 140
			Benzene	2016/02/24		95	%	60 - 130
			Bromodichloromethane	2016/02/24		97	%	60 - 130

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QA/QC	Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
				Bromoform	2016/02/24		99	%	60 - 130
				Bromomethane	2016/02/24		88	%	60 - 140
				Carbon Tetrachloride	2016/02/24		98	%	60 - 130
				Chlorobenzene	2016/02/24		100	%	60 - 130
				Chloroform	2016/02/24		96	%	60 - 130
				Dibromochloromethane	2016/02/24		100	%	60 - 130
				1,2-Dichlorobenzene	2016/02/24		99	%	60 - 130
				1,3-Dichlorobenzene	2016/02/24		97	%	60 - 130
				1,4-Dichlorobenzene	2016/02/24		99	%	60 - 130
				Dichlorodifluoromethane (FREON 12)	2016/02/24		108	%	60 - 140
				1,1-Dichloroethane	2016/02/24		95	%	60 - 130
				1,2-Dichloroethane	2016/02/24		97	%	60 - 130
				1,1-Dichloroethylene	2016/02/24		99	%	60 - 130
				cis-1,2-Dichloroethylene	2016/02/24		97	%	60 - 130
				trans-1,2-Dichloroethylene	2016/02/24		96	%	60 - 130
				1,2-Dichloropropane	2016/02/24		95	%	60 - 130
				cis-1,3-Dichloropropene	2016/02/24		93	%	60 - 130
				trans-1,3-Dichloropropene	2016/02/24		90	%	60 - 130
				Ethylbenzene	2016/02/24		97	%	60 - 130
				Ethylene Dibromide	2016/02/24		99	%	60 - 130
				Hexane	2016/02/24		103	%	60 - 130
				Methylene Chloride(Dichloromethane)	2016/02/24		96	%	60 - 130
				Methyl Ethyl Ketone (2-Butanone)	2016/02/24		105	%	60 - 140
				Methyl Isobutyl Ketone	2016/02/24		100	%	60 - 130
				Methyl t-butyl ether (MTBE)	2016/02/24		96	%	60 - 130
				Styrene	2016/02/24		97	%	60 - 130
				1,1,1,2-Tetrachloroethane	2016/02/24		99	%	60 - 130
				1,1,2,2-Tetrachloroethane	2016/02/24		100	%	60 - 130
				Tetrachloroethylene	2016/02/24		95	%	60 - 130
				Toluene	2016/02/24		93	%	60 - 130
				1,1,1-Trichloroethane	2016/02/24		93	%	60 - 130
				1,1,2-Trichloroethane	2016/02/24		96	%	60 - 130
				Trichloroethylene	2016/02/24		95	%	60 - 130
				Trichlorofluoromethane (FREON 11)	2016/02/24		101	%	60 - 130
				Vinyl Chloride	2016/02/24		104	%	60 - 130
				p+m-Xylene	2016/02/24		95	%	60 - 130
				o-Xylene	2016/02/24		96	%	60 - 130
4391875	J_W		Method Blank	4-Bromofluorobenzene	2016/02/24		98	%	60 - 140
				D10-o-Xylene	2016/02/24		94	%	60 - 130
				D4-1,2-Dichloroethane	2016/02/24		100	%	60 - 140
				D8-Toluene	2016/02/24		97	%	60 - 140
				Acetone (2-Propanone)	2016/02/24	ND, RDL=0.50		ug/g	
				Benzene	2016/02/24	ND, RDL=0.020		ug/g	
				Bromodichloromethane	2016/02/24	ND, RDL=0.050		ug/g	
				Bromoform	2016/02/24	ND, RDL=0.050		ug/g	
				Bromomethane	2016/02/24	ND, RDL=0.050		ug/g	

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QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Carbon Tetrachloride	2016/02/24	ND, RDL=0.050		ug/g	
			Chlorobenzene	2016/02/24	ND, RDL=0.050		ug/g	
			Chloroform	2016/02/24	ND, RDL=0.050		ug/g	
			Dibromochloromethane	2016/02/24	ND, RDL=0.050		ug/g	
			1,2-Dichlorobenzene	2016/02/24	ND, RDL=0.050		ug/g	
			1,3-Dichlorobenzene	2016/02/24	ND, RDL=0.050		ug/g	
			1,4-Dichlorobenzene	2016/02/24	ND, RDL=0.050		ug/g	
			Dichlorodifluoromethane (FREON 12)	2016/02/24	ND, RDL=0.050		ug/g	
			1,1-Dichloroethane	2016/02/24	ND, RDL=0.050		ug/g	
			1,2-Dichloroethane	2016/02/24	ND, RDL=0.050		ug/g	
			1,1-Dichloroethylene	2016/02/24	ND, RDL=0.050		ug/g	
			cis-1,2-Dichloroethylene	2016/02/24	ND, RDL=0.050		ug/g	
			trans-1,2-Dichloroethylene	2016/02/24	ND, RDL=0.050		ug/g	
			1,2-Dichloropropane	2016/02/24	ND, RDL=0.050		ug/g	
			cis-1,3-Dichloropropene	2016/02/24	ND, RDL=0.030		ug/g	
			trans-1,3-Dichloropropene	2016/02/24	ND, RDL=0.040		ug/g	
			Ethylbenzene	2016/02/24	ND, RDL=0.020		ug/g	
			Ethylene Dibromide	2016/02/24	ND, RDL=0.050		ug/g	
			Hexane	2016/02/24	ND, RDL=0.050		ug/g	
			Methylene Chloride(Dichloromethane)	2016/02/24	ND, RDL=0.050		ug/g	
			Methyl Ethyl Ketone (2-Butanone)	2016/02/24	ND, RDL=0.50		ug/g	
			Methyl Isobutyl Ketone	2016/02/24	ND, RDL=0.50		ug/g	
			Methyl t-butyl ether (MTBE)	2016/02/24	ND, RDL=0.050		ug/g	
			Styrene	2016/02/24	ND, RDL=0.050		ug/g	

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				1,1,1,2-Tetrachloroethane	2016/02/24	ND, RDL=0.050		ug/g	
				1,1,2,2-Tetrachloroethane	2016/02/24	ND, RDL=0.050		ug/g	
				Tetrachloroethylene	2016/02/24	ND, RDL=0.050		ug/g	
				Toluene	2016/02/24	ND, RDL=0.020		ug/g	
				1,1,1-Trichloroethane	2016/02/24	ND, RDL=0.050		ug/g	
				1,1,2-Trichloroethane	2016/02/24	ND, RDL=0.050		ug/g	
				Trichloroethylene	2016/02/24	ND, RDL=0.050		ug/g	
				Trichlorofluoromethane (FREON 11)	2016/02/24	ND, RDL=0.050		ug/g	
				Vinyl Chloride	2016/02/24	ND, RDL=0.020		ug/g	
				p+m-Xylene	2016/02/24	ND, RDL=0.020		ug/g	
				o-Xylene	2016/02/24	ND, RDL=0.020		ug/g	
				Total Xylenes	2016/02/24	ND, RDL=0.020		ug/g	
4391875	J_W	RPD		Acetone (2-Propanone)	2016/02/24	NC		%	50
				Benzene	2016/02/24	NC		%	50
				Bromodichloromethane	2016/02/24	NC		%	50
				Bromoform	2016/02/24	NC		%	50
				Bromomethane	2016/02/24	NC		%	50
				Carbon Tetrachloride	2016/02/24	NC		%	50
				Chlorobenzene	2016/02/24	NC		%	50
				Chloroform	2016/02/24	NC		%	50
				Dibromochloromethane	2016/02/24	NC		%	50
				1,2-Dichlorobenzene	2016/02/24	NC		%	50
				1,3-Dichlorobenzene	2016/02/24	NC		%	50
				1,4-Dichlorobenzene	2016/02/24	NC		%	50
				Dichlorodifluoromethane (FREON 12)	2016/02/24	NC		%	50
				1,1-Dichloroethane	2016/02/24	NC		%	50
				1,2-Dichloroethane	2016/02/24	NC		%	50
				1,1-Dichloroethylene	2016/02/24	NC		%	50
				cis-1,2-Dichloroethylene	2016/02/24	NC		%	50
				trans-1,2-Dichloroethylene	2016/02/24	NC		%	50
				1,2-Dichloropropane	2016/02/24	NC		%	50
				cis-1,3-Dichloropropene	2016/02/24	NC		%	50
				trans-1,3-Dichloropropene	2016/02/24	NC		%	50
				Ethylbenzene	2016/02/24	NC		%	50
				Ethylene Dibromide	2016/02/24	NC		%	50
				Hexane	2016/02/24	NC		%	50
				Methylene Chloride(Dichloromethane)	2016/02/24	NC		%	50
				Methyl Ethyl Ketone (2-Butanone)	2016/02/24	NC		%	50

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			Methyl Isobutyl Ketone	2016/02/24	NC		%	50
			Methyl t-butyl ether (MTBE)	2016/02/24	NC		%	50
			Styrene	2016/02/24	NC		%	50
			1,1,1,2-Tetrachloroethane	2016/02/24	NC		%	50
			1,1,2,2-Tetrachloroethane	2016/02/24	NC		%	50
			Tetrachloroethylene	2016/02/24	NC		%	50
			Toluene	2016/02/24	NC		%	50
			1,1,1-Trichloroethane	2016/02/24	NC		%	50
			1,1,2-Trichloroethane	2016/02/24	NC		%	50
			Trichloroethylene	2016/02/24	NC		%	50
			Trichlorofluoromethane (FREON 11)	2016/02/24	NC		%	50
			Vinyl Chloride	2016/02/24	NC		%	50
			p+m-Xylene	2016/02/24	NC		%	50
			o-Xylene	2016/02/24	NC		%	50
			Total Xylenes	2016/02/24	NC		%	50
4394608	LLE	Matrix Spike	Chromium (VI)	2016/02/25		73 (1)	%	75 - 125
4394608	LLE	QC Standard	Chromium (VI)	2016/02/25		95	%	75 - 125
4394608	LLE	Spiked Blank	Chromium (VI)	2016/02/25		101	%	80 - 120
4394608	LLE	Method Blank	Chromium (VI)	2016/02/25	ND, RDL=0.2		ug/g	
4394608	LLE	RPD	Chromium (VI)	2016/02/25	NC		%	35
4394962	NS3	RPD	Moisture	2016/02/25	NC		%	20
4395187	NS3	RPD	Moisture	2016/02/25	0.90		%	20
4395544	ZZ	Matrix Spike [BXL318-02]	o-Terphenyl	2016/02/26		98	%	60 - 130
			F2 (C10-C16 Hydrocarbons)	2016/02/26		89	%	50 - 130
			F3 (C16-C34 Hydrocarbons)	2016/02/26		92	%	50 - 130
			F4 (C34-C50 Hydrocarbons)	2016/02/26		96	%	50 - 130
4395544	ZZ	Spiked Blank	o-Terphenyl	2016/02/26		99	%	60 - 130
			F2 (C10-C16 Hydrocarbons)	2016/02/26		89	%	80 - 120
			F3 (C16-C34 Hydrocarbons)	2016/02/26		92	%	80 - 120
			F4 (C34-C50 Hydrocarbons)	2016/02/26		97	%	80 - 120
4395544	ZZ	Method Blank	o-Terphenyl	2016/02/26		97	%	60 - 130
			F2 (C10-C16 Hydrocarbons)	2016/02/26	ND, RDL=10		ug/g	
			F3 (C16-C34 Hydrocarbons)	2016/02/26	ND, RDL=50		ug/g	
			F4 (C34-C50 Hydrocarbons)	2016/02/26	ND, RDL=50		ug/g	
4395544	ZZ	RPD [BXL318-02]	F2 (C10-C16 Hydrocarbons)	2016/02/26	NC		%	30
			F3 (C16-C34 Hydrocarbons)	2016/02/26	NC		%	30
			F4 (C34-C50 Hydrocarbons)	2016/02/26	NC		%	30
4395670	XQI	Matrix Spike [BXL318-01]	Free Cyanide	2016/02/26		105	%	75 - 125
4395670	XQI	Spiked Blank	Free Cyanide	2016/02/26		100	%	80 - 120
4395670	XQI	Method Blank	Free Cyanide	2016/02/26	ND, RDL=0.01		ug/g	
4395670	XQI	RPD [BXL318-01]	Free Cyanide	2016/02/26	NC		%	35
4395746	GRU	Matrix Spike [BXL320-02]	1,4-Difluorobenzene	2016/02/25		94	%	60 - 140
			4-Bromofluorobenzene	2016/02/25		100	%	60 - 140
			D10-Ethylbenzene	2016/02/25		78	%	60 - 140
			D4-1,2-Dichloroethane	2016/02/25		95	%	60 - 140
			Benzene	2016/02/25		76	%	60 - 140

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4395746	GRU	Spiked Blank		Toluene	2016/02/25		83	%	60 - 140
				Ethylbenzene	2016/02/25		85	%	60 - 140
				o-Xylene	2016/02/25		88	%	60 - 140
				p+m-Xylene	2016/02/25		77	%	60 - 140
				F1 (C6-C10)	2016/02/25		66	%	60 - 140
				1,4-Difluorobenzene	2016/02/25		96	%	60 - 140
				4-Bromofluorobenzene	2016/02/25		100	%	60 - 140
				D10-Ethylbenzene	2016/02/25		74	%	60 - 140
				D4-1,2-Dichloroethane	2016/02/25		94	%	60 - 140
				Benzene	2016/02/25		83	%	60 - 140
				Toluene	2016/02/25		90	%	60 - 140
				Ethylbenzene	2016/02/25		89	%	60 - 140
				o-Xylene	2016/02/25		91	%	60 - 140
				p+m-Xylene	2016/02/25		82	%	60 - 140
4395746	GRU	Method Blank		F1 (C6-C10)	2016/02/25		84	%	80 - 120
				1,4-Difluorobenzene	2016/02/25		98	%	60 - 140
				4-Bromofluorobenzene	2016/02/25		98	%	60 - 140
				D10-Ethylbenzene	2016/02/25		74	%	60 - 140
				D4-1,2-Dichloroethane	2016/02/25		95	%	60 - 140
				Benzene	2016/02/25	ND, RDL=0.020		ug/g	
				Toluene	2016/02/25	ND, RDL=0.020		ug/g	
				Ethylbenzene	2016/02/25	ND, RDL=0.020		ug/g	
				o-Xylene	2016/02/25	ND, RDL=0.020		ug/g	
				p+m-Xylene	2016/02/25	ND, RDL=0.040		ug/g	
				Total Xylenes	2016/02/25	ND, RDL=0.040		ug/g	
				F1 (C6-C10)	2016/02/25	ND, RDL=10		ug/g	
				F1 (C6-C10) - BTEX	2016/02/25	ND, RDL=10		ug/g	
4395746	GRU	RPD [BXL320-02]		Benzene	2016/02/25	NC		%	50
				Toluene	2016/02/25	NC		%	50
				Ethylbenzene	2016/02/25	NC		%	50
				o-Xylene	2016/02/25	NC		%	50
				p+m-Xylene	2016/02/25	NC		%	50
				Total Xylenes	2016/02/25	NC		%	50
				F1 (C6-C10)	2016/02/25	NC		%	30
				F1 (C6-C10) - BTEX	2016/02/25	NC		%	30
4395756	LFE	Matrix Spike [BXL318-02]		D10-Anthracene	2016/02/26		93	%	50 - 130
				D14-Terphenyl (FS)	2016/02/26		83	%	50 - 130
				D8-Acenaphthylene	2016/02/26		98	%	50 - 130
				Acenaphthene	2016/02/26		90	%	50 - 130
				Acenaphthylene	2016/02/26		91	%	50 - 130
				Anthracene	2016/02/26		90	%	50 - 130
				Benzo(a)anthracene	2016/02/26		99	%	50 - 130

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Batch	Init	QC Type	Parameter	Analyzed	Value	Recovery	UNITS	QC Limits
4395756	LFE	Spiked Blank	Benzo(a)pyrene	2016/02/26		99	%	50 - 130
			Benzo(b/j)fluoranthene	2016/02/26		100	%	50 - 130
			Benzo(g,h,i)perylene	2016/02/26		96	%	50 - 130
			Benzo(k)fluoranthene	2016/02/26		101	%	50 - 130
			Chrysene	2016/02/26		97	%	50 - 130
			Dibenz(a,h)anthracene	2016/02/26		91	%	50 - 130
			Fluoranthene	2016/02/26		92	%	50 - 130
			Fluorene	2016/02/26		92	%	50 - 130
			Indeno(1,2,3-cd)pyrene	2016/02/26		100	%	50 - 130
			1-Methylnaphthalene	2016/02/26		82	%	50 - 130
			2-Methylnaphthalene	2016/02/26		77	%	50 - 130
			Naphthalene	2016/02/26		77	%	50 - 130
			Phenanthrene	2016/02/26		91	%	50 - 130
			Pyrene	2016/02/26		85	%	50 - 130
			D10-Anthracene	2016/02/26		93	%	50 - 130
			D14-Terphenyl (FS)	2016/02/26		88	%	50 - 130
			D8-Acenaphthylene	2016/02/26		94	%	50 - 130
			Acenaphthene	2016/02/26		91	%	50 - 130
			Acenaphthylene	2016/02/26		92	%	50 - 130
			Anthracene	2016/02/26		90	%	50 - 130
			Benzo(a)anthracene	2016/02/26		99	%	50 - 130
			Benzo(a)pyrene	2016/02/26		107	%	50 - 130
			Benzo(b/j)fluoranthene	2016/02/26		106	%	50 - 130
			Benzo(g,h,i)perylene	2016/02/26		97	%	50 - 130
			Benzo(k)fluoranthene	2016/02/26		104	%	50 - 130
			Chrysene	2016/02/26		98	%	50 - 130
			Dibenz(a,h)anthracene	2016/02/26		105	%	50 - 130
			Fluoranthene	2016/02/26		98	%	50 - 130
			Fluorene	2016/02/26		96	%	50 - 130
			Indeno(1,2,3-cd)pyrene	2016/02/26		117	%	50 - 130
			1-Methylnaphthalene	2016/02/26		86	%	50 - 130
			2-Methylnaphthalene	2016/02/26		85	%	50 - 130
			Naphthalene	2016/02/26		81	%	50 - 130
			Phenanthrene	2016/02/26		93	%	50 - 130
			Pyrene	2016/02/26		94	%	50 - 130
4395756	LFE	Method Blank	D10-Anthracene	2016/02/26		94	%	50 - 130
			D14-Terphenyl (FS)	2016/02/26		87	%	50 - 130
			D8-Acenaphthylene	2016/02/26		92	%	50 - 130
			Acenaphthene	2016/02/26	ND, RDL=0.0050		ug/g	
			Acenaphthylene	2016/02/26	ND, RDL=0.0050		ug/g	
			Anthracene	2016/02/26	ND, RDL=0.0050		ug/g	
			Benzo(a)anthracene	2016/02/26	ND, RDL=0.0050		ug/g	
			Benzo(a)pyrene	2016/02/26	ND, RDL=0.0050		ug/g	
			Benzo(b/j)fluoranthene	2016/02/26	ND, RDL=0.0050		ug/g	

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			Benzo(g,h,i)perylene	2016/02/26	ND, RDL=0.0050		ug/g	
			Benzo(k)fluoranthene	2016/02/26	ND, RDL=0.0050		ug/g	
			Chrysene	2016/02/26	ND, RDL=0.0050		ug/g	
			Dibenz(a,h)anthracene	2016/02/26	ND, RDL=0.0050		ug/g	
			Fluoranthene	2016/02/26	ND, RDL=0.0050		ug/g	
			Fluorene	2016/02/26	ND, RDL=0.0050		ug/g	
			Indeno(1,2,3-cd)pyrene	2016/02/26	ND, RDL=0.0050		ug/g	
			1-Methylnaphthalene	2016/02/26	ND, RDL=0.0050		ug/g	
			2-Methylnaphthalene	2016/02/26	ND, RDL=0.0050		ug/g	
			Naphthalene	2016/02/26	ND, RDL=0.0050		ug/g	
			Phenanthrene	2016/02/26	ND, RDL=0.0050		ug/g	
			Pyrene	2016/02/26	ND, RDL=0.0050		ug/g	
4395756	LFE	RPD [BXL318-02]	Acenaphthene	2016/02/26	NC		%	40
			Acenaphthylene	2016/02/26	NC		%	40
			Anthracene	2016/02/26	NC		%	40
			Benzo(a)anthracene	2016/02/26	NC		%	40
			Benzo(a)pyrene	2016/02/26	NC		%	40
			Benzo(b,j)fluoranthene	2016/02/26	NC		%	40
			Benzo(g,h,i)perylene	2016/02/26	NC		%	40
			Benzo(k)fluoranthene	2016/02/26	NC		%	40
			Chrysene	2016/02/26	NC		%	40
			Dibenz(a,h)anthracene	2016/02/26	NC		%	40
			Fluoranthene	2016/02/26	NC		%	40
			Fluorene	2016/02/26	NC		%	40
			Indeno(1,2,3-cd)pyrene	2016/02/26	NC		%	40
			1-Methylnaphthalene	2016/02/26	NC		%	40
			2-Methylnaphthalene	2016/02/26	NC		%	40
			Naphthalene	2016/02/26	NC		%	40
			Phenanthrene	2016/02/26	NC		%	40
			Pyrene	2016/02/26	NC		%	40
4395998	AFZ	Spiked Blank	Soluble Calcium (Ca)	2016/02/26		101	%	80 - 120
			Soluble Magnesium (Mg)	2016/02/26		98	%	80 - 120
			Soluble Sodium (Na)	2016/02/26		103	%	80 - 120
4395998	AFZ	Method Blank	Soluble Calcium (Ca)	2016/02/26	ND, RDL=0.5		mg/L	
			Soluble Magnesium (Mg)	2016/02/26	ND, RDL=0.5		mg/L	
			Soluble Sodium (Na)	2016/02/26	ND,RDL=5		mg/L	

Maxxam Job #: B638341
Report Date: 2016/02/26

Terrapex Environmental Ltd
Client Project #: CB644.02
Site Location: 121 Hume Street, Collingwood, ON
Your P.O. #: 4700001396
Sampler Initials: PA

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC	Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
4395998	AFZ	RPD		Soluble Calcium (Ca)	2016/02/26	5.6		%	30
				Soluble Magnesium (Mg)	2016/02/26	NC		%	30
				Soluble Sodium (Na)	2016/02/26	NC		%	30
4396010	L_A	Spiked Blank		Conductivity	2016/02/26		101	%	90 - 110
4396010	L_A	Method Blank		Conductivity	2016/02/26	ND, RDL=0.002		mS/cm	
4396010	L_A	RPD		Conductivity	2016/02/26	2.2		%	10
4396065	APT	Matrix Spike		Hot Water Ext. Boron (B)	2016/02/26		103	%	75 - 125
4396065	APT	Spiked Blank		Hot Water Ext. Boron (B)	2016/02/26		97	%	75 - 125
4396065	APT	Method Blank		Hot Water Ext. Boron (B)	2016/02/26	ND, RDL=0.050		ug/g	
4396065	APT	RPD		Hot Water Ext. Boron (B)	2016/02/26	NC		%	40
4396075	VIV	Matrix Spike		Acid Extractable Antimony (Sb)	2016/02/26		95	%	75 - 125
				Acid Extractable Arsenic (As)	2016/02/26		96	%	75 - 125
				Acid Extractable Barium (Ba)	2016/02/26		NC	%	75 - 125
				Acid Extractable Beryllium (Be)	2016/02/26		96	%	75 - 125
				Acid Extractable Boron (B)	2016/02/26		92	%	75 - 125
				Acid Extractable Cadmium (Cd)	2016/02/26		98	%	75 - 125
				Acid Extractable Chromium (Cr)	2016/02/26		97	%	75 - 125
				Acid Extractable Cobalt (Co)	2016/02/26		97	%	75 - 125
				Acid Extractable Copper (Cu)	2016/02/26		95	%	75 - 125
				Acid Extractable Lead (Pb)	2016/02/26		97	%	75 - 125
				Acid Extractable Molybdenum (Mo)	2016/02/26		101	%	75 - 125
				Acid Extractable Nickel (Ni)	2016/02/26		94	%	75 - 125
				Acid Extractable Selenium (Se)	2016/02/26		95	%	75 - 125
				Acid Extractable Silver (Ag)	2016/02/26		98	%	75 - 125
				Acid Extractable Thallium (Tl)	2016/02/26		94	%	75 - 125
				Acid Extractable Uranium (U)	2016/02/26		97	%	75 - 125
				Acid Extractable Vanadium (V)	2016/02/26		NC	%	75 - 125
				Acid Extractable Zinc (Zn)	2016/02/26		NC	%	75 - 125
				Acid Extractable Mercury (Hg)	2016/02/26		105	%	75 - 125
				Acid Extractable Antimony (Sb)	2016/02/26		96	%	80 - 120
				Acid Extractable Arsenic (As)	2016/02/26		100	%	80 - 120
				Acid Extractable Barium (Ba)	2016/02/26		100	%	80 - 120
				Acid Extractable Beryllium (Be)	2016/02/26		94	%	80 - 120
				Acid Extractable Boron (B)	2016/02/26		92	%	80 - 120
				Acid Extractable Cadmium (Cd)	2016/02/26		100	%	80 - 120
				Acid Extractable Chromium (Cr)	2016/02/26		100	%	80 - 120
				Acid Extractable Cobalt (Co)	2016/02/26		100	%	80 - 120
				Acid Extractable Copper (Cu)	2016/02/26		102	%	80 - 120
				Acid Extractable Lead (Pb)	2016/02/26		100	%	80 - 120
				Acid Extractable Molybdenum (Mo)	2016/02/26		100	%	80 - 120
				Acid Extractable Nickel (Ni)	2016/02/26		103	%	80 - 120
				Acid Extractable Selenium (Se)	2016/02/26		101	%	80 - 120
				Acid Extractable Silver (Ag)	2016/02/26		100	%	80 - 120
				Acid Extractable Thallium (Tl)	2016/02/26		98	%	80 - 120
				Acid Extractable Uranium (U)	2016/02/26		98	%	80 - 120
				Acid Extractable Vanadium (V)	2016/02/26		99	%	80 - 120
				Acid Extractable Zinc (Zn)	2016/02/26		104	%	80 - 120
				Acid Extractable Mercury (Hg)	2016/02/26		107	%	80 - 120

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
4396075	VIV	Method Blank	Acid Extractable Antimony (Sb)	2016/02/26	ND, RDL=0.20		ug/g	
			Acid Extractable Arsenic (As)	2016/02/26	ND, RDL=1.0		ug/g	
			Acid Extractable Barium (Ba)	2016/02/26	ND, RDL=0.50		ug/g	
			Acid Extractable Beryllium (Be)	2016/02/26	ND, RDL=0.20		ug/g	
			Acid Extractable Boron (B)	2016/02/26	ND, RDL=5.0		ug/g	
			Acid Extractable Cadmium (Cd)	2016/02/26	ND, RDL=0.10		ug/g	
			Acid Extractable Chromium (Cr)	2016/02/26	ND, RDL=1.0		ug/g	
			Acid Extractable Cobalt (Co)	2016/02/26	ND, RDL=0.10		ug/g	
			Acid Extractable Copper (Cu)	2016/02/26	ND, RDL=0.50		ug/g	
			Acid Extractable Lead (Pb)	2016/02/26	ND, RDL=1.0		ug/g	
			Acid Extractable Molybdenum (Mo)	2016/02/26	ND, RDL=0.50		ug/g	
			Acid Extractable Nickel (Ni)	2016/02/26	ND, RDL=0.50		ug/g	
			Acid Extractable Selenium (Se)	2016/02/26	ND, RDL=0.50		ug/g	
			Acid Extractable Silver (Ag)	2016/02/26	ND, RDL=0.20		ug/g	
			Acid Extractable Thallium (Tl)	2016/02/26	ND, RDL=0.050		ug/g	
			Acid Extractable Uranium (U)	2016/02/26	ND, RDL=0.050		ug/g	
			Acid Extractable Vanadium (V)	2016/02/26	ND, RDL=5.0		ug/g	
			Acid Extractable Zinc (Zn)	2016/02/26	ND, RDL=5.0		ug/g	
			Acid Extractable Mercury (Hg)	2016/02/26	ND, RDL=0.050		ug/g	
4396075	VIV	RPD	Acid Extractable Antimony (Sb)	2016/02/26	NC		%	30
			Acid Extractable Arsenic (As)	2016/02/26	NC		%	30
			Acid Extractable Barium (Ba)	2016/02/26	1.6		%	30
			Acid Extractable Beryllium (Be)	2016/02/26	NC		%	30
			Acid Extractable Boron (B)	2016/02/26	NC		%	30
			Acid Extractable Cadmium (Cd)	2016/02/26	NC		%	30
			Acid Extractable Chromium (Cr)	2016/02/26	11		%	30
			Acid Extractable Cobalt (Co)	2016/02/26	7.5		%	30
			Acid Extractable Copper (Cu)	2016/02/26	0.049		%	30
			Acid Extractable Lead (Pb)	2016/02/26	NC		%	30
			Acid Extractable Molybdenum (Mo)	2016/02/26	NC		%	30

Maxxam Job #: B638341
Report Date: 2016/02/26

Terrapex Environmental Ltd
Client Project #: CB644.02
Site Location: 121 Hume Street, Collingwood, ON
Your P.O. #: 4700001396
Sampler Initials: PA

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Acid Extractable Nickel (Ni)	2016/02/26	1.6		%	30
			Acid Extractable Selenium (Se)	2016/02/26	NC		%	30
			Acid Extractable Silver (Ag)	2016/02/26	NC		%	30
			Acid Extractable Thallium (Tl)	2016/02/26	NC		%	30
			Acid Extractable Uranium (U)	2016/02/26	1.8		%	30
			Acid Extractable Vanadium (V)	2016/02/26	NC		%	30
			Acid Extractable Zinc (Zn)	2016/02/26	NC		%	30
			Acid Extractable Mercury (Hg)	2016/02/26	NC		%	30
4396202	NYS	Spiked Blank	Available (CaCl ₂) pH	2016/02/26		98	%	97 - 103
4396202	NYS	RPD [BXL318-01]	Available (CaCl ₂) pH	2016/02/26	1.3		%	N/A

N/A = Not Applicable

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.

Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.

QC Standard: A sample of known concentration prepared by an external agency under stringent conditions. Used as an independent check of method accuracy.

Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.

Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.

Surrogate: A pure or isotopically labeled compound whose behavior mirrors the analytes of interest. Used to evaluate extraction efficiency.

NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spiked amount was too small to permit a reliable recovery calculation (matrix spike concentration was less than 2x that of the native sample concentration).

NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (one or both samples < 5x RDL).

(1) The matrix spike recovery was below the lower control limit. This may be due in part to the reducing environment of the sample. The matrix spike was reanalyzed to confirm result.

Maxxam Job #: B638341
Report Date: 2016/02/26

Terrapex Environmental Ltd
Client Project #: CB644.02
Site Location: 121 Hume Street, Collingwood, ON
Your P.O. #: 4700001396
Sampler Initials: PA

VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by the following individual(s).

Cristina Carriere

Cristina Carriere, Scientific Services

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

RUSHInternational Corporation of a Maxxam Analytica
Road, Mississauga, Ontario Canada L5W 2L8 Tel: (905) 817-5700 Toll-Free: (800) 563-6286 Fax: (905) 817-5777 www.maxxam.ca

CHAIN OF CUSTODY RECORD SUNCOR DOWNSTREAM

Page 1 of 1

INVOICE INFORMATION:				REPORT INFORMATION (if differs from invoice):				PROJECT INFORMATION:				Laboratory Use Only:			
Company Name: #14539 Suncor Energy Products Partnership				Company Name: #5557 Terrapex Environmental Ltd				Quotation #: B43750				Maxxam Job #:			
Contact Name: Ken Tedder				Contact Name: Jeff Stevenson				Task Order #:				Bottle Order #:			
Address: 3275 Rebecca St				Address: 920 Brant Street Unit 16				Project #: CB544.02				COC #:			
City: Oakville ON L6L 6N5				City: Burlington ON L7R 4J1				Site Location: 121 Hume Street, Collingwood, ON				Project Manager:			
Phone: (905) 489-3754				Phone: (905) 632-5939 x 226				Outlet #: 60680				Marissa Oddi:			
Email: ktedder@suncor.com				Email: j.stevenson@terrapex.com				Prepared By: PD				Turnaround Time (TAT) Required:			
MOE REGULATED DRINKING WATER OR WATER INTENDED FOR HUMAN CONSUMPTION MUST BE SUBMITTED ON THE MAXXAM DRINKING WATER CHAIN OF CUSTODY															
Regulation 153 (2011)				Other Regulations				Activity				Please provide advance notice for rush projects			
☐ Table 1 ☐ Res/Park ☐ Medium/Fine				☐ CGME ☐ Sanitary Sewer Bylaw				☒ RE				☐ Regular (Standard) TAT:			
☒ Table 2 ☒ Land/Comm ☒ Coarse				☐ Reg 558 ☐ Storm Sewer Bylaw				Assessment (circle one)				(will be applied if Rush TAT is not specified)			
☐ Table 3 ☐ Agric/Other				☐ MISA ☐ Municipality				A1, A2, AR, AV				Standard TAT = 5-7 Working days for most tests.			
☐ Table 4 ☒ For RSC				☐ PWDO ☐ Other				Remediations (circle one)				Please note: Standard TAT for certain tests such as BOD and Dissolve/Furans are > 5 days - contact your Project Manager for details.			
Include Criteria on Certificate of Analysis (Y/N)? <u>N</u>				Contaminant Management (circle one)				RE, BX, RI, RA				Rush TAT			
				M, MW, MV								2 Day ☒ 3 Day ☐ Same Day ☐			
Sample Barcode Label:				Sample (Location) Identification:				Date Sampled:				Time Sampled:			
1				Culvert 1				Feb-22-16				13:00			
2				Culvert 2				Feb-22-16				13:00			
3				CS172				Feb-23-16				12:30			
4				CS172 20				↑				12:30			
5				CS8001				↓				13:30			
6				CS8003				Feb-23-16				13:30			
7															
8															
9															
10															
* RELINQUISHED BY: (Signature/Print)				Date: (YY/MM/DD)				Time				RECEIVED BY: (Signature/Print)			
Philip John Arlos				14/02/23				14:00				Ashley Soudiman			
												Date: (YY/MM/DD)			
												Time			
												# jars used and not submitted			
												Time Sensitive			
												Temperature (°C) on Receipt			
												3/3/3			
												Custody Seal			
												Present			
												Intact			
												Yes			
												No			
* IT IS THE RESPONSIBILITY OF THE RELINQUISHER TO ENSURE THE ACCURACY OF THE CHAIN OF CUSTODY RECORD. AN INCOMPLETE CHAIN OF CUSTODY MAY RESULT IN ANALYTICAL TAT DELAYS.															
SAMPLES MUST BE KEPT COOL (< 10°C) FROM TIME OF SAMPLING UNTIL DELIVERY TO MAXXAM															
White: Maxxam Yellow: Client															

Maxxam Analytica International Corporation of a Maxxam Analytica

Attention: Jeff Stevenson

Terrapex Environmental Ltd
920 Brant Street
Unit 16
Burlington, ON
CANADA L7R 4J1

Your P.O. #: 4700001396

Your Project #: CB644.02

Site#: 60680

Site Location: 121 Hume Street, Collingwood, ON

Your C.O.C. #: 546624-07-01

Report Date: 2016/02/25

Report #: R3908539

Version: 1 - Partial

CERTIFICATE OF ANALYSIS – PARTIAL RESULTS

MAXXAM JOB #: B637323

Received: 2016/02/24, 09:04

Sample Matrix: Soil
Samples Received: 4

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Reference
Petroleum Hydro. CCME F1 & BTEX in Soil (1)	4	N/A	2016/02/25	CAM SOP-00315	CCME PHC-CWS m
Petroleum Hydrocarbons F2-F4 in Soil (2)	4	2016/02/24	2016/02/25	CAM SOP-00316	CCME CWS m
Moisture	4	N/A	2016/02/24	CAM SOP-00445	Carter 2nd ed 51.2 m

Sample Matrix: Water
Samples Received: 2

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Reference
Petroleum Hydro. CCME F1 & BTEX in Water	2	N/A	2016/02/25	CAM SOP-00315	CCME PHC-CWS m
Petroleum Hydrocarbons F2-F4 in Water (2)	2	2016/02/24	2016/02/25	CAM SOP-00316	CCME PHC-CWS m

Remarks:

Maxxam Analytics has performed all analytical testing herein in accordance with ISO 17025 and the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act. All methodologies comply with this document and are validated for use in the laboratory. The methods and techniques employed in this analysis conform to the performance criteria (detection limits, accuracy and precision) as outlined in the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act.

Maxxam Analytics is accredited for all specific parameters as required by Ontario Regulation 153/04. Maxxam Analytics is limited in liability to the actual cost of analysis unless otherwise agreed in writing. There is no other warranty expressed or implied. Samples will be retained at Maxxam Analytics for three weeks from receipt of data or as per contract.

Reference Method suffix "m" indicates test methods incorporate validated modifications from specific reference methods to improve performance.

* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.

(1) No lab extraction date is given for F1BTEX & VOC samples that are field preserved with methanol. Extraction date is the date sampled unless otherwise stated.

(2) All CCME PHC results met required criteria unless otherwise stated in the report. The CWS PHC methods employed by Maxxam conform to all prescribed elements of the reference method and performance based elements have been validated. All modifications have been validated and proven equivalent following "Alberta Environment's Interpretation of the Reference Method for the Canada-Wide Standard for Petroleum Hydrocarbons in Soil Validation of Performance-Based Alternative Methods September 2003". Documentation is available upon request. Modifications from Reference Method for the Canada-wide Standard for Petroleum Hydrocarbons in Soil-Tier 1 Method: F2/F3/F4 data reported using validated cold solvent extraction instead of Soxhlet extraction.

Attention: Jeff Stevenson

Terrapex Environmental Ltd
920 Brant Street
Unit 16
Burlington, ON
CANADA L7R 4J1

Your P.O. #: 4700001396

Your Project #: CB644.02

Site#: 60680

Site Location: 121 Hume Street, Collingwood, ON

Your C.O.C. #: 546624-07-01

Report Date: 2016/02/25

Report #: R3908539

Version: 1 - Partial

CERTIFICATE OF ANALYSIS – PARTIAL RESULTS

MAXXAM JOB #: B637323

Received: 2016/02/24, 09:04

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.

Marissa Oddi, Customer Service Representative

Email: moddi@maxxam.ca

Phone# (905) 817-5700

=====

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

O.REG 153 PETROLEUM HYDROCARBONS (SOIL)

Maxxam ID		BXG435	BXG436	BXG437	BXG437	BXG438		
Sampling Date		2016/02/23 12:30	2016/02/23 12:30	2016/02/23 13:30	2016/02/23 13:30	2016/02/23 13:30		
COC Number		546624-07-01	546624-07-01	546624-07-01	546624-07-01	546624-07-01		
	UNITS	CS172	CS1720	CS8001	CS8001 Lab-Dup	CS8003	RDL	QC Batch

Inorganics								
Moisture	%	20	19	17	17	21	1.0	4393098

BTEX & F1 Hydrocarbons								
Benzene	ug/g	ND	ND	ND		ND	0.020	4393998
Toluene	ug/g	ND	ND	ND		ND	0.020	4393998
Ethylbenzene	ug/g	ND	ND	ND		ND	0.020	4393998
o-Xylene	ug/g	ND	ND	ND		ND	0.020	4393998
p+m-Xylene	ug/g	0.055	0.064	ND		ND	0.040	4393998
Total Xylenes	ug/g	0.055	0.064	ND		ND	0.040	4393998
F1 (C6-C10)	ug/g	130	83	ND		ND	10	4393998
F1 (C6-C10) - BTEX	ug/g	130	83	ND		ND	10	4393998

F2-F4 Hydrocarbons								
F2 (C10-C16 Hydrocarbons)	ug/g	410	220	ND		12	10	4394026
F3 (C16-C34 Hydrocarbons)	ug/g	320	140	120		200	50	4394026
F4 (C34-C50 Hydrocarbons)	ug/g	220	120	87		120	50	4394026
Reached Baseline at C50	ug/g	No	No	Yes		Yes		4394026

Surrogate Recovery (%)								
1,4-Difluorobenzene	%	103	101	99		99		4393998
4-Bromofluorobenzene	%	98	100	99		98		4393998
D10-Ethylbenzene	%	104	104	89		103		4393998
D4-1,2-Dichloroethane	%	102	102	99		101		4393998
o-Terphenyl	%	100	104	103		100		4394026

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate
ND = Not detected

O.REG 153 PETROLEUM HYDROCARBONS (WATER)

Maxxam ID		BXG433	BXG434		
Sampling Date		2016/02/22 13:00	2016/02/22 13:00		
COC Number		546624-07-01	546624-07-01		
	UNITS	CULVERT 1	CULVERT 2	RDL	QC Batch
BTEX & F1 Hydrocarbons					
Benzene	ug/L	ND	ND	0.20	4394056
Toluene	ug/L	ND	ND	0.20	4394056
Ethylbenzene	ug/L	ND	0.36	0.20	4394056
o-Xylene	ug/L	ND	0.53	0.20	4394056
p+m-Xylene	ug/L	ND	1.4	0.40	4394056
Total Xylenes	ug/L	ND	1.9	0.40	4394056
F1 (C6-C10)	ug/L	ND	ND	25	4394056
F1 (C6-C10) - BTEX	ug/L	ND	ND	25	4394056
F2-F4 Hydrocarbons					
F2 (C10-C16 Hydrocarbons)	ug/L	ND	ND	100	4393898
F3 (C16-C34 Hydrocarbons)	ug/L	ND	ND	200	4393898
F4 (C34-C50 Hydrocarbons)	ug/L	ND	ND	200	4393898
Reached Baseline at C50	ug/L	Yes	Yes		4393898
Surrogate Recovery (%)					
1,4-Difluorobenzene	%	104	105		4394056
4-Bromofluorobenzene	%	98	98		4394056
D10-Ethylbenzene	%	113	115		4394056
D4-1,2-Dichloroethane	%	101	101		4394056
o-Terphenyl	%	94	93		4393898
RDL = Reportable Detection Limit QC Batch = Quality Control Batch ND = Not detected					

TEST SUMMARY

Maxxam ID: BXG433
Sample ID: CULVERT 1
Matrix: Water

Collected: 2016/02/22
Shipped:
Received: 2016/02/24

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Petroleum Hydro. CCME F1 & BTEX in Water	HSGC/MSFD	4394056	N/A	2016/02/25	Georgeta Rusu
Petroleum Hydrocarbons F2-F4 in Water	GC/FID	4393898	2016/02/24	2016/02/25	Barbara Wowk

Maxxam ID: BXG434
Sample ID: CULVERT 2
Matrix: Water

Collected: 2016/02/22
Shipped:
Received: 2016/02/24

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Petroleum Hydro. CCME F1 & BTEX in Water	HSGC/MSFD	4394056	N/A	2016/02/25	Georgeta Rusu
Petroleum Hydrocarbons F2-F4 in Water	GC/FID	4393898	2016/02/24	2016/02/25	Barbara Wowk

Maxxam ID: BXG435
Sample ID: CS172
Matrix: Soil

Collected: 2016/02/23
Shipped:
Received: 2016/02/24

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	4393998	N/A	2016/02/25	Georgeta Rusu
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	4394026	2016/02/24	2016/02/25	Zhiyue (Frank) Zhu
Moisture	BAL	4393098	N/A	2016/02/24	Valentina Kaftani

Maxxam ID: BXG436
Sample ID: CS1720
Matrix: Soil

Collected: 2016/02/23
Shipped:
Received: 2016/02/24

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	4393998	N/A	2016/02/25	Georgeta Rusu
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	4394026	2016/02/24	2016/02/25	Zhiyue (Frank) Zhu
Moisture	BAL	4393098	N/A	2016/02/24	Valentina Kaftani

Maxxam ID: BXG437
Sample ID: CS8001
Matrix: Soil

Collected: 2016/02/23
Shipped:
Received: 2016/02/24

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	4393998	N/A	2016/02/25	Georgeta Rusu
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	4394026	2016/02/24	2016/02/25	Zhiyue (Frank) Zhu
Moisture	BAL	4393098	N/A	2016/02/24	Valentina Kaftani

Maxxam ID: BXG437 Dup
Sample ID: CS8001
Matrix: Soil

Collected: 2016/02/23
Shipped:
Received: 2016/02/24

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Moisture	BAL	4393098	N/A	2016/02/24	Valentina Kaftani

Maxxam Job #: B637323
Report Date: 2016/02/25

Terrapex Environmental Ltd
Client Project #: CB644.02
Site Location: 121 Hume Street, Collingwood, ON
Your P.O. #: 4700001396
Sampler Initials: PA

TEST SUMMARY

Maxxam ID: BXG438
Sample ID: CS8003
Matrix: Soil

Collected: 2016/02/23
Shipped:
Received: 2016/02/24

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	4393998	N/A	2016/02/25	Georgeta Rusu
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	4394026	2016/02/24	2016/02/25	Zhiyue (Frank) Zhu
Moisture	BAL	4393098	N/A	2016/02/24	Valentina Kaftani

GENERAL COMMENTS

Each temperature is the average of up to three cooler temperatures taken at receipt

Package 1	3.0°C

F4G (gravimetric) analysis commences upon completion of F4 analysis by FID, if the FID signal does not reach baseline before C50. Analytical reports that have been released prior to completion of the F4G analysis are to be superseded by the final report containing the additional results.

Results relate only to the items tested.

Maxxam Job #: B637323
Report Date: 2016/02/25

Terrapex Environmental Ltd
Client Project #: CB644.02
Site Location: 121 Hume Street, Collingwood, ON
Your P.O. #: 4700001396
Sampler Initials: PA

QUALITY ASSURANCE REPORT

QA/QC	Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
	4393098	NS3	RPD [BXG437-01]	Moisture	2016/02/24	4.2		%	20
	4393898	BWW	Matrix Spike	o-Terphenyl	2016/02/25		99	%	60 - 130
				F2 (C10-C16 Hydrocarbons)	2016/02/25		102	%	50 - 130
				F3 (C16-C34 Hydrocarbons)	2016/02/25		94	%	50 - 130
				F4 (C34-C50 Hydrocarbons)	2016/02/25		98	%	50 - 130
	4393898	BWW	Spiked Blank	o-Terphenyl	2016/02/25		100	%	60 - 130
				F2 (C10-C16 Hydrocarbons)	2016/02/25		102	%	60 - 130
				F3 (C16-C34 Hydrocarbons)	2016/02/25		98	%	60 - 130
				F4 (C34-C50 Hydrocarbons)	2016/02/25		97	%	60 - 130
	4393898	BWW	Method Blank	o-Terphenyl	2016/02/25		96	%	60 - 130
				F2 (C10-C16 Hydrocarbons)	2016/02/25	ND, RDL=100		ug/L	
				F3 (C16-C34 Hydrocarbons)	2016/02/25	ND, RDL=200		ug/L	
				F4 (C34-C50 Hydrocarbons)	2016/02/25	ND, RDL=200		ug/L	
	4393898	BWW	RPD	F2 (C10-C16 Hydrocarbons)	2016/02/25	7.0		%	30
				F3 (C16-C34 Hydrocarbons)	2016/02/25	NC		%	30
				F4 (C34-C50 Hydrocarbons)	2016/02/25	NC		%	30
	4393998	GRU	Matrix Spike	1,4-Difluorobenzene	2016/02/24		101	%	60 - 140
				4-Bromofluorobenzene	2016/02/24		102	%	60 - 140
				D10-Ethylbenzene	2016/02/24		95	%	60 - 140
				D4-1,2-Dichloroethane	2016/02/24		102	%	60 - 140
				Benzene	2016/02/24		101	%	60 - 140
				Toluene	2016/02/24		104	%	60 - 140
				Ethylbenzene	2016/02/24		112	%	60 - 140
				o-Xylene	2016/02/24		114	%	60 - 140
				p+m-Xylene	2016/02/24		102	%	60 - 140
				F1 (C6-C10)	2016/02/24		80	%	60 - 140
	4393998	GRU	Spiked Blank	1,4-Difluorobenzene	2016/02/24		100	%	60 - 140
				4-Bromofluorobenzene	2016/02/24		99	%	60 - 140
				D10-Ethylbenzene	2016/02/24		94	%	60 - 140
				D4-1,2-Dichloroethane	2016/02/24		101	%	60 - 140
				Benzene	2016/02/24		98	%	60 - 140
				Toluene	2016/02/24		98	%	60 - 140
				Ethylbenzene	2016/02/24		104	%	60 - 140
				o-Xylene	2016/02/24		104	%	60 - 140
				p+m-Xylene	2016/02/24		94	%	60 - 140
				F1 (C6-C10)	2016/02/24		90	%	80 - 120
	4393998	GRU	Method Blank	1,4-Difluorobenzene	2016/02/24		103	%	60 - 140
				4-Bromofluorobenzene	2016/02/24		100	%	60 - 140
				D10-Ethylbenzene	2016/02/24		87	%	60 - 140
				D4-1,2-Dichloroethane	2016/02/24		99	%	60 - 140
				Benzene	2016/02/24	ND, RDL=0.020		ug/g	
				Toluene	2016/02/24	ND, RDL=0.020		ug/g	
				Ethylbenzene	2016/02/24	ND, RDL=0.020		ug/g	

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC	Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
4393998	GRU	RPD		o-Xylene	2016/02/24	ND, RDL=0.020		ug/g	
				p+m-Xylene	2016/02/24	ND, RDL=0.040		ug/g	
				Total Xylenes	2016/02/24	ND, RDL=0.040		ug/g	
				F1 (C6-C10)	2016/02/24	ND, RDL=10		ug/g	
				F1 (C6-C10) - BTEX	2016/02/24	ND, RDL=10		ug/g	
				Benzene	2016/02/24	NC		%	50
				Toluene	2016/02/24	NC		%	50
				Ethylbenzene	2016/02/24	NC		%	50
				o-Xylene	2016/02/24	NC		%	50
				p+m-Xylene	2016/02/24	NC		%	50
4394026	ZZ	Matrix Spike		Total Xylenes	2016/02/24	NC		%	50
				F1 (C6-C10)	2016/02/24	NC		%	30
				F1 (C6-C10) - BTEX	2016/02/24	NC		%	30
				o-Terphenyl	2016/02/25		104	%	60 - 130
				F2 (C10-C16 Hydrocarbons)	2016/02/25		100	%	50 - 130
4394026	ZZ	Spiked Blank		F3 (C16-C34 Hydrocarbons)	2016/02/25		103	%	50 - 130
				F4 (C34-C50 Hydrocarbons)	2016/02/25		107	%	50 - 130
				o-Terphenyl	2016/02/25		100	%	60 - 130
				F2 (C10-C16 Hydrocarbons)	2016/02/25		95	%	80 - 120
				F3 (C16-C34 Hydrocarbons)	2016/02/25		99	%	80 - 120
4394026	ZZ	Method Blank		F4 (C34-C50 Hydrocarbons)	2016/02/25		102	%	80 - 120
				o-Terphenyl	2016/02/24		105	%	60 - 130
				F2 (C10-C16 Hydrocarbons)	2016/02/24	ND, RDL=10		ug/g	
				F3 (C16-C34 Hydrocarbons)	2016/02/24	ND, RDL=50		ug/g	
				F4 (C34-C50 Hydrocarbons)	2016/02/24	ND, RDL=50		ug/g	
4394026	ZZ	RPD		F2 (C10-C16 Hydrocarbons)	2016/02/25	NC		%	30
				F3 (C16-C34 Hydrocarbons)	2016/02/25	NC		%	30
				F4 (C34-C50 Hydrocarbons)	2016/02/25	NC		%	30
				1,4-Difluorobenzene	2016/02/25		103	%	70 - 130
4394056	GRU	Matrix Spike		4-Bromofluorobenzene	2016/02/25		100	%	70 - 130
				D10-Ethylbenzene	2016/02/25		112	%	70 - 130
				D4-1,2-Dichloroethane	2016/02/25		102	%	70 - 130
				Benzene	2016/02/25		119	%	70 - 130
				Toluene	2016/02/25		116	%	70 - 130
				Ethylbenzene	2016/02/25		125	%	70 - 130
				o-Xylene	2016/02/25		127	%	70 - 130
				p+m-Xylene	2016/02/25		119	%	70 - 130
				F1 (C6-C10)	2016/02/25		86	%	70 - 130
				1,4-Difluorobenzene	2016/02/24		104	%	70 - 130
4394056	GRU	Spiked Blank		4-Bromofluorobenzene	2016/02/24		101	%	70 - 130
				D10-Ethylbenzene	2016/02/24		109	%	70 - 130
				D4-1,2-Dichloroethane	2016/02/24		103	%	70 - 130

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
4394056	GRU	Method Blank	Benzene	2016/02/24		121	%	70 - 130
			Toluene	2016/02/24		116	%	70 - 130
			Ethylbenzene	2016/02/24		121	%	70 - 130
			o-Xylene	2016/02/24		126	%	70 - 130
			p+m-Xylene	2016/02/24		115	%	70 - 130
			F1 (C6-C10)	2016/02/24		101	%	70 - 130
			1,4-Difluorobenzene	2016/02/24		104	%	70 - 130
			4-Bromofluorobenzene	2016/02/24		98	%	70 - 130
			D10-Ethylbenzene	2016/02/24		110	%	70 - 130
			D4-1,2-Dichloroethane	2016/02/24		101	%	70 - 130
			Benzene	2016/02/24	ND, RDL=0.20		ug/L	
			Toluene	2016/02/24	ND, RDL=0.20		ug/L	
			Ethylbenzene	2016/02/24	ND, RDL=0.20		ug/L	
			o-Xylene	2016/02/24	ND, RDL=0.20		ug/L	
			p+m-Xylene	2016/02/24	ND, RDL=0.40		ug/L	
			Total Xylenes	2016/02/24	ND, RDL=0.40		ug/L	
			F1 (C6-C10)	2016/02/24	ND, RDL=25		ug/L	
			F1 (C6-C10) - BTEX	2016/02/24	ND, RDL=25		ug/L	
4394056	GRU	RPD	F1 (C6-C10)	2016/02/25	NC		%	30
			F1 (C6-C10) - BTEX	2016/02/25	NC		%	30

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.

Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.

Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.

Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.

Surrogate: A pure or isotopically labeled compound whose behavior mirrors the analytes of interest. Used to evaluate extraction efficiency.

NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (one or both samples < 5x RDL).

VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by the following individual(s).

Cristina Carriere

Cristina Carriere, Scientific Services

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

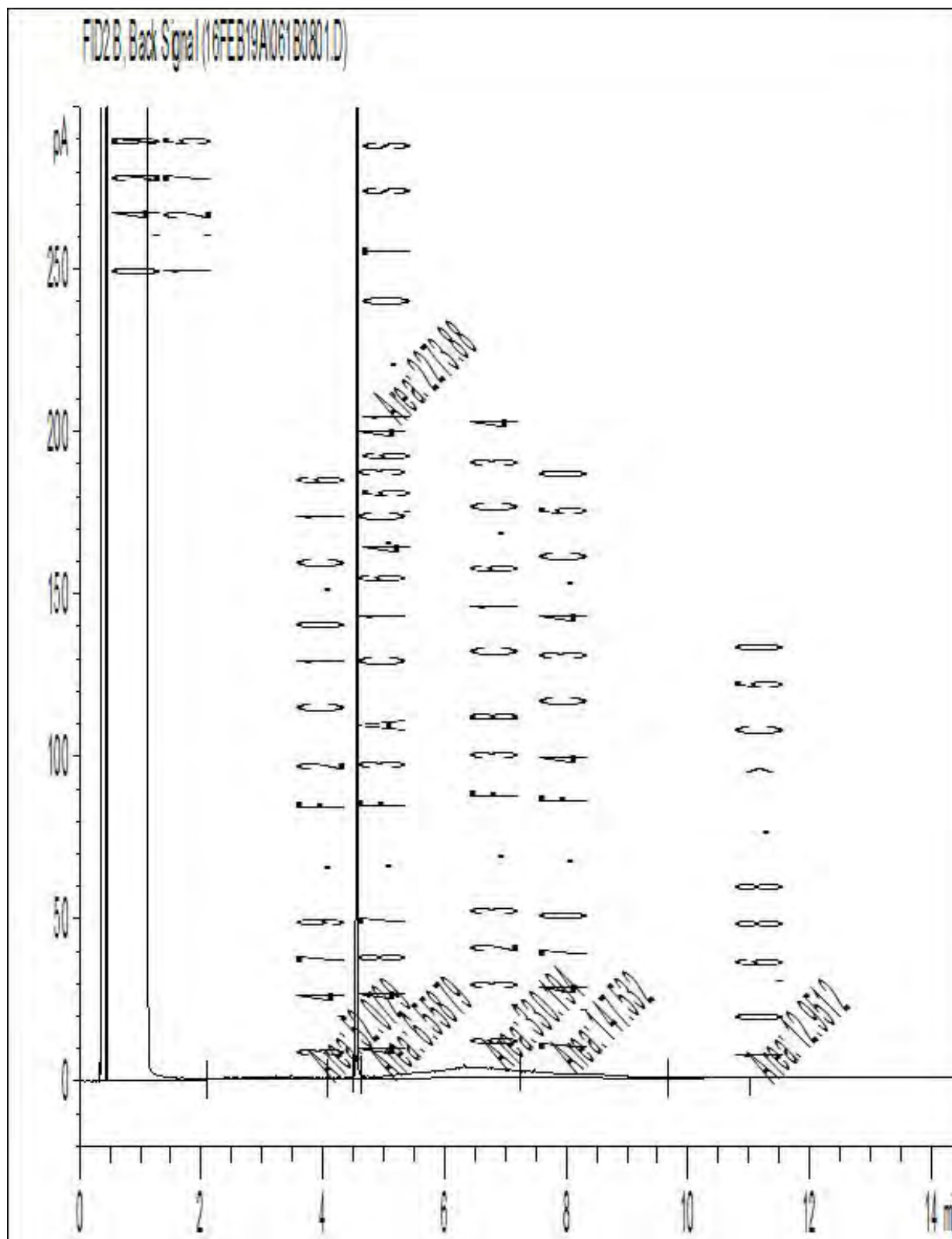
RUSHInternational Corporation of a Maxxam Analytics
Mississauga, Ontario Canada L5N 2L8 Tel (905) 817-5700 Toll-Free (800) 563-8266 Fax (905) 817-5777 www.maxxam.ca

CHAIN OF CUSTODY RECORD SUNCOR DOWNSTREAM

Page 1 of 1

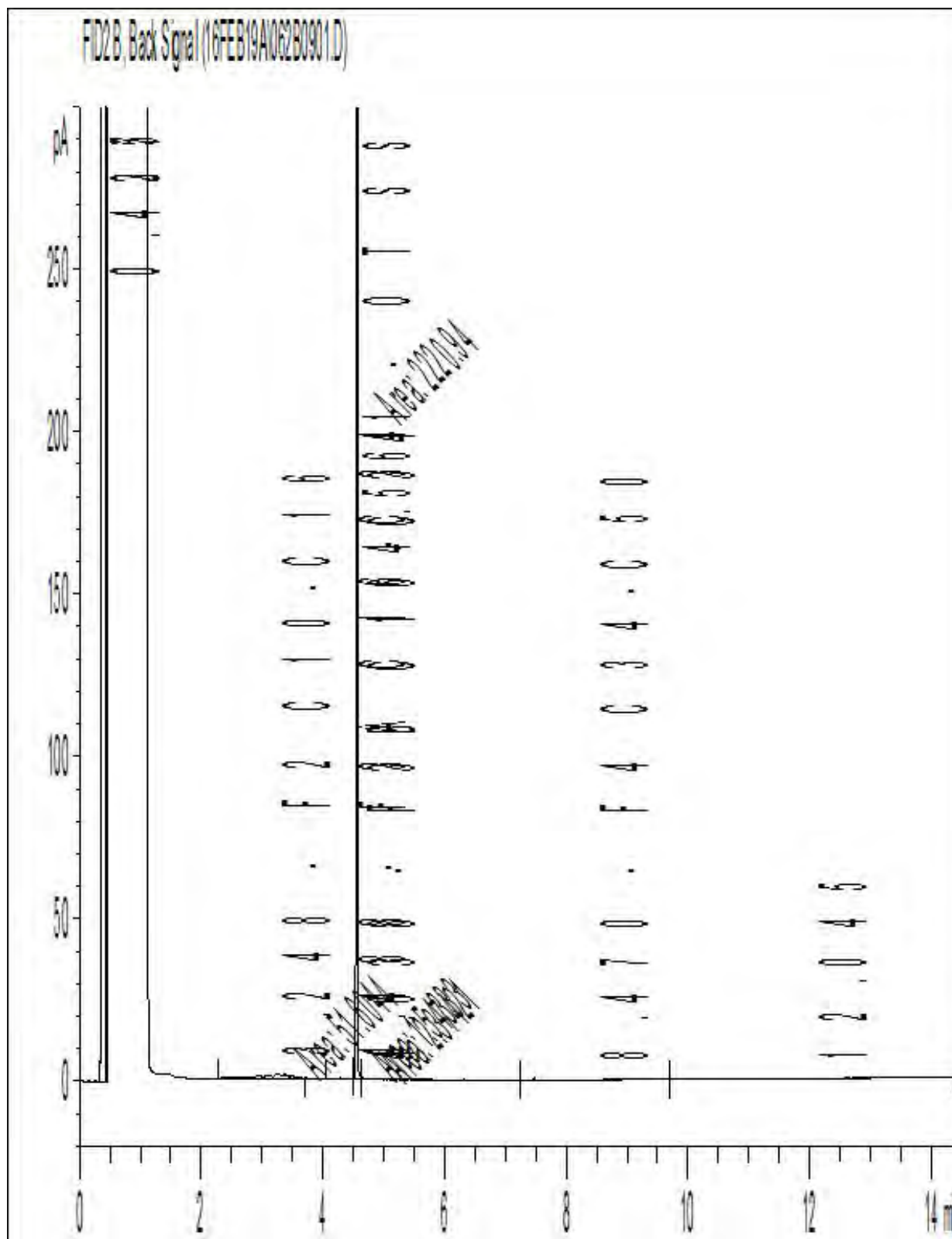
INVOICE INFORMATION:				REPORT INFORMATION (if differs from invoice):				PROJECT INFORMATION:				Laboratory Use Only:							
Company Name: #14539 Suncor Energy Products Partnership				Company Name: #6557 Terrapex Environmental Ltd				Quotation #: B43750				Maxxam Job #:							
Contact Name: Ken Tedder				Contact Name: Jeff Stevenson				Task Order #:				Bottle Order #:							
Address: 3275 Rebecca St				Address: 920 Brant Street Unit 16				Project #: CB644.02				COC #:							
Address: Oakville ON L6L 6N5				Address: Burlington ON L7R 4J1				Site Location: 121 Hume Street, Collingwood, ON				Project Manager:							
Phone: (905) 469-3754				Phone: (905) 632-5939 x 226				Outlet #: 60680				Marissa Oddi							
Email: ktedder@suncor.com				Email: j.stevenson@terrapex.com				Sampled By: PA				C#546624-06-01							
MOE REGULATED DRINKING WATER OR WATER INTENDED FOR HUMAN CONSUMPTION MUST BE SUBMITTED ON THE MAXXAM DRINKING WATER CHAIN OF CUSTODY												Turnaround Time (TAT) Required:							
Regulation 153 (2011)				Other Regulations				Activity				Please provide advance notice for rush projects							
☐ Table 1 ☒ Res/Park ☐ Medium/Fine				☐ CCME ☐ Sanitary Sewer Bylaw				Assessment (circle one)				Regular (Standard) TAT:							
☒ Table 2 ☒ Ind/Comm ☒ Coarse				☐ Reg 558 ☐ Storm Sewer Bylaw				A1, A2, AR, AV				(will be applied if Rush TAT is not specified)							
☐ Table 3 ☐ Agri/Other				☐ MISA Municipality				Remediations (circle one)				Standard TAT = 5-7 Working days for most tests.							
☐ Table ☒ For RSC				☐ PWDO				RE, RX, RI, RA				Please note: Standard TAT for certain tests such as BOD and Dioxins/Furans are > 5 days - contact your Project Manager for details							
☐ Other				☐ Other				Contaminant Management (circle one)				Rush TAT							
Include Criteria on Certificate of Analysis (Y/N)? ☒				M, MW, MV				M, MW, MV				2 Day ☐ 1 DAY ☒ Same Day ☐							
Sample Barcode Label				Sample (Location) Identification				Date Sampled				Time Sampled							
Matrix				Field Filtered (please circle):				Metals / Hg / Cr / V				# of Bottles							
1				CS169				Feb-16-16				12:00							
2				CB169				11:45				5							
3				SP5001				12:30				3							
4				SP6001				12:30				3							
5				SP7001				Feb-16-16				12:40							
6				12:40				Soil				3							
7																			
8																			
9																			
10																			
* RELINQUISHED BY: (Signature/Print)				Date: (YY/MM/DD)				Time				RECEIVED BY: (Signature/Print)							
Philip Arks				16/02/18				15:10				Ashley Lockwood							
Philip Arks												2016/02/19 09:11							
												ASH/DM SUNCOR							
# Jars used and not submitted				Time Sensitive				Temperature (°C) on Receipt				Custody Seal							
0								0/0/0				Present							
												Intact							
* It is the responsibility of the relinquisher to ensure the accuracy of the chain of custody record. An incomplete chain of custody may result in analytical TAT delays.												SAMPLES MUST BE KEPT COOL (< 10° C) FROM TIME OF SAMPLING UNTIL DELIVERY TO MAXXAM				White: Maxxam Yellow: Client			

Petroleum Hydrocarbons F2-F4 in Soil Chromatogram



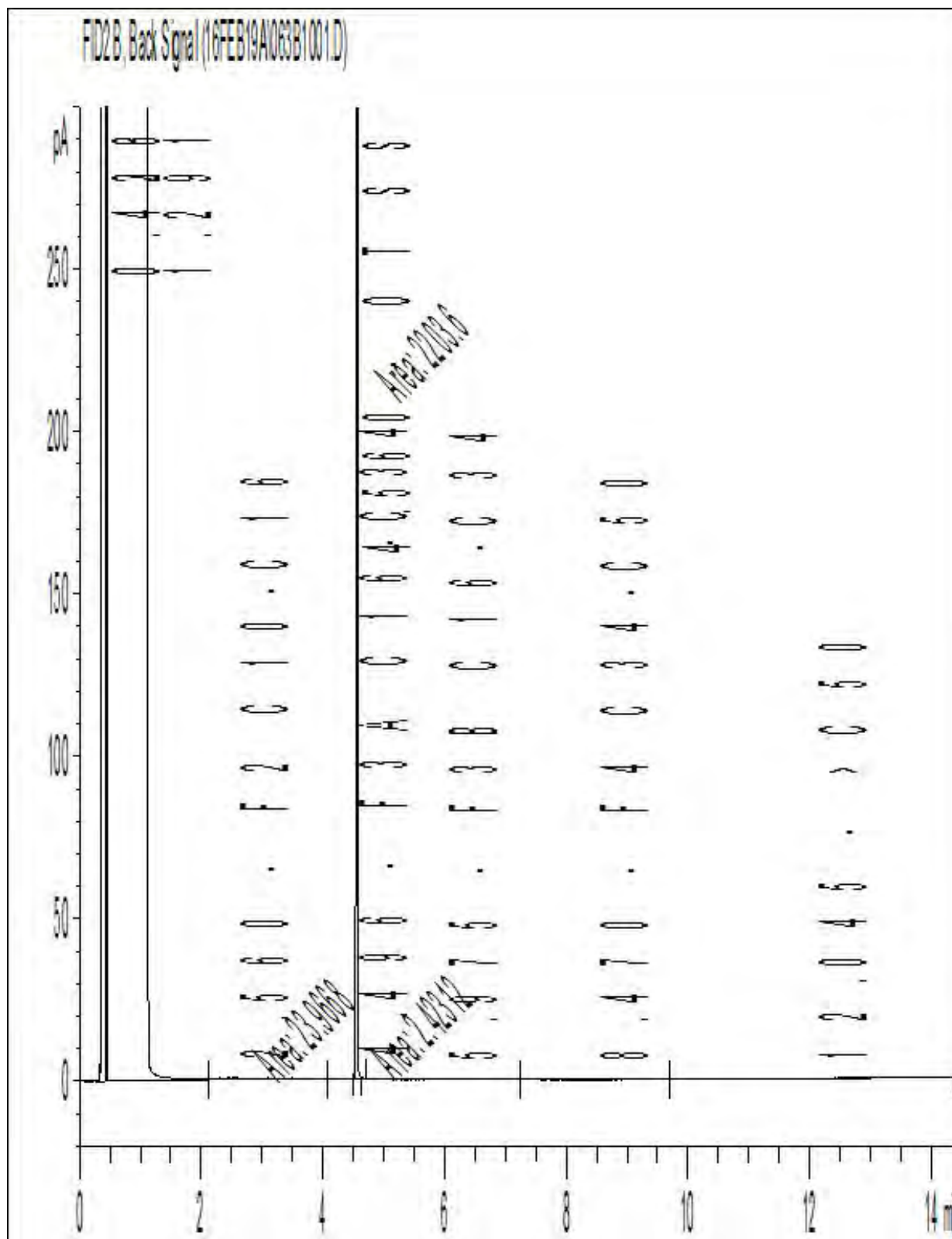
Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Petroleum Hydrocarbons F2-F4 in Soil Chromatogram



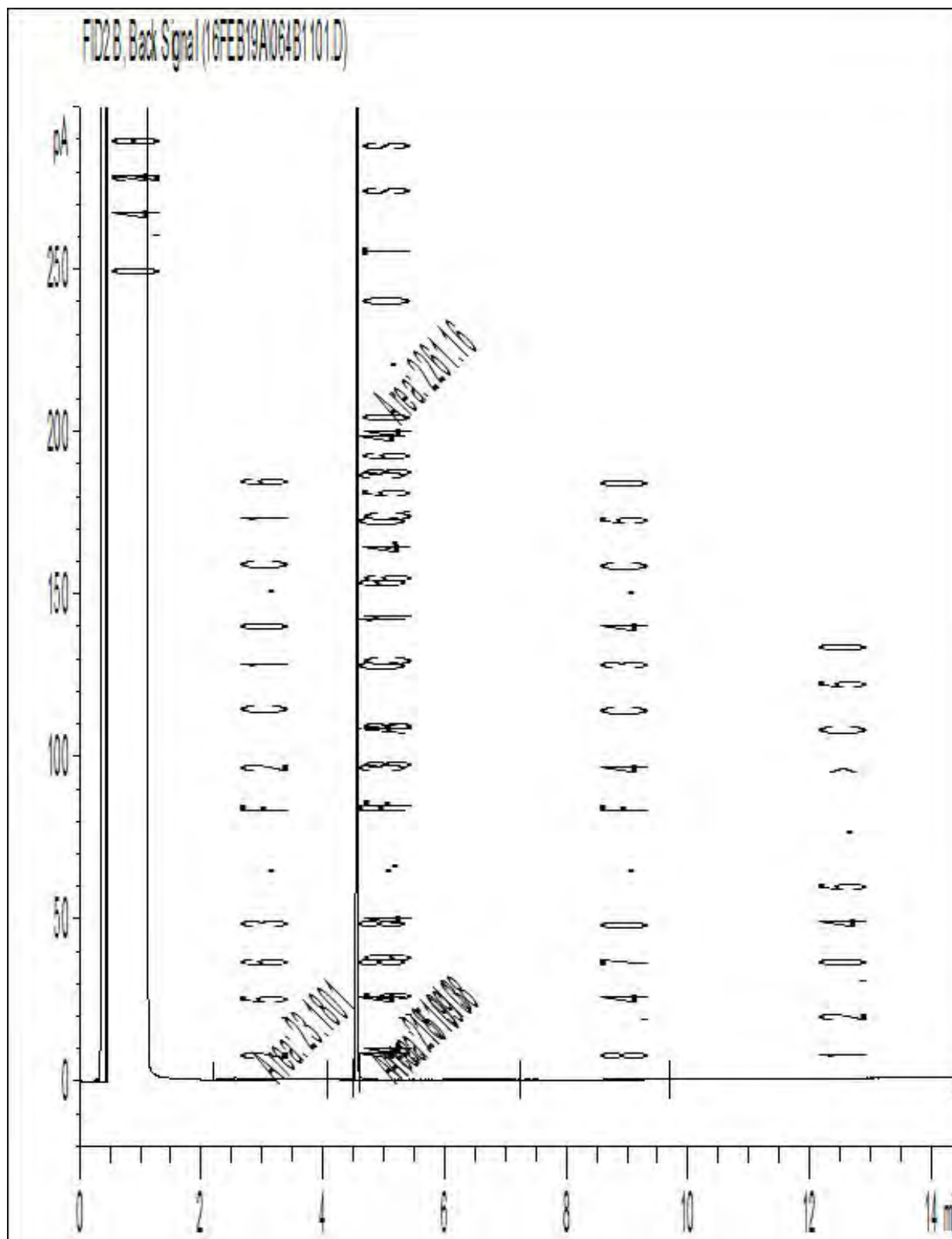
Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Petroleum Hydrocarbons F2-F4 in Soil Chromatogram



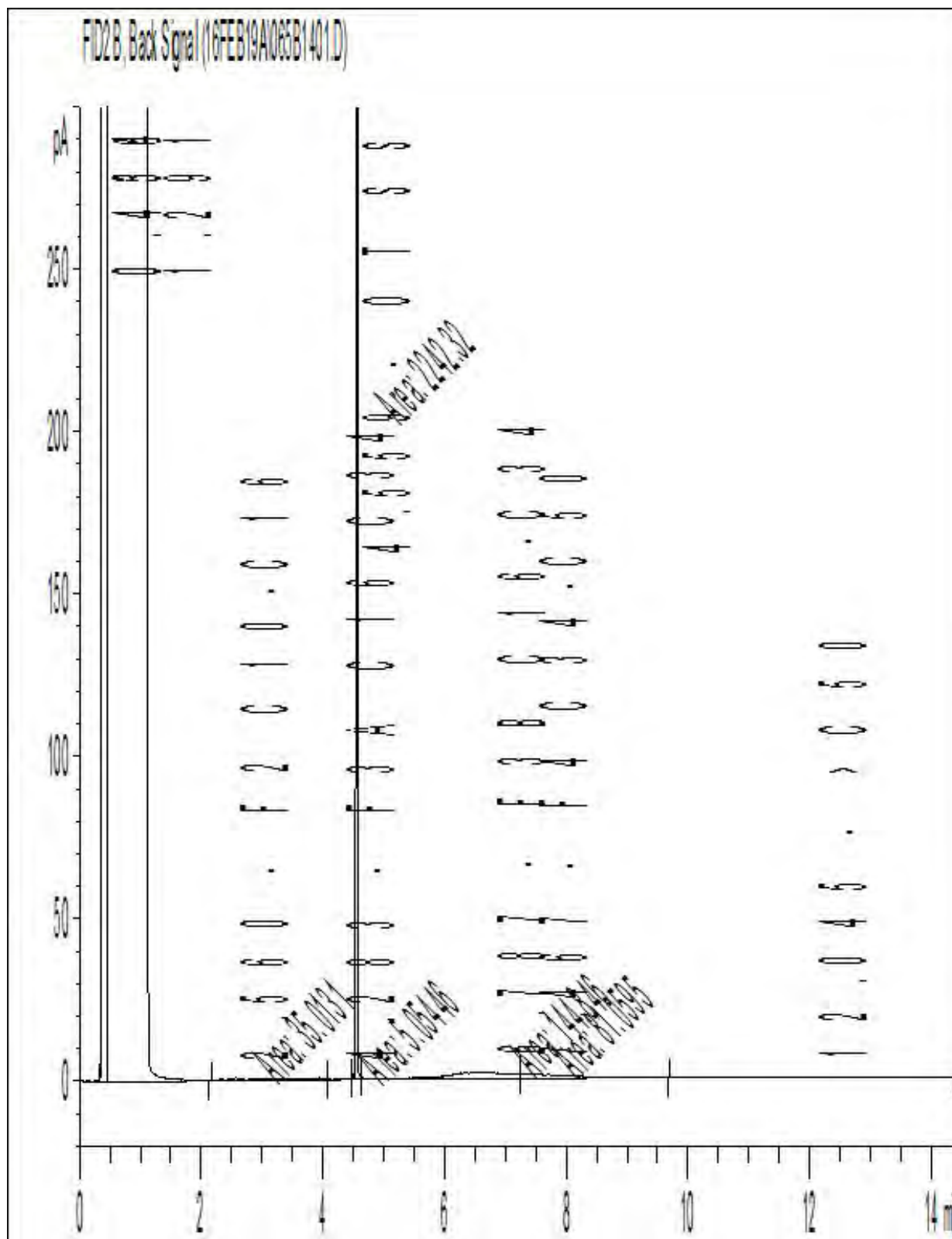
Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Petroleum Hydrocarbons F2-F4 in Soil Chromatogram



Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Petroleum Hydrocarbons F2-F4 in Soil Chromatogram



Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Page 7 of 7

Attention: Jeff Stevenson

Terrapex Environmental Ltd
920 Brant Street
Unit 16
Burlington, ON
CANADA L7R 4J1

Your P.O. #: 4700001396

Your Project #: CB644.02

Site#: 60680

Site Location: 121 Hume Street, Collingwood, ON

Your C.O.C. #: 546624-06-01

Report Date: 2016/02/22

Report #: R3903960

Version: 1 - Final

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B634064

Received: 2016/02/19, 09:11

Sample Matrix: Soil
Samples Received: 5

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Reference
Methylnaphthalene Sum	1	N/A	2016/02/22	CAM SOP-00301	EPA 8270D m
Hot Water Extractable Boron	1	2016/02/22	2016/02/22	CAM SOP-00408	R153 Ana. Prot. 2011
1,3-Dichloropropene Sum	1	N/A	2016/02/22		EPA 8260C m
Free (WAD) Cyanide	1	2016/02/19	2016/02/22	CAM SOP-00457	OMOE E3015 m
Conductivity	1	N/A	2016/02/22	CAM SOP-00414	OMOE E3138 v2 m
Hexavalent Chromium in Soil by IC (1)	1	2016/02/19	2016/02/22	CAM SOP-00436	EPA 3060/7199 m
Petroleum Hydro. CCME F1 & BTEX in Soil (2)	5	N/A	2016/02/20	CAM SOP-00315	CCME PHC-CWS m
Petroleum Hydrocarbons F2-F4 in Soil (3)	3	2016/02/19	2016/02/19	CAM SOP-00316	CCME CWS m
Petroleum Hydrocarbons F2-F4 in Soil (3)	2	2016/02/19	2016/02/20	CAM SOP-00316	CCME CWS m
Strong Acid Leachable Metals by ICPMS	1	2016/02/22	2016/02/22	CAM SOP-00447	EPA 6020A m
Moisture	5	N/A	2016/02/19	CAM SOP-00445	Carter 2nd ed 51.2 m
PAH Compounds in Soil by GC/MS (SIM)	1	2016/02/19	2016/02/20	CAM SOP-00318	EPA 8270D m
pH CaCl2 EXTRACT	1	2016/02/22	2016/02/22	CAM SOP-00413	EPA 9045 D m
Sodium Adsorption Ratio (SAR)	1	N/A	2016/02/22	CAM SOP-00102	EPA 6010
SAR - ICP Metals	1	2016/02/22	2016/02/22	CAM SOP-00408	EPA 6010 m
Volatile Organic Compounds in Soil	1	N/A	2016/02/19	CAM SOP000228	EPA 8260C m

Remarks:

Maxxam Analytics has performed all analytical testing herein in accordance with ISO 17025 and the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act. All methodologies comply with this document and are validated for use in the laboratory. The methods and techniques employed in this analysis conform to the performance criteria (detection limits, accuracy and precision) as outlined in the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act.

Maxxam Analytics is accredited for all specific parameters as required by Ontario Regulation 153/04. Maxxam Analytics is limited in liability to the actual cost of analysis unless otherwise agreed in writing. There is no other warranty expressed or implied. Samples will be retained at Maxxam Analytics for three weeks from receipt of data or as per contract.

Reference Method suffix "m" indicates test methods incorporate validated modifications from specific reference methods to improve performance.

* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.

Attention: Jeff Stevenson

Terrapex Environmental Ltd
920 Brant Street
Unit 16
Burlington, ON
CANADA L7R 4J1

Your P.O. #: 4700001396

Your Project #: CB644.02

Site#: 60680

Site Location: 121 Hume Street, Collingwood, ON

Your C.O.C. #: 546624-06-01

Report Date: 2016/02/22

Report #: R3903960

Version: 1 - Final

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B634064

Received: 2016/02/19, 09:11

- (1) Soils are reported on a dry weight basis unless otherwise specified.
- (2) No lab extraction date is given for F1BTX & VOC samples that are field preserved with methanol. Extraction date is the date sampled unless otherwise stated.
- (3) All CCME PHC results met required criteria unless otherwise stated in the report. The CWS PHC methods employed by Maxxam conform to all prescribed elements of the reference method and performance based elements have been validated. All modifications have been validated and proven equivalent following "Alberta Environment's Interpretation of the Reference Method for the Canada-Wide Standard for Petroleum Hydrocarbons in Soil Validation of Performance-Based Alternative Methods September 2003". Documentation is available upon request. Modifications from Reference Method for the Canada-wide Standard for Petroleum Hydrocarbons in Soil-Tier 1 Method: F2/F3/F4 data reported using validated cold solvent extraction instead of Soxhlet extraction.

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.

Marissa Oddi, Customer Service Representative

Email: moddi@maxxam.ca

Phone# (905) 817-5700

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Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

O.REG 153 METALS & INORGANICS PKG (SOIL)

Maxxam ID		BWO881		
Sampling Date		2016/02/18 11:45		
COC Number		546624-06-01		
	UNITS	CS164	RDL	QC Batch
Calculated Parameters				
Sodium Adsorption Ratio	N/A	3.9		4387466
Inorganics				
Conductivity	mS/cm	0.22	0.002	4388153
Free Cyanide	ug/g	ND	0.01	4388417
Available (CaCl ₂) pH	pH	7.74		4389530
Metals				
Soluble Calcium (Ca)	mg/L	6.8	0.5	4388039
Soluble Magnesium (Mg)	mg/L	0.7	0.5	4388039
Soluble Sodium (Na)	mg/L	40	5	4388039
Inorganics				
Chromium (VI)	ug/g	ND	0.2	4388133
Metals				
Hot Water Ext. Boron (B)	ug/g	ND	0.050	4389614
Acid Extractable Antimony (Sb)	ug/g	ND	0.20	4389518
Acid Extractable Arsenic (As)	ug/g	ND	1.0	4389518
Acid Extractable Barium (Ba)	ug/g	3.5	0.50	4389518
Acid Extractable Beryllium (Be)	ug/g	ND	0.20	4389518
Acid Extractable Boron (B)	ug/g	ND	5.0	4389518
Acid Extractable Cadmium (Cd)	ug/g	ND	0.10	4389518
Acid Extractable Chromium (Cr)	ug/g	7.7	1.0	4389518
Acid Extractable Cobalt (Co)	ug/g	1.4	0.10	4389518
Acid Extractable Copper (Cu)	ug/g	1.2	0.50	4389518
Acid Extractable Lead (Pb)	ug/g	2.3	1.0	4389518
Acid Extractable Molybdenum (Mo)	ug/g	ND	0.50	4389518
Acid Extractable Nickel (Ni)	ug/g	2.8	0.50	4389518
Acid Extractable Selenium (Se)	ug/g	ND	0.50	4389518
Acid Extractable Silver (Ag)	ug/g	ND	0.20	4389518
Acid Extractable Thallium (Tl)	ug/g	ND	0.050	4389518
Acid Extractable Uranium (U)	ug/g	0.33	0.050	4389518
Acid Extractable Vanadium (V)	ug/g	16	5.0	4389518
Acid Extractable Zinc (Zn)	ug/g	7.8	5.0	4389518
Acid Extractable Mercury (Hg)	ug/g	ND	0.050	4389518
RDL = Reportable Detection Limit				
QC Batch = Quality Control Batch				
ND = Not detected				

O.REG 153 PAHS (SOIL)

Maxxam ID		BWO881		
Sampling Date		2016/02/18 11:45		
COC Number		546624-06-01		
	UNITS	CS164	RDL	QC Batch
Calculated Parameters				
Methylnaphthalene, 2-(1-)	ug/g	ND	0.0071	4387468
Polyaromatic Hydrocarbons				
Acenaphthene	ug/g	ND	0.0050	4388766
Acenaphthylene	ug/g	ND	0.0050	4388766
Anthracene	ug/g	ND	0.0050	4388766
Benzo(a)anthracene	ug/g	ND	0.0050	4388766
Benzo(a)pyrene	ug/g	ND	0.0050	4388766
Benzo(b/j)fluoranthene	ug/g	ND	0.0050	4388766
Benzo(g,h,i)perylene	ug/g	ND	0.0050	4388766
Benzo(k)fluoranthene	ug/g	ND	0.0050	4388766
Chrysene	ug/g	ND	0.0050	4388766
Dibenz(a,h)anthracene	ug/g	ND	0.0050	4388766
Fluoranthene	ug/g	ND	0.0050	4388766
Fluorene	ug/g	ND	0.0050	4388766
Indeno(1,2,3-cd)pyrene	ug/g	ND	0.0050	4388766
1-Methylnaphthalene	ug/g	ND	0.0050	4388766
2-Methylnaphthalene	ug/g	ND	0.0050	4388766
Naphthalene	ug/g	ND	0.0050	4388766
Phenanthrene	ug/g	ND	0.0050	4388766
Pyrene	ug/g	0.0050	0.0050	4388766
Surrogate Recovery (%)				
D10-Anthracene	%	99		4388766
D14-Terphenyl (FS)	%	93		4388766
D8-Acenaphthylene	%	88		4388766
RDL = Reportable Detection Limit QC Batch = Quality Control Batch ND = Not detected				

O.REG 153 PETROLEUM HYDROCARBONS (SOIL)

Maxxam ID		BWO880	BWO880		BWO881		BWO882	BWO882		
Sampling Date		2016/02/18 12:00	2016/02/18 12:00		2016/02/18 11:45		2016/02/18 12:30	2016/02/18 12:30		
COC Number		546624-06-01	546624-06-01		546624-06-01		546624-06-01	546624-06-01		
	UNITS	CS169	CS169 Lab-Dup	QC Batch	CS164	QC Batch	SP5001	SP5001 Lab-Dup	RDL	QC Batch

Inorganics

Moisture	%	19		4387862	18	4388026	11	11	1.0	4387862

BTEX & F1 Hydrocarbons

Benzene	ug/g	ND	ND	4388685			ND		0.020	4388685
Toluene	ug/g	ND	ND	4388685			ND		0.020	4388685
Ethylbenzene	ug/g	ND	ND	4388685			ND		0.020	4388685
o-Xylene	ug/g	ND	ND	4388685			ND		0.020	4388685
p+m-Xylene	ug/g	ND	ND	4388685			ND		0.040	4388685
Total Xylenes	ug/g	ND	ND	4388685			ND		0.040	4388685
F1 (C6-C10)	ug/g	24	23	4388685	19	4388685	ND		10	4388685
F1 (C6-C10) - BTEX	ug/g	24	23	4388685	19	4388685	ND		10	4388685

F2-F4 Hydrocarbons

F2 (C10-C16 Hydrocarbons)	ug/g	12		4388038	11	4388038	ND	ND	10	4388038
F3 (C16-C34 Hydrocarbons)	ug/g	75		4388038	ND	4388038	ND	ND	50	4388038
F4 (C34-C50 Hydrocarbons)	ug/g	ND		4388038	ND	4388038	ND	ND	50	4388038
Reached Baseline at C50	ug/g	Yes		4388038	Yes	4388038	Yes	Yes		4388038

Surrogate Recovery (%)

1,4-Difluorobenzene	%	107	106	4388685	106	4388685	99			4388685
4-Bromofluorobenzene	%	105	101	4388685	107	4388685	88			4388685
D10-Ethylbenzene	%	87	85	4388685	79	4388685	83			4388685
D4-1,2-Dichloroethane	%	103	102	4388685	100	4388685	92			4388685
o-Terphenyl	%	92		4388038	90	4388038	89	91		4388038

RDL = Reportable Detection Limit

QC Batch = Quality Control Batch

Lab-Dup = Laboratory Initiated Duplicate

ND = Not detected

O.REG 153 PETROLEUM HYDROCARBONS (SOIL)

Maxxam ID		BWO883	BWO884		
Sampling Date		2016/02/18 12:30	2016/02/18 12:30		
COC Number		546624-06-01	546624-06-01		
	UNITS	SP6001	SP7001	RDL	QC Batch
Inorganics					
Moisture	%	10	7.0	1.0	4387862
BTEX & F1 Hydrocarbons					
Benzene	ug/g	ND	ND	0.020	4388685
Toluene	ug/g	0.027	ND	0.020	4388685
Ethylbenzene	ug/g	ND	ND	0.020	4388685
o-Xylene	ug/g	ND	ND	0.020	4388685
p+m-Xylene	ug/g	ND	ND	0.040	4388685
Total Xylenes	ug/g	ND	ND	0.040	4388685
F1 (C6-C10)	ug/g	ND	ND	10	4388685
F1 (C6-C10) - BTEX	ug/g	ND	ND	10	4388685
F2-F4 Hydrocarbons					
F2 (C10-C16 Hydrocarbons)	ug/g	ND	ND	10	4388038
F3 (C16-C34 Hydrocarbons)	ug/g	ND	ND	50	4388038
F4 (C34-C50 Hydrocarbons)	ug/g	ND	ND	50	4388038
Reached Baseline at C50	ug/g	Yes	Yes		4388038
Surrogate Recovery (%)					
1,4-Difluorobenzene	%	102	102		4388685
4-Bromofluorobenzene	%	75	89		4388685
D10-Ethylbenzene	%	77	86		4388685
D4-1,2-Dichloroethane	%	96	98		4388685
o-Terphenyl	%	91	87		4388038
RDL = Reportable Detection Limit QC Batch = Quality Control Batch ND = Not detected					

O.REG 153 VOLATILE ORGANICS (SOIL)

Maxxam ID		BWO881	BWO881		
Sampling Date		2016/02/18 11:45	2016/02/18 11:45		
COC Number		546624-06-01	546624-06-01		
	UNITS	CS164	CS164 Lab-Dup	RDL	QC Batch
Calculated Parameters					
1,3-Dichloropropene (cis+trans)	ug/g	ND		0.050	4387190
Volatile Organics					
Acetone (2-Propanone)	ug/g	ND	ND	0.50	4386577
Benzene	ug/g	ND	ND	0.020	4386577
Bromodichloromethane	ug/g	ND	ND	0.050	4386577
Bromoform	ug/g	ND	ND	0.050	4386577
Bromomethane	ug/g	ND	ND	0.050	4386577
Carbon Tetrachloride	ug/g	ND	ND	0.050	4386577
Chlorobenzene	ug/g	ND	ND	0.050	4386577
Chloroform	ug/g	ND	ND	0.050	4386577
Dibromochloromethane	ug/g	ND	ND	0.050	4386577
1,2-Dichlorobenzene	ug/g	ND	ND	0.050	4386577
1,3-Dichlorobenzene	ug/g	ND	ND	0.050	4386577
1,4-Dichlorobenzene	ug/g	ND	ND	0.050	4386577
Dichlorodifluoromethane (FREON 12)	ug/g	ND	ND	0.050	4386577
1,1-Dichloroethane	ug/g	ND	ND	0.050	4386577
1,2-Dichloroethane	ug/g	ND	ND	0.050	4386577
1,1-Dichloroethylene	ug/g	ND	ND	0.050	4386577
cis-1,2-Dichloroethylene	ug/g	ND	ND	0.050	4386577
trans-1,2-Dichloroethylene	ug/g	ND	ND	0.050	4386577
1,2-Dichloropropane	ug/g	ND	ND	0.050	4386577
cis-1,3-Dichloropropene	ug/g	ND	ND	0.030	4386577
trans-1,3-Dichloropropene	ug/g	ND	ND	0.040	4386577
Ethylbenzene	ug/g	ND	ND	0.020	4386577
Ethylene Dibromide	ug/g	ND	ND	0.050	4386577
Hexane	ug/g	ND	ND	0.050	4386577
Methylene Chloride(Dichloromethane)	ug/g	ND	ND	0.050	4386577
Methyl Ethyl Ketone (2-Butanone)	ug/g	ND	ND	0.50	4386577
Methyl Isobutyl Ketone	ug/g	ND	ND	0.50	4386577
Methyl t-butyl ether (MTBE)	ug/g	ND	ND	0.050	4386577
Styrene	ug/g	ND	ND	0.050	4386577
RDL = Reportable Detection Limit QC Batch = Quality Control Batch Lab-Dup = Laboratory Initiated Duplicate ND = Not detected					

O.REG 153 VOLATILE ORGANICS (SOIL)

Maxxam ID		BWO881	BWO881		
Sampling Date		2016/02/18 11:45	2016/02/18 11:45		
COC Number		546624-06-01	546624-06-01		
	UNITS	CS164	CS164 Lab-Dup	RDL	QC Batch
1,1,1,2-Tetrachloroethane	ug/g	ND	ND	0.050	4386577
1,1,2,2-Tetrachloroethane	ug/g	ND	ND	0.050	4386577
Tetrachloroethylene	ug/g	ND	ND	0.050	4386577
Toluene	ug/g	ND	ND	0.020	4386577
1,1,1-Trichloroethane	ug/g	ND	ND	0.050	4386577
1,1,2-Trichloroethane	ug/g	ND	ND	0.050	4386577
Trichloroethylene	ug/g	ND	ND	0.050	4386577
Trichlorofluoromethane (FREON 11)	ug/g	ND	ND	0.050	4386577
Vinyl Chloride	ug/g	ND	ND	0.020	4386577
p+m-Xylene	ug/g	ND	ND	0.020	4386577
o-Xylene	ug/g	ND	ND	0.020	4386577
Total Xylenes	ug/g	ND	ND	0.020	4386577
Surrogate Recovery (%)					
4-Bromofluorobenzene	%	102	102		4386577
D10-o-Xylene	%	90	86		4386577
D4-1,2-Dichloroethane	%	97	97		4386577
D8-Toluene	%	92	94		4386577
RDL = Reportable Detection Limit QC Batch = Quality Control Batch Lab-Dup = Laboratory Initiated Duplicate ND = Not detected					

Maxxam Job #: B634064
Report Date: 2016/02/22

Terrapex Environmental Ltd
Client Project #: CB644.02
Site Location: 121 Hume Street, Collingwood, ON
Your P.O. #: 4700001396
Sampler Initials: PA

TEST SUMMARY

Maxxam ID: BWO880
Sample ID: CS169
Matrix: Soil

Collected: 2016/02/18
Shipped:
Received: 2016/02/19

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	4388685	N/A	2016/02/20	Georgeta Rusu
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	4388038	2016/02/19	2016/02/19	Barbara Wowk
Moisture	BAL	4387862	N/A	2016/02/19	Chamika Deeyagaha

Maxxam ID: BWO880 Dup
Sample ID: CS169
Matrix: Soil

Collected: 2016/02/18
Shipped:
Received: 2016/02/19

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	4388685	N/A	2016/02/20	Georgeta Rusu

Maxxam ID: BWO881
Sample ID: CS164
Matrix: Soil

Collected: 2016/02/18
Shipped:
Received: 2016/02/19

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	4387468	N/A	2016/02/22	Automated Statchk
Hot Water Extractable Boron	ICP	4389614	2016/02/22	2016/02/22	Archana Patel
1,3-Dichloropropene Sum	CALC	4387190	N/A	2016/02/22	Automated Statchk
Free (WAD) Cyanide	TECH	4388417	2016/02/19	2016/02/22	Xuanhong Qiu
Conductivity	AT	4388153	N/A	2016/02/22	Yogesh Patel
Hexavalent Chromium in Soil by IC	IC/SPEC	4388133	2016/02/19	2016/02/22	Manoj Gera
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	4388685	N/A	2016/02/20	Georgeta Rusu
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	4388038	2016/02/19	2016/02/19	Barbara Wowk
Strong Acid Leachable Metals by ICPMS	ICP/MS	4389518	2016/02/22	2016/02/22	Viviana Canzonieri
Moisture	BAL	4388026	N/A	2016/02/19	Chamika Deeyagaha
PAH Compounds in Soil by GC/MS (SIM)	GC/MS	4388766	2016/02/19	2016/02/20	Lingyun Feng
pH CaCl2 EXTRACT	AT	4389530	2016/02/22	2016/02/22	Neil Dassanayake
Sodium Adsorption Ratio (SAR)	CALC/MET	4387466	N/A	2016/02/22	Automated Statchk
SAR - ICP Metals	ICP	4388039	2016/02/22	2016/02/22	Azita Fazaali
Volatile Organic Compounds in Soil	GC/MS	4386577	N/A	2016/02/19	Anna Gabrielyan

Maxxam ID: BWO881 Dup
Sample ID: CS164
Matrix: Soil

Collected: 2016/02/18
Shipped:
Received: 2016/02/19

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Volatile Organic Compounds in Soil	GC/MS	4386577	N/A	2016/02/19	Anna Gabrielyan

Maxxam Job #: B634064
Report Date: 2016/02/22

Terrapex Environmental Ltd
Client Project #: CB644.02
Site Location: 121 Hume Street, Collingwood, ON
Your P.O. #: 4700001396
Sampler Initials: PA

TEST SUMMARY

Maxxam ID: BWO882
Sample ID: SP5001
Matrix: Soil

Collected: 2016/02/18
Shipped:
Received: 2016/02/19

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	4388685	N/A	2016/02/20	Georgeta Rusu
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	4388038	2016/02/19	2016/02/19	Barbara Wowk
Moisture	BAL	4387862	N/A	2016/02/19	Chamika Deeyagaha

Maxxam ID: BWO882 Dup
Sample ID: SP5001
Matrix: Soil

Collected: 2016/02/18
Shipped:
Received: 2016/02/19

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	4388038	2016/02/19	2016/02/19	Barbara Wowk
Moisture	BAL	4387862	N/A	2016/02/19	Chamika Deeyagaha

Maxxam ID: BWO883
Sample ID: SP6001
Matrix: Soil

Collected: 2016/02/18
Shipped:
Received: 2016/02/19

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	4388685	N/A	2016/02/20	Georgeta Rusu
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	4388038	2016/02/19	2016/02/20	Barbara Wowk
Moisture	BAL	4387862	N/A	2016/02/19	Chamika Deeyagaha

Maxxam ID: BWO884
Sample ID: SP7001
Matrix: Soil

Collected: 2016/02/18
Shipped:
Received: 2016/02/19

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	4388685	N/A	2016/02/20	Georgeta Rusu
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	4388038	2016/02/19	2016/02/20	Barbara Wowk
Moisture	BAL	4387862	N/A	2016/02/19	Chamika Deeyagaha

Maxxam Job #: B634064
Report Date: 2016/02/22

Terrapex Environmental Ltd
Client Project #: CB644.02
Site Location: 121 Hume Street, Collingwood, ON
Your P.O. #: 4700001396
Sampler Initials: PA

GENERAL COMMENTS

Each temperature is the average of up to three cooler temperatures taken at receipt

Package 1	0.0°C

Sample BWO881-01 : F1-BTEX Analysis: The BTEX results used for the F1-BTEX calculation were obtained from Headspace-GC analysis.

Results relate only to the items tested.

QUALITY ASSURANCE REPORT

QA/QC	Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
4386577	AYA	Matrix Spike [BWO881-03]		4-Bromofluorobenzene	2016/02/19		104	%	60 - 140
				D10-o-Xylene	2016/02/19		92	%	60 - 130
				D4-1,2-Dichloroethane	2016/02/19		94	%	60 - 140
				D8-Toluene	2016/02/19		102	%	60 - 140
				Acetone (2-Propanone)	2016/02/19		82	%	60 - 140
				Benzene	2016/02/19		87	%	60 - 140
				Bromodichloromethane	2016/02/19		88	%	60 - 140
				Bromoform	2016/02/19		84	%	60 - 140
				Bromomethane	2016/02/19		76	%	60 - 140
				Carbon Tetrachloride	2016/02/19		89	%	60 - 140
				Chlorobenzene	2016/02/19		92	%	60 - 140
				Chloroform	2016/02/19		86	%	60 - 140
				Dibromochloromethane	2016/02/19		86	%	60 - 140
				1,2-Dichlorobenzene	2016/02/19		91	%	60 - 140
				1,3-Dichlorobenzene	2016/02/19		94	%	60 - 140
				1,4-Dichlorobenzene	2016/02/19		97	%	60 - 140
				Dichlorodifluoromethane (FREON 12)	2016/02/19		88	%	60 - 140
				1,1-Dichloroethane	2016/02/19		86	%	60 - 140
				1,2-Dichloroethane	2016/02/19		87	%	60 - 140
				1,1-Dichloroethylene	2016/02/19		90	%	60 - 140
				cis-1,2-Dichloroethylene	2016/02/19		88	%	60 - 140
				trans-1,2-Dichloroethylene	2016/02/19		84	%	60 - 140
				1,2-Dichloropropane	2016/02/19		87	%	60 - 140
				cis-1,3-Dichloropropene	2016/02/19		87	%	60 - 140
				trans-1,3-Dichloropropene	2016/02/19		82	%	60 - 140
				Ethylbenzene	2016/02/19		99	%	60 - 140
				Ethylene Dibromide	2016/02/19		86	%	60 - 140
				Hexane	2016/02/19		96	%	60 - 140
				Methylene Chloride(Dichloromethane)	2016/02/19		93	%	60 - 140
				Methyl Ethyl Ketone (2-Butanone)	2016/02/19		89	%	60 - 140
				Methyl Isobutyl Ketone	2016/02/19		91	%	60 - 140
				Methyl t-butyl ether (MTBE)	2016/02/19		87	%	60 - 140
				Styrene	2016/02/19		99	%	60 - 140
				1,1,1,2-Tetrachloroethane	2016/02/19		88	%	60 - 140
				1,1,2,2-Tetrachloroethane	2016/02/19		87	%	60 - 140
				Tetrachloroethylene	2016/02/19		88	%	60 - 140
				Toluene	2016/02/19		89	%	60 - 140
				1,1,1-Trichloroethane	2016/02/19		86	%	60 - 140
				1,1,2-Trichloroethane	2016/02/19		84	%	60 - 140
				Trichloroethylene	2016/02/19		87	%	60 - 140
				Trichlorofluoromethane (FREON 11)	2016/02/19		89	%	60 - 140
				Vinyl Chloride	2016/02/19		88	%	60 - 140
				p+m-Xylene	2016/02/19		99	%	60 - 140
				o-Xylene	2016/02/19		99	%	60 - 140
4386577	AYA	Spiked Blank		4-Bromofluorobenzene	2016/02/19		103	%	60 - 140
				D10-o-Xylene	2016/02/19		87	%	60 - 130
				D4-1,2-Dichloroethane	2016/02/19		100	%	60 - 140
				D8-Toluene	2016/02/19		105	%	60 - 140
				Acetone (2-Propanone)	2016/02/19		91	%	60 - 140
				Benzene	2016/02/19		86	%	60 - 130

Maxxam Job #: B634064
Report Date: 2016/02/22

Terrapex Environmental Ltd
Client Project #: CB644.02
Site Location: 121 Hume Street, Collingwood, ON
Your P.O. #: 4700001396
Sampler Initials: PA

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC	Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
				Bromodichloromethane	2016/02/19		89	%	60 - 130
				Bromoform	2016/02/19		91	%	60 - 130
				Bromomethane	2016/02/19		78	%	60 - 140
				Carbon Tetrachloride	2016/02/19		88	%	60 - 130
				Chlorobenzene	2016/02/19		90	%	60 - 130
				Chloroform	2016/02/19		88	%	60 - 130
				Dibromochloromethane	2016/02/19		91	%	60 - 130
				1,2-Dichlorobenzene	2016/02/19		89	%	60 - 130
				1,3-Dichlorobenzene	2016/02/19		87	%	60 - 130
				1,4-Dichlorobenzene	2016/02/19		90	%	60 - 130
				Dichlorodifluoromethane (FREON 12)	2016/02/19		83	%	60 - 140
				1,1-Dichloroethane	2016/02/19		86	%	60 - 130
				1,2-Dichloroethane	2016/02/19		90	%	60 - 130
				1,1-Dichloroethylene	2016/02/19		88	%	60 - 130
				cis-1,2-Dichloroethylene	2016/02/19		89	%	60 - 130
				trans-1,2-Dichloroethylene	2016/02/19		83	%	60 - 130
				1,2-Dichloropropane	2016/02/19		87	%	60 - 130
				cis-1,3-Dichloropropene	2016/02/19		90	%	60 - 130
				trans-1,3-Dichloropropene	2016/02/19		91	%	60 - 130
				Ethylbenzene	2016/02/19		90	%	60 - 130
				Ethylene Dibromide	2016/02/19		92	%	60 - 130
				Hexane	2016/02/19		93	%	60 - 130
				Methylene Chloride(Dichloromethane)	2016/02/19		96	%	60 - 130
				Methyl Ethyl Ketone (2-Butanone)	2016/02/19		98	%	60 - 140
				Methyl Isobutyl Ketone	2016/02/19		98	%	60 - 130
				Methyl t-butyl ether (MTBE)	2016/02/19		89	%	60 - 130
				Styrene	2016/02/19		96	%	60 - 130
				1,1,1,2-Tetrachloroethane	2016/02/19		90	%	60 - 130
				1,1,2,2-Tetrachloroethane	2016/02/19		93	%	60 - 130
				Tetrachloroethylene	2016/02/19		87	%	60 - 130
				Toluene	2016/02/19		90	%	60 - 130
				1,1,1-Trichloroethane	2016/02/19		86	%	60 - 130
				1,1,2-Trichloroethane	2016/02/19		89	%	60 - 130
				Trichloroethylene	2016/02/19		85	%	60 - 130
				Trichlorofluoromethane (FREON 11)	2016/02/19		87	%	60 - 130
				Vinyl Chloride	2016/02/19		84	%	60 - 130
				p+m-Xylene	2016/02/19		92	%	60 - 130
				o-Xylene	2016/02/19		93	%	60 - 130
4386577	AYA		Method Blank	4-Bromofluorobenzene	2016/02/19		93	%	60 - 140
				D10-o-Xylene	2016/02/19		78	%	60 - 130
				D4-1,2-Dichloroethane	2016/02/19		105	%	60 - 140
				D8-Toluene	2016/02/19		93	%	60 - 140
				Acetone (2-Propanone)	2016/02/19	ND, RDL=0.50		ug/g	
				Benzene	2016/02/19	ND, RDL=0.020		ug/g	
				Bromodichloromethane	2016/02/19	ND, RDL=0.050		ug/g	
				Bromoform	2016/02/19	ND, RDL=0.050		ug/g	

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Bromomethane	2016/02/19	ND, RDL=0.050		ug/g	
			Carbon Tetrachloride	2016/02/19	ND, RDL=0.050		ug/g	
			Chlorobenzene	2016/02/19	ND, RDL=0.050		ug/g	
			Chloroform	2016/02/19	ND, RDL=0.050		ug/g	
			Dibromochloromethane	2016/02/19	ND, RDL=0.050		ug/g	
			1,2-Dichlorobenzene	2016/02/19	ND, RDL=0.050		ug/g	
			1,3-Dichlorobenzene	2016/02/19	ND, RDL=0.050		ug/g	
			1,4-Dichlorobenzene	2016/02/19	ND, RDL=0.050		ug/g	
			Dichlorodifluoromethane (FREON 12)	2016/02/19	ND, RDL=0.050		ug/g	
			1,1-Dichloroethane	2016/02/19	ND, RDL=0.050		ug/g	
			1,2-Dichloroethane	2016/02/19	ND, RDL=0.050		ug/g	
			1,1-Dichloroethylene	2016/02/19	ND, RDL=0.050		ug/g	
			cis-1,2-Dichloroethylene	2016/02/19	ND, RDL=0.050		ug/g	
			trans-1,2-Dichloroethylene	2016/02/19	ND, RDL=0.050		ug/g	
			1,2-Dichloropropane	2016/02/19	ND, RDL=0.050		ug/g	
			cis-1,3-Dichloropropene	2016/02/19	ND, RDL=0.030		ug/g	
			trans-1,3-Dichloropropene	2016/02/19	ND, RDL=0.040		ug/g	
			Ethylbenzene	2016/02/19	ND, RDL=0.020		ug/g	
			Ethylene Dibromide	2016/02/19	ND, RDL=0.050		ug/g	
			Hexane	2016/02/19	ND, RDL=0.050		ug/g	
			Methylene Chloride(Dichloromethane)	2016/02/19	ND, RDL=0.050		ug/g	
			Methyl Ethyl Ketone (2-Butanone)	2016/02/19	ND, RDL=0.50		ug/g	
			Methyl Isobutyl Ketone	2016/02/19	ND, RDL=0.50		ug/g	
			Methyl t-butyl ether (MTBE)	2016/02/19	ND, RDL=0.050		ug/g	

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Styrene	2016/02/19	ND, RDL=0.050		ug/g	
			1,1,1,2-Tetrachloroethane	2016/02/19	ND, RDL=0.050		ug/g	
			1,1,2,2-Tetrachloroethane	2016/02/19	ND, RDL=0.050		ug/g	
			Tetrachloroethylene	2016/02/19	ND, RDL=0.050		ug/g	
			Toluene	2016/02/19	ND, RDL=0.020		ug/g	
			1,1,1-Trichloroethane	2016/02/19	ND, RDL=0.050		ug/g	
			1,1,2-Trichloroethane	2016/02/19	ND, RDL=0.050		ug/g	
			Trichloroethylene	2016/02/19	ND, RDL=0.050		ug/g	
			Trichlorofluoromethane (FREON 11)	2016/02/19	ND, RDL=0.050		ug/g	
			Vinyl Chloride	2016/02/19	ND, RDL=0.020		ug/g	
			p+m-Xylene	2016/02/19	ND, RDL=0.020		ug/g	
			o-Xylene	2016/02/19	ND, RDL=0.020		ug/g	
			Total Xylenes	2016/02/19	ND, RDL=0.020		ug/g	
4386577	AYA	RPD [BWO881-03]	Acetone (2-Propanone)	2016/02/19	NC		%	50
			Benzene	2016/02/19	NC		%	50
			Bromodichloromethane	2016/02/19	NC		%	50
			Bromoform	2016/02/19	NC		%	50
			Bromomethane	2016/02/19	NC		%	50
			Carbon Tetrachloride	2016/02/19	NC		%	50
			Chlorobenzene	2016/02/19	NC		%	50
			Chloroform	2016/02/19	NC		%	50
			Dibromochloromethane	2016/02/19	NC		%	50
			1,2-Dichlorobenzene	2016/02/19	NC		%	50
			1,3-Dichlorobenzene	2016/02/19	NC		%	50
			1,4-Dichlorobenzene	2016/02/19	NC		%	50
			Dichlorodifluoromethane (FREON 12)	2016/02/19	NC		%	50
			1,1-Dichloroethane	2016/02/19	NC		%	50
			1,2-Dichloroethane	2016/02/19	NC		%	50
			1,1-Dichloroethylene	2016/02/19	NC		%	50
			cis-1,2-Dichloroethylene	2016/02/19	NC		%	50
			trans-1,2-Dichloroethylene	2016/02/19	NC		%	50
			1,2-Dichloropropane	2016/02/19	NC		%	50
			cis-1,3-Dichloropropene	2016/02/19	NC		%	50
			trans-1,3-Dichloropropene	2016/02/19	NC		%	50
			Ethylbenzene	2016/02/19	NC		%	50
			Ethylene Dibromide	2016/02/19	NC		%	50
			Hexane	2016/02/19	NC		%	50

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Methylene Chloride(Dichloromethane)	2016/02/19	NC		%	50
			Methyl Ethyl Ketone (2-Butanone)	2016/02/19	NC		%	50
			Methyl Isobutyl Ketone	2016/02/19	NC		%	50
			Methyl t-butyl ether (MTBE)	2016/02/19	NC		%	50
			Styrene	2016/02/19	NC		%	50
			1,1,1,2-Tetrachloroethane	2016/02/19	NC		%	50
			1,1,2,2-Tetrachloroethane	2016/02/19	NC		%	50
			Tetrachloroethylene	2016/02/19	NC		%	50
			Toluene	2016/02/19	NC		%	50
			1,1,1-Trichloroethane	2016/02/19	NC		%	50
			1,1,2-Trichloroethane	2016/02/19	NC		%	50
			Trichloroethylene	2016/02/19	NC		%	50
			Trichlorofluoromethane (FREON 11)	2016/02/19	NC		%	50
			Vinyl Chloride	2016/02/19	NC		%	50
			p+m-Xylene	2016/02/19	NC		%	50
			o-Xylene	2016/02/19	NC		%	50
			Total Xylenes	2016/02/19	NC		%	50
4387862	NS3	RPD [BWO882-01]	Moisture	2016/02/19	0.90		%	20
4388026	NS3	RPD	Moisture	2016/02/19	2.2		%	20
4388038	BWW	Matrix Spike [BWO882-01]	o-Terphenyl	2016/02/19		92	%	60 - 130
			F2 (C10-C16 Hydrocarbons)	2016/02/19		94	%	50 - 130
			F3 (C16-C34 Hydrocarbons)	2016/02/19		97	%	50 - 130
			F4 (C34-C50 Hydrocarbons)	2016/02/19		94	%	50 - 130
4388038	BWW	Spiked Blank	o-Terphenyl	2016/02/19		95	%	60 - 130
			F2 (C10-C16 Hydrocarbons)	2016/02/19		96	%	80 - 120
			F3 (C16-C34 Hydrocarbons)	2016/02/19		99	%	80 - 120
			F4 (C34-C50 Hydrocarbons)	2016/02/19		97	%	80 - 120
4388038	BWW	Method Blank	o-Terphenyl	2016/02/19		91	%	60 - 130
			F2 (C10-C16 Hydrocarbons)	2016/02/19	ND, RDL=10		ug/g	
			F3 (C16-C34 Hydrocarbons)	2016/02/19	ND, RDL=50		ug/g	
			F4 (C34-C50 Hydrocarbons)	2016/02/19	ND, RDL=50		ug/g	
4388038	BWW	RPD [BWO882-01]	F2 (C10-C16 Hydrocarbons)	2016/02/19	NC		%	30
			F3 (C16-C34 Hydrocarbons)	2016/02/19	NC		%	30
			F4 (C34-C50 Hydrocarbons)	2016/02/19	NC		%	30
4388039	AFZ	Spiked Blank	Soluble Calcium (Ca)	2016/02/22		105	%	80 - 120
			Soluble Magnesium (Mg)	2016/02/22		101	%	80 - 120
			Soluble Sodium (Na)	2016/02/22		105	%	80 - 120
4388039	AFZ	Method Blank	Soluble Calcium (Ca)	2016/02/22	ND, RDL=0.5		mg/L	
			Soluble Magnesium (Mg)	2016/02/22	ND, RDL=0.5		mg/L	
			Soluble Sodium (Na)	2016/02/22	ND,RDL=5		mg/L	
4388039	AFZ	RPD	Soluble Calcium (Ca)	2016/02/22	1.2		%	30
			Soluble Magnesium (Mg)	2016/02/22	3.9		%	30
			Soluble Sodium (Na)	2016/02/22	NC		%	30
4388133	MGE	Matrix Spike	Chromium (VI)	2016/02/22		81	%	75 - 125
4388133	MGE	QC Standard	Chromium (VI)	2016/02/22		87	%	75 - 125

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Terrapex Environmental Ltd
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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC	Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
	4388133	MGE	Spiked Blank	Chromium (VI)	2016/02/22		99	%	80 - 120
	4388133	MGE	Method Blank	Chromium (VI)	2016/02/22	ND, RDL=0.2		ug/g	
	4388133	MGE	RPD	Chromium (VI)	2016/02/22	NC		%	35
	4388153	YPA	Spiked Blank	Conductivity	2016/02/22		101	%	90 - 110
	4388153	YPA	Method Blank	Conductivity	2016/02/22	ND, RDL=0.002		mS/cm	
	4388153	YPA	RPD	Conductivity	2016/02/22	0.22		%	10
	4388417	XQI	Matrix Spike	Free Cyanide	2016/02/22		106	%	75 - 125
	4388417	XQI	Spiked Blank	Free Cyanide	2016/02/22		104	%	80 - 120
	4388417	XQI	Method Blank	Free Cyanide	2016/02/22	ND, RDL=0.01		ug/g	
	4388417	XQI	RPD	Free Cyanide	2016/02/22	NC		%	35
	4388685	GRU	Matrix Spike [BWO880-02]	1,4-Difluorobenzene	2016/02/20		108	%	60 - 140
				4-Bromofluorobenzene	2016/02/20		117	%	60 - 140
				D10-Ethylbenzene	2016/02/20		87	%	60 - 140
				D4-1,2-Dichloroethane	2016/02/20		102	%	60 - 140
				Benzene	2016/02/20		86	%	60 - 140
				Toluene	2016/02/20		87	%	60 - 140
				Ethylbenzene	2016/02/20		100	%	60 - 140
				o-Xylene	2016/02/20		103	%	60 - 140
				p+m-Xylene	2016/02/20		97	%	60 - 140
				F1 (C6-C10)	2016/02/20		116	%	60 - 140
	4388685	GRU	Spiked Blank	1,4-Difluorobenzene	2016/02/20		101	%	60 - 140
				4-Bromofluorobenzene	2016/02/20		110	%	60 - 140
				D10-Ethylbenzene	2016/02/20		84	%	60 - 140
				D4-1,2-Dichloroethane	2016/02/20		98	%	60 - 140
				Benzene	2016/02/20		87	%	60 - 140
				Toluene	2016/02/20		88	%	60 - 140
				Ethylbenzene	2016/02/20		102	%	60 - 140
				o-Xylene	2016/02/20		106	%	60 - 140
				p+m-Xylene	2016/02/20		99	%	60 - 140
				F1 (C6-C10)	2016/02/20		80	%	80 - 120
	4388685	GRU	Method Blank	1,4-Difluorobenzene	2016/02/20		105	%	60 - 140
				4-Bromofluorobenzene	2016/02/20		88	%	60 - 140
				D10-Ethylbenzene	2016/02/20		86	%	60 - 140
				D4-1,2-Dichloroethane	2016/02/20		99	%	60 - 140
				Benzene	2016/02/20	ND, RDL=0.020		ug/g	
				Toluene	2016/02/20	ND, RDL=0.020		ug/g	
				Ethylbenzene	2016/02/20	ND, RDL=0.020		ug/g	
				o-Xylene	2016/02/20	ND, RDL=0.020		ug/g	
				p+m-Xylene	2016/02/20	ND, RDL=0.040		ug/g	
				Total Xylenes	2016/02/20	ND, RDL=0.040		ug/g	

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC	Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
				F1 (C6-C10)	2016/02/20	ND, RDL=10		ug/g	
				F1 (C6-C10) - BTEX	2016/02/20	ND, RDL=10		ug/g	
4388685	GRU	RPD [BWO880-02]		Benzene	2016/02/20	NC		%	50
				Toluene	2016/02/20	NC		%	50
				Ethylbenzene	2016/02/20	NC		%	50
				o-Xylene	2016/02/20	NC		%	50
				p+m-Xylene	2016/02/20	NC		%	50
				Total Xylenes	2016/02/20	NC		%	50
				F1 (C6-C10)	2016/02/20	NC		%	30
				F1 (C6-C10) - BTEX	2016/02/20	NC		%	30
4388766	LFE	Matrix Spike		D10-Anthracene	2016/02/20		93	%	50 - 130
				D14-Terphenyl (FS)	2016/02/20		90	%	50 - 130
				D8-Acenaphthylene	2016/02/20		87	%	50 - 130
				Acenaphthene	2016/02/20		80	%	50 - 130
				Acenaphthylene	2016/02/20		76	%	50 - 130
				Anthracene	2016/02/20		85	%	50 - 130
				Benzo(a)anthracene	2016/02/20		92	%	50 - 130
				Benzo(a)pyrene	2016/02/20		88	%	50 - 130
				Benzo(b/j)fluoranthene	2016/02/20		92	%	50 - 130
				Benzo(g,h,i)perylene	2016/02/20		91	%	50 - 130
				Benzo(k)fluoranthene	2016/02/20		93	%	50 - 130
				Chrysene	2016/02/20		91	%	50 - 130
				Dibenz(a,h)anthracene	2016/02/20		85	%	50 - 130
				Fluoranthene	2016/02/20		91	%	50 - 130
				Fluorene	2016/02/20		84	%	50 - 130
				Indeno(1,2,3-cd)pyrene	2016/02/20		94	%	50 - 130
				1-Methylnaphthalene	2016/02/20		93	%	50 - 130
				2-Methylnaphthalene	2016/02/20		79	%	50 - 130
				Naphthalene	2016/02/20		77	%	50 - 130
				Phenanthrene	2016/02/20		86	%	50 - 130
				Pyrene	2016/02/20		87	%	50 - 130
4388766	LFE	Spiked Blank		D10-Anthracene	2016/02/20		94	%	50 - 130
				D14-Terphenyl (FS)	2016/02/20		89	%	50 - 130
				D8-Acenaphthylene	2016/02/20		87	%	50 - 130
				Acenaphthene	2016/02/20		86	%	50 - 130
				Acenaphthylene	2016/02/20		81	%	50 - 130
				Anthracene	2016/02/20		87	%	50 - 130
				Benzo(a)anthracene	2016/02/20		87	%	50 - 130
				Benzo(a)pyrene	2016/02/20		89	%	50 - 130
				Benzo(b/j)fluoranthene	2016/02/20		97	%	50 - 130
				Benzo(g,h,i)perylene	2016/02/20		95	%	50 - 130
				Benzo(k)fluoranthene	2016/02/20		88	%	50 - 130
				Chrysene	2016/02/20		91	%	50 - 130
				Dibenz(a,h)anthracene	2016/02/20		87	%	50 - 130
				Fluoranthene	2016/02/20		92	%	50 - 130
				Fluorene	2016/02/20		84	%	50 - 130
				Indeno(1,2,3-cd)pyrene	2016/02/20		98	%	50 - 130
				1-Methylnaphthalene	2016/02/20		85	%	50 - 130
				2-Methylnaphthalene	2016/02/20		81	%	50 - 130

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Sampler Initials: PA

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
4388766	LFE	Method Blank	Naphthalene	2016/02/20		79	%	50 - 130
			Phenanthrene	2016/02/20		87	%	50 - 130
			Pyrene	2016/02/20		88	%	50 - 130
			D10-Anthracene	2016/02/20		93	%	50 - 130
			D14-Terphenyl (FS)	2016/02/20		88	%	50 - 130
			D8-Acenaphthylene	2016/02/20		82	%	50 - 130
			Acenaphthene	2016/02/20	ND, RDL=0.0050		ug/g	
			Acenaphthylene	2016/02/20	ND, RDL=0.0050		ug/g	
			Anthracene	2016/02/20	ND, RDL=0.0050		ug/g	
			Benzo(a)anthracene	2016/02/20	ND, RDL=0.0050		ug/g	
			Benzo(a)pyrene	2016/02/20	ND, RDL=0.0050		ug/g	
			Benzo(b/j)fluoranthene	2016/02/20	ND, RDL=0.0050		ug/g	
			Benzo(g,h,i)perylene	2016/02/20	ND, RDL=0.0050		ug/g	
			Benzo(k)fluoranthene	2016/02/20	ND, RDL=0.0050		ug/g	
			Chrysene	2016/02/20	ND, RDL=0.0050		ug/g	
			Dibenz(a,h)anthracene	2016/02/20	ND, RDL=0.0050		ug/g	
			Fluoranthene	2016/02/20	ND, RDL=0.0050		ug/g	
			Fluorene	2016/02/20	ND, RDL=0.0050		ug/g	
			Indeno(1,2,3-cd)pyrene	2016/02/20	ND, RDL=0.0050		ug/g	
			1-Methylnaphthalene	2016/02/20	ND, RDL=0.0050		ug/g	
			2-Methylnaphthalene	2016/02/20	ND, RDL=0.0050		ug/g	
			Naphthalene	2016/02/20	ND, RDL=0.0050		ug/g	
			Phenanthrene	2016/02/20	ND, RDL=0.0050		ug/g	
			Pyrene	2016/02/20	ND, RDL=0.0050		ug/g	
4388766	LFE	RPD	Acenaphthene	2016/02/20	NC		%	40
			Acenaphthylene	2016/02/20	NC		%	40
			Anthracene	2016/02/20	NC		%	40
			Benzo(a)anthracene	2016/02/20	NC		%	40
			Benzo(a)pyrene	2016/02/20	NC		%	40
			Benzo(b/j)fluoranthene	2016/02/20	NC		%	40
			Benzo(g,h,i)perylene	2016/02/20	NC		%	40

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC	Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
				Benzo(k)fluoranthene	2016/02/20	NC		%	40
				Chrysene	2016/02/20	NC		%	40
				Dibenz(a,h)anthracene	2016/02/20	NC		%	40
				Fluoranthene	2016/02/20	NC		%	40
				Fluorene	2016/02/20	13		%	40
				Indeno(1,2,3-cd)pyrene	2016/02/20	NC		%	40
				1-Methylnaphthalene	2016/02/20	6.7		%	40
				2-Methylnaphthalene	2016/02/20	NC (1)		%	40
				Naphthalene	2016/02/20	NC		%	40
				Phenanthrene	2016/02/20	NC		%	40
				Pyrene	2016/02/20	NC		%	40
4389518	VIV		Matrix Spike	Acid Extractable Antimony (Sb)	2016/02/22		91	%	75 - 125
				Acid Extractable Arsenic (As)	2016/02/22		95	%	75 - 125
				Acid Extractable Barium (Ba)	2016/02/22		NC	%	75 - 125
				Acid Extractable Beryllium (Be)	2016/02/22		100	%	75 - 125
				Acid Extractable Boron (B)	2016/02/22		97	%	75 - 125
				Acid Extractable Cadmium (Cd)	2016/02/22		101	%	75 - 125
				Acid Extractable Chromium (Cr)	2016/02/22		NC	%	75 - 125
				Acid Extractable Cobalt (Co)	2016/02/22		95	%	75 - 125
				Acid Extractable Copper (Cu)	2016/02/22		NC	%	75 - 125
				Acid Extractable Lead (Pb)	2016/02/22		98	%	75 - 125
				Acid Extractable Molybdenum (Mo)	2016/02/22		98	%	75 - 125
				Acid Extractable Nickel (Ni)	2016/02/22		NC	%	75 - 125
				Acid Extractable Selenium (Se)	2016/02/22		99	%	75 - 125
				Acid Extractable Silver (Ag)	2016/02/22		97	%	75 - 125
				Acid Extractable Thallium (Tl)	2016/02/22		95	%	75 - 125
				Acid Extractable Uranium (U)	2016/02/22		100	%	75 - 125
				Acid Extractable Vanadium (V)	2016/02/22		NC	%	75 - 125
				Acid Extractable Zinc (Zn)	2016/02/22		NC	%	75 - 125
4389518	VIV		Spiked Blank	Acid Extractable Mercury (Hg)	2016/02/22		101	%	75 - 125
				Acid Extractable Antimony (Sb)	2016/02/22		97	%	80 - 120
				Acid Extractable Arsenic (As)	2016/02/22		98	%	80 - 120
				Acid Extractable Barium (Ba)	2016/02/22		104	%	80 - 120
				Acid Extractable Beryllium (Be)	2016/02/22		97	%	80 - 120
				Acid Extractable Boron (B)	2016/02/22		94	%	80 - 120
				Acid Extractable Cadmium (Cd)	2016/02/22		98	%	80 - 120
				Acid Extractable Chromium (Cr)	2016/02/22		100	%	80 - 120
				Acid Extractable Cobalt (Co)	2016/02/22		96	%	80 - 120
				Acid Extractable Copper (Cu)	2016/02/22		98	%	80 - 120
				Acid Extractable Lead (Pb)	2016/02/22		98	%	80 - 120
				Acid Extractable Molybdenum (Mo)	2016/02/22		97	%	80 - 120
				Acid Extractable Nickel (Ni)	2016/02/22		99	%	80 - 120
				Acid Extractable Selenium (Se)	2016/02/22		100	%	80 - 120
				Acid Extractable Silver (Ag)	2016/02/22		96	%	80 - 120
				Acid Extractable Thallium (Tl)	2016/02/22		97	%	80 - 120
				Acid Extractable Uranium (U)	2016/02/22		98	%	80 - 120
				Acid Extractable Vanadium (V)	2016/02/22		98	%	80 - 120
				Acid Extractable Zinc (Zn)	2016/02/22		95	%	80 - 120
4389518	VIV		Method Blank	Acid Extractable Mercury (Hg)	2016/02/22		106	%	80 - 120
				Acid Extractable Antimony (Sb)	2016/02/22	ND, RDL=0.20		ug/g	

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
4389518	VIV	RPD	Acid Extractable Arsenic (As)	2016/02/22	ND, RDL=1.0		ug/g	
			Acid Extractable Barium (Ba)	2016/02/22	ND, RDL=0.50		ug/g	
			Acid Extractable Beryllium (Be)	2016/02/22	ND, RDL=0.20		ug/g	
			Acid Extractable Boron (B)	2016/02/22	ND, RDL=5.0		ug/g	
			Acid Extractable Cadmium (Cd)	2016/02/22	ND, RDL=0.10		ug/g	
			Acid Extractable Chromium (Cr)	2016/02/22	ND, RDL=1.0		ug/g	
			Acid Extractable Cobalt (Co)	2016/02/22	ND, RDL=0.10		ug/g	
			Acid Extractable Copper (Cu)	2016/02/22	ND, RDL=0.50		ug/g	
			Acid Extractable Lead (Pb)	2016/02/22	ND, RDL=1.0		ug/g	
			Acid Extractable Molybdenum (Mo)	2016/02/22	ND, RDL=0.50		ug/g	
			Acid Extractable Nickel (Ni)	2016/02/22	ND, RDL=0.50		ug/g	
			Acid Extractable Selenium (Se)	2016/02/22	ND, RDL=0.50		ug/g	
			Acid Extractable Silver (Ag)	2016/02/22	ND, RDL=0.20		ug/g	
			Acid Extractable Thallium (Tl)	2016/02/22	ND, RDL=0.050		ug/g	
			Acid Extractable Uranium (U)	2016/02/22	ND, RDL=0.050		ug/g	
			Acid Extractable Vanadium (V)	2016/02/22	ND, RDL=5.0		ug/g	
			Acid Extractable Zinc (Zn)	2016/02/22	ND, RDL=5.0		ug/g	
			Acid Extractable Mercury (Hg)	2016/02/22	ND, RDL=0.050		ug/g	
			Acid Extractable Antimony (Sb)	2016/02/22	NC		%	30
			Acid Extractable Arsenic (As)	2016/02/22	NC		%	30
			Acid Extractable Barium (Ba)	2016/02/22	0.77		%	30
			Acid Extractable Beryllium (Be)	2016/02/22	NC		%	30
			Acid Extractable Boron (B)	2016/02/22	NC		%	30
			Acid Extractable Cadmium (Cd)	2016/02/22	NC		%	30
			Acid Extractable Chromium (Cr)	2016/02/22	0.44		%	30
			Acid Extractable Cobalt (Co)	2016/02/22	2.1		%	30
			Acid Extractable Copper (Cu)	2016/02/22	1.1		%	30
			Acid Extractable Lead (Pb)	2016/02/22	0.74		%	30
			Acid Extractable Molybdenum (Mo)	2016/02/22	NC		%	30
			Acid Extractable Nickel (Ni)	2016/02/22	1.4		%	30
			Acid Extractable Selenium (Se)	2016/02/22	NC		%	30

Maxxam Job #: B634064
Report Date: 2016/02/22

Terrapex Environmental Ltd
Client Project #: CB644.02
Site Location: 121 Hume Street, Collingwood, ON
Your P.O. #: 4700001396
Sampler Initials: PA

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Acid Extractable Silver (Ag)	2016/02/22	NC		%	30
			Acid Extractable Thallium (Tl)	2016/02/22	NC		%	30
			Acid Extractable Uranium (U)	2016/02/22	5.8		%	30
			Acid Extractable Vanadium (V)	2016/02/22	NC		%	30
			Acid Extractable Zinc (Zn)	2016/02/22	3.7		%	30
4389530	NYS	Spiked Blank	Available (CaCl ₂) pH	2016/02/22		99	%	97 - 103
4389530	NYS	RPD	Available (CaCl ₂) pH	2016/02/22	0.29		%	N/A
4389614	APT	Matrix Spike	Hot Water Ext. Boron (B)	2016/02/22		99	%	75 - 125
4389614	APT	Spiked Blank	Hot Water Ext. Boron (B)	2016/02/22		99	%	75 - 125
4389614	APT	Method Blank	Hot Water Ext. Boron (B)	2016/02/22	ND, RDL=0.050		ug/g	
4389614	APT	RPD	Hot Water Ext. Boron (B)	2016/02/22	NC		%	40
N/A = Not Applicable Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement. Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference. QC Standard: A sample of known concentration prepared by an external agency under stringent conditions. Used as an independent check of method accuracy. Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy. Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination. Surrogate: A pure or isotopically labeled compound whose behavior mirrors the analytes of interest. Used to evaluate extraction efficiency. NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spiked amount was too small to permit a reliable recovery calculation (matrix spike concentration was less than 2x that of the native sample concentration). NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (one or both samples < 5x RDL). (1) Detection Limit was raised due to matrix interferences.								

Maxxam Job #: B634064
Report Date: 2016/02/22

Terrapex Environmental Ltd
Client Project #: CB644.02
Site Location: 121 Hume Street, Collingwood, ON
Your P.O. #: 4700001396
Sampler Initials: PA

VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by the following individual(s).

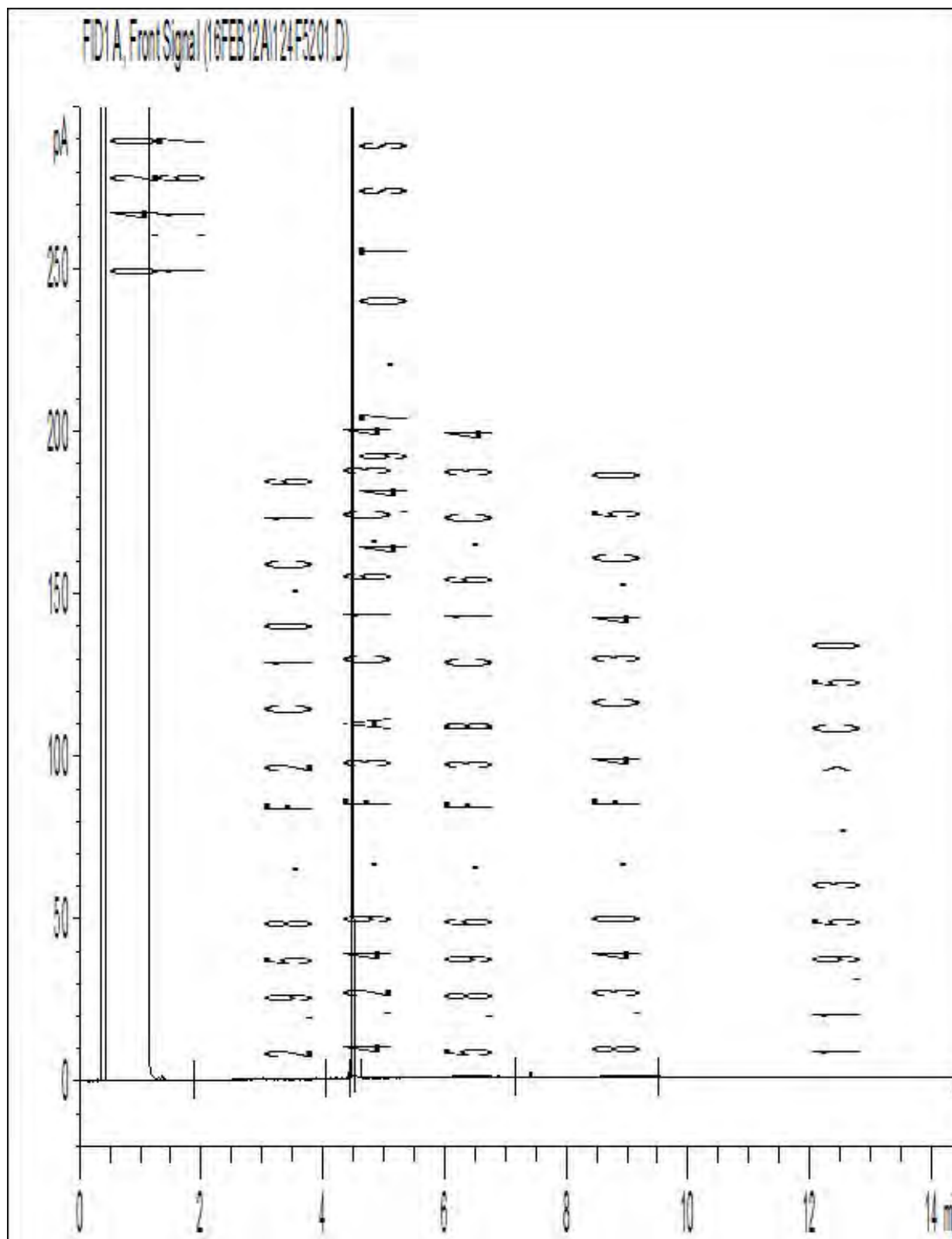
Cristina Carriere

Cristina Carriere, Scientific Services

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

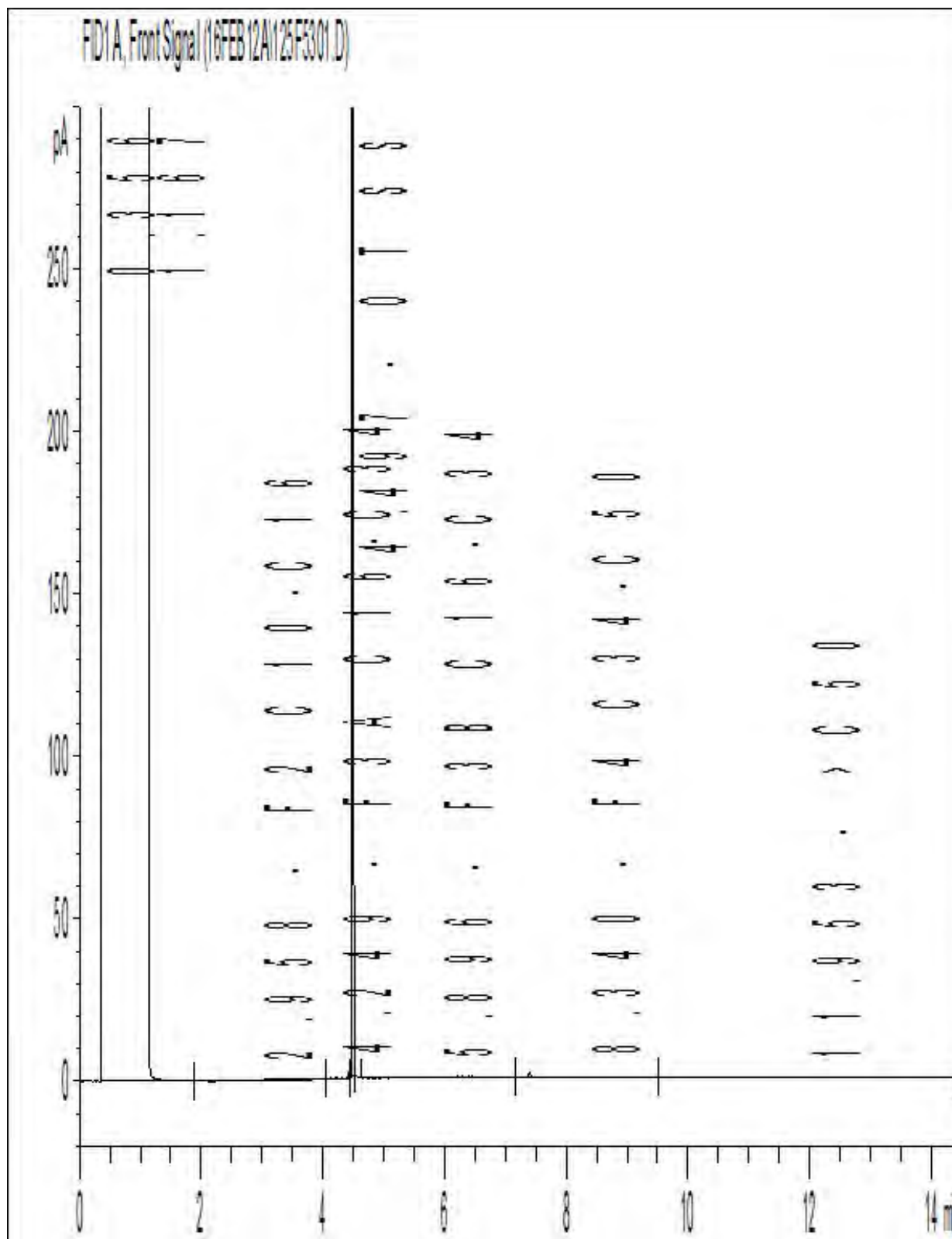
Maxxam Analytics International Corporation o/a Maxxam Analytics

Petroleum Hydrocarbons F2-F4 in Soil Chromatogram



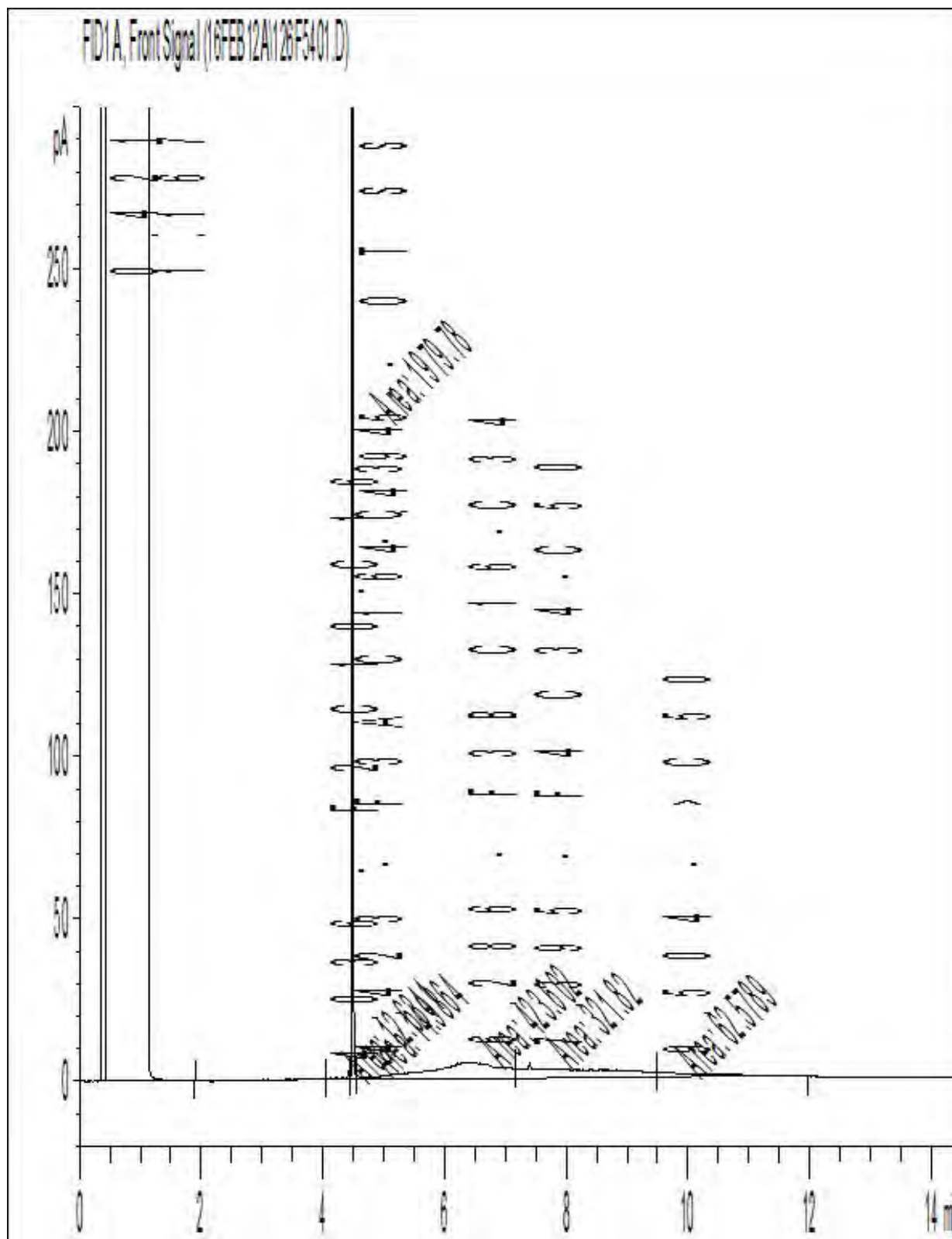
Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Petroleum Hydrocarbons F2-F4 in Soil Chromatogram



Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Petroleum Hydrocarbons F2-F4 in Soil Chromatogram



Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Attention: Jeff Stevenson

Terrapex Environmental Ltd
920 Brant Street
Unit 16
Burlington, ON
CANADA L7R 4J1

Your P.O. #: 4700001396
Your Project #: CB644.02
Site#: 60680
Site Location: 121 Hume Street, Collingwood, ON
Your C.O.C. #: 546624-05-01

Report Date: 2016/02/16
Report #: R3896302
Version: 1 - Final

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B630303

Received: 2016/02/12, 15:36

Sample Matrix: Soil
Samples Received: 3

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Reference
Petroleum Hydro. CCME F1 & BTEX in Soil (1)	3	N/A	2016/02/13	CAM SOP-00315	CCME PHC-CWS m
Petroleum Hydrocarbons F2-F4 in Soil (2)	3	2016/02/12	2016/02/13	CAM SOP-00316	CCME CWS m
Moisture	3	N/A	2016/02/12	CAM SOP-00445	Carter 2nd ed 51.2 m

Remarks:

Maxxam Analytics has performed all analytical testing herein in accordance with ISO 17025 and the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act. All methodologies comply with this document and are validated for use in the laboratory. The methods and techniques employed in this analysis conform to the performance criteria (detection limits, accuracy and precision) as outlined in the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act.

Maxxam Analytics is accredited for all specific parameters as required by Ontario Regulation 153/04. Maxxam Analytics is limited in liability to the actual cost of analysis unless otherwise agreed in writing. There is no other warranty expressed or implied. Samples will be retained at Maxxam Analytics for three weeks from receipt of data or as per contract.

Reference Method suffix "m" indicates test methods incorporate validated modifications from specific reference methods to improve performance.

* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.

- (1) No lab extraction date is given for F1BTEX & VOC samples that are field preserved with methanol. Extraction date is the date sampled unless otherwise stated.
(2) All CCME PHC results met required criteria unless otherwise stated in the report. The CWS PHC methods employed by Maxxam conform to all prescribed elements of the reference method and performance based elements have been validated. All modifications have been validated and proven equivalent following "Alberta Environment's Interpretation of the Reference Method for the Canada-Wide Standard for Petroleum Hydrocarbons in Soil Validation of Performance-Based Alternative Methods September 2003". Documentation is available upon request. Modifications from Reference Method for the Canada-wide Standard for Petroleum Hydrocarbons in Soil-Tier 1 Method: F2/F3/F4 data reported using validated cold solvent extraction instead of Soxhlet extraction.

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.
Marissa Oddi, Customer Service Representative
Email: moddi@maxxam.ca
Phone# (905) 817-5700

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

O.REG 153 PETROLEUM HYDROCARBONS (SOIL)

Maxxam ID		BVV600	BVV600	BVV601	BVV602		
Sampling Date		2016/02/12 10:00	2016/02/12 10:00	2016/02/12 10:00	2016/02/12 10:00		
COC Number		546624-05-01	546624-05-01	546624-05-01	546624-05-01		
	UNITS	SP2003	SP2003 Lab-Dup	SP3004	SP4002	RDL	QC Batch
Inorganics							
Moisture	%	12		13	7.7	1.0	4381160
BTEX & F1 Hydrocarbons							
Benzene	ug/g	ND	ND	ND	ND	0.020	4381495
Toluene	ug/g	ND	ND	ND	ND	0.020	4381495
Ethylbenzene	ug/g	ND	ND	ND	ND	0.020	4381495
o-Xylene	ug/g	ND	ND	ND	ND	0.020	4381495
p+m-Xylene	ug/g	ND	ND	ND	ND	0.040	4381495
Total Xylenes	ug/g	ND	ND	ND	ND	0.040	4381495
F1 (C6-C10)	ug/g	ND	ND	ND	ND	10	4381495
F1 (C6-C10) - BTEX	ug/g	ND	ND	ND	ND	10	4381495
F2-F4 Hydrocarbons							
F2 (C10-C16 Hydrocarbons)	ug/g	ND		ND	ND	10	4381065
F3 (C16-C34 Hydrocarbons)	ug/g	ND		ND	91	50	4381065
F4 (C34-C50 Hydrocarbons)	ug/g	ND		ND	67	50	4381065
Reached Baseline at C50	ug/g	Yes		Yes	Yes		4381065
Surrogate Recovery (%)							
1,4-Difluorobenzene	%	97	99	100	96		4381495
4-Bromofluorobenzene	%	100	101	100	96		4381495
D10-Ethylbenzene	%	82	88	84	85		4381495
D4-1,2-Dichloroethane	%	101	102	104	105		4381495
o-Terphenyl	%	95		94	94		4381065
RDL = Reportable Detection Limit QC Batch = Quality Control Batch Lab-Dup = Laboratory Initiated Duplicate ND = Not detected							

Maxxam Job #: B630303
Report Date: 2016/02/16

Terrapex Environmental Ltd
Client Project #: CB644.02
Site Location: 121 Hume Street, Collingwood, ON
Your P.O. #: 4700001396
Sampler Initials: PA

TEST SUMMARY

Maxxam ID: BVV600
Sample ID: SP2003
Matrix: Soil

Collected: 2016/02/12
Shipped:
Received: 2016/02/12

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	4381495	N/A	2016/02/13	Abdi Mohamud
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	4381065	2016/02/12	2016/02/13	Barbara Wowk
Moisture	BAL	4381160	N/A	2016/02/12	Nimarta Singh

Maxxam ID: BVV600 Dup
Sample ID: SP2003
Matrix: Soil

Collected: 2016/02/12
Shipped:
Received: 2016/02/12

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	4381495	N/A	2016/02/13	Abdi Mohamud

Maxxam ID: BVV601
Sample ID: SP3004
Matrix: Soil

Collected: 2016/02/12
Shipped:
Received: 2016/02/12

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	4381495	N/A	2016/02/13	Abdi Mohamud
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	4381065	2016/02/12	2016/02/13	Barbara Wowk
Moisture	BAL	4381160	N/A	2016/02/12	Nimarta Singh

Maxxam ID: BVV602
Sample ID: SP4002
Matrix: Soil

Collected: 2016/02/12
Shipped:
Received: 2016/02/12

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	4381495	N/A	2016/02/13	Abdi Mohamud
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	4381065	2016/02/12	2016/02/13	Barbara Wowk
Moisture	BAL	4381160	N/A	2016/02/12	Nimarta Singh

Maxxam Job #: B630303
Report Date: 2016/02/16

Terrapex Environmental Ltd
Client Project #: CB644.02
Site Location: 121 Hume Street, Collingwood, ON
Your P.O. #: 4700001396
Sampler Initials: PA

GENERAL COMMENTS

Each temperature is the average of up to three cooler temperatures taken at receipt

Package 1	9.7°C

Results relate only to the items tested.

Maxxam Job #: B630303
Report Date: 2016/02/16

Terrapex Environmental Ltd
Client Project #: CB644.02
Site Location: 121 Hume Street, Collingwood, ON
Your P.O. #: 4700001396
Sampler Initials: PA

QUALITY ASSURANCE REPORT

QA/QC	Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
4381065	BWW	Matrix Spike		o-Terphenyl	2016/02/12		94	%	60 - 130
				F2 (C10-C16 Hydrocarbons)	2016/02/12		83	%	50 - 130
				F3 (C16-C34 Hydrocarbons)	2016/02/12		88	%	50 - 130
				F4 (C34-C50 Hydrocarbons)	2016/02/12		91	%	50 - 130
4381065	BWW	Spiked Blank		o-Terphenyl	2016/02/12		91	%	60 - 130
				F2 (C10-C16 Hydrocarbons)	2016/02/12		82	%	80 - 120
				F3 (C16-C34 Hydrocarbons)	2016/02/12		89	%	80 - 120
				F4 (C34-C50 Hydrocarbons)	2016/02/12		88	%	80 - 120
4381065	BWW	Method Blank		o-Terphenyl	2016/02/12		98	%	60 - 130
				F2 (C10-C16 Hydrocarbons)	2016/02/12	ND, RDL=10		ug/g	
				F3 (C16-C34 Hydrocarbons)	2016/02/12	ND, RDL=50		ug/g	
				F4 (C34-C50 Hydrocarbons)	2016/02/12	ND, RDL=50		ug/g	
4381065	BWW	RPD		F2 (C10-C16 Hydrocarbons)	2016/02/13	NC		%	30
				F3 (C16-C34 Hydrocarbons)	2016/02/13	NC		%	30
				F4 (C34-C50 Hydrocarbons)	2016/02/13	NC		%	30
4381160	NS3	RPD		Moisture	2016/02/12	2.5		%	20
4381495	ABD	Matrix Spike [BVV600-02]		1,4-Difluorobenzene	2016/02/13		97	%	60 - 140
				4-Bromofluorobenzene	2016/02/13		99	%	60 - 140
				D10-Ethylbenzene	2016/02/13		78	%	60 - 140
				D4-1,2-Dichloroethane	2016/02/13		100	%	60 - 140
				Benzene	2016/02/13		79	%	60 - 140
				Toluene	2016/02/13		80	%	60 - 140
				Ethylbenzene	2016/02/13		87	%	60 - 140
				o-Xylene	2016/02/13		90	%	60 - 140
				p+m-Xylene	2016/02/13		81	%	60 - 140
				F1 (C6-C10)	2016/02/13		99	%	60 - 140
				1,4-Difluorobenzene	2016/02/13		98	%	60 - 140
				4-Bromofluorobenzene	2016/02/13		100	%	60 - 140
4381495	ABD	Spiked Blank		D10-Ethylbenzene	2016/02/13		83	%	60 - 140
				D4-1,2-Dichloroethane	2016/02/13		102	%	60 - 140
				Benzene	2016/02/13		89	%	60 - 140
				Toluene	2016/02/13		88	%	60 - 140
				Ethylbenzene	2016/02/13		97	%	60 - 140
				o-Xylene	2016/02/13		104	%	60 - 140
				p+m-Xylene	2016/02/13		92	%	60 - 140
				F1 (C6-C10)	2016/02/13		85	%	80 - 120
				1,4-Difluorobenzene	2016/02/13		100	%	60 - 140
				4-Bromofluorobenzene	2016/02/13		102	%	60 - 140
				D10-Ethylbenzene	2016/02/13		84	%	60 - 140
				D4-1,2-Dichloroethane	2016/02/13		103	%	60 - 140
4381495	ABD	Method Blank		Benzene	2016/02/13	ND, RDL=0.020		ug/g	
				Toluene	2016/02/13	ND, RDL=0.020		ug/g	
				Ethylbenzene	2016/02/13	ND, RDL=0.020		ug/g	

Maxxam Job #: B630303
Report Date: 2016/02/16

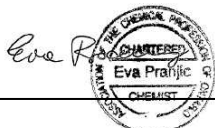
Terrapex Environmental Ltd
Client Project #: CB644.02
Site Location: 121 Hume Street, Collingwood, ON
Your P.O. #: 4700001396
Sampler Initials: PA

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
4381495	ABD	RPD [BVV600-02]	o-Xylene	2016/02/13	ND, RDL=0.020		ug/g	
			p+m-Xylene	2016/02/13	ND, RDL=0.040		ug/g	
			Total Xylenes	2016/02/13	ND, RDL=0.040		ug/g	
			F1 (C6-C10)	2016/02/13	ND, RDL=10		ug/g	
			F1 (C6-C10) - BTEX	2016/02/13	ND, RDL=10		ug/g	
			Benzene	2016/02/13	NC		%	50
			Toluene	2016/02/13	NC		%	50
			Ethylbenzene	2016/02/13	NC		%	50
			o-Xylene	2016/02/13	NC		%	50
			p+m-Xylene	2016/02/13	NC		%	50
			Total Xylenes	2016/02/13	NC		%	50
			F1 (C6-C10)	2016/02/13	NC		%	30
			F1 (C6-C10) - BTEX	2016/02/13	NC		%	30
Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.								
Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.								
Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.								
Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.								
Surrogate: A pure or isotopically labeled compound whose behavior mirrors the analytes of interest. Used to evaluate extraction efficiency.								
NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (one or both samples < 5x RDL).								

VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by the following individual(s).



Ewa Pranjić, M.Sc., C.Chem, Scientific Specialist

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RUSH

Station via Maxxam Analytics
Ontario Canada L5N 2L8 Tel: (905) 917-3700 Toll-Free (800) 563-6206 Fax: (905) 917-3777 www.maxxam.ca

CHAIN OF CUSTODY RECORD SUNCOR DOWNSTREAM

Page 1 of 1

Company Name: #14539 Suncor Energy Products Partnership
Contact Name: Ken Tedder
Address: 3275 Rebecca St.
Oakville ON L6L 6N5
Phone: (905) 459-3754
Email: ktedder@suncor.com

Company Name: #6557 Terrapex Environmental Ltd
Contact Name: Jeff Stevenson
Address: 920 Brant Street Unit 16
Burlington ON L7R 4J1
Phone: (905) 632-5939 x 226
Email: j.stevenson@terrapex.com

Quotation #: B43750
Task Order #: CB644 02
Project #: 121 Hume Street, Collingwood, ON
Outlet #: 60680
Sampled By: PA

Laboratory Use Only:

Maxxam Job #: Bottle Order #:
COC #: Project Manager:
C804662A-04-01 Marissa Oddi

MOE REGULATED DRINKING WATER OR WATER INTENDED FOR HUMAN CONSUMPTION MUST BE SUBMITTED ON THE MAXXAM DRINKING WATER CHAIN OF CUSTODY

Regulation 153 (2011)

Table 1 ☐ Res/Pan ☐ Medium/Fine
Table 2 ☒ Ind/Coar ☒ Coarse
Table 3 ☐ Agri/Other
Table: ☒ For RSC

Other Regulations

CCME ☐ Sanitary Sewer Bylaw
Reg 556 ☐ Storm Sewer Bylaw
MISA ☐ Municipality
PWQO ☐
Other ☐

Activity

Assessment (circle one)
A1, A2, AR, AV
Remediations (circle one)
RE, RX, RI, RA
Contaminant Management (circle one)
M, MW, MV

Include Criteria on Certificate of Analysis (Y/N)? N

Field Filtered (please circle)

Metals / Hg / Cr VI

REX, PML (5-74)

ANALYSIS REQUESTED (PLEASE BE SPECIFIC)

Regular (Standard) TAT:

(will be applied if Rush TAT is not specified)

Standard TAT = 5-7 Working days for most tests.

Please note: Standard TAT for certain tests such as BOD and Dissolved Oxygen are > 5 days - contact your Project Manager for details.

Rush TAT

2 Day ☒

1 Day ☐

Same Day ☐

Date Received:

Time Required:

Rush Confirmation Number:

AD20160211-02

of Bottles:

Comments:

3

12-Feb-16 09:30

Marissa Oddi

B629703

AKP

ENV-797

* RELINQUISHED BY: (Signature/Print)

Philip Arlos

Date: (YY/MM/DD)

16/02/16

Time

11:30

RECEIVED BY: (Signature/Print)

Adrian Bhatia

Date: (YY/MM/DD)

16/02/16

Time

09:30

jars used and not submitted

0

Laboratory Use Only:

Time Sensitive

Temperature (°C) on Receipt

0/0

Custody Seal

Present

Intact

Yes

No

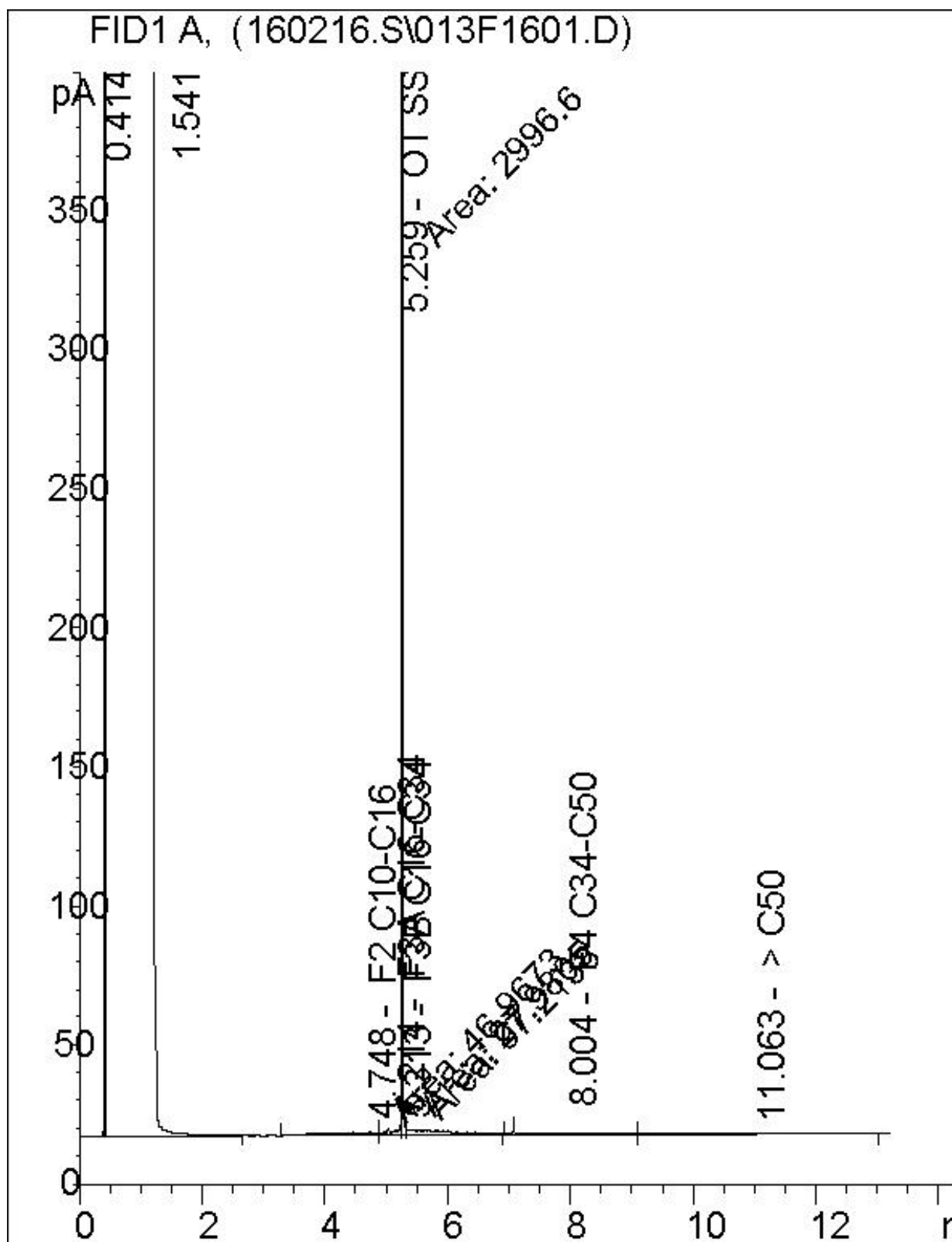
* IT IS THE RESPONSIBILITY OF THE RELINQUISHER TO ENSURE THE ACCURACY OF THE CHAIN OF CUSTODY RECORD. AN INCOMPLETE CHAIN OF CUSTODY MAY RESULT IN ANALYTICAL TAT DELAYS.

SAMPLES MUST BE KEPT COOL (< 10°C) FROM TIME OF SAMPLING UNTIL DELIVERY TO MAXXAM

White: Maxxam Yellow: Client

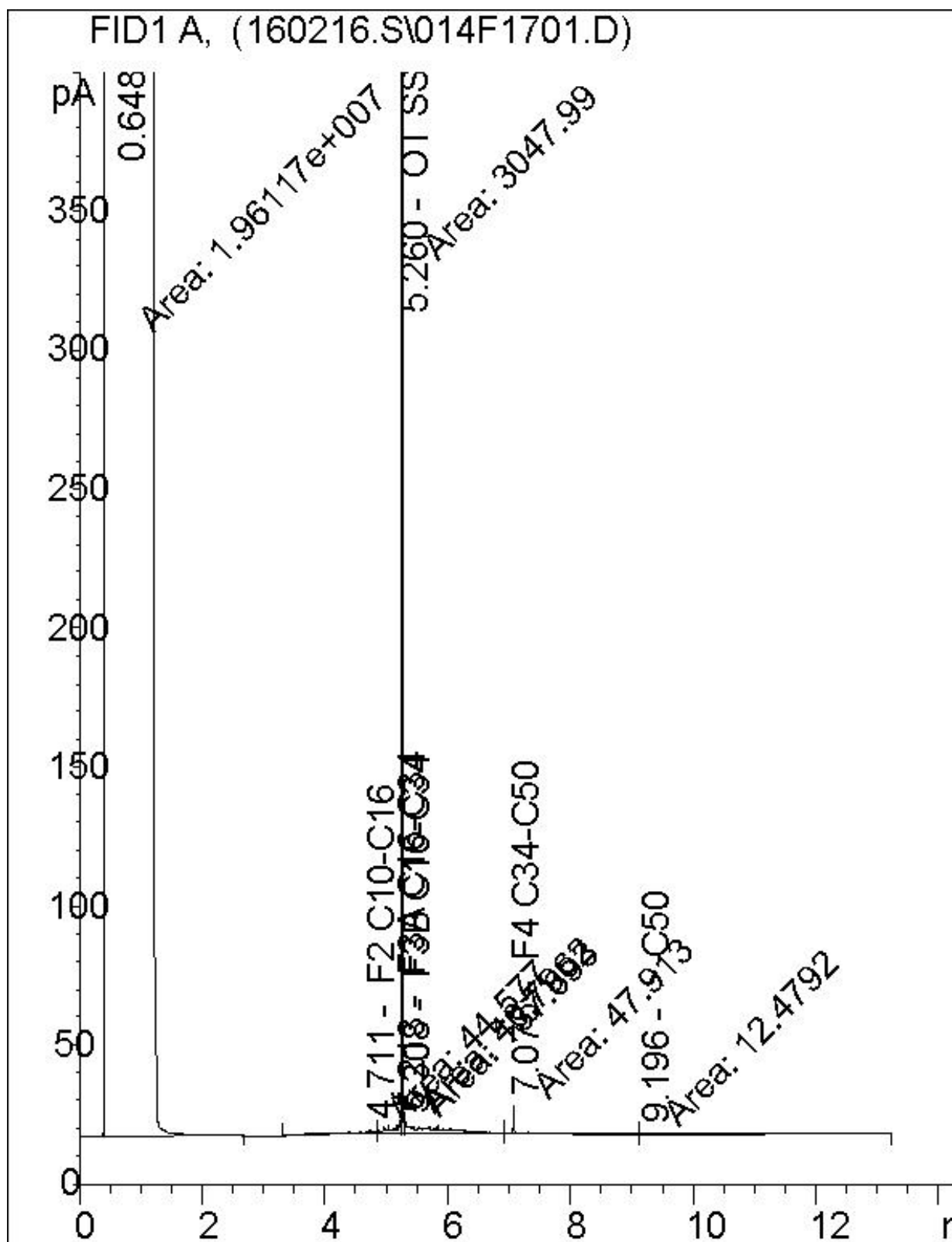
Maxxam Analytics International Corporation d/b/a Maxxam Analytics

Petroleum Hydrocarbons F2-F4 in Soil Chromatogram



Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Petroleum Hydrocarbons F2-F4 in Soil Chromatogram



Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Attention: Jeff Stevenson

Terrapex Environmental Ltd
920 Brant Street
Unit 16
Burlington, ON
CANADA L7R 4J1

Your P.O. #: 4700001396
Your Project #: CB644.02
Site#: 60680
Site Location: 121 Hume Street, Collingwood, ON
Your C.O.C. #: 546624-04-01

Report Date: 2016/02/17
Report #: R3897952
Version: 1 - Final

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B629703

Received: 2016/02/12, 09:30

Sample Matrix: Soil
Samples Received: 1

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Reference
Petroleum Hydro. CCME F1 & BTEX in Soil (1)	1	N/A	2016/02/16	CAM SOP-00315	CCME PHC-CWS m
Petroleum Hydrocarbons F2-F4 in Soil (2)	1	2016/02/13	2016/02/16	CAM SOP-00316	CCME CWS m
Moisture	1	N/A	2016/02/13	CAM SOP-00445	Carter 2nd ed 51.2 m

Remarks:

Maxxam Analytics has performed all analytical testing herein in accordance with ISO 17025 and the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act. All methodologies comply with this document and are validated for use in the laboratory. The methods and techniques employed in this analysis conform to the performance criteria (detection limits, accuracy and precision) as outlined in the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act.

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Reference Method suffix "m" indicates test methods incorporate validated modifications from specific reference methods to improve performance.

* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.

- (1) No lab extraction date is given for F1BTEX & VOC samples that are field preserved with methanol. Extraction date is the date sampled unless otherwise stated.
(2) All CCME PHC results met required criteria unless otherwise stated in the report. The CWS PHC methods employed by Maxxam conform to all prescribed elements of the reference method and performance based elements have been validated. All modifications have been validated and proven equivalent following "Alberta Environment's Interpretation of the Reference Method for the Canada-Wide Standard for Petroleum Hydrocarbons in Soil Validation of Performance-Based Alternative Methods September 2003". Documentation is available upon request. Modifications from Reference Method for the Canada-wide Standard for Petroleum Hydrocarbons in Soil-Tier 1 Method: F2/F3/F4 data reported using validated cold solvent extraction instead of Soxhlet extraction.

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.
Marissa Oddi, Customer Service Representative
Email: moddi@maxxam.ca
Phone# (905) 817-5700

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O.REG 153 PETROLEUM HYDROCARBONS (SOIL)

Maxxam ID		BVS568	BVS568		
Sampling Date		2016/02/08 11:30	2016/02/08 11:30		
COC Number		546624-04-01	546624-04-01		
	UNITS	CS159	CS159 Lab-Dup	RDL	QC Batch
Inorganics					
Moisture	%	22		1.0	4381553
BTEX & F1 Hydrocarbons					
Benzene	ug/g	ND		0.020	4382588
Toluene	ug/g	ND		0.020	4382588
Ethylbenzene	ug/g	ND		0.020	4382588
o-Xylene	ug/g	ND		0.020	4382588
p+m-Xylene	ug/g	ND		0.040	4382588
Total Xylenes	ug/g	ND		0.040	4382588
F1 (C6-C10)	ug/g	ND		10	4382588
F1 (C6-C10) - BTEX	ug/g	ND		10	4382588
F2-F4 Hydrocarbons					
F2 (C10-C16 Hydrocarbons)	ug/g	ND	ND	10	4381454
F3 (C16-C34 Hydrocarbons)	ug/g	ND	ND	50	4381454
F4 (C34-C50 Hydrocarbons)	ug/g	ND	ND	50	4381454
Reached Baseline at C50	ug/g	Yes	Yes		4381454
Surrogate Recovery (%)					
1,4-Difluorobenzene	%	98			4382588
4-Bromofluorobenzene	%	102			4382588
D10-Ethylbenzene	%	95			4382588
D4-1,2-Dichloroethane	%	103			4382588
o-Terphenyl	%	111	113		4381454
RDL = Reportable Detection Limit QC Batch = Quality Control Batch Lab-Dup = Laboratory Initiated Duplicate ND = Not detected					

Maxxam Job #: B629703
Report Date: 2016/02/17

Terrapex Environmental Ltd
Client Project #: CB644.02
Site Location: 121 Hume Street, Collingwood, ON
Your P.O. #: 4700001396
Sampler Initials: PA

TEST SUMMARY

Maxxam ID: BVS568
Sample ID: CS159
Matrix: Soil

Collected: 2016/02/08
Shipped:
Received: 2016/02/12

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	4382588	N/A	2016/02/16	Joe Paino
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	4381454	2016/02/13	2016/02/16	Margaret Kulczyk-Stanko
Moisture	BAL	4381553	N/A	2016/02/13	Shivani Desai

Maxxam ID: BVS568 Dup
Sample ID: CS159
Matrix: Soil

Collected: 2016/02/08
Shipped:
Received: 2016/02/12

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	4381454	2016/02/13	2016/02/16	Margaret Kulczyk-Stanko

Maxxam Job #: B629703
Report Date: 2016/02/17

Terrapex Environmental Ltd
Client Project #: CB644.02
Site Location: 121 Hume Street, Collingwood, ON
Your P.O. #: 4700001396
Sampler Initials: PA

GENERAL COMMENTS

Each temperature is the average of up to three cooler temperatures taken at receipt

Package 1	0.0°C

Results relate only to the items tested.

Maxxam Job #: B629703
Report Date: 2016/02/17

Terrapex Environmental Ltd
Client Project #: CB644.02
Site Location: 121 Hume Street, Collingwood, ON
Your P.O. #: 4700001396
Sampler Initials: PA

QUALITY ASSURANCE REPORT

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
4381454	MKS	Matrix Spike [BVS568-01]	o-Terphenyl	2016/02/16		109	%	60 - 130
			F2 (C10-C16 Hydrocarbons)	2016/02/16		106	%	50 - 130
			F3 (C16-C34 Hydrocarbons)	2016/02/16		104	%	50 - 130
			F4 (C34-C50 Hydrocarbons)	2016/02/16		108	%	50 - 130
4381454	MKS	Spiked Blank	o-Terphenyl	2016/02/16		111	%	60 - 130
			F2 (C10-C16 Hydrocarbons)	2016/02/16		107	%	80 - 120
			F3 (C16-C34 Hydrocarbons)	2016/02/16		106	%	80 - 120
			F4 (C34-C50 Hydrocarbons)	2016/02/16		108	%	80 - 120
4381454	MKS	Method Blank	o-Terphenyl	2016/02/16		113	%	60 - 130
			F2 (C10-C16 Hydrocarbons)	2016/02/16	ND, RDL=10		ug/g	
			F3 (C16-C34 Hydrocarbons)	2016/02/16	ND, RDL=50		ug/g	
			F4 (C34-C50 Hydrocarbons)	2016/02/16	ND, RDL=50		ug/g	
4381454	MKS	RPD [BVS568-01]	F2 (C10-C16 Hydrocarbons)	2016/02/16	NC		%	30
			F3 (C16-C34 Hydrocarbons)	2016/02/16	NC		%	30
			F4 (C34-C50 Hydrocarbons)	2016/02/16	NC		%	30
4381553	VGS	RPD	Moisture	2016/02/13	1.6		%	20
4382588	JP5	Matrix Spike	1,4-Difluorobenzene	2016/02/16		101	%	60 - 140
			4-Bromofluorobenzene	2016/02/16		106	%	60 - 140
			D10-Ethylbenzene	2016/02/16		93	%	60 - 140
			D4-1,2-Dichloroethane	2016/02/16		104	%	60 - 140
			Benzene	2016/02/16		95	%	60 - 140
			Toluene	2016/02/16		NC	%	60 - 140
			Ethylbenzene	2016/02/16		108	%	60 - 140
			o-Xylene	2016/02/16		104	%	60 - 140
			p+m-Xylene	2016/02/16		97	%	60 - 140
			F1 (C6-C10)	2016/02/16		NC	%	60 - 140
4382588	JP5	Spiked Blank	1,4-Difluorobenzene	2016/02/16		99	%	60 - 140
			4-Bromofluorobenzene	2016/02/16		103	%	60 - 140
			D10-Ethylbenzene	2016/02/16		96	%	60 - 140
			D4-1,2-Dichloroethane	2016/02/16		99	%	60 - 140
			Benzene	2016/02/16		102	%	60 - 140
			Toluene	2016/02/16		104	%	60 - 140
			Ethylbenzene	2016/02/16		112	%	60 - 140
			o-Xylene	2016/02/16		113	%	60 - 140
			p+m-Xylene	2016/02/16		103	%	60 - 140
			F1 (C6-C10)	2016/02/16		90	%	80 - 120
4382588	JP5	Method Blank	1,4-Difluorobenzene	2016/02/16		100	%	60 - 140
			4-Bromofluorobenzene	2016/02/16		100	%	60 - 140
			D10-Ethylbenzene	2016/02/16		92	%	60 - 140
			D4-1,2-Dichloroethane	2016/02/16		99	%	60 - 140
			Benzene	2016/02/16	ND, RDL=0.020		ug/g	
			Toluene	2016/02/16	ND, RDL=0.020		ug/g	
			Ethylbenzene	2016/02/16	ND, RDL=0.020		ug/g	

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
4382588	JP5	RPD	o-Xylene	2016/02/16	ND, RDL=0.020		ug/g	
			p+m-Xylene	2016/02/16	ND, RDL=0.040		ug/g	
			Total Xylenes	2016/02/16	ND, RDL=0.040		ug/g	
			F1 (C6-C10)	2016/02/16	ND, RDL=10		ug/g	
			F1 (C6-C10) - BTEX	2016/02/16	ND, RDL=10		ug/g	
			Benzene	2016/02/17	NC		%	50
			Toluene	2016/02/17	0.19		%	50
			Ethylbenzene	2016/02/17	NC		%	50
			o-Xylene	2016/02/17	NC		%	50
			p+m-Xylene	2016/02/17	NC		%	50
			Total Xylenes	2016/02/17	NC		%	50
			F1 (C6-C10)	2016/02/17	NC		%	30
			F1 (C6-C10) - BTEX	2016/02/17	NC		%	30

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.

Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.

Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.

Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.

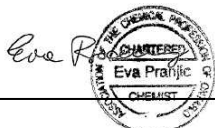
Surrogate: A pure or isotopically labeled compound whose behavior mirrors the analytes of interest. Used to evaluate extraction efficiency.

NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spiked amount was too small to permit a reliable recovery calculation (matrix spike concentration was less than 2x that of the native sample concentration).

NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (one or both samples < 5x RDL).

VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by the following individual(s).



Ewa Pranjić, M.Sc., C.Chem, Scientific Specialist

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RUSH

CHAIN OF CUSTODY RECORD SUNCOR DOWNSTREAM

Page 1 of 1

INVOICE INFORMATION:		REPORT INFORMATION (if differs from invoice):		PROJECT INFORMATION:		Laboratory Use Only:	
Company Name:	#14539 Suncor Energy Products Partnership	Company Name:	#6557 Terrapex Environmental Ltd	Quotation #:	B43750	Maxxam Job #:	Bottle Order #:
Contact Name:	Ken Tedder	Contact Name:	Jeff Stevenson	Task Order #:			
Address:	3275 Rebecca St Oakville ON L6L 6N5	Address:	920 Brant Street Unit 16 Burlington ON L7R 4J1	Project #:	CB644.02		
Phone:	(905) 469-3754	Phone:	(905) 632-5939 x 226	Site Location:	121 Hume Street, Collingwood, ON	COC #:	Project Manager:
Email:	ktedder@suncor.com	Email:	j.stevenson@terrapex.com	Outlet #:	60680		
				Sampled By:	P4		Marissa Oddi

MOE REGULATED DRINKING WATER OR WATER INTENDED FOR HUMAN CONSUMPTION MUST BE SUBMITTED ON THE MAXXAM DRINKING WATER CHAIN OF CUSTODY			ANALYSIS REQUESTED (PLEASE BE SPECIFIC)										Turnaround Time (TAT) Required:					
Regulation 153 (2011)			Other Regulations			Activity			Please provide advance notice for rush projects									
☐ Table 1	☐ Res/Park	☐ Medium/Fine	☐ CCME	☐ Sanitary Sewer Bylaw	Field Filled (please circle): Metals / Hg / Cr / VI BTEX, PAHs, CF, F ₄	Regular (Standard) TAT: (will be applied if Rush TAT is not specified). Standard TAT = 5-7 Working days for most tests. Please note: Standard TAT for certain tests such as BOD and Dioxins/Furans are > 5 days - contact your Project Manager for details.												
☒ Table 2	☒ Ind/Comm	☐ Coarse	☐ Reg 558	☐ Storm Sewer Bylaw		Rush TAT 2 Day ☒ 1 DAY ☐ SameDay ☐												
☐ Table 3	☐ Agri/Other		☐ MISA	☐ PWQO		Date Required: _____ Time Required: _____												
☐ Table	☒ For RSC		☐ Other	☐ Other		Rush Confirmation Number: <u>MOD 20160205-02</u> (call lab for #)												
Include Criteria on Certificate of Analysis (Y/N)? <u>N</u>																		
Sample Barcode Label	Sample (Location) Identification	Date Sampled	Time Sampled	Matrix														
1	SP1003	Feb 5-16	11:00	Soil														
2	SP1007	Feb 5-16	11:00	Soil														
3																		
4																		
5																		
6																		
7																		
8																		
9																		
10																		

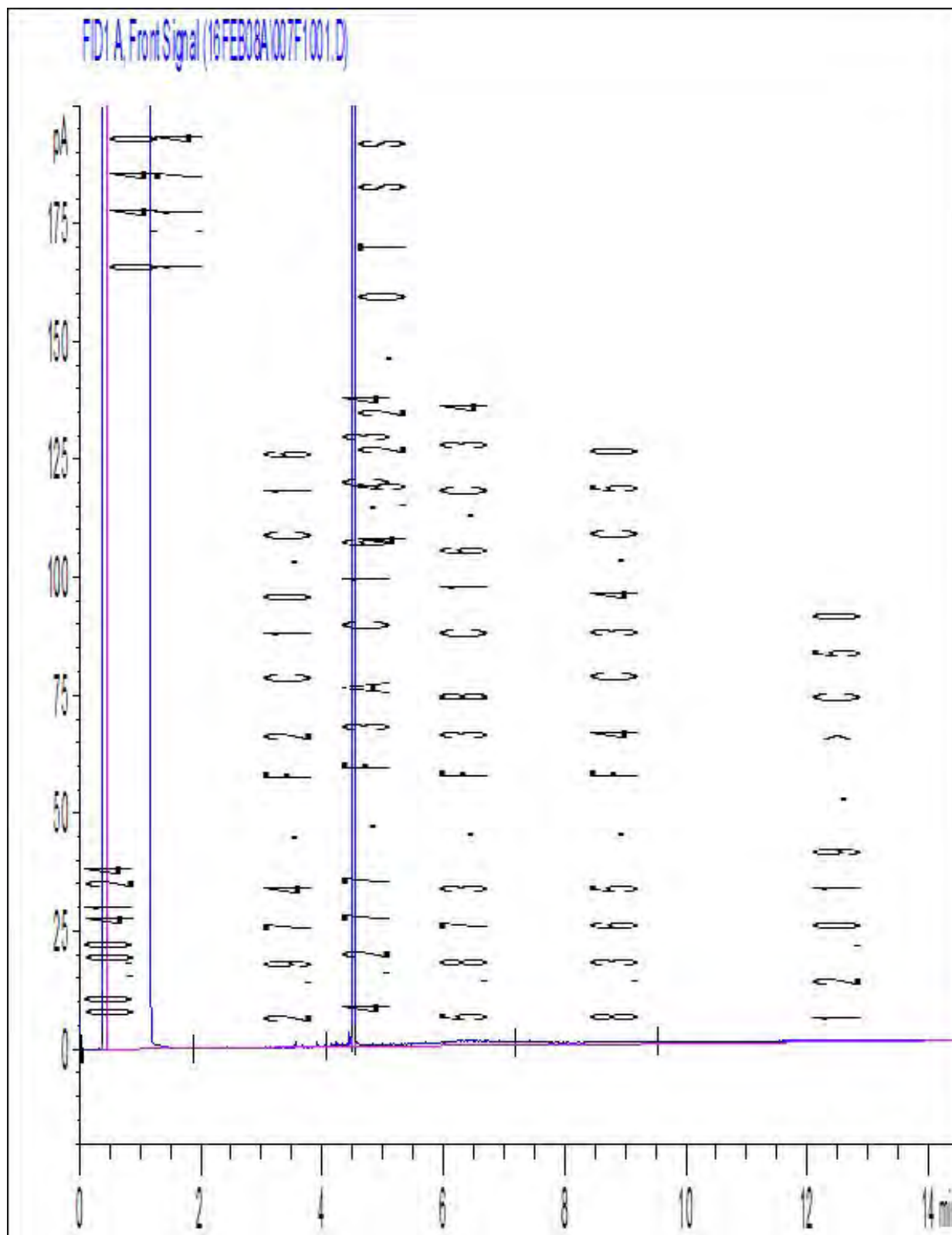
RELINQUISHED BY: (Signature/Print)		Date: (YY/MM/DD)	Time	RECEIVED BY: (Signature/Print)		Date: (YY/MM/DD)	Time	# Jars used and not submitted	Laboratory Use Only				
Philip Arlos		16/02/05	12:30	RECEIVED BY: CHADIAN		2016/02/05	12:37	0	Time Sensitive	Temperature (°C) on Receipt	Custody Seal	Yes	No
										12/13/12	NO	✓	
										12/13/12	NO	✓	

IT IS THE RESPONSIBILITY OF THE RELINQUISHER TO ENSURE THE ACCURACY OF THE CHAIN OF CUSTODY RECORD. AN INCOMPLETE CHAIN OF CUSTODY MAY RESULT IN ANALYTICAL TAT DELAYS.

SAMPLES MUST BE KEPT COOL (< 10° C) FROM TIME OF SAMPLING UNTIL DELIVERY TO MAXXAM

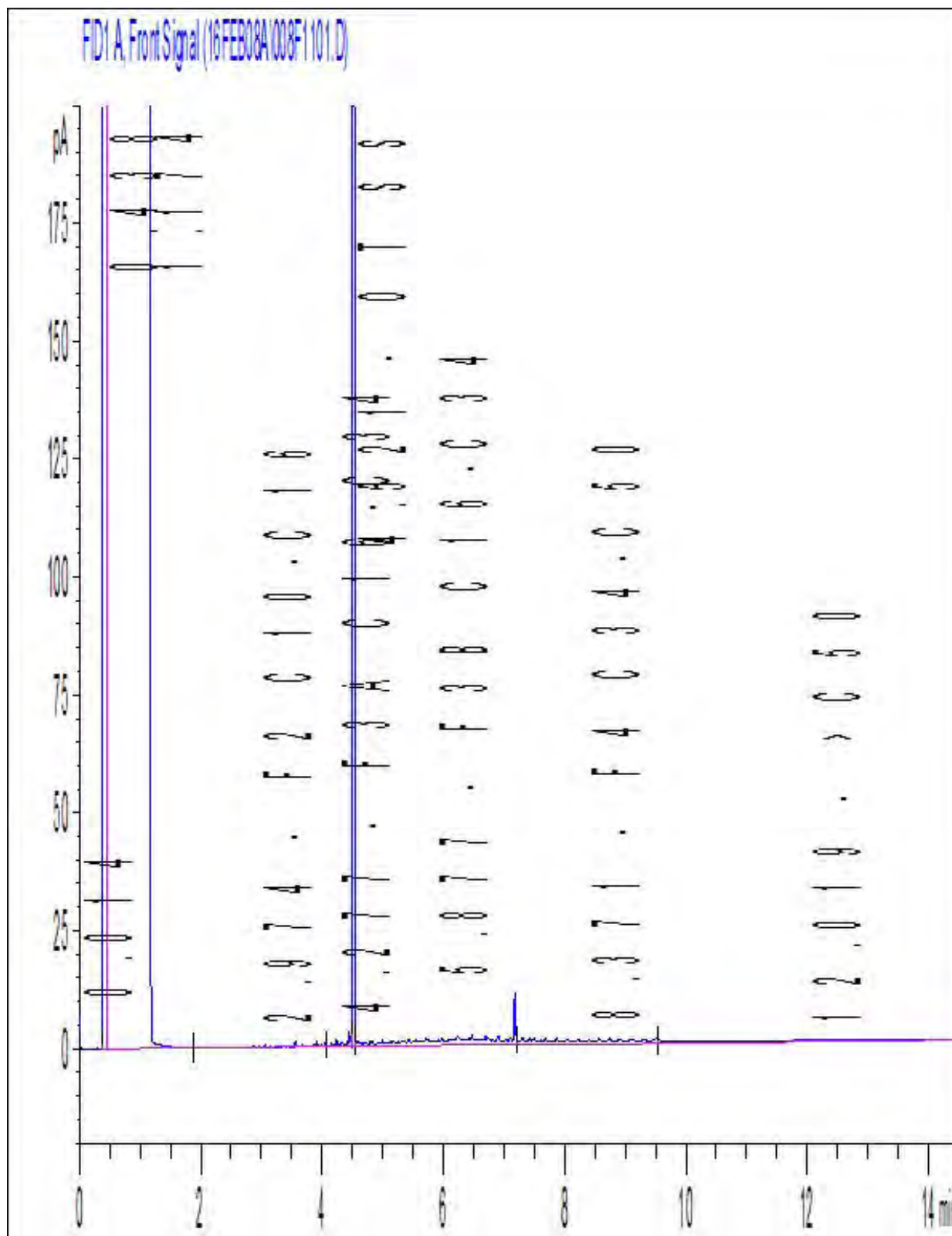
White: Maxxam Yellow: Client

Petroleum Hydrocarbons F2-F4 in Soil Chromatogram



Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Petroleum Hydrocarbons F2-F4 in Soil Chromatogram



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Attention: Jeff Stevenson

Terrapex Environmental Ltd
920 Brant Street
Unit 16
Burlington, ON
CANADA L7R 4J1

Your P.O. #: 4700001396

Your Project #: CB644.02

Site#: 60680

Site Location: 121 Hume Street, Collingwood, ON

Your C.O.C. #: 546624-03-01

Report Date: 2016/02/09

Report #: R3889616

Version: 1 - Final

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B624773

Received: 2016/02/05, 12:37

Sample Matrix: Soil
Samples Received: 2

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Reference
Petroleum Hydro. CCME F1 & BTEX in Soil (1)	2	N/A	2016/02/08	CAM SOP-00315	CCME PHC-CWS m
Petroleum Hydrocarbons F2-F4 in Soil (2)	2	2016/02/08	2016/02/09	CAM SOP-00316	CCME CWS m
Moisture	2	N/A	2016/02/06	CAM SOP-00445	Carter 2nd ed 51.2 m

Remarks:

Maxxam Analytics has performed all analytical testing herein in accordance with ISO 17025 and the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act. All methodologies comply with this document and are validated for use in the laboratory. The methods and techniques employed in this analysis conform to the performance criteria (detection limits, accuracy and precision) as outlined in the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act.

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Reference Method suffix "m" indicates test methods incorporate validated modifications from specific reference methods to improve performance.

* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.

(1) No lab extraction date is given for F1BTEX & VOC samples that are field preserved with methanol. Extraction date is the date sampled unless otherwise stated.

(2) All CCME PHC results met required criteria unless otherwise stated in the report. The CWS PHC methods employed by Maxxam conform to all prescribed elements of the reference method and performance based elements have been validated. All modifications have been validated and proven equivalent following "Alberta Environment's Interpretation of the Reference Method for the Canada-Wide Standard for Petroleum Hydrocarbons in Soil Validation of Performance-Based Alternative Methods September 2003". Documentation is available upon request. Modifications from Reference Method for the Canada-wide Standard for Petroleum Hydrocarbons in Soil-Tier 1 Method: F2/F3/F4 data reported using validated cold solvent extraction instead of Soxhlet extraction.

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.

Marissa Oddi, Customer Service Representative

Email: moddi@maxxam.ca

Phone# (905) 817-5700

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O.REG 153 PETROLEUM HYDROCARBONS (SOIL)

Maxxam ID		BUO805	BUO806	BUO806		
Sampling Date		2016/02/05 11:00	2016/02/05 11:00	2016/02/05 11:00		
COC Number		546624-03-01	546624-03-01	546624-03-01		
	UNITS	SP1003	SP1007	SP1007 Lab-Dup	RDL	QC Batch
Inorganics						
Moisture	%	6.6	7.2	7.6	1.0	4373047
BTEX & F1 Hydrocarbons						
Benzene	ug/g	ND	ND		0.020	4373684
Toluene	ug/g	ND	ND		0.020	4373684
Ethylbenzene	ug/g	ND	ND		0.020	4373684
o-Xylene	ug/g	ND	ND		0.020	4373684
p+m-Xylene	ug/g	ND	ND		0.040	4373684
Total Xylenes	ug/g	ND	ND		0.040	4373684
F1 (C6-C10)	ug/g	ND	ND		10	4373684
F1 (C6-C10) - BTEX	ug/g	ND	ND		10	4373684
F2-F4 Hydrocarbons						
F2 (C10-C16 Hydrocarbons)	ug/g	ND	ND		10	4374158
F3 (C16-C34 Hydrocarbons)	ug/g	ND	ND		50	4374158
F4 (C34-C50 Hydrocarbons)	ug/g	ND	ND		50	4374158
Reached Baseline at C50	ug/g	Yes	Yes			4374158
Surrogate Recovery (%)						
1,4-Difluorobenzene	%	98	98			4373684
4-Bromofluorobenzene	%	108	108			4373684
D10-Ethylbenzene	%	80	72			4373684
D4-1,2-Dichloroethane	%	92	92			4373684
o-Terphenyl	%	96	95			4374158
RDL = Reportable Detection Limit QC Batch = Quality Control Batch Lab-Dup = Laboratory Initiated Duplicate ND = Not detected						

Maxxam Job #: B624773
Report Date: 2016/02/09

Terrapex Environmental Ltd
Client Project #: CB644.02
Site Location: 121 Hume Street, Collingwood, ON
Your P.O. #: 4700001396
Sampler Initials: PA

TEST SUMMARY

Maxxam ID: BUO805
Sample ID: SP1003
Matrix: Soil

Collected: 2016/02/05
Shipped:
Received: 2016/02/05

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	4373684	N/A	2016/02/08	Ravinder Gaidhu
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	4374158	2016/02/08	2016/02/09	(Kent) Maolin Li
Moisture	BAL	4373047	N/A	2016/02/06	Valentina Kaftani

Maxxam ID: BUO806
Sample ID: SP1007
Matrix: Soil

Collected: 2016/02/05
Shipped:
Received: 2016/02/05

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	4373684	N/A	2016/02/08	Ravinder Gaidhu
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	4374158	2016/02/08	2016/02/09	(Kent) Maolin Li
Moisture	BAL	4373047	N/A	2016/02/06	Valentina Kaftani

Maxxam ID: BUO806 Dup
Sample ID: SP1007
Matrix: Soil

Collected: 2016/02/05
Shipped:
Received: 2016/02/05

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Moisture	BAL	4373047	N/A	2016/02/06	Valentina Kaftani

GENERAL COMMENTS

Each temperature is the average of up to three cooler temperatures taken at receipt

Package 1	12.3°C

Results relate only to the items tested.

Maxxam Job #: B624773
Report Date: 2016/02/09

Terrapex Environmental Ltd
Client Project #: CB644.02
Site Location: 121 Hume Street, Collingwood, ON
Your P.O. #: 4700001396
Sampler Initials: PA

QUALITY ASSURANCE REPORT

QA/QC	Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
	4373047	DEE	RPD [BUO806-01]	Moisture	2016/02/06	5.4		%	20
	4373684	RGA	Matrix Spike	1,4-Difluorobenzene	2016/02/09		95	%	60 - 140
				4-Bromofluorobenzene	2016/02/09		110	%	60 - 140
				D10-Ethylbenzene	2016/02/09		69	%	60 - 140
				D4-1,2-Dichloroethane	2016/02/09		93	%	60 - 140
				Benzene	2016/02/09		97	%	60 - 140
				Toluene	2016/02/09		89	%	60 - 140
				Ethylbenzene	2016/02/09		105	%	60 - 140
				o-Xylene	2016/02/09		110	%	60 - 140
				p+m-Xylene	2016/02/09		98	%	60 - 140
				F1 (C6-C10)	2016/02/09		97	%	60 - 140
	4373684	RGA	Spiked Blank	1,4-Difluorobenzene	2016/02/08		99	%	60 - 140
				4-Bromofluorobenzene	2016/02/08		109	%	60 - 140
				D10-Ethylbenzene	2016/02/08		84	%	60 - 140
				D4-1,2-Dichloroethane	2016/02/08		93	%	60 - 140
				Benzene	2016/02/08		97	%	60 - 140
				Toluene	2016/02/08		100	%	60 - 140
				Ethylbenzene	2016/02/08		109	%	60 - 140
				o-Xylene	2016/02/08		114	%	60 - 140
				p+m-Xylene	2016/02/08		100	%	60 - 140
				F1 (C6-C10)	2016/02/08		107	%	80 - 120
	4373684	RGA	Method Blank	1,4-Difluorobenzene	2016/02/08		98	%	60 - 140
				4-Bromofluorobenzene	2016/02/08		109	%	60 - 140
				D10-Ethylbenzene	2016/02/08		79	%	60 - 140
				D4-1,2-Dichloroethane	2016/02/08		92	%	60 - 140
				Benzene	2016/02/08	ND, RDL=0.020		ug/g	
				Toluene	2016/02/08	ND, RDL=0.020		ug/g	
				Ethylbenzene	2016/02/08	ND, RDL=0.020		ug/g	
				o-Xylene	2016/02/08	ND, RDL=0.020		ug/g	
				p+m-Xylene	2016/02/08	ND, RDL=0.040		ug/g	
				Total Xylenes	2016/02/08	ND, RDL=0.040		ug/g	
				F1 (C6-C10)	2016/02/08	ND, RDL=10		ug/g	
				F1 (C6-C10) - BTEX	2016/02/08	ND, RDL=10		ug/g	
	4373684	RGA	RPD	Benzene	2016/02/08	NC		%	50
				Toluene	2016/02/08	5.3		%	50
				Ethylbenzene	2016/02/08	NC		%	50
				o-Xylene	2016/02/08	NC		%	50
				p+m-Xylene	2016/02/08	NC		%	50
				Total Xylenes	2016/02/08	NC		%	50
				F1 (C6-C10)	2016/02/08	NC		%	30
				F1 (C6-C10) - BTEX	2016/02/08	NC		%	30
	4374158	KLI	Matrix Spike	o-Terphenyl	2016/02/09		108	%	60 - 130

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
4374158	KLI	Spiked Blank	F2 (C10-C16 Hydrocarbons)	2016/02/09		NC	%	50 - 130
			F3 (C16-C34 Hydrocarbons)	2016/02/09		100	%	50 - 130
			F4 (C34-C50 Hydrocarbons)	2016/02/09		92	%	50 - 130
			o-Terphenyl	2016/02/09		98	%	60 - 130
			F2 (C10-C16 Hydrocarbons)	2016/02/09		91	%	80 - 120
4374158	KLI	Method Blank	F3 (C16-C34 Hydrocarbons)	2016/02/09		92	%	80 - 120
			F4 (C34-C50 Hydrocarbons)	2016/02/09		92	%	80 - 120
			o-Terphenyl	2016/02/09		98	%	60 - 130
			F2 (C10-C16 Hydrocarbons)	2016/02/09	ND, RDL=10		ug/g	
			F3 (C16-C34 Hydrocarbons)	2016/02/09	ND, RDL=50		ug/g	
4374158	KLI	RPD	F4 (C34-C50 Hydrocarbons)	2016/02/09	ND, RDL=50		ug/g	
			F2 (C10-C16 Hydrocarbons)	2016/02/09	7.3		%	30
			F3 (C16-C34 Hydrocarbons)	2016/02/09	9.1		%	30
			F4 (C34-C50 Hydrocarbons)	2016/02/09	NC		%	30

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.

Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.

Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.

Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.

Surrogate: A pure or isotopically labeled compound whose behavior mirrors the analytes of interest. Used to evaluate extraction efficiency.

NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spiked amount was too small to permit a reliable recovery calculation (matrix spike concentration was less than 2x that of the native sample concentration).

NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (one or both samples < 5x RDL).

VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by the following individual(s).



Brad Newman, Scientific Specialist

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

RUSH

Maxxam Analytics International Corporation o/a Maxxam Analytics
1000 Robello Road, Mississauga, Ontario Canada L5N 2L8 Tel: (905) 817-5700 Toll-Free (800) 563-6296 Fax: (905) 817-5777 www.maxxam.ca

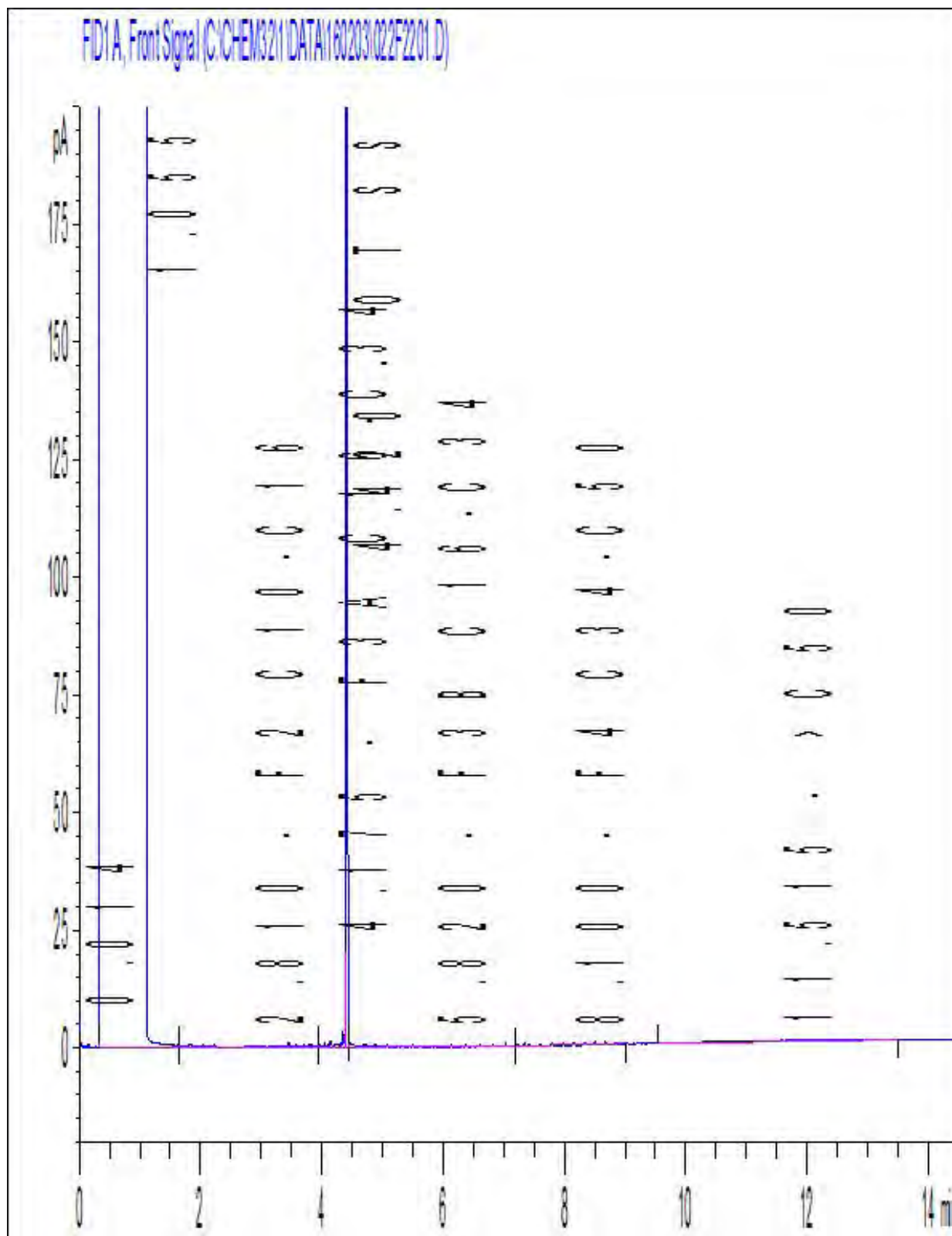
CHAIN OF CUSTODY RECORD SUNCOR DOWNSTREAM

Page 1 of 1

INVOICE INFORMATION:				REPORT INFORMATION (if differs from invoice):				PROJECT INFORMATION:				Laboratory Use Only:			
Company Name: #14539 Suncor Energy Products Partnership				Company Name: #6557 Terrapex Environmental Ltd				Quotation #: B43750				Maxxam Job #:			
Contact Name: Ken Tedder				Contact Name: Jeff Stevenson				Task Order #:				Bottle Order #:			
Address: 3275 Rebecca St				Address: 920 Brant Street Unit 16				Project #: CB644.02				COC #:			
Address: Oakville ON L6L 6N5				Address: Burlington ON L7R 4J1				Site Location: 121 Hume Street, Collingwood, ON				Project Manager:			
Phone: (905) 469-3754 Fax:				Phone: (905) 632-5939 x 226 Fax:				Outlet #: 60680				Marissa Oddi			
Email: ktedder@suncor.com				Email: jstevenson@terrapex.com				Sampled By: PA				C#546624-02-01			
MOE REGULATED DRINKING WATER OR WATER INTENDED FOR HUMAN CONSUMPTION MUST BE SUBMITTED ON THE MAXXAM DRINKING WATER CHAIN OF CUSTODY												Turnaround Time (TAT) Required:			
Regulation 153 (2011)				Other Regulations				Activity				Please provide advance notice for rush projects			
☐ Table 1 ☐ Res/Park ☒ Medium/Fine				☐ CCME ☐ Sanitary Sewer Bylaw				Assessment (circle one) A1, A2, AR, AV Regeneration (circle one) RE, RX, RI, RA Contaminant Management (circle one) M, MW, MV				Regular (Standard) TAT:			
☒ Table 2 ☒ Ind/Comm ☐ Coarse				☐ Reg 558 ☐ Storm Sewer Bylaw								(will be applied if Rush TAT is not specified):			
☐ Table 3 ☐ Agri/Other				☐ MISA Municipality								Standard TAT = 5-7 Working days for most tests.			
☐ Table ☒ For RSC				☐ PWQO								Please note: Standard TAT for certain tests such as BOD and Dioxins/Furans are > 5 days - contact your Project Manager for details.			
☐ Table				☐ Other								Rush TAT			
Include Criteria on Certificate of Analysis (Y/N)? <u>N</u>												2 Day ☒ 1 DAY ☐ Same Day ☐			
												Date Required: <u>Feb 8-16</u> Time Required: <u>Feb 8-16</u>			
												Rush Confirmation Number: <u>MOD80160202-06</u>			
												(call lab for #)			
Sample Barcode Label				Sample (Location) Identification				Date Sampled				# of Bottles			
1				CS152				10 Feb-1-16 12:00				3			
2				CS142				Feb-1-16 11:30				3			
3															
4															
5															
6															
7															
8															
9															
10															
RELINQUISHED BY: (Signature/Print)				Date: (YY/MM/DD)				Time				RECEIVED BY: (Signature/Print)			
Philip Ariss				10/02/02				12:00				Ashrita Sakuma			
												Date: (YY/MM/DD)			
												Time			
												09:30			
												# Jars used and not submitted			
												Time Sensitive			
												Temperature (°C) on Receipt			
												1/1/11			
												Custody Seal			
												Present			
												Intact			
												White: Maxxam Yellow: Client			

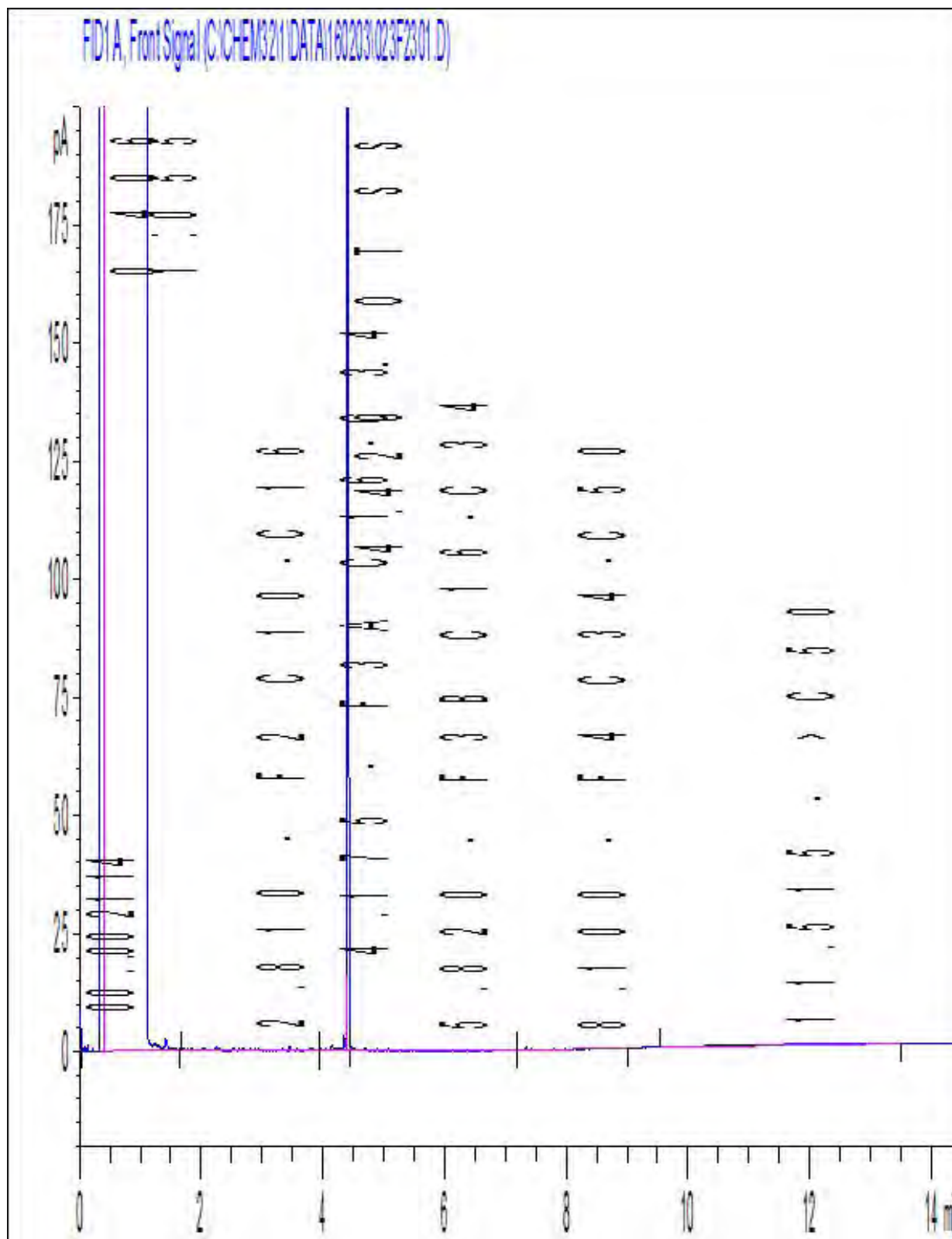
Maxxam Analytics International Corporation o/a Maxxam Analytics

Petroleum Hydrocarbons F2-F4 in Soil Chromatogram



Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Petroleum Hydrocarbons F2-F4 in Soil Chromatogram



Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Attention: Jeff Stevenson

Terrapex Environmental Ltd
920 Brant Street
Unit 16
Burlington, ON
CANADA L7R 4J1

Your P.O. #: 4700001396

Your Project #: CB644.02

Site#: 60680

Site Location: 121 Hume Street, Collingwood, ON

Your C.O.C. #: 546624-02-01

Report Date: 2016/02/04

Report #: R3878826

Version: 1 - Final

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B622158

Received: 2016/02/03, 09:30

Sample Matrix: Soil
Samples Received: 2

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Reference
Petroleum Hydro. CCME F1 & BTEX in Soil (1)	2	N/A	2016/02/03	CAM SOP-00315	CCME PHC-CWS m
Petroleum Hydrocarbons F2-F4 in Soil (2)	2	2016/02/03	2016/02/04	CAM SOP-00316	CCME CWS m
Moisture	2	N/A	2016/02/03	CAM SOP-00445	Carter 2nd ed 51.2 m

Remarks:

Maxxam Analytics has performed all analytical testing herein in accordance with ISO 17025 and the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act. All methodologies comply with this document and are validated for use in the laboratory. The methods and techniques employed in this analysis conform to the performance criteria (detection limits, accuracy and precision) as outlined in the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act.

Maxxam Analytics is accredited for all specific parameters as required by Ontario Regulation 153/04. Maxxam Analytics is limited in liability to the actual cost of analysis unless otherwise agreed in writing. There is no other warranty expressed or implied. Samples will be retained at Maxxam Analytics for three weeks from receipt of data or as per contract.

Reference Method suffix "m" indicates test methods incorporate validated modifications from specific reference methods to improve performance.

* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.

(1) No lab extraction date is given for F1BTEX & VOC samples that are field preserved with methanol. Extraction date is the date sampled unless otherwise stated.

(2) All CCME PHC results met required criteria unless otherwise stated in the report. The CWS PHC methods employed by Maxxam conform to all prescribed elements of the reference method and performance based elements have been validated. All modifications have been validated and proven equivalent following "Alberta Environment's Interpretation of the Reference Method for the Canada-Wide Standard for Petroleum Hydrocarbons in Soil Validation of Performance-Based Alternative Methods September 2003". Documentation is available upon request. Modifications from Reference Method for the Canada-wide Standard for Petroleum Hydrocarbons in Soil-Tier 1 Method: F2/F3/F4 data reported using validated cold solvent extraction instead of Soxhlet extraction.

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.

Marissa Oddi, Customer Service Representative

Email: moddi@maxxam.ca

Phone# (905) 817-5700

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

O.REG 153 PETROLEUM HYDROCARBONS (SOIL)

Maxxam ID		BTZ019	BTZ019	BTZ020		
Sampling Date		2016/02/01 12:00	2016/02/01 12:00	2016/02/01 11:30		
COC Number		546624-02-01	546624-02-01	546624-02-01		
	UNITS	CS152	CS152 Lab-Dup	CS142	RDL	QC Batch
Inorganics						
Moisture	%	19		22	1.0	4368452
BTEX & F1 Hydrocarbons						
Benzene	ug/g	ND	ND	ND	0.020	4369365
Toluene	ug/g	ND	ND	ND	0.020	4369365
Ethylbenzene	ug/g	ND	ND	0.11	0.020	4369365
o-Xylene	ug/g	ND	ND	ND	0.020	4369365
p+m-Xylene	ug/g	ND	ND	0.27	0.040	4369365
Total Xylenes	ug/g	ND	ND	0.27	0.040	4369365
F1 (C6-C10)	ug/g	ND	ND	ND	10	4369365
F1 (C6-C10) - BTEX	ug/g	ND	ND	ND	10	4369365
F2-F4 Hydrocarbons						
F2 (C10-C16 Hydrocarbons)	ug/g	ND		ND	10	4368580
F3 (C16-C34 Hydrocarbons)	ug/g	ND		ND	50	4368580
F4 (C34-C50 Hydrocarbons)	ug/g	ND		ND	50	4368580
Reached Baseline at C50	ug/g	Yes		Yes		4368580
Surrogate Recovery (%)						
1,4-Difluorobenzene	%	102	101	102		4369365
4-Bromofluorobenzene	%	98	95	99		4369365
D10-Ethylbenzene	%	68	68	71		4369365
D4-1,2-Dichloroethane	%	95	94	95		4369365
o-Terphenyl	%	98		97		4368580
RDL = Reportable Detection Limit QC Batch = Quality Control Batch Lab-Dup = Laboratory Initiated Duplicate ND = Not detected						

Maxxam Job #: B622158
Report Date: 2016/02/04

Terrapex Environmental Ltd
Client Project #: CB644.02
Site Location: 121 Hume Street, Collingwood, ON
Your P.O. #: 4700001396
Sampler Initials: PA

TEST SUMMARY

Maxxam ID: BTZ019
Sample ID: CS152
Matrix: Soil

Collected: 2016/02/01
Shipped:
Received: 2016/02/03

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	4369365	N/A	2016/02/03	Georgeta Rusu
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	4368580	2016/02/03	2016/02/04	Zhiyue (Frank) Zhu
Moisture	BAL	4368452	N/A	2016/02/03	Valentina Kaftani

Maxxam ID: BTZ019 Dup
Sample ID: CS152
Matrix: Soil

Collected: 2016/02/01
Shipped:
Received: 2016/02/03

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	4369365	N/A	2016/02/03	Georgeta Rusu

Maxxam ID: BTZ020
Sample ID: CS142
Matrix: Soil

Collected: 2016/02/01
Shipped:
Received: 2016/02/03

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	4369365	N/A	2016/02/03	Georgeta Rusu
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	4368580	2016/02/03	2016/02/04	Zhiyue (Frank) Zhu
Moisture	BAL	4368452	N/A	2016/02/03	Valentina Kaftani

GENERAL COMMENTS

Each temperature is the average of up to three cooler temperatures taken at receipt

Package 1	1.0°C

Results relate only to the items tested.

Maxxam Job #: B622158
Report Date: 2016/02/04

Terrapex Environmental Ltd
Client Project #: CB644.02
Site Location: 121 Hume Street, Collingwood, ON
Your P.O. #: 4700001396
Sampler Initials: PA

QUALITY ASSURANCE REPORT

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
4368452	SKE	RPD	Moisture	2016/02/03	NC		%	20
4368580	ZZ	Matrix Spike	o-Terphenyl	2016/02/04		107	%	60 - 130
			F2 (C10-C16 Hydrocarbons)	2016/02/04		113	%	50 - 130
			F3 (C16-C34 Hydrocarbons)	2016/02/04		123	%	50 - 130
			F4 (C34-C50 Hydrocarbons)	2016/02/04		108	%	50 - 130
4368580	ZZ	Spiked Blank	o-Terphenyl	2016/02/04		101	%	60 - 130
			F2 (C10-C16 Hydrocarbons)	2016/02/04		96	%	80 - 120
			F3 (C16-C34 Hydrocarbons)	2016/02/04		104	%	80 - 120
			F4 (C34-C50 Hydrocarbons)	2016/02/04		93	%	80 - 120
4368580	ZZ	Method Blank	o-Terphenyl	2016/02/04		99	%	60 - 130
			F2 (C10-C16 Hydrocarbons)	2016/02/04	ND, RDL=10		ug/g	
			F3 (C16-C34 Hydrocarbons)	2016/02/04	ND, RDL=50		ug/g	
			F4 (C34-C50 Hydrocarbons)	2016/02/04	ND, RDL=50		ug/g	
4368580	ZZ	RPD	F2 (C10-C16 Hydrocarbons)	2016/02/04	NC		%	30
			F3 (C16-C34 Hydrocarbons)	2016/02/04	NC		%	30
			F4 (C34-C50 Hydrocarbons)	2016/02/04	NC		%	30
4369365	GRU	Matrix Spike [BTZ019-02]	1,4-Difluorobenzene	2016/02/03		101	%	60 - 140
			4-Bromofluorobenzene	2016/02/03		99	%	60 - 140
			D10-Ethylbenzene	2016/02/03		63	%	60 - 140
			D4-1,2-Dichloroethane	2016/02/03		96	%	60 - 140
			Benzene	2016/02/03		76	%	60 - 140
			Toluene	2016/02/03		76	%	60 - 140
			Ethylbenzene	2016/02/03		80	%	60 - 140
			o-Xylene	2016/02/03		85	%	60 - 140
			p+m-Xylene	2016/02/03		72	%	60 - 140
			F1 (C6-C10)	2016/02/03		76	%	60 - 140
4369365	GRU	Spiked Blank	1,4-Difluorobenzene	2016/02/03		102	%	60 - 140
			4-Bromofluorobenzene	2016/02/03		98	%	60 - 140
			D10-Ethylbenzene	2016/02/03		68	%	60 - 140
			D4-1,2-Dichloroethane	2016/02/03		96	%	60 - 140
			Benzene	2016/02/03		94	%	60 - 140
			Toluene	2016/02/03		92	%	60 - 140
			Ethylbenzene	2016/02/03		97	%	60 - 140
			o-Xylene	2016/02/03		103	%	60 - 140
			p+m-Xylene	2016/02/03		89	%	60 - 140
			F1 (C6-C10)	2016/02/03		96	%	80 - 120
4369365	GRU	Method Blank	1,4-Difluorobenzene	2016/02/03		103	%	60 - 140
			4-Bromofluorobenzene	2016/02/03		97	%	60 - 140
			D10-Ethylbenzene	2016/02/03		69	%	60 - 140
			D4-1,2-Dichloroethane	2016/02/03		95	%	60 - 140
			Benzene	2016/02/03	ND, RDL=0.020		ug/g	
			Toluene	2016/02/03	ND, RDL=0.020		ug/g	
			Ethylbenzene	2016/02/03	ND, RDL=0.020		ug/g	

Maxxam Job #: B622158
Report Date: 2016/02/04

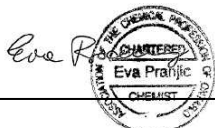
Terrapex Environmental Ltd
Client Project #: CB644.02
Site Location: 121 Hume Street, Collingwood, ON
Your P.O. #: 4700001396
Sampler Initials: PA

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
4369365	GRU	RPD [BTZ019-02]	o-Xylene	2016/02/03	ND, RDL=0.020		ug/g	
			p+m-Xylene	2016/02/03	ND, RDL=0.040		ug/g	
			Total Xylenes	2016/02/03	ND, RDL=0.040		ug/g	
			F1 (C6-C10)	2016/02/03	ND, RDL=10		ug/g	
			F1 (C6-C10) - BTEX	2016/02/03	ND, RDL=10		ug/g	
			Benzene	2016/02/03	NC		%	50
			Toluene	2016/02/03	NC		%	50
			Ethylbenzene	2016/02/03	NC		%	50
			o-Xylene	2016/02/03	NC		%	50
			p+m-Xylene	2016/02/03	NC		%	50
			Total Xylenes	2016/02/03	NC		%	50
			F1 (C6-C10)	2016/02/03	NC		%	30
			F1 (C6-C10) - BTEX	2016/02/03	NC		%	30
Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.								
Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.								
Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.								
Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.								
Surrogate: A pure or isotopically labeled compound whose behavior mirrors the analytes of interest. Used to evaluate extraction efficiency.								
NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (one or both samples < 5x RDL).								

VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by the following individual(s).



Ewa Pranjić, M.Sc., C.Chem, Scientific Specialist

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

RUSHMaxxam Analytics International Corporation o/a Maxxam Analytics
1000 Highway 10 West, Mississauga, Ontario Canada L5N 2L8 Tel: (905) 817-5700 Toll-Free (800) 563-6266 Fax: (905) 817-5777 www.maxxam.ca

CHAIN OF CUSTODY RECORD SUNCOR DOWNSTREAM

Page 1 of 1

INVOICE INFORMATION:				REPORT INFORMATION (if differs from invoice):				PROJECT INFORMATION:				Laboratory Use Only:			
Company Name: #14539 Suncor Energy Products Partnership				Company Name: #6557 Terrapex Environmental Ltd				Quotation #: B43750				Maxxam Job #:			
Contact Name: Ken Tedder				Contact Name: Jeff Stevenson				Task Order #:				Bottle Order #:			
Address: 3275 Rebecca St				Address: 920 Brant Street Unit 16				Project #: CB644.02				COC #:			
City: Oakville ON L6L 6N5				City: Burlington ON L7R 4J1				Site Location: 121 Hume Street, Collingwood, ON				Project Manager:			
Phone: (905) 469-3754				Phone: (905) 632-5939 x 226				Outlet #: 60680				C#546624-01-01			
Email: ktedder@suncor.com				Email: j.stevenson@terrapex.com				Sampled By: PA				Marissa Oddi			
MOE REGULATED DRINKING WATER OR WATER INTENDED FOR HUMAN CONSUMPTION MUST BE SUBMITTED ON THE MAXXAM DRINKING WATER CHAIN OF CUSTODY												ANALYSIS REQUESTED (PLEASE BE SPECIFIC)			
Regulation 153 (2011)				Other Regulations				Activity				Turnaround Time (TAT) Required:			
☐ Table 1 ☐ Res/Park ☐ Medium/Fine				☐ CCME ☐ Sanitary Sewer Bylaw				☒ RE				Regular (Standard) TAT:			
☒ Table 2 ☒ Ind/Comm ☒ Coarse				☐ Reg 558 ☐ Storm Sewer Bylaw				☐ A1, A2, AR, AV				☐ (will be applied if Rush TAT is not specified):			
☐ Table 3 ☐ Agri/Other				☐ MISA Municipality				☐ Remediations (circle one)				☐ Standard TAT = 5-7 Working days for most tests.			
☐ Table ☒ For RSC				☐ PWQO				☐ RE, RX, RI, RA				☐ Please note: Standard TAT for certain tests such as BOD and Dioxins/Furans are > 5 days - contact your Project Manager for details.			
☐ Other				☐ Contaminant Management				☐ M, MW, MV				Rush TAT			
Include Criteria on Certificate of Analysis (Y/N)? <u>N</u>												2 Day ☐ 1 DAY ☒ Same Day ☐			
												Date Required: Feb 1, 2016 Time Required: Early morning			
												Rush Confirmation Number: MOD20160128-81 (call lab for #)			
												# of Bottles			
												Comments			
Sample Barcode Label				Sample (Location) Identification				Date Sampled				Time Sampled			
Matrix															
1				SP902				Jan-27-16				14:30			
2				SP908				Jan-27-16				14:30			
3				SP908/1				Jan-27-16				14:30			
4				SP912				Jan-27-16				14:30			
5				SP976				Jan-27-16				14:30			
6															
7															
8															
9															
10															
RELINQUISHED BY: (Signature/Print)				Date: (YY/MM/DD)				Time				RECEIVED BY: (Signature/Print)			
Philip Adams				16/01/20				11:45				J. MURRAY M. 2016/01/29 09:20			
												# Jars used and not submitted			
												Laboratory Use Only			
												Time Sensitive			
												Temperature (°C) on Receipt			
												Custody Seal			
												Present			
												Intact			
												Yes			
												No			

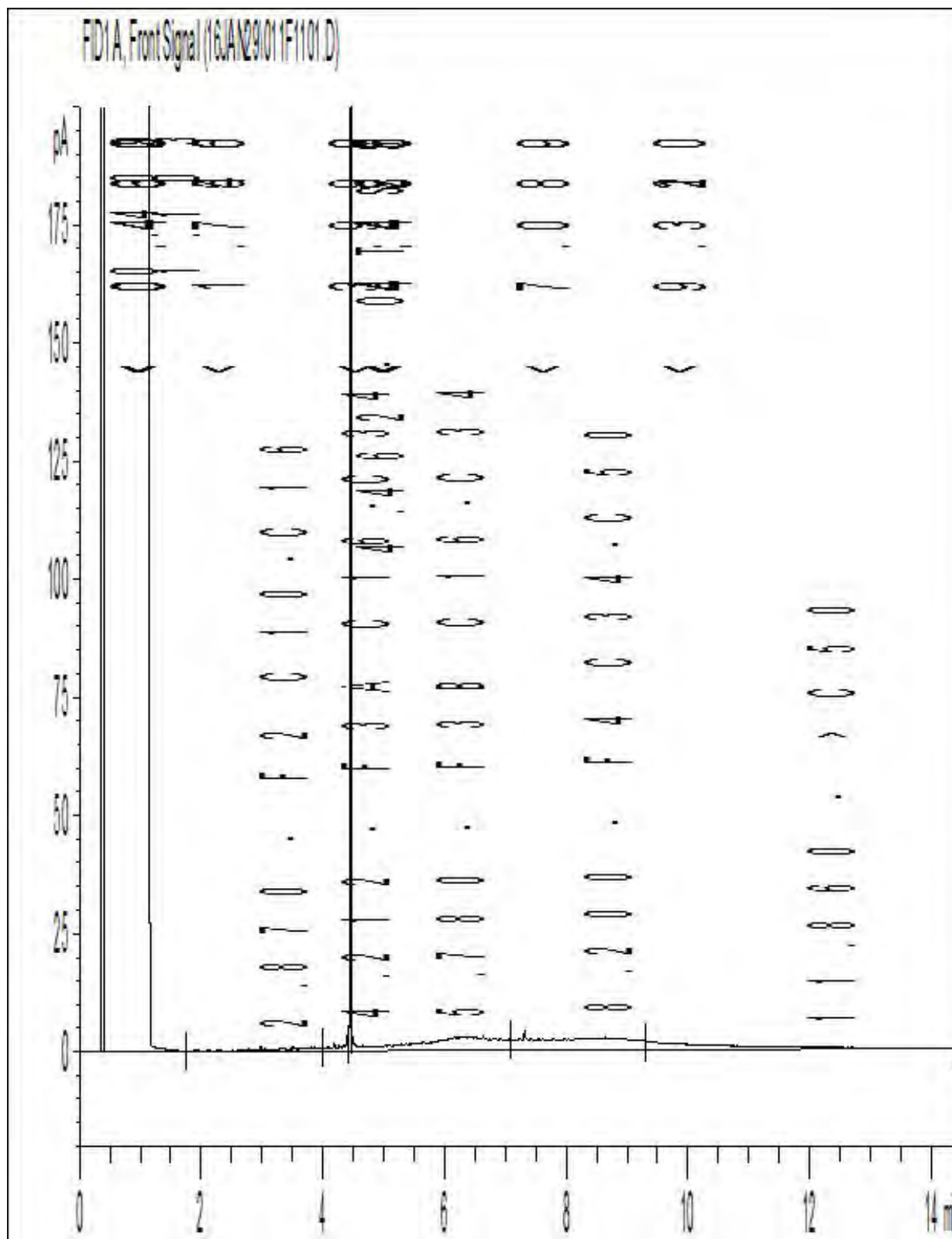
* IT IS THE RESPONSIBILITY OF THE RELINQUISHER TO ENSURE THE ACCURACY OF THE CHAIN OF CUSTODY RECORD. AN INCOMPLETE CHAIN OF CUSTODY MAY RESULT IN ANALYTICAL TAT DELAYS.

SAMPLES MUST BE KEPT COOL (< 10° C) FROM TIME OF SAMPLING UNTIL DELIVERY TO MAXXAM

White: Maxxam Yellow: Client

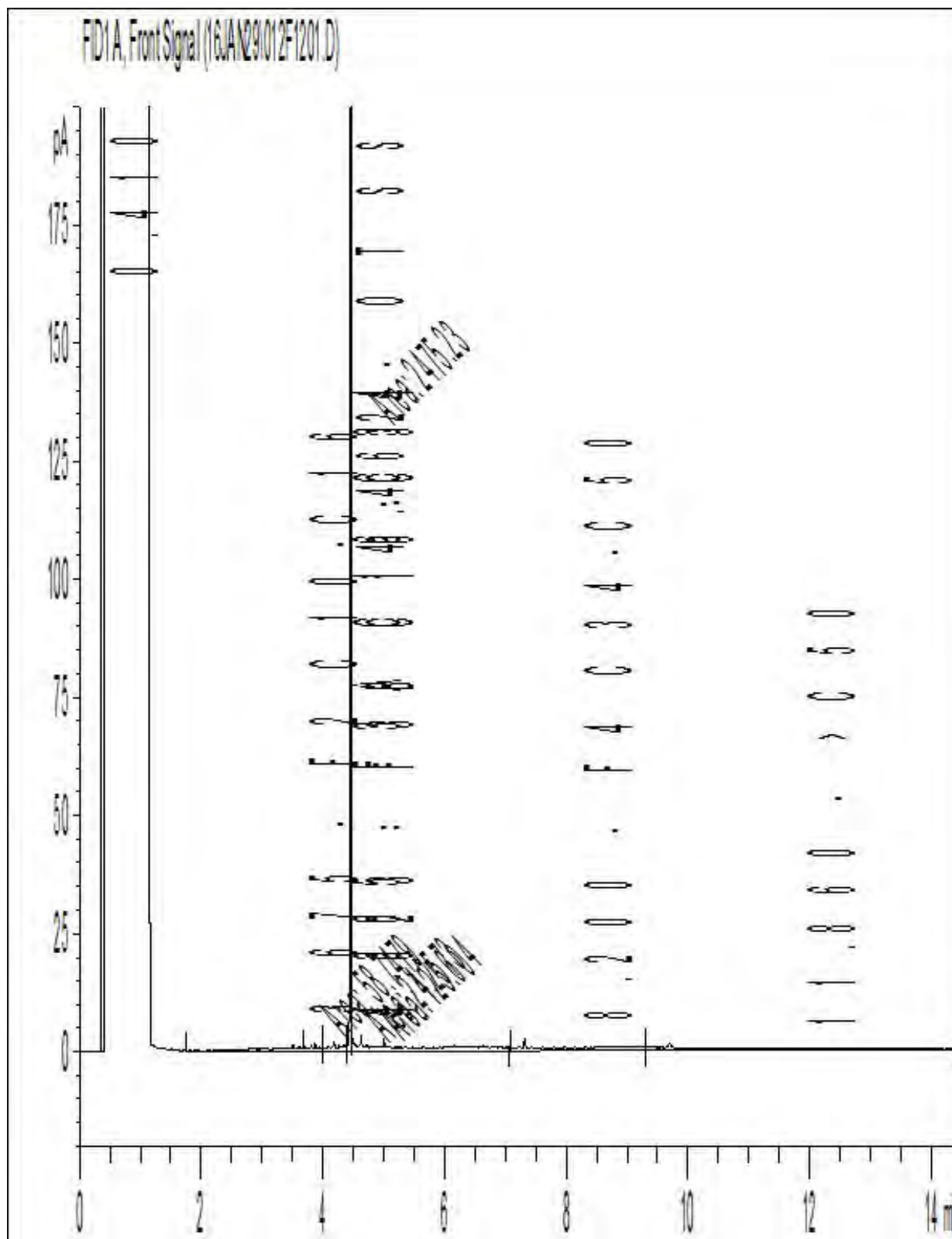
Maxxam Analytics International Corporation o/a Maxxam Analytics

Petroleum Hydrocarbons F2-F4 in Soil Chromatogram



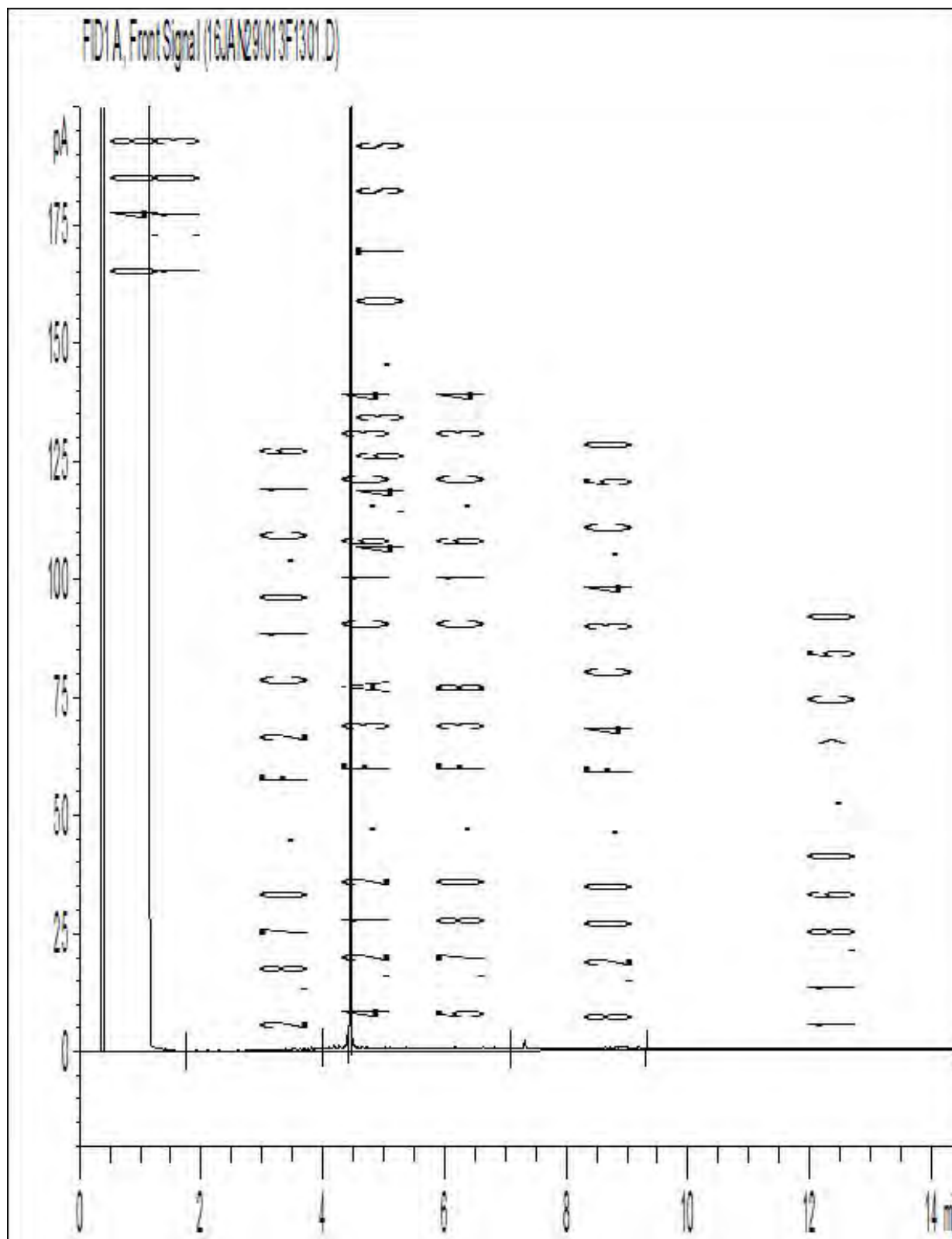
Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Petroleum Hydrocarbons F2-F4 in Soil Chromatogram



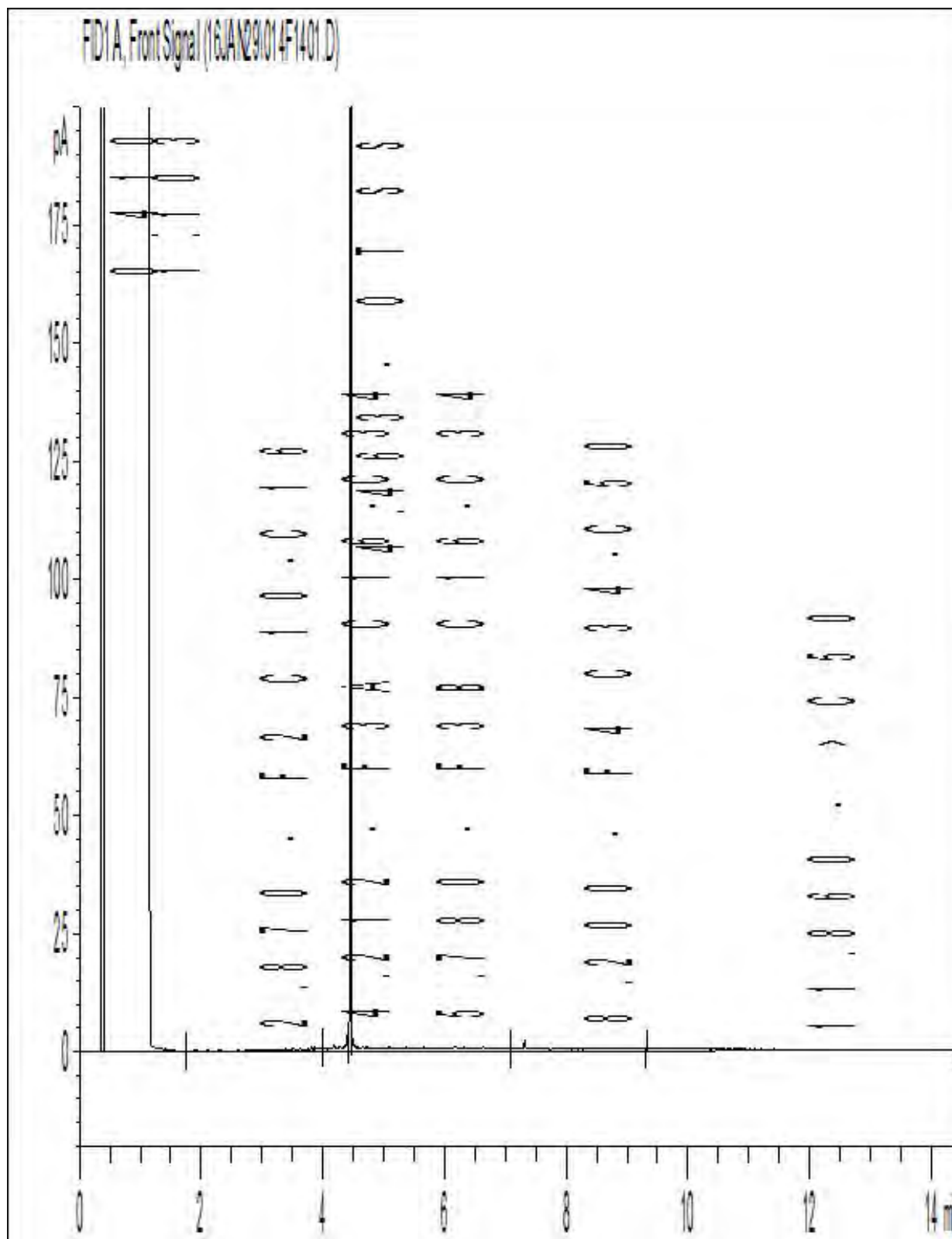
Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Petroleum Hydrocarbons F2-F4 in Soil Chromatogram



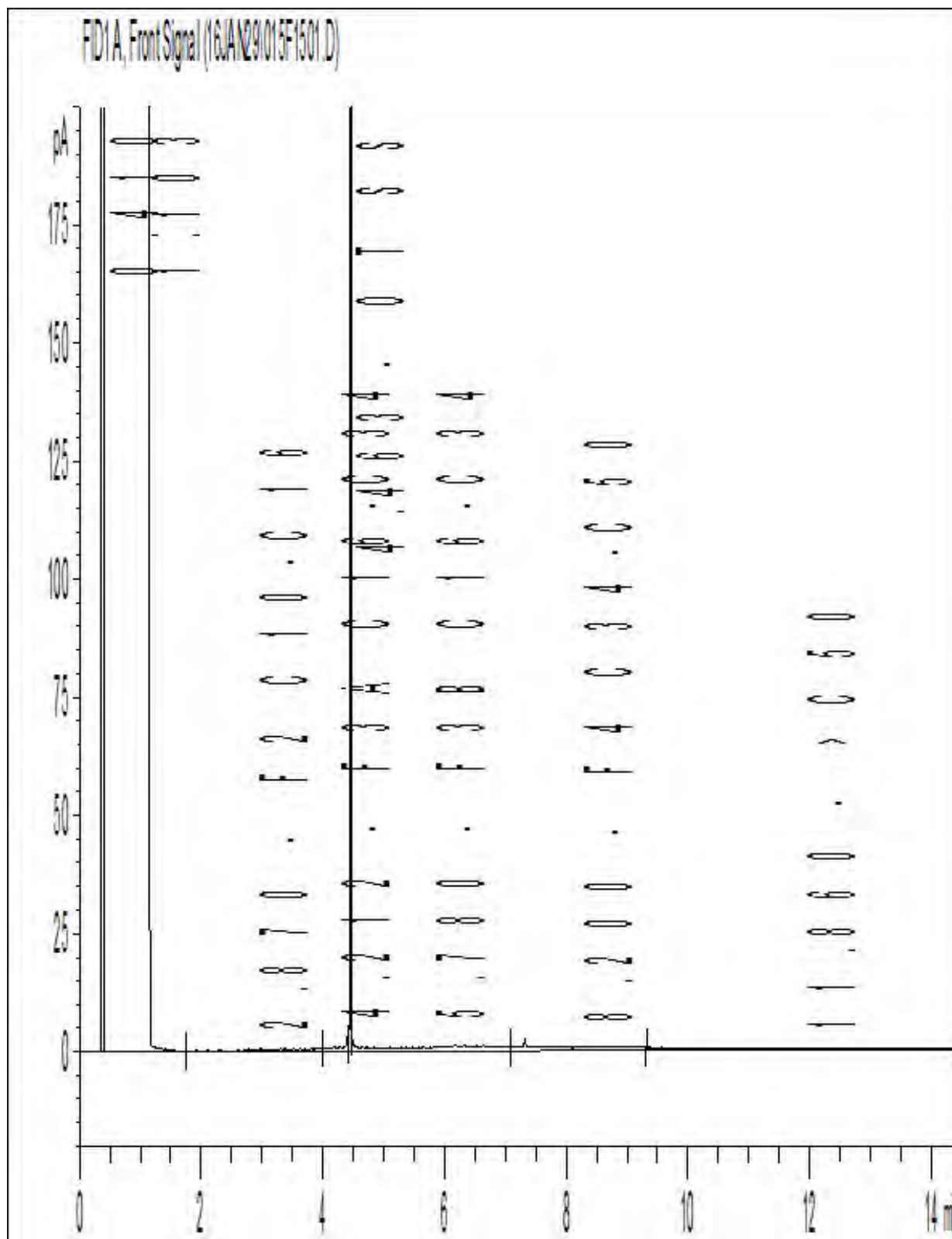
Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Petroleum Hydrocarbons F2-F4 in Soil Chromatogram



Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Petroleum Hydrocarbons F2-F4 in Soil Chromatogram



Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Attention: Jeff Stevenson

Terrapex Environmental Ltd
920 Brant Street
Unit 16
Burlington, ON
CANADA L7R 4J1

Your P.O. #: 4700001396
Your Project #: CB644.02
Site#: 60680
Site Location: 121 Hume Street, Collingwood, ON
Your C.O.C. #: C#546624-01-01

Report Date: 2016/02/01
Report #: R3873933
Version: 1 - Final

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B618689

Received: 2016/01/29, 09:20

Sample Matrix: Soil
Samples Received: 5

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Reference
Petroleum Hydro. CCME F1 & BTEX in Soil (1)	4	N/A	2016/01/29	CAM SOP-00315	CCME PHC-CWS m
Petroleum Hydro. CCME F1 & BTEX in Soil (1)	1	N/A	2016/01/30	CAM SOP-00315	CCME PHC-CWS m
Petroleum Hydrocarbons F2-F4 in Soil (2)	5	2016/01/30	2016/01/30	CAM SOP-00316	CCME CWS m
Moisture	5	N/A	2016/01/29	CAM SOP-00445	Carter 2nd ed 51.2 m

Remarks:

Maxxam Analytics has performed all analytical testing herein in accordance with ISO 17025 and the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act. All methodologies comply with this document and are validated for use in the laboratory. The methods and techniques employed in this analysis conform to the performance criteria (detection limits, accuracy and precision) as outlined in the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act.

Maxxam Analytics is accredited for all specific parameters as required by Ontario Regulation 153/04. Maxxam Analytics is limited in liability to the actual cost of analysis unless otherwise agreed in writing. There is no other warranty expressed or implied. Samples will be retained at Maxxam Analytics for three weeks from receipt of data or as per contract.

Reference Method suffix "m" indicates test methods incorporate validated modifications from specific reference methods to improve performance.

* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.

- (1) No lab extraction date is given for F1BTEX & VOC samples that are field preserved with methanol. Extraction date is the date sampled unless otherwise stated.
- (2) All CCME PHC results met required criteria unless otherwise stated in the report. The CWS PHC methods employed by Maxxam conform to all prescribed elements of the reference method and performance based elements have been validated. All modifications have been validated and proven equivalent following "Alberta Environment's Interpretation of the Reference Method for the Canada-Wide Standard for Petroleum Hydrocarbons in Soil Validation of Performance-Based Alternative Methods September 2003". Documentation is available upon request. Modifications from Reference Method for the Canada-wide Standard for Petroleum Hydrocarbons in Soil-Tier 1 Method: F2/F3/F4 data reported using validated cold solvent extraction instead of Soxhlet extraction.

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.
Marissa Oddi, Customer Service Representative
Email: moddi@maxxam.ca
Phone# (905) 817-5700

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O.REG 153 PETROLEUM HYDROCARBONS (SOIL)

Maxxam ID		BTA738	BTA739	BTA740	BTA741	BTA742		
Sampling Date		2016/01/27 14:30	2016/01/27 14:30	2016/01/27 14:30	2016/01/27 14:30	2016/01/27 14:30		
COC Number		C#546624-01-01	C#546624-01-01	C#546624-01-01	C#546624-01-01	C#546624-01-01		
	UNITS	SP902	SP908	SP9081	SP912	SP920	RDL	QC Batch

Inorganics								
Moisture	%	7.7	17	8.9	14	18	1.0	4363896
BTEX & F1 Hydrocarbons								
Benzene	ug/g	ND	ND	ND	ND	ND	0.020	4364405
Toluene	ug/g	ND	ND	ND	ND	ND	0.020	4364405
Ethylbenzene	ug/g	ND	ND	ND	ND	ND	0.020	4364405
o-Xylene	ug/g	ND	ND	ND	ND	ND	0.020	4364405
p+m-Xylene	ug/g	ND	ND	ND	ND	ND	0.040	4364405
Total Xylenes	ug/g	ND	ND	ND	ND	ND	0.040	4364405
F1 (C6-C10)	ug/g	ND	ND	ND	ND	ND	10	4364405
F1 (C6-C10) - BTEX	ug/g	ND	ND	ND	ND	ND	10	4364405
F2-F4 Hydrocarbons								
F2 (C10-C16 Hydrocarbons)	ug/g	ND	11	ND	ND	ND	10	4364606
F3 (C16-C34 Hydrocarbons)	ug/g	54	ND	ND	ND	ND	50	4364606
F4 (C34-C50 Hydrocarbons)	ug/g	53	ND	ND	ND	ND	50	4364606
Reached Baseline at C50	ug/g	Yes	Yes	Yes	Yes	Yes		4364606
Surrogate Recovery (%)								
1,4-Difluorobenzene	%	102	102	100	101	101		4364405
4-Bromofluorobenzene	%	97	96	96	98	98		4364405
D10-Ethylbenzene	%	73	75	80	75	80		4364405
D4-1,2-Dichloroethane	%	97	97	96	96	98		4364405
o-Terphenyl	%	96	98	97	101	94		4364606
RDL = Reportable Detection Limit								
QC Batch = Quality Control Batch								
ND = Not detected								

Maxxam Job #: B618689
Report Date: 2016/02/01

Terrapex Environmental Ltd
Client Project #: CB644.02
Site Location: 121 Hume Street, Collingwood, ON
Your P.O. #: 4700001396
Sampler Initials: PA

TEST SUMMARY

Maxxam ID: BTA738
Sample ID: SP902
Matrix: Soil

Collected: 2016/01/27
Shipped:
Received: 2016/01/29

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	4364405	N/A	2016/01/29	Georgeta Rusu
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	4364606	2016/01/30	2016/01/30	Jeevaraj Jeevaratnam
Moisture	BAL	4363896	N/A	2016/01/29	Chun Yan

Maxxam ID: BTA739
Sample ID: SP908
Matrix: Soil

Collected: 2016/01/27
Shipped:
Received: 2016/01/29

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	4364405	N/A	2016/01/29	Georgeta Rusu
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	4364606	2016/01/30	2016/01/30	Jeevaraj Jeevaratnam
Moisture	BAL	4363896	N/A	2016/01/29	Chun Yan

Maxxam ID: BTA740
Sample ID: SP9081
Matrix: Soil

Collected: 2016/01/27
Shipped:
Received: 2016/01/29

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	4364405	N/A	2016/01/29	Georgeta Rusu
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	4364606	2016/01/30	2016/01/30	Jeevaraj Jeevaratnam
Moisture	BAL	4363896	N/A	2016/01/29	Chun Yan

Maxxam ID: BTA741
Sample ID: SP912
Matrix: Soil

Collected: 2016/01/27
Shipped:
Received: 2016/01/29

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	4364405	N/A	2016/01/29	Georgeta Rusu
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	4364606	2016/01/30	2016/01/30	Jeevaraj Jeevaratnam
Moisture	BAL	4363896	N/A	2016/01/29	Chun Yan

Maxxam ID: BTA742
Sample ID: SP920
Matrix: Soil

Collected: 2016/01/27
Shipped:
Received: 2016/01/29

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	4364405	N/A	2016/01/30	Georgeta Rusu
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	4364606	2016/01/30	2016/01/30	Jeevaraj Jeevaratnam
Moisture	BAL	4363896	N/A	2016/01/29	Chun Yan

Maxxam Job #: B618689
Report Date: 2016/02/01

Terrapex Environmental Ltd
Client Project #: CB644.02
Site Location: 121 Hume Street, Collingwood, ON
Your P.O. #: 4700001396
Sampler Initials: PA

GENERAL COMMENTS

Each temperature is the average of up to three cooler temperatures taken at receipt

Package 1	1.3°C

Results relate only to the items tested.

Maxxam Job #: B618689
Report Date: 2016/02/01

Terrapex Environmental Ltd
Client Project #: CB644.02
Site Location: 121 Hume Street, Collingwood, ON
Your P.O. #: 4700001396
Sampler Initials: PA

QUALITY ASSURANCE REPORT

QA/QC			Date		Value	Recovery	UNITS	QC Limits
Batch	Init	QC Type	Parameter	Analyzed				
4363896	SB1	RPD	Moisture	2016/01/29	0.87		%	20
4364405	GRU	Matrix Spike	1,4-Difluorobenzene	2016/01/29		101	%	60 - 140
			4-Bromofluorobenzene	2016/01/29		102	%	60 - 140
			D10-Ethylbenzene	2016/01/29		70	%	60 - 140
			D4-1,2-Dichloroethane	2016/01/29		96	%	60 - 140
			Benzene	2016/01/29		87	%	60 - 140
			Toluene	2016/01/29		91	%	60 - 140
			Ethylbenzene	2016/01/29		90	%	60 - 140
			o-Xylene	2016/01/29		91	%	60 - 140
			p+m-Xylene	2016/01/29		83	%	60 - 140
			F1 (C6-C10)	2016/01/29		87	%	60 - 140
4364405	GRU	Spiked Blank	1,4-Difluorobenzene	2016/01/29		100	%	60 - 140
			4-Bromofluorobenzene	2016/01/29		100	%	60 - 140
			D10-Ethylbenzene	2016/01/29		70	%	60 - 140
			D4-1,2-Dichloroethane	2016/01/29		96	%	60 - 140
			Benzene	2016/01/29		97	%	60 - 140
			Toluene	2016/01/29		103	%	60 - 140
			Ethylbenzene	2016/01/29		100	%	60 - 140
			o-Xylene	2016/01/29		99	%	60 - 140
			p+m-Xylene	2016/01/29		92	%	60 - 140
			F1 (C6-C10)	2016/01/29		95	%	80 - 120
4364405	GRU	Method Blank	1,4-Difluorobenzene	2016/01/29		102	%	60 - 140
			4-Bromofluorobenzene	2016/01/29		96	%	60 - 140
			D10-Ethylbenzene	2016/01/29		75	%	60 - 140
			D4-1,2-Dichloroethane	2016/01/29		98	%	60 - 140
			Benzene	2016/01/29	ND, RDL=0.020		ug/g	
			Toluene	2016/01/29	ND, RDL=0.020		ug/g	
			Ethylbenzene	2016/01/29	ND, RDL=0.020		ug/g	
			o-Xylene	2016/01/29	ND, RDL=0.020		ug/g	
			p+m-Xylene	2016/01/29	ND, RDL=0.040		ug/g	
			Total Xylenes	2016/01/29	ND, RDL=0.040		ug/g	
			F1 (C6-C10)	2016/01/29	ND, RDL=10		ug/g	
			F1 (C6-C10) - BTEX	2016/01/29	ND, RDL=10		ug/g	
4364405	GRU	RPD	Benzene	2016/01/29	NC		%	50
			Toluene	2016/01/29	NC		%	50
			Ethylbenzene	2016/01/29	NC		%	50
			o-Xylene	2016/01/29	NC		%	50
			p+m-Xylene	2016/01/29	NC		%	50
			Total Xylenes	2016/01/29	NC		%	50
			F1 (C6-C10)	2016/01/29	NC		%	30
			F1 (C6-C10) - BTEX	2016/01/29	NC		%	30
4364606	JJE	Matrix Spike	o-Terphenyl	2016/01/30		99	%	60 - 130

Maxxam Job #: B618689
Report Date: 2016/02/01

Terrapex Environmental Ltd
Client Project #: CB644.02
Site Location: 121 Hume Street, Collingwood, ON
Your P.O. #: 4700001396
Sampler Initials: PA

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
4364606	JJE	Spiked Blank	F2 (C10-C16 Hydrocarbons)	2016/01/30		95	%	50 - 130
			F3 (C16-C34 Hydrocarbons)	2016/01/30		95	%	50 - 130
			F4 (C34-C50 Hydrocarbons)	2016/01/30		100	%	50 - 130
			o-Terphenyl	2016/01/30		97	%	60 - 130
			F2 (C10-C16 Hydrocarbons)	2016/01/30		93	%	80 - 120
4364606	JJE	Method Blank	F3 (C16-C34 Hydrocarbons)	2016/01/30		93	%	80 - 120
			F4 (C34-C50 Hydrocarbons)	2016/01/30		97	%	80 - 120
			o-Terphenyl	2016/01/30		96	%	60 - 130
			F2 (C10-C16 Hydrocarbons)	2016/01/30	ND, RDL=10		ug/g	
			F3 (C16-C34 Hydrocarbons)	2016/01/30	ND, RDL=50		ug/g	
4364606	JJE	RPD	F4 (C34-C50 Hydrocarbons)	2016/01/30	ND, RDL=50		ug/g	
			F2 (C10-C16 Hydrocarbons)	2016/01/30	NC		%	30
			F3 (C16-C34 Hydrocarbons)	2016/01/30	NC		%	30
			F4 (C34-C50 Hydrocarbons)	2016/01/30	NC		%	30

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.

Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.

Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.

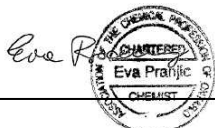
Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.

Surrogate: A pure or isotopically labeled compound whose behavior mirrors the analytes of interest. Used to evaluate extraction efficiency.

NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (one or both samples < 5x RDL).

VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by the following individual(s).



Ewa Pranjić, M.Sc., C.Chem, Scientific Specialist

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RUSH

CHAIN OF CUSTODY RECORD **70832** Page 1 of 1

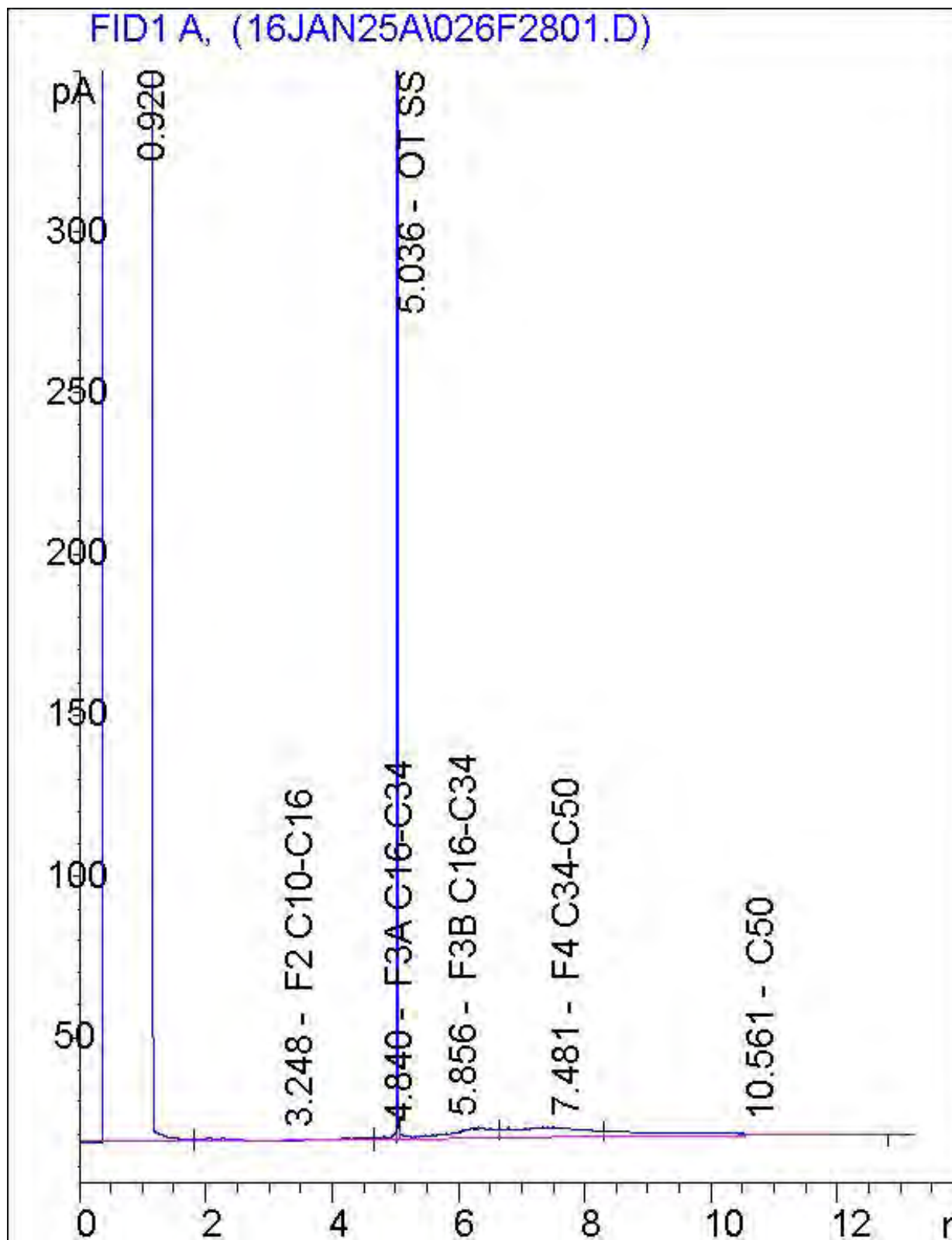
Invoice Information		Report Information (if differs from invoice)		Project Information (where applicable)		Turnaround Time (TAT) Required	
Company Name: <u>Suncor</u>	Company Name: <u>Tempco Environmental</u>	Quotation #: <u>Suncor</u>	☐ Regular TAT (5-7 days) Most analyses		PLEASE PROVIDE ADVANCE NOTICE FOR RUSH PROJECTS		
Contact Name: <u>Kon Tedder</u>	Contact Name: <u>Jeff Stevenson/Philip Arlos</u>	P.O. #/ A/E/R: <u>-</u>					
Address: <u>3275 Rebecca St</u>	Address: <u>920 Brant St. Unit 16</u>	Project #: <u>C13644-02</u>	Project TAT (Surcharges will be applied)		☐ 1 Day ☐ 2 Days ☒ 3-4 Days		
Address: <u>Oakville ON</u>	Address: <u>Burlington ON</u>	Site Location: <u>121 Hunt St. Collingwood</u>	Site #: <u>60680</u>		Date Required: <u>Wednesday Jan 27, 2016</u>		
Phone: <u>905-464-3754</u> Fax: <u>-</u>	Phone: <u>905-632-5434 x 726</u>	Site #: <u>PA</u>	Sampled By: <u>PA</u>		Rush Confirmation #: <u>MOD20160121-01</u>		
Email: <u>ktedder@suncor.com</u>	Email: <u>j.stevenson@tempco.com / P.arlos@tempco.com</u>						
MOE REGULATED DRINKING WATER OR WATER INTENDED FOR HUMAN CONSUMPTION MUST BE SUBMITTED ON THE MAXXAM DRINKING WATER CHAIN OF CUSTODY							
Regulation 153		Other Regulations		Analysis Requested		LABORATORY USE ONLY	
☐ Table 1 ☐ Res/Park ☐ Med/ Fine	☐ CCME ☐ Sanitary Sewer Bylaw	REFER TO BACK OF COC		REG 153 METALS & INORGANICS		CUSTODY SEAL	
☒ Table 2 ☒ Ind/Comm ☒ Coarse	☐ MISA ☐ Storm Sewer Bylaw					Y / N	
☐ Table 3 ☐ Agri/ Other	☐ PWQO Region			Present		Intact	
☐ Table <u> </u>	☐ Other (Specify) <u> </u>			Y		Y	
FOR RSC (PLEASE CIRCLE) Y / <u>N</u>						COOLING MEDIA PRESENT: <u>0</u> / <u>1</u> / <u>0</u>	
Include Criteria on Certificate of Analysis: Y / <u>N</u>						COMMENTS	
SAMPLES MUST BE KEPT COOL (< 10 °C) FROM TIME OF SAMPLING UNTIL DELIVERY TO MAXXAM							
SAMPLE IDENTIFICATION	DATE SAMPLED (YYYY/MM/DD)	TIME SAMPLED (HH:MM)	MATRIX	# OF CONTAINERS SUBMITTED	FIELD FILTERED (CIRCLE) Metals / Hg / CrVI	BITEX / PHC FL	PHC FL - F4
1 <u>TCLP</u>	<u>2016/01/21</u>	<u>16:00</u>	<u>Soil</u>	<u>7</u>	<u>1</u>	<u>1</u>	<u>1</u>
2							
3							
4							
5							
6							
7							
8							
9							
10							
RELINQUISHED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)	RECEIVED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)		
<u>Philip Arlos</u>	<u>2016/01/22</u>	<u>13:30</u>	<u>Marissa Oddi</u>	<u>2016/01/22</u>	<u>13:25</u>		
<u>[Signature]</u>							

COC-1004 (10/14) - ENV-ENG

22-Jan-16 13:25
Marissa Oddi
B613731
RGN ENV-635

White: Maxxam - Yellow: Client

Petroleum Hydrocarbons F2-F4 in Soil Chromatogram



Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Attention: Jeff Stevenson

Terrapex Environmental Ltd
920 Brant Street
Unit 16
Burlington, ON
CANADA L7R 4J1

Your P.O. #: 4700001396

Your Project #: CB644.02

Site#: 60680

Site Location: 121 Hume Street, Collingwood, ON

Your C.O.C. #: 70832

Report Date: 2016/01/26

Report #: R3866985

Version: 1 - Final

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B613731

Received: 2016/01/22, 13:25

Sample Matrix: Soil
Samples Received: 1

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Reference
Methylnaphthalene Sum	1	N/A	2016/01/26	CAM SOP-00301	EPA 8270D m
ABN Compounds in soil by GC/MS	1	2016/01/22	2016/01/25	CAM SOP-00301	EPA 8270 m
1,3-Dichloropropene Sum	1	N/A	2016/01/26		EPA 8260C m
Petroleum Hydro. CCME F1 & BTEX in Soil (1)	1	N/A	2016/01/26	CAM SOP-00315	CCME PHC-CWS m
Petroleum Hydrocarbons F2-F4 in Soil (2)	1	2016/01/25	2016/01/26	CAM SOP-00316	CCME CWS m
Mercury (TCLP Leachable) (mg/L)	1	N/A	2016/01/25	CAM SOP-00453	EPA 7470A m
Strong Acid Leachable Metals by ICPMS	1	2016/01/26	2016/01/26	CAM SOP-00447	EPA 6020A m
Total Metals in TCLP Leachate by ICPMS	1	2016/01/25	2016/01/25	CAM SOP-00447	EPA 6020A m
Moisture	1	N/A	2016/01/25	CAM SOP-00445	Carter 2nd ed 51.2 m
TCLP - % Solids	1	2016/01/22	2016/01/23	CAM SOP-00401	EPA 1311 Update I m
TCLP - Extraction Fluid	1	N/A	2016/01/23	CAM SOP-00401	EPA 1311 Update I m
TCLP - Initial and final pH	1	N/A	2016/01/23	CAM SOP-00401	EPA 1311 Update I m
Volatile Organic Compounds in Soil (3)	1	N/A	2016/01/25	CAM SOP000226	EPA 8260C m

Remarks:

Maxxam Analytics has performed all analytical testing herein in accordance with ISO 17025 and the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act. All methodologies comply with this document and are validated for use in the laboratory. The methods and techniques employed in this analysis conform to the performance criteria (detection limits, accuracy and precision) as outlined in the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act.

Maxxam Analytics is accredited for all specific parameters as required by Ontario Regulation 153/04. Maxxam Analytics is limited in liability to the actual cost of analysis unless otherwise agreed in writing. There is no other warranty expressed or implied. Samples will be retained at Maxxam Analytics for three weeks from receipt of data or as per contract.

Reference Method suffix "m" indicates test methods incorporate validated modifications from specific reference methods to improve performance.

* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.

(1) No lab extraction date is given for F1BTEX & VOC samples that are field preserved with methanol. Extraction date is the date sampled unless otherwise stated.

(2) All CCME PHC results met required criteria unless otherwise stated in the report. The CWS PHC methods employed by Maxxam conform to all prescribed elements of the reference method and performance based elements have been validated. All modifications have been validated and proven equivalent following "Alberta Environment's Interpretation of the Reference Method for the Canada-Wide Standard for Petroleum Hydrocarbons in Soil Validation of Performance-Based Alternative Methods September 2003". Documentation is available upon request. Modifications from Reference Method for the Canada-wide Standard for Petroleum Hydrocarbons in Soil-Tier 1 Method: F2/F3/F4 data reported using validated cold solvent extraction instead of Soxhlet extraction.

(3) The extraction date for samples field preserved with methanol for F1 and Volatile Organic Compounds is considered to be the date sampled.

Attention: Jeff Stevenson

Terrapex Environmental Ltd
920 Brant Street
Unit 16
Burlington, ON
CANADA L7R 4J1

Your P.O. #: 4700001396

Your Project #: CB644.02

Site#: 60680

Site Location: 121 Hume Street, Collingwood, ON

Your C.O.C. #: 70832

Report Date: 2016/01/26

Report #: R3866985

Version: 1 - Final

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B613731

Received: 2016/01/22, 13:25

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.

Marissa Oddi, Customer Service Representative

Email: moddi@maxxam.ca

Phone# (905) 817-5700

=====

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

Maxxam Job #: B613731
Report Date: 2016/01/26

Terrapex Environmental Ltd
Client Project #: CB644.02
Site Location: 121 Hume Street, Collingwood, ON
Your P.O. #: 4700001396
Sampler Initials: PA

O.REG 153 ICPMS METALS (SOIL)

Maxxam ID		BRY556	BRY556		
Sampling Date		2016/01/21 16:00	2016/01/21 16:00		
COC Number		70832	70832		
	UNITS	TCLP	TCLP Lab-Dup	RDL	QC Batch
Metals					
Acid Extractable Antimony (Sb)	ug/g	ND	ND	0.20	4358046
Acid Extractable Arsenic (As)	ug/g	2.2	2.1	1.0	4358046
Acid Extractable Barium (Ba)	ug/g	20	20	0.50	4358046
Acid Extractable Beryllium (Be)	ug/g	ND	ND	0.20	4358046
Acid Extractable Boron (B)	ug/g	ND	ND	5.0	4358046
Acid Extractable Cadmium (Cd)	ug/g	ND	ND	0.10	4358046
Acid Extractable Chromium (Cr)	ug/g	5.4	4.1	1.0	4358046
Acid Extractable Cobalt (Co)	ug/g	1.4	1.3	0.10	4358046
Acid Extractable Copper (Cu)	ug/g	5.4	4.9	0.50	4358046
Acid Extractable Lead (Pb)	ug/g	28	25	1.0	4358046
Acid Extractable Molybdenum (Mo)	ug/g	ND	ND	0.50	4358046
Acid Extractable Nickel (Ni)	ug/g	3.0	3.0	0.50	4358046
Acid Extractable Selenium (Se)	ug/g	ND	ND	0.50	4358046
Acid Extractable Silver (Ag)	ug/g	ND	ND	0.20	4358046
Acid Extractable Thallium (Tl)	ug/g	ND	ND	0.050	4358046
Acid Extractable Uranium (U)	ug/g	0.23	0.23	0.050	4358046
Acid Extractable Vanadium (V)	ug/g	6.6	5.7	5.0	4358046
Acid Extractable Zinc (Zn)	ug/g	27	23	5.0	4358046
Acid Extractable Mercury (Hg)	ug/g	ND	ND	0.050	4358046
RDL = Reportable Detection Limit QC Batch = Quality Control Batch Lab-Dup = Laboratory Initiated Duplicate ND = Not detected					

Maxxam Job #: B613731
Report Date: 2016/01/26

Terrapex Environmental Ltd
Client Project #: CB644.02
Site Location: 121 Hume Street, Collingwood, ON
Your P.O. #: 4700001396
Sampler Initials: PA

O.REG 153 PETROLEUM HYDROCARBONS (SOIL)

Maxxam ID		BRY556	BRY556		
Sampling Date		2016/01/21 16:00	2016/01/21 16:00		
COC Number		70832	70832		
	UNITS	TCLP	TCLP Lab-Dup	RDL	QC Batch
Inorganics					
Moisture	%	14		1.0	4356940
BTEX & F1 Hydrocarbons					
F1 (C6-C10)	ug/g	38	41	10	4357919
F1 (C6-C10) - BTEX	ug/g	38	41	10	4357919
F2-F4 Hydrocarbons					
F2 (C10-C16 Hydrocarbons)	ug/g	ND		10	4356969
F3 (C16-C34 Hydrocarbons)	ug/g	ND		50	4356969
F4 (C34-C50 Hydrocarbons)	ug/g	ND		50	4356969
Reached Baseline at C50	ug/g	Yes			4356969
Surrogate Recovery (%)					
1,4-Difluorobenzene	%	109	110		4357919
4-Bromofluorobenzene	%	103	101		4357919
D10-Ethylbenzene	%	80	87		4357919
D4-1,2-Dichloroethane	%	107	108		4357919
o-Terphenyl	%	92			4356969
RDL = Reportable Detection Limit QC Batch = Quality Control Batch Lab-Dup = Laboratory Initiated Duplicate ND = Not detected					

Maxxam Job #: B613731
Report Date: 2016/01/26

Terrapex Environmental Ltd
Client Project #: CB644.02
Site Location: 121 Hume Street, Collingwood, ON
Your P.O. #: 4700001396
Sampler Initials: PA

O.REG 153 SEMIVOLATILES PACKAGE (SOIL)

Maxxam ID		BRY556		
Sampling Date		2016/01/21 16:00		
COC Number		70832		
	UNITS	TCLP	RDL	QC Batch
Semivolatile Organics				
1,2,4-Trichlorobenzene	ug/g	ND	0.1	4355231
1-Methylnaphthalene	ug/g	ND	0.06	4355231
2,4,5-Trichlorophenol	ug/g	ND	0.2	4355231
2,4,6-Trichlorophenol	ug/g	ND	0.2	4355231
2,4-Dichlorophenol	ug/g	ND	0.2	4355231
2,4-Dimethylphenol	ug/g	ND	0.4	4355231
2,4-Dinitrophenol	ug/g	ND	1	4355231
2,4-Dinitrotoluene	ug/g	ND	0.2	4355231
2,6-Dinitrotoluene	ug/g	ND	0.2	4355231
2-Chlorophenol	ug/g	ND	0.2	4355231
2-Methylnaphthalene	ug/g	ND	0.06	4355231
3,3'-Dichlorobenzidine	ug/g	ND	1	4355231
Acenaphthene	ug/g	ND	0.06	4355231
Acenaphthylene	ug/g	ND	0.1	4355231
Anthracene	ug/g	ND	0.06	4355231
Benzo(a)anthracene	ug/g	ND	0.1	4355231
Benzo(a)pyrene	ug/g	ND	0.1	4355231
Benzo(b,j)fluoranthene	ug/g	ND	0.2	4355231
Benzo(g,h,i)perylene	ug/g	ND	0.2	4355231
Benzo(k)fluoranthene	ug/g	ND	0.06	4355231
Biphenyl	ug/g	ND	0.1	4355231
Bis(2-chloroethyl)ether	ug/g	ND	0.4	4355231
Bis(2-chloroisopropyl)ether	ug/g	ND	0.2	4355231
Bis(2-ethylhexyl)phthalate	ug/g	ND	2	4355231
Chrysene	ug/g	ND	0.1	4355231
Dibenz(a,h)anthracene	ug/g	ND	0.1	4355231
Diethyl phthalate	ug/g	ND	0.4	4355231
Dimethyl phthalate	ug/g	ND	0.4	4355231
Fluoranthene	ug/g	ND	0.1	4355231
Fluorene	ug/g	ND	0.06	4355231
Indeno(1,2,3-cd)pyrene	ug/g	ND	0.2	4355231
Naphthalene	ug/g	ND	0.06	4355231
RDL = Reportable Detection Limit				
QC Batch = Quality Control Batch				
ND = Not detected				

Maxxam Job #: B613731
Report Date: 2016/01/26

Terrapex Environmental Ltd
Client Project #: CB644.02
Site Location: 121 Hume Street, Collingwood, ON
Your P.O. #: 4700001396
Sampler Initials: PA

O.REG 153 SEMIVOLATILES PACKAGE (SOIL)

Maxxam ID		BRY556		
Sampling Date		2016/01/21 16:00		
COC Number		70832		
	UNITS	TCLP	RDL	QC Batch
p-Chloroaniline	ug/g	ND	0.4	4355231
Pentachlorophenol	ug/g	ND	0.2	4355231
Phenanthrene	ug/g	ND	0.1	4355231
Phenol	ug/g	ND	0.2	4355231
Pyrene	ug/g	ND	0.1	4355231
Calculated Parameters				
Methylnaphthalene, 2-(1-)	ug/g	ND	0.085	4354513
Surrogate Recovery (%)				
2,4,6-Tribromophenol	%	45 (1)		4355231
2-Fluorobiphenyl	%	84		4355231
D14-Terphenyl (FS)	%	114		4355231
D5-Nitrobenzene	%	68		4355231
RDL = Reportable Detection Limit QC Batch = Quality Control Batch ND = Not detected (1) Surrogate recovery was below the lower control limit. This may represent a low bias in some results.				

Maxxam Job #: B613731
Report Date: 2016/01/26

Terrapex Environmental Ltd
Client Project #: CB644.02
Site Location: 121 Hume Street, Collingwood, ON
Your P.O. #: 4700001396
Sampler Initials: PA

O.REG 153 VOLATILE ORGANICS (SOIL)

Maxxam ID		BRY556		
Sampling Date		2016/01/21 16:00		
COC Number		70832		
	UNITS	TCLP	RDL	QC Batch
Calculated Parameters				
1,3-Dichloropropene (cis+trans)	ug/g	ND	0.25	4354564
Volatile Organics				
Acetone (2-Propanone)	ug/g	ND	2.5	4354762
Benzene	ug/g	ND	0.10	4354762
Bromodichloromethane	ug/g	ND	0.25	4354762
Bromoform	ug/g	ND	0.25	4354762
Bromomethane	ug/g	ND	0.25	4354762
Carbon Tetrachloride	ug/g	ND	0.25	4354762
Chlorobenzene	ug/g	ND	0.25	4354762
Chloroform	ug/g	ND	0.25	4354762
Dibromochloromethane	ug/g	ND	0.25	4354762
1,2-Dichlorobenzene	ug/g	ND	0.25	4354762
1,3-Dichlorobenzene	ug/g	ND	0.25	4354762
1,4-Dichlorobenzene	ug/g	ND	0.25	4354762
Dichlorodifluoromethane (FREON 12)	ug/g	ND	0.25	4354762
1,1-Dichloroethane	ug/g	ND	0.25	4354762
1,2-Dichloroethane	ug/g	ND	0.25	4354762
1,1-Dichloroethylene	ug/g	ND	0.25	4354762
cis-1,2-Dichloroethylene	ug/g	ND	0.25	4354762
trans-1,2-Dichloroethylene	ug/g	ND	0.25	4354762
1,2-Dichloropropane	ug/g	ND	0.25	4354762
cis-1,3-Dichloropropene	ug/g	ND	0.15	4354762
trans-1,3-Dichloropropene	ug/g	ND	0.20	4354762
Ethylbenzene	ug/g	ND	0.10	4354762
Ethylene Dibromide	ug/g	ND	0.25	4354762
Hexane	ug/g	0.47	0.25	4354762
Methylene Chloride(Dichloromethane)	ug/g	ND	0.25	4354762
Methyl Ethyl Ketone (2-Butanone)	ug/g	ND	2.5	4354762
Methyl Isobutyl Ketone	ug/g	ND	2.5	4354762
Methyl t-butyl ether (MTBE)	ug/g	ND	0.25	4354762
Styrene	ug/g	ND	0.25	4354762
1,1,1,2-Tetrachloroethane	ug/g	ND	0.25	4354762
RDL = Reportable Detection Limit				
QC Batch = Quality Control Batch				
ND = Not detected				

Maxxam Job #: B613731
Report Date: 2016/01/26

Terrapex Environmental Ltd
Client Project #: CB644.02
Site Location: 121 Hume Street, Collingwood, ON
Your P.O. #: 4700001396
Sampler Initials: PA

O.REG 153 VOLATILE ORGANICS (SOIL)

Maxxam ID		BRY556		
Sampling Date		2016/01/21 16:00		
COC Number		70832		
	UNITS	TCLP	RDL	QC Batch
1,1,2,2-Tetrachloroethane	ug/g	ND	0.25	4354762
Tetrachloroethylene	ug/g	ND	0.25	4354762
Toluene	ug/g	ND	0.10	4354762
1,1,1-Trichloroethane	ug/g	ND	0.25	4354762
1,1,2-Trichloroethane	ug/g	ND	0.25	4354762
Trichloroethylene	ug/g	ND	0.25	4354762
Trichlorofluoromethane (FREON 11)	ug/g	ND	0.25	4354762
Vinyl Chloride	ug/g	ND	0.10	4354762
p+m-Xylene	ug/g	0.14	0.10	4354762
o-Xylene	ug/g	ND	0.10	4354762
Total Xylenes	ug/g	0.14	0.10	4354762
Surrogate Recovery (%)				
4-Bromofluorobenzene	%	99		4354762
D10-o-Xylene	%	106		4354762
D4-1,2-Dichloroethane	%	96		4354762
D8-Toluene	%	102		4354762
RDL = Reportable Detection Limit QC Batch = Quality Control Batch ND = Not detected				

Maxxam Job #: B613731
Report Date: 2016/01/26

Terrapex Environmental Ltd
Client Project #: CB644.02
Site Location: 121 Hume Street, Collingwood, ON
Your P.O. #: 4700001396
Sampler Initials: PA

O.REG 558 TCLP LEACHATE PREPARATION (SOIL)

Maxxam ID		BRY556		
Sampling Date		2016/01/21 16:00		
COC Number		70832		
	UNITS	TCLP	RDL	QC Batch
Inorganics				
Final pH	pH	5.78		4355898
Initial pH	pH	9.55		4355898
TCLP - % Solids	%	100	0.2	4355895
TCLP Extraction Fluid	N/A	FLUID 2		4355896
RDL = Reportable Detection Limit				
QC Batch = Quality Control Batch				

Maxxam Job #: B613731
Report Date: 2016/01/26

Terrapex Environmental Ltd
Client Project #: CB644.02
Site Location: 121 Hume Street, Collingwood, ON
Your P.O. #: 4700001396
Sampler Initials: PA

O.REG 558 TCLP METALS (SOIL)

Maxxam ID		BRY556		
Sampling Date		2016/01/21 16:00		
COC Number		70832		
	UNITS	TCLP	RDL	QC Batch
Metals				
Leachable Mercury (Hg)	mg/L	ND	0.0010	4356626
Leachable Arsenic (As)	mg/L	ND	0.20	4356781
Leachable Barium (Ba)	mg/L	ND	0.20	4356781
Leachable Boron (B)	mg/L	0.13	0.10	4356781
Leachable Cadmium (Cd)	mg/L	ND	0.050	4356781
Leachable Chromium (Cr)	mg/L	ND	0.10	4356781
Leachable Lead (Pb)	mg/L	ND	0.10	4356781
Leachable Selenium (Se)	mg/L	ND	0.10	4356781
Leachable Silver (Ag)	mg/L	ND	0.010	4356781
Leachable Uranium (U)	mg/L	ND	0.010	4356781
RDL = Reportable Detection Limit				
QC Batch = Quality Control Batch				
ND = Not detected				

Maxxam Job #: B613731
Report Date: 2016/01/26

Terrapex Environmental Ltd
Client Project #: CB644.02
Site Location: 121 Hume Street, Collingwood, ON
Your P.O. #: 4700001396
Sampler Initials: PA

TEST SUMMARY

Maxxam ID: BRY556
Sample ID: TCLP
Matrix: Soil

Collected: 2016/01/21
Shipped:
Received: 2016/01/22

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	4354513	N/A	2016/01/26	Automated Statchk
ABN Compounds in soil by GC/MS	GC/MS	4355231	2016/01/22	2016/01/25	Milijana Avramovic
1,3-Dichloropropene Sum	CALC	4354564	N/A	2016/01/26	Automated Statchk
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	4357919	N/A	2016/01/26	Yang (Philip) Yu
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	4356969	2016/01/25	2016/01/26	Zhiyue (Frank) Zhu
Mercury (TCLP Leachable) (mg/L)	CV/AA	4356626	N/A	2016/01/25	Ron Morrison
Strong Acid Leachable Metals by ICPMS	ICP/MS	4358046	2016/01/26	2016/01/26	Viviana Canzonieri
Total Metals in TCLP Leachate by ICPMS	ICP1/MS	4356781	2016/01/25	2016/01/25	Cristina Petran
Moisture	BAL	4356940	N/A	2016/01/25	Valentina Kaftani
TCLP - % Solids	BAL	4355895	2016/01/22	2016/01/23	Jian (Ken) Wang
TCLP - Extraction Fluid		4355896	N/A	2016/01/23	Jian (Ken) Wang
TCLP - Initial and final pH	PH	4355898	N/A	2016/01/23	Jian (Ken) Wang
Volatile Organic Compounds in Soil	P&T/MS	4354762	N/A	2016/01/25	Dina Wang

Maxxam ID: BRY556 Dup
Sample ID: TCLP
Matrix: Soil

Collected: 2016/01/21
Shipped:
Received: 2016/01/22

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	4357919	N/A	2016/01/26	Yang (Philip) Yu
Strong Acid Leachable Metals by ICPMS	ICP/MS	4358046	2016/01/26	2016/01/26	Viviana Canzonieri

Maxxam Job #: B613731
Report Date: 2016/01/26

Terrapex Environmental Ltd
Client Project #: CB644.02
Site Location: 121 Hume Street, Collingwood, ON
Your P.O. #: 4700001396
Sampler Initials: PA

GENERAL COMMENTS

Each temperature is the average of up to three cooler temperatures taken at receipt

Package 1	0.0°C

Sample BRY556-01 : ABN analysis: Due to the nature of the sample matrix, sample required dilution. Detection limits were adjusted accordingly.

F1BTEX Analysis: The BTEX results used for the F1-BTEX calculation were obtained from Headspace-GC analysis.

VOC Analysis: Due to a level of petroleum hydrocarbon compounds beyond the appropriate range, the sample required dilution. The detection limits were adjusted accordingly.

Results relate only to the items tested.

Maxxam Job #: B613731
Report Date: 2016/01/26

Terrapex Environmental Ltd
Client Project #: CB644.02
Site Location: 121 Hume Street, Collingwood, ON
Your P.O. #: 4700001396
Sampler Initials: PA

QUALITY ASSURANCE REPORT

QA/QC				Date				
Batch	Init	QC Type	Parameter	Analyzed	Value	Recovery	UNITS	QC Limits
4354762	DW5	Matrix Spike	4-Bromofluorobenzene	2016/01/25		99	%	60 - 140
			D10-o-Xylene	2016/01/25		101	%	60 - 130
			D4-1,2-Dichloroethane	2016/01/25		92	%	60 - 140
			D8-Toluene	2016/01/25		102	%	60 - 140
			Acetone (2-Propanone)	2016/01/25		91	%	60 - 140
			Benzene	2016/01/25		90	%	60 - 140
			Bromodichloromethane	2016/01/25		91	%	60 - 140
			Bromoform	2016/01/25		100	%	60 - 140
			Bromomethane	2016/01/25		81	%	60 - 140
			Carbon Tetrachloride	2016/01/25		90	%	60 - 140
			Chlorobenzene	2016/01/25		97	%	60 - 140
			Chloroform	2016/01/25		90	%	60 - 140
			Dibromochloromethane	2016/01/25		99	%	60 - 140
			1,2-Dichlorobenzene	2016/01/25		96	%	60 - 140
			1,3-Dichlorobenzene	2016/01/25		95	%	60 - 140
			1,4-Dichlorobenzene	2016/01/25		95	%	60 - 140
			Dichlorodifluoromethane (FREON 12)	2016/01/25		88	%	60 - 140
			1,1-Dichloroethane	2016/01/25		89	%	60 - 140
			1,2-Dichloroethane	2016/01/25		90	%	60 - 140
			1,1-Dichloroethylene	2016/01/25		93	%	60 - 140
			cis-1,2-Dichloroethylene	2016/01/25		91	%	60 - 140
			trans-1,2-Dichloroethylene	2016/01/25		90	%	60 - 140
			1,2-Dichloropropane	2016/01/25		91	%	60 - 140
			cis-1,3-Dichloropropene	2016/01/25		92	%	60 - 140
			trans-1,3-Dichloropropene	2016/01/25		94	%	60 - 140
			Ethylbenzene	2016/01/25		96	%	60 - 140
			Ethylene Dibromide	2016/01/25		98	%	60 - 140
			Hexane	2016/01/25		85	%	60 - 140
			Methylene Chloride(Dichloromethane)	2016/01/25		87	%	60 - 140
			Methyl Ethyl Ketone (2-Butanone)	2016/01/25		91	%	60 - 140
			Methyl Isobutyl Ketone	2016/01/25		92	%	60 - 140
			Methyl t-butyl ether (MTBE)	2016/01/25		91	%	60 - 140
			Styrene	2016/01/25		95	%	60 - 140
			1,1,1,2-Tetrachloroethane	2016/01/25		97	%	60 - 140
			1,1,2,2-Tetrachloroethane	2016/01/25		99	%	60 - 140
			Tetrachloroethylene	2016/01/25		92	%	60 - 140
			Toluene	2016/01/25		95	%	60 - 140
			1,1,1-Trichloroethane	2016/01/25		86	%	60 - 140
			1,1,2-Trichloroethane	2016/01/25		98	%	60 - 140
			Trichloroethylene	2016/01/25		88	%	60 - 140
			Trichlorofluoromethane (FREON 11)	2016/01/25		89	%	60 - 140
			Vinyl Chloride	2016/01/25		91	%	60 - 140
			p+m-Xylene	2016/01/25		94	%	60 - 140
			o-Xylene	2016/01/25		96	%	60 - 140
4354762	DW5	Spiked Blank	4-Bromofluorobenzene	2016/01/25		100	%	60 - 140
			D10-o-Xylene	2016/01/25		91	%	60 - 130
			D4-1,2-Dichloroethane	2016/01/25		96	%	60 - 140
			D8-Toluene	2016/01/25		102	%	60 - 140
			Acetone (2-Propanone)	2016/01/25		95	%	60 - 140
			Benzene	2016/01/25		88	%	60 - 130
			Bromodichloromethane	2016/01/25		90	%	60 - 130

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QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
4354762	DW5	Method Blank	Bromoform	2016/01/25		98	%	60 - 130
			Bromomethane	2016/01/25		77	%	60 - 140
			Carbon Tetrachloride	2016/01/25		86	%	60 - 130
			Chlorobenzene	2016/01/25		94	%	60 - 130
			Chloroform	2016/01/25		88	%	60 - 130
			Dibromochloromethane	2016/01/25		98	%	60 - 130
			1,2-Dichlorobenzene	2016/01/25		92	%	60 - 130
			1,3-Dichlorobenzene	2016/01/25		91	%	60 - 130
			1,4-Dichlorobenzene	2016/01/25		91	%	60 - 130
			Dichlorodifluoromethane (FREON 12)	2016/01/25		86	%	60 - 140
			1,1-Dichloroethane	2016/01/25		87	%	60 - 130
			1,2-Dichloroethane	2016/01/25		90	%	60 - 130
			1,1-Dichloroethylene	2016/01/25		90	%	60 - 130
			cis-1,2-Dichloroethylene	2016/01/25		89	%	60 - 130
			trans-1,2-Dichloroethylene	2016/01/25		87	%	60 - 130
			1,2-Dichloropropane	2016/01/25		91	%	60 - 130
			cis-1,3-Dichloropropene	2016/01/25		92	%	60 - 130
			trans-1,3-Dichloropropene	2016/01/25		93	%	60 - 130
			Ethylbenzene	2016/01/25		92	%	60 - 130
			Ethylene Dibromide	2016/01/25		98	%	60 - 130
			Hexane	2016/01/25		88	%	60 - 130
			Methylene Chloride(Dichloromethane)	2016/01/25		86	%	60 - 130
			Methyl Ethyl Ketone (2-Butanone)	2016/01/25		95	%	60 - 140
			Methyl Isobutyl Ketone	2016/01/25		95	%	60 - 130
			Methyl t-butyl ether (MTBE)	2016/01/25		93	%	60 - 130
			Styrene	2016/01/25		92	%	60 - 130
			1,1,1,2-Tetrachloroethane	2016/01/25		95	%	60 - 130
			1,1,2,2-Tetrachloroethane	2016/01/25		99	%	60 - 130
			Tetrachloroethylene	2016/01/25		89	%	60 - 130
			Toluene	2016/01/25		91	%	60 - 130
			1,1,1-Trichloroethane	2016/01/25		84	%	60 - 130
			1,1,2-Trichloroethane	2016/01/25		97	%	60 - 130
			Trichloroethylene	2016/01/25		85	%	60 - 130
			Trichlorofluoromethane (FREON 11)	2016/01/25		86	%	60 - 130
			Vinyl Chloride	2016/01/25		89	%	60 - 130
			p+m-Xylene	2016/01/25		90	%	60 - 130
			o-Xylene	2016/01/25		93	%	60 - 130
			4-Bromofluorobenzene	2016/01/25		98	%	60 - 140
			D10-o-Xylene	2016/01/25		99	%	60 - 130
			D4-1,2-Dichloroethane	2016/01/25		95	%	60 - 140
			D8-Toluene	2016/01/25		104	%	60 - 140
			Acetone (2-Propanone)	2016/01/25	ND, RDL=0.50		ug/g	
			Benzene	2016/01/25	ND, RDL=0.020		ug/g	
			Bromodichloromethane	2016/01/25	ND, RDL=0.050		ug/g	
			Bromoform	2016/01/25	ND, RDL=0.050		ug/g	
			Bromomethane	2016/01/25	ND, RDL=0.050		ug/g	

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			Carbon Tetrachloride	2016/01/25	ND, RDL=0.050		ug/g	
			Chlorobenzene	2016/01/25	ND, RDL=0.050		ug/g	
			Chloroform	2016/01/25	ND, RDL=0.050		ug/g	
			Dibromochloromethane	2016/01/25	ND, RDL=0.050		ug/g	
			1,2-Dichlorobenzene	2016/01/25	ND, RDL=0.050		ug/g	
			1,3-Dichlorobenzene	2016/01/25	ND, RDL=0.050		ug/g	
			1,4-Dichlorobenzene	2016/01/25	ND, RDL=0.050		ug/g	
			Dichlorodifluoromethane (FREON 12)	2016/01/25	ND, RDL=0.050		ug/g	
			1,1-Dichloroethane	2016/01/25	ND, RDL=0.050		ug/g	
			1,2-Dichloroethane	2016/01/25	ND, RDL=0.050		ug/g	
			1,1-Dichloroethylene	2016/01/25	ND, RDL=0.050		ug/g	
			cis-1,2-Dichloroethylene	2016/01/25	ND, RDL=0.050		ug/g	
			trans-1,2-Dichloroethylene	2016/01/25	ND, RDL=0.050		ug/g	
			1,2-Dichloropropane	2016/01/25	ND, RDL=0.050		ug/g	
			cis-1,3-Dichloropropene	2016/01/25	ND, RDL=0.030		ug/g	
			trans-1,3-Dichloropropene	2016/01/25	ND, RDL=0.040		ug/g	
			Ethylbenzene	2016/01/25	ND, RDL=0.020		ug/g	
			Ethylene Dibromide	2016/01/25	ND, RDL=0.050		ug/g	
			Hexane	2016/01/25	ND, RDL=0.050		ug/g	
			Methylene Chloride(Dichloromethane)	2016/01/25	ND, RDL=0.050		ug/g	
			Methyl Ethyl Ketone (2-Butanone)	2016/01/25	ND, RDL=0.50		ug/g	
			Methyl Isobutyl Ketone	2016/01/25	ND, RDL=0.50		ug/g	
			Methyl t-butyl ether (MTBE)	2016/01/25	ND, RDL=0.050		ug/g	
			Styrene	2016/01/25	ND, RDL=0.050		ug/g	

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QA/QC	Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
				1,1,1,2-Tetrachloroethane	2016/01/25	ND, RDL=0.050		ug/g	
				1,1,2,2-Tetrachloroethane	2016/01/25	ND, RDL=0.050		ug/g	
				Tetrachloroethylene	2016/01/25	ND, RDL=0.050		ug/g	
				Toluene	2016/01/25	ND, RDL=0.020		ug/g	
				1,1,1-Trichloroethane	2016/01/25	ND, RDL=0.050		ug/g	
				1,1,2-Trichloroethane	2016/01/25	ND, RDL=0.050		ug/g	
				Trichloroethylene	2016/01/25	ND, RDL=0.050		ug/g	
				Trichlorofluoromethane (FREON 11)	2016/01/25	ND, RDL=0.050		ug/g	
				Vinyl Chloride	2016/01/25	ND, RDL=0.020		ug/g	
				p+m-Xylene	2016/01/25	ND, RDL=0.020		ug/g	
				o-Xylene	2016/01/25	ND, RDL=0.020		ug/g	
				Total Xylenes	2016/01/25	ND, RDL=0.020		ug/g	
4354762	DW5	RPD		Acetone (2-Propanone)	2016/01/25	NC		%	50
				Benzene	2016/01/25	NC		%	50
				Bromodichloromethane	2016/01/25	NC		%	50
				Bromoform	2016/01/25	NC		%	50
				Bromomethane	2016/01/25	NC		%	50
				Carbon Tetrachloride	2016/01/25	NC		%	50
				Chlorobenzene	2016/01/25	NC		%	50
				Chloroform	2016/01/25	NC		%	50
				Dibromochloromethane	2016/01/25	NC		%	50
				1,2-Dichlorobenzene	2016/01/25	NC		%	50
				1,3-Dichlorobenzene	2016/01/25	NC		%	50
				1,4-Dichlorobenzene	2016/01/25	NC		%	50
				Dichlorodifluoromethane (FREON 12)	2016/01/25	NC		%	50
				1,1-Dichloroethane	2016/01/25	NC		%	50
				1,2-Dichloroethane	2016/01/25	NC		%	50
				1,1-Dichloroethylene	2016/01/25	NC		%	50
				cis-1,2-Dichloroethylene	2016/01/25	NC		%	50
				trans-1,2-Dichloroethylene	2016/01/25	NC		%	50
				1,2-Dichloropropane	2016/01/25	NC		%	50
				cis-1,3-Dichloropropene	2016/01/25	NC		%	50
				trans-1,3-Dichloropropene	2016/01/25	NC		%	50
				Ethylbenzene	2016/01/25	NC		%	50
				Ethylene Dibromide	2016/01/25	NC		%	50
				Hexane	2016/01/25	NC		%	50
				Methylene Chloride(Dichloromethane)	2016/01/25	NC		%	50
				Methyl Ethyl Ketone (2-Butanone)	2016/01/25	NC		%	50

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QA/QC	Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
				Methyl Isobutyl Ketone	2016/01/25	NC		%	50
				Methyl t-butyl ether (MTBE)	2016/01/25	NC		%	50
				Styrene	2016/01/25	NC		%	50
				1,1,1,2-Tetrachloroethane	2016/01/25	NC		%	50
				1,1,2,2-Tetrachloroethane	2016/01/25	NC		%	50
				Tetrachloroethylene	2016/01/25	NC		%	50
				Toluene	2016/01/25	NC		%	50
				1,1,1-Trichloroethane	2016/01/25	NC		%	50
				1,1,2-Trichloroethane	2016/01/25	NC		%	50
				Trichloroethylene	2016/01/25	NC		%	50
				Trichlorofluoromethane (FREON 11)	2016/01/25	NC		%	50
				Vinyl Chloride	2016/01/25	NC		%	50
				p+m-Xylene	2016/01/25	NC		%	50
				o-Xylene	2016/01/25	NC		%	50
				Total Xylenes	2016/01/25	NC		%	50
4355231	MA		Matrix Spike	2,4,6-Tribromophenol	2016/01/25		79	%	50 - 130
				2-Fluorobiphenyl	2016/01/25		80	%	50 - 130
				D14-Terphenyl (FS)	2016/01/25		103	%	50 - 130
				D5-Nitrobenzene	2016/01/25		75	%	50 - 130
				1,2,4-Trichlorobenzene	2016/01/25		66	%	50 - 130
				1-Methylnaphthalene	2016/01/25		84	%	50 - 130
				2,4,5-Trichlorophenol	2016/01/25		86	%	50 - 130
				2,4,6-Trichlorophenol	2016/01/25		80	%	50 - 130
				2,4-Dichlorophenol	2016/01/25		81	%	50 - 130
				2,4-Dimethylphenol	2016/01/25		91	%	30 - 130
				2,4-Dinitrophenol	2016/01/25		40	%	30 - 130
				2,4-Dinitrotoluene	2016/01/25		85	%	50 - 130
				2,6-Dinitrotoluene	2016/01/25		82	%	50 - 130
				2-Chlorophenol	2016/01/25		79	%	50 - 130
				2-Methylnaphthalene	2016/01/25		82	%	50 - 130
				3,3'-Dichlorobenzidine	2016/01/25		120	%	30 - 130
				Acenaphthene	2016/01/25		91	%	50 - 130
				Acenaphthylene	2016/01/25		92	%	50 - 130
				Anthracene	2016/01/25		97	%	50 - 130
				Benzo(a)anthracene	2016/01/25		111	%	50 - 130
				Benzo(a)pyrene	2016/01/25		100	%	50 - 130
				Benzo(b,j)fluoranthene	2016/01/25		98	%	50 - 130
				Benzo(g,h,i)perylene	2016/01/25		91	%	50 - 130
				Benzo(k)fluoranthene	2016/01/25		108	%	50 - 130
				Biphenyl	2016/01/25		89	%	50 - 130
				Bis(2-chloroethyl)ether	2016/01/25		84	%	50 - 130
				Bis(2-chloroisopropyl)ether	2016/01/25		76	%	50 - 130
				Bis(2-ethylhexyl)phthalate	2016/01/25		106	%	50 - 130
				Chrysene	2016/01/25		105	%	50 - 130
				Dibenz(a,h)anthracene	2016/01/25		92	%	50 - 130
				Diethyl phthalate	2016/01/25		96	%	50 - 130
				Dimethyl phthalate	2016/01/25		99	%	50 - 130
				Fluoranthene	2016/01/25		110	%	50 - 130
				Fluorene	2016/01/25		97	%	50 - 130
				Indeno(1,2,3-cd)pyrene	2016/01/25		90	%	50 - 130
				Naphthalene	2016/01/25		77	%	50 - 130

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QA/QC				Date					
Batch	Init	QC Type	Parameter	Analyzed	Value	Recovery	UNITS	QC Limits	
4355231	MA	Spiked Blank	p-Chloroaniline	2016/01/25		101	%	30 - 130	
			Pentachlorophenol	2016/01/25		68	%	50 - 130	
			Phenanthrene	2016/01/25		95	%	50 - 130	
			Phenol	2016/01/25		86	%	30 - 130	
			Pyrene	2016/01/25		103	%	50 - 130	
			2,4,6-Tribromophenol	2016/01/25		97	%	50 - 130	
			2-Fluorobiphenyl	2016/01/25		93	%	50 - 130	
			D14-Terphenyl (FS)	2016/01/25		103	%	50 - 130	
			D5-Nitrobenzene	2016/01/25		89	%	50 - 130	
			1,2,4-Trichlorobenzene	2016/01/25		85	%	50 - 130	
			1-Methylnaphthalene	2016/01/25		93	%	50 - 130	
			2,4,5-Trichlorophenol	2016/01/25		98	%	50 - 130	
			2,4,6-Trichlorophenol	2016/01/25		95	%	50 - 130	
			2,4-Dichlorophenol	2016/01/25		91	%	50 - 130	
			2,4-Dimethylphenol	2016/01/25		83	%	30 - 130	
			2,4-Dinitrophenol	2016/01/25		17 (1)	%	30 - 130	
			2,4-Dinitrotoluene	2016/01/25		90	%	50 - 130	
			2,6-Dinitrotoluene	2016/01/25		90	%	50 - 130	
			2-Chlorophenol	2016/01/25		96	%	50 - 130	
			2-Methylnaphthalene	2016/01/25		91	%	50 - 130	
			3,3'-Dichlorobenzidine	2016/01/25		83	%	30 - 130	
			Acenaphthene	2016/01/25		95	%	50 - 130	
			Acenaphthylene	2016/01/25		97	%	50 - 130	
			Anthracene	2016/01/25		97	%	50 - 130	
			Benzo(a)anthracene	2016/01/25		109	%	50 - 130	
			Benzo(a)pyrene	2016/01/25		98	%	50 - 130	
			Benzo(b,j)fluoranthene	2016/01/25		98	%	50 - 130	
			Benzo(g,h,i)perylene	2016/01/25		92	%	50 - 130	
			Benzo(k)fluoranthene	2016/01/25		108	%	50 - 130	
			Biphenyl	2016/01/25		96	%	50 - 130	
			Bis(2-chloroethyl)ether	2016/01/25		92	%	50 - 130	
			Bis(2-chloroisopropyl)ether	2016/01/25		89	%	50 - 130	
			Bis(2-ethylhexyl)phthalate	2016/01/25		99	%	50 - 130	
			Chrysene	2016/01/25		103	%	50 - 130	
			Dibenz(a,h)anthracene	2016/01/25		93	%	50 - 130	
			Diethyl phthalate	2016/01/25		100	%	50 - 130	
			Dimethyl phthalate	2016/01/25		103	%	50 - 130	
			Fluoranthene	2016/01/25		107	%	50 - 130	
			Fluorene	2016/01/25		99	%	50 - 130	
			Indeno(1,2,3-cd)pyrene	2016/01/25		90	%	50 - 130	
			Naphthalene	2016/01/25		88	%	50 - 130	
			p-Chloroaniline	2016/01/25		70	%	30 - 130	
			Pentachlorophenol	2016/01/25		74	%	50 - 130	
			Phenanthrene	2016/01/25		96	%	50 - 130	
			Phenol	2016/01/25		95	%	30 - 130	
			Pyrene	2016/01/25		101	%	50 - 130	
4355231	MA	Method Blank	2,4,6-Tribromophenol	2016/01/25		78	%	50 - 130	
			2-Fluorobiphenyl	2016/01/25		92	%	50 - 130	
			D14-Terphenyl (FS)	2016/01/25		105	%	50 - 130	
			D5-Nitrobenzene	2016/01/25		87	%	50 - 130	

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			1,2,4-Trichlorobenzene	2016/01/25	ND, RDL=0.05		ug/g	
			1-Methylnaphthalene	2016/01/25	ND, RDL=0.03		ug/g	
			2,4,5-Trichlorophenol	2016/01/25	ND, RDL=0.08		ug/g	
			2,4,6-Trichlorophenol	2016/01/25	ND, RDL=0.1		ug/g	
			2,4-Dichlorophenol	2016/01/25	ND, RDL=0.1		ug/g	
			2,4-Dimethylphenol	2016/01/25	ND, RDL=0.2		ug/g	
			2,4-Dinitrophenol	2016/01/25	ND, RDL=0.5		ug/g	
			2,4-Dinitrotoluene	2016/01/25	ND, RDL=0.1		ug/g	
			2,6-Dinitrotoluene	2016/01/25	ND, RDL=0.1		ug/g	
			2-Chlorophenol	2016/01/25	ND, RDL=0.08		ug/g	
			2-Methylnaphthalene	2016/01/25	ND, RDL=0.03		ug/g	
			3,3'-Dichlorobenzidine	2016/01/25	ND, RDL=0.5		ug/g	
			Acenaphthene	2016/01/25	ND, RDL=0.03		ug/g	
			Acenaphthylene	2016/01/25	ND, RDL=0.05		ug/g	
			Anthracene	2016/01/25	ND, RDL=0.03		ug/g	
			Benzo(a)anthracene	2016/01/25	ND, RDL=0.05		ug/g	
			Benzo(a)pyrene	2016/01/25	ND, RDL=0.05		ug/g	
			Benzo(b/j)fluoranthene	2016/01/25	ND, RDL=0.1		ug/g	
			Benzo(g,h,i)perylene	2016/01/25	ND, RDL=0.1		ug/g	
			Benzo(k)fluoranthene	2016/01/25	ND, RDL=0.03		ug/g	
			Biphenyl	2016/01/25	ND, RDL=0.05		ug/g	
			Bis(2-chloroethyl)ether	2016/01/25	ND, RDL=0.2		ug/g	
			Bis(2-chloroisopropyl)ether	2016/01/25	ND, RDL=0.1		ug/g	
			Bis(2-ethylhexyl)phthalate	2016/01/25	ND,RDL=1		ug/g	

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
4355231	MA	RPD	Chrysene	2016/01/25	ND, RDL=0.05		ug/g	
			Dibenz(a,h)anthracene	2016/01/25	ND, RDL=0.05		ug/g	
			Diethyl phthalate	2016/01/25	ND, RDL=0.2		ug/g	
			Dimethyl phthalate	2016/01/25	ND, RDL=0.2		ug/g	
			Fluoranthene	2016/01/25	ND, RDL=0.05		ug/g	
			Fluorene	2016/01/25	ND, RDL=0.03		ug/g	
			Indeno(1,2,3-cd)pyrene	2016/01/25	ND, RDL=0.08		ug/g	
			Naphthalene	2016/01/25	ND, RDL=0.03		ug/g	
			p-Chloroaniline	2016/01/25	ND, RDL=0.2		ug/g	
			Pentachlorophenol	2016/01/25	ND, RDL=0.1		ug/g	
			Phenanthrene	2016/01/25	ND, RDL=0.05		ug/g	
			Phenol	2016/01/25	ND, RDL=0.09		ug/g	
			Pyrene	2016/01/25	ND, RDL=0.05		ug/g	
			1,2,4-Trichlorobenzene	2016/01/25	NC		%	40
			1-Methylnaphthalene	2016/01/25	NC		%	40
			2,4,5-Trichlorophenol	2016/01/25	NC		%	40
			2,4,6-Trichlorophenol	2016/01/25	NC		%	40
			2,4-Dichlorophenol	2016/01/25	NC		%	40
			2,4-Dimethylphenol	2016/01/25	NC		%	40
			2,4-Dinitrophenol	2016/01/25	NC		%	40
			2,4-Dinitrotoluene	2016/01/25	NC		%	40
			2,6-Dinitrotoluene	2016/01/25	NC		%	40
			2-Chlorophenol	2016/01/25	NC		%	40
			2-Methylnaphthalene	2016/01/25	NC		%	40
			3,3'-Dichlorobenzidine	2016/01/25	NC		%	40
			Acenaphthene	2016/01/25	NC		%	40
			Acenaphthylene	2016/01/25	NC		%	40
			Anthracene	2016/01/25	NC		%	40
			Benzo(a)anthracene	2016/01/25	NC		%	40
			Benzo(a)pyrene	2016/01/25	NC		%	40
			Benzo(b,j)fluoranthene	2016/01/25	NC		%	40
			Benzo(g,h,i)perylene	2016/01/25	NC		%	40
			Benzo(k)fluoranthene	2016/01/25	NC		%	40
			Biphenyl	2016/01/25	NC		%	40
			Bis(2-chloroethyl)ether	2016/01/25	NC		%	40
			Bis(2-chloroisopropyl)ether	2016/01/25	NC		%	40
			Bis(2-ethylhexyl)phthalate	2016/01/25	NC		%	40

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QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Chrysene	2016/01/25	NC		%	40
			Dibenz(a,h)anthracene	2016/01/25	NC		%	40
			Diethyl phthalate	2016/01/25	NC		%	40
			Dimethyl phthalate	2016/01/25	NC		%	40
			Fluoranthene	2016/01/25	NC		%	40
			Fluorene	2016/01/25	NC		%	40
			Indeno(1,2,3-cd)pyrene	2016/01/25	NC		%	40
			Naphthalene	2016/01/25	NC		%	40
			p-Chloroaniline	2016/01/25	NC		%	40
			Pentachlorophenol	2016/01/25	NC		%	40
			Phenanthrene	2016/01/25	NC		%	40
			Phenol	2016/01/25	NC		%	40
			Pyrene	2016/01/25	NC		%	40
4356626	RON	Matrix Spike	Leachable Mercury (Hg)	2016/01/25		103	%	75 - 125
4356626	RON	Leachate Blank	Leachable Mercury (Hg)	2016/01/25	ND, RDL=0.0010		mg/L	
4356626	RON	Spiked Blank	Leachable Mercury (Hg)	2016/01/25		91	%	80 - 120
4356626	RON	Method Blank	Leachable Mercury (Hg)	2016/01/25	ND, RDL=0.0010		mg/L	
4356626	RON	RPD	Leachable Mercury (Hg)	2016/01/25	NC		%	25
4356781	CPE	Matrix Spike	Leachable Arsenic (As)	2016/01/25		97	%	80 - 120
			Leachable Barium (Ba)	2016/01/25		NC	%	80 - 120
			Leachable Boron (B)	2016/01/25		94	%	80 - 120
			Leachable Cadmium (Cd)	2016/01/25		97	%	80 - 120
			Leachable Chromium (Cr)	2016/01/25		95	%	80 - 120
			Leachable Lead (Pb)	2016/01/25		90	%	80 - 120
			Leachable Selenium (Se)	2016/01/25		95	%	80 - 120
			Leachable Silver (Ag)	2016/01/25		93	%	80 - 120
			Leachable Uranium (U)	2016/01/25		92	%	80 - 120
4356781	CPE	Leachate Blank	Leachable Arsenic (As)	2016/01/25	ND, RDL=0.20		mg/L	
			Leachable Barium (Ba)	2016/01/25	ND, RDL=0.20		mg/L	
			Leachable Boron (B)	2016/01/25	ND, RDL=0.10		mg/L	
			Leachable Cadmium (Cd)	2016/01/25	ND, RDL=0.050		mg/L	
			Leachable Chromium (Cr)	2016/01/25	ND, RDL=0.10		mg/L	
			Leachable Lead (Pb)	2016/01/25	ND, RDL=0.10		mg/L	
			Leachable Selenium (Se)	2016/01/25	ND, RDL=0.10		mg/L	
			Leachable Silver (Ag)	2016/01/25	ND, RDL=0.010		mg/L	
			Leachable Uranium (U)	2016/01/25	ND, RDL=0.010		mg/L	
4356781	CPE	Spiked Blank	Leachable Arsenic (As)	2016/01/25		96	%	80 - 120
			Leachable Barium (Ba)	2016/01/25		100	%	80 - 120
			Leachable Boron (B)	2016/01/25		97	%	80 - 120

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QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
4356781	CPE	Method Blank	Leachable Cadmium (Cd)	2016/01/25		96	%	80 - 120
			Leachable Chromium (Cr)	2016/01/25		98	%	80 - 120
			Leachable Lead (Pb)	2016/01/25		95	%	80 - 120
			Leachable Selenium (Se)	2016/01/25		97	%	80 - 120
			Leachable Silver (Ag)	2016/01/25		95	%	80 - 120
			Leachable Uranium (U)	2016/01/25		93	%	80 - 120
			Leachable Arsenic (As)	2016/01/25	ND, RDL=0.20		mg/L	
			Leachable Barium (Ba)	2016/01/25	ND, RDL=0.20		mg/L	
			Leachable Boron (B)	2016/01/25	ND, RDL=0.10		mg/L	
			Leachable Cadmium (Cd)	2016/01/25	ND, RDL=0.050		mg/L	
			Leachable Chromium (Cr)	2016/01/25	ND, RDL=0.10		mg/L	
			Leachable Lead (Pb)	2016/01/25	ND, RDL=0.10		mg/L	
			Leachable Selenium (Se)	2016/01/25	ND, RDL=0.10		mg/L	
			Leachable Silver (Ag)	2016/01/25	ND, RDL=0.010		mg/L	
			Leachable Uranium (U)	2016/01/25	ND, RDL=0.010		mg/L	
4356781	CPE	RPD	Leachable Arsenic (As)	2016/01/25	NC		%	35
			Leachable Barium (Ba)	2016/01/25	NC		%	35
			Leachable Boron (B)	2016/01/25	NC		%	35
			Leachable Cadmium (Cd)	2016/01/25	NC		%	35
			Leachable Chromium (Cr)	2016/01/25	NC		%	35
			Leachable Lead (Pb)	2016/01/25	NC		%	35
			Leachable Selenium (Se)	2016/01/25	NC		%	35
			Leachable Silver (Ag)	2016/01/25	NC		%	35
			Leachable Uranium (U)	2016/01/25	NC		%	35
4356940	NS3	RPD	Moisture	2016/01/25	3.8		%	20
4356969	ZZ	Matrix Spike	o-Terphenyl	2016/01/25		92	%	60 - 130
			F2 (C10-C16 Hydrocarbons)	2016/01/25		90	%	50 - 130
			F3 (C16-C34 Hydrocarbons)	2016/01/25		93	%	50 - 130
			F4 (C34-C50 Hydrocarbons)	2016/01/25		96	%	50 - 130
4356969	ZZ	Spiked Blank	o-Terphenyl	2016/01/25		90	%	60 - 130
			F2 (C10-C16 Hydrocarbons)	2016/01/25		83	%	80 - 120
			F3 (C16-C34 Hydrocarbons)	2016/01/25		86	%	80 - 120
			F4 (C34-C50 Hydrocarbons)	2016/01/25		89	%	80 - 120
4356969	ZZ	Method Blank	o-Terphenyl	2016/01/25		92	%	60 - 130
			F2 (C10-C16 Hydrocarbons)	2016/01/25	ND, RDL=10		ug/g	
			F3 (C16-C34 Hydrocarbons)	2016/01/25	ND, RDL=50		ug/g	
			F4 (C34-C50 Hydrocarbons)	2016/01/25	ND, RDL=50		ug/g	
4356969	ZZ	RPD	F2 (C10-C16 Hydrocarbons)	2016/01/26	NC		%	30

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QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
4357919	YY	Spiked Blank	F3 (C16-C34 Hydrocarbons)	2016/01/26	NC		%	30
			F4 (C34-C50 Hydrocarbons)	2016/01/26	NC		%	30
			1,4-Difluorobenzene	2016/01/26		101	%	60 - 140
			4-Bromofluorobenzene	2016/01/26		101	%	60 - 140
			D10-Ethylbenzene	2016/01/26		81	%	60 - 140
			D4-1,2-Dichloroethane	2016/01/26		97	%	60 - 140
4357919	YY	RPD	F1 (C6-C10)	2016/01/26		95	%	80 - 120
4357919	YY	Method Blank	F1 (C6-C10)	2016/01/26	1.3		%	30
4357919	YY	Method Blank	1,4-Difluorobenzene	2016/01/26		104	%	60 - 140
			4-Bromofluorobenzene	2016/01/26		101	%	60 - 140
			D10-Ethylbenzene	2016/01/26		85	%	60 - 140
			D4-1,2-Dichloroethane	2016/01/26		99	%	60 - 140
			F1 (C6-C10)	2016/01/26	ND, RDL=10		ug/g	
4357919	YY	RPD [BRY556-05]	F1 (C6-C10) - BTEX	2016/01/26	ND, RDL=10		ug/g	
			F1 (C6-C10)	2016/01/26	NC		%	30
			F1 (C6-C10) - BTEX	2016/01/26	NC		%	30
4358046	VIV	Matrix Spike [BRY556-01]	Acid Extractable Antimony (Sb)	2016/01/26		99	%	75 - 125
			Acid Extractable Arsenic (As)	2016/01/26		98	%	75 - 125
			Acid Extractable Barium (Ba)	2016/01/26		NC	%	75 - 125
			Acid Extractable Beryllium (Be)	2016/01/26		94	%	75 - 125
			Acid Extractable Boron (B)	2016/01/26		88	%	75 - 125
			Acid Extractable Cadmium (Cd)	2016/01/26		101	%	75 - 125
			Acid Extractable Chromium (Cr)	2016/01/26		95	%	75 - 125
			Acid Extractable Cobalt (Co)	2016/01/26		95	%	75 - 125
			Acid Extractable Copper (Cu)	2016/01/26		93	%	75 - 125
			Acid Extractable Lead (Pb)	2016/01/26		NC	%	75 - 125
			Acid Extractable Molybdenum (Mo)	2016/01/26		101	%	75 - 125
			Acid Extractable Nickel (Ni)	2016/01/26		96	%	75 - 125
			Acid Extractable Selenium (Se)	2016/01/26		96	%	75 - 125
			Acid Extractable Silver (Ag)	2016/01/26		102	%	75 - 125
			Acid Extractable Thallium (Tl)	2016/01/26		96	%	75 - 125
			Acid Extractable Uranium (U)	2016/01/26		97	%	75 - 125
			Acid Extractable Vanadium (V)	2016/01/26		99	%	75 - 125
			Acid Extractable Zinc (Zn)	2016/01/26		NC	%	75 - 125
			Acid Extractable Mercury (Hg)	2016/01/26		104	%	75 - 125
			Acid Extractable Antimony (Sb)	2016/01/26		98	%	80 - 120
			Acid Extractable Arsenic (As)	2016/01/26		99	%	80 - 120
			Acid Extractable Barium (Ba)	2016/01/26		107	%	80 - 120
			Acid Extractable Beryllium (Be)	2016/01/26		95	%	80 - 120
			Acid Extractable Boron (B)	2016/01/26		93	%	80 - 120
			Acid Extractable Cadmium (Cd)	2016/01/26		99	%	80 - 120
			Acid Extractable Chromium (Cr)	2016/01/26		103	%	80 - 120
			Acid Extractable Cobalt (Co)	2016/01/26		100	%	80 - 120
			Acid Extractable Copper (Cu)	2016/01/26		100	%	80 - 120
			Acid Extractable Lead (Pb)	2016/01/26		101	%	80 - 120
			Acid Extractable Molybdenum (Mo)	2016/01/26		100	%	80 - 120
			Acid Extractable Nickel (Ni)	2016/01/26		101	%	80 - 120
			Acid Extractable Selenium (Se)	2016/01/26		99	%	80 - 120
			Acid Extractable Silver (Ag)	2016/01/26		101	%	80 - 120

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QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
4358046	VIV	Method Blank	Acid Extractable Thallium (Tl)	2016/01/26		99	%	80 - 120
			Acid Extractable Uranium (U)	2016/01/26		98	%	80 - 120
			Acid Extractable Vanadium (V)	2016/01/26		103	%	80 - 120
			Acid Extractable Zinc (Zn)	2016/01/26		98	%	80 - 120
			Acid Extractable Mercury (Hg)	2016/01/26		107	%	80 - 120
			Acid Extractable Antimony (Sb)	2016/01/26	ND, RDL=0.20		ug/g	
			Acid Extractable Arsenic (As)	2016/01/26	ND, RDL=1.0		ug/g	
			Acid Extractable Barium (Ba)	2016/01/26	ND, RDL=0.50		ug/g	
			Acid Extractable Beryllium (Be)	2016/01/26	ND, RDL=0.20		ug/g	
			Acid Extractable Boron (B)	2016/01/26	ND, RDL=5.0		ug/g	
			Acid Extractable Cadmium (Cd)	2016/01/26	ND, RDL=0.10		ug/g	
			Acid Extractable Chromium (Cr)	2016/01/26	ND, RDL=1.0		ug/g	
			Acid Extractable Cobalt (Co)	2016/01/26	ND, RDL=0.10		ug/g	
			Acid Extractable Copper (Cu)	2016/01/26	ND, RDL=0.50		ug/g	
			Acid Extractable Lead (Pb)	2016/01/26	ND, RDL=1.0		ug/g	
			Acid Extractable Molybdenum (Mo)	2016/01/26	ND, RDL=0.50		ug/g	
			Acid Extractable Nickel (Ni)	2016/01/26	ND, RDL=0.50		ug/g	
			Acid Extractable Selenium (Se)	2016/01/26	ND, RDL=0.50		ug/g	
			Acid Extractable Silver (Ag)	2016/01/26	ND, RDL=0.20		ug/g	
			Acid Extractable Thallium (Tl)	2016/01/26	ND, RDL=0.050		ug/g	
			Acid Extractable Uranium (U)	2016/01/26	ND, RDL=0.050		ug/g	
			Acid Extractable Vanadium (V)	2016/01/26	ND, RDL=5.0		ug/g	
			Acid Extractable Zinc (Zn)	2016/01/26	ND, RDL=5.0		ug/g	
			Acid Extractable Mercury (Hg)	2016/01/26	ND, RDL=0.050		ug/g	
4358046	VIV	RPD [BRY556-01]	Acid Extractable Antimony (Sb)	2016/01/26	NC		%	30
			Acid Extractable Arsenic (As)	2016/01/26	NC		%	30
			Acid Extractable Barium (Ba)	2016/01/26	1.5		%	30
			Acid Extractable Beryllium (Be)	2016/01/26	NC		%	30
			Acid Extractable Boron (B)	2016/01/26	NC		%	30
			Acid Extractable Cadmium (Cd)	2016/01/26	NC		%	30

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Acid Extractable Chromium (Cr)	2016/01/26	NC		%	30
			Acid Extractable Cobalt (Co)	2016/01/26	8.1		%	30
			Acid Extractable Copper (Cu)	2016/01/26	10		%	30
			Acid Extractable Lead (Pb)	2016/01/26	9.9		%	30
			Acid Extractable Molybdenum (Mo)	2016/01/26	NC		%	30
			Acid Extractable Nickel (Ni)	2016/01/26	0.49		%	30
			Acid Extractable Selenium (Se)	2016/01/26	NC		%	30
			Acid Extractable Silver (Ag)	2016/01/26	NC		%	30
			Acid Extractable Thallium (Tl)	2016/01/26	NC		%	30
			Acid Extractable Uranium (U)	2016/01/26	NC		%	30
			Acid Extractable Vanadium (V)	2016/01/26	NC		%	30
			Acid Extractable Zinc (Zn)	2016/01/26	NC		%	30
			Acid Extractable Mercury (Hg)	2016/01/26	NC		%	30

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.

Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.

Leachate Blank: A blank matrix containing all reagents used in the leaching procedure. Used to determine any process contamination.

Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.

Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.

Surrogate: A pure or isotopically labeled compound whose behavior mirrors the analytes of interest. Used to evaluate extraction efficiency.

NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spiked amount was too small to permit a reliable recovery calculation (matrix spike concentration was less than 2x that of the native sample concentration).

NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (one or both samples < 5x RDL).

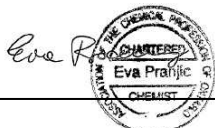
(1) The recovery was below the lower control limit. This may represent a low bias in some results for this specific analyte.

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VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by the following individual(s).



Ewa Pranjić, M.Sc., C.Chem, Scientific Specialist

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

M

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CHAIN OF CUSTODY RECORD

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INVOICE INFORMATION		REPORT INFORMATION (if differs from invoice)		PROJECT INFORMATION		TURNAROUND TIME (TAT) REQUIRED	
Company Name: <u>Suncor</u>	Contact Name: <u>Ken Todder</u>	Company Name: <u>Tenape Environmental</u>	Contact Name: <u>Jeff Stevenson / Philip Arlos</u>	Quotation #: <u>31659</u>	P.O. #: <u>-</u>	☐ Regular TAT (5-7 days)	
Address: <u>3275 Rebecca St</u>	Address: <u>970 Brant St. Unit 66</u>	Address: <u>Burlington, ON</u>		Project #: <u>CB644-02</u>	PLEASE PROVIDE ADVANCE NOTICE FOR RUSH PROJECTS		
Phone: <u>905-469-3754</u>	Phone: <u>905-632-5934</u>	Phone: <u>905-632-5934</u>		Site Location: <u>121 Hume St. Collingwood</u>	Rush TAT (Applicable Surcharge)		
Email: <u>ktodder@suncor.com</u>	Email: <u>jstevenson@tenape.com / p.arlos@tenape.com</u>	Email: <u>jstevenson@tenape.com / p.arlos@tenape.com</u>		Site #: <u>60680</u>	☒ 1 Day (100%) ☒ 2 Days (50%) ☐ 3-4 Days (25%)		
MOE REGULATED DRINKING WATER OR WATER INTENDED FOR HUMAN CONSUMPTION MUST BE SUBMITTED ON THE MAXXAM DRINKING WATER CHAIN OF CUSTODY				ANALYSIS REQUESTED		Rush Confirmation #: <u>MOD20160120-01</u>	
REGULATION 153 (2011)		OTHER REGULATIONS		FIELD FILTERED (PLEASE CIRCLE) Metals / Hg / CrVI BTEX, PHCs (F-F4) VOCs PAHs Reg 153 Metals Full list		Date Required: <u>Monday Jan-25-16</u>	
☐ Table 1 ☐ Res/Park ☐ Med/Fine ☒ Table 2 ☒ Ind/Comm ☒ Coarse ☐ Table 3 ☐ Agri/Other ☐ Table 4		☐ CCME ☐ Sanitary Sewer Bylaw ☐ MISA ☐ Storm Sewer Bylaw ☐ PWQO Municipality: _____ ☐ Other (Specify): _____ ☐ REG 558 (MINIMUM 3 DAY TAT REQUIRED)				LABORATORY USE ONLY	
FOR RSC (PLEASE CIRCLE) <u>(YES)</u> / NO						CUSTODY SEAL (Y/N) ☒ Present ☒ Intact	
Include Criteria on Certificate of Analysis (Y/N)? <u>N</u>						Temperature (°C) on Receipt <u>21/2/3</u>	
SAMPLES MUST BE KEPT COOL (< 10 °C) FROM TIME OF SAMPLING UNTIL DELIVERY TO MAXXAM						COOLING MEDIA PRESENT (Y/N) <u>Y</u>	
SAMPLE IDENTIFICATION		DATE SAMPLED	TIME SAMPLED	MATRIX	# OF CONT.	COMMENTS / TAT COMMENTS	
1	SP701	Jan-19-16	16:00	Soil	3	Activity Cont: RE	
2	CS137	↑	12:00		3		
3	CS125	↑	9:30		4		
4	CS1250	↓	9:30		4		
5	SP601	Jan-19-16	16:00		3		
6	SP803	Jan-20-16	12:00	Soil	3		
7							
8							
9							
10							
RELINQUISHED BY: (Signature/Print)		DATE: (YYYY/MM/DD)	TIME:	RECEIVED BY: (Signature/Print)		DATE: (YYYY/MM/DD)	TIME:
<u>Philip Arlos</u>		<u>18/01/20</u>	<u>12:00</u>	<u>Mr. MACDONALD</u>		<u>2016/01/21</u>	<u>09:35</u>

COC-1004 (11/13) ENV. ENG

Maxxam Analytics International Corporation o/a Maxxam Analytics

21-Jan-16 09:35

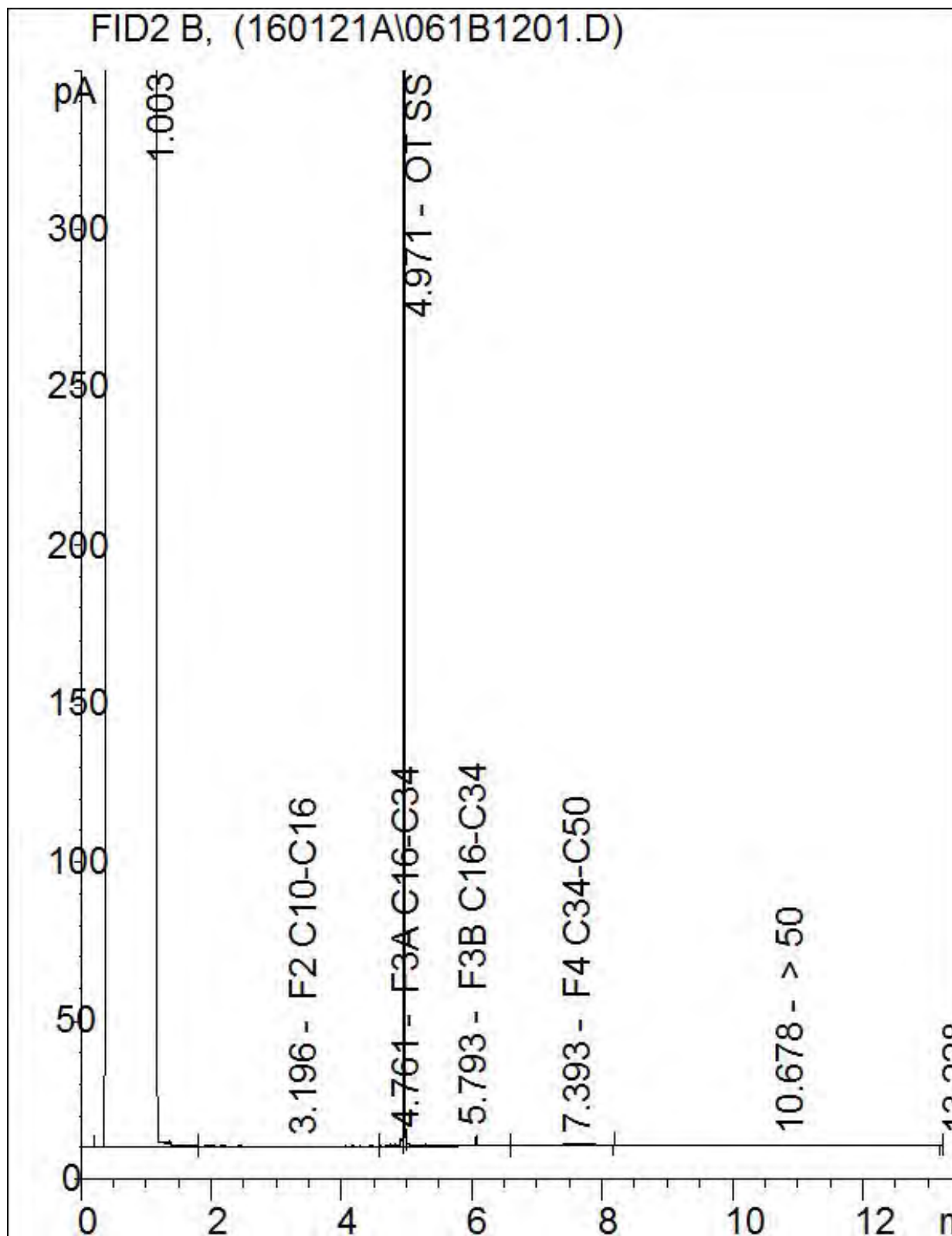
Marissa Oddi

B612414

SEL ENV-626

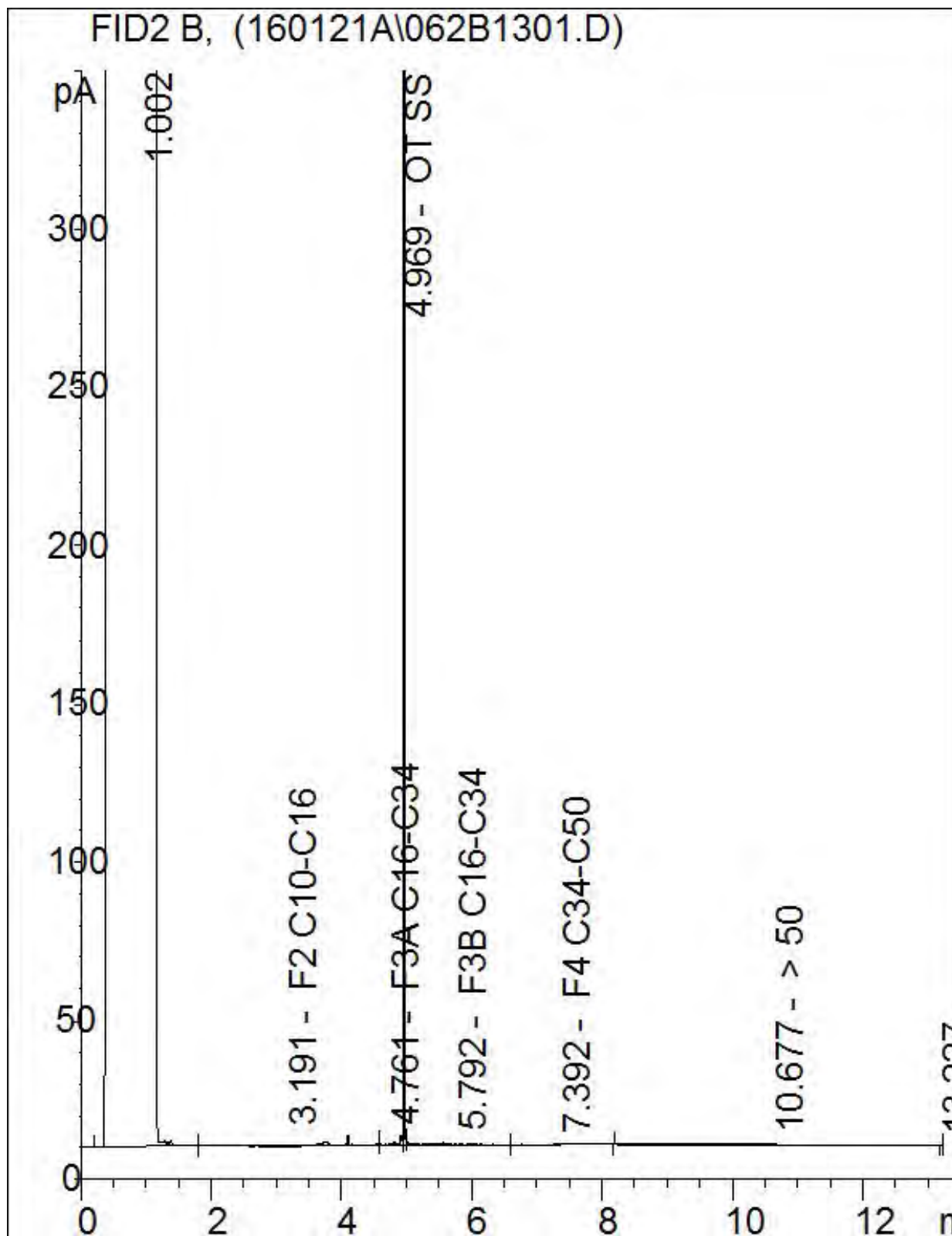
White: Maxxam - Yellow: Client

Petroleum Hydrocarbons F2-F4 in Soil Chromatogram



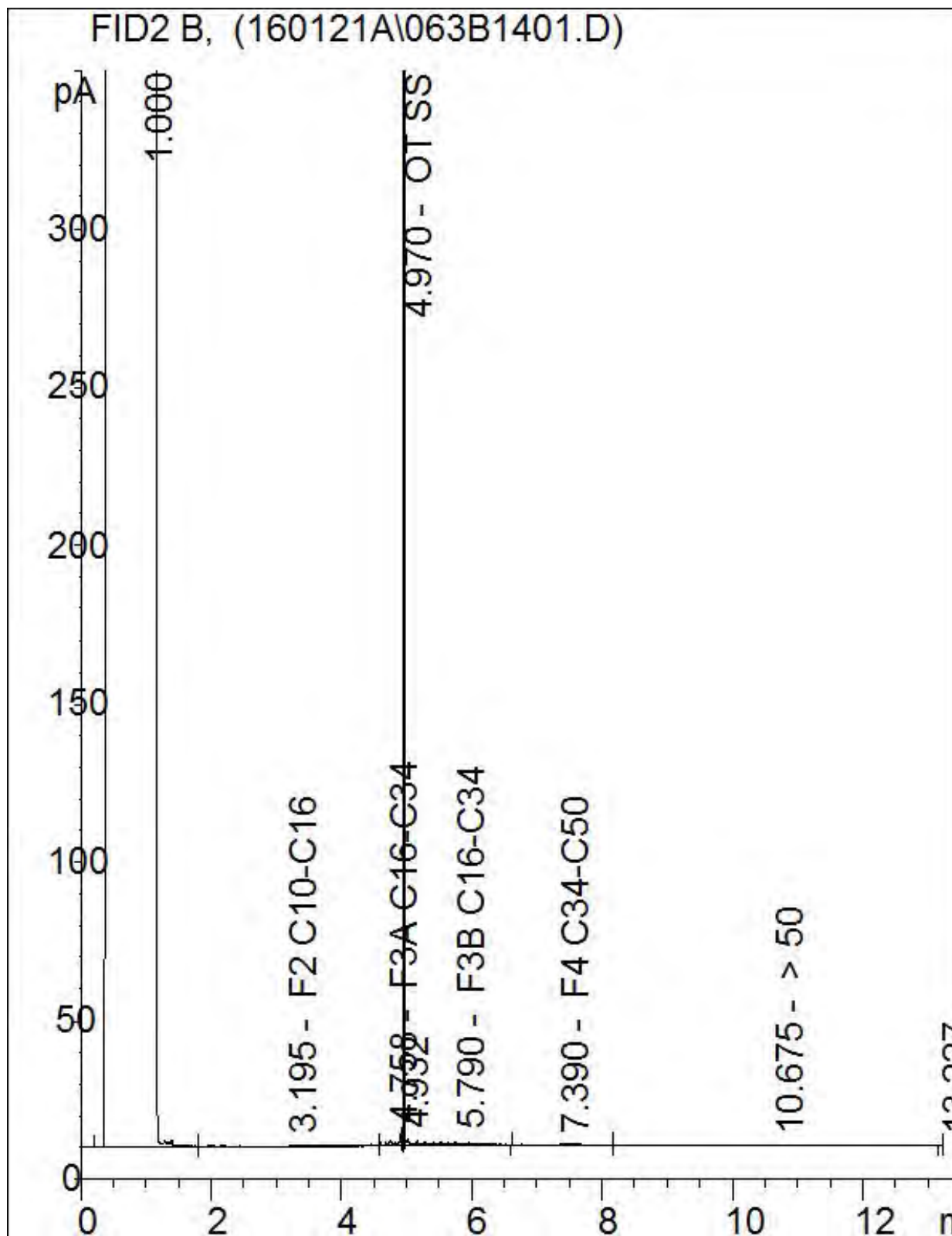
Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Petroleum Hydrocarbons F2-F4 in Soil Chromatogram



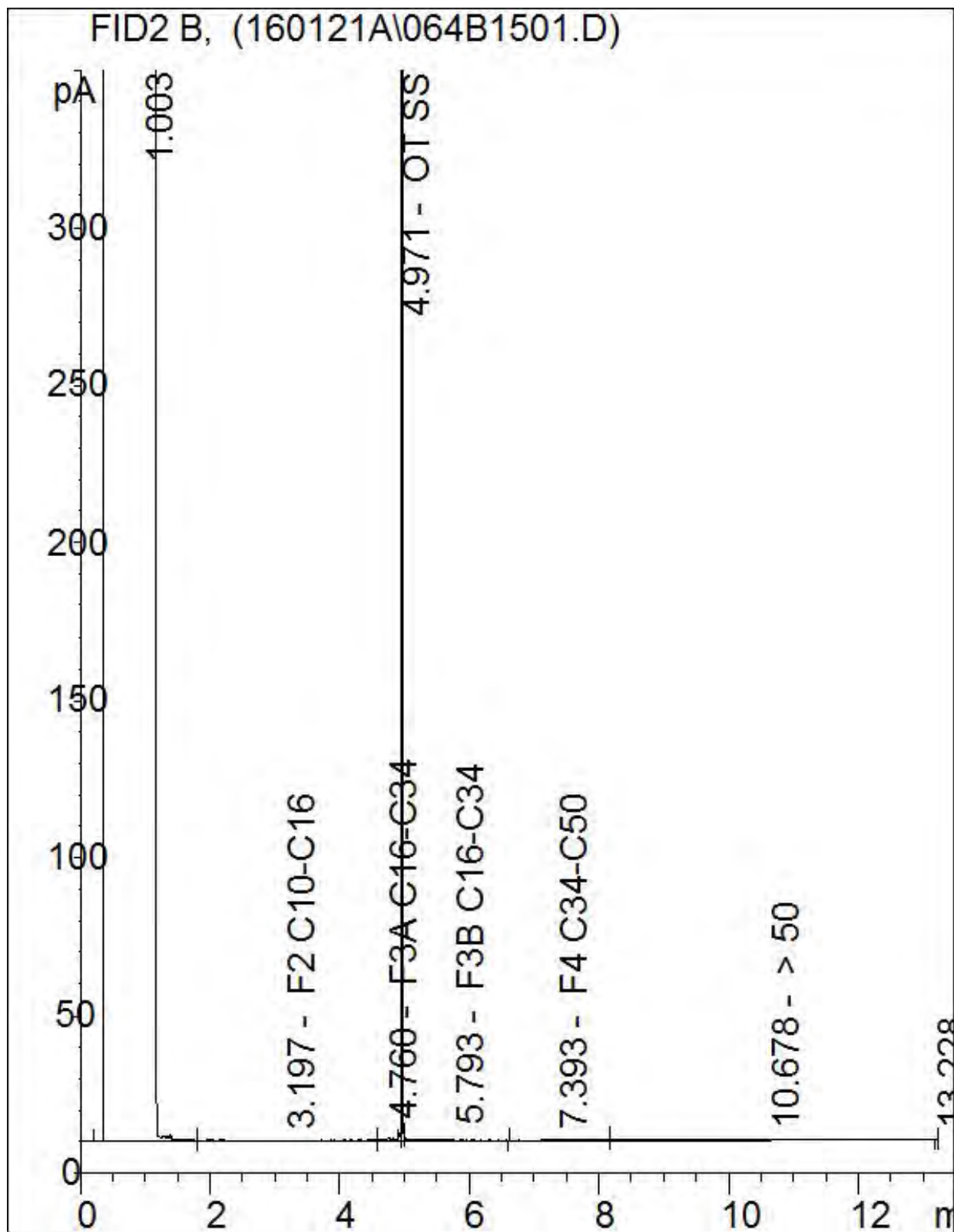
Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Petroleum Hydrocarbons F2-F4 in Soil Chromatogram



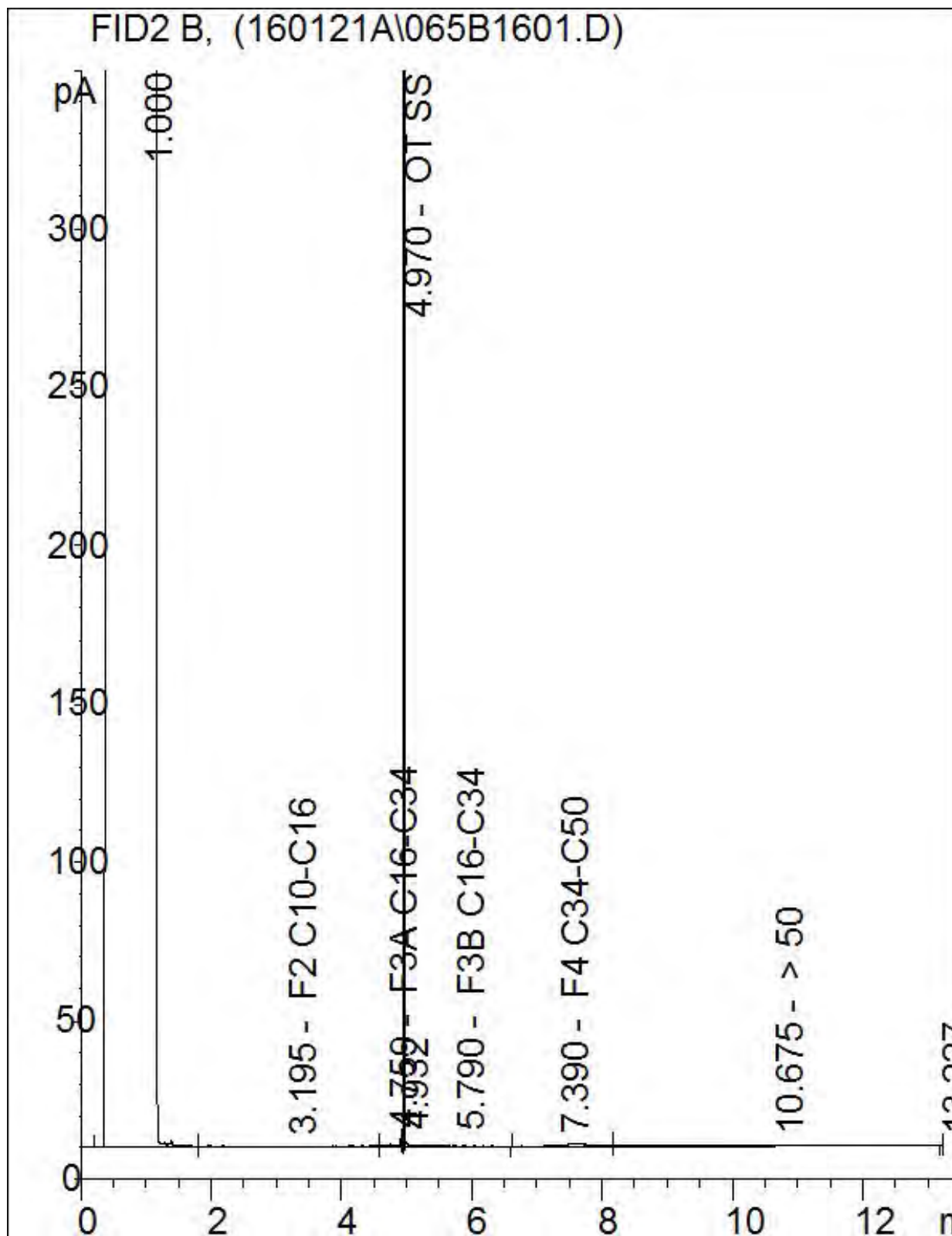
Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Petroleum Hydrocarbons F2-F4 in Soil Chromatogram



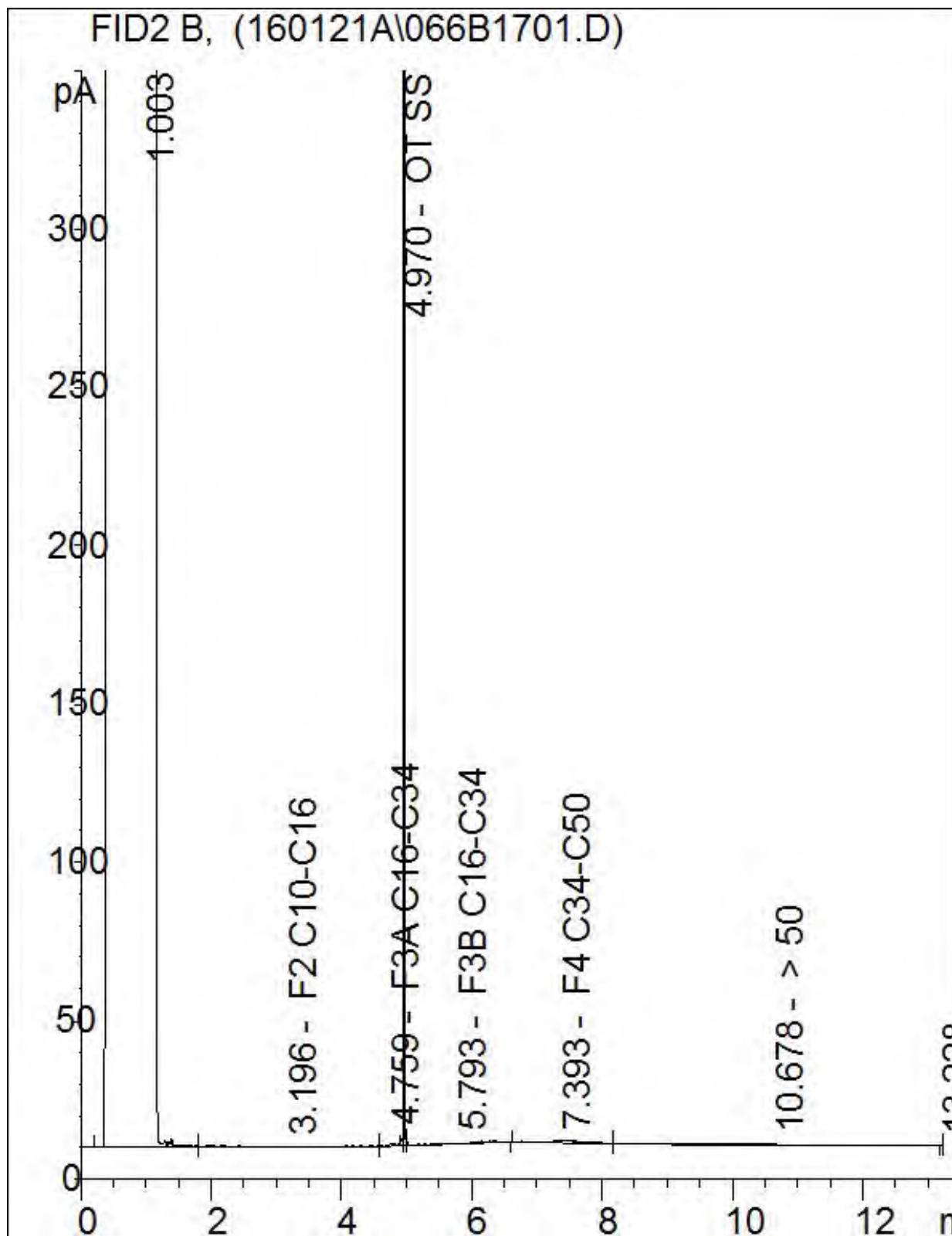
Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Petroleum Hydrocarbons F2-F4 in Soil Chromatogram



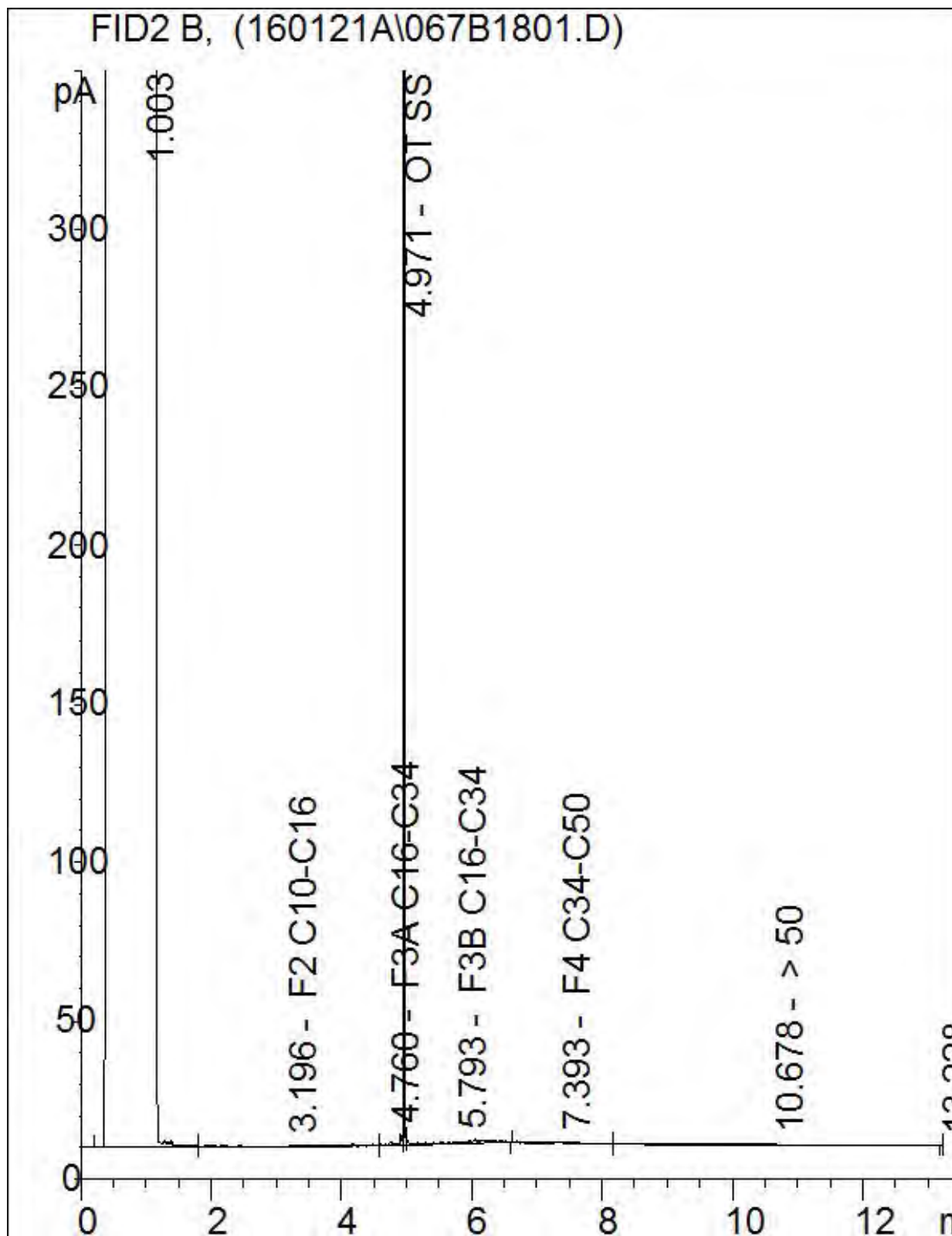
Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Petroleum Hydrocarbons F2-F4 in Soil Chromatogram



Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Petroleum Hydrocarbons F2-F4 in Soil Chromatogram



Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Attention: Jeff Stevenson

Terrapex Environmental Ltd
920 Brant Street
Unit 16
Burlington, ON
CANADA L7R 4J1

Your P.O. #: 4700001396
Your Project #: CB644.02
Site#: 60680
Site Location: 121 Hume Street, Collingwood, ON
Your C.O.C. #: 31659

Report Date: 2016/01/22

Report #: R3861129

Version: 1 - Final

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B612414

Received: 2016/01/21, 09:35

Sample Matrix: Soil
Samples Received: 6

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Reference
Methylnaphthalene Sum	2	N/A	2016/01/22	CAM SOP-00301	EPA 8270D m
Hot Water Extractable Boron	2	2016/01/22	2016/01/22	CAM SOP-00408	R153 Ana. Prot. 2011
1,3-Dichloropropene Sum	2	N/A	2016/01/22		EPA 8260C m
Free (WAD) Cyanide	2	2016/01/21	2016/01/22	CAM SOP-00457	OMOE E3015 m
Conductivity	2	N/A	2016/01/22	CAM SOP-00414	OMOE E3138 v2 m
Hexavalent Chromium in Soil by IC (1)	2	2016/01/21	2016/01/22	CAM SOP-00436	EPA 3060/7199 m
Petroleum Hydro. CCME F1 & BTEX in Soil (2)	6	N/A	2016/01/22	CAM SOP-00315	CCME PHC-CWS m
Petroleum Hydrocarbons F2-F4 in Soil (3)	6	2016/01/21	2016/01/22	CAM SOP-00316	CCME CWS m
Strong Acid Leachable Metals by ICPMS	2	2016/01/22	2016/01/22	CAM SOP-00447	EPA 6020A m
Moisture	6	N/A	2016/01/21	CAM SOP-00445	Carter 2nd ed 51.2 m
PAH Compounds in Soil by GC/MS (SIM)	2	2016/01/21	2016/01/22	CAM SOP-00318	EPA 8270D m
pH CaCl2 EXTRACT	2	2016/01/22	2016/01/22	CAM SOP-00413	EPA 9045 D m
Sodium Adsorption Ratio (SAR)	2	N/A	2016/01/22	CAM SOP-00102	EPA 6010
SAR - ICP Metals	2	2016/01/22	2016/01/22	CAM SOP-00408	EPA 6010 m
Volatile Organic Compounds in Soil	2	N/A	2016/01/21	CAM SOP000228	EPA 8260C m

Remarks:

Maxxam Analytics has performed all analytical testing herein in accordance with ISO 17025 and the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act. All methodologies comply with this document and are validated for use in the laboratory. The methods and techniques employed in this analysis conform to the performance criteria (detection limits, accuracy and precision) as outlined in the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act.

Maxxam Analytics is accredited for all specific parameters as required by Ontario Regulation 153/04. Maxxam Analytics is limited in liability to the actual cost of analysis unless otherwise agreed in writing. There is no other warranty expressed or implied. Samples will be retained at Maxxam Analytics for three weeks from receipt of data or as per contract.

Reference Method suffix "m" indicates test methods incorporate validated modifications from specific reference methods to improve performance.

* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.

Attention: Jeff Stevenson

Terrapex Environmental Ltd
920 Brant Street
Unit 16
Burlington, ON
CANADA L7R 4J1

Your P.O. #: 4700001396

Your Project #: CB644.02

Site#: 60680

Site Location: 121 Hume Street, Collingwood, ON

Your C.O.C. #: 31659

Report Date: 2016/01/22

Report #: R3861129

Version: 1 - Final

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B612414

Received: 2016/01/21, 09:35

(1) Soils are reported on a dry weight basis unless otherwise specified.

(2) No lab extraction date is given for F1BTX & VOC samples that are field preserved with methanol. Extraction date is the date sampled unless otherwise stated.

(3) All CCME PHC results met required criteria unless otherwise stated in the report. The CWS PHC methods employed by Maxxam conform to all prescribed elements of the reference method and performance based elements have been validated. All modifications have been validated and proven equivalent following "Alberta Environment's Interpretation of the Reference Method for the Canada-Wide Standard for Petroleum Hydrocarbons in Soil Validation of Performance-Based Alternative Methods September 2003". Documentation is available upon request. Modifications from Reference Method for the Canada-wide Standard for Petroleum Hydrocarbons in Soil-Tier 1 Method: F2/F3/F4 data reported using validated cold solvent extraction instead of Soxhlet extraction.

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.

Marissa Oddi, Customer Service Representative

Email: moddi@maxxam.ca

Phone# (905) 817-5700

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Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

O.REG 153 METALS & INORGANICS PKG (SOIL)

Maxxam ID		BRR315	BRR315	BRR316	BRR316		
Sampling Date		2016/01/19 09:30	2016/01/19 09:30	2016/01/19 09:30	2016/01/19 09:30		
COC Number		31659	31659	31659	31659		
	UNITS	CS125	CS125 Lab-Dup	CS1250	CS1250 Lab-Dup	RDL	QC Batch
Calculated Parameters							
Sodium Adsorption Ratio	N/A	0.84		0.81			4352961
Inorganics							
Conductivity	mS/cm	0.14	0.14	0.15		0.002	4354440
Free Cyanide	ug/g	ND		ND	ND	0.01	4353497
Moisture	%	21		20		1.0	4353411
Available (CaCl ₂) pH	pH	7.78		7.53	7.60	N/A	4354518
Metals							
Soluble Calcium (Ca)	mg/L	11.9	11.8	12.7		0.5	4354438
Soluble Magnesium (Mg)	mg/L	1.0	1.0	1.1		0.5	4354438
Soluble Sodium (Na)	mg/L	11	11	11		5	4354438
Inorganics							
Chromium (VI)	ug/g	ND		ND	ND	0.2	4353480
Metals							
Hot Water Ext. Boron (B)	ug/g	ND		ND	ND	0.050	4354497
Acid Extractable Antimony (Sb)	ug/g	ND		ND	ND	0.20	4354402
Acid Extractable Arsenic (As)	ug/g	ND		ND	ND	1.0	4354402
Acid Extractable Barium (Ba)	ug/g	4.4		3.2	3.9	0.50	4354402
Acid Extractable Beryllium (Be)	ug/g	ND		ND	ND	0.20	4354402
Acid Extractable Boron (B)	ug/g	ND		ND	ND	5.0	4354402
Acid Extractable Cadmium (Cd)	ug/g	ND		ND	ND	0.10	4354402
Acid Extractable Chromium (Cr)	ug/g	4.1		3.4	3.4	1.0	4354402
Acid Extractable Cobalt (Co)	ug/g	1.2		1.1	1.2	0.10	4354402
Acid Extractable Copper (Cu)	ug/g	1.4		1.1	1.1	0.50	4354402
Acid Extractable Lead (Pb)	ug/g	1.7		1.5	1.5	1.0	4354402
Acid Extractable Molybdenum (Mo)	ug/g	ND		ND	ND	0.50	4354402
Acid Extractable Nickel (Ni)	ug/g	2.3		2.0	1.9	0.50	4354402
Acid Extractable Selenium (Se)	ug/g	ND		ND	ND	0.50	4354402
Acid Extractable Silver (Ag)	ug/g	ND		ND	ND	0.20	4354402
Acid Extractable Thallium (Tl)	ug/g	ND		ND	ND	0.050	4354402
Acid Extractable Uranium (U)	ug/g	0.22		0.23	0.22	0.050	4354402
RDL = Reportable Detection Limit QC Batch = Quality Control Batch Lab-Dup = Laboratory Initiated Duplicate ND = Not detected N/A = Not Applicable							

Maxxam Job #: B612414
Report Date: 2016/01/22

Terrapex Environmental Ltd
Client Project #: CB644.02
Site Location: 121 Hume Street, Collingwood, ON
Your P.O. #: 4700001396
Sampler Initials: PA

O.REG 153 METALS & INORGANICS PKG (SOIL)

Maxxam ID		BRR315	BRR315	BRR316	BRR316		
Sampling Date		2016/01/19 09:30	2016/01/19 09:30	2016/01/19 09:30	2016/01/19 09:30		
COC Number		31659	31659	31659	31659		
	UNITS	CS125	CS125 Lab-Dup	CS1250	CS1250 Lab-Dup	RDL	QC Batch
Acid Extractable Vanadium (V)	ug/g	7.8		5.7	5.6	5.0	4354402
Acid Extractable Zinc (Zn)	ug/g	5.9		6.2	5.9	5.0	4354402
Acid Extractable Mercury (Hg)	ug/g	ND		ND	ND	0.050	4354402
RDL = Reportable Detection Limit QC Batch = Quality Control Batch Lab-Dup = Laboratory Initiated Duplicate ND = Not detected							

O.REG 153 PAHS (SOIL)

Maxxam ID		BRR315	BRR316		
Sampling Date		2016/01/19 09:30	2016/01/19 09:30		
COC Number		31659	31659		
	UNITS	CS125	CS1250	RDL	QC Batch
Calculated Parameters					
Methylnaphthalene, 2-(1-)	ug/g	ND	ND	0.0071	4352851
Polyaromatic Hydrocarbons					
Acenaphthene	ug/g	ND	ND	0.0050	4354187
Acenaphthylene	ug/g	ND	ND	0.0050	4354187
Anthracene	ug/g	ND	ND	0.0050	4354187
Benzo(a)anthracene	ug/g	ND	ND	0.0050	4354187
Benzo(a)pyrene	ug/g	ND	ND	0.0050	4354187
Benzo(b/j)fluoranthene	ug/g	ND	ND	0.0050	4354187
Benzo(g,h,i)perylene	ug/g	ND	ND	0.0050	4354187
Benzo(k)fluoranthene	ug/g	ND	ND	0.0050	4354187
Chrysene	ug/g	ND	ND	0.0050	4354187
Dibenz(a,h)anthracene	ug/g	ND	ND	0.0050	4354187
Fluoranthene	ug/g	ND	ND	0.0050	4354187
Fluorene	ug/g	ND	ND	0.0050	4354187
Indeno(1,2,3-cd)pyrene	ug/g	ND	ND	0.0050	4354187
1-Methylnaphthalene	ug/g	0.0057	ND	0.0050	4354187
2-Methylnaphthalene	ug/g	ND	ND	0.0050	4354187
Naphthalene	ug/g	ND	ND	0.0050	4354187
Phenanthrene	ug/g	0.0056	ND	0.0050	4354187
Pyrene	ug/g	ND	ND	0.0050	4354187
Surrogate Recovery (%)					
D10-Anthracene	%	118	114		4354187
D14-Terphenyl (FS)	%	78	79		4354187
D8-Acenaphthylene	%	112	109		4354187
RDL = Reportable Detection Limit					
QC Batch = Quality Control Batch					
ND = Not detected					

O.REG 153 PETROLEUM HYDROCARBONS (SOIL)

Maxxam ID		BRR313	BRR313	BRR314	BRR315	BRR316	BRR317	BRR318		
Sampling Date		2016/01/19 16:00	2016/01/19 16:00	2016/01/19 12:00	2016/01/19 09:30	2016/01/19 09:30	2016/01/19 16:00	2016/01/20 12:00		
COC Number		31659	31659	31659	31659	31659	31659	31659		
	UNITS	SP701	SP701 Lab-Dup	CS137	CS125	CS1250	SP601	SP803	RDL	QC Batch

Inorganics										
Moisture	%	19	19	11			13	10	1.0	4353049
BTEX & F1 Hydrocarbons										
Benzene	ug/g	ND		ND			ND	ND	0.020	4354166
Toluene	ug/g	ND		ND			ND	ND	0.020	4354166
Ethylbenzene	ug/g	ND		ND			ND	ND	0.020	4354166
o-Xylene	ug/g	ND		ND			ND	ND	0.020	4354166
p+m-Xylene	ug/g	ND		ND			ND	ND	0.040	4354166
Total Xylenes	ug/g	ND		ND			ND	ND	0.040	4354166
F1 (C6-C10)	ug/g	ND		ND	ND	ND	ND	ND	10	4354166
F1 (C6-C10) - BTEX	ug/g	ND		ND	ND	ND	ND	ND	10	4354166
F2-F4 Hydrocarbons										
F2 (C10-C16 Hydrocarbons)	ug/g	ND	ND	ND	ND	ND	ND	ND	10	4353660
F3 (C16-C34 Hydrocarbons)	ug/g	ND	ND	ND	ND	ND	ND	ND	50	4353660
F4 (C34-C50 Hydrocarbons)	ug/g	ND	ND	ND	ND	ND	ND	ND	50	4353660
Reached Baseline at C50	ug/g	Yes	Yes	Yes	Yes	Yes	Yes	Yes		4353660
Surrogate Recovery (%)										
1,4-Difluorobenzene	%	99		99	99	99	98	100		4354166
4-Bromofluorobenzene	%	98		98	100	99	99	101		4354166
D10-Ethylbenzene	%	87		88	73	81	78	78		4354166
D4-1,2-Dichloroethane	%	98		98	99	99	100	100		4354166
o-Terphenyl	%	88	91	92	93	90	91	91		4353660

RDL = Reportable Detection Limit

QC Batch = Quality Control Batch

Lab-Dup = Laboratory Initiated Duplicate

ND = Not detected

O.REG 153 VOLATILE ORGANICS (SOIL)

Maxxam ID		BRR315	BRR316		
Sampling Date		2016/01/19 09:30	2016/01/19 09:30		
COC Number		31659	31659		
	UNITS	CS125	CS1250	RDL	QC Batch
Calculated Parameters					
1,3-Dichloropropene (cis+trans)	ug/g	ND	ND	0.050	4352962
Volatile Organics					
Acetone (2-Propanone)	ug/g	ND	ND	0.50	4353290
Benzene	ug/g	ND	ND	0.020	4353290
Bromodichloromethane	ug/g	ND	ND	0.050	4353290
Bromoform	ug/g	ND	ND	0.050	4353290
Bromomethane	ug/g	ND	ND	0.050	4353290
Carbon Tetrachloride	ug/g	ND	ND	0.050	4353290
Chlorobenzene	ug/g	ND	ND	0.050	4353290
Chloroform	ug/g	ND	ND	0.050	4353290
Dibromochloromethane	ug/g	ND	ND	0.050	4353290
1,2-Dichlorobenzene	ug/g	ND	ND	0.050	4353290
1,3-Dichlorobenzene	ug/g	ND	ND	0.050	4353290
1,4-Dichlorobenzene	ug/g	ND	ND	0.050	4353290
Dichlorodifluoromethane (FREON 12)	ug/g	ND	ND	0.050	4353290
1,1-Dichloroethane	ug/g	ND	ND	0.050	4353290
1,2-Dichloroethane	ug/g	ND	ND	0.050	4353290
1,1-Dichloroethylene	ug/g	ND	ND	0.050	4353290
cis-1,2-Dichloroethylene	ug/g	ND	ND	0.050	4353290
trans-1,2-Dichloroethylene	ug/g	ND	ND	0.050	4353290
1,2-Dichloropropane	ug/g	ND	ND	0.050	4353290
cis-1,3-Dichloropropene	ug/g	ND	ND	0.030	4353290
trans-1,3-Dichloropropene	ug/g	ND	ND	0.040	4353290
Ethylbenzene	ug/g	ND	ND	0.020	4353290
Ethylene Dibromide	ug/g	ND	ND	0.050	4353290
Hexane	ug/g	ND	ND	0.050	4353290
Methylene Chloride(Dichloromethane)	ug/g	ND	ND	0.050	4353290
Methyl Ethyl Ketone (2-Butanone)	ug/g	ND	ND	0.50	4353290
Methyl Isobutyl Ketone	ug/g	ND	ND	0.50	4353290
Methyl t-butyl ether (MTBE)	ug/g	ND	ND	0.050	4353290
Styrene	ug/g	ND	ND	0.050	4353290
1,1,1,2-Tetrachloroethane	ug/g	ND	ND	0.050	4353290
RDL = Reportable Detection Limit					
QC Batch = Quality Control Batch					
ND = Not detected					

O.REG 153 VOLATILE ORGANICS (SOIL)

Maxxam ID		BRR315	BRR316		
Sampling Date		2016/01/19 09:30	2016/01/19 09:30		
COC Number		31659	31659		
	UNITS	CS125	CS1250	RDL	QC Batch
1,1,2,2-Tetrachloroethane	ug/g	ND	ND	0.050	4353290
Tetrachloroethylene	ug/g	ND	ND	0.050	4353290
Toluene	ug/g	ND	ND	0.020	4353290
1,1,1-Trichloroethane	ug/g	ND	ND	0.050	4353290
1,1,2-Trichloroethane	ug/g	ND	ND	0.050	4353290
Trichloroethylene	ug/g	ND	ND	0.050	4353290
Trichlorofluoromethane (FREON 11)	ug/g	ND	ND	0.050	4353290
Vinyl Chloride	ug/g	ND	ND	0.020	4353290
p+m-Xylene	ug/g	ND	ND	0.020	4353290
o-Xylene	ug/g	ND	ND	0.020	4353290
Total Xylenes	ug/g	ND	ND	0.020	4353290
Surrogate Recovery (%)					
4-Bromofluorobenzene	%	98	98		4353290
D10-o-Xylene	%	100	96		4353290
D4-1,2-Dichloroethane	%	92	91		4353290
D8-Toluene	%	96	97		4353290
RDL = Reportable Detection Limit					
QC Batch = Quality Control Batch					
ND = Not detected					

Maxxam Job #: B612414
Report Date: 2016/01/22

Terrapex Environmental Ltd
Client Project #: CB644.02
Site Location: 121 Hume Street, Collingwood, ON
Your P.O. #: 4700001396
Sampler Initials: PA

TEST SUMMARY

Maxxam ID: BRR313
Sample ID: SP701
Matrix: Soil

Collected: 2016/01/19
Shipped:
Received: 2016/01/21

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	4354166	N/A	2016/01/22	Georgeta Rusu
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	4353660	2016/01/21	2016/01/22	Zhiyue (Frank) Zhu
Moisture	BAL	4353049	N/A	2016/01/21	Shivani Desai

Maxxam ID: BRR313 Dup
Sample ID: SP701
Matrix: Soil

Collected: 2016/01/19
Shipped:
Received: 2016/01/21

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	4353660	2016/01/21	2016/01/22	Zhiyue (Frank) Zhu
Moisture	BAL	4353049	N/A	2016/01/21	Shivani Desai

Maxxam ID: BRR314
Sample ID: CS137
Matrix: Soil

Collected: 2016/01/19
Shipped:
Received: 2016/01/21

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	4354166	N/A	2016/01/22	Georgeta Rusu
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	4353660	2016/01/21	2016/01/22	Zhiyue (Frank) Zhu
Moisture	BAL	4353049	N/A	2016/01/21	Shivani Desai

Maxxam ID: BRR315
Sample ID: CS125
Matrix: Soil

Collected: 2016/01/19
Shipped:
Received: 2016/01/21

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	4352851	N/A	2016/01/22	Automated Statchk
Hot Water Extractable Boron	ICP	4354497	2016/01/22	2016/01/22	Jolly John
1,3-Dichloropropene Sum	CALC	4352962	N/A	2016/01/22	Automated Statchk
Free (WAD) Cyanide	TECH	4353497	2016/01/21	2016/01/22	Xuanhong Qiu
Conductivity	AT	4354440	N/A	2016/01/22	Lemeneh Addis
Hexavalent Chromium in Soil by IC	IC/SPEC	4353480	2016/01/21	2016/01/22	Sally Coughlin
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	4354166	N/A	2016/01/22	Georgeta Rusu
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	4353660	2016/01/21	2016/01/22	Zhiyue (Frank) Zhu
Strong Acid Leachable Metals by ICPMS	ICP/MS	4354402	2016/01/22	2016/01/22	Viviana Canzonieri
Moisture	BAL	4353411	N/A	2016/01/21	Valentina Kaftani
PAH Compounds in Soil by GC/MS (SIM)	GC/MS	4354187	2016/01/21	2016/01/22	Lingyun Feng
pH CaCl2 EXTRACT	AT	4354518	2016/01/22	2016/01/22	Neil Dassanayake
Sodium Adsorption Ratio (SAR)	CALC/MET	4352961	N/A	2016/01/22	Automated Statchk
SAR - ICP Metals	ICP	4354438	2016/01/22	2016/01/22	Jolly John
Volatile Organic Compounds in Soil	GC/MS	4353290	N/A	2016/01/21	Anna Gabrielyan

Maxxam Job #: B612414
Report Date: 2016/01/22

Terrapex Environmental Ltd
Client Project #: CB644.02
Site Location: 121 Hume Street, Collingwood, ON
Your P.O. #: 4700001396
Sampler Initials: PA

TEST SUMMARY

Maxxam ID: BRR315 Dup
Sample ID: CS125
Matrix: Soil

Collected: 2016/01/19
Shipped:
Received: 2016/01/21

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Conductivity	AT	4354440	N/A	2016/01/22	Lemeneh Addis
SAR - ICP Metals	ICP	4354438	2016/01/22	2016/01/22	Jolly John

Maxxam ID: BRR316
Sample ID: CS1250
Matrix: Soil

Collected: 2016/01/19
Shipped:
Received: 2016/01/21

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	4352851	N/A	2016/01/22	Automated Statchk
Hot Water Extractable Boron	ICP	4354497	2016/01/22	2016/01/22	Jolly John
1,3-Dichloropropene Sum	CALC	4352962	N/A	2016/01/22	Automated Statchk
Free (WAD) Cyanide	TECH	4353497	2016/01/21	2016/01/22	Xuanhong Qiu
Conductivity	AT	4354440	N/A	2016/01/22	Lemeneh Addis
Hexavalent Chromium in Soil by IC	IC/SPEC	4353480	2016/01/21	2016/01/22	Sally Coughlin
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	4354166	N/A	2016/01/22	Georgeta Rusu
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	4353660	2016/01/21	2016/01/22	Zhiyue (Frank) Zhu
Strong Acid Leachable Metals by ICPMS	ICP/MS	4354402	2016/01/22	2016/01/22	Viviana Canzonieri
Moisture	BAL	4353411	N/A	2016/01/21	Valentina Kaftani
PAH Compounds in Soil by GC/MS (SIM)	GC/MS	4354187	2016/01/21	2016/01/22	Lingyun Feng
pH CaCl2 EXTRACT	AT	4354518	2016/01/22	2016/01/22	Neil Dassanayake
Sodium Adsorption Ratio (SAR)	CALC/MET	4352961	N/A	2016/01/22	Automated Statchk
SAR - ICP Metals	ICP	4354438	2016/01/22	2016/01/22	Jolly John
Volatile Organic Compounds in Soil	GC/MS	4353290	N/A	2016/01/21	Anna Gabrielyan

Maxxam ID: BRR316 Dup
Sample ID: CS1250
Matrix: Soil

Collected: 2016/01/19
Shipped:
Received: 2016/01/21

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hot Water Extractable Boron	ICP	4354497	2016/01/22	2016/01/22	Jolly John
Free (WAD) Cyanide	TECH	4353497	2016/01/21	2016/01/22	Xuanhong Qiu
Hexavalent Chromium in Soil by IC	IC/SPEC	4353480	2016/01/21	2016/01/22	Sally Coughlin
Strong Acid Leachable Metals by ICPMS	ICP/MS	4354402	2016/01/22	2016/01/22	Viviana Canzonieri
pH CaCl2 EXTRACT	AT	4354518	2016/01/22	2016/01/22	Neil Dassanayake

Maxxam ID: BRR317
Sample ID: SP601
Matrix: Soil

Collected: 2016/01/19
Shipped:
Received: 2016/01/21

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	4354166	N/A	2016/01/22	Georgeta Rusu
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	4353660	2016/01/21	2016/01/22	Zhiyue (Frank) Zhu
Moisture	BAL	4353049	N/A	2016/01/21	Shivani Desai

Maxxam Job #: B612414
Report Date: 2016/01/22

Terrapex Environmental Ltd
Client Project #: CB644.02
Site Location: 121 Hume Street, Collingwood, ON
Your P.O. #: 4700001396
Sampler Initials: PA

TEST SUMMARY

Maxxam ID: BRR318
Sample ID: SP803
Matrix: Soil

Collected: 2016/01/20
Shipped:
Received: 2016/01/21

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	4354166	N/A	2016/01/22	Georgeta Rusu
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	4353660	2016/01/21	2016/01/22	Zhiyue (Frank) Zhu
Moisture	BAL	4353049	N/A	2016/01/21	Shivani Desai

Maxxam Job #: B612414
Report Date: 2016/01/22

Terrapex Environmental Ltd
Client Project #: CB644.02
Site Location: 121 Hume Street, Collingwood, ON
Your P.O. #: 4700001396
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GENERAL COMMENTS

Each temperature is the average of up to three cooler temperatures taken at receipt

Package 1	2.3°C

Results relate only to the items tested.

Maxxam Job #: B612414
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Terrapex Environmental Ltd
Client Project #: CB644.02
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Sampler Initials: PA

QUALITY ASSURANCE REPORT

QA/QC	Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
	4353049	VK	RPD [BRR313-01]	Moisture	2016/01/21	3.2		%	20
	4353290	AYA	Matrix Spike	4-Bromofluorobenzene	2016/01/21		103	%	60 - 140
				D10-o-Xylene	2016/01/21		108	%	60 - 130
				D4-1,2-Dichloroethane	2016/01/21		89	%	60 - 140
				D8-Toluene	2016/01/21		103	%	60 - 140
				Acetone (2-Propanone)	2016/01/21		88	%	60 - 140
				Benzene	2016/01/21		94	%	60 - 140
				Bromodichloromethane	2016/01/21		91	%	60 - 140
				Bromoform	2016/01/21		89	%	60 - 140
				Bromomethane	2016/01/21		80	%	60 - 140
				Carbon Tetrachloride	2016/01/21		96	%	60 - 140
				Chlorobenzene	2016/01/21		101	%	60 - 140
				Chloroform	2016/01/21		90	%	60 - 140
				Dibromochloromethane	2016/01/21		92	%	60 - 140
				1,2-Dichlorobenzene	2016/01/21		98	%	60 - 140
				1,3-Dichlorobenzene	2016/01/21		100	%	60 - 140
				1,4-Dichlorobenzene	2016/01/21		103	%	60 - 140
				Dichlorodifluoromethane (FREON 12)	2016/01/21		87	%	60 - 140
				1,1-Dichloroethane	2016/01/21		91	%	60 - 140
				1,2-Dichloroethane	2016/01/21		88	%	60 - 140
				1,1-Dichloroethylene	2016/01/21		97	%	60 - 140
				cis-1,2-Dichloroethylene	2016/01/21		94	%	60 - 140
				trans-1,2-Dichloroethylene	2016/01/21		95	%	60 - 140
				1,2-Dichloropropane	2016/01/21		91	%	60 - 140
				cis-1,3-Dichloropropene	2016/01/21		92	%	60 - 140
				trans-1,3-Dichloropropene	2016/01/21		90	%	60 - 140
				Ethylbenzene	2016/01/21		106	%	60 - 140
				Ethylene Dibromide	2016/01/21		91	%	60 - 140
				Hexane	2016/01/21		105	%	60 - 140
				Methylene Chloride(Dichloromethane)	2016/01/21		85	%	60 - 140
				Methyl Ethyl Ketone (2-Butanone)	2016/01/21		90	%	60 - 140
				Methyl Isobutyl Ketone	2016/01/21		89	%	60 - 140
				Methyl t-butyl ether (MTBE)	2016/01/21		95	%	60 - 140
				Styrene	2016/01/21		103	%	60 - 140
				1,1,1,2-Tetrachloroethane	2016/01/21		96	%	60 - 140
				1,1,2,2-Tetrachloroethane	2016/01/21		90	%	60 - 140
				Tetrachloroethylene	2016/01/21		99	%	60 - 140
				Toluene	2016/01/21		100	%	60 - 140
				1,1,1-Trichloroethane	2016/01/21		93	%	60 - 140
				1,1,2-Trichloroethane	2016/01/21		89	%	60 - 140
				Trichloroethylene	2016/01/21		96	%	60 - 140
				Trichlorofluoromethane (FREON 11)	2016/01/21		96	%	60 - 140
				Vinyl Chloride	2016/01/21		93	%	60 - 140
				p+m-Xylene	2016/01/21		105	%	60 - 140
				o-Xylene	2016/01/21		104	%	60 - 140
	4353290	AYA	Spiked Blank	4-Bromofluorobenzene	2016/01/21		104	%	60 - 140
				D10-o-Xylene	2016/01/21		105	%	60 - 130
				D4-1,2-Dichloroethane	2016/01/21		95	%	60 - 140
				D8-Toluene	2016/01/21		101	%	60 - 140
				Acetone (2-Propanone)	2016/01/21		99	%	60 - 140
				Benzene	2016/01/21		95	%	60 - 130

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Terrapex Environmental Ltd
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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC	Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
				Bromodichloromethane	2016/01/21		95	%	60 - 130
				Bromoform	2016/01/21		97	%	60 - 130
				Bromomethane	2016/01/21		80	%	60 - 140
				Carbon Tetrachloride	2016/01/21		94	%	60 - 130
				Chlorobenzene	2016/01/21		100	%	60 - 130
				Chloroform	2016/01/21		92	%	60 - 130
				Dibromochloromethane	2016/01/21		97	%	60 - 130
				1,2-Dichlorobenzene	2016/01/21		99	%	60 - 130
				1,3-Dichlorobenzene	2016/01/21		98	%	60 - 130
				1,4-Dichlorobenzene	2016/01/21		101	%	60 - 130
				Dichlorodifluoromethane (FREON 12)	2016/01/21		84	%	60 - 140
				1,1-Dichloroethane	2016/01/21		91	%	60 - 130
				1,2-Dichloroethane	2016/01/21		94	%	60 - 130
				1,1-Dichloroethylene	2016/01/21		94	%	60 - 130
				cis-1,2-Dichloroethylene	2016/01/21		96	%	60 - 130
				trans-1,2-Dichloroethylene	2016/01/21		94	%	60 - 130
				1,2-Dichloropropane	2016/01/21		94	%	60 - 130
				cis-1,3-Dichloropropene	2016/01/21		96	%	60 - 130
				trans-1,3-Dichloropropene	2016/01/21		91	%	60 - 130
				Ethylbenzene	2016/01/21		101	%	60 - 130
				Ethylene Dibromide	2016/01/21		97	%	60 - 130
				Hexane	2016/01/21		100	%	60 - 130
				Methylene Chloride(Dichloromethane)	2016/01/21		88	%	60 - 130
				Methyl Ethyl Ketone (2-Butanone)	2016/01/21		105	%	60 - 140
				Methyl Isobutyl Ketone	2016/01/21		103	%	60 - 130
				Methyl t-butyl ether (MTBE)	2016/01/21		98	%	60 - 130
				Styrene	2016/01/21		103	%	60 - 130
				1,1,1,2-Tetrachloroethane	2016/01/21		96	%	60 - 130
				1,1,2,2-Tetrachloroethane	2016/01/21		98	%	60 - 130
				Tetrachloroethylene	2016/01/21		95	%	60 - 130
				Toluene	2016/01/21		97	%	60 - 130
				1,1,1-Trichloroethane	2016/01/21		92	%	60 - 130
				1,1,2-Trichloroethane	2016/01/21		94	%	60 - 130
				Trichloroethylene	2016/01/21		96	%	60 - 130
				Trichlorofluoromethane (FREON 11)	2016/01/21		93	%	60 - 130
				Vinyl Chloride	2016/01/21		90	%	60 - 130
				p+m-Xylene	2016/01/21		100	%	60 - 130
				o-Xylene	2016/01/21		101	%	60 - 130
4353290	AYA		Method Blank	4-Bromofluorobenzene	2016/01/21		99	%	60 - 140
				D10-o-Xylene	2016/01/21		97	%	60 - 130
				D4-1,2-Dichloroethane	2016/01/21		97	%	60 - 140
				D8-Toluene	2016/01/21		94	%	60 - 140
				Acetone (2-Propanone)	2016/01/21	ND, RDL=0.50		ug/g	
				Benzene	2016/01/21	ND, RDL=0.020		ug/g	
				Bromodichloromethane	2016/01/21	ND, RDL=0.050		ug/g	
				Bromoform	2016/01/21	ND, RDL=0.050		ug/g	

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Terrapex Environmental Ltd
Client Project #: CB644.02
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Sampler Initials: PA

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Bromomethane	2016/01/21	ND, RDL=0.050		ug/g	
			Carbon Tetrachloride	2016/01/21	ND, RDL=0.050		ug/g	
			Chlorobenzene	2016/01/21	ND, RDL=0.050		ug/g	
			Chloroform	2016/01/21	ND, RDL=0.050		ug/g	
			Dibromochloromethane	2016/01/21	ND, RDL=0.050		ug/g	
			1,2-Dichlorobenzene	2016/01/21	ND, RDL=0.050		ug/g	
			1,3-Dichlorobenzene	2016/01/21	ND, RDL=0.050		ug/g	
			1,4-Dichlorobenzene	2016/01/21	ND, RDL=0.050		ug/g	
			Dichlorodifluoromethane (FREON 12)	2016/01/21	ND, RDL=0.050		ug/g	
			1,1-Dichloroethane	2016/01/21	ND, RDL=0.050		ug/g	
			1,2-Dichloroethane	2016/01/21	ND, RDL=0.050		ug/g	
			1,1-Dichloroethylene	2016/01/21	ND, RDL=0.050		ug/g	
			cis-1,2-Dichloroethylene	2016/01/21	ND, RDL=0.050		ug/g	
			trans-1,2-Dichloroethylene	2016/01/21	ND, RDL=0.050		ug/g	
			1,2-Dichloropropane	2016/01/21	ND, RDL=0.050		ug/g	
			cis-1,3-Dichloropropene	2016/01/21	ND, RDL=0.030		ug/g	
			trans-1,3-Dichloropropene	2016/01/21	ND, RDL=0.040		ug/g	
			Ethylbenzene	2016/01/21	ND, RDL=0.020		ug/g	
			Ethylene Dibromide	2016/01/21	ND, RDL=0.050		ug/g	
			Hexane	2016/01/21	ND, RDL=0.050		ug/g	
			Methylene Chloride(Dichloromethane)	2016/01/21	ND, RDL=0.050		ug/g	
			Methyl Ethyl Ketone (2-Butanone)	2016/01/21	ND, RDL=0.50		ug/g	
			Methyl Isobutyl Ketone	2016/01/21	ND, RDL=0.50		ug/g	
			Methyl t-butyl ether (MTBE)	2016/01/21	ND, RDL=0.050		ug/g	

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Styrene	2016/01/21	ND, RDL=0.050		ug/g	
			1,1,1,2-Tetrachloroethane	2016/01/21	ND, RDL=0.050		ug/g	
			1,1,2,2-Tetrachloroethane	2016/01/21	ND, RDL=0.050		ug/g	
			Tetrachloroethylene	2016/01/21	ND, RDL=0.050		ug/g	
			Toluene	2016/01/21	ND, RDL=0.020		ug/g	
			1,1,1-Trichloroethane	2016/01/21	ND, RDL=0.050		ug/g	
			1,1,2-Trichloroethane	2016/01/21	ND, RDL=0.050		ug/g	
			Trichloroethylene	2016/01/21	ND, RDL=0.050		ug/g	
			Trichlorofluoromethane (FREON 11)	2016/01/21	ND, RDL=0.050		ug/g	
			Vinyl Chloride	2016/01/21	ND, RDL=0.020		ug/g	
			p+m-Xylene	2016/01/21	ND, RDL=0.020		ug/g	
			o-Xylene	2016/01/21	ND, RDL=0.020		ug/g	
			Total Xylenes	2016/01/21	ND, RDL=0.020		ug/g	
			Acetone (2-Propanone)	2016/01/21	NC		%	50
			Benzene	2016/01/21	NC		%	50
			Bromodichloromethane	2016/01/21	NC		%	50
			Bromoform	2016/01/21	NC		%	50
			Bromomethane	2016/01/21	NC		%	50
			Carbon Tetrachloride	2016/01/21	NC		%	50
			Chlorobenzene	2016/01/21	NC		%	50
			Chloroform	2016/01/21	NC		%	50
4353290	AYA	RPD	Dibromochloromethane	2016/01/21	NC		%	50
			1,2-Dichlorobenzene	2016/01/21	NC		%	50
			1,3-Dichlorobenzene	2016/01/21	NC		%	50
			1,4-Dichlorobenzene	2016/01/21	NC		%	50
			Dichlorodifluoromethane (FREON 12)	2016/01/21	NC		%	50
			1,1-Dichloroethane	2016/01/21	NC		%	50
			1,2-Dichloroethane	2016/01/21	NC		%	50
			1,1-Dichloroethylene	2016/01/21	NC		%	50
			cis-1,2-Dichloroethylene	2016/01/21	NC		%	50
			trans-1,2-Dichloroethylene	2016/01/21	NC		%	50
			1,2-Dichloropropane	2016/01/21	NC		%	50
			cis-1,3-Dichloropropene	2016/01/21	NC		%	50
			trans-1,3-Dichloropropene	2016/01/21	NC		%	50
			Ethylbenzene	2016/01/21	NC		%	50
			Ethylene Dibromide	2016/01/21	NC		%	50
			Hexane	2016/01/21	NC		%	50

Maxxam Job #: B612414
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Terrapex Environmental Ltd
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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Methylene Chloride(Dichloromethane)	2016/01/21	NC		%	50
			Methyl Ethyl Ketone (2-Butanone)	2016/01/21	NC		%	50
			Methyl Isobutyl Ketone	2016/01/21	NC		%	50
			Methyl t-butyl ether (MTBE)	2016/01/21	NC		%	50
			Styrene	2016/01/21	NC		%	50
			1,1,1,2-Tetrachloroethane	2016/01/21	NC		%	50
			1,1,2,2-Tetrachloroethane	2016/01/21	NC		%	50
			Tetrachloroethylene	2016/01/21	NC		%	50
			Toluene	2016/01/21	NC		%	50
			1,1,1-Trichloroethane	2016/01/21	NC		%	50
			1,1,2-Trichloroethane	2016/01/21	NC		%	50
			Trichloroethylene	2016/01/21	NC		%	50
			Trichlorofluoromethane (FREON 11)	2016/01/21	NC		%	50
			Vinyl Chloride	2016/01/21	NC		%	50
			p+m-Xylene	2016/01/21	NC		%	50
			o-Xylene	2016/01/21	NC		%	50
			Total Xylenes	2016/01/21	NC		%	50
4353411	SPO	RPD	Moisture	2016/01/21	3.0		%	20
4353480	SAC	Matrix Spike [BRR316-01]	Chromium (VI)	2016/01/22		75	%	75 - 125
4353480	SAC	QC Standard	Chromium (VI)	2016/01/22		83	%	75 - 125
4353480	SAC	Spiked Blank	Chromium (VI)	2016/01/22		96	%	80 - 120
4353480	SAC	Method Blank	Chromium (VI)	2016/01/22	ND, RDL=0.2		ug/g	
4353480	SAC	RPD [BRR316-01]	Chromium (VI)	2016/01/22	NC		%	35
4353497	XQI	Matrix Spike [BRR316-01]	Free Cyanide	2016/01/22		98	%	75 - 125
4353497	XQI	Spiked Blank	Free Cyanide	2016/01/22		101	%	80 - 120
4353497	XQI	Method Blank	Free Cyanide	2016/01/22	ND, RDL=0.01		ug/g	
4353497	XQI	RPD [BRR316-01]	Free Cyanide	2016/01/22	NC		%	35
4353660	ZZ	Matrix Spike [BRR313-01]	o-Terphenyl	2016/01/22		91	%	60 - 130
			F2 (C10-C16 Hydrocarbons)	2016/01/22		76	%	50 - 130
			F3 (C16-C34 Hydrocarbons)	2016/01/22		84	%	50 - 130
			F4 (C34-C50 Hydrocarbons)	2016/01/22		86	%	50 - 130
4353660	ZZ	Spiked Blank	o-Terphenyl	2016/01/22		90	%	60 - 130
			F2 (C10-C16 Hydrocarbons)	2016/01/22		81	%	80 - 120
			F3 (C16-C34 Hydrocarbons)	2016/01/22		84	%	80 - 120
			F4 (C34-C50 Hydrocarbons)	2016/01/22		85	%	80 - 120
4353660	ZZ	Method Blank	o-Terphenyl	2016/01/22		91	%	60 - 130
			F2 (C10-C16 Hydrocarbons)	2016/01/22	ND, RDL=10		ug/g	
			F3 (C16-C34 Hydrocarbons)	2016/01/22	ND, RDL=50		ug/g	
			F4 (C34-C50 Hydrocarbons)	2016/01/22	ND, RDL=50		ug/g	
4353660	ZZ	RPD [BRR313-01]	F2 (C10-C16 Hydrocarbons)	2016/01/22	NC		%	30
			F3 (C16-C34 Hydrocarbons)	2016/01/22	NC		%	30
			F4 (C34-C50 Hydrocarbons)	2016/01/22	NC		%	30
4354166	GRU	Matrix Spike	1,4-Difluorobenzene	2016/01/22		99	%	60 - 140
			4-Bromofluorobenzene	2016/01/22		99	%	60 - 140
			D10-Ethylbenzene	2016/01/22		80	%	60 - 140
			D4-1,2-Dichloroethane	2016/01/22		99	%	60 - 140

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC	Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
4354166	GRU	Spiked Blank		Benzene	2016/01/22		77	%	60 - 140
				Toluene	2016/01/22		77	%	60 - 140
				Ethylbenzene	2016/01/22		86	%	60 - 140
				o-Xylene	2016/01/22		90	%	60 - 140
				p+m-Xylene	2016/01/22		78	%	60 - 140
				F1 (C6-C10)	2016/01/22		67	%	60 - 140
				1,4-Difluorobenzene	2016/01/22		99	%	60 - 140
				4-Bromofluorobenzene	2016/01/22		99	%	60 - 140
				D10-Ethylbenzene	2016/01/22		88	%	60 - 140
				D4-1,2-Dichloroethane	2016/01/22		98	%	60 - 140
4354166	GRU	Method Blank		Benzene	2016/01/22		98	%	60 - 140
				Toluene	2016/01/22		94	%	60 - 140
				Ethylbenzene	2016/01/22		106	%	60 - 140
				o-Xylene	2016/01/22		106	%	60 - 140
				p+m-Xylene	2016/01/22		97	%	60 - 140
				F1 (C6-C10)	2016/01/22		88	%	80 - 120
				1,4-Difluorobenzene	2016/01/22		99	%	60 - 140
				4-Bromofluorobenzene	2016/01/22		99	%	60 - 140
				D10-Ethylbenzene	2016/01/22		85	%	60 - 140
				D4-1,2-Dichloroethane	2016/01/22		99	%	60 - 140
4354166	GRU	RPD		Benzene	2016/01/22	ND, RDL=0.020		ug/g	
				Toluene	2016/01/22	ND, RDL=0.020		ug/g	
				Ethylbenzene	2016/01/22	ND, RDL=0.020		ug/g	
				o-Xylene	2016/01/22	ND, RDL=0.020		ug/g	
				p+m-Xylene	2016/01/22	ND, RDL=0.040		ug/g	
				Total Xylenes	2016/01/22	ND, RDL=0.040		ug/g	
				F1 (C6-C10)	2016/01/22	ND, RDL=10		ug/g	
				F1 (C6-C10) - BTEX	2016/01/22	ND, RDL=10		ug/g	
				Benzene	2016/01/22	NC		%	50
				Toluene	2016/01/22	4.1		%	50
4354187	LFE	Matrix Spike		Ethylbenzene	2016/01/22	0.085		%	50
				o-Xylene	2016/01/22	0.81		%	50
				p+m-Xylene	2016/01/22	2.5		%	50
				Total Xylenes	2016/01/22	1.4		%	50
				F1 (C6-C10)	2016/01/22	NC		%	30
				F1 (C6-C10) - BTEX	2016/01/22	NC		%	30
				D10-Anthracene	2016/01/22		90	%	50 - 130
				D14-Terphenyl (FS)	2016/01/22		73	%	50 - 130
				D8-Acenaphthylene	2016/01/22		93	%	50 - 130
				Acenaphthene	2016/01/22		93	%	50 - 130
4354187	LFE	Matrix Spike		Acenaphthylene	2016/01/22		90	%	50 - 130
				Anthracene	2016/01/22		86	%	50 - 130

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC				Date				
Batch	Init	QC Type	Parameter	Analyzed	Value	Recovery	UNITS	QC Limits
4354187	LFE	Spiked Blank	Benzo(a)anthracene	2016/01/22		129	%	50 - 130
			Benzo(a)pyrene	2016/01/22		111	%	50 - 130
			Benzo(b/j)fluoranthene	2016/01/22		103	%	50 - 130
			Benzo(g,h,i)perylene	2016/01/22		94	%	50 - 130
			Benzo(k)fluoranthene	2016/01/22		86	%	50 - 130
			Chrysene	2016/01/22		117	%	50 - 130
			Dibenz(a,h)anthracene	2016/01/22		92	%	50 - 130
			Fluoranthene	2016/01/22		NC	%	50 - 130
			Fluorene	2016/01/22		95	%	50 - 130
			Indeno(1,2,3-cd)pyrene	2016/01/22		105	%	50 - 130
			1-Methylnaphthalene	2016/01/22		94	%	50 - 130
			2-Methylnaphthalene	2016/01/22		93	%	50 - 130
			Naphthalene	2016/01/22		83	%	50 - 130
			Phenanthrene	2016/01/22		112	%	50 - 130
			Pyrene	2016/01/22		124	%	50 - 130
			D10-Anthracene	2016/01/22		89	%	50 - 130
			D14-Terphenyl (FS)	2016/01/22		75	%	50 - 130
			D8-Acenaphthylene	2016/01/22		63	%	50 - 130
			Acenaphthene	2016/01/22		97	%	50 - 130
			Acenaphthylene	2016/01/22		97	%	50 - 130
			Anthracene	2016/01/22		82	%	50 - 130
			Benzo(a)anthracene	2016/01/22		91	%	50 - 130
			Benzo(a)pyrene	2016/01/22		100	%	50 - 130
			Benzo(b/j)fluoranthene	2016/01/22		102	%	50 - 130
			Benzo(g,h,i)perylene	2016/01/22		96	%	50 - 130
			Benzo(k)fluoranthene	2016/01/22		99	%	50 - 130
			Chrysene	2016/01/22		92	%	50 - 130
			Dibenz(a,h)anthracene	2016/01/22		89	%	50 - 130
			Fluoranthene	2016/01/22		82	%	50 - 130
			Fluorene	2016/01/22		101	%	50 - 130
			Indeno(1,2,3-cd)pyrene	2016/01/22		98	%	50 - 130
			1-Methylnaphthalene	2016/01/22		93	%	50 - 130
			2-Methylnaphthalene	2016/01/22		91	%	50 - 130
			Naphthalene	2016/01/22		110	%	50 - 130
			Phenanthrene	2016/01/22		91	%	50 - 130
			Pyrene	2016/01/22		82	%	50 - 130
4354187	LFE	Method Blank	D10-Anthracene	2016/01/22		84	%	50 - 130
			D14-Terphenyl (FS)	2016/01/22		71	%	50 - 130
			D8-Acenaphthylene	2016/01/22		59	%	50 - 130
			Acenaphthene	2016/01/22	ND, RDL=0.0050		ug/g	
			Acenaphthylene	2016/01/22	ND, RDL=0.0050		ug/g	
			Anthracene	2016/01/22	ND, RDL=0.0050		ug/g	
			Benzo(a)anthracene	2016/01/22	ND, RDL=0.0050		ug/g	
			Benzo(a)pyrene	2016/01/22	ND, RDL=0.0050		ug/g	
			Benzo(b/j)fluoranthene	2016/01/22	ND, RDL=0.0050		ug/g	

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			Benzo(g,h,i)perylene	2016/01/22	ND, RDL=0.0050		ug/g	
			Benzo(k)fluoranthene	2016/01/22	ND, RDL=0.0050		ug/g	
			Chrysene	2016/01/22	ND, RDL=0.0050		ug/g	
			Dibenz(a,h)anthracene	2016/01/22	ND, RDL=0.0050		ug/g	
			Fluoranthene	2016/01/22	ND, RDL=0.0050		ug/g	
			Fluorene	2016/01/22	ND, RDL=0.0050		ug/g	
			Indeno(1,2,3-cd)pyrene	2016/01/22	ND, RDL=0.0050		ug/g	
			1-Methylnaphthalene	2016/01/22	ND, RDL=0.0050		ug/g	
			2-Methylnaphthalene	2016/01/22	ND, RDL=0.0050		ug/g	
			Naphthalene	2016/01/22	ND, RDL=0.0050		ug/g	
			Phenanthrene	2016/01/22	ND, RDL=0.0050		ug/g	
			Pyrene	2016/01/22	ND, RDL=0.0050		ug/g	
4354187	LFE	RPD	Acenaphthene	2016/01/22	NC		%	40
			Acenaphthylene	2016/01/22	NC		%	40
			Anthracene	2016/01/22	NC		%	40
			Benzo(a)anthracene	2016/01/22	21		%	40
			Benzo(a)pyrene	2016/01/22	3.1		%	40
			Benzo(b,j)fluoranthene	2016/01/22	8.7		%	40
			Benzo(g,h,i)perylene	2016/01/22	3.3		%	40
			Benzo(k)fluoranthene	2016/01/22	0.34		%	40
			Chrysene	2016/01/22	24		%	40
			Dibenz(a,h)anthracene	2016/01/22	NC		%	40
			Fluoranthene	2016/01/22	38		%	40
			Fluorene	2016/01/22	NC		%	40
			Indeno(1,2,3-cd)pyrene	2016/01/22	1.1		%	40
			1-Methylnaphthalene	2016/01/22	NC		%	40
			2-Methylnaphthalene	2016/01/22	NC		%	40
4354402	VIV	Matrix Spike [BRR316-01]	Naphthalene	2016/01/22	NC		%	40
			Phenanthrene	2016/01/22	70 (1)		%	40
			Pyrene	2016/01/22	31		%	40
			Acid Extractable Antimony (Sb)	2016/01/22		102	%	75 - 125
			Acid Extractable Arsenic (As)	2016/01/22		101	%	75 - 125
			Acid Extractable Barium (Ba)	2016/01/22		101	%	75 - 125
			Acid Extractable Beryllium (Be)	2016/01/22		100	%	75 - 125
			Acid Extractable Boron (B)	2016/01/22		97	%	75 - 125
			Acid Extractable Cadmium (Cd)	2016/01/22		105	%	75 - 125
			Acid Extractable Chromium (Cr)	2016/01/22		99	%	75 - 125
			Acid Extractable Cobalt (Co)	2016/01/22		97	%	75 - 125

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
4354402	VIV	Spiked Blank	Acid Extractable Copper (Cu)	2016/01/22		96	%	75 - 125
			Acid Extractable Lead (Pb)	2016/01/22		101	%	75 - 125
			Acid Extractable Molybdenum (Mo)	2016/01/22		109	%	75 - 125
			Acid Extractable Nickel (Ni)	2016/01/22		97	%	75 - 125
			Acid Extractable Selenium (Se)	2016/01/22		103	%	75 - 125
			Acid Extractable Silver (Ag)	2016/01/22		103	%	75 - 125
			Acid Extractable Thallium (Tl)	2016/01/22		102	%	75 - 125
			Acid Extractable Uranium (U)	2016/01/22		105	%	75 - 125
			Acid Extractable Vanadium (V)	2016/01/22		96	%	75 - 125
			Acid Extractable Zinc (Zn)	2016/01/22		96	%	75 - 125
			Acid Extractable Mercury (Hg)	2016/01/22		112	%	75 - 125
			Acid Extractable Antimony (Sb)	2016/01/22		101	%	80 - 120
			Acid Extractable Arsenic (As)	2016/01/22		96	%	80 - 120
			Acid Extractable Barium (Ba)	2016/01/22		94	%	80 - 120
			Acid Extractable Beryllium (Be)	2016/01/22		96	%	80 - 120
			Acid Extractable Boron (B)	2016/01/22		91	%	80 - 120
			Acid Extractable Cadmium (Cd)	2016/01/22		102	%	80 - 120
			Acid Extractable Chromium (Cr)	2016/01/22		96	%	80 - 120
			Acid Extractable Cobalt (Co)	2016/01/22		93	%	80 - 120
			Acid Extractable Copper (Cu)	2016/01/22		97	%	80 - 120
			Acid Extractable Lead (Pb)	2016/01/22		99	%	80 - 120
			Acid Extractable Molybdenum (Mo)	2016/01/22		99	%	80 - 120
			Acid Extractable Nickel (Ni)	2016/01/22		95	%	80 - 120
			Acid Extractable Selenium (Se)	2016/01/22		98	%	80 - 120
			Acid Extractable Silver (Ag)	2016/01/22		102	%	80 - 120
			Acid Extractable Thallium (Tl)	2016/01/22		97	%	80 - 120
			Acid Extractable Uranium (U)	2016/01/22		100	%	80 - 120
			Acid Extractable Vanadium (V)	2016/01/22		94	%	80 - 120
			Acid Extractable Zinc (Zn)	2016/01/22		94	%	80 - 120
			Acid Extractable Mercury (Hg)	2016/01/22		110	%	80 - 120
4354402	VIV	Method Blank	Acid Extractable Antimony (Sb)	2016/01/22	ND, RDL=0.20		ug/g	
			Acid Extractable Arsenic (As)	2016/01/22	ND, RDL=1.0		ug/g	
			Acid Extractable Barium (Ba)	2016/01/22	ND, RDL=0.50		ug/g	
			Acid Extractable Beryllium (Be)	2016/01/22	ND, RDL=0.20		ug/g	
			Acid Extractable Boron (B)	2016/01/22	ND, RDL=5.0		ug/g	
			Acid Extractable Cadmium (Cd)	2016/01/22	ND, RDL=0.10		ug/g	
			Acid Extractable Chromium (Cr)	2016/01/22	ND, RDL=1.0		ug/g	
			Acid Extractable Cobalt (Co)	2016/01/22	ND, RDL=0.10		ug/g	
			Acid Extractable Copper (Cu)	2016/01/22	ND, RDL=0.50		ug/g	
			Acid Extractable Lead (Pb)	2016/01/22	ND, RDL=1.0		ug/g	

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			Acid Extractable Molybdenum (Mo)	2016/01/22	ND, RDL=0.50		ug/g	
			Acid Extractable Nickel (Ni)	2016/01/22	ND, RDL=0.50		ug/g	
			Acid Extractable Selenium (Se)	2016/01/22	ND, RDL=0.50		ug/g	
			Acid Extractable Silver (Ag)	2016/01/22	ND, RDL=0.20		ug/g	
			Acid Extractable Thallium (Tl)	2016/01/22	ND, RDL=0.050		ug/g	
			Acid Extractable Uranium (U)	2016/01/22	ND, RDL=0.050		ug/g	
			Acid Extractable Vanadium (V)	2016/01/22	ND, RDL=5.0		ug/g	
			Acid Extractable Zinc (Zn)	2016/01/22	ND, RDL=5.0		ug/g	
			Acid Extractable Mercury (Hg)	2016/01/22	ND, RDL=0.050		ug/g	
4354402	VIV	RPD [BRR316-01]	Acid Extractable Antimony (Sb)	2016/01/22	NC		%	30
			Acid Extractable Arsenic (As)	2016/01/22	NC		%	30
			Acid Extractable Barium (Ba)	2016/01/22	20		%	30
			Acid Extractable Beryllium (Be)	2016/01/22	NC		%	30
			Acid Extractable Boron (B)	2016/01/22	NC		%	30
			Acid Extractable Cadmium (Cd)	2016/01/22	NC		%	30
			Acid Extractable Chromium (Cr)	2016/01/22	NC		%	30
			Acid Extractable Cobalt (Co)	2016/01/22	2.6		%	30
			Acid Extractable Copper (Cu)	2016/01/22	NC		%	30
			Acid Extractable Lead (Pb)	2016/01/22	NC		%	30
			Acid Extractable Molybdenum (Mo)	2016/01/22	NC		%	30
			Acid Extractable Nickel (Ni)	2016/01/22	NC		%	30
			Acid Extractable Selenium (Se)	2016/01/22	NC		%	30
			Acid Extractable Silver (Ag)	2016/01/22	NC		%	30
			Acid Extractable Thallium (Tl)	2016/01/22	NC		%	30
			Acid Extractable Uranium (U)	2016/01/22	NC		%	30
			Acid Extractable Vanadium (V)	2016/01/22	NC		%	30
			Acid Extractable Zinc (Zn)	2016/01/22	NC		%	30
			Acid Extractable Mercury (Hg)	2016/01/22	NC		%	30
4354438	JOH	Spiked Blank	Soluble Calcium (Ca)	2016/01/22		96	%	80 - 120
			Soluble Magnesium (Mg)	2016/01/22		96	%	80 - 120
			Soluble Sodium (Na)	2016/01/22		93	%	80 - 120
4354438	JOH	Method Blank	Soluble Calcium (Ca)	2016/01/22	ND, RDL=0.5		mg/L	
			Soluble Magnesium (Mg)	2016/01/22	ND, RDL=0.5		mg/L	
			Soluble Sodium (Na)	2016/01/22	ND,RDL=5		mg/L	
4354438	JOH	RPD [BRR315-01]	Soluble Calcium (Ca)	2016/01/22	1.2		%	30
			Soluble Magnesium (Mg)	2016/01/22	NC		%	30
			Soluble Sodium (Na)	2016/01/22	NC		%	30
4354440	L_A	Spiked Blank	Conductivity	2016/01/22		99	%	90 - 110

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
4354440	L_A	Method Blank	Conductivity	2016/01/22	ND, RDL=0.002		mS/cm	
4354440	L_A	RPD [BRR315-01]	Conductivity	2016/01/22	1.1		%	10
4354497	JOH	Matrix Spike [BRR316-01]	Hot Water Ext. Boron (B)	2016/01/22		94	%	75 - 125
4354497	JOH	Spiked Blank	Hot Water Ext. Boron (B)	2016/01/22		92	%	75 - 125
4354497	JOH	Method Blank	Hot Water Ext. Boron (B)	2016/01/22	ND, RDL=0.050		ug/g	
4354497	JOH	RPD [BRR316-01]	Hot Water Ext. Boron (B)	2016/01/22	NC		%	40
4354518	NYS	Spiked Blank	Available (CaCl ₂) pH	2016/01/22		98	%	97 - 103
4354518	NYS	RPD [BRR316-01]	Available (CaCl ₂) pH	2016/01/22	0.98		%	N/A

N/A = Not Applicable

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.

Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.

QC Standard: A sample of known concentration prepared by an external agency under stringent conditions. Used as an independent check of method accuracy.

Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.

Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.

Surrogate: A pure or isotopically labeled compound whose behavior mirrors the analytes of interest. Used to evaluate extraction efficiency.

NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spiked amount was too small to permit a reliable recovery calculation (matrix spike concentration was less than 2x that of the native sample concentration).

NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (one or both samples < 5x RDL).

(1) Duplicate results exceeded RPD acceptance criteria. The variability in the results for this analyte may be more pronounced.

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VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by the following individual(s).

Cristina Carriere

Cristina Carriere, Scientific Services

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

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Maxxam Analytics International Corporation o/a Maxxam Analytics

Attention: Jeff Stevenson

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Your P.O. #: 4700001396

Your Project #: CB644.02

Site#: 60680

Site Location: 121 Hume Street, Collingwood, ON

Your C.O.C. #: 544552-01-01

Report Date: 2016/01/21

Report #: R3858661

Version: 1 - Final

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B610258

Received: 2016/01/19, 09:00

Sample Matrix: Soil
Samples Received: 3

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Reference
Methylnaphthalene Sum	1	N/A	2016/01/20	CAM SOP-00301	EPA 8270D m
Hot Water Extractable Boron	1	2016/01/20	2016/01/20	CAM SOP-00408	R153 Ana. Prot. 2011
1,3-Dichloropropene Sum	1	N/A	2016/01/20		EPA 8260C m
Free (WAD) Cyanide	1	2016/01/19	2016/01/20	CAM SOP-00457	OMOE E3015 m
Conductivity	1	N/A	2016/01/20	CAM SOP-00414	OMOE E3138 v2 m
Hexavalent Chromium in Soil by IC (1)	1	2016/01/19	2016/01/20	CAM SOP-00436	EPA 3060/7199 m
Petroleum Hydro. CCME F1 & BTEX in Soil (2)	3	N/A	2016/01/20	CAM SOP-00315	CCME PHC-CWS m
Petroleum Hydrocarbons F2-F4 in Soil (3)	3	2016/01/19	2016/01/20	CAM SOP-00316	CCME CWS m
Strong Acid Leachable Metals by ICPMS	1	2016/01/20	2016/01/20	CAM SOP-00447	EPA 6020A m
Moisture	3	N/A	2016/01/19	CAM SOP-00445	Carter 2nd ed 51.2 m
PAH Compounds in Soil by GC/MS (SIM)	1	2016/01/19	2016/01/20	CAM SOP-00318	EPA 8270D m
pH CaCl2 EXTRACT	1	2016/01/20	2016/01/20	CAM SOP-00413	EPA 9045 D m
Sodium Adsorption Ratio (SAR)	1	N/A	2016/01/20	CAM SOP-00102	EPA 6010
SAR - ICP Metals	1	2016/01/20	2016/01/20	CAM SOP-00408	EPA 6010 m
Volatile Organic Compounds in Soil	1	N/A	2016/01/20	CAM SOP000228	EPA 8260C m

Remarks:

Maxxam Analytics has performed all analytical testing herein in accordance with ISO 17025 and the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act. All methodologies comply with this document and are validated for use in the laboratory. The methods and techniques employed in this analysis conform to the performance criteria (detection limits, accuracy and precision) as outlined in the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act.

Maxxam Analytics is accredited for all specific parameters as required by Ontario Regulation 153/04. Maxxam Analytics is limited in liability to the actual cost of analysis unless otherwise agreed in writing. There is no other warranty expressed or implied. Samples will be retained at Maxxam Analytics for three weeks from receipt of data or as per contract.

Reference Method suffix "m" indicates test methods incorporate validated modifications from specific reference methods to improve performance.

* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.

Attention: Jeff Stevenson

Terrapex Environmental Ltd
920 Brant Street
Unit 16
Burlington, ON
CANADA L7R 4J1

Your P.O. #: 4700001396

Your Project #: CB644.02

Site#: 60680

Site Location: 121 Hume Street, Collingwood, ON

Your C.O.C. #: 544552-01-01

Report Date: 2016/01/21

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CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B610258

Received: 2016/01/19, 09:00

- (1) Soils are reported on a dry weight basis unless otherwise specified.
- (2) No lab extraction date is given for F1BTX & VOC samples that are field preserved with methanol. Extraction date is the date sampled unless otherwise stated.
- (3) All CCME PHC results met required criteria unless otherwise stated in the report. The CWS PHC methods employed by Maxxam conform to all prescribed elements of the reference method and performance based elements have been validated. All modifications have been validated and proven equivalent following "Alberta Environment's Interpretation of the Reference Method for the Canada-Wide Standard for Petroleum Hydrocarbons in Soil Validation of Performance-Based Alternative Methods September 2003". Documentation is available upon request. Modifications from Reference Method for the Canada-wide Standard for Petroleum Hydrocarbons in Soil-Tier 1 Method: F2/F3/F4 data reported using validated cold solvent extraction instead of Soxhlet extraction.

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.

Marissa Oddi, Customer Service Representative

Email: moddi@maxxam.ca

Phone# (905) 817-5700

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Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

O.REG 153 METALS & INORGANICS PKG (SOIL)

Maxxam ID		BRG588	BRG588		
Sampling Date		2016/01/18 12:30	2016/01/18 12:30		
COC Number		544552-01-01	544552-01-01		
	UNITS	CS111	CS111 Lab-Dup	RDL	QC Batch
Calculated Parameters					
Sodium Adsorption Ratio	N/A	1.8			4349562
Inorganics					
Conductivity	mS/cm	0.13		0.002	4351004
Free Cyanide	ug/g	ND	ND	0.01	4349782
Moisture	%	22		1.0	4350617
Available (CaCl2) pH	pH	7.36	7.52	N/A	4351239
Metals					
Soluble Calcium (Ca)	mg/L	5.9		0.5	4351002
Soluble Magnesium (Mg)	mg/L	0.6		0.5	4351002
Soluble Sodium (Na)	mg/L	17		5	4351002
Inorganics					
Chromium (VI)	ug/g	ND	ND	0.2	4350326
Metals					
Hot Water Ext. Boron (B)	ug/g	ND	0.054	0.050	4351201
Acid Extractable Antimony (Sb)	ug/g	ND		0.20	4351160
Acid Extractable Arsenic (As)	ug/g	ND		1.0	4351160
Acid Extractable Barium (Ba)	ug/g	4.1		0.50	4351160
Acid Extractable Beryllium (Be)	ug/g	ND		0.20	4351160
Acid Extractable Boron (B)	ug/g	ND		5.0	4351160
Acid Extractable Cadmium (Cd)	ug/g	ND		0.10	4351160
Acid Extractable Chromium (Cr)	ug/g	3.4		1.0	4351160
Acid Extractable Cobalt (Co)	ug/g	2.6		0.10	4351160
Acid Extractable Copper (Cu)	ug/g	1.9		0.50	4351160
Acid Extractable Lead (Pb)	ug/g	2.5		1.0	4351160
Acid Extractable Molybdenum (Mo)	ug/g	ND		0.50	4351160
Acid Extractable Nickel (Ni)	ug/g	3.7		0.50	4351160
Acid Extractable Selenium (Se)	ug/g	ND		0.50	4351160
Acid Extractable Silver (Ag)	ug/g	ND		0.20	4351160
Acid Extractable Thallium (Tl)	ug/g	ND		0.050	4351160
Acid Extractable Uranium (U)	ug/g	0.20		0.050	4351160
RDL = Reportable Detection Limit QC Batch = Quality Control Batch Lab-Dup = Laboratory Initiated Duplicate ND = Not detected N/A = Not Applicable					

Maxxam Job #: B610258
Report Date: 2016/01/21

Terrapex Environmental Ltd
Client Project #: CB644.02
Site Location: 121 Hume Street, Collingwood, ON
Your P.O. #: 4700001396
Sampler Initials: PA

O.REG 153 METALS & INORGANICS PKG (SOIL)

Maxxam ID		BRG588	BRG588		
Sampling Date		2016/01/18 12:30	2016/01/18 12:30		
COC Number		544552-01-01	544552-01-01		
	UNITS	CS111	CS111 Lab-Dup	RDL	QC Batch
Acid Extractable Vanadium (V)	ug/g	5.1		5.0	4351160
Acid Extractable Zinc (Zn)	ug/g	11		5.0	4351160
Acid Extractable Mercury (Hg)	ug/g	ND		0.050	4351160
RDL = Reportable Detection Limit QC Batch = Quality Control Batch Lab-Dup = Laboratory Initiated Duplicate ND = Not detected					

O.REG 153 PAHS (SOIL)

Maxxam ID		BRG588	BRG588		
Sampling Date		2016/01/18 12:30	2016/01/18 12:30		
COC Number		544552-01-01	544552-01-01		
	UNITS	CS111	CS111 Lab-Dup	RDL	QC Batch
Calculated Parameters					
Methylnaphthalene, 2-(1-)	ug/g	0.18		0.0071	4349559
Polyaromatic Hydrocarbons					
Acenaphthene	ug/g	ND	ND	0.0050	4350935
Acenaphthylene	ug/g	ND	ND	0.0050	4350935
Anthracene	ug/g	ND	ND	0.0050	4350935
Benzo(a)anthracene	ug/g	ND	ND	0.0050	4350935
Benzo(a)pyrene	ug/g	ND	ND	0.0050	4350935
Benzo(b/j)fluoranthene	ug/g	ND	ND	0.0050	4350935
Benzo(g,h,i)perylene	ug/g	ND	ND	0.0050	4350935
Benzo(k)fluoranthene	ug/g	ND	ND	0.0050	4350935
Chrysene	ug/g	ND	ND	0.0050	4350935
Dibenz(a,h)anthracene	ug/g	ND	ND	0.0050	4350935
Fluoranthene	ug/g	ND	ND	0.0050	4350935
Fluorene	ug/g	0.0063	0.0072	0.0050	4350935
Indeno(1,2,3-cd)pyrene	ug/g	ND	ND	0.0050	4350935
1-Methylnaphthalene	ug/g	0.11	0.10	0.0050	4350935
2-Methylnaphthalene	ug/g	0.067	0.069	0.0050	4350935
Naphthalene	ug/g	0.17	0.16	0.0050	4350935
Phenanthrene	ug/g	0.0052	0.0055	0.0050	4350935
Pyrene	ug/g	ND	ND	0.0050	4350935
Surrogate Recovery (%)					
D10-Anthracene	%	89	87		4350935
D14-Terphenyl (FS)	%	85	84		4350935
D8-Acenaphthylene	%	86	86		4350935
RDL = Reportable Detection Limit QC Batch = Quality Control Batch Lab-Dup = Laboratory Initiated Duplicate ND = Not detected					

O.REG 153 PETROLEUM HYDROCARBONS (SOIL)

Maxxam ID		BRG588	BRG589	BRG590		
Sampling Date		2016/01/18 12:30	2016/01/18 13:30	2016/01/18 13:45		
COC Number		544552-01-01	544552-01-01	544552-01-01		
	UNITS	CS111	SP403	SP504	RDL	QC Batch
Inorganics						
Moisture	%		10	20	1.0	4350617
BTEX & F1 Hydrocarbons						
Benzene	ug/g		ND	ND	0.020	4350862
Toluene	ug/g		ND	ND	0.020	4350862
Ethylbenzene	ug/g		ND	ND	0.020	4350862
o-Xylene	ug/g		ND	ND	0.020	4350862
p+m-Xylene	ug/g		ND	ND	0.040	4350862
Total Xylenes	ug/g		ND	ND	0.040	4350862
F1 (C6-C10)	ug/g	22	ND	ND	10	4350862
F1 (C6-C10) - BTEX	ug/g	21	ND	ND	10	4350862
F2-F4 Hydrocarbons						
F2 (C10-C16 Hydrocarbons)	ug/g	ND	ND	ND	10	4350845
F3 (C16-C34 Hydrocarbons)	ug/g	ND	ND	ND	50	4350845
F4 (C34-C50 Hydrocarbons)	ug/g	ND	ND	ND	50	4350845
Reached Baseline at C50	ug/g	Yes	Yes	Yes		4350845
Surrogate Recovery (%)						
1,4-Difluorobenzene	%	105	104	105		4350862
4-Bromofluorobenzene	%	99	98	96		4350862
D10-Ethylbenzene	%	71	75	83		4350862
D4-1,2-Dichloroethane	%	101	100	108		4350862
o-Terphenyl	%	89	88	90		4350845
RDL = Reportable Detection Limit QC Batch = Quality Control Batch ND = Not detected						

O.REG 153 VOLATILE ORGANICS (SOIL)

Maxxam ID		BRG588	BRG588		
Sampling Date		2016/01/18 12:30	2016/01/18 12:30		
COC Number		544552-01-01	544552-01-01		
	UNITS	CS111	CS111 Lab-Dup	RDL	QC Batch
Calculated Parameters					
1,3-Dichloropropene (cis+trans)	ug/g	ND		0.050	4349560
Volatile Organics					
Acetone (2-Propanone)	ug/g	ND	ND	0.50	4349553
Benzene	ug/g	ND	ND	0.020	4349553
Bromodichloromethane	ug/g	ND	ND	0.050	4349553
Bromoform	ug/g	ND	ND	0.050	4349553
Bromomethane	ug/g	ND	ND	0.050	4349553
Carbon Tetrachloride	ug/g	ND	ND	0.050	4349553
Chlorobenzene	ug/g	ND	ND	0.050	4349553
Chloroform	ug/g	ND	ND	0.050	4349553
Dibromochloromethane	ug/g	ND	ND	0.050	4349553
1,2-Dichlorobenzene	ug/g	ND	ND	0.050	4349553
1,3-Dichlorobenzene	ug/g	ND	ND	0.050	4349553
1,4-Dichlorobenzene	ug/g	ND	ND	0.050	4349553
Dichlorodifluoromethane (FREON 12)	ug/g	ND	ND	0.050	4349553
1,1-Dichloroethane	ug/g	ND	ND	0.050	4349553
1,2-Dichloroethane	ug/g	ND	ND	0.050	4349553
1,1-Dichloroethylene	ug/g	ND	ND	0.050	4349553
cis-1,2-Dichloroethylene	ug/g	ND	ND	0.050	4349553
trans-1,2-Dichloroethylene	ug/g	ND	ND	0.050	4349553
1,2-Dichloropropane	ug/g	ND	ND	0.050	4349553
cis-1,3-Dichloropropene	ug/g	ND	ND	0.030	4349553
trans-1,3-Dichloropropene	ug/g	ND	ND	0.040	4349553
Ethylbenzene	ug/g	0.10	0.097	0.020	4349553
Ethylene Dibromide	ug/g	ND	ND	0.050	4349553
Hexane	ug/g	0.27	0.26	0.050	4349553
Methylene Chloride(Dichloromethane)	ug/g	ND	ND	0.050	4349553
Methyl Ethyl Ketone (2-Butanone)	ug/g	ND	ND	0.50	4349553
Methyl Isobutyl Ketone	ug/g	ND	ND	0.50	4349553
Methyl t-butyl ether (MTBE)	ug/g	ND	ND	0.050	4349553
Styrene	ug/g	ND	ND	0.050	4349553
RDL = Reportable Detection Limit QC Batch = Quality Control Batch Lab-Dup = Laboratory Initiated Duplicate ND = Not detected					

O.REG 153 VOLATILE ORGANICS (SOIL)

Maxxam ID		BRG588	BRG588		
Sampling Date		2016/01/18 12:30	2016/01/18 12:30		
COC Number		544552-01-01	544552-01-01		
	UNITS	CS111	CS111 Lab-Dup	RDL	QC Batch
1,1,1,2-Tetrachloroethane	ug/g	ND	ND	0.050	4349553
1,1,2,2-Tetrachloroethane	ug/g	ND	ND	0.050	4349553
Tetrachloroethylene	ug/g	ND	ND	0.050	4349553
Toluene	ug/g	ND	ND	0.020	4349553
1,1,1-Trichloroethane	ug/g	ND	ND	0.050	4349553
1,1,2-Trichloroethane	ug/g	ND	ND	0.050	4349553
Trichloroethylene	ug/g	ND	ND	0.050	4349553
Trichlorofluoromethane (FREON 11)	ug/g	ND	ND	0.050	4349553
Vinyl Chloride	ug/g	ND	ND	0.020	4349553
p+m-Xylene	ug/g	0.52	0.51	0.020	4349553
o-Xylene	ug/g	0.047	0.045	0.020	4349553
Total Xylenes	ug/g	0.57	0.56	0.020	4349553
Surrogate Recovery (%)					
4-Bromofluorobenzene	%	99	99		4349553
D10-o-Xylene	%	99	97		4349553
D4-1,2-Dichloroethane	%	95	95		4349553
D8-Toluene	%	101	101		4349553
RDL = Reportable Detection Limit QC Batch = Quality Control Batch Lab-Dup = Laboratory Initiated Duplicate ND = Not detected					

Maxxam Job #: B610258
Report Date: 2016/01/21

Terrapex Environmental Ltd
Client Project #: CB644.02
Site Location: 121 Hume Street, Collingwood, ON
Your P.O. #: 4700001396
Sampler Initials: PA

TEST SUMMARY

Maxxam ID: BRG588
Sample ID: CS111
Matrix: Soil

Collected: 2016/01/18
Shipped:
Received: 2016/01/19

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	4349559	N/A	2016/01/20	Automated Statchk
Hot Water Extractable Boron	ICP	4351201	2016/01/20	2016/01/20	Jolly John
1,3-Dichloropropene Sum	CALC	4349560	N/A	2016/01/20	Automated Statchk
Free (WAD) Cyanide	TECH	4349782	2016/01/19	2016/01/20	Xuanhong Qiu
Conductivity	AT	4351004	N/A	2016/01/20	Lemeneh Addis
Hexavalent Chromium in Soil by IC	IC/SPEC	4350326	2016/01/19	2016/01/20	Sally Coughlin
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	4350862	N/A	2016/01/20	Georgeta Rusu
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	4350845	2016/01/19	2016/01/20	Zhiyue (Frank) Zhu
Strong Acid Leachable Metals by ICPMS	ICP/MS	4351160	2016/01/20	2016/01/20	Viviana Canzonieri
Moisture	BAL	4350617	N/A	2016/01/19	Shivani Desai
PAH Compounds in Soil by GC/MS (SIM)	GC/MS	4350935	2016/01/19	2016/01/20	Lingyun Feng
pH CaCl2 EXTRACT	AT	4351239	2016/01/20	2016/01/20	Surinder Rai
Sodium Adsorption Ratio (SAR)	CALC/MET	4349562	N/A	2016/01/20	Automated Statchk
SAR - ICP Metals	ICP	4351002	2016/01/20	2016/01/20	Jolly John
Volatile Organic Compounds in Soil	GC/MS	4349553	N/A	2016/01/20	Anna Gabrielyan

Maxxam ID: BRG588 Dup
Sample ID: CS111
Matrix: Soil

Collected: 2016/01/18
Shipped:
Received: 2016/01/19

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hot Water Extractable Boron	ICP	4351201	2016/01/20	2016/01/20	Jolly John
Free (WAD) Cyanide	TECH	4349782	2016/01/19	2016/01/20	Xuanhong Qiu
Hexavalent Chromium in Soil by IC	IC/SPEC	4350326	2016/01/19	2016/01/20	Sally Coughlin
PAH Compounds in Soil by GC/MS (SIM)	GC/MS	4350935	2016/01/19	2016/01/20	Lingyun Feng
pH CaCl2 EXTRACT	AT	4351239	2016/01/20	2016/01/20	Surinder Rai
Volatile Organic Compounds in Soil	GC/MS	4349553	N/A	2016/01/20	Anna Gabrielyan

Maxxam ID: BRG589
Sample ID: SP403
Matrix: Soil

Collected: 2016/01/18
Shipped:
Received: 2016/01/19

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	4350862	N/A	2016/01/20	Georgeta Rusu
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	4350845	2016/01/19	2016/01/20	Zhiyue (Frank) Zhu
Moisture	BAL	4350617	N/A	2016/01/19	Shivani Desai

Maxxam ID: BRG590
Sample ID: SP504
Matrix: Soil

Collected: 2016/01/18
Shipped:
Received: 2016/01/19

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	4350862	N/A	2016/01/20	Georgeta Rusu
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	4350845	2016/01/19	2016/01/20	Zhiyue (Frank) Zhu

Maxxam Job #: B610258
Report Date: 2016/01/21

Terrapex Environmental Ltd
Client Project #: CB644.02
Site Location: 121 Hume Street, Collingwood, ON
Your P.O. #: 4700001396
Sampler Initials: PA

TEST SUMMARY

Maxxam ID: BRG590
Sample ID: SP504
Matrix: Soil

Collected: 2016/01/18
Shipped:
Received: 2016/01/19

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Moisture	BAL	4350617	N/A	2016/01/19	Shivani Desai

Maxxam Job #: B610258
Report Date: 2016/01/21

Terrapex Environmental Ltd
Client Project #: CB644.02
Site Location: 121 Hume Street, Collingwood, ON
Your P.O. #: 4700001396
Sampler Initials: PA

GENERAL COMMENTS

Each temperature is the average of up to three cooler temperatures taken at receipt

Package 1	-0.3°C

Sample BRG588-01 : F1 BTEX Analysis: The BTEX results used for the F1-BTEX calculation were obtained from Headspace-GC analysis.

Results relate only to the items tested.

QUALITY ASSURANCE REPORT

QA/QC	Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
4349553	AYA	Matrix Spike [BRG588-03]		4-Bromofluorobenzene	2016/01/20		99	%	60 - 140
				D10-o-Xylene	2016/01/20		102	%	60 - 130
				D4-1,2-Dichloroethane	2016/01/20		95	%	60 - 140
				D8-Toluene	2016/01/20		103	%	60 - 140
				Acetone (2-Propanone)	2016/01/20		89	%	60 - 140
				Benzene	2016/01/20		98	%	60 - 140
				Bromodichloromethane	2016/01/20		98	%	60 - 140
				Bromoform	2016/01/20		104	%	60 - 140
				Bromomethane	2016/01/20		83	%	60 - 140
				Carbon Tetrachloride	2016/01/20		105	%	60 - 140
				Chlorobenzene	2016/01/20		100	%	60 - 140
				Chloroform	2016/01/20		98	%	60 - 140
				Dibromochloromethane	2016/01/20		104	%	60 - 140
				1,2-Dichlorobenzene	2016/01/20		99	%	60 - 140
				1,3-Dichlorobenzene	2016/01/20		94	%	60 - 140
				1,4-Dichlorobenzene	2016/01/20		93	%	60 - 140
				Dichlorodifluoromethane (FREON 12)	2016/01/20		103	%	60 - 140
				1,1-Dichloroethane	2016/01/20		97	%	60 - 140
				1,2-Dichloroethane	2016/01/20		96	%	60 - 140
				1,1-Dichloroethylene	2016/01/20		103	%	60 - 140
				cis-1,2-Dichloroethylene	2016/01/20		97	%	60 - 140
				trans-1,2-Dichloroethylene	2016/01/20		98	%	60 - 140
				1,2-Dichloropropane	2016/01/20		95	%	60 - 140
				cis-1,3-Dichloropropene	2016/01/20		83	%	60 - 140
				trans-1,3-Dichloropropene	2016/01/20		80	%	60 - 140
				Ethylbenzene	2016/01/20		102	%	60 - 140
				Ethylene Dibromide	2016/01/20		94	%	60 - 140
				Hexane	2016/01/20		110	%	60 - 140
				Methylene Chloride(Dichloromethane)	2016/01/20		98	%	60 - 140
				Methyl Ethyl Ketone (2-Butanone)	2016/01/20		88	%	60 - 140
				Methyl Isobutyl Ketone	2016/01/20		88	%	60 - 140
				Methyl t-butyl ether (MTBE)	2016/01/20		96	%	60 - 140
				Styrene	2016/01/20		95	%	60 - 140
				1,1,1,2-Tetrachloroethane	2016/01/20		102	%	60 - 140
				1,1,2,2-Tetrachloroethane	2016/01/20		96	%	60 - 140
				Tetrachloroethylene	2016/01/20		104	%	60 - 140
				Toluene	2016/01/20		99	%	60 - 140
				1,1,1-Trichloroethane	2016/01/20		98	%	60 - 140
				1,1,2-Trichloroethane	2016/01/20		98	%	60 - 140
				Trichloroethylene	2016/01/20		95	%	60 - 140
				Trichlorofluoromethane (FREON 11)	2016/01/20		104	%	60 - 140
				Vinyl Chloride	2016/01/20		104	%	60 - 140
				p+m-Xylene	2016/01/20		100	%	60 - 140
				o-Xylene	2016/01/20		99	%	60 - 140
4349553	AYA	Spiked Blank		4-Bromofluorobenzene	2016/01/20		99	%	60 - 140
				D10-o-Xylene	2016/01/20		99	%	60 - 130
				D4-1,2-Dichloroethane	2016/01/20		102	%	60 - 140
				D8-Toluene	2016/01/20		101	%	60 - 140
				Acetone (2-Propanone)	2016/01/20		106	%	60 - 140
				Benzene	2016/01/20		98	%	60 - 130
				Bromodichloromethane	2016/01/20		100	%	60 - 130

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC	Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
				Bromoform	2016/01/20		110	%	60 - 130
				Bromomethane	2016/01/20		86	%	60 - 140
				Carbon Tetrachloride	2016/01/20		104	%	60 - 130
				Chlorobenzene	2016/01/20		98	%	60 - 130
				Chloroform	2016/01/20		99	%	60 - 130
				Dibromochloromethane	2016/01/20		106	%	60 - 130
				1,2-Dichlorobenzene	2016/01/20		96	%	60 - 130
				1,3-Dichlorobenzene	2016/01/20		87	%	60 - 130
				1,4-Dichlorobenzene	2016/01/20		87	%	60 - 130
				Dichlorodifluoromethane (FREON 12)	2016/01/20		102	%	60 - 140
				1,1-Dichloroethane	2016/01/20		99	%	60 - 130
				1,2-Dichloroethane	2016/01/20		101	%	60 - 130
				1,1-Dichloroethylene	2016/01/20		102	%	60 - 130
				cis-1,2-Dichloroethylene	2016/01/20		99	%	60 - 130
				trans-1,2-Dichloroethylene	2016/01/20		98	%	60 - 130
				1,2-Dichloropropane	2016/01/20		97	%	60 - 130
				cis-1,3-Dichloropropene	2016/01/20		84	%	60 - 130
				trans-1,3-Dichloropropene	2016/01/20		80	%	60 - 130
				Ethylbenzene	2016/01/20		97	%	60 - 130
				Ethylene Dibromide	2016/01/20		99	%	60 - 130
				Hexane	2016/01/20		108	%	60 - 130
				Methylene Chloride(Dichloromethane)	2016/01/20		102	%	60 - 130
				Methyl Ethyl Ketone (2-Butanone)	2016/01/20		104	%	60 - 140
				Methyl Isobutyl Ketone	2016/01/20		100	%	60 - 130
				Methyl t-butyl ether (MTBE)	2016/01/20		100	%	60 - 130
				Styrene	2016/01/20		92	%	60 - 130
				1,1,1,2-Tetrachloroethane	2016/01/20		100	%	60 - 130
				1,1,2,2-Tetrachloroethane	2016/01/20		102	%	60 - 130
				Tetrachloroethylene	2016/01/20		98	%	60 - 130
				Toluene	2016/01/20		96	%	60 - 130
				1,1,1-Trichloroethane	2016/01/20		97	%	60 - 130
				1,1,2-Trichloroethane	2016/01/20		102	%	60 - 130
				Trichloroethylene	2016/01/20		94	%	60 - 130
				Trichlorofluoromethane (FREON 11)	2016/01/20		103	%	60 - 130
				Vinyl Chloride	2016/01/20		104	%	60 - 130
				p+m-Xylene	2016/01/20		93	%	60 - 130
				o-Xylene	2016/01/20		96	%	60 - 130
4349553	AYA		Method Blank	4-Bromofluorobenzene	2016/01/20		97	%	60 - 140
				D10-o-Xylene	2016/01/20		98	%	60 - 130
				D4-1,2-Dichloroethane	2016/01/20		103	%	60 - 140
				D8-Toluene	2016/01/20		99	%	60 - 140
				Acetone (2-Propanone)	2016/01/20	ND, RDL=0.50		ug/g	
				Benzene	2016/01/20	ND, RDL=0.020		ug/g	
				Bromodichloromethane	2016/01/20	ND, RDL=0.050		ug/g	
				Bromoform	2016/01/20	ND, RDL=0.050		ug/g	
				Bromomethane	2016/01/20	ND, RDL=0.050		ug/g	

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Carbon Tetrachloride	2016/01/20	ND, RDL=0.050		ug/g	
			Chlorobenzene	2016/01/20	ND, RDL=0.050		ug/g	
			Chloroform	2016/01/20	ND, RDL=0.050		ug/g	
			Dibromochloromethane	2016/01/20	ND, RDL=0.050		ug/g	
			1,2-Dichlorobenzene	2016/01/20	ND, RDL=0.050		ug/g	
			1,3-Dichlorobenzene	2016/01/20	ND, RDL=0.050		ug/g	
			1,4-Dichlorobenzene	2016/01/20	ND, RDL=0.050		ug/g	
			Dichlorodifluoromethane (FREON 12)	2016/01/20	ND, RDL=0.050		ug/g	
			1,1-Dichloroethane	2016/01/20	ND, RDL=0.050		ug/g	
			1,2-Dichloroethane	2016/01/20	ND, RDL=0.050		ug/g	
			1,1-Dichloroethylene	2016/01/20	ND, RDL=0.050		ug/g	
			cis-1,2-Dichloroethylene	2016/01/20	ND, RDL=0.050		ug/g	
			trans-1,2-Dichloroethylene	2016/01/20	ND, RDL=0.050		ug/g	
			1,2-Dichloropropane	2016/01/20	ND, RDL=0.050		ug/g	
			cis-1,3-Dichloropropene	2016/01/20	ND, RDL=0.030		ug/g	
			trans-1,3-Dichloropropene	2016/01/20	ND, RDL=0.040		ug/g	
			Ethylbenzene	2016/01/20	ND, RDL=0.020		ug/g	
			Ethylene Dibromide	2016/01/20	ND, RDL=0.050		ug/g	
			Hexane	2016/01/20	ND, RDL=0.050		ug/g	
			Methylene Chloride(Dichloromethane)	2016/01/20	ND, RDL=0.050		ug/g	
			Methyl Ethyl Ketone (2-Butanone)	2016/01/20	ND, RDL=0.50		ug/g	
			Methyl Isobutyl Ketone	2016/01/20	ND, RDL=0.50		ug/g	
			Methyl t-butyl ether (MTBE)	2016/01/20	ND, RDL=0.050		ug/g	
			Styrene	2016/01/20	ND, RDL=0.050		ug/g	

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC	Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
				1,1,1,2-Tetrachloroethane	2016/01/20	ND, RDL=0.050		ug/g	
				1,1,2,2-Tetrachloroethane	2016/01/20	ND, RDL=0.050		ug/g	
				Tetrachloroethylene	2016/01/20	ND, RDL=0.050		ug/g	
				Toluene	2016/01/20	ND, RDL=0.020		ug/g	
				1,1,1-Trichloroethane	2016/01/20	ND, RDL=0.050		ug/g	
				1,1,2-Trichloroethane	2016/01/20	ND, RDL=0.050		ug/g	
				Trichloroethylene	2016/01/20	ND, RDL=0.050		ug/g	
				Trichlorofluoromethane (FREON 11)	2016/01/20	ND, RDL=0.050		ug/g	
				Vinyl Chloride	2016/01/20	ND, RDL=0.020		ug/g	
				p+m-Xylene	2016/01/20	ND, RDL=0.020		ug/g	
				o-Xylene	2016/01/20	ND, RDL=0.020		ug/g	
				Total Xylenes	2016/01/20	ND, RDL=0.020		ug/g	
4349553	AYA	RPD [BRG588-03]		Acetone (2-Propanone)	2016/01/20	NC		%	50
				Benzene	2016/01/20	NC		%	50
				Bromodichloromethane	2016/01/20	NC		%	50
				Bromoform	2016/01/20	NC		%	50
				Bromomethane	2016/01/20	NC		%	50
				Carbon Tetrachloride	2016/01/20	NC		%	50
				Chlorobenzene	2016/01/20	NC		%	50
				Chloroform	2016/01/20	NC		%	50
				Dibromochloromethane	2016/01/20	NC		%	50
				1,2-Dichlorobenzene	2016/01/20	NC		%	50
				1,3-Dichlorobenzene	2016/01/20	NC		%	50
				1,4-Dichlorobenzene	2016/01/20	NC		%	50
				Dichlorodifluoromethane (FREON 12)	2016/01/20	NC		%	50
				1,1-Dichloroethane	2016/01/20	NC		%	50
				1,2-Dichloroethane	2016/01/20	NC		%	50
				1,1-Dichloroethylene	2016/01/20	NC		%	50
				cis-1,2-Dichloroethylene	2016/01/20	NC		%	50
				trans-1,2-Dichloroethylene	2016/01/20	NC		%	50
				1,2-Dichloropropane	2016/01/20	NC		%	50
				cis-1,3-Dichloropropene	2016/01/20	NC		%	50
				trans-1,3-Dichloropropene	2016/01/20	NC		%	50
				Ethylbenzene	2016/01/20	NC		%	50
				Ethylene Dibromide	2016/01/20	NC		%	50
				Hexane	2016/01/20	2.8		%	50
				Methylene Chloride(Dichloromethane)	2016/01/20	NC		%	50
				Methyl Ethyl Ketone (2-Butanone)	2016/01/20	NC		%	50

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Methyl Isobutyl Ketone	2016/01/20	NC		%	50
			Methyl t-butyl ether (MTBE)	2016/01/20	NC		%	50
			Styrene	2016/01/20	NC		%	50
			1,1,1,2-Tetrachloroethane	2016/01/20	NC		%	50
			1,1,2,2-Tetrachloroethane	2016/01/20	NC		%	50
			Tetrachloroethylene	2016/01/20	NC		%	50
			Toluene	2016/01/20	NC		%	50
			1,1,1-Trichloroethane	2016/01/20	NC		%	50
			1,1,2-Trichloroethane	2016/01/20	NC		%	50
			Trichloroethylene	2016/01/20	NC		%	50
			Trichlorofluoromethane (FREON 11)	2016/01/20	NC		%	50
			Vinyl Chloride	2016/01/20	NC		%	50
			p+m-Xylene	2016/01/20	1.9		%	50
			o-Xylene	2016/01/20	NC		%	50
			Total Xylenes	2016/01/20	2.0		%	50
4349782	XQI	Matrix Spike [BRG588-01]	Free Cyanide	2016/01/20		111	%	75 - 125
4349782	XQI	Spiked Blank	Free Cyanide	2016/01/20		111	%	80 - 120
4349782	XQI	Method Blank	Free Cyanide	2016/01/20	ND, RDL=0.01		ug/g	
4349782	XQI	RPD [BRG588-01]	Free Cyanide	2016/01/20	NC		%	35
4350326	SAC	Matrix Spike [BRG588-01]	Chromium (VI)	2016/01/20		77	%	75 - 125
4350326	SAC	QC Standard	Chromium (VI)	2016/01/20		88	%	75 - 125
4350326	SAC	Spiked Blank	Chromium (VI)	2016/01/20		92	%	80 - 120
4350326	SAC	Method Blank	Chromium (VI)	2016/01/20	ND, RDL=0.2		ug/g	
4350326	SAC	RPD [BRG588-01]	Chromium (VI)	2016/01/20	NC		%	35
4350617	SPO	RPD	Moisture	2016/01/19	NC		%	20
4350845	ZZ	Matrix Spike	o-Terphenyl	2016/01/20		82	%	60 - 130
			F2 (C10-C16 Hydrocarbons)	2016/01/20		84	%	50 - 130
			F3 (C16-C34 Hydrocarbons)	2016/01/20		89	%	50 - 130
			F4 (C34-C50 Hydrocarbons)	2016/01/20		87	%	50 - 130
4350845	ZZ	Spiked Blank	o-Terphenyl	2016/01/20		86	%	60 - 130
			F2 (C10-C16 Hydrocarbons)	2016/01/20		81	%	80 - 120
			F3 (C16-C34 Hydrocarbons)	2016/01/20		88	%	80 - 120
			F4 (C34-C50 Hydrocarbons)	2016/01/20		85	%	80 - 120
4350845	ZZ	Method Blank	o-Terphenyl	2016/01/20		88	%	60 - 130
			F2 (C10-C16 Hydrocarbons)	2016/01/20	ND, RDL=10		ug/g	
			F3 (C16-C34 Hydrocarbons)	2016/01/20	ND, RDL=50		ug/g	
			F4 (C34-C50 Hydrocarbons)	2016/01/20	ND, RDL=50		ug/g	
4350845	ZZ	RPD	F2 (C10-C16 Hydrocarbons)	2016/01/20	NC		%	30
			F3 (C16-C34 Hydrocarbons)	2016/01/20	NC		%	30
			F4 (C34-C50 Hydrocarbons)	2016/01/20	NC		%	30
4350862	GRU	Matrix Spike	1,4-Difluorobenzene	2016/01/20		92	%	60 - 140
			4-Bromofluorobenzene	2016/01/20		101	%	60 - 140
			D10-Ethylbenzene	2016/01/20		74	%	60 - 140
			D4-1,2-Dichloroethane	2016/01/20		100	%	60 - 140
			Benzene	2016/01/20		73	%	60 - 140
			Toluene	2016/01/20		78	%	60 - 140

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QA/QC	Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
4350862	GRU	Spiked Blank		Ethylbenzene	2016/01/20		109	%	60 - 140
				o-Xylene	2016/01/20		94	%	60 - 140
				p+m-Xylene	2016/01/20		84	%	60 - 140
				F1 (C6-C10)	2016/01/20		79	%	60 - 140
				1,4-Difluorobenzene	2016/01/20		100	%	60 - 140
				4-Bromofluorobenzene	2016/01/20		100	%	60 - 140
				D10-Ethylbenzene	2016/01/20		84	%	60 - 140
				D4-1,2-Dichloroethane	2016/01/20		104	%	60 - 140
				Benzene	2016/01/20		92	%	60 - 140
				Toluene	2016/01/20		92	%	60 - 140
				Ethylbenzene	2016/01/20		99	%	60 - 140
				o-Xylene	2016/01/20		101	%	60 - 140
				p+m-Xylene	2016/01/20		88	%	60 - 140
				F1 (C6-C10)	2016/01/20		94	%	80 - 120
4350862	GRU	Method Blank		1,4-Difluorobenzene	2016/01/20		101	%	60 - 140
				4-Bromofluorobenzene	2016/01/20		97	%	60 - 140
				D10-Ethylbenzene	2016/01/20		80	%	60 - 140
				D4-1,2-Dichloroethane	2016/01/20		102	%	60 - 140
				Benzene	2016/01/20	ND, RDL=0.020		ug/g	
				Toluene	2016/01/20	ND, RDL=0.020		ug/g	
				Ethylbenzene	2016/01/20	ND, RDL=0.020		ug/g	
				o-Xylene	2016/01/20	ND, RDL=0.020		ug/g	
				p+m-Xylene	2016/01/20	ND, RDL=0.040		ug/g	
				Total Xylenes	2016/01/20	ND, RDL=0.040		ug/g	
				F1 (C6-C10)	2016/01/20	ND, RDL=10		ug/g	
				F1 (C6-C10) - BTEX	2016/01/20	ND, RDL=10		ug/g	
4350862	GRU	RPD		Benzene	2016/01/20	NC		%	50
				Toluene	2016/01/20	NC		%	50
				Ethylbenzene	2016/01/20	NC		%	50
				o-Xylene	2016/01/20	NC		%	50
				p+m-Xylene	2016/01/20	NC		%	50
				Total Xylenes	2016/01/20	NC		%	50
				F1 (C6-C10)	2016/01/20	NC		%	30
				F1 (C6-C10) - BTEX	2016/01/20	NC		%	30
4350935	LFE	Matrix Spike [BRG588-02]		D10-Anthracene	2016/01/20		89	%	50 - 130
				D14-Terphenyl (FS)	2016/01/20		83	%	50 - 130
				D8-Acenaphthylene	2016/01/20		87	%	50 - 130
				Acenaphthene	2016/01/20		86	%	50 - 130
				Acenaphthylene	2016/01/20		82	%	50 - 130
				Anthracene	2016/01/20		83	%	50 - 130
				Benzo(a)anthracene	2016/01/20		92	%	50 - 130
				Benzo(a)pyrene	2016/01/20		92	%	50 - 130

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC				Date				
Batch	Init	QC Type	Parameter	Analyzed	Value	Recovery	UNITS	QC Limits
4350935	LFE	Spiked Blank	Benzo(b/j)fluoranthene	2016/01/20		88	%	50 - 130
			Benzo(g,h,i)perylene	2016/01/20		84	%	50 - 130
			Benzo(k)fluoranthene	2016/01/20		96	%	50 - 130
			Chrysene	2016/01/20		90	%	50 - 130
			Dibenz(a,h)anthracene	2016/01/20		84	%	50 - 130
			Fluoranthene	2016/01/20		88	%	50 - 130
			Fluorene	2016/01/20		84	%	50 - 130
			Indeno(1,2,3-cd)pyrene	2016/01/20		92	%	50 - 130
			1-Methylnaphthalene	2016/01/20		80	%	50 - 130
			2-Methylnaphthalene	2016/01/20		80	%	50 - 130
			Naphthalene	2016/01/20		66	%	50 - 130
			Phenanthrene	2016/01/20		85	%	50 - 130
			Pyrene	2016/01/20		87	%	50 - 130
			D10-Anthracene	2016/01/20		89	%	50 - 130
			D14-Terphenyl (FS)	2016/01/20		83	%	50 - 130
			D8-Acenaphthylene	2016/01/20		87	%	50 - 130
			Acenaphthene	2016/01/20		85	%	50 - 130
			Acenaphthylene	2016/01/20		83	%	50 - 130
			Anthracene	2016/01/20		83	%	50 - 130
			Benzo(a)anthracene	2016/01/20		89	%	50 - 130
			Benzo(a)pyrene	2016/01/20		93	%	50 - 130
			Benzo(b/j)fluoranthene	2016/01/20		93	%	50 - 130
			Benzo(g,h,i)perylene	2016/01/20		83	%	50 - 130
			Benzo(k)fluoranthene	2016/01/20		94	%	50 - 130
			Chrysene	2016/01/20		91	%	50 - 130
			Dibenz(a,h)anthracene	2016/01/20		79	%	50 - 130
			Fluoranthene	2016/01/20		88	%	50 - 130
			Fluorene	2016/01/20		83	%	50 - 130
			Indeno(1,2,3-cd)pyrene	2016/01/20		90	%	50 - 130
			1-Methylnaphthalene	2016/01/20		86	%	50 - 130
			2-Methylnaphthalene	2016/01/20		82	%	50 - 130
			Naphthalene	2016/01/20		77	%	50 - 130
			Phenanthrene	2016/01/20		86	%	50 - 130
			Pyrene	2016/01/20		86	%	50 - 130
4350935	LFE	Method Blank	D10-Anthracene	2016/01/20		90	%	50 - 130
			D14-Terphenyl (FS)	2016/01/20		84	%	50 - 130
			D8-Acenaphthylene	2016/01/20		109	%	50 - 130
			Acenaphthene	2016/01/20	ND, RDL=0.0050		ug/g	
			Acenaphthylene	2016/01/20	ND, RDL=0.0050		ug/g	
			Anthracene	2016/01/20	ND, RDL=0.0050		ug/g	
			Benzo(a)anthracene	2016/01/20	ND, RDL=0.0050		ug/g	
			Benzo(a)pyrene	2016/01/20	ND, RDL=0.0050		ug/g	
			Benzo(b/j)fluoranthene	2016/01/20	ND, RDL=0.0050		ug/g	

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QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Benzo(g,h,i)perylene	2016/01/20	ND, RDL=0.0050		ug/g	
			Benzo(k)fluoranthene	2016/01/20	ND, RDL=0.0050		ug/g	
			Chrysene	2016/01/20	ND, RDL=0.0050		ug/g	
			Dibenz(a,h)anthracene	2016/01/20	ND, RDL=0.0050		ug/g	
			Fluoranthene	2016/01/20	ND, RDL=0.0050		ug/g	
			Fluorene	2016/01/20	ND, RDL=0.0050		ug/g	
			Indeno(1,2,3-cd)pyrene	2016/01/20	ND, RDL=0.0050		ug/g	
			1-Methylnaphthalene	2016/01/20	ND, RDL=0.0050		ug/g	
			2-Methylnaphthalene	2016/01/20	ND, RDL=0.0050		ug/g	
			Naphthalene	2016/01/20	ND, RDL=0.0050		ug/g	
			Phenanthrene	2016/01/20	ND, RDL=0.0050		ug/g	
			Pyrene	2016/01/20	ND, RDL=0.0050		ug/g	
4350935	LFE	RPD [BRG588-02]	Acenaphthene	2016/01/20	NC		%	40
			Acenaphthylene	2016/01/20	NC		%	40
			Anthracene	2016/01/20	NC		%	40
			Benzo(a)anthracene	2016/01/20	NC		%	40
			Benzo(a)pyrene	2016/01/20	NC		%	40
			Benzo(b,j)fluoranthene	2016/01/20	NC		%	40
			Benzo(g,h,i)perylene	2016/01/20	NC		%	40
			Benzo(k)fluoranthene	2016/01/20	NC		%	40
			Chrysene	2016/01/20	NC		%	40
			Dibenz(a,h)anthracene	2016/01/20	NC		%	40
			Fluoranthene	2016/01/20	NC		%	40
			Fluorene	2016/01/20	NC		%	40
			Indeno(1,2,3-cd)pyrene	2016/01/20	NC		%	40
			1-Methylnaphthalene	2016/01/20	5.9		%	40
			2-Methylnaphthalene	2016/01/20	3.3		%	40
			Naphthalene	2016/01/20	5.4		%	40
			Phenanthrene	2016/01/20	NC		%	40
			Pyrene	2016/01/20	NC		%	40
4351002	JOH	Spiked Blank	Soluble Calcium (Ca)	2016/01/20		99	%	80 - 120
			Soluble Magnesium (Mg)	2016/01/20		96	%	80 - 120
			Soluble Sodium (Na)	2016/01/20		96	%	80 - 120
4351002	JOH	Method Blank	Soluble Calcium (Ca)	2016/01/20	ND, RDL=0.5		mg/L	
			Soluble Magnesium (Mg)	2016/01/20	ND, RDL=0.5		mg/L	
			Soluble Sodium (Na)	2016/01/20	ND,RDL=5		mg/L	

Maxxam Job #: B610258
Report Date: 2016/01/21

Terrapex Environmental Ltd
Client Project #: CB644.02
Site Location: 121 Hume Street, Collingwood, ON
Your P.O. #: 4700001396
Sampler Initials: PA

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC	Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
4351002	JOH	RPD		Soluble Calcium (Ca)	2016/01/20	1.3		%	30
				Soluble Magnesium (Mg)	2016/01/20	NC		%	30
				Soluble Sodium (Na)	2016/01/20	NC		%	30
4351004	L_A	Spiked Blank		Conductivity	2016/01/20		100	%	90 - 110
4351004	L_A	Method Blank		Conductivity	2016/01/20	ND, RDL=0.002		mS/cm	
4351004	L_A	RPD		Conductivity	2016/01/20	1.5		%	10
4351160	VIV	Matrix Spike		Acid Extractable Antimony (Sb)	2016/01/20		87	%	75 - 125
				Acid Extractable Arsenic (As)	2016/01/20		96	%	75 - 125
				Acid Extractable Barium (Ba)	2016/01/20		NC	%	75 - 125
				Acid Extractable Beryllium (Be)	2016/01/20		98	%	75 - 125
				Acid Extractable Boron (B)	2016/01/20		95	%	75 - 125
				Acid Extractable Cadmium (Cd)	2016/01/20		97	%	75 - 125
				Acid Extractable Chromium (Cr)	2016/01/20		NC	%	75 - 125
				Acid Extractable Cobalt (Co)	2016/01/20		95	%	75 - 125
				Acid Extractable Copper (Cu)	2016/01/20		NC	%	75 - 125
				Acid Extractable Lead (Pb)	2016/01/20		NC	%	75 - 125
				Acid Extractable Molybdenum (Mo)	2016/01/20		99	%	75 - 125
				Acid Extractable Nickel (Ni)	2016/01/20		NC	%	75 - 125
				Acid Extractable Selenium (Se)	2016/01/20		100	%	75 - 125
				Acid Extractable Silver (Ag)	2016/01/20		99	%	75 - 125
				Acid Extractable Thallium (Tl)	2016/01/20		95	%	75 - 125
				Acid Extractable Uranium (U)	2016/01/20		100	%	75 - 125
				Acid Extractable Vanadium (V)	2016/01/20		NC	%	75 - 125
				Acid Extractable Zinc (Zn)	2016/01/20		NC	%	75 - 125
				Acid Extractable Mercury (Hg)	2016/01/20		106	%	75 - 125
				Acid Extractable Antimony (Sb)	2016/01/20		96	%	80 - 120
				Acid Extractable Arsenic (As)	2016/01/20		97	%	80 - 120
				Acid Extractable Barium (Ba)	2016/01/20		99	%	80 - 120
				Acid Extractable Beryllium (Be)	2016/01/20		96	%	80 - 120
				Acid Extractable Boron (B)	2016/01/20		91	%	80 - 120
				Acid Extractable Cadmium (Cd)	2016/01/20		97	%	80 - 120
				Acid Extractable Chromium (Cr)	2016/01/20		102	%	80 - 120
				Acid Extractable Cobalt (Co)	2016/01/20		99	%	80 - 120
				Acid Extractable Copper (Cu)	2016/01/20		102	%	80 - 120
				Acid Extractable Lead (Pb)	2016/01/20		100	%	80 - 120
				Acid Extractable Molybdenum (Mo)	2016/01/20		100	%	80 - 120
				Acid Extractable Nickel (Ni)	2016/01/20		101	%	80 - 120
				Acid Extractable Selenium (Se)	2016/01/20		101	%	80 - 120
				Acid Extractable Silver (Ag)	2016/01/20		99	%	80 - 120
				Acid Extractable Thallium (Tl)	2016/01/20		99	%	80 - 120
				Acid Extractable Uranium (U)	2016/01/20		101	%	80 - 120
				Acid Extractable Vanadium (V)	2016/01/20		103	%	80 - 120
				Acid Extractable Zinc (Zn)	2016/01/20		95	%	80 - 120
				Acid Extractable Mercury (Hg)	2016/01/20		112	%	80 - 120
4351160	VIV	Method Blank		Acid Extractable Antimony (Sb)	2016/01/20	ND, RDL=0.20		ug/g	
				Acid Extractable Arsenic (As)	2016/01/20	ND, RDL=1.0		ug/g	
				Acid Extractable Barium (Ba)	2016/01/20	ND, RDL=0.50		ug/g	

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Acid Extractable Beryllium (Be)	2016/01/20	ND, RDL=0.20		ug/g	
			Acid Extractable Boron (B)	2016/01/20	ND, RDL=5.0		ug/g	
			Acid Extractable Cadmium (Cd)	2016/01/20	ND, RDL=0.10		ug/g	
			Acid Extractable Chromium (Cr)	2016/01/20	ND, RDL=1.0		ug/g	
			Acid Extractable Cobalt (Co)	2016/01/20	ND, RDL=0.10		ug/g	
			Acid Extractable Copper (Cu)	2016/01/20	ND, RDL=0.50		ug/g	
			Acid Extractable Lead (Pb)	2016/01/20	ND, RDL=1.0		ug/g	
			Acid Extractable Molybdenum (Mo)	2016/01/20	ND, RDL=0.50		ug/g	
			Acid Extractable Nickel (Ni)	2016/01/20	ND, RDL=0.50		ug/g	
			Acid Extractable Selenium (Se)	2016/01/20	ND, RDL=0.50		ug/g	
			Acid Extractable Silver (Ag)	2016/01/20	ND, RDL=0.20		ug/g	
			Acid Extractable Thallium (Tl)	2016/01/20	ND, RDL=0.050		ug/g	
			Acid Extractable Uranium (U)	2016/01/20	ND, RDL=0.050		ug/g	
			Acid Extractable Vanadium (V)	2016/01/20	ND, RDL=5.0		ug/g	
			Acid Extractable Zinc (Zn)	2016/01/20	ND, RDL=5.0		ug/g	
			Acid Extractable Mercury (Hg)	2016/01/20	ND, RDL=0.050		ug/g	
4351160	VIV	RPD	Acid Extractable Lead (Pb)	2016/01/20	0.28		%	30
			Acid Extractable Zinc (Zn)	2016/01/20	0.14		%	30
4351201	JOH	Matrix Spike [BRG588-01]	Hot Water Ext. Boron (B)	2016/01/20		94	%	75 - 125
4351201	JOH	Spiked Blank	Hot Water Ext. Boron (B)	2016/01/20		94	%	75 - 125
4351201	JOH	Method Blank	Hot Water Ext. Boron (B)	2016/01/20	ND, RDL=0.050		ug/g	
4351201	JOH	RPD [BRG588-01]	Hot Water Ext. Boron (B)	2016/01/20	NC		%	40
4351239	SAU	Spiked Blank	Available (CaCl2) pH	2016/01/20		99	%	97 - 103

Maxxam Job #: B610258
Report Date: 2016/01/21

Terrapex Environmental Ltd
Client Project #: CB644.02
Site Location: 121 Hume Street, Collingwood, ON
Your P.O. #: 4700001396
Sampler Initials: PA

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC				Date				
Batch	Init	QC Type	Parameter	Analyzed	Value	Recovery	UNITS	QC Limits
4351239	SAU	RPD [BRG588-01]	Available (CaCl ₂) pH	2016/01/20	2.1		%	N/A
N/A = Not Applicable Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement. Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference. QC Standard: A sample of known concentration prepared by an external agency under stringent conditions. Used as an independent check of method accuracy. Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy. Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination. Surrogate: A pure or isotopically labeled compound whose behavior mirrors the analytes of interest. Used to evaluate extraction efficiency. NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spiked amount was too small to permit a reliable recovery calculation (matrix spike concentration was less than 2x that of the native sample concentration). NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (one or both samples < 5x RDL).								

Maxxam Job #: B610258
Report Date: 2016/01/21

Terrapex Environmental Ltd
Client Project #: CB644.02
Site Location: 121 Hume Street, Collingwood, ON
Your P.O. #: 4700001396
Sampler Initials: PA

VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by the following individual(s).



Brad Newman, Scientific Specialist

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

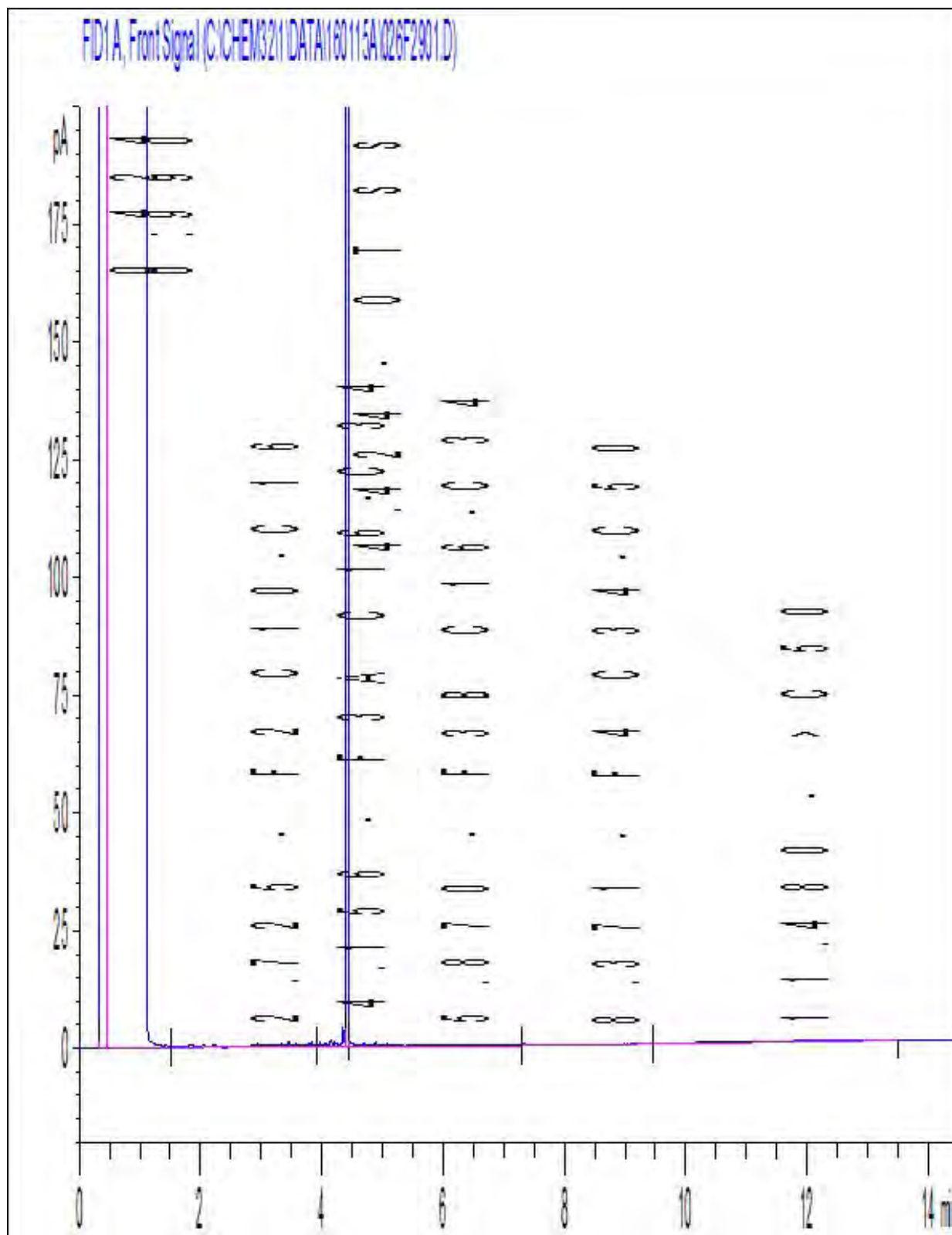
Invoice Information		Report Information (if differs from invoice)		Project Information (where applicable)		Turnaround Time (TAT) Required	
Company Name: <u>Sunlor</u>		Company Name: <u>Terrapex Environmental</u>		Quotation #: <u>B43750</u>		☐ Regular TAT (5-7 days) Most analyses	
Contact Name: <u>Ken Taldor</u>		Contact Name: <u>Jeff Stevenson/Philip Arlos</u>		P.O. #/ AFE#: _____		PLEASE PROVIDE ADVANCE NOTICE FOR RUSH PROJECTS	
Address: <u>3275 Rebecca</u> <u>Oakville ON</u>		Address: <u>970 Brent St. Unit 16</u> <u>Burlington</u>		Project #: <u>CB644.01</u>		Rush TAT (Surcharges will be applied)	
Phone: <u>905-469-3754</u> Fax: _____		Phone: <u>905-632-5439 x 226</u>		Site Location: <u>121 Hume St. Collingwood</u>		☒ 1 Day ☐ 2 Days ☐ 3-4 Days	
Email: <u>KTaldor@Sunlor.com</u>		Email: <u>J.Stevenson@terrapex.com / p.arlos@terrapex.com</u>		Site #: <u>60680</u>		Date Required: <u>Monday Jun 18/16</u>	
Sampled By: _____		Sampled By: <u>PA</u>		Rush Confirmation #: <u>MO20160615-01</u>			
MOE REGULATED DRINKING WATER OR WATER INTENDED FOR HUMAN CONSUMPTION MUST BE SUBMITTED ON THE MAXXAM DRINKING WATER CHAIN OF CUSTODY							
Regulation 153		Other Regulations		Analysis Requested		LABORATORY USE ONLY	
☐ Table 1 ☐ Res/Park ☐ Med/ Fine ☒ Table 2 ☒ Ind/Comm ☒ Coarse ☐ Table 3 ☐ Agri/ Other ☐ Table _____ FOR RSC (PLEASE CIRCLE) <u>(Y) N</u>		☐ CCME ☐ Sanitary Sewer Bylaw ☐ MISA ☐ Storm Sewer Bylaw ☐ PWQO ☐ Region ☐ Other (Specify) _____ ☐ REG 558 (MIN. 3 DAY TAT REQUIRED)		REFER TO BACK OF COC ☐ REG 153 METALS & INORGANICS ☐ REG 153 ICPMS METALS ☐ REG 153 METALS (Hg, Cr VI, ICPMS Metals, HWS - II)		CUSTODY SEAL Y / N Present Intact <u>Y Y</u> <u>4/3/4</u> COOLING MEDIA PRESENT: <u>(Y) N</u>	
Include Criteria on Certificate of Analysis: <u>Y / N</u>							
SAMPLES MUST BE KEPT COOL (< 10 °C) FROM TIME OF SAMPLING UNTIL DELIVERY TO MAXXAM							
SAMPLE IDENTIFICATION		DATE SAMPLED (YYYY/MM/DD)	TIME SAMPLED (HH:MM)	MATRIX	# OF CONTAINERS SUBMITTED	FIELD FILTERED (CIRCLE) Metals / Hg / Cu	DO NOT ANALYZE
1	<u>CS107</u>	<u>Jun-15-16</u>	<u>9:30</u>	<u>Soil</u>	<u>3</u>	<u>XX</u>	
2	<u>SP201</u>	<u>J</u>	<u>11:00</u>	<u>I</u>	<u>3</u>	<u>XX</u>	
3	<u>SP305</u>	<u>Jun-15-16</u>	<u>12:30</u>	<u>Soil</u>	<u>3</u>	<u>XX</u>	
4							
5							
6							
7							
8							
9							
10							

15-Jan-16 15:20
 Marissa Oddi

 B609023
 HGR ENV-725

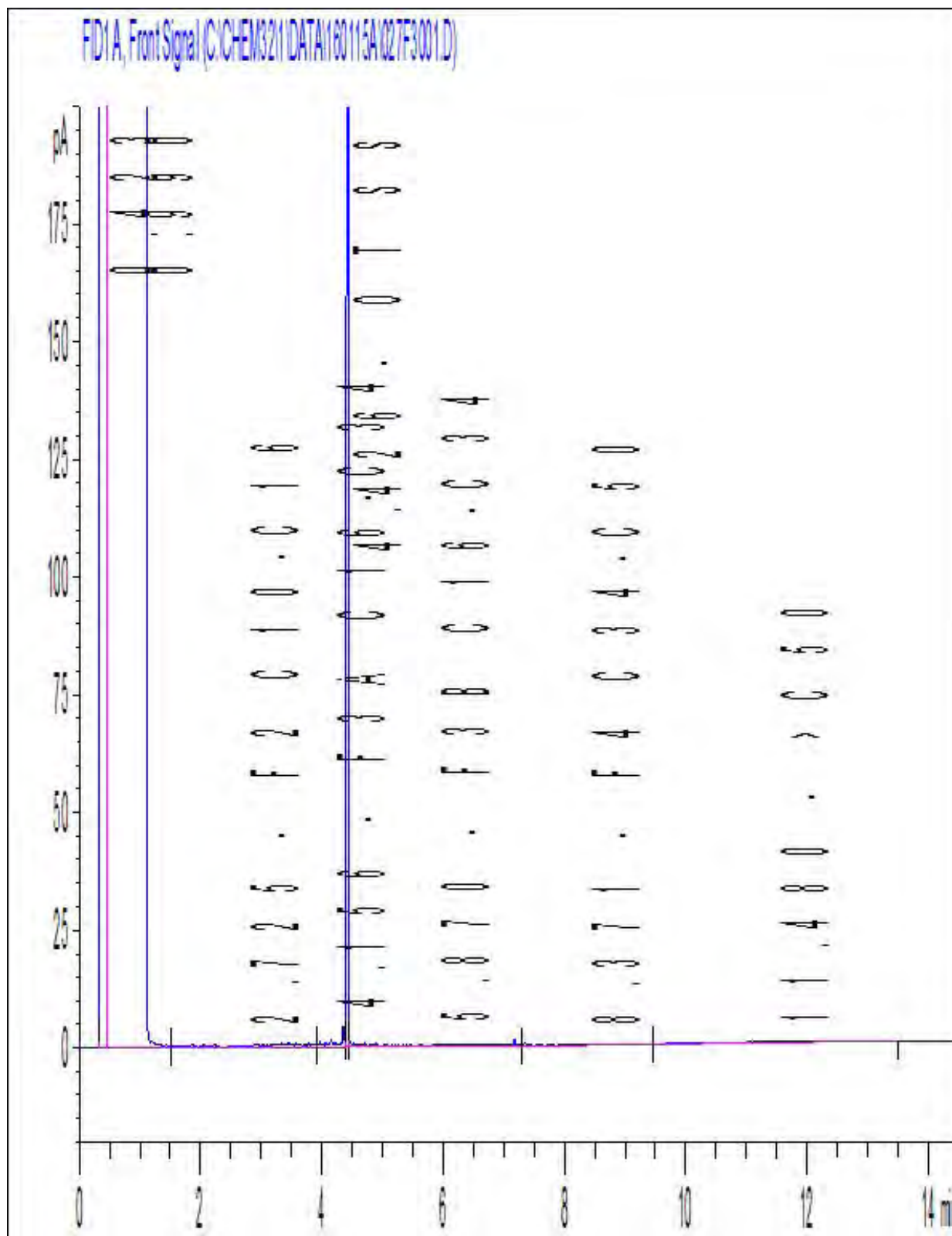
RELINQUISHED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)	RECEIVED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)	MAXXAM JOB #
<u>Philip Arlos</u>	<u>2016/01/15</u>	<u>15:30</u>	<u>RACHEL DENIM</u>	<u>2016/01/15</u>	<u>15:20</u>	

Petroleum Hydrocarbons F2-F4 in Soil Chromatogram



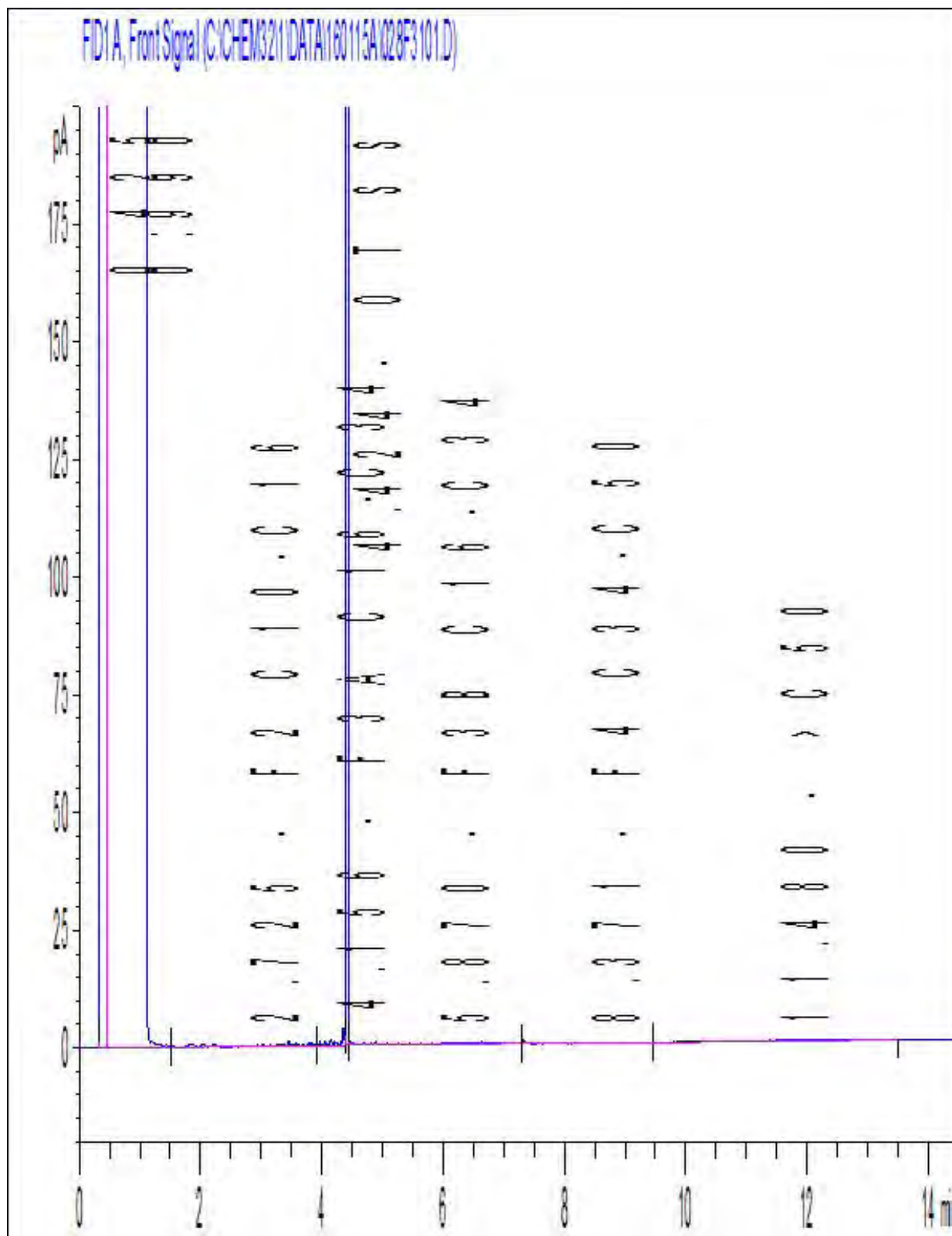
Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Petroleum Hydrocarbons F2-F4 in Soil Chromatogram



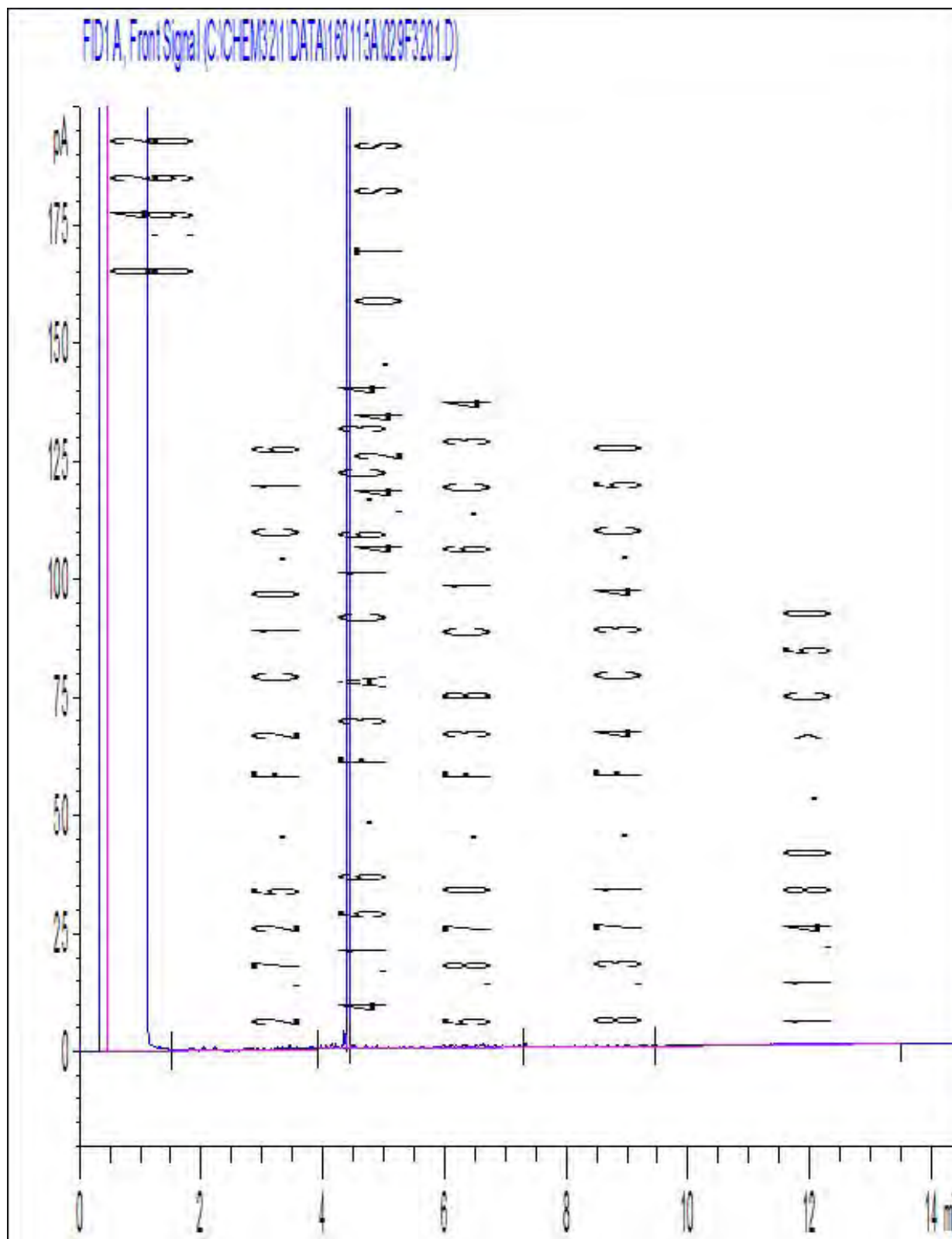
Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Petroleum Hydrocarbons F2-F4 in Soil Chromatogram



Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Petroleum Hydrocarbons F2-F4 in Soil Chromatogram



Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Attention: Jeff Stevenson

Terrapex Environmental Ltd
920 Brant Street
Unit 16
Burlington, ON
CANADA L7R 4J1

Your P.O. #: 4700001396

Your Project #: CB644.01

Site#: 60680

Site Location: 121 Hume Street, Collingwood, ON

Your C.O.C. #: 70362

Report Date: 2016/01/18

Report #: R3855467

Version: 1 - Final

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B609023

Received: 2016/01/15, 15:20

Sample Matrix: Soil
Samples Received: 3

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Reference
Petroleum Hydro. CCME F1 & BTEX in Soil (1)	3	N/A	2016/01/18	CAM SOP-00315	CCME PHC-CWS m
Petroleum Hydrocarbons F2-F4 in Soil (2)	3	2016/01/16	2016/01/17	CAM SOP-00316	CCME CWS m
Moisture	3	N/A	2016/01/15	CAM SOP-00445	Carter 2nd ed 51.2 m

Remarks:

Maxxam Analytics has performed all analytical testing herein in accordance with ISO 17025 and the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act. All methodologies comply with this document and are validated for use in the laboratory. The methods and techniques employed in this analysis conform to the performance criteria (detection limits, accuracy and precision) as outlined in the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act.

Maxxam Analytics is accredited for all specific parameters as required by Ontario Regulation 153/04. Maxxam Analytics is limited in liability to the actual cost of analysis unless otherwise agreed in writing. There is no other warranty expressed or implied. Samples will be retained at Maxxam Analytics for three weeks from receipt of data or as per contract.

Reference Method suffix "m" indicates test methods incorporate validated modifications from specific reference methods to improve performance.

* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.

(1) No lab extraction date is given for F1BTEX & VOC samples that are field preserved with methanol. Extraction date is the date sampled unless otherwise stated.

(2) All CCME PHC results met required criteria unless otherwise stated in the report. The CWS PHC methods employed by Maxxam conform to all prescribed elements of the reference method and performance based elements have been validated. All modifications have been validated and proven equivalent following "Alberta Environment's Interpretation of the Reference Method for the Canada-Wide Standard for Petroleum Hydrocarbons in Soil Validation of Performance-Based Alternative Methods September 2003". Documentation is available upon request. Modifications from Reference Method for the Canada-wide Standard for Petroleum Hydrocarbons in Soil-Tier 1 Method: F2/F3/F4 data reported using validated cold solvent extraction instead of Soxhlet extraction.

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.

Marissa Oddi, Customer Service Representative

Email: moddi@maxxam.ca

Phone# (905) 817-5700

=====

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

O.REG 153 PETROLEUM HYDROCARBONS (SOIL)

Maxxam ID		BRA030	BRA030	BRA031	BRA032		
Sampling Date		2016/01/15 09:30	2016/01/15 09:30	2016/01/15 11:00	2016/01/15 12:30		
COC Number		70362	70362	70362	70362		
	UNITS	CS107	CS107 Lab-Dup	SP201	SP305	RDL	QC Batch
Inorganics							
Moisture	%	19		10	12	1.0	4347288
BTEX & F1 Hydrocarbons							
Benzene	ug/g	ND	ND	ND	ND	0.020	4347676
Toluene	ug/g	ND	ND	ND	ND	0.020	4347676
Ethylbenzene	ug/g	ND	ND	ND	ND	0.020	4347676
o-Xylene	ug/g	ND	ND	ND	ND	0.020	4347676
p+m-Xylene	ug/g	ND	ND	ND	ND	0.040	4347676
Total Xylenes	ug/g	ND	ND	ND	ND	0.040	4347676
F1 (C6-C10)	ug/g	ND	ND	ND	ND	10	4347676
F1 (C6-C10) - BTEX	ug/g	ND	ND	ND	ND	10	4347676
F2-F4 Hydrocarbons							
F2 (C10-C16 Hydrocarbons)	ug/g	ND	ND	ND	ND	10	4347665
F3 (C16-C34 Hydrocarbons)	ug/g	ND	ND	ND	ND	50	4347665
F4 (C34-C50 Hydrocarbons)	ug/g	ND	ND	ND	ND	50	4347665
Reached Baseline at C50	ug/g	Yes	Yes	Yes	Yes		4347665
Surrogate Recovery (%)							
1,4-Difluorobenzene	%	100	99	100	101		4347676
4-Bromofluorobenzene	%	102	99	101	100		4347676
D10-Ethylbenzene	%	94	95	79	88		4347676
D4-1,2-Dichloroethane	%	103	102	101	103		4347676
o-Terphenyl	%	109	107	99	100		4347665
RDL = Reportable Detection Limit QC Batch = Quality Control Batch Lab-Dup = Laboratory Initiated Duplicate ND = Not detected							

Maxxam Job #: B609023
Report Date: 2016/01/18

Terrapex Environmental Ltd
Client Project #: CB644.01
Site Location: 121 Hume Street, Collingwood, ON
Your P.O. #: 4700001396
Sampler Initials: PA

TEST SUMMARY

Maxxam ID: BRA030
Sample ID: CS107
Matrix: Soil

Collected: 2016/01/15
Shipped:
Received: 2016/01/15

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	4347676	N/A	2016/01/18	Ravinder Gaidhu
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	4347665	2016/01/16	2016/01/17	Zhiyue (Frank) Zhu
Moisture	BAL	4347288	N/A	2016/01/15	Chun Yan

Maxxam ID: BRA030 Dup
Sample ID: CS107
Matrix: Soil

Collected: 2016/01/15
Shipped:
Received: 2016/01/15

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	4347676	N/A	2016/01/18	Ravinder Gaidhu
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	4347665	2016/01/16	2016/01/17	Zhiyue (Frank) Zhu

Maxxam ID: BRA031
Sample ID: SP201
Matrix: Soil

Collected: 2016/01/15
Shipped:
Received: 2016/01/15

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	4347676	N/A	2016/01/18	Ravinder Gaidhu
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	4347665	2016/01/16	2016/01/17	Zhiyue (Frank) Zhu
Moisture	BAL	4347288	N/A	2016/01/15	Chun Yan

Maxxam ID: BRA032
Sample ID: SP305
Matrix: Soil

Collected: 2016/01/15
Shipped:
Received: 2016/01/15

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	4347676	N/A	2016/01/18	Ravinder Gaidhu
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	4347665	2016/01/16	2016/01/17	Zhiyue (Frank) Zhu
Moisture	BAL	4347288	N/A	2016/01/15	Chun Yan

Maxxam Job #: B609023
Report Date: 2016/01/18

Terrapex Environmental Ltd
Client Project #: CB644.01
Site Location: 121 Hume Street, Collingwood, ON
Your P.O. #: 4700001396
Sampler Initials: PA

GENERAL COMMENTS

Each temperature is the average of up to three cooler temperatures taken at receipt

Package 1	3.7°C

Results relate only to the items tested.

Maxxam Job #: B609023
Report Date: 2016/01/18

Terrapex Environmental Ltd
Client Project #: CB644.01
Site Location: 121 Hume Street, Collingwood, ON
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Sampler Initials: PA

QUALITY ASSURANCE REPORT

QA/QC	Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
4347288	NS3		RPD	Moisture	2016/01/15	0.71		%	20
4347665	ZZ		Matrix Spike [BRA030-01]	o-Terphenyl	2016/01/16		105	%	60 - 130
				F2 (C10-C16 Hydrocarbons)	2016/01/16		97	%	50 - 130
				F3 (C16-C34 Hydrocarbons)	2016/01/16		112	%	50 - 130
				F4 (C34-C50 Hydrocarbons)	2016/01/16		90	%	50 - 130
4347665	ZZ		Spiked Blank	o-Terphenyl	2016/01/16		98	%	60 - 130
				F2 (C10-C16 Hydrocarbons)	2016/01/16		87	%	80 - 120
				F3 (C16-C34 Hydrocarbons)	2016/01/16		100	%	80 - 120
				F4 (C34-C50 Hydrocarbons)	2016/01/16		80	%	80 - 120
4347665	ZZ		Method Blank	o-Terphenyl	2016/01/16		100	%	60 - 130
				F2 (C10-C16 Hydrocarbons)	2016/01/16	ND, RDL=10		ug/g	
				F3 (C16-C34 Hydrocarbons)	2016/01/16	ND, RDL=50		ug/g	
				F4 (C34-C50 Hydrocarbons)	2016/01/16	ND, RDL=50		ug/g	
4347665	ZZ		RPD [BRA030-01]	F2 (C10-C16 Hydrocarbons)	2016/01/17	NC		%	30
				F3 (C16-C34 Hydrocarbons)	2016/01/17	NC		%	30
				F4 (C34-C50 Hydrocarbons)	2016/01/17	NC		%	30
4347676	RGA		Matrix Spike [BRA030-02]	1,4-Difluorobenzene	2016/01/18		99	%	60 - 140
				4-Bromofluorobenzene	2016/01/18		102	%	60 - 140
				D10-Ethylbenzene	2016/01/18		99	%	60 - 140
				D4-1,2-Dichloroethane	2016/01/18		102	%	60 - 140
				Benzene	2016/01/18		104	%	60 - 140
				Toluene	2016/01/18		102	%	60 - 140
				Ethylbenzene	2016/01/18		111	%	60 - 140
				o-Xylene	2016/01/18		114	%	60 - 140
				p+m-Xylene	2016/01/18		102	%	60 - 140
				F1 (C6-C10)	2016/01/18		102	%	60 - 140
4347676	RGA		Spiked Blank	1,4-Difluorobenzene	2016/01/18		100	%	60 - 140
				4-Bromofluorobenzene	2016/01/18		100	%	60 - 140
				D10-Ethylbenzene	2016/01/18		85	%	60 - 140
				D4-1,2-Dichloroethane	2016/01/18		103	%	60 - 140
				Benzene	2016/01/18		97	%	60 - 140
				Toluene	2016/01/18		93	%	60 - 140
				Ethylbenzene	2016/01/18		103	%	60 - 140
				o-Xylene	2016/01/18		104	%	60 - 140
				p+m-Xylene	2016/01/18		94	%	60 - 140
				F1 (C6-C10)	2016/01/18		84	%	80 - 120
4347676	RGA		Method Blank	1,4-Difluorobenzene	2016/01/18		101	%	60 - 140
				4-Bromofluorobenzene	2016/01/18		101	%	60 - 140
				D10-Ethylbenzene	2016/01/18		83	%	60 - 140
				D4-1,2-Dichloroethane	2016/01/18		103	%	60 - 140
				Benzene	2016/01/18	ND, RDL=0.020		ug/g	
				Toluene	2016/01/18	ND, RDL=0.020		ug/g	
				Ethylbenzene	2016/01/18	ND, RDL=0.020		ug/g	

Maxxam Job #: B609023
Report Date: 2016/01/18

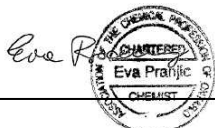
Terrapex Environmental Ltd
Client Project #: CB644.01
Site Location: 121 Hume Street, Collingwood, ON
Your P.O. #: 4700001396
Sampler Initials: PA

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
4347676	RGA	RPD [BRA030-02]	o-Xylene	2016/01/18	ND, RDL=0.020		ug/g	
			p+m-Xylene	2016/01/18	ND, RDL=0.040		ug/g	
			Total Xylenes	2016/01/18	ND, RDL=0.040		ug/g	
			F1 (C6-C10)	2016/01/18	ND, RDL=10		ug/g	
			F1 (C6-C10) - BTEX	2016/01/18	ND, RDL=10		ug/g	
			Benzene	2016/01/18	NC		%	50
			Toluene	2016/01/18	NC		%	50
			Ethylbenzene	2016/01/18	NC		%	50
			o-Xylene	2016/01/18	NC		%	50
			p+m-Xylene	2016/01/18	NC		%	50
			Total Xylenes	2016/01/18	NC		%	50
			F1 (C6-C10)	2016/01/18	NC		%	30
			F1 (C6-C10) - BTEX	2016/01/18	NC		%	30
Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.								
Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.								
Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.								
Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.								
Surrogate: A pure or isotopically labeled compound whose behavior mirrors the analytes of interest. Used to evaluate extraction efficiency.								
NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (one or both samples < 5x RDL).								

VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by the following individual(s).



Ewa Pranjić, M.Sc., C.Chem, Scientific Specialist

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

RUSHMaxxam Analytics International Corporation c/o Maxxam Analytics
Mississauga, Ontario Canada L5N 2L8 Tel: (905) 817-6700 Toll-Free (800) 563-6266 Fax: (905) 817-5777 www.maxxam.ca

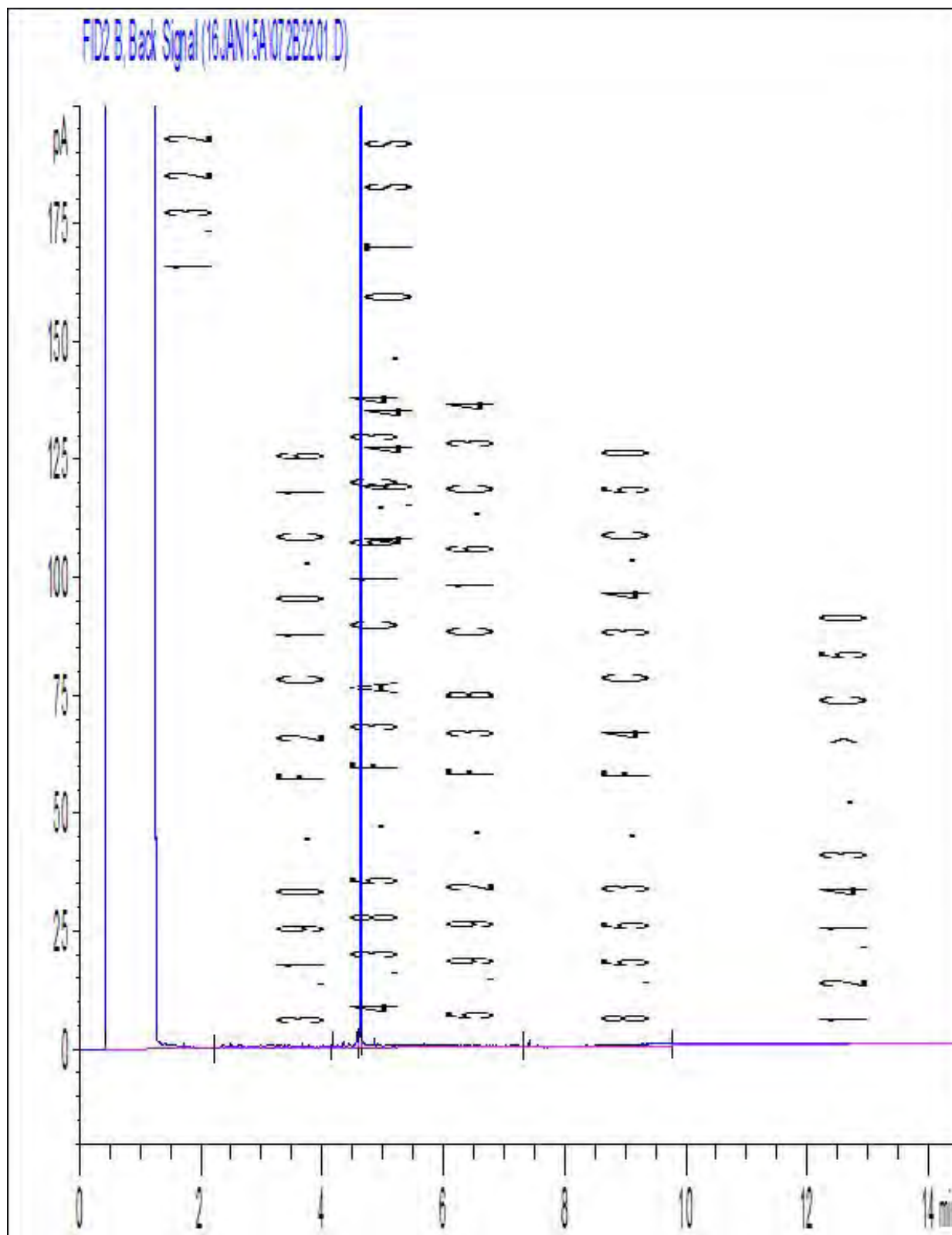
CHAIN OF CUSTODY RECORD SUNCOR DOWNSTREAM

Page 1 of 1

INVOICE INFORMATION:				REPORT INFORMATION (if differs from invoice):				PROJECT INFORMATION:				Laboratory Use Only:			
Company Name: #14539 Suncor Energy Products Partnership				Company Name: #6557 Terrapex Environmental Ltd				Quotation #: B43750				Maxxam Job #:			
Contact Name: Ken Tedder				Contact Name: Jeff Stevenson				Task Order #:				Bottle Order #:			
Address: 3275 Rebecca St				Address: 920 Brant Street Unit 16				Project #: CB644.02				S44352			
City: Oakville ON L6L 6N5				City: Burlington ON L7R 4J1				Site Location: 121 Hume Street, Collingwood, ON				COC #:			
Phone: (905) 469-3754				Phone: (905) 632-5939 x 226				Order #: 60680				Project Manager:			
Email: ktedder@suncor.com				Email: j.stevenson@terrapex.com				Sampled By: PA				Maxxam Oddi			
MOE REGULATED DRINKING WATER OR WATER INTENDED FOR HUMAN CONSUMPTION MUST BE SUBMITTED ON THE MAXXAM DRINKING WATER CHAIN OF CUSTODY															
Regulation 153 (2011)				Other Regulations				Activity				Turnaround Time (TAT) Required:			
☐ Table 1 ☐ Res/Phak ☐ Medium/Fine				☐ COME ☐ Sanitary Sewer Bylaw				Assessment (circle one) A1, A2, AP, AV (Regulations (circle one)) RELYX, RLRA Contaminant Management (circle one) M, MW, MV				Regular (Standard) TAT:			
☒ Table 2 ☒ Ind/Comm ☒ Coarse				☐ Storm Sewer Bylaw								(will be applied if Rush TAT is not specified)			
☐ Table 3 ☐ Agri/Other				☐ MSA Municipality								Standard TAT = 5-7 Working days for most tests.			
☐ Table 4 ☐ For RSC				☐ PWQO								Please note: Standard TAT for certain tests such as BOD and Dissolved Oxygen are +5 days + contact your Project Manager for details.			
Include Criteria on Certificate of Analysis (Y/N)?															
Sample Barcode Label		Sample Location Identification		Date Sampled		Time Sampled		Matrix		Field Filed (please circle)		Miles / Hg / DVI		Rush TAT	
1		CS1010		Jan-12-16		11:01		Soil		1		X		3	
2		CS101		Jan-12-16		11:06		Soil		1		X		3	
3		SP105		Jan-12-16		15:30		Soil		1		X		3	
4		SP107		Jan-12-16		15:36		Soil		1		X		3	
5															
6															
7															
8															
9															
10															
14-Jan-16 09:31 Marissa Oddi B607582 AKP ENV-720															
RELINQUISHED BY: (Signature/Print)				Date: (YY/MM/DD)		Time		RECEIVED BY: (Signature/Print)				Date: (YY/MM/DD)		Time	
Philip Arto				15/02/13		12:30		Shawn Heier				16/01/14		09:31	
Philip Arto															
* IT IS THE RESPONSIBILITY OF THE RELINQUISHING TO ENSURE THE ACCURACY OF THE CHAIN OF CUSTODY RECORD. AN INCOMPLETE CHAIN OF CUSTODY MAY RESULT IN ANALYTICAL TAT DELAYS.															
SAMPLES MUST BE KEPT COOL (< 10°C) FROM TIME OF SAMPLING UNTIL DELIVERY TO MAXXAM															
White: Maxxam (Yellow: Client)															

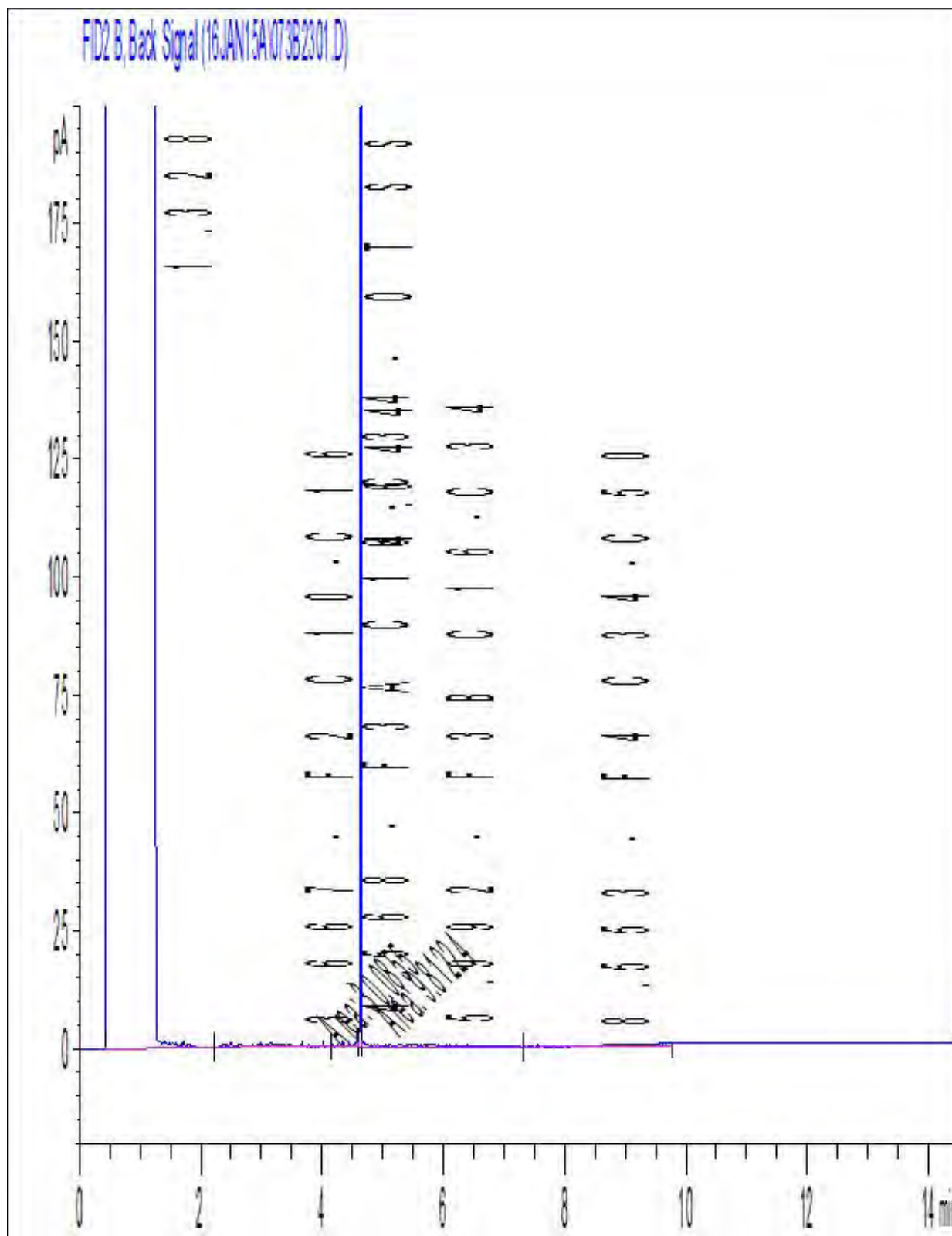
Maxxam Analytics International Corporation c/o Maxxam Analytics

Petroleum Hydrocarbons F2-F4 in Soil Chromatogram



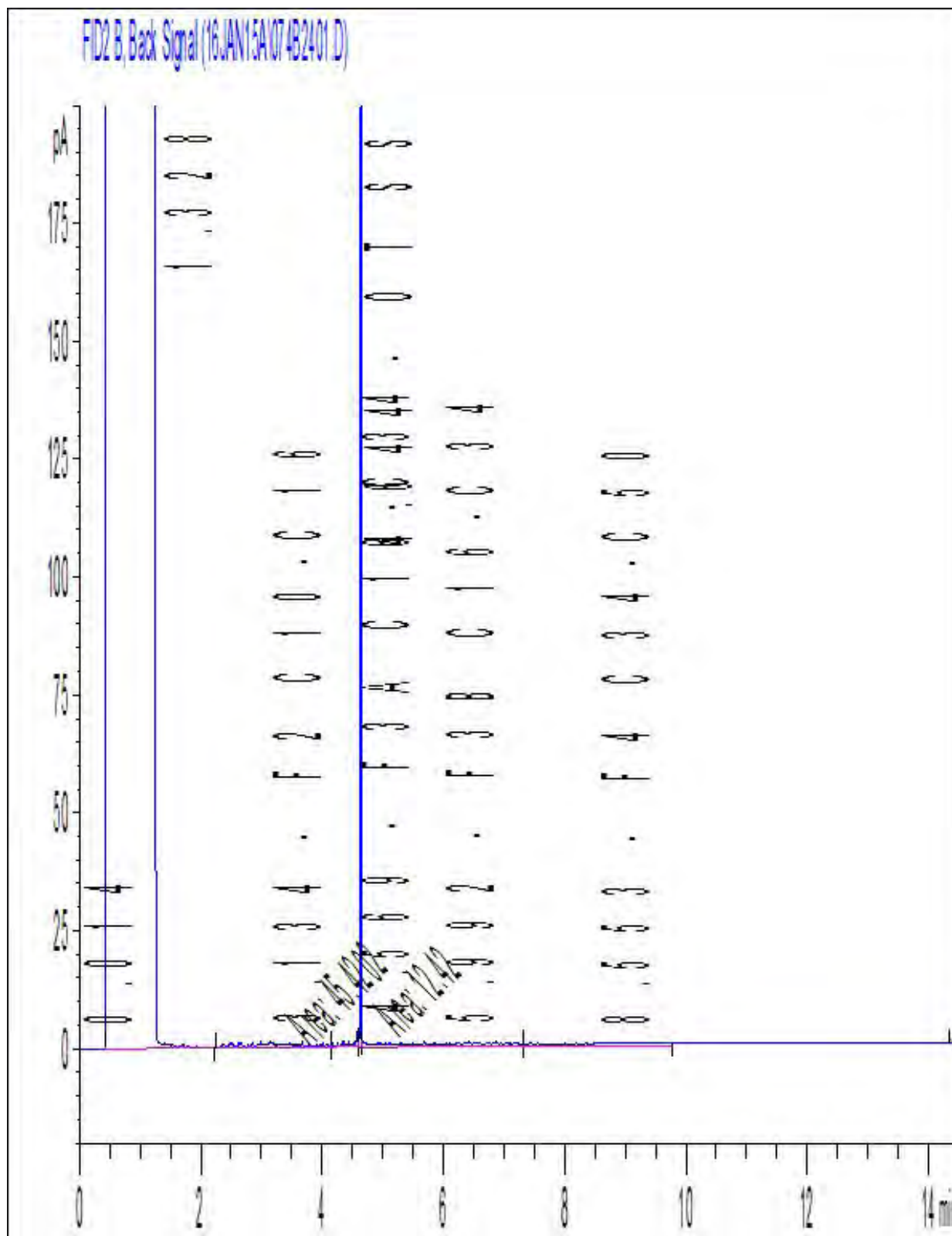
Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Petroleum Hydrocarbons F2-F4 in Soil Chromatogram



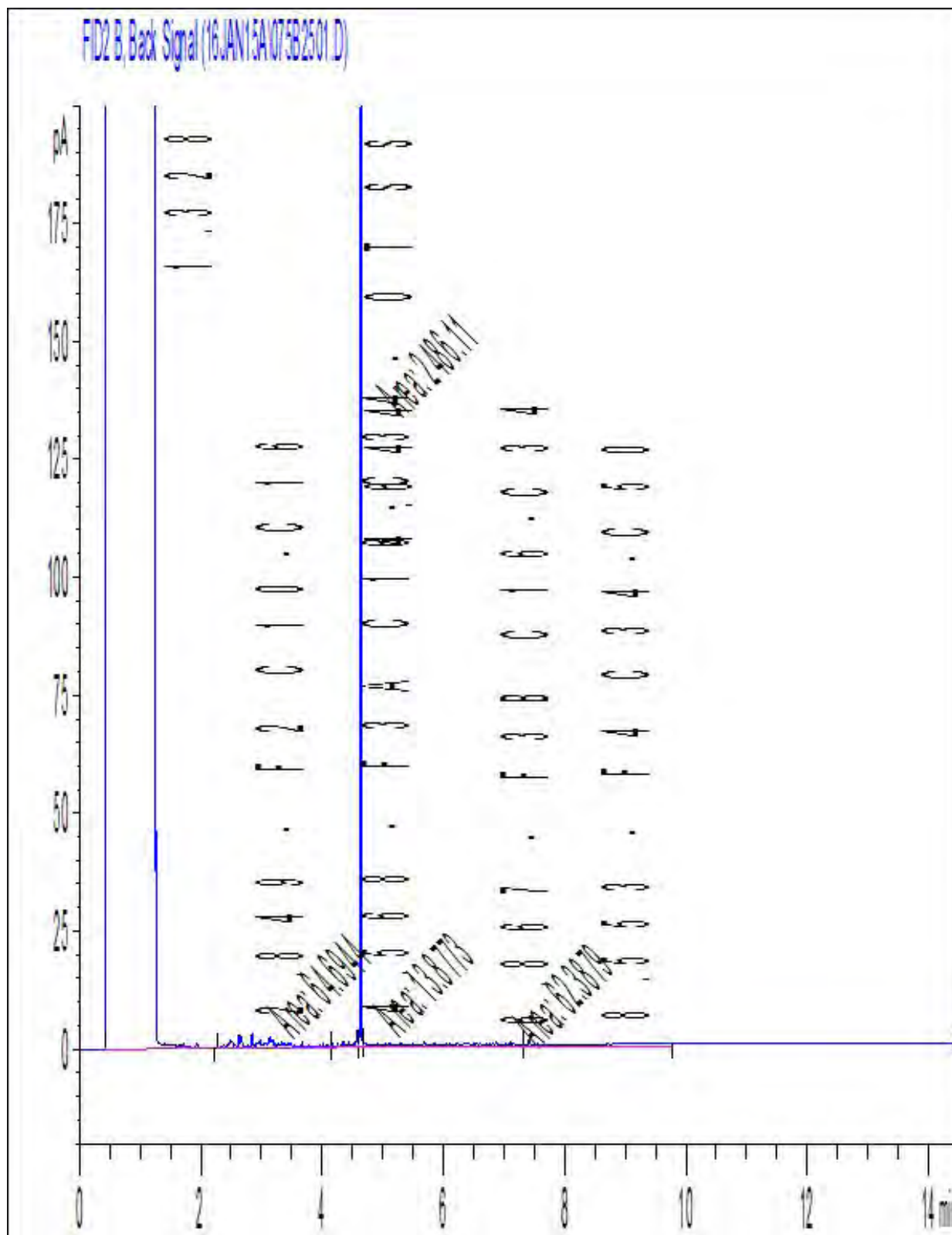
Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Petroleum Hydrocarbons F2-F4 in Soil Chromatogram



Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Petroleum Hydrocarbons F2-F4 in Soil Chromatogram



Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Attention: Jeff Stevenson

Terrapex Environmental Ltd
920 Brant Street
Unit 16
Burlington, ON
CANADA L7R 4J1

Your P.O. #: 4700001396

Your Project #: CB644.01

Site#: 60680

Site Location: 121 Hume Street, Collingwood, ON

Your C.O.C. #: 544552-01-01

Report Date: 2016/01/18

Report #: R3855200

Version: 1 - Final

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B607582

Received: 2016/01/14, 09:31

Sample Matrix: Soil
Samples Received: 4

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Reference
Petroleum Hydro. CCME F1 & BTEX in Soil (1)	2	N/A	2016/01/15	CAM SOP-00315	CCME PHC-CWS m
Petroleum Hydro. CCME F1 & BTEX in Soil (1)	2	N/A	2016/01/16	CAM SOP-00315	CCME PHC-CWS m
Petroleum Hydrocarbons F2-F4 in Soil (2)	4	2016/01/15	2016/01/16	CAM SOP-00316	CCME CWS m
Moisture	4	N/A	2016/01/14	CAM SOP-00445	Carter 2nd ed 51.2 m

Remarks:

Maxxam Analytics has performed all analytical testing herein in accordance with ISO 17025 and the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act. All methodologies comply with this document and are validated for use in the laboratory. The methods and techniques employed in this analysis conform to the performance criteria (detection limits, accuracy and precision) as outlined in the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act.

Maxxam Analytics is accredited for all specific parameters as required by Ontario Regulation 153/04. Maxxam Analytics is limited in liability to the actual cost of analysis unless otherwise agreed in writing. There is no other warranty expressed or implied. Samples will be retained at Maxxam Analytics for three weeks from receipt of data or as per contract.

Reference Method suffix "m" indicates test methods incorporate validated modifications from specific reference methods to improve performance.

* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.

(1) No lab extraction date is given for F1BTEX & VOC samples that are field preserved with methanol. Extraction date is the date sampled unless otherwise stated.

(2) All CCME PHC results met required criteria unless otherwise stated in the report. The CWS PHC methods employed by Maxxam conform to all prescribed elements of the reference method and performance based elements have been validated. All modifications have been validated and proven equivalent following "Alberta Environment's Interpretation of the Reference Method for the Canada-Wide Standard for Petroleum Hydrocarbons in Soil Validation of Performance-Based Alternative Methods September 2003". Documentation is available upon request. Modifications from Reference Method for the Canada-wide Standard for Petroleum Hydrocarbons in Soil-Tier 1 Method: F2/F3/F4 data reported using validated cold solvent extraction instead of Soxhlet extraction.

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.

Marissa Oddi, Customer Service Representative

Email: moddi@maxxam.ca

Phone# (905) 817-5700

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

O.REG 153 PETROLEUM HYDROCARBONS (SOIL)

Maxxam ID		BQS670	BQS671	BQS672	BQS673		
Sampling Date		2016/01/12 11:00	2016/01/12 11:00	2016/01/12 13:30	2016/01/12 13:30		
COC Number		544552-01-01	544552-01-01	544552-01-01	544552-01-01		
	UNITS	CS1010	CS101	SP105	SP107	RDL	QC Batch
Inorganics							
Moisture	%	21	21	10	12	1.0	4345064
BTEX & F1 Hydrocarbons							
Benzene	ug/g	ND	ND	ND	ND	0.020	4346197
Toluene	ug/g	ND	ND	ND	ND	0.020	4346197
Ethylbenzene	ug/g	ND	ND	ND	ND	0.020	4346197
o-Xylene	ug/g	ND	ND	ND	ND	0.020	4346197
p+m-Xylene	ug/g	ND	ND	ND	ND	0.040	4346197
Total Xylenes	ug/g	ND	ND	ND	ND	0.040	4346197
F1 (C6-C10)	ug/g	ND	15	ND	ND	10	4346197
F1 (C6-C10) - BTEX	ug/g	ND	15	ND	ND	10	4346197
F2-F4 Hydrocarbons							
F2 (C10-C16 Hydrocarbons)	ug/g	ND	ND	ND	12	10	4346751
F3 (C16-C34 Hydrocarbons)	ug/g	ND	ND	ND	ND	50	4346751
F4 (C34-C50 Hydrocarbons)	ug/g	ND	ND	ND	ND	50	4346751
Reached Baseline at C50	ug/g	Yes	Yes	Yes	Yes		4346751
Surrogate Recovery (%)							
1,4-Difluorobenzene	%	99	99	98	100		4346197
4-Bromofluorobenzene	%	103	99	101	102		4346197
D10-Ethylbenzene	%	106	99	122	114		4346197
D4-1,2-Dichloroethane	%	99	97	97	98		4346197
o-Terphenyl	%	97	96	93	94		4346751
RDL = Reportable Detection Limit QC Batch = Quality Control Batch ND = Not detected							

Maxxam Job #: B607582
Report Date: 2016/01/18

Terrapex Environmental Ltd
Client Project #: CB644.01
Site Location: 121 Hume Street, Collingwood, ON
Your P.O. #: 4700001396
Sampler Initials: PA

TEST SUMMARY

Maxxam ID: BQS670
Sample ID: CS1010
Matrix: Soil

Collected: 2016/01/12
Shipped:
Received: 2016/01/14

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	4346197	N/A	2016/01/15	Abdi Mohamud
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	4346751	2016/01/15	2016/01/16	Dorina Popa
Moisture	BAL	4345064	N/A	2016/01/14	Valentina Kaftani

Maxxam ID: BQS671
Sample ID: CS101
Matrix: Soil

Collected: 2016/01/12
Shipped:
Received: 2016/01/14

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	4346197	N/A	2016/01/15	Abdi Mohamud
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	4346751	2016/01/15	2016/01/16	Dorina Popa
Moisture	BAL	4345064	N/A	2016/01/14	Valentina Kaftani

Maxxam ID: BQS672
Sample ID: SP105
Matrix: Soil

Collected: 2016/01/12
Shipped:
Received: 2016/01/14

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	4346197	N/A	2016/01/16	Abdi Mohamud
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	4346751	2016/01/15	2016/01/16	Dorina Popa
Moisture	BAL	4345064	N/A	2016/01/14	Valentina Kaftani

Maxxam ID: BQS673
Sample ID: SP107
Matrix: Soil

Collected: 2016/01/12
Shipped:
Received: 2016/01/14

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	4346197	N/A	2016/01/16	Abdi Mohamud
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	4346751	2016/01/15	2016/01/16	Dorina Popa
Moisture	BAL	4345064	N/A	2016/01/14	Valentina Kaftani

Maxxam Job #: B607582
Report Date: 2016/01/18

Terrapex Environmental Ltd
Client Project #: CB644.01
Site Location: 121 Hume Street, Collingwood, ON
Your P.O. #: 4700001396
Sampler Initials: PA

GENERAL COMMENTS

Each temperature is the average of up to three cooler temperatures taken at receipt

Package 1	4.0°C

Results relate only to the items tested.

Maxxam Job #: B607582
Report Date: 2016/01/18

Terrapex Environmental Ltd
Client Project #: CB644.01
Site Location: 121 Hume Street, Collingwood, ON
Your P.O. #: 4700001396
Sampler Initials: PA

QUALITY ASSURANCE REPORT

QA/QC	Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
	4345064	NS3	RPD	Moisture	2016/01/14	2.0		%	20
	4346197	ABD	Matrix Spike	1,4-Difluorobenzene	2016/01/15		102	%	60 - 140
				4-Bromofluorobenzene	2016/01/15		102	%	60 - 140
				D10-Ethylbenzene	2016/01/15		98	%	60 - 140
				D4-1,2-Dichloroethane	2016/01/15		99	%	60 - 140
				Benzene	2016/01/15		104	%	60 - 140
				Toluene	2016/01/15		95	%	60 - 140
				Ethylbenzene	2016/01/15		104	%	60 - 140
				o-Xylene	2016/01/15		104	%	60 - 140
				p+m-Xylene	2016/01/15		97	%	60 - 140
				F1 (C6-C10)	2016/01/15		90	%	60 - 140
	4346197	ABD	Spiked Blank	1,4-Difluorobenzene	2016/01/15		99	%	60 - 140
				4-Bromofluorobenzene	2016/01/15		100	%	60 - 140
				D10-Ethylbenzene	2016/01/15		106	%	60 - 140
				D4-1,2-Dichloroethane	2016/01/15		97	%	60 - 140
				Benzene	2016/01/15		107	%	60 - 140
				Toluene	2016/01/15		104	%	60 - 140
				Ethylbenzene	2016/01/15		112	%	60 - 140
				o-Xylene	2016/01/15		112	%	60 - 140
				p+m-Xylene	2016/01/15		104	%	60 - 140
				F1 (C6-C10)	2016/01/15		101	%	80 - 120
	4346197	ABD	Method Blank	1,4-Difluorobenzene	2016/01/15		100	%	60 - 140
				4-Bromofluorobenzene	2016/01/15		101	%	60 - 140
				D10-Ethylbenzene	2016/01/15		97	%	60 - 140
				D4-1,2-Dichloroethane	2016/01/15		98	%	60 - 140
				Benzene	2016/01/15	ND, RDL=0.020		ug/g	
				Toluene	2016/01/15	ND, RDL=0.020		ug/g	
				Ethylbenzene	2016/01/15	ND, RDL=0.020		ug/g	
				o-Xylene	2016/01/15	ND, RDL=0.020		ug/g	
				p+m-Xylene	2016/01/15	ND, RDL=0.040		ug/g	
				Total Xylenes	2016/01/15	ND, RDL=0.040		ug/g	
				F1 (C6-C10)	2016/01/15	ND, RDL=10		ug/g	
				F1 (C6-C10) - BTEX	2016/01/15	ND, RDL=10		ug/g	
	4346197	ABD	RPD	Benzene	2016/01/15	NC		%	50
				Toluene	2016/01/15	NC		%	50
				Ethylbenzene	2016/01/15	NC		%	50
				o-Xylene	2016/01/15	NC		%	50
				p+m-Xylene	2016/01/15	NC		%	50
				Total Xylenes	2016/01/15	NC		%	50
				F1 (C6-C10)	2016/01/15	NC		%	30
				F1 (C6-C10) - BTEX	2016/01/15	NC		%	30
	4346751	DPO	Matrix Spike	o-Terphenyl	2016/01/15		96	%	60 - 130

Maxxam Job #: B607582
Report Date: 2016/01/18

Terrapex Environmental Ltd
Client Project #: CB644.01
Site Location: 121 Hume Street, Collingwood, ON
Your P.O. #: 4700001396
Sampler Initials: PA

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
4346751	DPO	Spiked Blank	F2 (C10-C16 Hydrocarbons)	2016/01/15		94	%	50 - 130
			F3 (C16-C34 Hydrocarbons)	2016/01/15		97	%	50 - 130
			F4 (C34-C50 Hydrocarbons)	2016/01/15		101	%	50 - 130
			o-Terphenyl	2016/01/15		96	%	60 - 130
			F2 (C10-C16 Hydrocarbons)	2016/01/15		95	%	80 - 120
4346751	DPO	Method Blank	F3 (C16-C34 Hydrocarbons)	2016/01/15		98	%	80 - 120
			F4 (C34-C50 Hydrocarbons)	2016/01/15		101	%	80 - 120
			o-Terphenyl	2016/01/15		98	%	60 - 130
			F2 (C10-C16 Hydrocarbons)	2016/01/15	ND, RDL=10		ug/g	
			F3 (C16-C34 Hydrocarbons)	2016/01/15	ND, RDL=50		ug/g	
4346751	DPO	RPD	F4 (C34-C50 Hydrocarbons)	2016/01/15	ND, RDL=50		ug/g	
			F2 (C10-C16 Hydrocarbons)	2016/01/15	NC		%	30
			F3 (C16-C34 Hydrocarbons)	2016/01/15	NC		%	30
			F4 (C34-C50 Hydrocarbons)	2016/01/15	NC		%	30

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.

Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.

Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.

Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.

Surrogate: A pure or isotopically labeled compound whose behavior mirrors the analytes of interest. Used to evaluate extraction efficiency.

NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (one or both samples < 5x RDL).

VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by the following individual(s).

Cristina Carriere

Cristina Carriere, Scientific Services

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.



Maxxam Analytics International Corporation o/a Maxxam Analytics
6740 Campobello Road, Mississauga, Ontario Canada L5N 2L8 Tel: (905) 817-5700 Toll-Free (800) 563-6266 Fax: (905) 817-5777 www.maxxam.ca

CHAIN OF CUSTODY RECORD SUNCOR DOWNSTREAM

Page 1 of 1

INVOICE INFORMATION:		REPORT INFORMATION (if differs from invoice):		PROJECT INFORMATION:		Laboratory Use Only:	
Company Name: #14539 Suncor Energy Products Partnership	Company Name: #6557 Terrapex Environmental Ltd	Quotation #: B43750	Maxxam Job #:	Bottle Order #:			
Contact Name: Ken Tedder	Contact Name: Jeff Stevenson	Task Order #:					
Address: 3275 Rebecca St	Address: 920 Brant Street Unit 16	Project #: CB644.02					
Oakville ON L6L 6N5	Burlington ON L7R 4J1	Site Location: 121 Hume Street, Collingwood, ON					
Phone: (905) 469-3754	Phone: (905) 632-5939 x 226	Outlet #: 60680			COC #:		Project Manager:
Email: ktedder@suncor.com	Email: j.stevenson@terrapex.com	Sampled By: PA			CP562385-01-01		Marissa Oddi

MOE REGULATED DRINKING WATER OR WATER INTENDED FOR HUMAN CONSUMPTION MUST BE SUBMITTED ON THE MAXXAM DRINKING WATER CHAIN OF CUSTODY

Regulation 153 (2011)	Other Regulations	Activity
☐ Table 1 ☐ Res/Park ☐ Medium/Fine	☐ CCME ☐ Sanitary Sewer Bylaw	☒ RE
☒ Table 2 ☒ Ind/Comm ☒ Coarse	☐ Reg 558 ☐ Storm Sewer Bylaw	Assessment (circle one)
☐ Table 3 ☐ Agri/Other	☐ MISA ☐ Municipality	A1, A2, AR, AV
☐ Table ☐ For RSC	☐ PWQO	Remediation (circle one)
	☐ Other	☒ RE RX, RI, RA
Include Criteria on Certificate of Analysis (Y/N)? N		Contaminant Management (circle one)
		M, MW, MV

Sample Barcode Label	Sample (Location) Identification	Date Sampled	Time Sampled	Matrix	Field Filled (please circle)	Metals / Hg / Cr / V	O Reg 153 Metals & Inorganics Pkg (Wtr)	O Reg 153 PAHs (Water)	O Reg 153 Volatile Organics (Water)	O Reg 153 PHCs (F-Fu)	# of Bottles	Comments
1	MW404	May 26-16	8:30	GW	Y	X	X	X	X		14	
2	MW1000	↑	8:30	GW	Y	X	X				7	
3	MW463	↓	10:00	GW	Y	X		X	X		12	
4	MW3000	↓	11:30	GW	Y			X			3	
5	Trip Blank	May 26-16	11:30	GW	Y			X			3	
6												27-May-16 09:40
7												Marissa Oddi
8												B6A7363
9												ASR ENV-1106
10												

* RELINQUISHED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	RECEIVED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	# Jars used and not submitted	Laboratory Use Only				
Philip Arks	16/05/26	13:00	The MRSAT MRL	16/05/27	09:40	0	Time Sensitive	Temperature (°C) on Receipt:	Custody Seal	Yes	No
								0/2/2	Present		
									Intact		

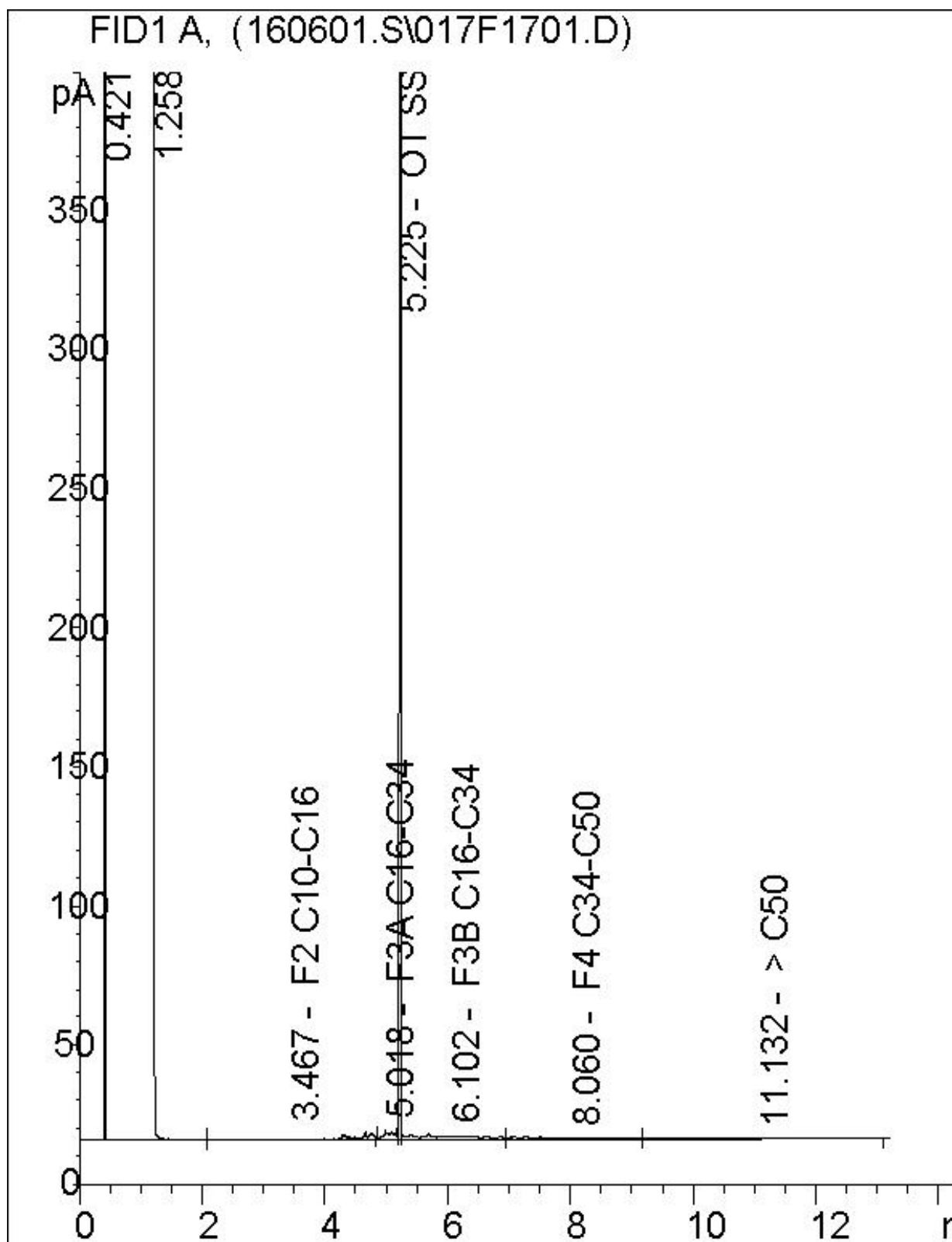
* IT IS THE RESPONSIBILITY OF THE RELINQUISHER TO ENSURE THE ACCURACY OF THE CHAIN OF CUSTODY RECORD. AN INCOMPLETE CHAIN OF CUSTODY MAY RESULT IN ANALYTICAL TAT DELAYS.

SAMPLES MUST BE KEPT COOL (< 10°C) FROM TIME OF SAMPLING UNTIL DELIVERY TO MAXXAM

White: Maxxam Yellow: Client

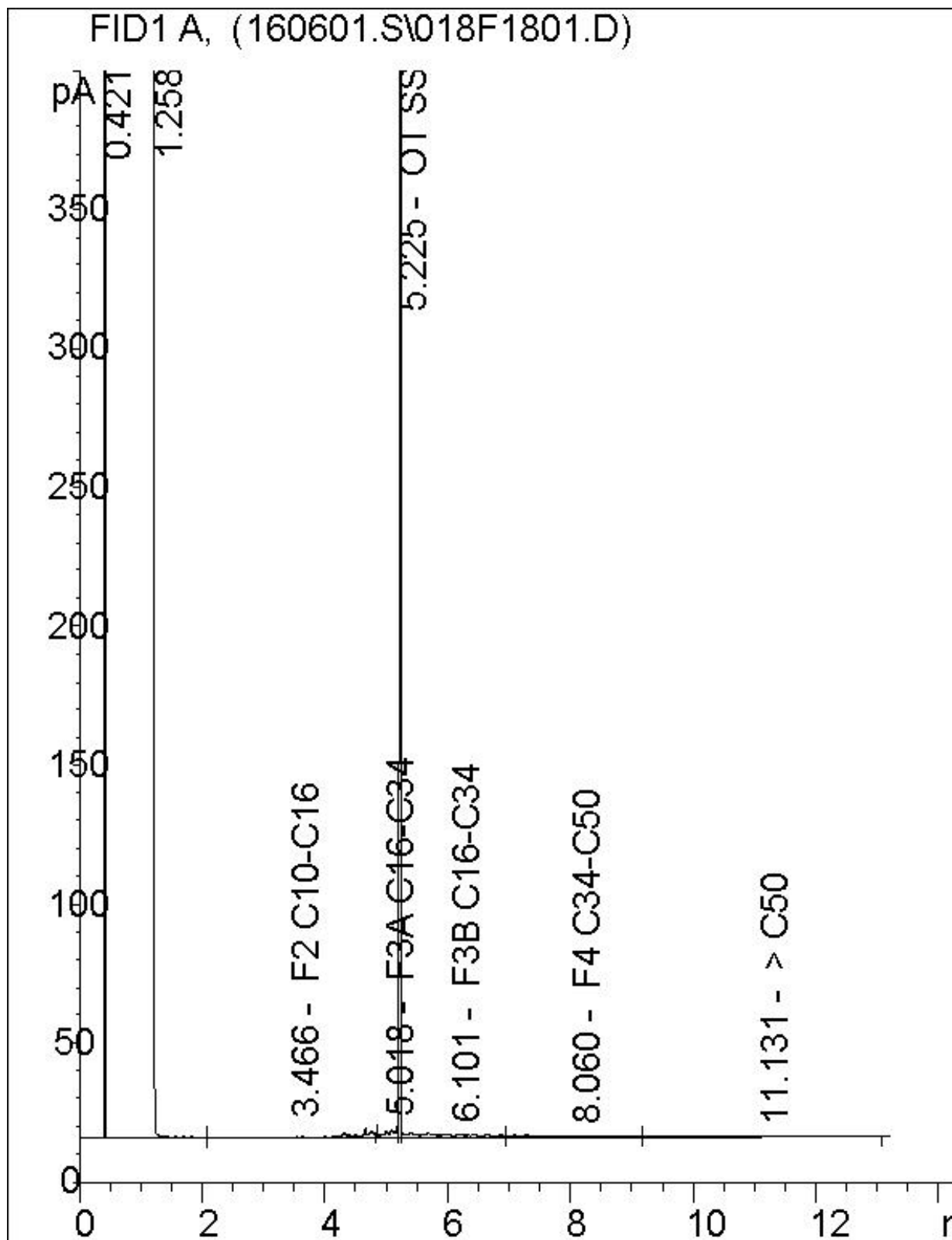
Maxxam Analytics International Corporation o/a Maxxam Analytics

Petroleum Hydrocarbons F2-F4 in Water Chromatogram



Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Petroleum Hydrocarbons F2-F4 in Water Chromatogram



Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Attention: Jeff Stevenson

Terrapex Environmental Ltd
920 Brant Street
Unit 16
Burlington, ON
CANADA L7R 4J1

Your P.O. #: 4700001396

Your Project #: CB644.02

Site#: 60680

Site Location: 121 Hume Street, Collingwood, ON

Your C.O.C. #: 562385-01-01

Report Date: 2016/06/03

Report #: R4013953

Version: 1 - Final

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B6A7363

Received: 2016/05/27, 09:40

Sample Matrix: Water

Samples Received: 5

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Reference
Methylnaphthalene Sum	2	N/A	2016/06/02	CAM SOP-00301	EPA 8270D m
1,3-Dichloropropene Sum	4	N/A	2016/06/02		EPA 8260C m
Chloride by Automated Colourimetry	3	N/A	2016/05/31	CAM SOP-00463	EPA 325.2 m
Chromium (VI) in Water	3	N/A	2016/05/31	CAM SOP-00436	EPA 7199 m
Free (WAD) Cyanide	3	N/A	2016/05/30	CAM SOP-00457	OMOE E3015 m
Petroleum Hydro. CCME F1 & BTEX in Water	2	N/A	2016/06/01	CAM SOP-00315	CCME PHC-CWS m
Petroleum Hydrocarbons F2-F4 in Water (1)	2	2016/06/01	2016/06/02	CAM SOP-00316	CCME PHC-CWS m
Mercury	1	2016/05/31	2016/06/02	CAM SOP-00453	EPA 7470A m
Mercury	2	2016/06/01	2016/06/02	CAM SOP-00453	EPA 7470A m
Dissolved Metals by ICPMS	3	N/A	2016/06/01	CAM SOP-00447	EPA 6020A m
PAH Compounds in Water by GC/MS (SIM)	1	2016/06/01	2016/06/01	CAM SOP-00318	EPA 8270D m
PAH Compounds in Water by GC/MS (SIM)	1	2016/06/01	2016/06/02	CAM SOP-00318	EPA 8270D m
Volatile Organic Compounds in Water	4	N/A	2016/05/30	CAM SOP-00228	EPA 8260C m

Remarks:

Maxxam Analytics has performed all analytical testing herein in accordance with ISO 17025 and the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act. All methodologies comply with this document and are validated for use in the laboratory. The methods and techniques employed in this analysis conform to the performance criteria (detection limits, accuracy and precision) as outlined in the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act.

Maxxam Analytics is accredited for all specific parameters as required by Ontario Regulation 153/04. Maxxam Analytics is limited in liability to the actual cost of analysis unless otherwise agreed in writing. There is no other warranty expressed or implied. Samples will be retained at Maxxam Analytics for three weeks from receipt of data or as per contract.

Reference Method suffix "m" indicates test methods incorporate validated modifications from specific reference methods to improve performance.

* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.

(1) All CCME PHC results met required criteria unless otherwise stated in the report. The CWS PHC methods employed by Maxxam conform to all prescribed elements of the reference method and performance based elements have been validated. All modifications have been validated and proven equivalent following "Alberta Environment's Interpretation of the Reference Method for the Canada-Wide Standard for Petroleum Hydrocarbons in Soil Validation of Performance-Based Alternative Methods September 2003". Documentation is available upon request. Modifications from Reference Method for the Canada-wide Standard for Petroleum Hydrocarbons in Soil-Tier 1 Method: F2/F3/F4 data reported using validated cold solvent extraction instead of Soxhlet extraction.

Attention: Jeff Stevenson

Terrapex Environmental Ltd
920 Brant Street
Unit 16
Burlington, ON
CANADA L7R 4J1

Your P.O. #: 4700001396

Your Project #: CB644.02

Site#: 60680

Site Location: 121 Hume Street, Collingwood, ON

Your C.O.C. #: 562385-01-01

Report Date: 2016/06/03

Report #: R4013953

Version: 1 - Final

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B6A7363

Received: 2016/05/27, 09:40

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.

Marissa Oddi, Customer Service Representative

Email: moddi@maxxam.ca

Phone# (905) 817-5700

=====

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O.REG 153 METALS & INORGANICS PKG (WTR)

Maxxam ID		CKV220	CKV220		CKV221		CKV222		
Sampling Date		2016/05/26 08:30	2016/05/26 08:30		2016/05/26 08:30		2016/05/26 10:00		
COC Number		562385-01-01	562385-01-01		562385-01-01		562385-01-01		
	UNITS	MW404	MW404 Lab-Dup	QC Batch	MW1000	QC Batch	MW403	RDL	QC Batch
Inorganics									
Free Cyanide	ug/L	ND	ND	4516392	ND	4516392	ND	2	4516392
Dissolved Chloride (Cl)	mg/L	96		4518124	97	4518124	87	1.0	4518124
Metals									
Chromium (VI)	ug/L	ND		4516402	ND	4516402	ND	0.50	4516402
Mercury (Hg)	ug/L	ND	ND	4520376	ND	4518905	ND	0.1	4520376
Dissolved Antimony (Sb)	ug/L	ND		4519452	0.64	4519452	ND	0.50	4519452
Dissolved Arsenic (As)	ug/L	ND		4519452	1.4	4519452	3.8	1.0	4519452
Dissolved Barium (Ba)	ug/L	ND		4519452	76	4519452	94	2.0	4519452
Dissolved Beryllium (Be)	ug/L	ND		4519452	ND	4519452	ND	0.50	4519452
Dissolved Boron (B)	ug/L	ND		4519452	150	4519452	87	10	4519452
Dissolved Cadmium (Cd)	ug/L	ND		4519452	ND	4519452	ND	0.10	4519452
Dissolved Chromium (Cr)	ug/L	ND		4519452	ND	4519452	ND	5.0	4519452
Dissolved Cobalt (Co)	ug/L	ND		4519452	0.54	4519452	1.4	0.50	4519452
Dissolved Copper (Cu)	ug/L	ND		4519452	1.2	4519452	1.6	1.0	4519452
Dissolved Lead (Pb)	ug/L	ND		4519452	ND	4519452	0.58	0.50	4519452
Dissolved Molybdenum (Mo)	ug/L	ND		4519452	4.4	4519452	5.9	0.50	4519452
Dissolved Nickel (Ni)	ug/L	ND		4519452	1.1	4519452	1.8	1.0	4519452
Dissolved Selenium (Se)	ug/L	ND		4519452	ND	4519452	ND	2.0	4519452
Dissolved Silver (Ag)	ug/L	ND		4519452	ND	4519452	ND	0.10	4519452
Dissolved Sodium (Na)	ug/L	380		4519452	54000	4519452	62000	100	4519452
Dissolved Thallium (Tl)	ug/L	ND		4519452	ND	4519452	ND	0.050	4519452
Dissolved Uranium (U)	ug/L	ND		4519452	1.2	4519452	1.2	0.10	4519452
Dissolved Vanadium (V)	ug/L	ND		4519452	1.0	4519452	1.0	0.50	4519452
Dissolved Zinc (Zn)	ug/L	ND		4519452	ND	4519452	7.1	5.0	4519452
RDL = Reportable Detection Limit QC Batch = Quality Control Batch Lab-Dup = Laboratory Initiated Duplicate ND = Not detected									

O.REG 153 PAHS (WATER)

Maxxam ID		CKV220	CKV221		
Sampling Date		2016/05/26 08:30	2016/05/26 08:30		
COC Number		562385-01-01	562385-01-01		
	UNITS	MW404	MW1000	RDL	QC Batch
Calculated Parameters					
Methylnaphthalene, 2-(1-)	ug/L	ND	ND	0.071	4515022
Polyaromatic Hydrocarbons					
Acenaphthene	ug/L	ND	ND	0.050	4520648
Acenaphthylene	ug/L	ND	ND	0.050	4520648
Anthracene	ug/L	ND	ND	0.050	4520648
Benzo(a)anthracene	ug/L	ND	ND	0.050	4520648
Benzo(a)pyrene	ug/L	ND	ND	0.010	4520648
Benzo(b/j)fluoranthene	ug/L	ND	ND	0.050	4520648
Benzo(g,h,i)perylene	ug/L	ND	ND	0.050	4520648
Benzo(k)fluoranthene	ug/L	ND	ND	0.050	4520648
Chrysene	ug/L	ND	ND	0.050	4520648
Dibenz(a,h)anthracene	ug/L	ND	ND	0.050	4520648
Fluoranthene	ug/L	ND	ND	0.050	4520648
Fluorene	ug/L	ND	ND	0.050	4520648
Indeno(1,2,3-cd)pyrene	ug/L	ND	ND	0.050	4520648
1-Methylnaphthalene	ug/L	ND	ND	0.050	4520648
2-Methylnaphthalene	ug/L	ND	ND	0.050	4520648
Naphthalene	ug/L	ND	ND	0.050	4520648
Phenanthrene	ug/L	ND	ND	0.030	4520648
Pyrene	ug/L	ND	ND	0.050	4520648
Surrogate Recovery (%)					
D10-Anthracene	%	106	101		4520648
D14-Terphenyl (FS)	%	102	97		4520648
D8-Acenaphthylene	%	104	98		4520648
RDL = Reportable Detection Limit QC Batch = Quality Control Batch ND = Not detected					

O.REG 153 PETROLEUM HYDROCARBONS (WATER)

Maxxam ID		CKV220	CKV222		
Sampling Date		2016/05/26 08:30	2016/05/26 10:00		
COC Number		562385-01-01	562385-01-01		
	UNITS	MW404	MW403	RDL	QC Batch
BTEX & F1 Hydrocarbons					
F1 (C6-C10)	ug/L	ND	ND	25	4520303
F1 (C6-C10) - BTEX	ug/L	ND	ND	25	4520303
F2-F4 Hydrocarbons					
F2 (C10-C16 Hydrocarbons)	ug/L	ND	ND	100	4520892
F3 (C16-C34 Hydrocarbons)	ug/L	ND	ND	200	4520892
F4 (C34-C50 Hydrocarbons)	ug/L	ND	ND	200	4520892
Reached Baseline at C50	ug/L	Yes	Yes		4520892
Surrogate Recovery (%)					
1,4-Difluorobenzene	%	99	98		4520303
4-Bromofluorobenzene	%	102	100		4520303
D10-Ethylbenzene	%	96	96		4520303
D4-1,2-Dichloroethane	%	96	94		4520303
o-Terphenyl	%	98	97		4520892
RDL = Reportable Detection Limit QC Batch = Quality Control Batch ND = Not detected					

O.REG 153 VOLATILE ORGANICS (WATER)

Maxxam ID		CKV220	CKV222	CKV222	CKV223	CKV224		
Sampling Date		2016/05/26 08:30	2016/05/26 10:00	2016/05/26 10:00	2016/05/26 11:30	2016/05/26 11:30		
COC Number		562385-01-01	562385-01-01	562385-01-01	562385-01-01	562385-01-01		
	UNITS	MW404	MW403	MW403 Lab-Dup	MW3000	TRIP BLANK	RDL	QC Batch

Calculated Parameters								
1,3-Dichloropropene (cis+trans)	ug/L	ND	ND		ND	ND	0.50	4515032
Volatile Organics								
Acetone (2-Propanone)	ug/L	ND	31	29	ND	ND	10	4516635
Benzene	ug/L	2.2	ND	ND	ND	ND	0.20	4516635
Bromodichloromethane	ug/L	ND	ND	ND	ND	ND	0.50	4516635
Bromoform	ug/L	ND	ND	ND	ND	ND	1.0	4516635
Bromomethane	ug/L	ND	ND	ND	ND	ND	0.50	4516635
Carbon Tetrachloride	ug/L	ND	ND	ND	ND	ND	0.20	4516635
Chlorobenzene	ug/L	ND	ND	ND	ND	ND	0.20	4516635
Chloroform	ug/L	ND	ND	ND	ND	ND	0.20	4516635
Dibromochloromethane	ug/L	ND	ND	ND	ND	ND	0.50	4516635
1,2-Dichlorobenzene	ug/L	ND	ND	ND	ND	ND	0.50	4516635
1,3-Dichlorobenzene	ug/L	ND	ND	ND	ND	ND	0.50	4516635
1,4-Dichlorobenzene	ug/L	ND	ND	ND	ND	ND	0.50	4516635
Dichlorodifluoromethane (FREON 12)	ug/L	ND	ND	ND	ND	ND	1.0	4516635
1,1-Dichloroethane	ug/L	ND	ND	ND	ND	ND	0.20	4516635
1,2-Dichloroethane	ug/L	ND	ND	ND	ND	ND	0.50	4516635
1,1-Dichloroethylene	ug/L	ND	ND	ND	ND	ND	0.20	4516635
cis-1,2-Dichloroethylene	ug/L	ND	ND	ND	ND	ND	0.50	4516635
trans-1,2-Dichloroethylene	ug/L	ND	ND	ND	ND	ND	0.50	4516635
1,2-Dichloropropane	ug/L	ND	ND	ND	ND	ND	0.20	4516635
cis-1,3-Dichloropropene	ug/L	ND	ND	ND	ND	ND	0.30	4516635
trans-1,3-Dichloropropene	ug/L	ND	ND	ND	ND	ND	0.40	4516635
Ethylbenzene	ug/L	ND	0.23	0.24	ND	ND	0.20	4516635
Ethylene Dibromide	ug/L	ND	ND	ND	ND	ND	0.20	4516635
Hexane	ug/L	ND	ND	ND	ND	ND	1.0	4516635
Methylene Chloride(Dichloromethane)	ug/L	ND	ND	ND	ND	ND	2.0	4516635
Methyl Ethyl Ketone (2-Butanone)	ug/L	ND	ND	ND	ND	ND	10	4516635
Methyl Isobutyl Ketone	ug/L	ND	ND	ND	ND	ND	5.0	4516635
Methyl t-butyl ether (MTBE)	ug/L	ND	ND	ND	ND	ND	0.50	4516635
Styrene	ug/L	ND	ND	ND	ND	ND	0.50	4516635

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate
ND = Not detected

O.REG 153 VOLATILE ORGANICS (WATER)

Maxxam ID		CKV220	CKV222	CKV222	CKV223	CKV224		
Sampling Date		2016/05/26 08:30	2016/05/26 10:00	2016/05/26 10:00	2016/05/26 11:30	2016/05/26 11:30		
COC Number		562385-01-01	562385-01-01	562385-01-01	562385-01-01	562385-01-01		
	UNITS	MW404	MW403	MW403 Lab-Dup	MW3000	TRIP BLANK	RDL	QC Batch
1,1,1,2-Tetrachloroethane	ug/L	ND	ND	ND	ND	ND	0.50	4516635
1,1,2,2-Tetrachloroethane	ug/L	ND	ND	ND	ND	ND	0.50	4516635
Tetrachloroethylene	ug/L	ND	ND	ND	ND	ND	0.20	4516635
Toluene	ug/L	0.43	ND	ND	ND	ND	0.20	4516635
1,1,1-Trichloroethane	ug/L	ND	ND	ND	ND	ND	0.20	4516635
1,1,2-Trichloroethane	ug/L	ND	ND	ND	ND	ND	0.50	4516635
Trichloroethylene	ug/L	ND	ND	ND	ND	ND	0.20	4516635
Trichlorofluoromethane (FREON 11)	ug/L	ND	ND	ND	ND	ND	0.50	4516635
Vinyl Chloride	ug/L	ND	ND	ND	ND	ND	0.20	4516635
p+m-Xylene	ug/L	ND	0.35	0.35	ND	ND	0.20	4516635
o-Xylene	ug/L	ND	ND	ND	ND	ND	0.20	4516635
Total Xylenes	ug/L	ND	0.35	0.35	ND	ND	0.20	4516635
Surrogate Recovery (%)								
4-Bromofluorobenzene	%	89	91	91	89	93		4516635
D4-1,2-Dichloroethane	%	107	111	110	107	104		4516635
D8-Toluene	%	100	98	98	99	99		4516635
RDL = Reportable Detection Limit QC Batch = Quality Control Batch Lab-Dup = Laboratory Initiated Duplicate ND = Not detected								

TEST SUMMARY

Maxxam ID: CKV220
Sample ID: MW404
Matrix: Water

Collected: 2016/05/26
Shipped:
Received: 2016/05/27

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	4515022	N/A	2016/06/02	Automated Statchk
1,3-Dichloropropene Sum	CALC	4515032	N/A	2016/06/02	Automated Statchk
Chloride by Automated Colourimetry	KONE	4518124	N/A	2016/05/31	Deonarine Ramnarine
Chromium (VI) in Water	IC	4516402	N/A	2016/05/31	Sally Coughlin
Free (WAD) Cyanide	TECH/CN	4516392	N/A	2016/05/30	Christine Pham
Petroleum Hydro. CCME F1 & BTEX in Water	HSGC/MSFD	4520303	N/A	2016/06/01	Haibin Wu
Petroleum Hydrocarbons F2-F4 in Water	GC/FID	4520892	2016/06/01	2016/06/02	Zhiyue (Frank) Zhu
Mercury	CV/AA	4520376	2016/06/01	2016/06/02	Magdalena Carlos
Dissolved Metals by ICPMS	ICP/MS	4519452	N/A	2016/06/01	Prempal Bhatti
PAH Compounds in Water by GC/MS (SIM)	GC/MS	4520648	2016/06/01	2016/06/01	Jett Wu
Volatile Organic Compounds in Water	GC/MS	4516635	N/A	2016/05/30	Karen Hughes

Maxxam ID: CKV220 Dup
Sample ID: MW404
Matrix: Water

Collected: 2016/05/26
Shipped:
Received: 2016/05/27

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Free (WAD) Cyanide	TECH/CN	4516392	N/A	2016/05/30	Christine Pham
Mercury	CV/AA	4520376	2016/06/02	2016/06/02	Magdalena Carlos

Maxxam ID: CKV221
Sample ID: MW1000
Matrix: Water

Collected: 2016/05/26
Shipped:
Received: 2016/05/27

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	4515022	N/A	2016/06/02	Automated Statchk
Chloride by Automated Colourimetry	KONE	4518124	N/A	2016/05/31	Deonarine Ramnarine
Chromium (VI) in Water	IC	4516402	N/A	2016/05/31	Sally Coughlin
Free (WAD) Cyanide	TECH/CN	4516392	N/A	2016/05/30	Christine Pham
Mercury	CV/AA	4518905	2016/05/31	2016/06/02	Magdalena Carlos
Dissolved Metals by ICPMS	ICP/MS	4519452	N/A	2016/06/01	Prempal Bhatti
PAH Compounds in Water by GC/MS (SIM)	GC/MS	4520648	2016/06/01	2016/06/02	Jett Wu

Maxxam ID: CKV222
Sample ID: MW403
Matrix: Water

Collected: 2016/05/26
Shipped:
Received: 2016/05/27

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
1,3-Dichloropropene Sum	CALC	4515032	N/A	2016/06/02	Automated Statchk
Chloride by Automated Colourimetry	KONE	4518124	N/A	2016/05/31	Deonarine Ramnarine
Chromium (VI) in Water	IC	4516402	N/A	2016/05/31	Sally Coughlin
Free (WAD) Cyanide	TECH/CN	4516392	N/A	2016/05/30	Christine Pham
Petroleum Hydro. CCME F1 & BTEX in Water	HSGC/MSFD	4520303	N/A	2016/06/01	Haibin Wu
Petroleum Hydrocarbons F2-F4 in Water	GC/FID	4520892	2016/06/01	2016/06/02	Zhiyue (Frank) Zhu

Maxxam Job #: B6A7363
Report Date: 2016/06/03

Terrapex Environmental Ltd
Client Project #: CB644.02
Site Location: 121 Hume Street, Collingwood, ON
Your P.O. #: 4700001396
Sampler Initials: PA

TEST SUMMARY

Maxxam ID: CKV222
Sample ID: MW403
Matrix: Water

Collected: 2016/05/26
Shipped:
Received: 2016/05/27

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Mercury	CV/AA	4520376	2016/06/01	2016/06/02	Magdalena Carlos
Dissolved Metals by ICPMS	ICP/MS	4519452	N/A	2016/06/01	Prempal Bhatti
Volatile Organic Compounds in Water	GC/MS	4516635	N/A	2016/05/30	Karen Hughes

Maxxam ID: CKV222 Dup
Sample ID: MW403
Matrix: Water

Collected: 2016/05/26
Shipped:
Received: 2016/05/27

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Volatile Organic Compounds in Water	GC/MS	4516635	N/A	2016/05/30	Karen Hughes

Maxxam ID: CKV223
Sample ID: MW3000
Matrix: Water

Collected: 2016/05/26
Shipped:
Received: 2016/05/27

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
1,3-Dichloropropene Sum	CALC	4515032	N/A	2016/06/02	Automated Statchk
Volatile Organic Compounds in Water	GC/MS	4516635	N/A	2016/05/30	Karen Hughes

Maxxam ID: CKV224
Sample ID: TRIP BLANK
Matrix: Water

Collected: 2016/05/26
Shipped:
Received: 2016/05/27

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
1,3-Dichloropropene Sum	CALC	4515032	N/A	2016/06/02	Automated Statchk
Volatile Organic Compounds in Water	GC/MS	4516635	N/A	2016/05/30	Karen Hughes

Maxxam Job #: B6A7363
Report Date: 2016/06/03

Terrapex Environmental Ltd
Client Project #: CB644.02
Site Location: 121 Hume Street, Collingwood, ON
Your P.O. #: 4700001396
Sampler Initials: PA

GENERAL COMMENTS

Each temperature is the average of up to three cooler temperatures taken at receipt

Package 1	1.3°C

Results relate only to the items tested.

Maxxam Job #: B6A7363
Report Date: 2016/06/03

Terrapex Environmental Ltd
Client Project #: CB644.02
Site Location: 121 Hume Street, Collingwood, ON
Your P.O. #: 4700001396
Sampler Initials: PA

QUALITY ASSURANCE REPORT

QA/QC	Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
4516392	CP		Matrix Spike [CKV220-03]	Free Cyanide	2016/05/30		100	%	80 - 120
4516392	CP		Spiked Blank	Free Cyanide	2016/05/30		100	%	80 - 120
4516392	CP		Method Blank	Free Cyanide	2016/05/30	ND,RDL=2		ug/L	
4516392	CP		RPD [CKV220-03]	Free Cyanide	2016/05/30	NC		%	20
4516402	SAC		Matrix Spike	Chromium (VI)	2016/05/31		100	%	80 - 120
4516402	SAC		Spiked Blank	Chromium (VI)	2016/05/31		101	%	80 - 120
4516402	SAC		Method Blank	Chromium (VI)	2016/05/31	ND, RDL=0.50		ug/L	
4516402	SAC		RPD	Chromium (VI)	2016/05/31	NC		%	20
4516635	KH2		Matrix Spike [CKV220-08]	4-Bromofluorobenzene	2016/05/30		98	%	70 - 130
				D4-1,2-Dichloroethane	2016/05/30		105	%	70 - 130
				D8-Toluene	2016/05/30		105	%	70 - 130
				Acetone (2-Propanone)	2016/05/30		108	%	60 - 140
				Benzene	2016/05/30		99	%	70 - 130
				Bromodichloromethane	2016/05/30		100	%	70 - 130
				Bromoform	2016/05/30		96	%	70 - 130
				Bromomethane	2016/05/30		86	%	60 - 140
				Carbon Tetrachloride	2016/05/30		95	%	70 - 130
				Chlorobenzene	2016/05/30		102	%	70 - 130
				Chloroform	2016/05/30		98	%	70 - 130
				Dibromochloromethane	2016/05/30		99	%	70 - 130
				1,2-Dichlorobenzene	2016/05/30		99	%	70 - 130
				1,3-Dichlorobenzene	2016/05/30		99	%	70 - 130
				1,4-Dichlorobenzene	2016/05/30		104	%	70 - 130
				Dichlorodifluoromethane (FREON 12)	2016/05/30		86	%	60 - 140
				1,1-Dichloroethane	2016/05/30		101	%	70 - 130
				1,2-Dichloroethane	2016/05/30		103	%	70 - 130
				1,1-Dichloroethylene	2016/05/30		104	%	70 - 130
				cis-1,2-Dichloroethylene	2016/05/30		96	%	70 - 130
				trans-1,2-Dichloroethylene	2016/05/30		95	%	70 - 130
				1,2-Dichloropropane	2016/05/30		104	%	70 - 130
				cis-1,3-Dichloropropene	2016/05/30		105	%	70 - 130
				trans-1,3-Dichloropropene	2016/05/30		109	%	70 - 130
				Ethylbenzene	2016/05/30		105	%	70 - 130
				Ethylene Dibromide	2016/05/30		104	%	70 - 130
				Hexane	2016/05/30		110	%	70 - 130
				Methylene Chloride(Dichloromethane)	2016/05/30		93	%	70 - 130
				Methyl Ethyl Ketone (2-Butanone)	2016/05/30		120	%	60 - 140
				Methyl Isobutyl Ketone	2016/05/30		118	%	70 - 130
				Methyl t-butyl ether (MTBE)	2016/05/30		102	%	70 - 130
				Styrene	2016/05/30		104	%	70 - 130
				1,1,1,2-Tetrachloroethane	2016/05/30		96	%	70 - 130
				1,1,2,2-Tetrachloroethane	2016/05/30		109	%	70 - 130
				Tetrachloroethylene	2016/05/30		91	%	70 - 130
				Toluene	2016/05/30		99	%	70 - 130
				1,1,1-Trichloroethane	2016/05/30		93	%	70 - 130
				1,1,2-Trichloroethane	2016/05/30		111	%	70 - 130
				Trichloroethylene	2016/05/30		90	%	70 - 130
				Trichlorofluoromethane (FREON 11)	2016/05/30		96	%	70 - 130
				Vinyl Chloride	2016/05/30		105	%	70 - 130
				p+m-Xylene	2016/05/30		105	%	70 - 130

Maxxam Job #: B6A7363
Report Date: 2016/06/03

Terrapex Environmental Ltd
Client Project #: CB644.02
Site Location: 121 Hume Street, Collingwood, ON
Your P.O. #: 4700001396
Sampler Initials: PA

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC	Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
4516635	KH2	Spiked Blank		o-Xylene	2016/05/30		103	%	70 - 130
				4-Bromofluorobenzene	2016/05/30		98	%	70 - 130
				D4-1,2-Dichloroethane	2016/05/30		105	%	70 - 130
				D8-Toluene	2016/05/30		106	%	70 - 130
				Acetone (2-Propanone)	2016/05/30		116	%	60 - 140
				Benzene	2016/05/30		99	%	70 - 130
				Bromodichloromethane	2016/05/30		100	%	70 - 130
				Bromoform	2016/05/30		96	%	70 - 130
				Bromomethane	2016/05/30		86	%	60 - 140
				Carbon Tetrachloride	2016/05/30		94	%	70 - 130
				Chlorobenzene	2016/05/30		101	%	70 - 130
				Chloroform	2016/05/30		98	%	70 - 130
				Dibromochloromethane	2016/05/30		99	%	70 - 130
				1,2-Dichlorobenzene	2016/05/30		98	%	70 - 130
				1,3-Dichlorobenzene	2016/05/30		99	%	70 - 130
				1,4-Dichlorobenzene	2016/05/30		105	%	70 - 130
				Dichlorodifluoromethane (FREON 12)	2016/05/30		89	%	60 - 140
				1,1-Dichloroethane	2016/05/30		101	%	70 - 130
				1,2-Dichloroethane	2016/05/30		103	%	70 - 130
				1,1-Dichloroethylene	2016/05/30		103	%	70 - 130
				cis-1,2-Dichloroethylene	2016/05/30		96	%	70 - 130
				trans-1,2-Dichloroethylene	2016/05/30		94	%	70 - 130
				1,2-Dichloropropane	2016/05/30		103	%	70 - 130
				cis-1,3-Dichloropropene	2016/05/30		104	%	70 - 130
				trans-1,3-Dichloropropene	2016/05/30		106	%	70 - 130
				Ethylbenzene	2016/05/30		104	%	70 - 130
				Ethylene Dibromide	2016/05/30		104	%	70 - 130
				Hexane	2016/05/30		107	%	70 - 130
				Methylene Chloride(Dichloromethane)	2016/05/30		93	%	70 - 130
				Methyl Ethyl Ketone (2-Butanone)	2016/05/30		128	%	60 - 140
				Methyl Isobutyl Ketone	2016/05/30		120	%	70 - 130
				Methyl t-butyl ether (MTBE)	2016/05/30		103	%	70 - 130
				Styrene	2016/05/30		104	%	70 - 130
				1,1,1,2-Tetrachloroethane	2016/05/30		97	%	70 - 130
				1,1,2,2-Tetrachloroethane	2016/05/30		110	%	70 - 130
				Tetrachloroethylene	2016/05/30		90	%	70 - 130
				Toluene	2016/05/30		98	%	70 - 130
				1,1,1-Trichloroethane	2016/05/30		94	%	70 - 130
				1,1,2-Trichloroethane	2016/05/30		109	%	70 - 130
				Trichloroethylene	2016/05/30		90	%	70 - 130
				Trichlorofluoromethane (FREON 11)	2016/05/30		95	%	70 - 130
				Vinyl Chloride	2016/05/30		104	%	70 - 130
				p+m-Xylene	2016/05/30		104	%	70 - 130
4516635	KH2	Method Blank		o-Xylene	2016/05/30		104	%	70 - 130
				4-Bromofluorobenzene	2016/05/30		93	%	70 - 130
				D4-1,2-Dichloroethane	2016/05/30		107	%	70 - 130
				D8-Toluene	2016/05/30		100	%	70 - 130
				Acetone (2-Propanone)	2016/05/30	ND, RDL=10		ug/L	
				Benzene	2016/05/30	ND, RDL=0.20		ug/L	

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Bromodichloromethane	2016/05/30	ND, RDL=0.50		ug/L	
			Bromoform	2016/05/30	ND, RDL=1.0		ug/L	
			Bromomethane	2016/05/30	ND, RDL=0.50		ug/L	
			Carbon Tetrachloride	2016/05/30	ND, RDL=0.20		ug/L	
			Chlorobenzene	2016/05/30	ND, RDL=0.20		ug/L	
			Chloroform	2016/05/30	ND, RDL=0.20		ug/L	
			Dibromochloromethane	2016/05/30	ND, RDL=0.50		ug/L	
			1,2-Dichlorobenzene	2016/05/30	ND, RDL=0.50		ug/L	
			1,3-Dichlorobenzene	2016/05/30	ND, RDL=0.50		ug/L	
			1,4-Dichlorobenzene	2016/05/30	ND, RDL=0.50		ug/L	
			Dichlorodifluoromethane (FREON 12)	2016/05/30	ND, RDL=1.0		ug/L	
			1,1-Dichloroethane	2016/05/30	ND, RDL=0.20		ug/L	
			1,2-Dichloroethane	2016/05/30	ND, RDL=0.50		ug/L	
			1,1-Dichloroethylene	2016/05/30	ND, RDL=0.20		ug/L	
			cis-1,2-Dichloroethylene	2016/05/30	ND, RDL=0.50		ug/L	
			trans-1,2-Dichloroethylene	2016/05/30	ND, RDL=0.50		ug/L	
			1,2-Dichloropropane	2016/05/30	ND, RDL=0.20		ug/L	
			cis-1,3-Dichloropropene	2016/05/30	ND, RDL=0.30		ug/L	
			trans-1,3-Dichloropropene	2016/05/30	ND, RDL=0.40		ug/L	
			Ethylbenzene	2016/05/30	ND, RDL=0.20		ug/L	
			Ethylene Dibromide	2016/05/30	ND, RDL=0.20		ug/L	
			Hexane	2016/05/30	ND, RDL=1.0		ug/L	
			Methylene Chloride(Dichloromethane)	2016/05/30	ND, RDL=2.0		ug/L	
			Methyl Ethyl Ketone (2-Butanone)	2016/05/30	ND, RDL=10		ug/L	

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Methyl Isobutyl Ketone	2016/05/30	ND, RDL=5.0		ug/L	
			Methyl t-butyl ether (MTBE)	2016/05/30	ND, RDL=0.50		ug/L	
			Styrene	2016/05/30	ND, RDL=0.50		ug/L	
			1,1,1,2-Tetrachloroethane	2016/05/30	ND, RDL=0.50		ug/L	
			1,1,2,2-Tetrachloroethane	2016/05/30	ND, RDL=0.50		ug/L	
			Tetrachloroethylene	2016/05/30	ND, RDL=0.20		ug/L	
			Toluene	2016/05/30	ND, RDL=0.20		ug/L	
			1,1,1-Trichloroethane	2016/05/30	ND, RDL=0.20		ug/L	
			1,1,2-Trichloroethane	2016/05/30	ND, RDL=0.50		ug/L	
			Trichloroethylene	2016/05/30	ND, RDL=0.20		ug/L	
			Trichlorofluoromethane (FREON 11)	2016/05/30	ND, RDL=0.50		ug/L	
			Vinyl Chloride	2016/05/30	ND, RDL=0.20		ug/L	
			p+m-Xylene	2016/05/30	ND, RDL=0.20		ug/L	
			o-Xylene	2016/05/30	ND, RDL=0.20		ug/L	
			Total Xylenes	2016/05/30	ND, RDL=0.20		ug/L	
4516635	KH2	RPD [CKV222-07]	Acetone (2-Propanone)	2016/05/30	NC		%	30
			Benzene	2016/05/30	NC		%	30
			Bromodichloromethane	2016/05/30	NC		%	30
			Bromoform	2016/05/30	NC		%	30
			Bromomethane	2016/05/30	NC		%	30
			Carbon Tetrachloride	2016/05/30	NC		%	30
			Chlorobenzene	2016/05/30	NC		%	30
			Chloroform	2016/05/30	NC		%	30
			Dibromochloromethane	2016/05/30	NC		%	30
			1,2-Dichlorobenzene	2016/05/30	NC		%	30
			1,3-Dichlorobenzene	2016/05/30	NC		%	30
			1,4-Dichlorobenzene	2016/05/30	NC		%	30
			Dichlorodifluoromethane (FREON 12)	2016/05/30	NC		%	30
			1,1-Dichloroethane	2016/05/30	NC		%	30
			1,2-Dichloroethane	2016/05/30	NC		%	30
			1,1-Dichloroethylene	2016/05/30	NC		%	30
			cis-1,2-Dichloroethylene	2016/05/30	NC		%	30
			trans-1,2-Dichloroethylene	2016/05/30	NC		%	30
			1,2-Dichloropropane	2016/05/30	NC		%	30

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC	Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
				cis-1,3-Dichloropropene	2016/05/30	NC		%	30
				trans-1,3-Dichloropropene	2016/05/30	NC		%	30
				Ethylbenzene	2016/05/30	NC		%	30
				Ethylene Dibromide	2016/05/30	NC		%	30
				Hexane	2016/05/30	NC		%	30
				Methylene Chloride(Dichloromethane)	2016/05/30	NC		%	30
				Methyl Ethyl Ketone (2-Butanone)	2016/05/30	NC		%	30
				Methyl Isobutyl Ketone	2016/05/30	NC		%	30
				Methyl t-butyl ether (MTBE)	2016/05/30	NC		%	30
				Styrene	2016/05/30	NC		%	30
				1,1,1,2-Tetrachloroethane	2016/05/30	NC		%	30
				1,1,2,2-Tetrachloroethane	2016/05/30	NC		%	30
				Tetrachloroethylene	2016/05/30	NC		%	30
				Toluene	2016/05/30	NC		%	30
				1,1,1-Trichloroethane	2016/05/30	NC		%	30
				1,1,2-Trichloroethane	2016/05/30	NC		%	30
				Trichloroethylene	2016/05/30	NC		%	30
				Trichlorofluoromethane (FREON 11)	2016/05/30	NC		%	30
				Vinyl Chloride	2016/05/30	NC		%	30
				p+m-Xylene	2016/05/30	NC		%	30
				o-Xylene	2016/05/30	NC		%	30
				Total Xylenes	2016/05/30	NC		%	30
4518124	DRM		Matrix Spike	Dissolved Chloride (Cl)	2016/05/31		NC	%	80 - 120
4518124	DRM		Spiked Blank	Dissolved Chloride (Cl)	2016/05/31		102	%	80 - 120
4518124	DRM		Method Blank	Dissolved Chloride (Cl)	2016/05/31	ND, RDL=1.0		mg/L	
4518124	DRM		RPD	Dissolved Chloride (Cl)	2016/05/31	1.0		%	20
4518905	MC		Matrix Spike	Mercury (Hg)	2016/06/02		103	%	75 - 125
4518905	MC		Spiked Blank	Mercury (Hg)	2016/06/02		102	%	80 - 120
4518905	MC		Method Blank	Mercury (Hg)	2016/06/02	ND, RDL=0.1		ug/L	
4518905	MC		RPD	Mercury (Hg)	2016/06/02	NC		%	20
4519452	PBA		Matrix Spike	Dissolved Antimony (Sb)	2016/06/01		112	%	80 - 120
				Dissolved Arsenic (As)	2016/06/01		106	%	80 - 120
				Dissolved Barium (Ba)	2016/06/01		110	%	80 - 120
				Dissolved Beryllium (Be)	2016/06/01		112	%	80 - 120
				Dissolved Boron (B)	2016/06/01		112	%	80 - 120
				Dissolved Cadmium (Cd)	2016/06/01		111	%	80 - 120
				Dissolved Chromium (Cr)	2016/06/01		107	%	80 - 120
				Dissolved Cobalt (Co)	2016/06/01		107	%	80 - 120
				Dissolved Copper (Cu)	2016/06/01		105	%	80 - 120
				Dissolved Lead (Pb)	2016/06/01		108	%	80 - 120
				Dissolved Molybdenum (Mo)	2016/06/01		114	%	80 - 120
				Dissolved Nickel (Ni)	2016/06/01		106	%	80 - 120
				Dissolved Selenium (Se)	2016/06/01		110	%	80 - 120
				Dissolved Silver (Ag)	2016/06/01		110	%	80 - 120
				Dissolved Sodium (Na)	2016/06/01		105	%	80 - 120
				Dissolved Thallium (Tl)	2016/06/01		109	%	80 - 120
				Dissolved Uranium (U)	2016/06/01		107	%	80 - 120
				Dissolved Vanadium (V)	2016/06/01		110	%	80 - 120
				Dissolved Zinc (Zn)	2016/06/01		NC	%	80 - 120

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
4519452	PBA	Spiked Blank	Dissolved Antimony (Sb)	2016/06/01		107	%	80 - 120
			Dissolved Arsenic (As)	2016/06/01		99	%	80 - 120
			Dissolved Barium (Ba)	2016/06/01		102	%	80 - 120
			Dissolved Beryllium (Be)	2016/06/01		107	%	80 - 120
			Dissolved Boron (B)	2016/06/01		108	%	80 - 120
			Dissolved Cadmium (Cd)	2016/06/01		104	%	80 - 120
			Dissolved Chromium (Cr)	2016/06/01		104	%	80 - 120
			Dissolved Cobalt (Co)	2016/06/01		103	%	80 - 120
			Dissolved Copper (Cu)	2016/06/01		101	%	80 - 120
			Dissolved Lead (Pb)	2016/06/01		101	%	80 - 120
			Dissolved Molybdenum (Mo)	2016/06/01		107	%	80 - 120
			Dissolved Nickel (Ni)	2016/06/01		103	%	80 - 120
			Dissolved Selenium (Se)	2016/06/01		105	%	80 - 120
			Dissolved Silver (Ag)	2016/06/01		103	%	80 - 120
			Dissolved Sodium (Na)	2016/06/01		104	%	80 - 120
			Dissolved Thallium (Tl)	2016/06/01		101	%	80 - 120
			Dissolved Uranium (U)	2016/06/01		101	%	80 - 120
			Dissolved Vanadium (V)	2016/06/01		105	%	80 - 120
			Dissolved Zinc (Zn)	2016/06/01		102	%	80 - 120
4519452	PBA	Method Blank	Dissolved Antimony (Sb)	2016/06/01	ND, RDL=0.50		ug/L	
			Dissolved Arsenic (As)	2016/06/01	ND, RDL=1.0		ug/L	
			Dissolved Barium (Ba)	2016/06/01	ND, RDL=2.0		ug/L	
			Dissolved Beryllium (Be)	2016/06/01	ND, RDL=0.50		ug/L	
			Dissolved Boron (B)	2016/06/01	ND, RDL=10		ug/L	
			Dissolved Cadmium (Cd)	2016/06/01	ND, RDL=0.10		ug/L	
			Dissolved Chromium (Cr)	2016/06/01	ND, RDL=5.0		ug/L	
			Dissolved Cobalt (Co)	2016/06/01	ND, RDL=0.50		ug/L	
			Dissolved Copper (Cu)	2016/06/01	ND, RDL=1.0		ug/L	
			Dissolved Lead (Pb)	2016/06/01	ND, RDL=0.50		ug/L	
			Dissolved Molybdenum (Mo)	2016/06/01	ND, RDL=0.50		ug/L	
			Dissolved Nickel (Ni)	2016/06/01	ND, RDL=1.0		ug/L	
			Dissolved Selenium (Se)	2016/06/01	ND, RDL=2.0		ug/L	
			Dissolved Silver (Ag)	2016/06/01	ND, RDL=0.10		ug/L	
			Dissolved Sodium (Na)	2016/06/01	ND, RDL=100		ug/L	

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC	Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
				Dissolved Thallium (Tl)	2016/06/01	ND, RDL=0.050		ug/L	
				Dissolved Uranium (U)	2016/06/01	ND, RDL=0.10		ug/L	
				Dissolved Vanadium (V)	2016/06/01	ND, RDL=0.50		ug/L	
				Dissolved Zinc (Zn)	2016/06/01	ND, RDL=5.0		ug/L	
4520303	H_W		Matrix Spike	1,4-Difluorobenzene	2016/06/01		98	%	70 - 130
				4-Bromofluorobenzene	2016/06/01		102	%	70 - 130
				D10-Ethylbenzene	2016/06/01		100	%	70 - 130
				D4-1,2-Dichloroethane	2016/06/01		97	%	70 - 130
				F1 (C6-C10)	2016/06/01		94	%	70 - 130
4520303	H_W		Spiked Blank	1,4-Difluorobenzene	2016/06/01		100	%	70 - 130
				4-Bromofluorobenzene	2016/06/01		104	%	70 - 130
				D10-Ethylbenzene	2016/06/01		112	%	70 - 130
				D4-1,2-Dichloroethane	2016/06/01		97	%	70 - 130
				F1 (C6-C10)	2016/06/01		95	%	70 - 130
4520303	H_W		Method Blank	1,4-Difluorobenzene	2016/06/01		100	%	70 - 130
				4-Bromofluorobenzene	2016/06/01		101	%	70 - 130
				D10-Ethylbenzene	2016/06/01		99	%	70 - 130
				D4-1,2-Dichloroethane	2016/06/01		94	%	70 - 130
				F1 (C6-C10)	2016/06/01	ND, RDL=25		ug/L	
				F1 (C6-C10) - BTEX	2016/06/01	ND, RDL=25		ug/L	
4520303	H_W		RPD	F1 (C6-C10)	2016/06/01	NC		%	30
				F1 (C6-C10) - BTEX	2016/06/01	NC		%	30
4520376	MC		Matrix Spike [CKV220-05]	Mercury (Hg)	2016/06/02		94	%	75 - 125
4520376	MC		Spiked Blank	Mercury (Hg)	2016/06/02		108	%	80 - 120
4520376	MC		Method Blank	Mercury (Hg)	2016/06/02	ND, RDL=0.1		ug/L	
4520376	MC		RPD [CKV220-05]	Mercury (Hg)	2016/06/02	NC		%	20
4520648	JET		Matrix Spike	D10-Anthracene	2016/06/01		101	%	50 - 130
				D14-Terphenyl (FS)	2016/06/01		98	%	50 - 130
				D8-Acenaphthylene	2016/06/01		99	%	50 - 130
				Acenaphthene	2016/06/01		110	%	50 - 130
				Acenaphthylene	2016/06/01		110	%	50 - 130
				Anthracene	2016/06/01		111	%	50 - 130
				Benzo(a)anthracene	2016/06/01		118	%	50 - 130
				Benzo(a)pyrene	2016/06/01		120	%	50 - 130
				Benzo(b/j)fluoranthene	2016/06/01		120	%	50 - 130
				Benzo(g,h,i)perylene	2016/06/01		115	%	50 - 130
				Benzo(k)fluoranthene	2016/06/01		118	%	50 - 130
				Chrysene	2016/06/01		116	%	50 - 130
				Dibenz(a,h)anthracene	2016/06/01		110	%	50 - 130
				Fluoranthene	2016/06/01		121	%	50 - 130
				Fluorene	2016/06/01		113	%	50 - 130
				Indeno(1,2,3-cd)pyrene	2016/06/01		125	%	50 - 130
				1-Methylnaphthalene	2016/06/01		103	%	50 - 130

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC	Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
4520648	JET	Spiked Blank		2-Methylnaphthalene	2016/06/01		102	%	50 - 130
				Naphthalene	2016/06/01		97	%	50 - 130
				Phenanthrene	2016/06/01		110	%	50 - 130
				Pyrene	2016/06/01		120	%	50 - 130
				D10-Anthracene	2016/06/02		104	%	50 - 130
				D14-Terphenyl (FS)	2016/06/02		102	%	50 - 130
				D8-Acenaphthylene	2016/06/02		99	%	50 - 130
				Acenaphthene	2016/06/02		110	%	50 - 130
				Acenaphthylene	2016/06/02		110	%	50 - 130
				Anthracene	2016/06/02		112	%	50 - 130
				Benzo(a)anthracene	2016/06/02		116	%	50 - 130
				Benzo(a)pyrene	2016/06/02		119	%	50 - 130
				Benzo(b/j)fluoranthene	2016/06/02		123	%	50 - 130
				Benzo(g,h,i)perylene	2016/06/02		119	%	50 - 130
				Benzo(k)fluoranthene	2016/06/02		121	%	50 - 130
				Chrysene	2016/06/02		117	%	50 - 130
				Dibenz(a,h)anthracene	2016/06/02		108	%	50 - 130
				Fluoranthene	2016/06/02		122	%	50 - 130
				Fluorene	2016/06/02		112	%	50 - 130
				Indeno(1,2,3-cd)pyrene	2016/06/02		128	%	50 - 130
				1-Methylnaphthalene	2016/06/02		102	%	50 - 130
				2-Methylnaphthalene	2016/06/02		100	%	50 - 130
				Naphthalene	2016/06/02		96	%	50 - 130
				Phenanthrene	2016/06/02		111	%	50 - 130
4520648	JET	Method Blank		Pyrene	2016/06/02		120	%	50 - 130
				D10-Anthracene	2016/06/01		105	%	50 - 130
				D14-Terphenyl (FS)	2016/06/01		103	%	50 - 130
				D8-Acenaphthylene	2016/06/01		102	%	50 - 130
				Acenaphthene	2016/06/01	ND, RDL=0.050		ug/L	
				Acenaphthylene	2016/06/01	ND, RDL=0.050		ug/L	
				Anthracene	2016/06/01	ND, RDL=0.050		ug/L	
				Benzo(a)anthracene	2016/06/01	ND, RDL=0.050		ug/L	
				Benzo(a)pyrene	2016/06/01	ND, RDL=0.010		ug/L	
				Benzo(b/j)fluoranthene	2016/06/01	ND, RDL=0.050		ug/L	
				Benzo(g,h,i)perylene	2016/06/01	ND, RDL=0.050		ug/L	
				Benzo(k)fluoranthene	2016/06/01	ND, RDL=0.050		ug/L	
				Chrysene	2016/06/01	ND, RDL=0.050		ug/L	
				Dibenz(a,h)anthracene	2016/06/01	ND, RDL=0.050		ug/L	
				Fluoranthene	2016/06/01	ND, RDL=0.050		ug/L	

Maxxam Job #: B6A7363
Report Date: 2016/06/03

Terrapex Environmental Ltd
Client Project #: CB644.02
Site Location: 121 Hume Street, Collingwood, ON
Your P.O. #: 4700001396
Sampler Initials: PA

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC	Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
4520648	JET	RPD		Fluorene	2016/06/01	ND, RDL=0.050		ug/L	
				Indeno(1,2,3-cd)pyrene	2016/06/01	ND, RDL=0.050		ug/L	
				1-Methylnaphthalene	2016/06/01	ND, RDL=0.050		ug/L	
				2-Methylnaphthalene	2016/06/01	ND, RDL=0.050		ug/L	
				Naphthalene	2016/06/01	ND, RDL=0.050		ug/L	
				Phenanthrene	2016/06/01	ND, RDL=0.030		ug/L	
				Pyrene	2016/06/01	ND, RDL=0.050		ug/L	
				Acenaphthene	2016/06/01	NC		%	30
				Acenaphthylene	2016/06/01	NC		%	30
				Anthracene	2016/06/01	NC		%	30
				Benzo(a)anthracene	2016/06/01	NC		%	30
				Benzo(a)pyrene	2016/06/01	NC		%	30
				Benzo(b/j)fluoranthene	2016/06/01	NC		%	30
				Benzo(g,h,i)perylene	2016/06/01	NC		%	30
				Benzo(k)fluoranthene	2016/06/01	NC		%	30
				Chrysene	2016/06/01	NC		%	30
				Dibenz(a,h)anthracene	2016/06/01	NC		%	30
				Fluoranthene	2016/06/01	NC		%	30
				Fluorene	2016/06/01	NC		%	30
				Indeno(1,2,3-cd)pyrene	2016/06/01	NC		%	30
4520892	ZZ	Matrix Spike		o-Terphenyl	2016/06/01		99	%	60 - 130
				F2 (C10-C16 Hydrocarbons)	2016/06/01		109	%	50 - 130
				F3 (C16-C34 Hydrocarbons)	2016/06/01		100	%	50 - 130
				F4 (C34-C50 Hydrocarbons)	2016/06/01		100	%	50 - 130
4520892	ZZ	Spiked Blank		o-Terphenyl	2016/06/01		102	%	60 - 130
				F2 (C10-C16 Hydrocarbons)	2016/06/01		113	%	60 - 130
				F3 (C16-C34 Hydrocarbons)	2016/06/01		105	%	60 - 130
				F4 (C34-C50 Hydrocarbons)	2016/06/01		103	%	60 - 130
4520892	ZZ	Method Blank		o-Terphenyl	2016/06/01		97	%	60 - 130
				F2 (C10-C16 Hydrocarbons)	2016/06/01	ND, RDL=100		ug/L	
				F3 (C16-C34 Hydrocarbons)	2016/06/01	ND, RDL=200		ug/L	
				F4 (C34-C50 Hydrocarbons)	2016/06/01	ND, RDL=200		ug/L	
4520892	ZZ	RPD		F2 (C10-C16 Hydrocarbons)	2016/06/02	NC		%	30
				F3 (C16-C34 Hydrocarbons)	2016/06/02	NC		%	30

Maxxam Job #: B6A7363
Report Date: 2016/06/03

Terrapex Environmental Ltd
Client Project #: CB644.02
Site Location: 121 Hume Street, Collingwood, ON
Your P.O. #: 4700001396
Sampler Initials: PA

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC				Date					
Batch	Init	QC Type	Parameter	Analyzed	Value	Recovery	UNITS	QC Limits	
			F4 (C34-C50 Hydrocarbons)	2016/06/02	NC		%	30	
Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement. Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference. Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy. Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination. Surrogate: A pure or isotopically labeled compound whose behavior mirrors the analytes of interest. Used to evaluate extraction efficiency. NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spiked amount was too small to permit a reliable recovery calculation (matrix spike concentration was less than 2x that of the native sample concentration). NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (one or both samples < 5x RDL).									

VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by the following individual(s).

Cristina Carriere

Cristina Carriere, Scientific Services

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

ANALYSIS REQUESTED (PLEASE BE SPECIFIC)Field Filtered (please circle):

Bottles	Comments

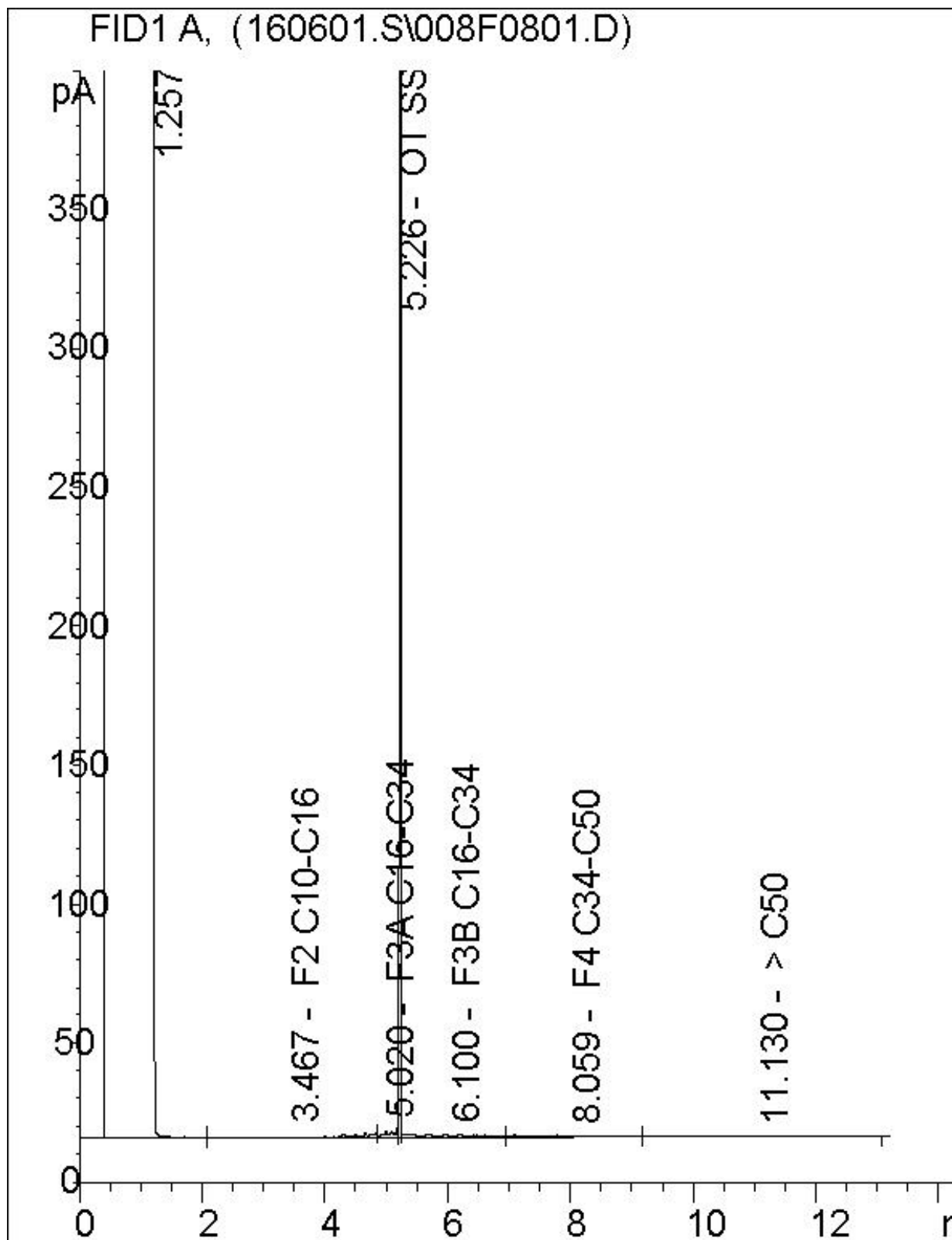
27-May-16 10:23
Marissa Oddi
B6A7201
MK3 ENV-1175

* IT IS THE RESPONSIBILITY OF THE RELINQUISHER TO ENSURE THE ACCURACY OF THE CHAIN OF CUSTODY RECORD. AN INCOMPLETE CHAIN OF CUSTODY MAY RESULT IN ANALYTICAL TAT DELAYS.

SAMPLES MUST BE KEPT COOL ($\leq 10^{\circ}\text{C}$) FROM TIME OF SAMPLING UNTIL DELIVERY TO MAXXAM

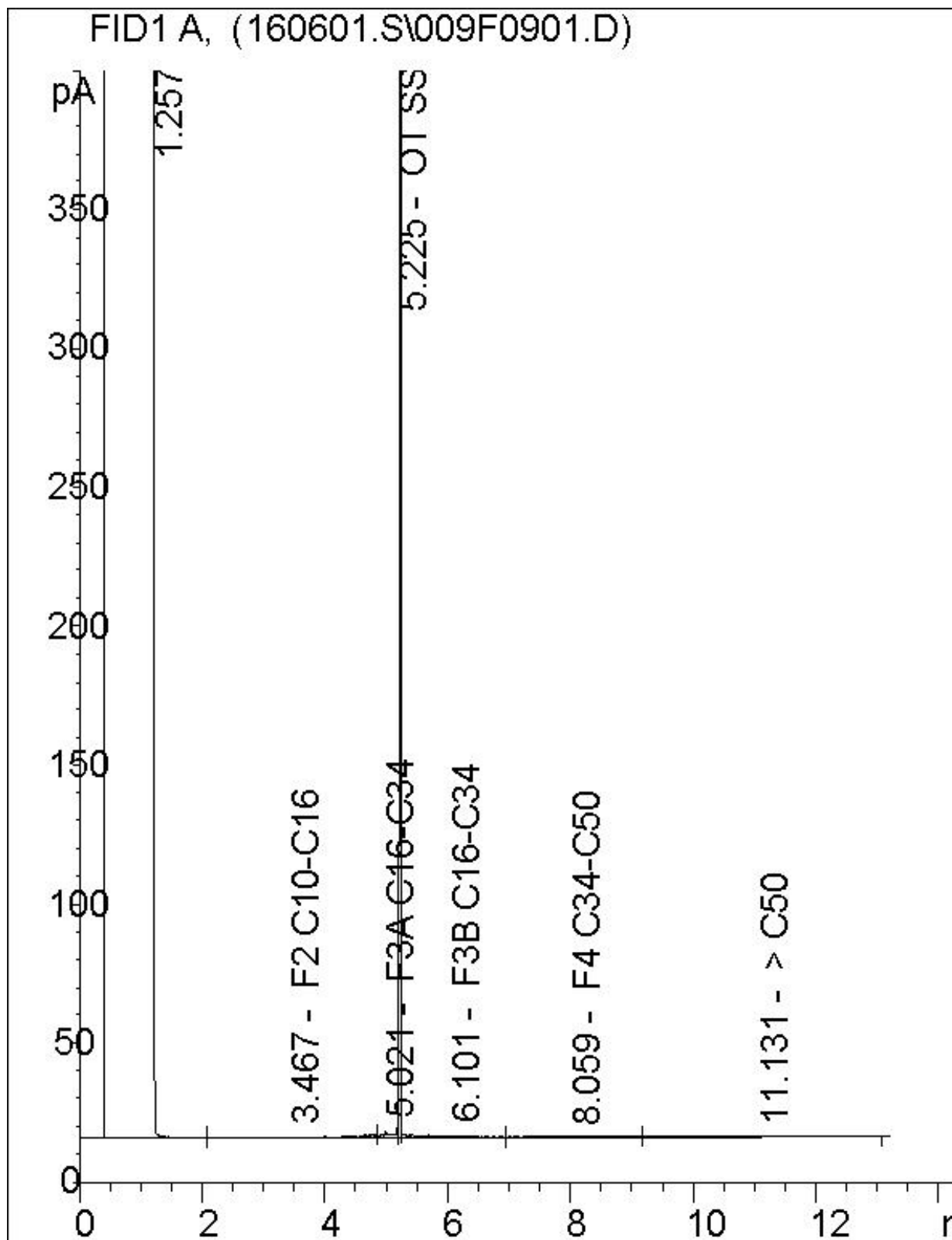
White: Maxxam Yellow: Clier

Petroleum Hydrocarbons F2-F4 in Water Chromatogram



Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Petroleum Hydrocarbons F2-F4 in Water Chromatogram



Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Attention: Jeff Stevenson

Terrapex Environmental Ltd
920 Brant Street
Unit 16
Burlington, ON
CANADA L7R 4J1

Your P.O. #: 4700001396

Your Project #: CB644.02

Site#: 60680

Site Location: 121 Hume Street, Collingwood, ON

Your C.O.C. #: 562385-02-01

Report Date: 2016/06/03

Report #: R4014271

Version: 1 - Final

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B6A7201

Received: 2016/05/27, 10:23

Sample Matrix: Soil
Samples Received: 3

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Reference
Methylnaphthalene Sum	1	N/A	2016/06/02	CAM SOP-00301	EPA 8270D m
Hot Water Extractable Boron	1	2016/05/31	2016/05/31	CAM SOP-00408	R153 Ana. Prot. 2011
1,3-Dichloropropene Sum	1	N/A	2016/06/01		EPA 8260C m
Free (WAD) Cyanide	1	2016/05/31	2016/06/01	CAM SOP-00457	OMOE E3015 m
Conductivity	1	2016/06/02	2016/06/02	CAM SOP-00414	OMOE E3138 v2 m
Hexavalent Chromium in Soil by IC (1)	1	2016/05/31	2016/06/01	CAM SOP-00436	EPA 3060/7199 m
Strong Acid Leachable Metals by ICPMS	1	2016/05/31	2016/06/01	CAM SOP-00447	EPA 6020A m
Moisture	3	N/A	2016/05/31	CAM SOP-00445	Carter 2nd ed 51.2 m
PAH Compounds in Soil by GC/MS (SIM)	1	2016/06/01	2016/06/02	CAM SOP-00318	EPA 8270D m
pH CaCl2 EXTRACT	1	2016/05/30	2016/05/30	CAM SOP-00413	EPA 9045 D m
Sodium Adsorption Ratio (SAR)	1	N/A	2016/06/02	CAM SOP-00102	EPA 6010C
SAR - ICP Metals	1	2016/06/02	2016/06/02	CAM SOP-00408	EPA 6010C m
Volatile Organic Compounds in Soil	1	N/A	2016/05/31	CAM SOP-00228	EPA 8260C m

Sample Matrix: Water
Samples Received: 4

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Reference
Methylnaphthalene Sum	2	N/A	2016/06/02	CAM SOP-00301	EPA 8270D m
1,3-Dichloropropene Sum	3	N/A	2016/05/31		EPA 8260C m
Chloride by Automated Colourimetry	1	N/A	2016/05/30	CAM SOP-00463	EPA 325.2 m
Chromium (VI) in Water	1	N/A	2016/05/31	CAM SOP-00436	EPA 7199 m
Free (WAD) Cyanide	1	N/A	2016/05/30	CAM SOP-00457	OMOE E3015 m
Petroleum Hydro. CCME F1 & BTEX in Water	2	N/A	2016/06/01	CAM SOP-00315	CCME PHC-CWS m
Petroleum Hydrocarbons F2-F4 in Water (2)	2	2016/06/01	2016/06/01	CAM SOP-00316	CCME PHC-CWS m
Mercury	1	2016/06/01	2016/06/01	CAM SOP-00453	EPA 7470A m
Dissolved Metals by ICPMS	1	N/A	2016/05/31	CAM SOP-00447	EPA 6020A m
PAH Compounds in Water by GC/MS (SIM)	1	2016/06/01	2016/06/01	CAM SOP-00318	EPA 8270D m
PAH Compounds in Water by GC/MS (SIM)	1	2016/06/01	2016/06/02	CAM SOP-00318	EPA 8270D m
Volatile Organic Compounds in Water	3	N/A	2016/05/30	CAM SOP-00228	EPA 8260C m

Attention: Jeff Stevenson

Terrapex Environmental Ltd
920 Brant Street
Unit 16
Burlington, ON
CANADA L7R 4J1

Your P.O. #: 4700001396
Your Project #: CB644.02
Site#: 60680
Site Location: 121 Hume Street, Collingwood, ON
Your C.O.C. #: 562385-02-01

Report Date: 2016/06/03
Report #: R4014271
Version: 1 - Final

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B6A7201

Received: 2016/05/27, 10:23

Remarks:

Maxxam Analytics has performed all analytical testing herein in accordance with ISO 17025 and the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act. All methodologies comply with this document and are validated for use in the laboratory. The methods and techniques employed in this analysis conform to the performance criteria (detection limits, accuracy and precision) as outlined in the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act.

Maxxam Analytics is accredited for all specific parameters as required by Ontario Regulation 153/04. Maxxam Analytics is limited in liability to the actual cost of analysis unless otherwise agreed in writing. There is no other warranty expressed or implied. Samples will be retained at Maxxam Analytics for three weeks from receipt of data or as per contract.

Reference Method suffix "m" indicates test methods incorporate validated modifications from specific reference methods to improve performance.

* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.

(1) Soils are reported on a dry weight basis unless otherwise specified.

(2) All CCME PHC results met required criteria unless otherwise stated in the report. The CWS PHC methods employed by Maxxam conform to all prescribed elements of the reference method and performance based elements have been validated. All modifications have been validated and proven equivalent following "Alberta Environment's Interpretation of the Reference Method for the Canada-Wide Standard for Petroleum Hydrocarbons in Soil Validation of Performance-Based Alternative Methods September 2003". Documentation is available upon request. Modifications from Reference Method for the Canada-wide Standard for Petroleum Hydrocarbons in Soil-Tier 1 Method: F2/F3/F4 data reported using validated cold solvent extraction instead of Soxhlet extraction.

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.

Marissa Oddi, Customer Service Representative

Email: moddi@maxxam.ca

Phone# (905) 817-5700

=====

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

O.REG 153 METALS & INORGANICS PKG (SOIL)

Maxxam ID		CKU361		
Sampling Date		2016/05/25 09:00		
COC Number		562385-02-01		
	UNITS	MW401-1	RDL	QC Batch
Calculated Parameters				
Sodium Adsorption Ratio	N/A	0.80		4514989
Inorganics				
Conductivity	mS/cm	0.17	0.002	4521281
Free Cyanide	ug/g	ND	0.01	4518525
Moisture	%	7.1	1.0	4519291
Available (CaCl2) pH	pH	7.92		4517247
Metals				
Soluble Calcium (Ca)	mg/L	17.5	0.5	4521260
Soluble Magnesium (Mg)	mg/L	1.0	0.5	4521260
Soluble Sodium (Na)	mg/L	13	5	4521260
Inorganics				
Chromium (VI)	ug/g	ND	0.2	4518998
Metals				
Hot Water Ext. Boron (B)	ug/g	0.13	0.050	4518796
Acid Extractable Antimony (Sb)	ug/g	ND	0.20	4518764
Acid Extractable Arsenic (As)	ug/g	1.0	1.0	4518764
Acid Extractable Barium (Ba)	ug/g	4.8	0.50	4518764
Acid Extractable Beryllium (Be)	ug/g	ND	0.20	4518764
Acid Extractable Boron (B)	ug/g	ND	5.0	4518764
Acid Extractable Cadmium (Cd)	ug/g	ND	0.10	4518764
Acid Extractable Chromium (Cr)	ug/g	4.2	1.0	4518764
Acid Extractable Cobalt (Co)	ug/g	1.0	0.10	4518764
Acid Extractable Copper (Cu)	ug/g	1.4	0.50	4518764
Acid Extractable Lead (Pb)	ug/g	3.2	1.0	4518764
Acid Extractable Molybdenum (Mo)	ug/g	ND	0.50	4518764
Acid Extractable Nickel (Ni)	ug/g	2.1	0.50	4518764
Acid Extractable Selenium (Se)	ug/g	ND	0.50	4518764
Acid Extractable Silver (Ag)	ug/g	ND	0.20	4518764
Acid Extractable Thallium (Tl)	ug/g	ND	0.050	4518764
Acid Extractable Uranium (U)	ug/g	0.20	0.050	4518764
Acid Extractable Vanadium (V)	ug/g	6.5	5.0	4518764
Acid Extractable Zinc (Zn)	ug/g	7.6	5.0	4518764
RDL = Reportable Detection Limit				
QC Batch = Quality Control Batch				
ND = Not detected				

Maxxam Job #: B6A7201
Report Date: 2016/06/03

Terrapex Environmental Ltd
Client Project #: CB644.02
Site Location: 121 Hume Street, Collingwood, ON
Your P.O. #: 4700001396
Sampler Initials: PA

O.REG 153 METALS & INORGANICS PKG (SOIL)

Maxxam ID		CKU361		
Sampling Date		2016/05/25 09:00		
COC Number		562385-02-01		
	UNITS	MW401-1	RDL	QC Batch
Acid Extractable Mercury (Hg)	ug/g	ND	0.050	4518764
RDL = Reportable Detection Limit QC Batch = Quality Control Batch ND = Not detected				

O.REG 153 PAHS (SOIL)

Maxxam ID		CKU362		
Sampling Date		2016/05/25 09:10		
COC Number		562385-02-01		
	UNITS	MW401-2B	RDL	QC Batch
Inorganics				
Moisture	%	27	1.0	4518935
Calculated Parameters				
Methylnaphthalene, 2-(1-)	ug/g	ND	0.0071	4515021
Polyaromatic Hydrocarbons				
Acenaphthene	ug/g	ND	0.0050	4521902
Acenaphthylene	ug/g	ND	0.0050	4521902
Anthracene	ug/g	ND	0.0050	4521902
Benzo(a)anthracene	ug/g	ND	0.0050	4521902
Benzo(a)pyrene	ug/g	ND	0.0050	4521902
Benzo(b/j)fluoranthene	ug/g	ND	0.0050	4521902
Benzo(g,h,i)perylene	ug/g	ND	0.0050	4521902
Benzo(k)fluoranthene	ug/g	ND	0.0050	4521902
Chrysene	ug/g	ND	0.0050	4521902
Dibenz(a,h)anthracene	ug/g	ND	0.0050	4521902
Fluoranthene	ug/g	ND	0.0050	4521902
Fluorene	ug/g	ND	0.0050	4521902
Indeno(1,2,3-cd)pyrene	ug/g	ND	0.0050	4521902
1-Methylnaphthalene	ug/g	ND	0.0050	4521902
2-Methylnaphthalene	ug/g	ND	0.0050	4521902
Naphthalene	ug/g	ND	0.0050	4521902
Phenanthrene	ug/g	ND	0.0050	4521902
Pyrene	ug/g	ND	0.0050	4521902
Surrogate Recovery (%)				
D10-Anthracene	%	75		4521902
D14-Terphenyl (FS)	%	78		4521902
D8-Acenaphthylene	%	82		4521902
RDL = Reportable Detection Limit QC Batch = Quality Control Batch ND = Not detected				

O.REG 153 VOLATILE ORGANICS (SOIL)

Maxxam ID		CKU363		
Sampling Date		2016/05/25 09:20		
COC Number		562385-02-01		
	UNITS	MW401-3	RDL	QC Batch
Inorganics				
Moisture	%	9.1	1.0	4519291
Calculated Parameters				
1,3-Dichloropropene (cis+trans)	ug/g	ND	0.050	4514369
Volatile Organics				
Acetone (2-Propanone)	ug/g	ND	0.50	4517528
Benzene	ug/g	ND	0.020	4517528
Bromodichloromethane	ug/g	ND	0.050	4517528
Bromoform	ug/g	ND	0.050	4517528
Bromomethane	ug/g	ND	0.050	4517528
Carbon Tetrachloride	ug/g	ND	0.050	4517528
Chlorobenzene	ug/g	ND	0.050	4517528
Chloroform	ug/g	ND	0.050	4517528
Dibromochloromethane	ug/g	ND	0.050	4517528
1,2-Dichlorobenzene	ug/g	ND	0.050	4517528
1,3-Dichlorobenzene	ug/g	ND	0.050	4517528
1,4-Dichlorobenzene	ug/g	ND	0.050	4517528
Dichlorodifluoromethane (FREON 12)	ug/g	ND	0.050	4517528
1,1-Dichloroethane	ug/g	ND	0.050	4517528
1,2-Dichloroethane	ug/g	ND	0.050	4517528
1,1-Dichloroethylene	ug/g	ND	0.050	4517528
cis-1,2-Dichloroethylene	ug/g	ND	0.050	4517528
trans-1,2-Dichloroethylene	ug/g	ND	0.050	4517528
1,2-Dichloropropane	ug/g	ND	0.050	4517528
cis-1,3-Dichloropropene	ug/g	ND	0.030	4517528
trans-1,3-Dichloropropene	ug/g	ND	0.040	4517528
Ethylbenzene	ug/g	ND	0.020	4517528
Ethylene Dibromide	ug/g	ND	0.050	4517528
Hexane	ug/g	ND	0.050	4517528
Methylene Chloride(Dichloromethane)	ug/g	ND	0.050	4517528
Methyl Ethyl Ketone (2-Butanone)	ug/g	ND	0.50	4517528
Methyl Isobutyl Ketone	ug/g	ND	0.50	4517528
Methyl t-butyl ether (MTBE)	ug/g	ND	0.050	4517528
RDL = Reportable Detection Limit				
QC Batch = Quality Control Batch				
ND = Not detected				

O.REG 153 VOLATILE ORGANICS (SOIL)

Maxxam ID		CKU363		
Sampling Date		2016/05/25 09:20		
COC Number		562385-02-01		
	UNITS	MW401-3	RDL	QC Batch
Styrene	ug/g	ND	0.050	4517528
1,1,1,2-Tetrachloroethane	ug/g	ND	0.050	4517528
1,1,2,2-Tetrachloroethane	ug/g	ND	0.050	4517528
Tetrachloroethylene	ug/g	ND	0.050	4517528
Toluene	ug/g	ND	0.020	4517528
1,1,1-Trichloroethane	ug/g	ND	0.050	4517528
1,1,2-Trichloroethane	ug/g	ND	0.050	4517528
Trichloroethylene	ug/g	ND	0.050	4517528
Trichlorofluoromethane (FREON 11)	ug/g	ND	0.050	4517528
Vinyl Chloride	ug/g	ND	0.020	4517528
p+m-Xylene	ug/g	ND	0.020	4517528
o-Xylene	ug/g	ND	0.020	4517528
Total Xylenes	ug/g	ND	0.020	4517528
Surrogate Recovery (%)				
4-Bromofluorobenzene	%	95		4517528
D10-o-Xylene	%	95		4517528
D4-1,2-Dichloroethane	%	110		4517528
D8-Toluene	%	97		4517528
RDL = Reportable Detection Limit				
QC Batch = Quality Control Batch				
ND = Not detected				

O.REG 153 METALS & INORGANICS PKG (WTR)

Maxxam ID		CKU366	CKU366		
Sampling Date		2016/05/26 11:30	2016/05/26 11:30		
COC Number		562385-02-01	562385-02-01		
	UNITS	MW401	MW401 Lab-Dup	RDL	QC Batch
Inorganics					
Free Cyanide	ug/L	ND		2	4516392
Dissolved Chloride (Cl)	mg/L	260		3.0	4516483
Metals					
Chromium (VI)	ug/L	ND		0.50	4516402
Mercury (Hg)	ug/L	ND		0.1	4520139
Dissolved Antimony (Sb)	ug/L	2.1	2.1	0.50	4517716
Dissolved Arsenic (As)	ug/L	ND	ND	1.0	4517716
Dissolved Barium (Ba)	ug/L	86	85	2.0	4517716
Dissolved Beryllium (Be)	ug/L	ND	ND	0.50	4517716
Dissolved Boron (B)	ug/L	51	54	10	4517716
Dissolved Cadmium (Cd)	ug/L	ND	ND	0.10	4517716
Dissolved Chromium (Cr)	ug/L	ND	ND	5.0	4517716
Dissolved Cobalt (Co)	ug/L	ND	ND	0.50	4517716
Dissolved Copper (Cu)	ug/L	1.2	1.2	1.0	4517716
Dissolved Lead (Pb)	ug/L	ND	ND	0.50	4517716
Dissolved Molybdenum (Mo)	ug/L	8.2	8.2	0.50	4517716
Dissolved Nickel (Ni)	ug/L	ND	ND	1.0	4517716
Dissolved Selenium (Se)	ug/L	ND	ND	2.0	4517716
Dissolved Silver (Ag)	ug/L	ND	ND	0.10	4517716
Dissolved Sodium (Na)	ug/L	120000	120000	100	4517716
Dissolved Thallium (Tl)	ug/L	ND	ND	0.050	4517716
Dissolved Uranium (U)	ug/L	2.7	2.8	0.10	4517716
Dissolved Vanadium (V)	ug/L	1.5	1.4	0.50	4517716
Dissolved Zinc (Zn)	ug/L	11	11	5.0	4517716
RDL = Reportable Detection Limit QC Batch = Quality Control Batch Lab-Dup = Laboratory Initiated Duplicate ND = Not detected					

O.REG 153 PAHS (WATER)

Maxxam ID		CKU364	CKU364	CKU366		
Sampling Date		2016/05/26 11:00	2016/05/26 11:00	2016/05/26 11:30		
COC Number		562385-02-01	562385-02-01	562385-02-01		
	UNITS	MW203	MW203 Lab-Dup	MW401	RDL	QC Batch
Calculated Parameters						
Methylnaphthalene, 2-(1-)	ug/L	ND		ND	0.071	4515022
Polyaromatic Hydrocarbons						
Acenaphthene	ug/L	ND	ND	ND	0.050	4520648
Acenaphthylene	ug/L	ND	ND	ND	0.050	4520648
Anthracene	ug/L	ND	ND	ND	0.050	4520648
Benzo(a)anthracene	ug/L	ND	ND	ND	0.050	4520648
Benzo(a)pyrene	ug/L	ND	ND	0.019	0.010	4520648
Benzo(b/j)fluoranthene	ug/L	ND	ND	ND	0.050	4520648
Benzo(g,h,i)perylene	ug/L	ND	ND	ND	0.050	4520648
Benzo(k)fluoranthene	ug/L	ND	ND	ND	0.050	4520648
Chrysene	ug/L	ND	ND	ND	0.050	4520648
Dibenz(a,h)anthracene	ug/L	ND	ND	ND	0.050	4520648
Fluoranthene	ug/L	ND	ND	ND	0.050	4520648
Fluorene	ug/L	ND	ND	ND	0.050	4520648
Indeno(1,2,3-cd)pyrene	ug/L	ND	ND	ND	0.050	4520648
1-Methylnaphthalene	ug/L	ND	ND	ND	0.050	4520648
2-Methylnaphthalene	ug/L	ND	ND	ND	0.050	4520648
Naphthalene	ug/L	ND	ND	ND	0.050	4520648
Phenanthrene	ug/L	ND	ND	ND	0.030	4520648
Pyrene	ug/L	ND	ND	ND	0.050	4520648
Surrogate Recovery (%)						
D10-Anthracene	%	101	104	101		4520648
D14-Terphenyl (FS)	%	96	99	97		4520648
D8-Acenaphthylene	%	100	103	97		4520648
RDL = Reportable Detection Limit QC Batch = Quality Control Batch Lab-Dup = Laboratory Initiated Duplicate ND = Not detected						

O.REG 153 PETROLEUM HYDROCARBONS (WATER)

Maxxam ID		CKU365	CKU365	CKU366		
Sampling Date		2016/05/26 10:30	2016/05/26 10:30	2016/05/26 11:30		
COC Number		562385-02-01	562385-02-01	562385-02-01		
	UNITS	MW402	MW402 Lab-Dup	MW401	RDL	QC Batch
BTEX & F1 Hydrocarbons						
F1 (C6-C10)	ug/L	ND	ND	ND	25	4520008
F1 (C6-C10) - BTEX	ug/L	ND	ND	ND	25	4520008
F2-F4 Hydrocarbons						
F2 (C10-C16 Hydrocarbons)	ug/L	ND		ND	100	4520892
F3 (C16-C34 Hydrocarbons)	ug/L	ND		ND	200	4520892
F4 (C34-C50 Hydrocarbons)	ug/L	ND		ND	200	4520892
Reached Baseline at C50	ug/L	Yes		Yes		4520892
Surrogate Recovery (%)						
1,4-Difluorobenzene	%	98	101	97		4520008
4-Bromofluorobenzene	%	98	99	97		4520008
D10-Ethylbenzene	%	97	96	96		4520008
D4-1,2-Dichloroethane	%	103	103	104		4520008
o-Terphenyl	%	98		96		4520892
RDL = Reportable Detection Limit QC Batch = Quality Control Batch Lab-Dup = Laboratory Initiated Duplicate ND = Not detected						

O.REG 153 VOLATILE ORGANICS (WATER)

Maxxam ID		CKU365	CKU366	CKU367		
Sampling Date		2016/05/26 10:30	2016/05/26 11:30	2016/05/26 11:30		
COC Number		562385-02-01	562385-02-01	562385-02-01		
	UNITS	MW402	MW401	MW2000	RDL	QC Batch
Calculated Parameters						
1,3-Dichloropropene (cis+trans)	ug/L	ND	ND	ND	0.50	4515032
Volatile Organics						
Acetone (2-Propanone)	ug/L	ND	ND	ND	10	4516620
Benzene	ug/L	0.25	0.57	0.60	0.20	4516620
Bromodichloromethane	ug/L	ND	ND	ND	0.50	4516620
Bromoform	ug/L	ND	ND	ND	1.0	4516620
Bromomethane	ug/L	ND	ND	ND	0.50	4516620
Carbon Tetrachloride	ug/L	ND	ND	ND	0.20	4516620
Chlorobenzene	ug/L	ND	ND	ND	0.20	4516620
Chloroform	ug/L	ND	ND	ND	0.20	4516620
Dibromochloromethane	ug/L	ND	ND	ND	0.50	4516620
1,2-Dichlorobenzene	ug/L	ND	ND	ND	0.50	4516620
1,3-Dichlorobenzene	ug/L	ND	ND	ND	0.50	4516620
1,4-Dichlorobenzene	ug/L	ND	ND	ND	0.50	4516620
Dichlorodifluoromethane (FREON 12)	ug/L	ND	ND	ND	1.0	4516620
1,1-Dichloroethane	ug/L	ND	ND	ND	0.20	4516620
1,2-Dichloroethane	ug/L	ND	ND	ND	0.50	4516620
1,1-Dichloroethylene	ug/L	ND	ND	ND	0.20	4516620
cis-1,2-Dichloroethylene	ug/L	ND	ND	ND	0.50	4516620
trans-1,2-Dichloroethylene	ug/L	ND	ND	ND	0.50	4516620
1,2-Dichloropropane	ug/L	ND	ND	ND	0.20	4516620
cis-1,3-Dichloropropene	ug/L	ND	ND	ND	0.30	4516620
trans-1,3-Dichloropropene	ug/L	ND	ND	ND	0.40	4516620
Ethylbenzene	ug/L	0.27	ND	ND	0.20	4516620
Ethylene Dibromide	ug/L	ND	ND	ND	0.20	4516620
Hexane	ug/L	ND	ND	ND	1.0	4516620
Methylene Chloride(Dichloromethane)	ug/L	ND	ND	ND	2.0	4516620
Methyl Ethyl Ketone (2-Butanone)	ug/L	ND	ND	ND	10	4516620
Methyl Isobutyl Ketone	ug/L	ND	ND	ND	5.0	4516620
Methyl t-butyl ether (MTBE)	ug/L	ND	ND	ND	0.50	4516620
Styrene	ug/L	ND	ND	ND	0.50	4516620
1,1,1,2-Tetrachloroethane	ug/L	ND	ND	ND	0.50	4516620
RDL = Reportable Detection Limit						
QC Batch = Quality Control Batch						
ND = Not detected						

O.REG 153 VOLATILE ORGANICS (WATER)

Maxxam ID		CKU365	CKU366	CKU367		
Sampling Date		2016/05/26 10:30	2016/05/26 11:30	2016/05/26 11:30		
COC Number		562385-02-01	562385-02-01	562385-02-01		
	UNITS	MW402	MW401	MW2000	RDL	QC Batch
1,1,2,2-Tetrachloroethane	ug/L	ND	ND	ND	0.50	4516620
Tetrachloroethylene	ug/L	ND	ND	ND	0.20	4516620
Toluene	ug/L	0.39	0.69	0.69	0.20	4516620
1,1,1-Trichloroethane	ug/L	ND	ND	ND	0.20	4516620
1,1,2-Trichloroethane	ug/L	ND	ND	ND	0.50	4516620
Trichloroethylene	ug/L	ND	ND	ND	0.20	4516620
Trichlorofluoromethane (FREON 11)	ug/L	ND	ND	ND	0.50	4516620
Vinyl Chloride	ug/L	ND	ND	ND	0.20	4516620
p+m-Xylene	ug/L	1.0	ND	ND	0.20	4516620
o-Xylene	ug/L	0.72	ND	ND	0.20	4516620
Total Xylenes	ug/L	1.7	ND	ND	0.20	4516620
Surrogate Recovery (%)						
4-Bromofluorobenzene	%	99	99	99		4516620
D4-1,2-Dichloroethane	%	103	103	103		4516620
D8-Toluene	%	98	100	99		4516620
RDL = Reportable Detection Limit QC Batch = Quality Control Batch ND = Not detected						

Maxxam Job #: B6A7201
Report Date: 2016/06/03

Terrapex Environmental Ltd
Client Project #: CB644.02
Site Location: 121 Hume Street, Collingwood, ON
Your P.O. #: 4700001396
Sampler Initials: PA

TEST SUMMARY

Maxxam ID: CKU361
Sample ID: MW401-1
Matrix: Soil

Collected: 2016/05/25
Shipped:
Received: 2016/05/27

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hot Water Extractable Boron	ICP	4518796	2016/05/31	2016/05/31	Suban Kanapathipplai
Free (WAD) Cyanide	TECH	4518525	2016/05/31	2016/06/01	Christine Pham
Conductivity	AT	4521281	2016/06/02	2016/06/02	Lemeneh Addis
Hexavalent Chromium in Soil by IC	IC/SPEC	4518998	2016/05/31	2016/06/01	Sally Coughlin
Strong Acid Leachable Metals by ICPMS	ICP/MS	4518764	2016/05/31	2016/06/01	Viviana Canzonieri
Moisture	BAL	4519291	N/A	2016/05/31	Shivani Desai
pH CaCl2 EXTRACT	AT	4517247	2016/05/30	2016/05/30	Neil Dassanayake
Sodium Adsorption Ratio (SAR)	CALC/MET	4514989	N/A	2016/06/02	Automated Statchk
SAR - ICP Metals	ICP	4521260	2016/06/02	2016/06/02	Jolly John

Maxxam ID: CKU362
Sample ID: MW401-2B
Matrix: Soil

Collected: 2016/05/25
Shipped:
Received: 2016/05/27

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	4515021	N/A	2016/06/02	Automated Statchk
Moisture	BAL	4518935	N/A	2016/05/31	Shivani Desai
PAH Compounds in Soil by GC/MS (SIM)	GC/MS	4521902	2016/06/01	2016/06/02	Jett Wu

Maxxam ID: CKU363
Sample ID: MW401-3
Matrix: Soil

Collected: 2016/05/25
Shipped:
Received: 2016/05/27

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
1,3-Dichloropropene Sum	CALC	4514369	N/A	2016/06/01	Automated Statchk
Moisture	BAL	4519291	N/A	2016/05/31	Shivani Desai
Volatile Organic Compounds in Soil	GC/MS	4517528	N/A	2016/05/31	Xueming Jiang

Maxxam ID: CKU364
Sample ID: MW203
Matrix: Water

Collected: 2016/05/26
Shipped:
Received: 2016/05/27

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	4515022	N/A	2016/06/02	Automated Statchk
PAH Compounds in Water by GC/MS (SIM)	GC/MS	4520648	2016/06/01	2016/06/01	Jett Wu

Maxxam ID: CKU364 Dup
Sample ID: MW203
Matrix: Water

Collected: 2016/05/26
Shipped:
Received: 2016/05/27

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
PAH Compounds in Water by GC/MS (SIM)	GC/MS	4520648	2016/06/01	2016/06/01	Jett Wu

Maxxam Job #: B6A7201
Report Date: 2016/06/03

Terrapex Environmental Ltd
Client Project #: CB644.02
Site Location: 121 Hume Street, Collingwood, ON
Your P.O. #: 4700001396
Sampler Initials: PA

TEST SUMMARY

Maxxam ID: CKU365
Sample ID: MW402
Matrix: Water

Collected: 2016/05/26
Shipped:
Received: 2016/05/27

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
1,3-Dichloropropene Sum	CALC	4515032	N/A	2016/05/31	Automated Statchk
Petroleum Hydro. CCME F1 & BTEX in Water	HSGC/MSFD	4520008	N/A	2016/06/01	Ravinder Gaidhu
Petroleum Hydrocarbons F2-F4 in Water	GC/FID	4520892	2016/06/01	2016/06/01	Zhiyue (Frank) Zhu
Volatile Organic Compounds in Water	GC/MS	4516620	N/A	2016/05/30	Blair Gannon

Maxxam ID: CKU365 Dup
Sample ID: MW402
Matrix: Water

Collected: 2016/05/26
Shipped:
Received: 2016/05/27

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Petroleum Hydro. CCME F1 & BTEX in Water	HSGC/MSFD	4520008	N/A	2016/06/01	Ravinder Gaidhu

Maxxam ID: CKU366
Sample ID: MW401
Matrix: Water

Collected: 2016/05/26
Shipped:
Received: 2016/05/27

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	4515022	N/A	2016/06/02	Automated Statchk
1,3-Dichloropropene Sum	CALC	4515032	N/A	2016/05/31	Automated Statchk
Chloride by Automated Colourimetry	KONE	4516483	N/A	2016/05/30	Deonarine Ramnarine
Chromium (VI) in Water	IC	4516402	N/A	2016/05/31	Sally Coughlin
Free (WAD) Cyanide	TECH/CN	4516392	N/A	2016/05/30	Christine Pham
Petroleum Hydro. CCME F1 & BTEX in Water	HSGC/MSFD	4520008	N/A	2016/06/01	Ravinder Gaidhu
Petroleum Hydrocarbons F2-F4 in Water	GC/FID	4520892	2016/06/01	2016/06/01	Zhiyue (Frank) Zhu
Mercury	CV/AA	4520139	2016/06/01	2016/06/01	Magdalena Carlos
Dissolved Metals by ICPMS	ICP/MS	4517716	N/A	2016/05/31	Arefa Dabhad
PAH Compounds in Water by GC/MS (SIM)	GC/MS	4520648	2016/06/01	2016/06/02	Jett Wu
Volatile Organic Compounds in Water	GC/MS	4516620	N/A	2016/05/30	Blair Gannon

Maxxam ID: CKU366 Dup
Sample ID: MW401
Matrix: Water

Collected: 2016/05/26
Shipped:
Received: 2016/05/27

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Dissolved Metals by ICPMS	ICP/MS	4517716	N/A	2016/05/31	Arefa Dabhad

Maxxam ID: CKU367
Sample ID: MW2000
Matrix: Water

Collected: 2016/05/26
Shipped:
Received: 2016/05/27

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
1,3-Dichloropropene Sum	CALC	4515032	N/A	2016/05/31	Automated Statchk
Volatile Organic Compounds in Water	GC/MS	4516620	N/A	2016/05/30	Blair Gannon

Maxxam Job #: B6A7201
Report Date: 2016/06/03

Terrapex Environmental Ltd
Client Project #: CB644.02
Site Location: 121 Hume Street, Collingwood, ON
Your P.O. #: 4700001396
Sampler Initials: PA

GENERAL COMMENTS

Each temperature is the average of up to three cooler temperatures taken at receipt

Package 1	0.3°C

Results relate only to the items tested.

Maxxam Job #: B6A7201
Report Date: 2016/06/03

Terrapex Environmental Ltd
Client Project #: CB644.02
Site Location: 121 Hume Street, Collingwood, ON
Your P.O. #: 4700001396
Sampler Initials: PA

QUALITY ASSURANCE REPORT

QA/QC	Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
	4516392	CP	Matrix Spike	Free Cyanide	2016/05/30		100	%	80 - 120
	4516392	CP	Spiked Blank	Free Cyanide	2016/05/30		100	%	80 - 120
	4516392	CP	Method Blank	Free Cyanide	2016/05/30	ND,RDL=2		ug/L	
	4516392	CP	RPD	Free Cyanide	2016/05/30	NC		%	20
	4516402	SAC	Matrix Spike	Chromium (VI)	2016/05/31		100	%	80 - 120
	4516402	SAC	Spiked Blank	Chromium (VI)	2016/05/31		101	%	80 - 120
	4516402	SAC	Method Blank	Chromium (VI)	2016/05/31	ND, RDL=0.50		ug/L	
	4516402	SAC	RPD	Chromium (VI)	2016/05/31	NC		%	20
	4516483	DRM	Matrix Spike	Dissolved Chloride (Cl)	2016/05/30		NC	%	80 - 120
	4516483	DRM	Spiked Blank	Dissolved Chloride (Cl)	2016/05/30		105	%	80 - 120
	4516483	DRM	Method Blank	Dissolved Chloride (Cl)	2016/05/30	ND, RDL=1.0		mg/L	
	4516483	DRM	RPD	Dissolved Chloride (Cl)	2016/05/30	2.0		%	20
	4516620	BG1	Matrix Spike	4-Bromofluorobenzene	2016/05/30		100	%	70 - 130
				D4-1,2-Dichloroethane	2016/05/30		101	%	70 - 130
				D8-Toluene	2016/05/30		100	%	70 - 130
				Acetone (2-Propanone)	2016/05/30		103	%	60 - 140
				Benzene	2016/05/30		95	%	70 - 130
				Bromodichloromethane	2016/05/30		95	%	70 - 130
				Bromoform	2016/05/30		96	%	70 - 130
				Bromomethane	2016/05/30		81	%	60 - 140
				Carbon Tetrachloride	2016/05/30		94	%	70 - 130
				Chlorobenzene	2016/05/30		99	%	70 - 130
				Chloroform	2016/05/30		94	%	70 - 130
				Dibromochloromethane	2016/05/30		98	%	70 - 130
				1,2-Dichlorobenzene	2016/05/30		95	%	70 - 130
				1,3-Dichlorobenzene	2016/05/30		93	%	70 - 130
				1,4-Dichlorobenzene	2016/05/30		93	%	70 - 130
				Dichlorodifluoromethane (FREON 12)	2016/05/30		78	%	60 - 140
				1,1-Dichloroethane	2016/05/30		94	%	70 - 130
				1,2-Dichloroethane	2016/05/30		99	%	70 - 130
				1,1-Dichloroethylene	2016/05/30		96	%	70 - 130
				cis-1,2-Dichloroethylene	2016/05/30		94	%	70 - 130
				trans-1,2-Dichloroethylene	2016/05/30		94	%	70 - 130
				1,2-Dichloropropane	2016/05/30		95	%	70 - 130
				cis-1,3-Dichloropropene	2016/05/30		98	%	70 - 130
				trans-1,3-Dichloropropene	2016/05/30		97	%	70 - 130
				Ethylbenzene	2016/05/30		95	%	70 - 130
				Ethylene Dibromide	2016/05/30		99	%	70 - 130
				Hexane	2016/05/30		98	%	70 - 130
				Methylene Chloride(Dichloromethane)	2016/05/30		102	%	70 - 130
				Methyl Ethyl Ketone (2-Butanone)	2016/05/30		103	%	60 - 140
				Methyl Isobutyl Ketone	2016/05/30		100	%	70 - 130
				Methyl t-butyl ether (MTBE)	2016/05/30		97	%	70 - 130
				Styrene	2016/05/30		95	%	70 - 130
				1,1,1,2-Tetrachloroethane	2016/05/30		95	%	70 - 130
				1,1,2,2-Tetrachloroethane	2016/05/30		93	%	70 - 130
				Tetrachloroethylene	2016/05/30		95	%	70 - 130
				Toluene	2016/05/30		93	%	70 - 130
				1,1,1-Trichloroethane	2016/05/30		92	%	70 - 130

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC	Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
4516620	BG1	Spiked Blank		1,1,2-Trichloroethane	2016/05/30		98	%	70 - 130
				Trichloroethylene	2016/05/30		103	%	70 - 130
				Trichlorofluoromethane (FREON 11)	2016/05/30		92	%	70 - 130
				Vinyl Chloride	2016/05/30		94	%	70 - 130
				p+m-Xylene	2016/05/30		91	%	70 - 130
				o-Xylene	2016/05/30		96	%	70 - 130
				4-Bromofluorobenzene	2016/05/30		101	%	70 - 130
				D4-1,2-Dichloroethane	2016/05/30		99	%	70 - 130
				D8-Toluene	2016/05/30		101	%	70 - 130
				Acetone (2-Propanone)	2016/05/30		98	%	60 - 140
				Benzene	2016/05/30		94	%	70 - 130
				Bromodichloromethane	2016/05/30		94	%	70 - 130
				Bromoform	2016/05/30		96	%	70 - 130
				Bromomethane	2016/05/30		80	%	60 - 140
				Carbon Tetrachloride	2016/05/30		95	%	70 - 130
				Chlorobenzene	2016/05/30		99	%	70 - 130
				Chloroform	2016/05/30		94	%	70 - 130
				Dibromochloromethane	2016/05/30		96	%	70 - 130
				1,2-Dichlorobenzene	2016/05/30		95	%	70 - 130
				1,3-Dichlorobenzene	2016/05/30		93	%	70 - 130
				1,4-Dichlorobenzene	2016/05/30		94	%	70 - 130
				Dichlorodifluoromethane (FREON 12)	2016/05/30		80	%	60 - 140
				1,1-Dichloroethane	2016/05/30		94	%	70 - 130
				1,2-Dichloroethane	2016/05/30		96	%	70 - 130
				1,1-Dichloroethylene	2016/05/30		96	%	70 - 130
				cis-1,2-Dichloroethylene	2016/05/30		93	%	70 - 130
				trans-1,2-Dichloroethylene	2016/05/30		94	%	70 - 130
				1,2-Dichloropropane	2016/05/30		95	%	70 - 130
				cis-1,3-Dichloropropene	2016/05/30		95	%	70 - 130
				trans-1,3-Dichloropropene	2016/05/30		92	%	70 - 130
				Ethylbenzene	2016/05/30		96	%	70 - 130
				Ethylene Dibromide	2016/05/30		96	%	70 - 130
				Hexane	2016/05/30		99	%	70 - 130
				Methylene Chloride(Dichloromethane)	2016/05/30		101	%	70 - 130
				Methyl Ethyl Ketone (2-Butanone)	2016/05/30		99	%	60 - 140
				Methyl Isobutyl Ketone	2016/05/30		97	%	70 - 130
				Methyl t-butyl ether (MTBE)	2016/05/30		96	%	70 - 130
				Styrene	2016/05/30		96	%	70 - 130
				1,1,1,2-Tetrachloroethane	2016/05/30		95	%	70 - 130
				1,1,2,2-Tetrachloroethane	2016/05/30		99	%	70 - 130
				Tetrachloroethylene	2016/05/30		95	%	70 - 130
				Toluene	2016/05/30		93	%	70 - 130
				1,1,1-Trichloroethane	2016/05/30		92	%	70 - 130
				1,1,2-Trichloroethane	2016/05/30		96	%	70 - 130
				Trichloroethylene	2016/05/30		92	%	70 - 130
				Trichlorofluoromethane (FREON 11)	2016/05/30		93	%	70 - 130
				Vinyl Chloride	2016/05/30		94	%	70 - 130
				p+m-Xylene	2016/05/30		92	%	70 - 130
				o-Xylene	2016/05/30		97	%	70 - 130
4516620	BG1	Method Blank		4-Bromofluorobenzene	2016/05/30		99	%	70 - 130
				D4-1,2-Dichloroethane	2016/05/30		98	%	70 - 130

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			D8-Toluene	2016/05/30		100	%	70 - 130
			Acetone (2-Propanone)	2016/05/30	ND, RDL=10		ug/L	
			Benzene	2016/05/30	ND, RDL=0.20		ug/L	
			Bromodichloromethane	2016/05/30	ND, RDL=0.50		ug/L	
			Bromoform	2016/05/30	ND, RDL=1.0		ug/L	
			Bromomethane	2016/05/30	ND, RDL=0.50		ug/L	
			Carbon Tetrachloride	2016/05/30	ND, RDL=0.20		ug/L	
			Chlorobenzene	2016/05/30	ND, RDL=0.20		ug/L	
			Chloroform	2016/05/30	ND, RDL=0.20		ug/L	
			Dibromochloromethane	2016/05/30	ND, RDL=0.50		ug/L	
			1,2-Dichlorobenzene	2016/05/30	ND, RDL=0.50		ug/L	
			1,3-Dichlorobenzene	2016/05/30	ND, RDL=0.50		ug/L	
			1,4-Dichlorobenzene	2016/05/30	ND, RDL=0.50		ug/L	
			Dichlorodifluoromethane (FREON 12)	2016/05/30	ND, RDL=1.0		ug/L	
			1,1-Dichloroethane	2016/05/30	ND, RDL=0.20		ug/L	
			1,2-Dichloroethane	2016/05/30	ND, RDL=0.50		ug/L	
			1,1-Dichloroethylene	2016/05/30	ND, RDL=0.20		ug/L	
			cis-1,2-Dichloroethylene	2016/05/30	ND, RDL=0.50		ug/L	
			trans-1,2-Dichloroethylene	2016/05/30	ND, RDL=0.50		ug/L	
			1,2-Dichloropropane	2016/05/30	ND, RDL=0.20		ug/L	
			cis-1,3-Dichloropropene	2016/05/30	ND, RDL=0.30		ug/L	
			trans-1,3-Dichloropropene	2016/05/30	ND, RDL=0.40		ug/L	
			Ethylbenzene	2016/05/30	ND, RDL=0.20		ug/L	
			Ethylene Dibromide	2016/05/30	ND, RDL=0.20		ug/L	

Maxxam Job #: B6A7201
Report Date: 2016/06/03

Terrapex Environmental Ltd
Client Project #: CB644.02
Site Location: 121 Hume Street, Collingwood, ON
Your P.O. #: 4700001396
Sampler Initials: PA

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
4516620	BG1	RPD	Hexane	2016/05/30	ND, RDL=1.0		ug/L	
			Methylene Chloride(Dichloromethane)	2016/05/30	ND, RDL=2.0		ug/L	
			Methyl Ethyl Ketone (2-Butanone)	2016/05/30	ND, RDL=10		ug/L	
			Methyl Isobutyl Ketone	2016/05/30	ND, RDL=5.0		ug/L	
			Methyl t-butyl ether (MTBE)	2016/05/30	ND, RDL=0.50		ug/L	
			Styrene	2016/05/30	ND, RDL=0.50		ug/L	
			1,1,1,2-Tetrachloroethane	2016/05/30	ND, RDL=0.50		ug/L	
			1,1,2,2-Tetrachloroethane	2016/05/30	ND, RDL=0.50		ug/L	
			Tetrachloroethylene	2016/05/30	ND, RDL=0.20		ug/L	
			Toluene	2016/05/30	ND, RDL=0.20		ug/L	
			1,1,1-Trichloroethane	2016/05/30	ND, RDL=0.20		ug/L	
			1,1,2-Trichloroethane	2016/05/30	ND, RDL=0.50		ug/L	
			Trichloroethylene	2016/05/30	ND, RDL=0.20		ug/L	
			Trichlorofluoromethane (FREON 11)	2016/05/30	ND, RDL=0.50		ug/L	
			Vinyl Chloride	2016/05/30	ND, RDL=0.20		ug/L	
			p+m-Xylene	2016/05/30	ND, RDL=0.20		ug/L	
			o-Xylene	2016/05/30	ND, RDL=0.20		ug/L	
			Total Xylenes	2016/05/30	ND, RDL=0.20		ug/L	
			Acetone (2-Propanone)	2016/05/30	NC		%	30
			Benzene	2016/05/30	NC		%	30
			Bromodichloromethane	2016/05/30	NC		%	30
			Bromoform	2016/05/30	NC		%	30
			Bromomethane	2016/05/30	NC		%	30
			Carbon Tetrachloride	2016/05/30	NC		%	30
			Chlorobenzene	2016/05/30	NC		%	30
			Chloroform	2016/05/30	NC		%	30
			Dibromochloromethane	2016/05/30	NC		%	30
			1,2-Dichlorobenzene	2016/05/30	NC		%	30
			1,3-Dichlorobenzene	2016/05/30	NC		%	30
			1,4-Dichlorobenzene	2016/05/30	NC		%	30
			Dichlorodifluoromethane (FREON 12)	2016/05/30	NC		%	30

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Sampler Initials: PA

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC	Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
				1,1-Dichloroethane	2016/05/30	NC		%	30
				1,2-Dichloroethane	2016/05/30	NC		%	30
				1,1-Dichloroethylene	2016/05/30	NC		%	30
				cis-1,2-Dichloroethylene	2016/05/30	NC		%	30
				trans-1,2-Dichloroethylene	2016/05/30	NC		%	30
				1,2-Dichloropropane	2016/05/30	NC		%	30
				cis-1,3-Dichloropropene	2016/05/30	NC		%	30
				trans-1,3-Dichloropropene	2016/05/30	NC		%	30
				Ethylbenzene	2016/05/30	NC		%	30
				Ethylene Dibromide	2016/05/30	NC		%	30
				Hexane	2016/05/30	NC		%	30
				Methylene Chloride(Dichloromethane)	2016/05/30	NC		%	30
				Methyl Ethyl Ketone (2-Butanone)	2016/05/30	NC		%	30
				Methyl Isobutyl Ketone	2016/05/30	NC		%	30
				Methyl t-butyl ether (MTBE)	2016/05/30	NC		%	30
				Styrene	2016/05/30	NC		%	30
				1,1,1,2-Tetrachloroethane	2016/05/30	NC		%	30
				1,1,2,2-Tetrachloroethane	2016/05/30	NC		%	30
				Tetrachloroethylene	2016/05/30	0.35		%	30
				Toluene	2016/05/30	NC		%	30
				1,1,1-Trichloroethane	2016/05/30	NC		%	30
				1,1,2-Trichloroethane	2016/05/30	NC		%	30
				Trichloroethylene	2016/05/30	NC		%	30
				Trichlorofluoromethane (FREON 11)	2016/05/30	NC		%	30
				Vinyl Chloride	2016/05/30	NC		%	30
				p+m-Xylene	2016/05/30	NC		%	30
				o-Xylene	2016/05/30	NC		%	30
				Total Xylenes	2016/05/30	NC		%	30
4517247	NYS		Spiked Blank	Available (CaCl2) pH	2016/05/30		99	%	97 - 103
4517247	NYS		RPD	Available (CaCl2) pH	2016/05/30	0.29		%	N/A
4517528	XJI		Matrix Spike	4-Bromofluorobenzene	2016/05/31		99	%	60 - 140
				D10-o-Xylene	2016/05/31		101	%	60 - 130
				D4-1,2-Dichloroethane	2016/05/31		109	%	60 - 140
				D8-Toluene	2016/05/31		103	%	60 - 140
				Acetone (2-Propanone)	2016/05/31		104	%	60 - 140
				Benzene	2016/05/31		106	%	60 - 140
				Bromodichloromethane	2016/05/31		105	%	60 - 140
				Bromoform	2016/05/31		99	%	60 - 140
				Bromomethane	2016/05/31		98	%	60 - 140
				Carbon Tetrachloride	2016/05/31		110	%	60 - 140
				Chlorobenzene	2016/05/31		101	%	60 - 140
				Chloroform	2016/05/31		107	%	60 - 140
				Dibromochloromethane	2016/05/31		101	%	60 - 140
				1,2-Dichlorobenzene	2016/05/31		94	%	60 - 140
				1,3-Dichlorobenzene	2016/05/31		92	%	60 - 140
				1,4-Dichlorobenzene	2016/05/31		93	%	60 - 140
				Dichlorodifluoromethane (FREON 12)	2016/05/31		129	%	60 - 140
				1,1-Dichloroethane	2016/05/31		108	%	60 - 140
				1,2-Dichloroethane	2016/05/31		113	%	60 - 140
				1,1-Dichloroethylene	2016/05/31		112	%	60 - 140
				cis-1,2-Dichloroethylene	2016/05/31		107	%	60 - 140

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC	Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
				trans-1,2-Dichloroethylene	2016/05/31		108	%	60 - 140
				1,2-Dichloropropane	2016/05/31		104	%	60 - 140
				cis-1,3-Dichloropropene	2016/05/31		99	%	60 - 140
				trans-1,3-Dichloropropene	2016/05/31		98	%	60 - 140
				Ethylbenzene	2016/05/31		98	%	60 - 140
				Ethylene Dibromide	2016/05/31		103	%	60 - 140
				Hexane	2016/05/31		113	%	60 - 140
				Methylene Chloride(Dichloromethane)	2016/05/31		106	%	60 - 140
				Methyl Ethyl Ketone (2-Butanone)	2016/05/31		102	%	60 - 140
				Methyl Isobutyl Ketone	2016/05/31		100	%	60 - 140
				Methyl t-butyl ether (MTBE)	2016/05/31		108	%	60 - 140
				Styrene	2016/05/31		98	%	60 - 140
				1,1,1,2-Tetrachloroethane	2016/05/31		99	%	60 - 140
				1,1,2,2-Tetrachloroethane	2016/05/31		99	%	60 - 140
				Tetrachloroethylene	2016/05/31		100	%	60 - 140
				Toluene	2016/05/31		99	%	60 - 140
				1,1,1-Trichloroethane	2016/05/31		107	%	60 - 140
				1,1,2-Trichloroethane	2016/05/31		105	%	60 - 140
				Trichloroethylene	2016/05/31		99	%	60 - 140
				Trichlorofluoromethane (FREON 11)	2016/05/31		114	%	60 - 140
				Vinyl Chloride	2016/05/31		114	%	60 - 140
				p+m-Xylene	2016/05/31		94	%	60 - 140
				o-Xylene	2016/05/31		96	%	60 - 140
4517528	XII		Spiked Blank	4-Bromofluorobenzene	2016/05/31		99	%	60 - 140
				D10-o-Xylene	2016/05/31		104	%	60 - 130
				D4-1,2-Dichloroethane	2016/05/31		113	%	60 - 140
				D8-Toluene	2016/05/31		102	%	60 - 140
				Acetone (2-Propanone)	2016/05/31		124	%	60 - 140
				Benzene	2016/05/31		107	%	60 - 130
				Bromodichloromethane	2016/05/31		107	%	60 - 130
				Bromoform	2016/05/31		104	%	60 - 130
				Bromomethane	2016/05/31		101	%	60 - 140
				Carbon Tetrachloride	2016/05/31		110	%	60 - 130
				Chlorobenzene	2016/05/31		102	%	60 - 130
				Chloroform	2016/05/31		108	%	60 - 130
				Dibromochloromethane	2016/05/31		104	%	60 - 130
				1,2-Dichlorobenzene	2016/05/31		94	%	60 - 130
				1,3-Dichlorobenzene	2016/05/31		90	%	60 - 130
				1,4-Dichlorobenzene	2016/05/31		92	%	60 - 130
				Dichlorodifluoromethane (FREON 12)	2016/05/31		133	%	60 - 140
				1,1-Dichloroethane	2016/05/31		109	%	60 - 130
				1,2-Dichloroethane	2016/05/31		116	%	60 - 130
				1,1-Dichloroethylene	2016/05/31		113	%	60 - 130
				cis-1,2-Dichloroethylene	2016/05/31		109	%	60 - 130
				trans-1,2-Dichloroethylene	2016/05/31		109	%	60 - 130
				1,2-Dichloropropane	2016/05/31		106	%	60 - 130
				cis-1,3-Dichloropropene	2016/05/31		101	%	60 - 130
				trans-1,3-Dichloropropene	2016/05/31		100	%	60 - 130
				Ethylbenzene	2016/05/31		97	%	60 - 130
				Ethylene Dibromide	2016/05/31		106	%	60 - 130
				Hexane	2016/05/31		119	%	60 - 130

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
4517528	XII	Method Blank	Methylene Chloride(Dichloromethane)	2016/05/31		108	%	60 - 130
			Methyl Ethyl Ketone (2-Butanone)	2016/05/31		121	%	60 - 140
			Methyl Isobutyl Ketone	2016/05/31		111	%	60 - 130
			Methyl t-butyl ether (MTBE)	2016/05/31		108	%	60 - 130
			Styrene	2016/05/31		99	%	60 - 130
			1,1,1,2-Tetrachloroethane	2016/05/31		100	%	60 - 130
			1,1,2,2-Tetrachloroethane	2016/05/31		104	%	60 - 130
			Tetrachloroethylene	2016/05/31		99	%	60 - 130
			Toluene	2016/05/31		99	%	60 - 130
			1,1,1-Trichloroethane	2016/05/31		107	%	60 - 130
			1,1,2-Trichloroethane	2016/05/31		107	%	60 - 130
			Trichloroethylene	2016/05/31		99	%	60 - 130
			Trichlorofluoromethane (FREON 11)	2016/05/31		115	%	60 - 130
			Vinyl Chloride	2016/05/31		116	%	60 - 130
			p+m-Xylene	2016/05/31		93	%	60 - 130
			o-Xylene	2016/05/31		96	%	60 - 130
			4-Bromofluorobenzene	2016/05/31		95	%	60 - 140
			D10-o-Xylene	2016/05/31		90	%	60 - 130
			D4-1,2-Dichloroethane	2016/05/31		116	%	60 - 140
			D8-Toluene	2016/05/31		95	%	60 - 140
			Acetone (2-Propanone)	2016/05/31	ND, RDL=0.50		ug/g	
			Benzene	2016/05/31	ND, RDL=0.020		ug/g	
			Bromodichloromethane	2016/05/31	ND, RDL=0.050		ug/g	
			Bromoform	2016/05/31	ND, RDL=0.050		ug/g	
			Bromomethane	2016/05/31	ND, RDL=0.050		ug/g	
			Carbon Tetrachloride	2016/05/31	ND, RDL=0.050		ug/g	
			Chlorobenzene	2016/05/31	ND, RDL=0.050		ug/g	
			Chloroform	2016/05/31	ND, RDL=0.050		ug/g	
			Dibromochloromethane	2016/05/31	ND, RDL=0.050		ug/g	
			1,2-Dichlorobenzene	2016/05/31	ND, RDL=0.050		ug/g	
			1,3-Dichlorobenzene	2016/05/31	ND, RDL=0.050		ug/g	
			1,4-Dichlorobenzene	2016/05/31	ND, RDL=0.050		ug/g	
			Dichlorodifluoromethane (FREON 12)	2016/05/31	ND, RDL=0.050		ug/g	
			1,1-Dichloroethane	2016/05/31	ND, RDL=0.050		ug/g	

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			1,2-Dichloroethane	2016/05/31	ND, RDL=0.050		ug/g	
			1,1-Dichloroethylene	2016/05/31	ND, RDL=0.050		ug/g	
			cis-1,2-Dichloroethylene	2016/05/31	ND, RDL=0.050		ug/g	
			trans-1,2-Dichloroethylene	2016/05/31	ND, RDL=0.050		ug/g	
			1,2-Dichloropropane	2016/05/31	ND, RDL=0.050		ug/g	
			cis-1,3-Dichloropropene	2016/05/31	ND, RDL=0.030		ug/g	
			trans-1,3-Dichloropropene	2016/05/31	ND, RDL=0.040		ug/g	
			Ethylbenzene	2016/05/31	ND, RDL=0.020		ug/g	
			Ethylene Dibromide	2016/05/31	ND, RDL=0.050		ug/g	
			Hexane	2016/05/31	ND, RDL=0.050		ug/g	
			Methylene Chloride(Dichloromethane)	2016/05/31	ND, RDL=0.050		ug/g	
			Methyl Ethyl Ketone (2-Butanone)	2016/05/31	ND, RDL=0.50		ug/g	
			Methyl Isobutyl Ketone	2016/05/31	ND, RDL=0.50		ug/g	
			Methyl t-butyl ether (MTBE)	2016/05/31	ND, RDL=0.050		ug/g	
			Styrene	2016/05/31	ND, RDL=0.050		ug/g	
			1,1,1,2-Tetrachloroethane	2016/05/31	ND, RDL=0.050		ug/g	
			1,1,2,2-Tetrachloroethane	2016/05/31	ND, RDL=0.050		ug/g	
			Tetrachloroethylene	2016/05/31	ND, RDL=0.050		ug/g	
			Toluene	2016/05/31	ND, RDL=0.020		ug/g	
			1,1,1-Trichloroethane	2016/05/31	ND, RDL=0.050		ug/g	
			1,1,2-Trichloroethane	2016/05/31	ND, RDL=0.050		ug/g	
			Trichloroethylene	2016/05/31	ND, RDL=0.050		ug/g	
			Trichlorofluoromethane (FREON 11)	2016/05/31	ND, RDL=0.050		ug/g	
			Vinyl Chloride	2016/05/31	ND, RDL=0.020		ug/g	

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC	Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
4517528	XII	RPD		p+m-Xylene	2016/05/31	ND, RDL=0.020		ug/g	
				o-Xylene	2016/05/31	ND, RDL=0.020		ug/g	
				Total Xylenes	2016/05/31	ND, RDL=0.020		ug/g	
				Acetone (2-Propanone)	2016/05/31	NC		%	50
				Benzene	2016/05/31	NC		%	50
				Bromodichloromethane	2016/05/31	NC		%	50
				Bromoform	2016/05/31	NC		%	50
				Bromomethane	2016/05/31	NC		%	50
				Carbon Tetrachloride	2016/05/31	NC		%	50
				Chlorobenzene	2016/05/31	NC		%	50
				Chloroform	2016/05/31	NC		%	50
				Dibromochloromethane	2016/05/31	NC		%	50
				1,2-Dichlorobenzene	2016/05/31	NC		%	50
				1,3-Dichlorobenzene	2016/05/31	NC		%	50
				1,4-Dichlorobenzene	2016/05/31	NC		%	50
				Dichlorodifluoromethane (FREON 12)	2016/05/31	NC		%	50
				1,1-Dichloroethane	2016/05/31	NC		%	50
				1,2-Dichloroethane	2016/05/31	NC		%	50
				1,1-Dichloroethylene	2016/05/31	NC		%	50
				cis-1,2-Dichloroethylene	2016/05/31	NC		%	50
				trans-1,2-Dichloroethylene	2016/05/31	NC		%	50
				1,2-Dichloropropane	2016/05/31	NC		%	50
				cis-1,3-Dichloropropene	2016/05/31	NC		%	50
				trans-1,3-Dichloropropene	2016/05/31	NC		%	50
				Ethylbenzene	2016/05/31	NC		%	50
				Ethylene Dibromide	2016/05/31	NC		%	50
				Hexane	2016/05/31	NC		%	50
				Methylene Chloride(Dichloromethane)	2016/05/31	NC		%	50
				Methyl Ethyl Ketone (2-Butanone)	2016/05/31	NC		%	50
				Methyl Isobutyl Ketone	2016/05/31	NC		%	50
				Methyl t-butyl ether (MTBE)	2016/05/31	NC		%	50
				Styrene	2016/05/31	NC		%	50
				1,1,1,2-Tetrachloroethane	2016/05/31	NC		%	50
				1,1,2,2-Tetrachloroethane	2016/05/31	NC		%	50
				Tetrachloroethylene	2016/05/31	NC		%	50
				Toluene	2016/05/31	NC		%	50
				1,1,1-Trichloroethane	2016/05/31	NC		%	50
				1,1,2-Trichloroethane	2016/05/31	NC		%	50
				Trichloroethylene	2016/05/31	NC		%	50
				Trichlorofluoromethane (FREON 11)	2016/05/31	NC		%	50
				Vinyl Chloride	2016/05/31	NC		%	50
				p+m-Xylene	2016/05/31	NC		%	50
				o-Xylene	2016/05/31	NC		%	50
				Total Xylenes	2016/05/31	NC		%	50
4517716	ADA	Matrix Spike [CKU366-06]		Dissolved Antimony (Sb)	2016/05/31		111	%	80 - 120
				Dissolved Arsenic (As)	2016/05/31		105	%	80 - 120
				Dissolved Barium (Ba)	2016/05/31		106	%	80 - 120
				Dissolved Beryllium (Be)	2016/05/31		112	%	80 - 120

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4517716	ADA	Spiked Blank		Dissolved Boron (B)	2016/05/31		109	%	80 - 120
				Dissolved Cadmium (Cd)	2016/05/31		109	%	80 - 120
				Dissolved Chromium (Cr)	2016/05/31		101	%	80 - 120
				Dissolved Cobalt (Co)	2016/05/31		104	%	80 - 120
				Dissolved Copper (Cu)	2016/05/31		107	%	80 - 120
				Dissolved Lead (Pb)	2016/05/31		103	%	80 - 120
				Dissolved Molybdenum (Mo)	2016/05/31		112	%	80 - 120
				Dissolved Nickel (Ni)	2016/05/31		102	%	80 - 120
				Dissolved Selenium (Se)	2016/05/31		104	%	80 - 120
				Dissolved Silver (Ag)	2016/05/31		103	%	80 - 120
				Dissolved Sodium (Na)	2016/05/31		NC	%	80 - 120
				Dissolved Thallium (Tl)	2016/05/31		104	%	80 - 120
				Dissolved Uranium (U)	2016/05/31		102	%	80 - 120
				Dissolved Vanadium (V)	2016/05/31		103	%	80 - 120
				Dissolved Zinc (Zn)	2016/05/31		103	%	80 - 120
				Dissolved Antimony (Sb)	2016/05/31		102	%	80 - 120
				Dissolved Arsenic (As)	2016/05/31		101	%	80 - 120
				Dissolved Barium (Ba)	2016/05/31		101	%	80 - 120
				Dissolved Beryllium (Be)	2016/05/31		105	%	80 - 120
				Dissolved Boron (B)	2016/05/31		99	%	80 - 120
				Dissolved Cadmium (Cd)	2016/05/31		102	%	80 - 120
				Dissolved Chromium (Cr)	2016/05/31		96	%	80 - 120
				Dissolved Cobalt (Co)	2016/05/31		99	%	80 - 120
				Dissolved Copper (Cu)	2016/05/31		102	%	80 - 120
				Dissolved Lead (Pb)	2016/05/31		98	%	80 - 120
				Dissolved Molybdenum (Mo)	2016/05/31		101	%	80 - 120
				Dissolved Nickel (Ni)	2016/05/31		98	%	80 - 120
				Dissolved Selenium (Se)	2016/05/31		102	%	80 - 120
				Dissolved Silver (Ag)	2016/05/31		99	%	80 - 120
				Dissolved Sodium (Na)	2016/05/31		102	%	80 - 120
				Dissolved Thallium (Tl)	2016/05/31		100	%	80 - 120
				Dissolved Uranium (U)	2016/05/31		96	%	80 - 120
				Dissolved Vanadium (V)	2016/05/31		98	%	80 - 120
				Dissolved Zinc (Zn)	2016/05/31		99	%	80 - 120
4517716	ADA	Method Blank		Dissolved Antimony (Sb)	2016/05/31	ND, RDL=0.50		ug/L	
				Dissolved Arsenic (As)	2016/05/31	ND, RDL=1.0		ug/L	
				Dissolved Barium (Ba)	2016/05/31	ND, RDL=2.0		ug/L	
				Dissolved Beryllium (Be)	2016/05/31	ND, RDL=0.50		ug/L	
				Dissolved Boron (B)	2016/05/31	ND, RDL=10		ug/L	
				Dissolved Cadmium (Cd)	2016/05/31	ND, RDL=0.10		ug/L	
				Dissolved Chromium (Cr)	2016/05/31	ND, RDL=5.0		ug/L	
				Dissolved Cobalt (Co)	2016/05/31	ND, RDL=0.50		ug/L	

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Dissolved Copper (Cu)	2016/05/31	ND, RDL=1.0		ug/L	
			Dissolved Lead (Pb)	2016/05/31	ND, RDL=0.50		ug/L	
			Dissolved Molybdenum (Mo)	2016/05/31	ND, RDL=0.50		ug/L	
			Dissolved Nickel (Ni)	2016/05/31	ND, RDL=1.0		ug/L	
			Dissolved Selenium (Se)	2016/05/31	ND, RDL=2.0		ug/L	
			Dissolved Silver (Ag)	2016/05/31	ND, RDL=0.10		ug/L	
			Dissolved Sodium (Na)	2016/05/31	ND, RDL=100		ug/L	
			Dissolved Thallium (Tl)	2016/05/31	ND, RDL=0.050		ug/L	
			Dissolved Uranium (U)	2016/05/31	ND, RDL=0.10		ug/L	
			Dissolved Vanadium (V)	2016/05/31	ND, RDL=0.50		ug/L	
			Dissolved Zinc (Zn)	2016/05/31	ND, RDL=5.0		ug/L	
4517716	ADA	RPD [CKU366-06]	Dissolved Antimony (Sb)	2016/05/31	NC		%	20
			Dissolved Arsenic (As)	2016/05/31	NC		%	20
			Dissolved Barium (Ba)	2016/05/31	0.43		%	20
			Dissolved Beryllium (Be)	2016/05/31	NC		%	20
			Dissolved Boron (B)	2016/05/31	5.5		%	20
			Dissolved Cadmium (Cd)	2016/05/31	NC		%	20
			Dissolved Chromium (Cr)	2016/05/31	NC		%	20
			Dissolved Cobalt (Co)	2016/05/31	NC		%	20
			Dissolved Copper (Cu)	2016/05/31	NC		%	20
			Dissolved Lead (Pb)	2016/05/31	NC		%	20
			Dissolved Molybdenum (Mo)	2016/05/31	0.15		%	20
			Dissolved Nickel (Ni)	2016/05/31	NC		%	20
			Dissolved Selenium (Se)	2016/05/31	NC		%	20
			Dissolved Silver (Ag)	2016/05/31	NC		%	20
			Dissolved Sodium (Na)	2016/05/31	1.4		%	20
			Dissolved Thallium (Tl)	2016/05/31	NC		%	20
			Dissolved Uranium (U)	2016/05/31	2.4		%	20
			Dissolved Vanadium (V)	2016/05/31	NC		%	20
			Dissolved Zinc (Zn)	2016/05/31	NC		%	20
4518525	CP	Matrix Spike	Free Cyanide	2016/06/01		101	%	75 - 125
4518525	CP	Spiked Blank	Free Cyanide	2016/06/01		99	%	80 - 120
4518525	CP	Method Blank	Free Cyanide	2016/06/01	ND, RDL=0.01		ug/g	
4518525	CP	RPD	Free Cyanide	2016/06/01	NC		%	35
4518764	VIV	Matrix Spike	Acid Extractable Antimony (Sb)	2016/06/01		NC	%	75 - 125
			Acid Extractable Arsenic (As)	2016/06/01		NC	%	75 - 125
			Acid Extractable Barium (Ba)	2016/06/01		NC	%	75 - 125
			Acid Extractable Beryllium (Be)	2016/06/01		92	%	75 - 125

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
4518764	VIV	Spiked Blank	Acid Extractable Boron (B)	2016/06/01		NC	%	75 - 125
			Acid Extractable Cadmium (Cd)	2016/06/01		97	%	75 - 125
			Acid Extractable Chromium (Cr)	2016/06/01		NC	%	75 - 125
			Acid Extractable Cobalt (Co)	2016/06/01		NC	%	75 - 125
			Acid Extractable Copper (Cu)	2016/06/01		NC	%	75 - 125
			Acid Extractable Lead (Pb)	2016/06/01		NC	%	75 - 125
			Acid Extractable Molybdenum (Mo)	2016/06/01		96	%	75 - 125
			Acid Extractable Nickel (Ni)	2016/06/01		NC	%	75 - 125
			Acid Extractable Selenium (Se)	2016/06/01		93	%	75 - 125
			Acid Extractable Silver (Ag)	2016/06/01		95	%	75 - 125
			Acid Extractable Thallium (Tl)	2016/06/01		92	%	75 - 125
			Acid Extractable Uranium (U)	2016/06/01		101	%	75 - 125
			Acid Extractable Vanadium (V)	2016/06/01		NC	%	75 - 125
			Acid Extractable Zinc (Zn)	2016/06/01		NC	%	75 - 125
			Acid Extractable Mercury (Hg)	2016/06/01		95	%	75 - 125
			Acid Extractable Antimony (Sb)	2016/06/01		104	%	80 - 120
			Acid Extractable Arsenic (As)	2016/06/01		105	%	80 - 120
			Acid Extractable Barium (Ba)	2016/06/01		103	%	80 - 120
			Acid Extractable Beryllium (Be)	2016/06/01		99	%	80 - 120
			Acid Extractable Boron (B)	2016/06/01		101	%	80 - 120
			Acid Extractable Cadmium (Cd)	2016/06/01		101	%	80 - 120
			Acid Extractable Chromium (Cr)	2016/06/01		101	%	80 - 120
			Acid Extractable Cobalt (Co)	2016/06/01		101	%	80 - 120
			Acid Extractable Copper (Cu)	2016/06/01		102	%	80 - 120
			Acid Extractable Lead (Pb)	2016/06/01		101	%	80 - 120
			Acid Extractable Molybdenum (Mo)	2016/06/01		102	%	80 - 120
			Acid Extractable Nickel (Ni)	2016/06/01		102	%	80 - 120
			Acid Extractable Selenium (Se)	2016/06/01		99	%	80 - 120
			Acid Extractable Silver (Ag)	2016/06/01		101	%	80 - 120
			Acid Extractable Thallium (Tl)	2016/06/01		100	%	80 - 120
			Acid Extractable Uranium (U)	2016/06/01		103	%	80 - 120
			Acid Extractable Vanadium (V)	2016/06/01		102	%	80 - 120
			Acid Extractable Zinc (Zn)	2016/06/01		99	%	80 - 120
			Acid Extractable Mercury (Hg)	2016/06/01		102	%	80 - 120
4518764	VIV	Method Blank	Acid Extractable Antimony (Sb)	2016/06/01	ND, RDL=0.20		ug/g	
			Acid Extractable Arsenic (As)	2016/06/01	ND, RDL=1.0		ug/g	
			Acid Extractable Barium (Ba)	2016/06/01	ND, RDL=0.50		ug/g	
			Acid Extractable Beryllium (Be)	2016/06/01	ND, RDL=0.20		ug/g	
			Acid Extractable Boron (B)	2016/06/01	ND, RDL=5.0		ug/g	
			Acid Extractable Cadmium (Cd)	2016/06/01	ND, RDL=0.10		ug/g	
			Acid Extractable Chromium (Cr)	2016/06/01	ND, RDL=1.0		ug/g	
			Acid Extractable Cobalt (Co)	2016/06/01	ND, RDL=0.10		ug/g	

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Acid Extractable Copper (Cu)	2016/06/01	ND, RDL=0.50		ug/g	
			Acid Extractable Lead (Pb)	2016/06/01	ND, RDL=1.0		ug/g	
			Acid Extractable Molybdenum (Mo)	2016/06/01	ND, RDL=0.50		ug/g	
			Acid Extractable Nickel (Ni)	2016/06/01	ND, RDL=0.50		ug/g	
			Acid Extractable Selenium (Se)	2016/06/01	ND, RDL=0.50		ug/g	
			Acid Extractable Silver (Ag)	2016/06/01	ND, RDL=0.20		ug/g	
			Acid Extractable Thallium (Tl)	2016/06/01	ND, RDL=0.050		ug/g	
			Acid Extractable Uranium (U)	2016/06/01	ND, RDL=0.050		ug/g	
			Acid Extractable Vanadium (V)	2016/06/01	ND, RDL=5.0		ug/g	
			Acid Extractable Zinc (Zn)	2016/06/01	ND, RDL=5.0		ug/g	
			Acid Extractable Mercury (Hg)	2016/06/01	ND, RDL=0.050		ug/g	
4518764	VIV	RPD	Acid Extractable Antimony (Sb)	2016/06/01	1.9		%	30
			Acid Extractable Arsenic (As)	2016/06/01	9.9		%	30
			Acid Extractable Barium (Ba)	2016/06/01	0.47		%	30
			Acid Extractable Beryllium (Be)	2016/06/01	NC		%	30
			Acid Extractable Boron (B)	2016/06/01	1.1		%	30
			Acid Extractable Cadmium (Cd)	2016/06/01	NC		%	30
			Acid Extractable Cobalt (Co)	2016/06/01	6.1		%	30
			Acid Extractable Copper (Cu)	2016/06/01	4.2		%	30
			Acid Extractable Lead (Pb)	2016/06/01	2.1		%	30
			Acid Extractable Molybdenum (Mo)	2016/06/01	NC		%	30
			Acid Extractable Nickel (Ni)	2016/06/01	4.0		%	30
			Acid Extractable Selenium (Se)	2016/06/01	NC		%	30
			Acid Extractable Silver (Ag)	2016/06/01	NC		%	30
			Acid Extractable Uranium (U)	2016/06/01	1.6		%	30
			Acid Extractable Vanadium (V)	2016/06/01	8.1		%	30
			Acid Extractable Zinc (Zn)	2016/06/01	3.7		%	30
4518796	SUK	Matrix Spike	Hot Water Ext. Boron (B)	2016/05/31		110	%	75 - 125
4518796	SUK	Spiked Blank	Hot Water Ext. Boron (B)	2016/05/31		103	%	75 - 125
4518796	SUK	Method Blank	Hot Water Ext. Boron (B)	2016/05/31	ND, RDL=0.050		ug/g	
4518796	SUK	RPD	Hot Water Ext. Boron (B)	2016/05/31	NC		%	40
4518935	VGS	RPD	Moisture	2016/05/31	3.2		%	20
4518998	SAC	Matrix Spike	Chromium (VI)	2016/06/01		80	%	75 - 125
4518998	SAC	Spiked Blank	Chromium (VI)	2016/06/01		89	%	80 - 120
4518998	SAC	Method Blank	Chromium (VI)	2016/06/01	ND, RDL=0.2		ug/g	
4518998	SAC	RPD	Chromium (VI)	2016/06/01	NC		%	35
4519291	GYA	RPD	Moisture	2016/05/31	14		%	20

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QA/QC	Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
4520008	RGA	Matrix Spike [CKU365-02]		1,4-Difluorobenzene	2016/06/01		100	%	70 - 130
				4-Bromofluorobenzene	2016/06/01		98	%	70 - 130
				D10-Ethylbenzene	2016/06/01		96	%	70 - 130
				D4-1,2-Dichloroethane	2016/06/01		103	%	70 - 130
				F1 (C6-C10)	2016/06/01		90	%	70 - 130
4520008	RGA	Spiked Blank		1,4-Difluorobenzene	2016/06/01		101	%	70 - 130
				4-Bromofluorobenzene	2016/06/01		98	%	70 - 130
				D10-Ethylbenzene	2016/06/01		98	%	70 - 130
				D4-1,2-Dichloroethane	2016/06/01		102	%	70 - 130
				F1 (C6-C10)	2016/06/01		86	%	70 - 130
4520008	RGA	Method Blank		1,4-Difluorobenzene	2016/06/01		102	%	70 - 130
				4-Bromofluorobenzene	2016/06/01		98	%	70 - 130
				D10-Ethylbenzene	2016/06/01		101	%	70 - 130
				D4-1,2-Dichloroethane	2016/06/01		103	%	70 - 130
				F1 (C6-C10)	2016/06/01	ND, RDL=25		ug/L	
4520008	RGA	RPD [CKU365-02]		F1 (C6-C10)	2016/06/01	NC		%	30
				F1 (C6-C10) - BTEX	2016/06/01	NC		%	30
4520139	MC	Matrix Spike		Mercury (Hg)	2016/06/01		110	%	75 - 125
4520139	MC	Spiked Blank		Mercury (Hg)	2016/06/01		102	%	80 - 120
4520139	MC	Method Blank		Mercury (Hg)	2016/06/01	ND, RDL=0.1		ug/L	
4520139	MC	RPD		Mercury (Hg)	2016/06/01	NC		%	20
4520648	JET	Matrix Spike [CKU366-02]		D10-Anthracene	2016/06/01		101	%	50 - 130
				D14-Terphenyl (FS)	2016/06/01		98	%	50 - 130
				D8-Acenaphthylene	2016/06/01		99	%	50 - 130
				Acenaphthene	2016/06/01		110	%	50 - 130
				Acenaphthylene	2016/06/01		110	%	50 - 130
				Anthracene	2016/06/01		111	%	50 - 130
				Benzo(a)anthracene	2016/06/01		118	%	50 - 130
				Benzo(a)pyrene	2016/06/01		120	%	50 - 130
				Benzo(b,j)fluoranthene	2016/06/01		120	%	50 - 130
				Benzo(g,h,i)perylene	2016/06/01		115	%	50 - 130
				Benzo(k)fluoranthene	2016/06/01		118	%	50 - 130
				Chrysene	2016/06/01		116	%	50 - 130
				Dibenz(a,h)anthracene	2016/06/01		110	%	50 - 130
				Fluoranthene	2016/06/01		121	%	50 - 130
				Fluorene	2016/06/01		113	%	50 - 130
				Indeno(1,2,3-cd)pyrene	2016/06/01		125	%	50 - 130
				1-Methylnaphthalene	2016/06/01		103	%	50 - 130
				2-Methylnaphthalene	2016/06/01		102	%	50 - 130
				Naphthalene	2016/06/01		97	%	50 - 130
				Phenanthrene	2016/06/01		110	%	50 - 130
				Pyrene	2016/06/01		120	%	50 - 130
4520648	JET	Spiked Blank		D10-Anthracene	2016/06/02		104	%	50 - 130
				D14-Terphenyl (FS)	2016/06/02		102	%	50 - 130
				D8-Acenaphthylene	2016/06/02		99	%	50 - 130
				Acenaphthene	2016/06/02		110	%	50 - 130
				Acenaphthylene	2016/06/02		110	%	50 - 130

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QA/QC				Date				
Batch	Init	QC Type	Parameter	Analyzed	Value	Recovery	UNITS	QC Limits
4520648	JET	Method Blank	Anthracene	2016/06/02		112	%	50 - 130
			Benzo(a)anthracene	2016/06/02		116	%	50 - 130
			Benzo(a)pyrene	2016/06/02		119	%	50 - 130
			Benzo(b/j)fluoranthene	2016/06/02		123	%	50 - 130
			Benzo(g,h,i)perylene	2016/06/02		119	%	50 - 130
			Benzo(k)fluoranthene	2016/06/02		121	%	50 - 130
			Chrysene	2016/06/02		117	%	50 - 130
			Dibenz(a,h)anthracene	2016/06/02		108	%	50 - 130
			Fluoranthene	2016/06/02		122	%	50 - 130
			Fluorene	2016/06/02		112	%	50 - 130
			Indeno(1,2,3-cd)pyrene	2016/06/02		128	%	50 - 130
			1-Methylnaphthalene	2016/06/02		102	%	50 - 130
			2-Methylnaphthalene	2016/06/02		100	%	50 - 130
			Naphthalene	2016/06/02		96	%	50 - 130
			Phenanthrene	2016/06/02		111	%	50 - 130
			Pyrene	2016/06/02		120	%	50 - 130
			D10-Anthracene	2016/06/01		105	%	50 - 130
			D14-Terphenyl (FS)	2016/06/01		103	%	50 - 130
			D8-Acenaphthylene	2016/06/01		102	%	50 - 130
			Acenaphthene	2016/06/01		ND, RDL=0.050		ug/L
			Acenaphthylene	2016/06/01		ND, RDL=0.050		ug/L
			Anthracene	2016/06/01		ND, RDL=0.050		ug/L
			Benzo(a)anthracene	2016/06/01		ND, RDL=0.050		ug/L
			Benzo(a)pyrene	2016/06/01		ND, RDL=0.010		ug/L
			Benzo(b/j)fluoranthene	2016/06/01		ND, RDL=0.050		ug/L
			Benzo(g,h,i)perylene	2016/06/01		ND, RDL=0.050		ug/L
			Benzo(k)fluoranthene	2016/06/01		ND, RDL=0.050		ug/L
			Chrysene	2016/06/01		ND, RDL=0.050		ug/L
			Dibenz(a,h)anthracene	2016/06/01		ND, RDL=0.050		ug/L
			Fluoranthene	2016/06/01		ND, RDL=0.050		ug/L
			Fluorene	2016/06/01		ND, RDL=0.050		ug/L
			Indeno(1,2,3-cd)pyrene	2016/06/01		ND, RDL=0.050		ug/L
			1-Methylnaphthalene	2016/06/01		ND, RDL=0.050		ug/L
			2-Methylnaphthalene	2016/06/01		ND, RDL=0.050		ug/L

Maxxam Job #: B6A7201
Report Date: 2016/06/03

Terrapex Environmental Ltd
Client Project #: CB644.02
Site Location: 121 Hume Street, Collingwood, ON
Your P.O. #: 4700001396
Sampler Initials: PA

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
4520648	JET	RPD [CKU364-01]	Naphthalene	2016/06/01	ND, RDL=0.050		ug/L	
			Phenanthrene	2016/06/01	ND, RDL=0.030		ug/L	
			Pyrene	2016/06/01	ND, RDL=0.050		ug/L	
			Acenaphthene	2016/06/01	NC		%	30
			Acenaphthylene	2016/06/01	NC		%	30
			Anthracene	2016/06/01	NC		%	30
			Benzo(a)anthracene	2016/06/01	NC		%	30
			Benzo(a)pyrene	2016/06/01	NC		%	30
			Benzo(b,j)fluoranthene	2016/06/01	NC		%	30
			Benzo(g,h,i)perylene	2016/06/01	NC		%	30
			Benzo(k)fluoranthene	2016/06/01	NC		%	30
			Chrysene	2016/06/01	NC		%	30
			Dibenz(a,h)anthracene	2016/06/01	NC		%	30
			Fluoranthene	2016/06/01	NC		%	30
			Fluorene	2016/06/01	NC		%	30
			Indeno(1,2,3-cd)pyrene	2016/06/01	NC		%	30
			1-Methylnaphthalene	2016/06/01	NC		%	30
			2-Methylnaphthalene	2016/06/01	NC		%	30
			Naphthalene	2016/06/01	NC		%	30
			Phenanthrene	2016/06/01	NC		%	30
			Pyrene	2016/06/01	NC		%	30
4520892	ZZ	Matrix Spike	o-Terphenyl	2016/06/01		99	%	60 - 130
			F2 (C10-C16 Hydrocarbons)	2016/06/01		109	%	50 - 130
			F3 (C16-C34 Hydrocarbons)	2016/06/01		100	%	50 - 130
			F4 (C34-C50 Hydrocarbons)	2016/06/01		100	%	50 - 130
4520892	ZZ	Spiked Blank	o-Terphenyl	2016/06/01		102	%	60 - 130
			F2 (C10-C16 Hydrocarbons)	2016/06/01		113	%	60 - 130
			F3 (C16-C34 Hydrocarbons)	2016/06/01		105	%	60 - 130
			F4 (C34-C50 Hydrocarbons)	2016/06/01		103	%	60 - 130
4520892	ZZ	Method Blank	o-Terphenyl	2016/06/01		97	%	60 - 130
			F2 (C10-C16 Hydrocarbons)	2016/06/01	ND, RDL=100		ug/L	
			F3 (C16-C34 Hydrocarbons)	2016/06/01	ND, RDL=200		ug/L	
			F4 (C34-C50 Hydrocarbons)	2016/06/01	ND, RDL=200		ug/L	
4520892	ZZ	RPD	F2 (C10-C16 Hydrocarbons)	2016/06/02	NC		%	30
			F3 (C16-C34 Hydrocarbons)	2016/06/02	NC		%	30
			F4 (C34-C50 Hydrocarbons)	2016/06/02	NC		%	30
4521260	JOH	Spiked Blank	Soluble Calcium (Ca)	2016/06/02		97	%	80 - 120
			Soluble Magnesium (Mg)	2016/06/02		96	%	80 - 120
			Soluble Sodium (Na)	2016/06/02		92	%	80 - 120
4521260	JOH	Method Blank	Soluble Calcium (Ca)	2016/06/02	ND, RDL=0.5		mg/L	
			Soluble Magnesium (Mg)	2016/06/02	ND, RDL=0.5		mg/L	
			Soluble Sodium (Na)	2016/06/02	ND,RDL=5		mg/L	

Maxxam Job #: B6A7201
Report Date: 2016/06/03

Terrapex Environmental Ltd
Client Project #: CB644.02
Site Location: 121 Hume Street, Collingwood, ON
Your P.O. #: 4700001396
Sampler Initials: PA

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC	Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
4521260	JOH	RPD		Soluble Calcium (Ca)	2016/06/02	3.8		%	30
				Soluble Magnesium (Mg)	2016/06/02	NC		%	30
				Soluble Sodium (Na)	2016/06/02	NC		%	30
4521281	L_A	Spiked Blank		Conductivity	2016/06/02		100	%	90 - 110
4521281	L_A	Method Blank		Conductivity	2016/06/02	ND, RDL=0.002		mS/cm	
4521281	L_A	RPD		Conductivity	2016/06/02	0.40		%	10
4521902	JET	Matrix Spike		D10-Anthracene	2016/06/02		102	%	50 - 130
				D14-Terphenyl (FS)	2016/06/02		107	%	50 - 130
				D8-Acenaphthylene	2016/06/02		113	%	50 - 130
				Acenaphthene	2016/06/02		100	%	50 - 130
				Acenaphthylene	2016/06/02		111	%	50 - 130
				Anthracene	2016/06/02		107	%	50 - 130
				Benzo(a)anthracene	2016/06/02		111	%	50 - 130
				Benzo(a)pyrene	2016/06/02		101	%	50 - 130
				Benzo(b/j)fluoranthene	2016/06/02		95	%	50 - 130
				Benzo(g,h,i)perylene	2016/06/02		100	%	50 - 130
				Benzo(k)fluoranthene	2016/06/02		96	%	50 - 130
				Chrysene	2016/06/02		101	%	50 - 130
				Dibenz(a,h)anthracene	2016/06/02		102	%	50 - 130
				Fluoranthene	2016/06/02		106	%	50 - 130
				Fluorene	2016/06/02		104	%	50 - 130
				Indeno(1,2,3-cd)pyrene	2016/06/02		103	%	50 - 130
				1-Methylnaphthalene	2016/06/02		101	%	50 - 130
				2-Methylnaphthalene	2016/06/02		102	%	50 - 130
				Naphthalene	2016/06/02		99	%	50 - 130
				Phenanthrene	2016/06/02		103	%	50 - 130
				Pyrene	2016/06/02		106	%	50 - 130
				D10-Anthracene	2016/06/02		98	%	50 - 130
				D14-Terphenyl (FS)	2016/06/02		109	%	50 - 130
				D8-Acenaphthylene	2016/06/02		104	%	50 - 130
				Acenaphthene	2016/06/02		106	%	50 - 130
				Acenaphthylene	2016/06/02		105	%	50 - 130
				Anthracene	2016/06/02		106	%	50 - 130
				Benzo(a)anthracene	2016/06/02		107	%	50 - 130
				Benzo(a)pyrene	2016/06/02		106	%	50 - 130
				Benzo(b/j)fluoranthene	2016/06/02		105	%	50 - 130
				Benzo(g,h,i)perylene	2016/06/02		105	%	50 - 130
				Benzo(k)fluoranthene	2016/06/02		106	%	50 - 130
				Chrysene	2016/06/02		105	%	50 - 130
				Dibenz(a,h)anthracene	2016/06/02		106	%	50 - 130
				Fluoranthene	2016/06/02		107	%	50 - 130
				Fluorene	2016/06/02		105	%	50 - 130
				Indeno(1,2,3-cd)pyrene	2016/06/02		106	%	50 - 130
				1-Methylnaphthalene	2016/06/02		107	%	50 - 130
				2-Methylnaphthalene	2016/06/02		108	%	50 - 130
				Naphthalene	2016/06/02		107	%	50 - 130
				Phenanthrene	2016/06/02		105	%	50 - 130
				Pyrene	2016/06/02		106	%	50 - 130
4521902	JET	Method Blank		D10-Anthracene	2016/06/02		75	%	50 - 130
				D14-Terphenyl (FS)	2016/06/02		84	%	50 - 130

Maxxam Job #: B6A7201
Report Date: 2016/06/03

Terrapex Environmental Ltd
Client Project #: CB644.02
Site Location: 121 Hume Street, Collingwood, ON
Your P.O. #: 4700001396
Sampler Initials: PA

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
4521902	JET	RPD	D8-Acenaphthylene	2016/06/02		81	%	50 - 130
			Acenaphthene	2016/06/02	ND, RDL=0.0050		ug/g	
			Acenaphthylene	2016/06/02	ND, RDL=0.0050		ug/g	
			Anthracene	2016/06/02	ND, RDL=0.0050		ug/g	
			Benzo(a)anthracene	2016/06/02	ND, RDL=0.0050		ug/g	
			Benzo(a)pyrene	2016/06/02	ND, RDL=0.0050		ug/g	
			Benzo(b/j)fluoranthene	2016/06/02	ND, RDL=0.0050		ug/g	
			Benzo(g,h,i)perylene	2016/06/02	ND, RDL=0.0050		ug/g	
			Benzo(k)fluoranthene	2016/06/02	ND, RDL=0.0050		ug/g	
			Chrysene	2016/06/02	ND, RDL=0.0050		ug/g	
			Dibenz(a,h)anthracene	2016/06/02	ND, RDL=0.0050		ug/g	
			Fluoranthene	2016/06/02	ND, RDL=0.0050		ug/g	
			Fluorene	2016/06/02	ND, RDL=0.0050		ug/g	
			Indeno(1,2,3-cd)pyrene	2016/06/02	ND, RDL=0.0050		ug/g	
			1-Methylnaphthalene	2016/06/02	ND, RDL=0.0050		ug/g	
			2-Methylnaphthalene	2016/06/02	ND, RDL=0.0050		ug/g	
			Naphthalene	2016/06/02	ND, RDL=0.0050		ug/g	
			Phenanthrene	2016/06/02	ND, RDL=0.0050		ug/g	
			Pyrene	2016/06/02	ND, RDL=0.0050		ug/g	
			Acenaphthene	2016/06/02	NC		%	40
			Acenaphthylene	2016/06/02	NC		%	40
			Anthracene	2016/06/02	NC		%	40
			Benzo(a)anthracene	2016/06/02	NC		%	40
			Benzo(a)pyrene	2016/06/02	NC		%	40
			Benzo(b/j)fluoranthene	2016/06/02	NC		%	40
			Benzo(g,h,i)perylene	2016/06/02	NC		%	40
			Benzo(k)fluoranthene	2016/06/02	NC		%	40
			Chrysene	2016/06/02	NC		%	40
			Dibenz(a,h)anthracene	2016/06/02	NC		%	40
			Fluoranthene	2016/06/02	NC		%	40
			Fluorene	2016/06/02	NC		%	40

Maxxam Job #: B6A7201
Report Date: 2016/06/03

Terrapex Environmental Ltd
Client Project #: CB644.02
Site Location: 121 Hume Street, Collingwood, ON
Your P.O. #: 4700001396
Sampler Initials: PA

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Indeno(1,2,3-cd)pyrene	2016/06/02	NC		%	40
			1-Methylnaphthalene	2016/06/02	NC		%	40
			2-Methylnaphthalene	2016/06/02	NC		%	40
			Naphthalene	2016/06/02	NC		%	40
			Phenanthrene	2016/06/02	NC		%	40
			Pyrene	2016/06/02	NC		%	40

N/A = Not Applicable

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.

Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.

Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.

Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.

Surrogate: A pure or isotopically labeled compound whose behavior mirrors the analytes of interest. Used to evaluate extraction efficiency.

NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spiked amount was too small to permit a reliable recovery calculation (matrix spike concentration was less than 2x that of the native sample concentration).

NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (one or both samples < 5x RDL).

VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by the following individual(s).

Cristina Carriere

Cristina Carriere, Scientific Services

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

Page 1 of 1

INVOICE INFORMATION:		REPORT INFORMATION (if differs from invoice):		PROJECT INFORMATION:		Laboratory Use Only:	
Company Name	#14539 Suncor Energy Products Partnership	Company Name	#6557 Terrapex Environmental Ltd	Quotation #	B43750	Maxxam Job #:	Bottle Order #:
Contact Name	Ken Tedder	Contact Name	Jeff Stevenson	Task Order #			
Address:	3275 Rebecca St Oakville ON L6L 6N5	Address:	920 Brant Street Unit 16 Burlington ON L7R 4J1	Project #	CB644 02		
Phone:	(905) 469-3754	Phone:	(905) 632-5939 x 226	Site Location:	121 Hurrie Street, Collingwood, ON	COC #:	Project Manager:
Email:	ktedder@suncor.com	Email:	j.stevenson@terrapex.com	Outlet #	60680		
				Sampled By	PA		

MOE REGULATED DRINKING WATER OR WATER INTENDED FOR HUMAN CONSUMPTION MUST BE SUBMITTED ON THE MAXXAM DRINKING WATER CHAIN OF CUSTODY

Regulation 153 (2011)		Other Regulations		Activity	
☐ Table 1	☐ Res/Park	☐ Medium/Fine	☐ CCME	☐ Sanitary Sewer Bylaw	<i>Handwritten:</i> RE Assessment (circle one) A1, A2, AR, AV Remediations (circle one) <u>RE</u>, RX, RI, RA Contaminant Management (circle one) M, MW, MV
☒ Table 2	☒ Ind/Comm	☒ Coarse	☐ Reg 558	☐ Storm Sewer Bylaw	
☐ Table 3	☐ Agri/Other		☐ MISA	Municipality _____	
☐ Table _____			☐ PWQO	_____	
			☐ Other _____	_____	
				☒ For RSC	
Include Criteria on Certificate of Analysis (Y/N)? <u>Y</u>					

Field Filled (please circle):

Metals / Hg / Cr VI

153 Metals & Inorganics Plg (Wtr)

153 PAHs (Water)

153 Volatile Organics (Water)

Handwritten: 153 PHEs (V, F, G)

Please provide advance notice for rush projects

Regular (Standard) TAT:

(will be applied if Rush TAT is not specified):

Standard TAT = 5-7 Working days for most tests.

Please note: Standard TAT for certain tests such as BOD and Dioxins/Furans are > 5 days - contact your Project Manager for details.

Rush TAT

2 Day ☐ 1 DAY ☐ SameDay ☐

Date Required: _____ Time Required: _____

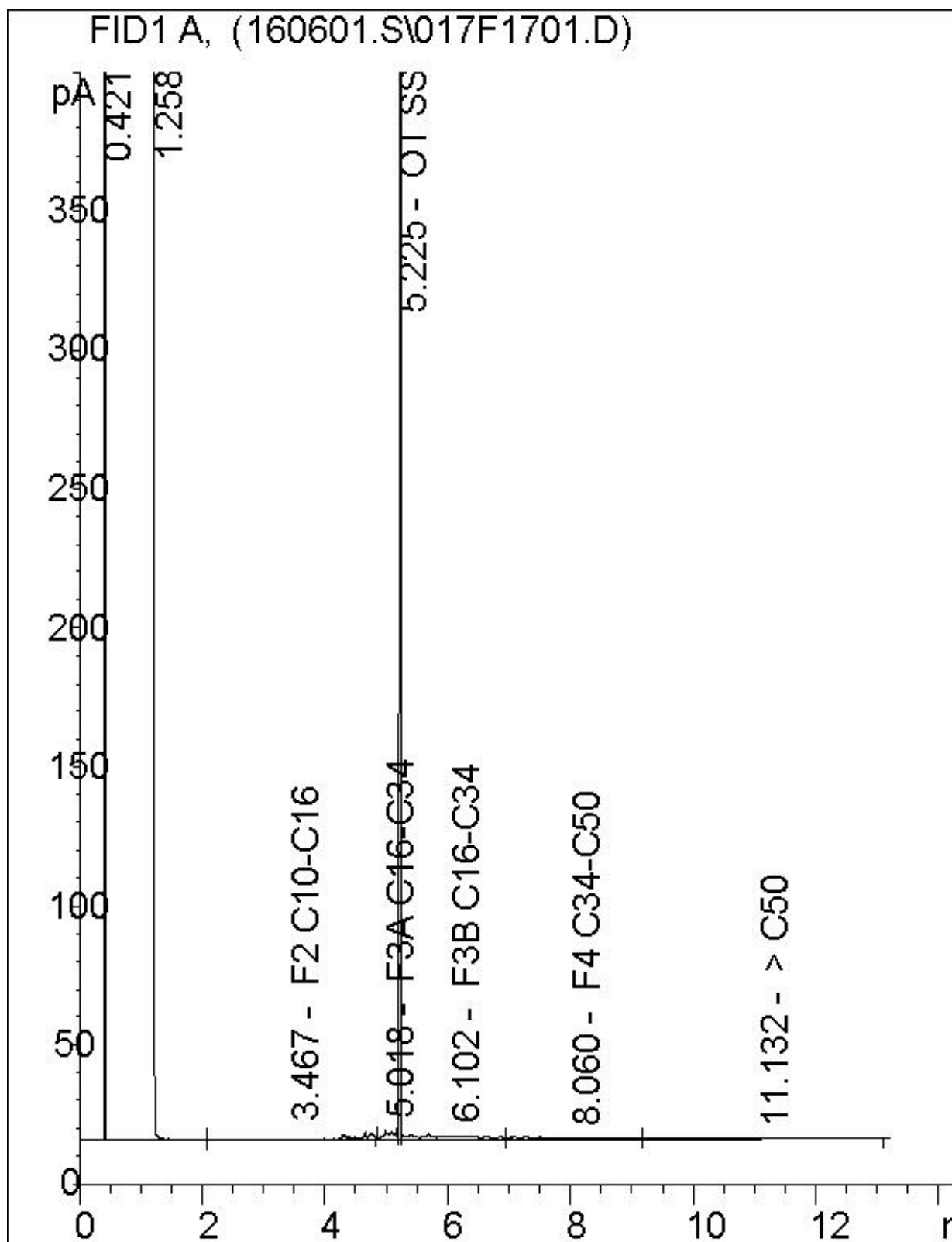
Rush Confirmation Number: _____

(call lab for #)

[illegible]

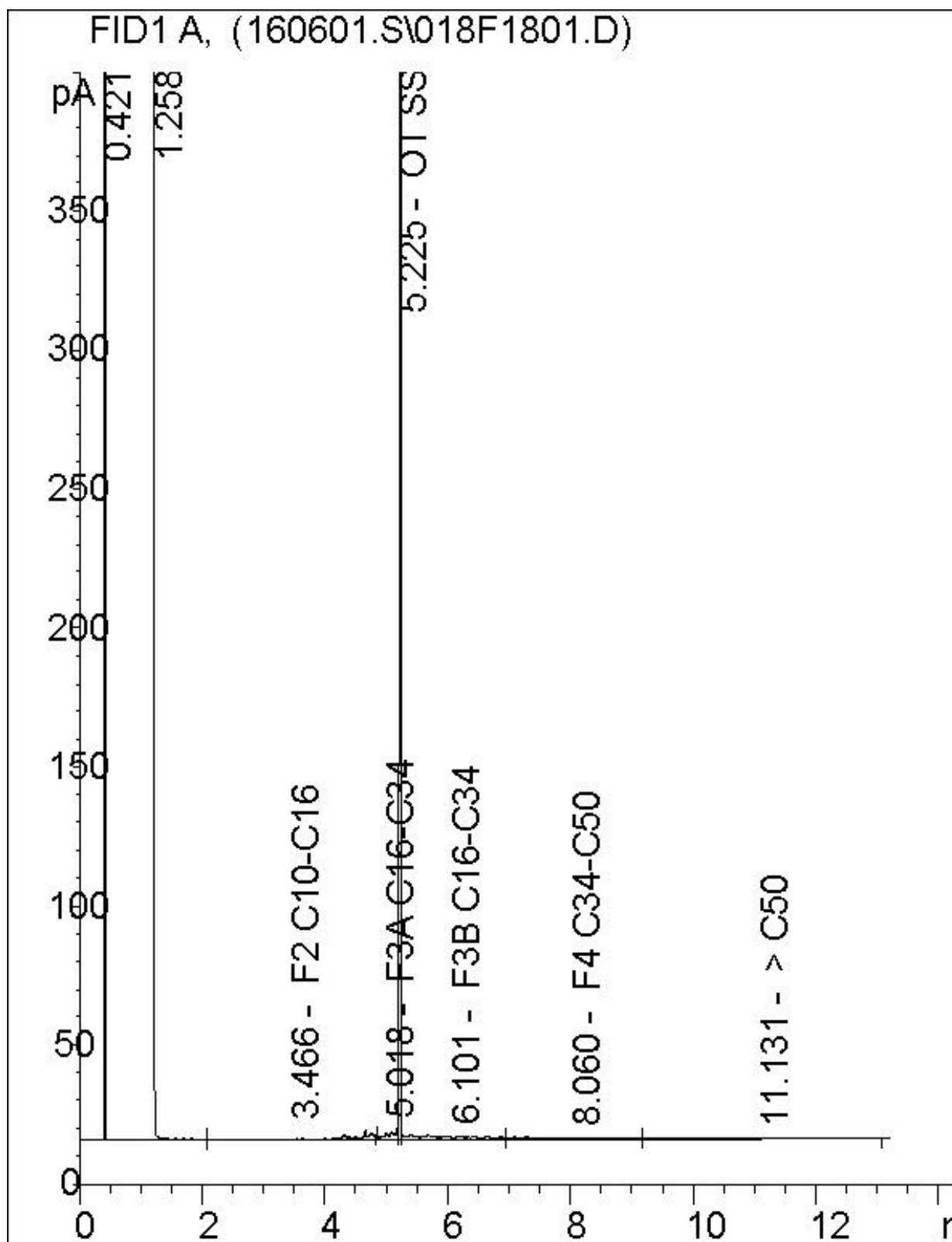
* RELINQUISHED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	RECEIVED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	# Jars used and not submitted	Laboratory Use Only				
Philip Arks <i>[Signature]</i>	16/05/26	13:00	The NUSRAT MAR	26/05/27	09:40	<i>[Signature]</i>	Time Sensitive	Temperature (°C) on Receipt	Custody Seal	Yes	No
								0/2/2	Present	☒	
									Intact	☒	
* IT IS THE RESPONSIBILITY OF THE RELINQUISHER TO ENSURE THE ACCURACY OF THE CHAIN OF CUSTODY RECORD. AN INCOMPLETE CHAIN OF CUSTODY MAY RESULT IN ANALYTICAL TAT DELAYS						SAMPLES MUST BE KEPT COOL (< 10° C) FROM TIME OF SAMPLING UNTIL DELIVERY TO MAXXAM		White: Maxxam Yellow: Client			

Petroleum Hydrocarbons F2-F4 in Water Chromatogram



Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Petroleum Hydrocarbons F2-F4 in Water Chromatogram



Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Attention: Jeff Stevenson

Terrapex Environmental Ltd
920 Brant Street
Unit 16
Burlington, ON
CANADA L7R 4J1

Your P.O. #: 4700001396

Your Project #: CB644.02

Site#: 60680

Site Location: 121 Hume Street, Collingwood, ON

Your C.O.C. #: 562385-01-01

Report Date: 2016/06/03

Report #: R4013953

Version: 1 - Final

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B6A7363

Received: 2016/05/27, 09:40

Sample Matrix: Water

Samples Received: 5

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Reference
Methylnaphthalene Sum	2	N/A	2016/06/02	CAM SOP-00301	EPA 8270D m
1,3-Dichloropropene Sum	4	N/A	2016/06/02		EPA 8260C m
Chloride by Automated Colourimetry	3	N/A	2016/05/31	CAM SOP-00463	EPA 325.2 m
Chromium (VI) in Water	3	N/A	2016/05/31	CAM SOP-00436	EPA 7199 m
Free (WAD) Cyanide	3	N/A	2016/05/30	CAM SOP-00457	OMOE E3015 m
Petroleum Hydro. CCME F1 & BTEX in Water	2	N/A	2016/06/01	CAM SOP-00315	CCME PHC-CWS m
Petroleum Hydrocarbons F2-F4 in Water (1)	2	2016/06/01	2016/06/02	CAM SOP-00316	CCME PHC-CWS m
Mercury	1	2016/05/31	2016/06/02	CAM SOP-00453	EPA 7470A m
Mercury	2	2016/06/01	2016/06/02	CAM SOP-00453	EPA 7470A m
Dissolved Metals by ICPMS	3	N/A	2016/06/01	CAM SOP-00447	EPA 6020A m
PAH Compounds in Water by GC/MS (SIM)	1	2016/06/01	2016/06/01	CAM SOP-00318	EPA 8270D m
PAH Compounds in Water by GC/MS (SIM)	1	2016/06/01	2016/06/02	CAM SOP-00318	EPA 8270D m
Volatile Organic Compounds in Water	4	N/A	2016/05/30	CAM SOP-00228	EPA 8260C m

Remarks:

Maxxam Analytics has performed all analytical testing herein in accordance with ISO 17025 and the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act. All methodologies comply with this document and are validated for use in the laboratory. The methods and techniques employed in this analysis conform to the performance criteria (detection limits, accuracy and precision) as outlined in the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act.

Maxxam Analytics is accredited for all specific parameters as required by Ontario Regulation 153/04. Maxxam Analytics is limited in liability to the actual cost of analysis unless otherwise agreed in writing. There is no other warranty expressed or implied. Samples will be retained at Maxxam Analytics for three weeks from receipt of data or as per contract.

Reference Method suffix "m" indicates test methods incorporate validated modifications from specific reference methods to improve performance.

* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.

(1) All CCME PHC results met required criteria unless otherwise stated in the report. The CWS PHC methods employed by Maxxam conform to all prescribed elements of the reference method and performance based elements have been validated. All modifications have been validated and proven equivalent following "Alberta Environment's Interpretation of the Reference Method for the Canada-Wide Standard for Petroleum Hydrocarbons in Soil Validation of Performance-Based Alternative Methods September 2003". Documentation is available upon request. Modifications from Reference Method for the Canada-wide Standard for Petroleum Hydrocarbons in Soil-Tier 1 Method: F2/F3/F4 data reported using validated cold solvent extraction instead of Soxhlet extraction.

Attention: Jeff Stevenson

Terrapex Environmental Ltd
920 Brant Street
Unit 16
Burlington, ON
CANADA L7R 4J1

Your P.O. #: 4700001396

Your Project #: CB644.02

Site#: 60680

Site Location: 121 Hume Street, Collingwood, ON

Your C.O.C. #: 562385-01-01

Report Date: 2016/06/03

Report #: R4013953

Version: 1 - Final

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B6A7363

Received: 2016/05/27, 09:40

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.

Marissa Oddi, Customer Service Representative

Email: moddi@maxxam.ca

Phone# (905) 817-5700

=====

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

O.REG 153 METALS & INORGANICS PKG (WTR)

Maxxam ID		CKV220	CKV220		CKV221		CKV222		
Sampling Date		2016/05/26 08:30	2016/05/26 08:30		2016/05/26 08:30		2016/05/26 10:00		
COC Number		562385-01-01	562385-01-01		562385-01-01		562385-01-01		
	UNITS	MW404	MW404 Lab-Dup	QC Batch	MW1000	QC Batch	MW403	RDL	QC Batch
Inorganics									
Free Cyanide	ug/L	ND	ND	4516392	ND	4516392	ND	2	4516392
Dissolved Chloride (Cl)	mg/L	96		4518124	97	4518124	87	1.0	4518124
Metals									
Chromium (VI)	ug/L	ND		4516402	ND	4516402	ND	0.50	4516402
Mercury (Hg)	ug/L	ND	ND	4520376	ND	4518905	ND	0.1	4520376
Dissolved Antimony (Sb)	ug/L	ND		4519452	0.64	4519452	ND	0.50	4519452
Dissolved Arsenic (As)	ug/L	ND		4519452	1.4	4519452	3.8	1.0	4519452
Dissolved Barium (Ba)	ug/L	ND		4519452	76	4519452	94	2.0	4519452
Dissolved Beryllium (Be)	ug/L	ND		4519452	ND	4519452	ND	0.50	4519452
Dissolved Boron (B)	ug/L	ND		4519452	150	4519452	87	10	4519452
Dissolved Cadmium (Cd)	ug/L	ND		4519452	ND	4519452	ND	0.10	4519452
Dissolved Chromium (Cr)	ug/L	ND		4519452	ND	4519452	ND	5.0	4519452
Dissolved Cobalt (Co)	ug/L	ND		4519452	0.54	4519452	1.4	0.50	4519452
Dissolved Copper (Cu)	ug/L	ND		4519452	1.2	4519452	1.6	1.0	4519452
Dissolved Lead (Pb)	ug/L	ND		4519452	ND	4519452	0.58	0.50	4519452
Dissolved Molybdenum (Mo)	ug/L	ND		4519452	4.4	4519452	5.9	0.50	4519452
Dissolved Nickel (Ni)	ug/L	ND		4519452	1.1	4519452	1.8	1.0	4519452
Dissolved Selenium (Se)	ug/L	ND		4519452	ND	4519452	ND	2.0	4519452
Dissolved Silver (Ag)	ug/L	ND		4519452	ND	4519452	ND	0.10	4519452
Dissolved Sodium (Na)	ug/L	380		4519452	54000	4519452	62000	100	4519452
Dissolved Thallium (Tl)	ug/L	ND		4519452	ND	4519452	ND	0.050	4519452
Dissolved Uranium (U)	ug/L	ND		4519452	1.2	4519452	1.2	0.10	4519452
Dissolved Vanadium (V)	ug/L	ND		4519452	1.0	4519452	1.0	0.50	4519452
Dissolved Zinc (Zn)	ug/L	ND		4519452	ND	4519452	7.1	5.0	4519452
RDL = Reportable Detection Limit QC Batch = Quality Control Batch Lab-Dup = Laboratory Initiated Duplicate ND = Not detected									

O.REG 153 PAHS (WATER)

Maxxam ID		CKV220	CKV221		
Sampling Date		2016/05/26 08:30	2016/05/26 08:30		
COC Number		562385-01-01	562385-01-01		
	UNITS	MW404	MW1000	RDL	QC Batch
Calculated Parameters					
Methylnaphthalene, 2-(1-)	ug/L	ND	ND	0.071	4515022
Polyaromatic Hydrocarbons					
Acenaphthene	ug/L	ND	ND	0.050	4520648
Acenaphthylene	ug/L	ND	ND	0.050	4520648
Anthracene	ug/L	ND	ND	0.050	4520648
Benzo(a)anthracene	ug/L	ND	ND	0.050	4520648
Benzo(a)pyrene	ug/L	ND	ND	0.010	4520648
Benzo(b/j)fluoranthene	ug/L	ND	ND	0.050	4520648
Benzo(g,h,i)perylene	ug/L	ND	ND	0.050	4520648
Benzo(k)fluoranthene	ug/L	ND	ND	0.050	4520648
Chrysene	ug/L	ND	ND	0.050	4520648
Dibenz(a,h)anthracene	ug/L	ND	ND	0.050	4520648
Fluoranthene	ug/L	ND	ND	0.050	4520648
Fluorene	ug/L	ND	ND	0.050	4520648
Indeno(1,2,3-cd)pyrene	ug/L	ND	ND	0.050	4520648
1-Methylnaphthalene	ug/L	ND	ND	0.050	4520648
2-Methylnaphthalene	ug/L	ND	ND	0.050	4520648
Naphthalene	ug/L	ND	ND	0.050	4520648
Phenanthrene	ug/L	ND	ND	0.030	4520648
Pyrene	ug/L	ND	ND	0.050	4520648
Surrogate Recovery (%)					
D10-Anthracene	%	106	101		4520648
D14-Terphenyl (FS)	%	102	97		4520648
D8-Acenaphthylene	%	104	98		4520648
RDL = Reportable Detection Limit QC Batch = Quality Control Batch ND = Not detected					

O.REG 153 PETROLEUM HYDROCARBONS (WATER)

Maxxam ID		CKV220	CKV222		
Sampling Date		2016/05/26 08:30	2016/05/26 10:00		
COC Number		562385-01-01	562385-01-01		
	UNITS	MW404	MW403	RDL	QC Batch
BTEX & F1 Hydrocarbons					
F1 (C6-C10)	ug/L	ND	ND	25	4520303
F1 (C6-C10) - BTEX	ug/L	ND	ND	25	4520303
F2-F4 Hydrocarbons					
F2 (C10-C16 Hydrocarbons)	ug/L	ND	ND	100	4520892
F3 (C16-C34 Hydrocarbons)	ug/L	ND	ND	200	4520892
F4 (C34-C50 Hydrocarbons)	ug/L	ND	ND	200	4520892
Reached Baseline at C50	ug/L	Yes	Yes		4520892
Surrogate Recovery (%)					
1,4-Difluorobenzene	%	99	98		4520303
4-Bromofluorobenzene	%	102	100		4520303
D10-Ethylbenzene	%	96	96		4520303
D4-1,2-Dichloroethane	%	96	94		4520303
o-Terphenyl	%	98	97		4520892
RDL = Reportable Detection Limit QC Batch = Quality Control Batch ND = Not detected					

O.REG 153 VOLATILE ORGANICS (WATER)

Maxxam ID		CKV220	CKV222	CKV222	CKV223	CKV224		
Sampling Date		2016/05/26 08:30	2016/05/26 10:00	2016/05/26 10:00	2016/05/26 11:30	2016/05/26 11:30		
COC Number		562385-01-01	562385-01-01	562385-01-01	562385-01-01	562385-01-01		
	UNITS	MW404	MW403	MW403 Lab-Dup	MW3000	TRIP BLANK	RDL	QC Batch

Calculated Parameters								
1,3-Dichloropropene (cis+trans)	ug/L	ND	ND		ND	ND	0.50	4515032
Volatile Organics								
Acetone (2-Propanone)	ug/L	ND	31	29	ND	ND	10	4516635
Benzene	ug/L	2.2	ND	ND	ND	ND	0.20	4516635
Bromodichloromethane	ug/L	ND	ND	ND	ND	ND	0.50	4516635
Bromoform	ug/L	ND	ND	ND	ND	ND	1.0	4516635
Bromomethane	ug/L	ND	ND	ND	ND	ND	0.50	4516635
Carbon Tetrachloride	ug/L	ND	ND	ND	ND	ND	0.20	4516635
Chlorobenzene	ug/L	ND	ND	ND	ND	ND	0.20	4516635
Chloroform	ug/L	ND	ND	ND	ND	ND	0.20	4516635
Dibromochloromethane	ug/L	ND	ND	ND	ND	ND	0.50	4516635
1,2-Dichlorobenzene	ug/L	ND	ND	ND	ND	ND	0.50	4516635
1,3-Dichlorobenzene	ug/L	ND	ND	ND	ND	ND	0.50	4516635
1,4-Dichlorobenzene	ug/L	ND	ND	ND	ND	ND	0.50	4516635
Dichlorodifluoromethane (FREON 12)	ug/L	ND	ND	ND	ND	ND	1.0	4516635
1,1-Dichloroethane	ug/L	ND	ND	ND	ND	ND	0.20	4516635
1,2-Dichloroethane	ug/L	ND	ND	ND	ND	ND	0.50	4516635
1,1-Dichloroethylene	ug/L	ND	ND	ND	ND	ND	0.20	4516635
cis-1,2-Dichloroethylene	ug/L	ND	ND	ND	ND	ND	0.50	4516635
trans-1,2-Dichloroethylene	ug/L	ND	ND	ND	ND	ND	0.50	4516635
1,2-Dichloropropane	ug/L	ND	ND	ND	ND	ND	0.20	4516635
cis-1,3-Dichloropropene	ug/L	ND	ND	ND	ND	ND	0.30	4516635
trans-1,3-Dichloropropene	ug/L	ND	ND	ND	ND	ND	0.40	4516635
Ethylbenzene	ug/L	ND	0.23	0.24	ND	ND	0.20	4516635
Ethylene Dibromide	ug/L	ND	ND	ND	ND	ND	0.20	4516635
Hexane	ug/L	ND	ND	ND	ND	ND	1.0	4516635
Methylene Chloride(Dichloromethane)	ug/L	ND	ND	ND	ND	ND	2.0	4516635
Methyl Ethyl Ketone (2-Butanone)	ug/L	ND	ND	ND	ND	ND	10	4516635
Methyl Isobutyl Ketone	ug/L	ND	ND	ND	ND	ND	5.0	4516635
Methyl t-butyl ether (MTBE)	ug/L	ND	ND	ND	ND	ND	0.50	4516635
Styrene	ug/L	ND	ND	ND	ND	ND	0.50	4516635

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate
ND = Not detected

O.REG 153 VOLATILE ORGANICS (WATER)

Maxxam ID		CKV220	CKV222	CKV222	CKV223	CKV224		
Sampling Date		2016/05/26 08:30	2016/05/26 10:00	2016/05/26 10:00	2016/05/26 11:30	2016/05/26 11:30		
COC Number		562385-01-01	562385-01-01	562385-01-01	562385-01-01	562385-01-01		
	UNITS	MW404	MW403	MW403 Lab-Dup	MW3000	TRIP BLANK	RDL	QC Batch
1,1,1,2-Tetrachloroethane	ug/L	ND	ND	ND	ND	ND	0.50	4516635
1,1,2,2-Tetrachloroethane	ug/L	ND	ND	ND	ND	ND	0.50	4516635
Tetrachloroethylene	ug/L	ND	ND	ND	ND	ND	0.20	4516635
Toluene	ug/L	0.43	ND	ND	ND	ND	0.20	4516635
1,1,1-Trichloroethane	ug/L	ND	ND	ND	ND	ND	0.20	4516635
1,1,2-Trichloroethane	ug/L	ND	ND	ND	ND	ND	0.50	4516635
Trichloroethylene	ug/L	ND	ND	ND	ND	ND	0.20	4516635
Trichlorofluoromethane (FREON 11)	ug/L	ND	ND	ND	ND	ND	0.50	4516635
Vinyl Chloride	ug/L	ND	ND	ND	ND	ND	0.20	4516635
p+m-Xylene	ug/L	ND	0.35	0.35	ND	ND	0.20	4516635
o-Xylene	ug/L	ND	ND	ND	ND	ND	0.20	4516635
Total Xylenes	ug/L	ND	0.35	0.35	ND	ND	0.20	4516635
Surrogate Recovery (%)								
4-Bromofluorobenzene	%	89	91	91	89	93		4516635
D4-1,2-Dichloroethane	%	107	111	110	107	104		4516635
D8-Toluene	%	100	98	98	99	99		4516635
RDL = Reportable Detection Limit QC Batch = Quality Control Batch Lab-Dup = Laboratory Initiated Duplicate ND = Not detected								

Maxxam Job #: B6A7363
Report Date: 2016/06/03

Terrapex Environmental Ltd
Client Project #: CB644.02
Site Location: 121 Hume Street, Collingwood, ON
Your P.O. #: 4700001396
Sampler Initials: PA

TEST SUMMARY

Maxxam ID: CKV220
Sample ID: MW404
Matrix: Water

Collected: 2016/05/26
Shipped:
Received: 2016/05/27

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	4515022	N/A	2016/06/02	Automated Statchk
1,3-Dichloropropene Sum	CALC	4515032	N/A	2016/06/02	Automated Statchk
Chloride by Automated Colourimetry	KONE	4518124	N/A	2016/05/31	Deonarine Ramnarine
Chromium (VI) in Water	IC	4516402	N/A	2016/05/31	Sally Coughlin
Free (WAD) Cyanide	TECH/CN	4516392	N/A	2016/05/30	Christine Pham
Petroleum Hydro. CCME F1 & BTEX in Water	HSGC/MSFD	4520303	N/A	2016/06/01	Haibin Wu
Petroleum Hydrocarbons F2-F4 in Water	GC/FID	4520892	2016/06/01	2016/06/02	Zhiyue (Frank) Zhu
Mercury	CV/AA	4520376	2016/06/01	2016/06/02	Magdalena Carlos
Dissolved Metals by ICPMS	ICP/MS	4519452	N/A	2016/06/01	Prempal Bhatti
PAH Compounds in Water by GC/MS (SIM)	GC/MS	4520648	2016/06/01	2016/06/01	Jett Wu
Volatile Organic Compounds in Water	GC/MS	4516635	N/A	2016/05/30	Karen Hughes

Maxxam ID: CKV220 Dup
Sample ID: MW404
Matrix: Water

Collected: 2016/05/26
Shipped:
Received: 2016/05/27

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Free (WAD) Cyanide	TECH/CN	4516392	N/A	2016/05/30	Christine Pham
Mercury	CV/AA	4520376	2016/06/02	2016/06/02	Magdalena Carlos

Maxxam ID: CKV221
Sample ID: MW1000
Matrix: Water

Collected: 2016/05/26
Shipped:
Received: 2016/05/27

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	4515022	N/A	2016/06/02	Automated Statchk
Chloride by Automated Colourimetry	KONE	4518124	N/A	2016/05/31	Deonarine Ramnarine
Chromium (VI) in Water	IC	4516402	N/A	2016/05/31	Sally Coughlin
Free (WAD) Cyanide	TECH/CN	4516392	N/A	2016/05/30	Christine Pham
Mercury	CV/AA	4518905	2016/05/31	2016/06/02	Magdalena Carlos
Dissolved Metals by ICPMS	ICP/MS	4519452	N/A	2016/06/01	Prempal Bhatti
PAH Compounds in Water by GC/MS (SIM)	GC/MS	4520648	2016/06/01	2016/06/02	Jett Wu

Maxxam ID: CKV222
Sample ID: MW403
Matrix: Water

Collected: 2016/05/26
Shipped:
Received: 2016/05/27

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
1,3-Dichloropropene Sum	CALC	4515032	N/A	2016/06/02	Automated Statchk
Chloride by Automated Colourimetry	KONE	4518124	N/A	2016/05/31	Deonarine Ramnarine
Chromium (VI) in Water	IC	4516402	N/A	2016/05/31	Sally Coughlin
Free (WAD) Cyanide	TECH/CN	4516392	N/A	2016/05/30	Christine Pham
Petroleum Hydro. CCME F1 & BTEX in Water	HSGC/MSFD	4520303	N/A	2016/06/01	Haibin Wu
Petroleum Hydrocarbons F2-F4 in Water	GC/FID	4520892	2016/06/01	2016/06/02	Zhiyue (Frank) Zhu

Maxxam Job #: B6A7363
Report Date: 2016/06/03

Terrapex Environmental Ltd
Client Project #: CB644.02
Site Location: 121 Hume Street, Collingwood, ON
Your P.O. #: 4700001396
Sampler Initials: PA

TEST SUMMARY

Maxxam ID: CKV222
Sample ID: MW403
Matrix: Water

Collected: 2016/05/26
Shipped:
Received: 2016/05/27

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Mercury	CV/AA	4520376	2016/06/01	2016/06/02	Magdalena Carlos
Dissolved Metals by ICPMS	ICP/MS	4519452	N/A	2016/06/01	Prempal Bhatti
Volatile Organic Compounds in Water	GC/MS	4516635	N/A	2016/05/30	Karen Hughes

Maxxam ID: CKV222 Dup
Sample ID: MW403
Matrix: Water

Collected: 2016/05/26
Shipped:
Received: 2016/05/27

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Volatile Organic Compounds in Water	GC/MS	4516635	N/A	2016/05/30	Karen Hughes

Maxxam ID: CKV223
Sample ID: MW3000
Matrix: Water

Collected: 2016/05/26
Shipped:
Received: 2016/05/27

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
1,3-Dichloropropene Sum	CALC	4515032	N/A	2016/06/02	Automated Statchk
Volatile Organic Compounds in Water	GC/MS	4516635	N/A	2016/05/30	Karen Hughes

Maxxam ID: CKV224
Sample ID: TRIP BLANK
Matrix: Water

Collected: 2016/05/26
Shipped:
Received: 2016/05/27

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
1,3-Dichloropropene Sum	CALC	4515032	N/A	2016/06/02	Automated Statchk
Volatile Organic Compounds in Water	GC/MS	4516635	N/A	2016/05/30	Karen Hughes

Maxxam Job #: B6A7363
Report Date: 2016/06/03

Terrapex Environmental Ltd
Client Project #: CB644.02
Site Location: 121 Hume Street, Collingwood, ON
Your P.O. #: 4700001396
Sampler Initials: PA

GENERAL COMMENTS

Each temperature is the average of up to three cooler temperatures taken at receipt

Package 1	1.3°C

Results relate only to the items tested.

Maxxam Job #: B6A7363
Report Date: 2016/06/03

Terrapex Environmental Ltd
Client Project #: CB644.02
Site Location: 121 Hume Street, Collingwood, ON
Your P.O. #: 4700001396
Sampler Initials: PA

QUALITY ASSURANCE REPORT

QA/QC	Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
	4516392	CP	Matrix Spike [CKV220-03]	Free Cyanide	2016/05/30		100	%	80 - 120
	4516392	CP	Spiked Blank	Free Cyanide	2016/05/30		100	%	80 - 120
	4516392	CP	Method Blank	Free Cyanide	2016/05/30	ND,RDL=2		ug/L	
	4516392	CP	RPD [CKV220-03]	Free Cyanide	2016/05/30	NC		%	20
	4516402	SAC	Matrix Spike	Chromium (VI)	2016/05/31		100	%	80 - 120
	4516402	SAC	Spiked Blank	Chromium (VI)	2016/05/31		101	%	80 - 120
	4516402	SAC	Method Blank	Chromium (VI)	2016/05/31	ND, RDL=0.50		ug/L	
	4516402	SAC	RPD	Chromium (VI)	2016/05/31	NC		%	20
	4516635	KH2	Matrix Spike [CKV220-08]	4-Bromofluorobenzene	2016/05/30		98	%	70 - 130
				D4-1,2-Dichloroethane	2016/05/30		105	%	70 - 130
				D8-Toluene	2016/05/30		105	%	70 - 130
				Acetone (2-Propanone)	2016/05/30		108	%	60 - 140
				Benzene	2016/05/30		99	%	70 - 130
				Bromodichloromethane	2016/05/30		100	%	70 - 130
				Bromoform	2016/05/30		96	%	70 - 130
				Bromomethane	2016/05/30		86	%	60 - 140
				Carbon Tetrachloride	2016/05/30		95	%	70 - 130
				Chlorobenzene	2016/05/30		102	%	70 - 130
				Chloroform	2016/05/30		98	%	70 - 130
				Dibromochloromethane	2016/05/30		99	%	70 - 130
				1,2-Dichlorobenzene	2016/05/30		99	%	70 - 130
				1,3-Dichlorobenzene	2016/05/30		99	%	70 - 130
				1,4-Dichlorobenzene	2016/05/30		104	%	70 - 130
				Dichlorodifluoromethane (FREON 12)	2016/05/30		86	%	60 - 140
				1,1-Dichloroethane	2016/05/30		101	%	70 - 130
				1,2-Dichloroethane	2016/05/30		103	%	70 - 130
				1,1-Dichloroethylene	2016/05/30		104	%	70 - 130
				cis-1,2-Dichloroethylene	2016/05/30		96	%	70 - 130
				trans-1,2-Dichloroethylene	2016/05/30		95	%	70 - 130
				1,2-Dichloropropane	2016/05/30		104	%	70 - 130
				cis-1,3-Dichloropropene	2016/05/30		105	%	70 - 130
				trans-1,3-Dichloropropene	2016/05/30		109	%	70 - 130
				Ethylbenzene	2016/05/30		105	%	70 - 130
				Ethylene Dibromide	2016/05/30		104	%	70 - 130
				Hexane	2016/05/30		110	%	70 - 130
				Methylene Chloride(Dichloromethane)	2016/05/30		93	%	70 - 130
				Methyl Ethyl Ketone (2-Butanone)	2016/05/30		120	%	60 - 140
				Methyl Isobutyl Ketone	2016/05/30		118	%	70 - 130
				Methyl t-butyl ether (MTBE)	2016/05/30		102	%	70 - 130
				Styrene	2016/05/30		104	%	70 - 130
				1,1,1,2-Tetrachloroethane	2016/05/30		96	%	70 - 130
				1,1,2,2-Tetrachloroethane	2016/05/30		109	%	70 - 130
				Tetrachloroethylene	2016/05/30		91	%	70 - 130
				Toluene	2016/05/30		99	%	70 - 130
				1,1,1-Trichloroethane	2016/05/30		93	%	70 - 130
				1,1,2-Trichloroethane	2016/05/30		111	%	70 - 130
				Trichloroethylene	2016/05/30		90	%	70 - 130
				Trichlorofluoromethane (FREON 11)	2016/05/30		96	%	70 - 130
				Vinyl Chloride	2016/05/30		105	%	70 - 130
				p+m-Xylene	2016/05/30		105	%	70 - 130

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC				Date				
Batch	Init	QC Type	Parameter	Analyzed	Value	Recovery	UNITS	QC Limits
4516635	KH2	Spiked Blank	o-Xylene	2016/05/30		103	%	70 - 130
			4-Bromofluorobenzene	2016/05/30		98	%	70 - 130
			D4-1,2-Dichloroethane	2016/05/30		105	%	70 - 130
			D8-Toluene	2016/05/30		106	%	70 - 130
			Acetone (2-Propanone)	2016/05/30		116	%	60 - 140
			Benzene	2016/05/30		99	%	70 - 130
			Bromodichloromethane	2016/05/30		100	%	70 - 130
			Bromoform	2016/05/30		96	%	70 - 130
			Bromomethane	2016/05/30		86	%	60 - 140
			Carbon Tetrachloride	2016/05/30		94	%	70 - 130
			Chlorobenzene	2016/05/30		101	%	70 - 130
			Chloroform	2016/05/30		98	%	70 - 130
			Dibromochloromethane	2016/05/30		99	%	70 - 130
			1,2-Dichlorobenzene	2016/05/30		98	%	70 - 130
			1,3-Dichlorobenzene	2016/05/30		99	%	70 - 130
			1,4-Dichlorobenzene	2016/05/30		105	%	70 - 130
			Dichlorodifluoromethane (FREON 12)	2016/05/30		89	%	60 - 140
			1,1-Dichloroethane	2016/05/30		101	%	70 - 130
			1,2-Dichloroethane	2016/05/30		103	%	70 - 130
			1,1-Dichloroethylene	2016/05/30		103	%	70 - 130
			cis-1,2-Dichloroethylene	2016/05/30		96	%	70 - 130
			trans-1,2-Dichloroethylene	2016/05/30		94	%	70 - 130
			1,2-Dichloropropane	2016/05/30		103	%	70 - 130
			cis-1,3-Dichloropropene	2016/05/30		104	%	70 - 130
			trans-1,3-Dichloropropene	2016/05/30		106	%	70 - 130
			Ethylbenzene	2016/05/30		104	%	70 - 130
			Ethylene Dibromide	2016/05/30		104	%	70 - 130
			Hexane	2016/05/30		107	%	70 - 130
			Methylene Chloride(Dichloromethane)	2016/05/30		93	%	70 - 130
			Methyl Ethyl Ketone (2-Butanone)	2016/05/30		128	%	60 - 140
			Methyl Isobutyl Ketone	2016/05/30		120	%	70 - 130
			Methyl t-butyl ether (MTBE)	2016/05/30		103	%	70 - 130
			Styrene	2016/05/30		104	%	70 - 130
			1,1,1,2-Tetrachloroethane	2016/05/30		97	%	70 - 130
			1,1,2,2-Tetrachloroethane	2016/05/30		110	%	70 - 130
			Tetrachloroethylene	2016/05/30		90	%	70 - 130
			Toluene	2016/05/30		98	%	70 - 130
			1,1,1-Trichloroethane	2016/05/30		94	%	70 - 130
			1,1,2-Trichloroethane	2016/05/30		109	%	70 - 130
			Trichloroethylene	2016/05/30		90	%	70 - 130
			Trichlorofluoromethane (FREON 11)	2016/05/30		95	%	70 - 130
			Vinyl Chloride	2016/05/30		104	%	70 - 130
			p+m-Xylene	2016/05/30		104	%	70 - 130
4516635	KH2	Method Blank	o-Xylene	2016/05/30		104	%	70 - 130
			4-Bromofluorobenzene	2016/05/30		93	%	70 - 130
			D4-1,2-Dichloroethane	2016/05/30		107	%	70 - 130
			D8-Toluene	2016/05/30		100	%	70 - 130
			Acetone (2-Propanone)	2016/05/30	ND, RDL=10		ug/L	
			Benzene	2016/05/30	ND, RDL=0.20		ug/L	

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Bromodichloromethane	2016/05/30	ND, RDL=0.50		ug/L	
			Bromoform	2016/05/30	ND, RDL=1.0		ug/L	
			Bromomethane	2016/05/30	ND, RDL=0.50		ug/L	
			Carbon Tetrachloride	2016/05/30	ND, RDL=0.20		ug/L	
			Chlorobenzene	2016/05/30	ND, RDL=0.20		ug/L	
			Chloroform	2016/05/30	ND, RDL=0.20		ug/L	
			Dibromochloromethane	2016/05/30	ND, RDL=0.50		ug/L	
			1,2-Dichlorobenzene	2016/05/30	ND, RDL=0.50		ug/L	
			1,3-Dichlorobenzene	2016/05/30	ND, RDL=0.50		ug/L	
			1,4-Dichlorobenzene	2016/05/30	ND, RDL=0.50		ug/L	
			Dichlorodifluoromethane (FREON 12)	2016/05/30	ND, RDL=1.0		ug/L	
			1,1-Dichloroethane	2016/05/30	ND, RDL=0.20		ug/L	
			1,2-Dichloroethane	2016/05/30	ND, RDL=0.50		ug/L	
			1,1-Dichloroethylene	2016/05/30	ND, RDL=0.20		ug/L	
			cis-1,2-Dichloroethylene	2016/05/30	ND, RDL=0.50		ug/L	
			trans-1,2-Dichloroethylene	2016/05/30	ND, RDL=0.50		ug/L	
			1,2-Dichloropropane	2016/05/30	ND, RDL=0.20		ug/L	
			cis-1,3-Dichloropropene	2016/05/30	ND, RDL=0.30		ug/L	
			trans-1,3-Dichloropropene	2016/05/30	ND, RDL=0.40		ug/L	
			Ethylbenzene	2016/05/30	ND, RDL=0.20		ug/L	
			Ethylene Dibromide	2016/05/30	ND, RDL=0.20		ug/L	
			Hexane	2016/05/30	ND, RDL=1.0		ug/L	
			Methylene Chloride(Dichloromethane)	2016/05/30	ND, RDL=2.0		ug/L	
			Methyl Ethyl Ketone (2-Butanone)	2016/05/30	ND, RDL=10		ug/L	

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Methyl Isobutyl Ketone	2016/05/30	ND, RDL=5.0		ug/L	
			Methyl t-butyl ether (MTBE)	2016/05/30	ND, RDL=0.50		ug/L	
			Styrene	2016/05/30	ND, RDL=0.50		ug/L	
			1,1,1,2-Tetrachloroethane	2016/05/30	ND, RDL=0.50		ug/L	
			1,1,2,2-Tetrachloroethane	2016/05/30	ND, RDL=0.50		ug/L	
			Tetrachloroethylene	2016/05/30	ND, RDL=0.20		ug/L	
			Toluene	2016/05/30	ND, RDL=0.20		ug/L	
			1,1,1-Trichloroethane	2016/05/30	ND, RDL=0.20		ug/L	
			1,1,2-Trichloroethane	2016/05/30	ND, RDL=0.50		ug/L	
			Trichloroethylene	2016/05/30	ND, RDL=0.20		ug/L	
			Trichlorofluoromethane (FREON 11)	2016/05/30	ND, RDL=0.50		ug/L	
			Vinyl Chloride	2016/05/30	ND, RDL=0.20		ug/L	
			p+m-Xylene	2016/05/30	ND, RDL=0.20		ug/L	
			o-Xylene	2016/05/30	ND, RDL=0.20		ug/L	
			Total Xylenes	2016/05/30	ND, RDL=0.20		ug/L	
4516635	KH2	RPD [CKV222-07]	Acetone (2-Propanone)	2016/05/30	NC		%	30
			Benzene	2016/05/30	NC		%	30
			Bromodichloromethane	2016/05/30	NC		%	30
			Bromoform	2016/05/30	NC		%	30
			Bromomethane	2016/05/30	NC		%	30
			Carbon Tetrachloride	2016/05/30	NC		%	30
			Chlorobenzene	2016/05/30	NC		%	30
			Chloroform	2016/05/30	NC		%	30
			Dibromochloromethane	2016/05/30	NC		%	30
			1,2-Dichlorobenzene	2016/05/30	NC		%	30
			1,3-Dichlorobenzene	2016/05/30	NC		%	30
			1,4-Dichlorobenzene	2016/05/30	NC		%	30
			Dichlorodifluoromethane (FREON 12)	2016/05/30	NC		%	30
			1,1-Dichloroethane	2016/05/30	NC		%	30
			1,2-Dichloroethane	2016/05/30	NC		%	30
			1,1-Dichloroethylene	2016/05/30	NC		%	30
			cis-1,2-Dichloroethylene	2016/05/30	NC		%	30
			trans-1,2-Dichloroethylene	2016/05/30	NC		%	30
			1,2-Dichloropropane	2016/05/30	NC		%	30

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC	Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
				cis-1,3-Dichloropropene	2016/05/30	NC		%	30
				trans-1,3-Dichloropropene	2016/05/30	NC		%	30
				Ethylbenzene	2016/05/30	NC		%	30
				Ethylene Dibromide	2016/05/30	NC		%	30
				Hexane	2016/05/30	NC		%	30
				Methylene Chloride(Dichloromethane)	2016/05/30	NC		%	30
				Methyl Ethyl Ketone (2-Butanone)	2016/05/30	NC		%	30
				Methyl Isobutyl Ketone	2016/05/30	NC		%	30
				Methyl t-butyl ether (MTBE)	2016/05/30	NC		%	30
				Styrene	2016/05/30	NC		%	30
				1,1,1,2-Tetrachloroethane	2016/05/30	NC		%	30
				1,1,2,2-Tetrachloroethane	2016/05/30	NC		%	30
				Tetrachloroethylene	2016/05/30	NC		%	30
				Toluene	2016/05/30	NC		%	30
				1,1,1-Trichloroethane	2016/05/30	NC		%	30
				1,1,2-Trichloroethane	2016/05/30	NC		%	30
				Trichloroethylene	2016/05/30	NC		%	30
				Trichlorofluoromethane (FREON 11)	2016/05/30	NC		%	30
				Vinyl Chloride	2016/05/30	NC		%	30
				p+m-Xylene	2016/05/30	NC		%	30
				o-Xylene	2016/05/30	NC		%	30
				Total Xylenes	2016/05/30	NC		%	30
4518124	DRM		Matrix Spike	Dissolved Chloride (Cl)	2016/05/31		NC	%	80 - 120
4518124	DRM		Spiked Blank	Dissolved Chloride (Cl)	2016/05/31		102	%	80 - 120
4518124	DRM		Method Blank	Dissolved Chloride (Cl)	2016/05/31	ND, RDL=1.0		mg/L	
4518124	DRM		RPD	Dissolved Chloride (Cl)	2016/05/31	1.0		%	20
4518905	MC		Matrix Spike	Mercury (Hg)	2016/06/02		103	%	75 - 125
4518905	MC		Spiked Blank	Mercury (Hg)	2016/06/02		102	%	80 - 120
4518905	MC		Method Blank	Mercury (Hg)	2016/06/02	ND, RDL=0.1		ug/L	
4518905	MC		RPD	Mercury (Hg)	2016/06/02	NC		%	20
4519452	PBA		Matrix Spike	Dissolved Antimony (Sb)	2016/06/01		112	%	80 - 120
				Dissolved Arsenic (As)	2016/06/01		106	%	80 - 120
				Dissolved Barium (Ba)	2016/06/01		110	%	80 - 120
				Dissolved Beryllium (Be)	2016/06/01		112	%	80 - 120
				Dissolved Boron (B)	2016/06/01		112	%	80 - 120
				Dissolved Cadmium (Cd)	2016/06/01		111	%	80 - 120
				Dissolved Chromium (Cr)	2016/06/01		107	%	80 - 120
				Dissolved Cobalt (Co)	2016/06/01		107	%	80 - 120
				Dissolved Copper (Cu)	2016/06/01		105	%	80 - 120
				Dissolved Lead (Pb)	2016/06/01		108	%	80 - 120
				Dissolved Molybdenum (Mo)	2016/06/01		114	%	80 - 120
				Dissolved Nickel (Ni)	2016/06/01		106	%	80 - 120
				Dissolved Selenium (Se)	2016/06/01		110	%	80 - 120
				Dissolved Silver (Ag)	2016/06/01		110	%	80 - 120
				Dissolved Sodium (Na)	2016/06/01		105	%	80 - 120
				Dissolved Thallium (Tl)	2016/06/01		109	%	80 - 120
				Dissolved Uranium (U)	2016/06/01		107	%	80 - 120
				Dissolved Vanadium (V)	2016/06/01		110	%	80 - 120
				Dissolved Zinc (Zn)	2016/06/01		NC	%	80 - 120

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
4519452	PBA	Spiked Blank	Dissolved Antimony (Sb)	2016/06/01		107	%	80 - 120
			Dissolved Arsenic (As)	2016/06/01		99	%	80 - 120
			Dissolved Barium (Ba)	2016/06/01		102	%	80 - 120
			Dissolved Beryllium (Be)	2016/06/01		107	%	80 - 120
			Dissolved Boron (B)	2016/06/01		108	%	80 - 120
			Dissolved Cadmium (Cd)	2016/06/01		104	%	80 - 120
			Dissolved Chromium (Cr)	2016/06/01		104	%	80 - 120
			Dissolved Cobalt (Co)	2016/06/01		103	%	80 - 120
			Dissolved Copper (Cu)	2016/06/01		101	%	80 - 120
			Dissolved Lead (Pb)	2016/06/01		101	%	80 - 120
			Dissolved Molybdenum (Mo)	2016/06/01		107	%	80 - 120
			Dissolved Nickel (Ni)	2016/06/01		103	%	80 - 120
			Dissolved Selenium (Se)	2016/06/01		105	%	80 - 120
			Dissolved Silver (Ag)	2016/06/01		103	%	80 - 120
			Dissolved Sodium (Na)	2016/06/01		104	%	80 - 120
			Dissolved Thallium (Tl)	2016/06/01		101	%	80 - 120
			Dissolved Uranium (U)	2016/06/01		101	%	80 - 120
			Dissolved Vanadium (V)	2016/06/01		105	%	80 - 120
			Dissolved Zinc (Zn)	2016/06/01		102	%	80 - 120
4519452	PBA	Method Blank	Dissolved Antimony (Sb)	2016/06/01	ND, RDL=0.50		ug/L	
			Dissolved Arsenic (As)	2016/06/01	ND, RDL=1.0		ug/L	
			Dissolved Barium (Ba)	2016/06/01	ND, RDL=2.0		ug/L	
			Dissolved Beryllium (Be)	2016/06/01	ND, RDL=0.50		ug/L	
			Dissolved Boron (B)	2016/06/01	ND, RDL=10		ug/L	
			Dissolved Cadmium (Cd)	2016/06/01	ND, RDL=0.10		ug/L	
			Dissolved Chromium (Cr)	2016/06/01	ND, RDL=5.0		ug/L	
			Dissolved Cobalt (Co)	2016/06/01	ND, RDL=0.50		ug/L	
			Dissolved Copper (Cu)	2016/06/01	ND, RDL=1.0		ug/L	
			Dissolved Lead (Pb)	2016/06/01	ND, RDL=0.50		ug/L	
			Dissolved Molybdenum (Mo)	2016/06/01	ND, RDL=0.50		ug/L	
			Dissolved Nickel (Ni)	2016/06/01	ND, RDL=1.0		ug/L	
			Dissolved Selenium (Se)	2016/06/01	ND, RDL=2.0		ug/L	
			Dissolved Silver (Ag)	2016/06/01	ND, RDL=0.10		ug/L	
			Dissolved Sodium (Na)	2016/06/01	ND, RDL=100		ug/L	

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Dissolved Thallium (Tl)	2016/06/01	ND, RDL=0.050		ug/L	
			Dissolved Uranium (U)	2016/06/01	ND, RDL=0.10		ug/L	
			Dissolved Vanadium (V)	2016/06/01	ND, RDL=0.50		ug/L	
			Dissolved Zinc (Zn)	2016/06/01	ND, RDL=5.0		ug/L	
4520303	H_W	Matrix Spike	1,4-Difluorobenzene	2016/06/01		98	%	70 - 130
			4-Bromofluorobenzene	2016/06/01		102	%	70 - 130
			D10-Ethylbenzene	2016/06/01		100	%	70 - 130
			D4-1,2-Dichloroethane	2016/06/01		97	%	70 - 130
			F1 (C6-C10)	2016/06/01		94	%	70 - 130
4520303	H_W	Spiked Blank	1,4-Difluorobenzene	2016/06/01		100	%	70 - 130
			4-Bromofluorobenzene	2016/06/01		104	%	70 - 130
			D10-Ethylbenzene	2016/06/01		112	%	70 - 130
			D4-1,2-Dichloroethane	2016/06/01		97	%	70 - 130
			F1 (C6-C10)	2016/06/01		95	%	70 - 130
4520303	H_W	Method Blank	1,4-Difluorobenzene	2016/06/01		100	%	70 - 130
			4-Bromofluorobenzene	2016/06/01		101	%	70 - 130
			D10-Ethylbenzene	2016/06/01		99	%	70 - 130
			D4-1,2-Dichloroethane	2016/06/01		94	%	70 - 130
			F1 (C6-C10)	2016/06/01	ND, RDL=25		ug/L	
			F1 (C6-C10) - BTEX	2016/06/01	ND, RDL=25		ug/L	
4520303	H_W	RPD	F1 (C6-C10)	2016/06/01	NC		%	30
			F1 (C6-C10) - BTEX	2016/06/01	NC		%	30
4520376	MC	Matrix Spike [CKV220-05]	Mercury (Hg)	2016/06/02		94	%	75 - 125
4520376	MC	Spiked Blank	Mercury (Hg)	2016/06/02		108	%	80 - 120
4520376	MC	Method Blank	Mercury (Hg)	2016/06/02	ND, RDL=0.1		ug/L	
4520376	MC	RPD [CKV220-05]	Mercury (Hg)	2016/06/02	NC		%	20
4520648	JET	Matrix Spike	D10-Anthracene	2016/06/01		101	%	50 - 130
			D14-Terphenyl (FS)	2016/06/01		98	%	50 - 130
			D8-Acenaphthylene	2016/06/01		99	%	50 - 130
			Acenaphthene	2016/06/01		110	%	50 - 130
			Acenaphthylene	2016/06/01		110	%	50 - 130
			Anthracene	2016/06/01		111	%	50 - 130
			Benzo(a)anthracene	2016/06/01		118	%	50 - 130
			Benzo(a)pyrene	2016/06/01		120	%	50 - 130
			Benzo(b/j)fluoranthene	2016/06/01		120	%	50 - 130
			Benzo(g,h,i)perylene	2016/06/01		115	%	50 - 130
			Benzo(k)fluoranthene	2016/06/01		118	%	50 - 130
			Chrysene	2016/06/01		116	%	50 - 130
			Dibenz(a,h)anthracene	2016/06/01		110	%	50 - 130
			Fluoranthene	2016/06/01		121	%	50 - 130
			Fluorene	2016/06/01		113	%	50 - 130
			Indeno(1,2,3-cd)pyrene	2016/06/01		125	%	50 - 130
			1-Methylnaphthalene	2016/06/01		103	%	50 - 130

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC	Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
4520648	JET	Spiked Blank		2-Methylnaphthalene	2016/06/01		102	%	50 - 130
				Naphthalene	2016/06/01		97	%	50 - 130
				Phenanthrene	2016/06/01		110	%	50 - 130
				Pyrene	2016/06/01		120	%	50 - 130
				D10-Anthracene	2016/06/02		104	%	50 - 130
				D14-Terphenyl (FS)	2016/06/02		102	%	50 - 130
				D8-Acenaphthylene	2016/06/02		99	%	50 - 130
				Acenaphthene	2016/06/02		110	%	50 - 130
				Acenaphthylene	2016/06/02		110	%	50 - 130
				Anthracene	2016/06/02		112	%	50 - 130
				Benzo(a)anthracene	2016/06/02		116	%	50 - 130
				Benzo(a)pyrene	2016/06/02		119	%	50 - 130
				Benzo(b/j)fluoranthene	2016/06/02		123	%	50 - 130
				Benzo(g,h,i)perylene	2016/06/02		119	%	50 - 130
				Benzo(k)fluoranthene	2016/06/02		121	%	50 - 130
				Chrysene	2016/06/02		117	%	50 - 130
				Dibenz(a,h)anthracene	2016/06/02		108	%	50 - 130
				Fluoranthene	2016/06/02		122	%	50 - 130
				Fluorene	2016/06/02		112	%	50 - 130
				Indeno(1,2,3-cd)pyrene	2016/06/02		128	%	50 - 130
				1-Methylnaphthalene	2016/06/02		102	%	50 - 130
				2-Methylnaphthalene	2016/06/02		100	%	50 - 130
				Naphthalene	2016/06/02		96	%	50 - 130
				Phenanthrene	2016/06/02		111	%	50 - 130
4520648	JET	Method Blank		Pyrene	2016/06/02		120	%	50 - 130
				D10-Anthracene	2016/06/01		105	%	50 - 130
				D14-Terphenyl (FS)	2016/06/01		103	%	50 - 130
				D8-Acenaphthylene	2016/06/01		102	%	50 - 130
				Acenaphthene	2016/06/01	ND, RDL=0.050		ug/L	
				Acenaphthylene	2016/06/01	ND, RDL=0.050		ug/L	
				Anthracene	2016/06/01	ND, RDL=0.050		ug/L	
				Benzo(a)anthracene	2016/06/01	ND, RDL=0.050		ug/L	
				Benzo(a)pyrene	2016/06/01	ND, RDL=0.010		ug/L	
				Benzo(b/j)fluoranthene	2016/06/01	ND, RDL=0.050		ug/L	
				Benzo(g,h,i)perylene	2016/06/01	ND, RDL=0.050		ug/L	
				Benzo(k)fluoranthene	2016/06/01	ND, RDL=0.050		ug/L	
				Chrysene	2016/06/01	ND, RDL=0.050		ug/L	
				Dibenz(a,h)anthracene	2016/06/01	ND, RDL=0.050		ug/L	
				Fluoranthene	2016/06/01	ND, RDL=0.050		ug/L	

Maxxam Job #: B6A7363
Report Date: 2016/06/03

Terrapex Environmental Ltd
Client Project #: CB644.02
Site Location: 121 Hume Street, Collingwood, ON
Your P.O. #: 4700001396
Sampler Initials: PA

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
4520648	JET	RPD	Fluorene	2016/06/01	ND, RDL=0.050		ug/L	
			Indeno(1,2,3-cd)pyrene	2016/06/01	ND, RDL=0.050		ug/L	
			1-Methylnaphthalene	2016/06/01	ND, RDL=0.050		ug/L	
			2-Methylnaphthalene	2016/06/01	ND, RDL=0.050		ug/L	
			Naphthalene	2016/06/01	ND, RDL=0.050		ug/L	
			Phenanthrene	2016/06/01	ND, RDL=0.030		ug/L	
			Pyrene	2016/06/01	ND, RDL=0.050		ug/L	
			Acenaphthene	2016/06/01	NC		%	30
			Acenaphthylene	2016/06/01	NC		%	30
			Anthracene	2016/06/01	NC		%	30
			Benzo(a)anthracene	2016/06/01	NC		%	30
			Benzo(a)pyrene	2016/06/01	NC		%	30
			Benzo(b/j)fluoranthene	2016/06/01	NC		%	30
			Benzo(g,h,i)perylene	2016/06/01	NC		%	30
			Benzo(k)fluoranthene	2016/06/01	NC		%	30
			Chrysene	2016/06/01	NC		%	30
			Dibenz(a,h)anthracene	2016/06/01	NC		%	30
			Fluoranthene	2016/06/01	NC		%	30
			Fluorene	2016/06/01	NC		%	30
			Indeno(1,2,3-cd)pyrene	2016/06/01	NC		%	30
4520892	ZZ	Matrix Spike	o-Terphenyl	2016/06/01		99	%	60 - 130
			F2 (C10-C16 Hydrocarbons)	2016/06/01		109	%	50 - 130
			F3 (C16-C34 Hydrocarbons)	2016/06/01		100	%	50 - 130
			F4 (C34-C50 Hydrocarbons)	2016/06/01		100	%	50 - 130
4520892	ZZ	Spiked Blank	o-Terphenyl	2016/06/01		102	%	60 - 130
			F2 (C10-C16 Hydrocarbons)	2016/06/01		113	%	60 - 130
			F3 (C16-C34 Hydrocarbons)	2016/06/01		105	%	60 - 130
			F4 (C34-C50 Hydrocarbons)	2016/06/01		103	%	60 - 130
4520892	ZZ	Method Blank	o-Terphenyl	2016/06/01		97	%	60 - 130
			F2 (C10-C16 Hydrocarbons)	2016/06/01	ND, RDL=100		ug/L	
			F3 (C16-C34 Hydrocarbons)	2016/06/01	ND, RDL=200		ug/L	
			F4 (C34-C50 Hydrocarbons)	2016/06/01	ND, RDL=200		ug/L	
4520892	ZZ	RPD	F2 (C10-C16 Hydrocarbons)	2016/06/02	NC		%	30
			F3 (C16-C34 Hydrocarbons)	2016/06/02	NC		%	30

Maxxam Job #: B6A7363
Report Date: 2016/06/03

Terrapex Environmental Ltd
Client Project #: CB644.02
Site Location: 121 Hume Street, Collingwood, ON
Your P.O. #: 4700001396
Sampler Initials: PA

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC				Date					
Batch	Init	QC Type	Parameter	Analyzed	Value	Recovery	UNITS	QC Limits	
			F4 (C34-C50 Hydrocarbons)	2016/06/02	NC		%	30	
Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement. Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference. Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy. Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination. Surrogate: A pure or isotopically labeled compound whose behavior mirrors the analytes of interest. Used to evaluate extraction efficiency. NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spiked amount was too small to permit a reliable recovery calculation (matrix spike concentration was less than 2x that of the native sample concentration). NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (one or both samples < 5x RDL).									

VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by the following individual(s).

Cristina Carriere

Cristina Carriere, Scientific Services

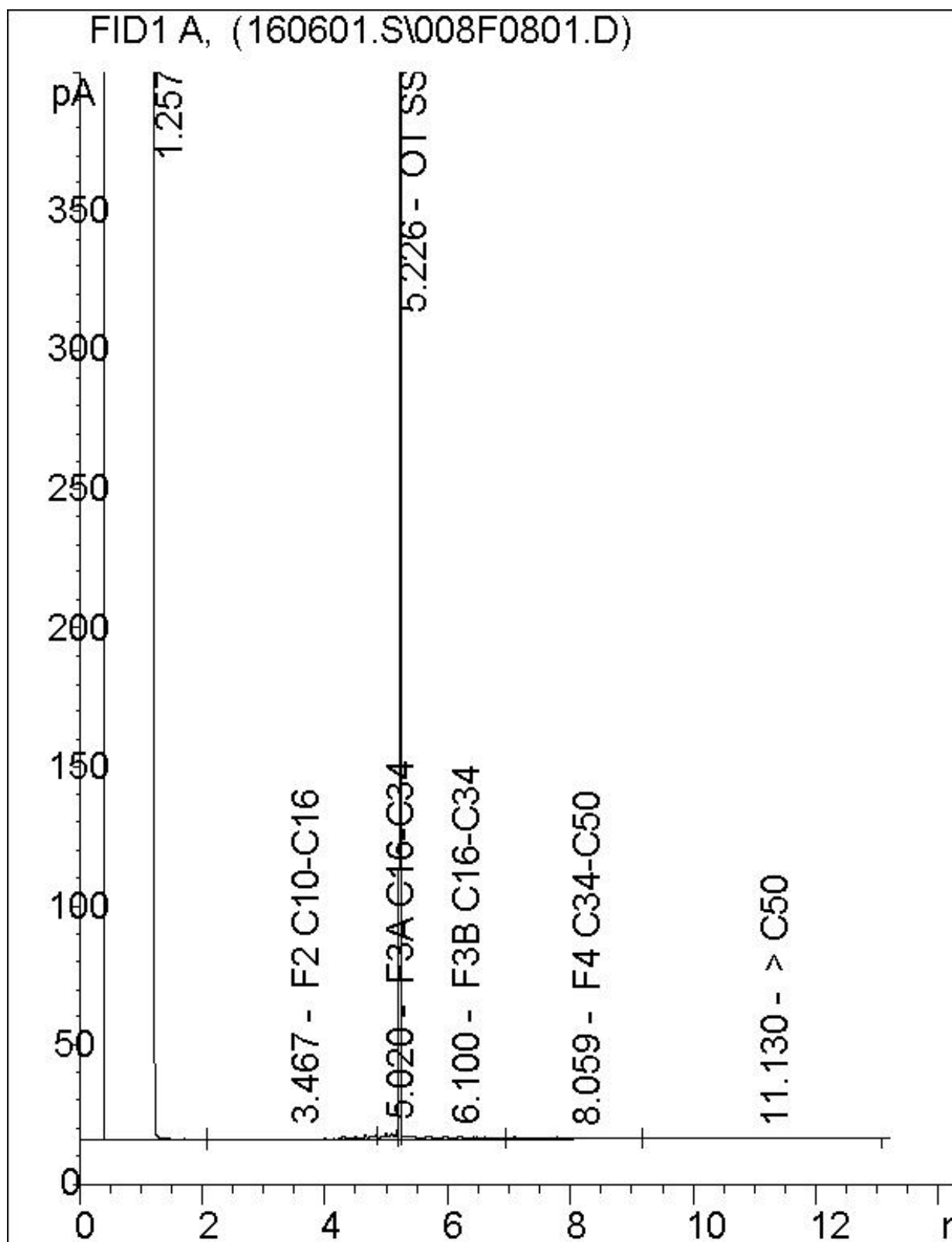
Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

ANALYSIS REQUESTED (PLEASE BE SPECIFIC)Field Filtered (please circle):

27-May-16 10:23
Marissa Oddi
B6A7201
MK3 ENV-1175

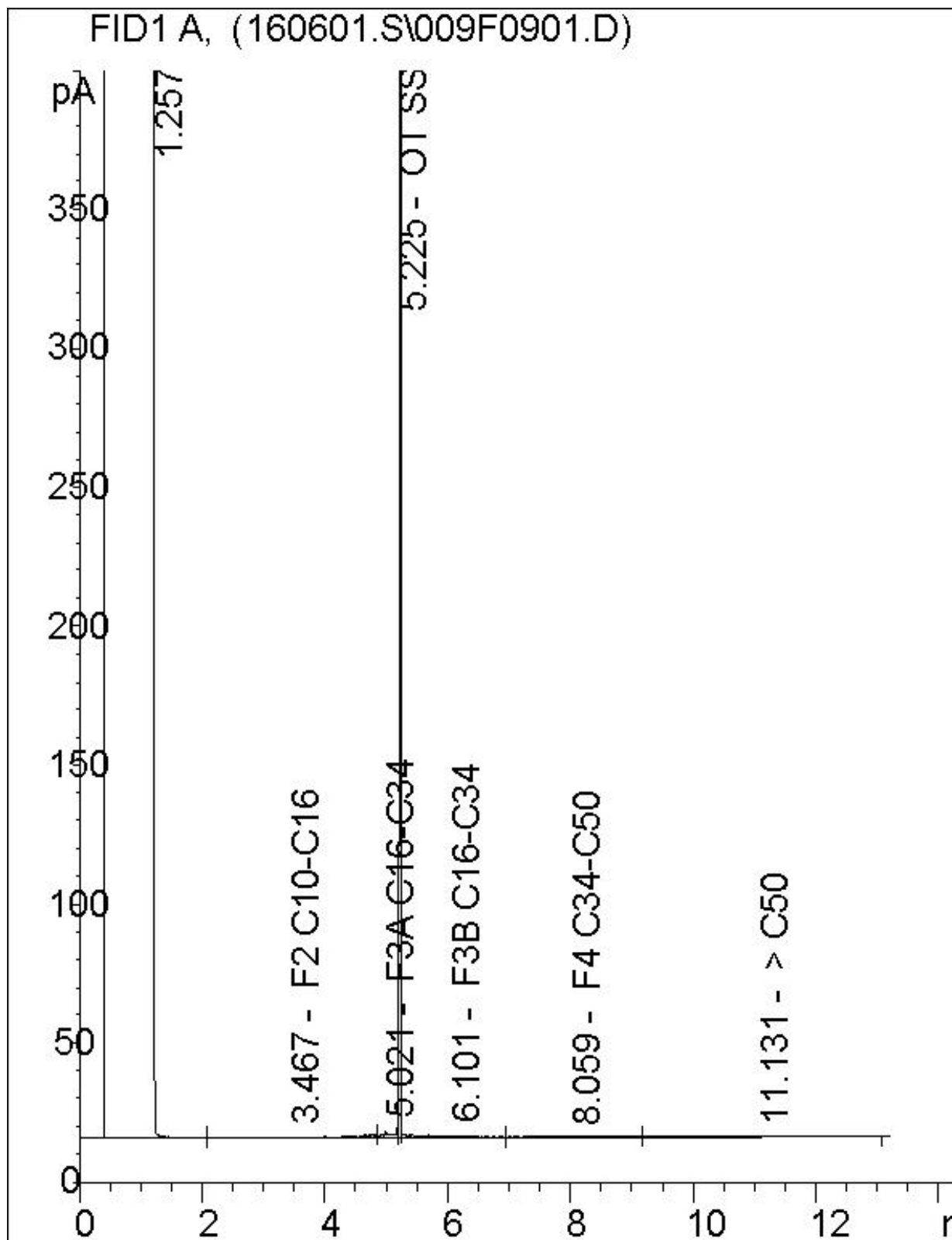
* IT IS THE RESPONSIBILITY OF THE RELINQUISHER TO ENSURE THE ACCURACY OF THE CHAIN OF CUSTODY RECORD. AN INCOMPLETE CHAIN OF CUSTODY MAY RESULT IN ANALYTICAL TAT DELAYS.

Petroleum Hydrocarbons F2-F4 in Water Chromatogram



Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Petroleum Hydrocarbons F2-F4 in Water Chromatogram



Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Attention: Jeff Stevenson

Terrapex Environmental Ltd
920 Brant Street
Unit 16
Burlington, ON
CANADA L7R 4J1

Your P.O. #: 4700001396

Your Project #: CB644.02

Site#: 60680

Site Location: 121 Hume Street, Collingwood, ON

Your C.O.C. #: 562385-02-01

Report Date: 2016/06/03

Report #: R4014271

Version: 1 - Final

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B6A7201

Received: 2016/05/27, 10:23

Sample Matrix: Soil
Samples Received: 3

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Reference
Methylnaphthalene Sum	1	N/A	2016/06/02	CAM SOP-00301	EPA 8270D m
Hot Water Extractable Boron	1	2016/05/31	2016/05/31	CAM SOP-00408	R153 Ana. Prot. 2011
1,3-Dichloropropene Sum	1	N/A	2016/06/01		EPA 8260C m
Free (WAD) Cyanide	1	2016/05/31	2016/06/01	CAM SOP-00457	OMOE E3015 m
Conductivity	1	2016/06/02	2016/06/02	CAM SOP-00414	OMOE E3138 v2 m
Hexavalent Chromium in Soil by IC (1)	1	2016/05/31	2016/06/01	CAM SOP-00436	EPA 3060/7199 m
Strong Acid Leachable Metals by ICPMS	1	2016/05/31	2016/06/01	CAM SOP-00447	EPA 6020A m
Moisture	3	N/A	2016/05/31	CAM SOP-00445	Carter 2nd ed 51.2 m
PAH Compounds in Soil by GC/MS (SIM)	1	2016/06/01	2016/06/02	CAM SOP-00318	EPA 8270D m
pH CaCl2 EXTRACT	1	2016/05/30	2016/05/30	CAM SOP-00413	EPA 9045 D m
Sodium Adsorption Ratio (SAR)	1	N/A	2016/06/02	CAM SOP-00102	EPA 6010C
SAR - ICP Metals	1	2016/06/02	2016/06/02	CAM SOP-00408	EPA 6010C m
Volatile Organic Compounds in Soil	1	N/A	2016/05/31	CAM SOP-00228	EPA 8260C m

Sample Matrix: Water
Samples Received: 4

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Reference
Methylnaphthalene Sum	2	N/A	2016/06/02	CAM SOP-00301	EPA 8270D m
1,3-Dichloropropene Sum	3	N/A	2016/05/31		EPA 8260C m
Chloride by Automated Colourimetry	1	N/A	2016/05/30	CAM SOP-00463	EPA 325.2 m
Chromium (VI) in Water	1	N/A	2016/05/31	CAM SOP-00436	EPA 7199 m
Free (WAD) Cyanide	1	N/A	2016/05/30	CAM SOP-00457	OMOE E3015 m
Petroleum Hydro. CCME F1 & BTEX in Water	2	N/A	2016/06/01	CAM SOP-00315	CCME PHC-CWS m
Petroleum Hydrocarbons F2-F4 in Water (2)	2	2016/06/01	2016/06/01	CAM SOP-00316	CCME PHC-CWS m
Mercury	1	2016/06/01	2016/06/01	CAM SOP-00453	EPA 7470A m
Dissolved Metals by ICPMS	1	N/A	2016/05/31	CAM SOP-00447	EPA 6020A m
PAH Compounds in Water by GC/MS (SIM)	1	2016/06/01	2016/06/01	CAM SOP-00318	EPA 8270D m
PAH Compounds in Water by GC/MS (SIM)	1	2016/06/01	2016/06/02	CAM SOP-00318	EPA 8270D m
Volatile Organic Compounds in Water	3	N/A	2016/05/30	CAM SOP-00228	EPA 8260C m

Attention: Jeff Stevenson

Terrapex Environmental Ltd
920 Brant Street
Unit 16
Burlington, ON
CANADA L7R 4J1

Your P.O. #: 4700001396
Your Project #: CB644.02
Site#: 60680
Site Location: 121 Hume Street, Collingwood, ON
Your C.O.C. #: 562385-02-01

Report Date: 2016/06/03
Report #: R4014271
Version: 1 - Final

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B6A7201

Received: 2016/05/27, 10:23

Remarks:

Maxxam Analytics has performed all analytical testing herein in accordance with ISO 17025 and the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act. All methodologies comply with this document and are validated for use in the laboratory. The methods and techniques employed in this analysis conform to the performance criteria (detection limits, accuracy and precision) as outlined in the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act.

Maxxam Analytics is accredited for all specific parameters as required by Ontario Regulation 153/04. Maxxam Analytics is limited in liability to the actual cost of analysis unless otherwise agreed in writing. There is no other warranty expressed or implied. Samples will be retained at Maxxam Analytics for three weeks from receipt of data or as per contract.

Reference Method suffix "m" indicates test methods incorporate validated modifications from specific reference methods to improve performance.

* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.

(1) Soils are reported on a dry weight basis unless otherwise specified.

(2) All CCME PHC results met required criteria unless otherwise stated in the report. The CWS PHC methods employed by Maxxam conform to all prescribed elements of the reference method and performance based elements have been validated. All modifications have been validated and proven equivalent following "Alberta Environment's Interpretation of the Reference Method for the Canada-Wide Standard for Petroleum Hydrocarbons in Soil Validation of Performance-Based Alternative Methods September 2003". Documentation is available upon request. Modifications from Reference Method for the Canada-wide Standard for Petroleum Hydrocarbons in Soil-Tier 1 Method: F2/F3/F4 data reported using validated cold solvent extraction instead of Soxhlet extraction.

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.

Marissa Oddi, Customer Service Representative

Email: moddi@maxxam.ca

Phone# (905) 817-5700

=====

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

O.REG 153 METALS & INORGANICS PKG (SOIL)

Maxxam ID		CKU361		
Sampling Date		2016/05/25 09:00		
COC Number		562385-02-01		
	UNITS	MW401-1	RDL	QC Batch
Calculated Parameters				
Sodium Adsorption Ratio	N/A	0.80		4514989
Inorganics				
Conductivity	mS/cm	0.17	0.002	4521281
Free Cyanide	ug/g	ND	0.01	4518525
Moisture	%	7.1	1.0	4519291
Available (CaCl ₂) pH	pH	7.92		4517247
Metals				
Soluble Calcium (Ca)	mg/L	17.5	0.5	4521260
Soluble Magnesium (Mg)	mg/L	1.0	0.5	4521260
Soluble Sodium (Na)	mg/L	13	5	4521260
Inorganics				
Chromium (VI)	ug/g	ND	0.2	4518998
Metals				
Hot Water Ext. Boron (B)	ug/g	0.13	0.050	4518796
Acid Extractable Antimony (Sb)	ug/g	ND	0.20	4518764
Acid Extractable Arsenic (As)	ug/g	1.0	1.0	4518764
Acid Extractable Barium (Ba)	ug/g	4.8	0.50	4518764
Acid Extractable Beryllium (Be)	ug/g	ND	0.20	4518764
Acid Extractable Boron (B)	ug/g	ND	5.0	4518764
Acid Extractable Cadmium (Cd)	ug/g	ND	0.10	4518764
Acid Extractable Chromium (Cr)	ug/g	4.2	1.0	4518764
Acid Extractable Cobalt (Co)	ug/g	1.0	0.10	4518764
Acid Extractable Copper (Cu)	ug/g	1.4	0.50	4518764
Acid Extractable Lead (Pb)	ug/g	3.2	1.0	4518764
Acid Extractable Molybdenum (Mo)	ug/g	ND	0.50	4518764
Acid Extractable Nickel (Ni)	ug/g	2.1	0.50	4518764
Acid Extractable Selenium (Se)	ug/g	ND	0.50	4518764
Acid Extractable Silver (Ag)	ug/g	ND	0.20	4518764
Acid Extractable Thallium (Tl)	ug/g	ND	0.050	4518764
Acid Extractable Uranium (U)	ug/g	0.20	0.050	4518764
Acid Extractable Vanadium (V)	ug/g	6.5	5.0	4518764
Acid Extractable Zinc (Zn)	ug/g	7.6	5.0	4518764
RDL = Reportable Detection Limit				
QC Batch = Quality Control Batch				
ND = Not detected				

Maxxam Job #: B6A7201
Report Date: 2016/06/03

Terrapex Environmental Ltd
Client Project #: CB644.02
Site Location: 121 Hume Street, Collingwood, ON
Your P.O. #: 4700001396
Sampler Initials: PA

O.REG 153 METALS & INORGANICS PKG (SOIL)

Maxxam ID		CKU361		
Sampling Date		2016/05/25 09:00		
COC Number		562385-02-01		
	UNITS	MW401-1	RDL	QC Batch
Acid Extractable Mercury (Hg)	ug/g	ND	0.050	4518764
RDL = Reportable Detection Limit QC Batch = Quality Control Batch ND = Not detected				

O.REG 153 PAHS (SOIL)

Maxxam ID		CKU362		
Sampling Date		2016/05/25 09:10		
COC Number		562385-02-01		
	UNITS	MW401-2B	RDL	QC Batch
Inorganics				
Moisture	%	27	1.0	4518935
Calculated Parameters				
Methylnaphthalene, 2-(1-)	ug/g	ND	0.0071	4515021
Polyaromatic Hydrocarbons				
Acenaphthene	ug/g	ND	0.0050	4521902
Acenaphthylene	ug/g	ND	0.0050	4521902
Anthracene	ug/g	ND	0.0050	4521902
Benzo(a)anthracene	ug/g	ND	0.0050	4521902
Benzo(a)pyrene	ug/g	ND	0.0050	4521902
Benzo(b/j)fluoranthene	ug/g	ND	0.0050	4521902
Benzo(g,h,i)perylene	ug/g	ND	0.0050	4521902
Benzo(k)fluoranthene	ug/g	ND	0.0050	4521902
Chrysene	ug/g	ND	0.0050	4521902
Dibenz(a,h)anthracene	ug/g	ND	0.0050	4521902
Fluoranthene	ug/g	ND	0.0050	4521902
Fluorene	ug/g	ND	0.0050	4521902
Indeno(1,2,3-cd)pyrene	ug/g	ND	0.0050	4521902
1-Methylnaphthalene	ug/g	ND	0.0050	4521902
2-Methylnaphthalene	ug/g	ND	0.0050	4521902
Naphthalene	ug/g	ND	0.0050	4521902
Phenanthrene	ug/g	ND	0.0050	4521902
Pyrene	ug/g	ND	0.0050	4521902
Surrogate Recovery (%)				
D10-Anthracene	%	75		4521902
D14-Terphenyl (FS)	%	78		4521902
D8-Acenaphthylene	%	82		4521902
RDL = Reportable Detection Limit QC Batch = Quality Control Batch ND = Not detected				

O.REG 153 VOLATILE ORGANICS (SOIL)

Maxxam ID		CKU363		
Sampling Date		2016/05/25 09:20		
COC Number		562385-02-01		
	UNITS	MW401-3	RDL	QC Batch
Inorganics				
Moisture	%	9.1	1.0	4519291
Calculated Parameters				
1,3-Dichloropropene (cis+trans)	ug/g	ND	0.050	4514369
Volatile Organics				
Acetone (2-Propanone)	ug/g	ND	0.50	4517528
Benzene	ug/g	ND	0.020	4517528
Bromodichloromethane	ug/g	ND	0.050	4517528
Bromoform	ug/g	ND	0.050	4517528
Bromomethane	ug/g	ND	0.050	4517528
Carbon Tetrachloride	ug/g	ND	0.050	4517528
Chlorobenzene	ug/g	ND	0.050	4517528
Chloroform	ug/g	ND	0.050	4517528
Dibromochloromethane	ug/g	ND	0.050	4517528
1,2-Dichlorobenzene	ug/g	ND	0.050	4517528
1,3-Dichlorobenzene	ug/g	ND	0.050	4517528
1,4-Dichlorobenzene	ug/g	ND	0.050	4517528
Dichlorodifluoromethane (FREON 12)	ug/g	ND	0.050	4517528
1,1-Dichloroethane	ug/g	ND	0.050	4517528
1,2-Dichloroethane	ug/g	ND	0.050	4517528
1,1-Dichloroethylene	ug/g	ND	0.050	4517528
cis-1,2-Dichloroethylene	ug/g	ND	0.050	4517528
trans-1,2-Dichloroethylene	ug/g	ND	0.050	4517528
1,2-Dichloropropane	ug/g	ND	0.050	4517528
cis-1,3-Dichloropropene	ug/g	ND	0.030	4517528
trans-1,3-Dichloropropene	ug/g	ND	0.040	4517528
Ethylbenzene	ug/g	ND	0.020	4517528
Ethylene Dibromide	ug/g	ND	0.050	4517528
Hexane	ug/g	ND	0.050	4517528
Methylene Chloride(Dichloromethane)	ug/g	ND	0.050	4517528
Methyl Ethyl Ketone (2-Butanone)	ug/g	ND	0.50	4517528
Methyl Isobutyl Ketone	ug/g	ND	0.50	4517528
Methyl t-butyl ether (MTBE)	ug/g	ND	0.050	4517528
RDL = Reportable Detection Limit QC Batch = Quality Control Batch ND = Not detected				

O.REG 153 VOLATILE ORGANICS (SOIL)

Maxxam ID		CKU363		
Sampling Date		2016/05/25 09:20		
COC Number		562385-02-01		
	UNITS	MW401-3	RDL	QC Batch
Styrene	ug/g	ND	0.050	4517528
1,1,1,2-Tetrachloroethane	ug/g	ND	0.050	4517528
1,1,2,2-Tetrachloroethane	ug/g	ND	0.050	4517528
Tetrachloroethylene	ug/g	ND	0.050	4517528
Toluene	ug/g	ND	0.020	4517528
1,1,1-Trichloroethane	ug/g	ND	0.050	4517528
1,1,2-Trichloroethane	ug/g	ND	0.050	4517528
Trichloroethylene	ug/g	ND	0.050	4517528
Trichlorofluoromethane (FREON 11)	ug/g	ND	0.050	4517528
Vinyl Chloride	ug/g	ND	0.020	4517528
p+m-Xylene	ug/g	ND	0.020	4517528
o-Xylene	ug/g	ND	0.020	4517528
Total Xylenes	ug/g	ND	0.020	4517528
Surrogate Recovery (%)				
4-Bromofluorobenzene	%	95		4517528
D10-o-Xylene	%	95		4517528
D4-1,2-Dichloroethane	%	110		4517528
D8-Toluene	%	97		4517528
RDL = Reportable Detection Limit QC Batch = Quality Control Batch ND = Not detected				

O.REG 153 METALS & INORGANICS PKG (WTR)

Maxxam ID		CKU366	CKU366		
Sampling Date		2016/05/26 11:30	2016/05/26 11:30		
COC Number		562385-02-01	562385-02-01		
	UNITS	MW401	MW401 Lab-Dup	RDL	QC Batch
Inorganics					
Free Cyanide	ug/L	ND		2	4516392
Dissolved Chloride (Cl)	mg/L	260		3.0	4516483
Metals					
Chromium (VI)	ug/L	ND		0.50	4516402
Mercury (Hg)	ug/L	ND		0.1	4520139
Dissolved Antimony (Sb)	ug/L	2.1	2.1	0.50	4517716
Dissolved Arsenic (As)	ug/L	ND	ND	1.0	4517716
Dissolved Barium (Ba)	ug/L	86	85	2.0	4517716
Dissolved Beryllium (Be)	ug/L	ND	ND	0.50	4517716
Dissolved Boron (B)	ug/L	51	54	10	4517716
Dissolved Cadmium (Cd)	ug/L	ND	ND	0.10	4517716
Dissolved Chromium (Cr)	ug/L	ND	ND	5.0	4517716
Dissolved Cobalt (Co)	ug/L	ND	ND	0.50	4517716
Dissolved Copper (Cu)	ug/L	1.2	1.2	1.0	4517716
Dissolved Lead (Pb)	ug/L	ND	ND	0.50	4517716
Dissolved Molybdenum (Mo)	ug/L	8.2	8.2	0.50	4517716
Dissolved Nickel (Ni)	ug/L	ND	ND	1.0	4517716
Dissolved Selenium (Se)	ug/L	ND	ND	2.0	4517716
Dissolved Silver (Ag)	ug/L	ND	ND	0.10	4517716
Dissolved Sodium (Na)	ug/L	120000	120000	100	4517716
Dissolved Thallium (Tl)	ug/L	ND	ND	0.050	4517716
Dissolved Uranium (U)	ug/L	2.7	2.8	0.10	4517716
Dissolved Vanadium (V)	ug/L	1.5	1.4	0.50	4517716
Dissolved Zinc (Zn)	ug/L	11	11	5.0	4517716
RDL = Reportable Detection Limit QC Batch = Quality Control Batch Lab-Dup = Laboratory Initiated Duplicate ND = Not detected					

O.REG 153 PAHS (WATER)

Maxxam ID		CKU364	CKU364	CKU366		
Sampling Date		2016/05/26 11:00	2016/05/26 11:00	2016/05/26 11:30		
COC Number		562385-02-01	562385-02-01	562385-02-01		
	UNITS	MW203	MW203 Lab-Dup	MW401	RDL	QC Batch
Calculated Parameters						
Methylnaphthalene, 2-(1-)	ug/L	ND		ND	0.071	4515022
Polyaromatic Hydrocarbons						
Acenaphthene	ug/L	ND	ND	ND	0.050	4520648
Acenaphthylene	ug/L	ND	ND	ND	0.050	4520648
Anthracene	ug/L	ND	ND	ND	0.050	4520648
Benzo(a)anthracene	ug/L	ND	ND	ND	0.050	4520648
Benzo(a)pyrene	ug/L	ND	ND	0.019	0.010	4520648
Benzo(b/j)fluoranthene	ug/L	ND	ND	ND	0.050	4520648
Benzo(g,h,i)perylene	ug/L	ND	ND	ND	0.050	4520648
Benzo(k)fluoranthene	ug/L	ND	ND	ND	0.050	4520648
Chrysene	ug/L	ND	ND	ND	0.050	4520648
Dibenz(a,h)anthracene	ug/L	ND	ND	ND	0.050	4520648
Fluoranthene	ug/L	ND	ND	ND	0.050	4520648
Fluorene	ug/L	ND	ND	ND	0.050	4520648
Indeno(1,2,3-cd)pyrene	ug/L	ND	ND	ND	0.050	4520648
1-Methylnaphthalene	ug/L	ND	ND	ND	0.050	4520648
2-Methylnaphthalene	ug/L	ND	ND	ND	0.050	4520648
Naphthalene	ug/L	ND	ND	ND	0.050	4520648
Phenanthrene	ug/L	ND	ND	ND	0.030	4520648
Pyrene	ug/L	ND	ND	ND	0.050	4520648
Surrogate Recovery (%)						
D10-Anthracene	%	101	104	101		4520648
D14-Terphenyl (FS)	%	96	99	97		4520648
D8-Acenaphthylene	%	100	103	97		4520648
RDL = Reportable Detection Limit QC Batch = Quality Control Batch Lab-Dup = Laboratory Initiated Duplicate ND = Not detected						

O.REG 153 PETROLEUM HYDROCARBONS (WATER)

Maxxam ID		CKU365	CKU365	CKU366		
Sampling Date		2016/05/26 10:30	2016/05/26 10:30	2016/05/26 11:30		
COC Number		562385-02-01	562385-02-01	562385-02-01		
	UNITS	MW402	MW402 Lab-Dup	MW401	RDL	QC Batch
BTEX & F1 Hydrocarbons						
F1 (C6-C10)	ug/L	ND	ND	ND	25	4520008
F1 (C6-C10) - BTEX	ug/L	ND	ND	ND	25	4520008
F2-F4 Hydrocarbons						
F2 (C10-C16 Hydrocarbons)	ug/L	ND		ND	100	4520892
F3 (C16-C34 Hydrocarbons)	ug/L	ND		ND	200	4520892
F4 (C34-C50 Hydrocarbons)	ug/L	ND		ND	200	4520892
Reached Baseline at C50	ug/L	Yes		Yes		4520892
Surrogate Recovery (%)						
1,4-Difluorobenzene	%	98	101	97		4520008
4-Bromofluorobenzene	%	98	99	97		4520008
D10-Ethylbenzene	%	97	96	96		4520008
D4-1,2-Dichloroethane	%	103	103	104		4520008
o-Terphenyl	%	98		96		4520892
RDL = Reportable Detection Limit QC Batch = Quality Control Batch Lab-Dup = Laboratory Initiated Duplicate ND = Not detected						

O.REG 153 VOLATILE ORGANICS (WATER)

Maxxam ID		CKU365	CKU366	CKU367		
Sampling Date		2016/05/26 10:30	2016/05/26 11:30	2016/05/26 11:30		
COC Number		562385-02-01	562385-02-01	562385-02-01		
	UNITS	MW402	MW401	MW2000	RDL	QC Batch
Calculated Parameters						
1,3-Dichloropropene (cis+trans)	ug/L	ND	ND	ND	0.50	4515032
Volatile Organics						
Acetone (2-Propanone)	ug/L	ND	ND	ND	10	4516620
Benzene	ug/L	0.25	0.57	0.60	0.20	4516620
Bromodichloromethane	ug/L	ND	ND	ND	0.50	4516620
Bromoform	ug/L	ND	ND	ND	1.0	4516620
Bromomethane	ug/L	ND	ND	ND	0.50	4516620
Carbon Tetrachloride	ug/L	ND	ND	ND	0.20	4516620
Chlorobenzene	ug/L	ND	ND	ND	0.20	4516620
Chloroform	ug/L	ND	ND	ND	0.20	4516620
Dibromochloromethane	ug/L	ND	ND	ND	0.50	4516620
1,2-Dichlorobenzene	ug/L	ND	ND	ND	0.50	4516620
1,3-Dichlorobenzene	ug/L	ND	ND	ND	0.50	4516620
1,4-Dichlorobenzene	ug/L	ND	ND	ND	0.50	4516620
Dichlorodifluoromethane (FREON 12)	ug/L	ND	ND	ND	1.0	4516620
1,1-Dichloroethane	ug/L	ND	ND	ND	0.20	4516620
1,2-Dichloroethane	ug/L	ND	ND	ND	0.50	4516620
1,1-Dichloroethylene	ug/L	ND	ND	ND	0.20	4516620
cis-1,2-Dichloroethylene	ug/L	ND	ND	ND	0.50	4516620
trans-1,2-Dichloroethylene	ug/L	ND	ND	ND	0.50	4516620
1,2-Dichloropropane	ug/L	ND	ND	ND	0.20	4516620
cis-1,3-Dichloropropene	ug/L	ND	ND	ND	0.30	4516620
trans-1,3-Dichloropropene	ug/L	ND	ND	ND	0.40	4516620
Ethylbenzene	ug/L	0.27	ND	ND	0.20	4516620
Ethylene Dibromide	ug/L	ND	ND	ND	0.20	4516620
Hexane	ug/L	ND	ND	ND	1.0	4516620
Methylene Chloride(Dichloromethane)	ug/L	ND	ND	ND	2.0	4516620
Methyl Ethyl Ketone (2-Butanone)	ug/L	ND	ND	ND	10	4516620
Methyl Isobutyl Ketone	ug/L	ND	ND	ND	5.0	4516620
Methyl t-butyl ether (MTBE)	ug/L	ND	ND	ND	0.50	4516620
Styrene	ug/L	ND	ND	ND	0.50	4516620
1,1,1,2-Tetrachloroethane	ug/L	ND	ND	ND	0.50	4516620
RDL = Reportable Detection Limit						
QC Batch = Quality Control Batch						
ND = Not detected						

O.REG 153 VOLATILE ORGANICS (WATER)

Maxxam ID		CKU365	CKU366	CKU367		
Sampling Date		2016/05/26 10:30	2016/05/26 11:30	2016/05/26 11:30		
COC Number		562385-02-01	562385-02-01	562385-02-01		
	UNITS	MW402	MW401	MW2000	RDL	QC Batch
1,1,2,2-Tetrachloroethane	ug/L	ND	ND	ND	0.50	4516620
Tetrachloroethylene	ug/L	ND	ND	ND	0.20	4516620
Toluene	ug/L	0.39	0.69	0.69	0.20	4516620
1,1,1-Trichloroethane	ug/L	ND	ND	ND	0.20	4516620
1,1,2-Trichloroethane	ug/L	ND	ND	ND	0.50	4516620
Trichloroethylene	ug/L	ND	ND	ND	0.20	4516620
Trichlorofluoromethane (FREON 11)	ug/L	ND	ND	ND	0.50	4516620
Vinyl Chloride	ug/L	ND	ND	ND	0.20	4516620
p+m-Xylene	ug/L	1.0	ND	ND	0.20	4516620
o-Xylene	ug/L	0.72	ND	ND	0.20	4516620
Total Xylenes	ug/L	1.7	ND	ND	0.20	4516620
Surrogate Recovery (%)						
4-Bromofluorobenzene	%	99	99	99		4516620
D4-1,2-Dichloroethane	%	103	103	103		4516620
D8-Toluene	%	98	100	99		4516620
RDL = Reportable Detection Limit QC Batch = Quality Control Batch ND = Not detected						

Maxxam Job #: B6A7201
Report Date: 2016/06/03

Terrapex Environmental Ltd
Client Project #: CB644.02
Site Location: 121 Hume Street, Collingwood, ON
Your P.O. #: 4700001396
Sampler Initials: PA

TEST SUMMARY

Maxxam ID: CKU361
Sample ID: MW401-1
Matrix: Soil

Collected: 2016/05/25
Shipped:
Received: 2016/05/27

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hot Water Extractable Boron	ICP	4518796	2016/05/31	2016/05/31	Suban Kanapathipplai
Free (WAD) Cyanide	TECH	4518525	2016/05/31	2016/06/01	Christine Pham
Conductivity	AT	4521281	2016/06/02	2016/06/02	Lemeneh Addis
Hexavalent Chromium in Soil by IC	IC/SPEC	4518998	2016/05/31	2016/06/01	Sally Coughlin
Strong Acid Leachable Metals by ICPMS	ICP/MS	4518764	2016/05/31	2016/06/01	Viviana Canzonieri
Moisture	BAL	4519291	N/A	2016/05/31	Shivani Desai
pH CaCl2 EXTRACT	AT	4517247	2016/05/30	2016/05/30	Neil Dassanayake
Sodium Adsorption Ratio (SAR)	CALC/MET	4514989	N/A	2016/06/02	Automated Statchk
SAR - ICP Metals	ICP	4521260	2016/06/02	2016/06/02	Jolly John

Maxxam ID: CKU362
Sample ID: MW401-2B
Matrix: Soil

Collected: 2016/05/25
Shipped:
Received: 2016/05/27

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	4515021	N/A	2016/06/02	Automated Statchk
Moisture	BAL	4518935	N/A	2016/05/31	Shivani Desai
PAH Compounds in Soil by GC/MS (SIM)	GC/MS	4521902	2016/06/01	2016/06/02	Jett Wu

Maxxam ID: CKU363
Sample ID: MW401-3
Matrix: Soil

Collected: 2016/05/25
Shipped:
Received: 2016/05/27

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
1,3-Dichloropropene Sum	CALC	4514369	N/A	2016/06/01	Automated Statchk
Moisture	BAL	4519291	N/A	2016/05/31	Shivani Desai
Volatile Organic Compounds in Soil	GC/MS	4517528	N/A	2016/05/31	Xueming Jiang

Maxxam ID: CKU364
Sample ID: MW203
Matrix: Water

Collected: 2016/05/26
Shipped:
Received: 2016/05/27

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	4515022	N/A	2016/06/02	Automated Statchk
PAH Compounds in Water by GC/MS (SIM)	GC/MS	4520648	2016/06/01	2016/06/01	Jett Wu

Maxxam ID: CKU364 Dup
Sample ID: MW203
Matrix: Water

Collected: 2016/05/26
Shipped:
Received: 2016/05/27

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
PAH Compounds in Water by GC/MS (SIM)	GC/MS	4520648	2016/06/01	2016/06/01	Jett Wu

Maxxam Job #: B6A7201
Report Date: 2016/06/03

Terrapex Environmental Ltd
Client Project #: CB644.02
Site Location: 121 Hume Street, Collingwood, ON
Your P.O. #: 4700001396
Sampler Initials: PA

TEST SUMMARY

Maxxam ID: CKU365
Sample ID: MW402
Matrix: Water

Collected: 2016/05/26
Shipped:
Received: 2016/05/27

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
1,3-Dichloropropene Sum	CALC	4515032	N/A	2016/05/31	Automated Statchk
Petroleum Hydro. CCME F1 & BTEX in Water	HSGC/MSFD	4520008	N/A	2016/06/01	Ravinder Gaidhu
Petroleum Hydrocarbons F2-F4 in Water	GC/FID	4520892	2016/06/01	2016/06/01	Zhiyue (Frank) Zhu
Volatile Organic Compounds in Water	GC/MS	4516620	N/A	2016/05/30	Blair Gannon

Maxxam ID: CKU365 Dup
Sample ID: MW402
Matrix: Water

Collected: 2016/05/26
Shipped:
Received: 2016/05/27

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Petroleum Hydro. CCME F1 & BTEX in Water	HSGC/MSFD	4520008	N/A	2016/06/01	Ravinder Gaidhu

Maxxam ID: CKU366
Sample ID: MW401
Matrix: Water

Collected: 2016/05/26
Shipped:
Received: 2016/05/27

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	4515022	N/A	2016/06/02	Automated Statchk
1,3-Dichloropropene Sum	CALC	4515032	N/A	2016/05/31	Automated Statchk
Chloride by Automated Colourimetry	KONE	4516483	N/A	2016/05/30	Deonarine Ramnarine
Chromium (VI) in Water	IC	4516402	N/A	2016/05/31	Sally Coughlin
Free (WAD) Cyanide	TECH/CN	4516392	N/A	2016/05/30	Christine Pham
Petroleum Hydro. CCME F1 & BTEX in Water	HSGC/MSFD	4520008	N/A	2016/06/01	Ravinder Gaidhu
Petroleum Hydrocarbons F2-F4 in Water	GC/FID	4520892	2016/06/01	2016/06/01	Zhiyue (Frank) Zhu
Mercury	CV/AA	4520139	2016/06/01	2016/06/01	Magdalena Carlos
Dissolved Metals by ICPMS	ICP/MS	4517716	N/A	2016/05/31	Arefa Dabhad
PAH Compounds in Water by GC/MS (SIM)	GC/MS	4520648	2016/06/01	2016/06/02	Jett Wu
Volatile Organic Compounds in Water	GC/MS	4516620	N/A	2016/05/30	Blair Gannon

Maxxam ID: CKU366 Dup
Sample ID: MW401
Matrix: Water

Collected: 2016/05/26
Shipped:
Received: 2016/05/27

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Dissolved Metals by ICPMS	ICP/MS	4517716	N/A	2016/05/31	Arefa Dabhad

Maxxam ID: CKU367
Sample ID: MW2000
Matrix: Water

Collected: 2016/05/26
Shipped:
Received: 2016/05/27

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
1,3-Dichloropropene Sum	CALC	4515032	N/A	2016/05/31	Automated Statchk
Volatile Organic Compounds in Water	GC/MS	4516620	N/A	2016/05/30	Blair Gannon

Maxxam Job #: B6A7201
Report Date: 2016/06/03

Terrapex Environmental Ltd
Client Project #: CB644.02
Site Location: 121 Hume Street, Collingwood, ON
Your P.O. #: 4700001396
Sampler Initials: PA

GENERAL COMMENTS

Each temperature is the average of up to three cooler temperatures taken at receipt

Package 1	0.3°C

Results relate only to the items tested.

Maxxam Job #: B6A7201
Report Date: 2016/06/03

Terrapex Environmental Ltd
Client Project #: CB644.02
Site Location: 121 Hume Street, Collingwood, ON
Your P.O. #: 4700001396
Sampler Initials: PA

QUALITY ASSURANCE REPORT

QA/QC	Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
	4516392	CP	Matrix Spike	Free Cyanide	2016/05/30		100	%	80 - 120
	4516392	CP	Spiked Blank	Free Cyanide	2016/05/30		100	%	80 - 120
	4516392	CP	Method Blank	Free Cyanide	2016/05/30	ND,RDL=2		ug/L	
	4516392	CP	RPD	Free Cyanide	2016/05/30	NC		%	20
	4516402	SAC	Matrix Spike	Chromium (VI)	2016/05/31		100	%	80 - 120
	4516402	SAC	Spiked Blank	Chromium (VI)	2016/05/31		101	%	80 - 120
	4516402	SAC	Method Blank	Chromium (VI)	2016/05/31	ND, RDL=0.50		ug/L	
	4516402	SAC	RPD	Chromium (VI)	2016/05/31	NC		%	20
	4516483	DRM	Matrix Spike	Dissolved Chloride (Cl)	2016/05/30		NC	%	80 - 120
	4516483	DRM	Spiked Blank	Dissolved Chloride (Cl)	2016/05/30		105	%	80 - 120
	4516483	DRM	Method Blank	Dissolved Chloride (Cl)	2016/05/30	ND, RDL=1.0		mg/L	
	4516483	DRM	RPD	Dissolved Chloride (Cl)	2016/05/30	2.0		%	20
	4516620	BG1	Matrix Spike	4-Bromofluorobenzene	2016/05/30		100	%	70 - 130
				D4-1,2-Dichloroethane	2016/05/30		101	%	70 - 130
				D8-Toluene	2016/05/30		100	%	70 - 130
				Acetone (2-Propanone)	2016/05/30		103	%	60 - 140
				Benzene	2016/05/30		95	%	70 - 130
				Bromodichloromethane	2016/05/30		95	%	70 - 130
				Bromoform	2016/05/30		96	%	70 - 130
				Bromomethane	2016/05/30		81	%	60 - 140
				Carbon Tetrachloride	2016/05/30		94	%	70 - 130
				Chlorobenzene	2016/05/30		99	%	70 - 130
				Chloroform	2016/05/30		94	%	70 - 130
				Dibromochloromethane	2016/05/30		98	%	70 - 130
				1,2-Dichlorobenzene	2016/05/30		95	%	70 - 130
				1,3-Dichlorobenzene	2016/05/30		93	%	70 - 130
				1,4-Dichlorobenzene	2016/05/30		93	%	70 - 130
				Dichlorodifluoromethane (FREON 12)	2016/05/30		78	%	60 - 140
				1,1-Dichloroethane	2016/05/30		94	%	70 - 130
				1,2-Dichloroethane	2016/05/30		99	%	70 - 130
				1,1-Dichloroethylene	2016/05/30		96	%	70 - 130
				cis-1,2-Dichloroethylene	2016/05/30		94	%	70 - 130
				trans-1,2-Dichloroethylene	2016/05/30		94	%	70 - 130
				1,2-Dichloropropane	2016/05/30		95	%	70 - 130
				cis-1,3-Dichloropropene	2016/05/30		98	%	70 - 130
				trans-1,3-Dichloropropene	2016/05/30		97	%	70 - 130
				Ethylbenzene	2016/05/30		95	%	70 - 130
				Ethylene Dibromide	2016/05/30		99	%	70 - 130
				Hexane	2016/05/30		98	%	70 - 130
				Methylene Chloride(Dichloromethane)	2016/05/30		102	%	70 - 130
				Methyl Ethyl Ketone (2-Butanone)	2016/05/30		103	%	60 - 140
				Methyl Isobutyl Ketone	2016/05/30		100	%	70 - 130
				Methyl t-butyl ether (MTBE)	2016/05/30		97	%	70 - 130
				Styrene	2016/05/30		95	%	70 - 130
				1,1,1,2-Tetrachloroethane	2016/05/30		95	%	70 - 130
				1,1,2,2-Tetrachloroethane	2016/05/30		93	%	70 - 130
				Tetrachloroethylene	2016/05/30		95	%	70 - 130
				Toluene	2016/05/30		93	%	70 - 130
				1,1,1-Trichloroethane	2016/05/30		92	%	70 - 130

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC	Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
4516620	BG1	Spiked Blank		1,1,2-Trichloroethane	2016/05/30		98	%	70 - 130
				Trichloroethylene	2016/05/30		103	%	70 - 130
				Trichlorofluoromethane (FREON 11)	2016/05/30		92	%	70 - 130
				Vinyl Chloride	2016/05/30		94	%	70 - 130
				p+m-Xylene	2016/05/30		91	%	70 - 130
				o-Xylene	2016/05/30		96	%	70 - 130
				4-Bromofluorobenzene	2016/05/30		101	%	70 - 130
				D4-1,2-Dichloroethane	2016/05/30		99	%	70 - 130
				D8-Toluene	2016/05/30		101	%	70 - 130
				Acetone (2-Propanone)	2016/05/30		98	%	60 - 140
				Benzene	2016/05/30		94	%	70 - 130
				Bromodichloromethane	2016/05/30		94	%	70 - 130
				Bromoform	2016/05/30		96	%	70 - 130
				Bromomethane	2016/05/30		80	%	60 - 140
				Carbon Tetrachloride	2016/05/30		95	%	70 - 130
				Chlorobenzene	2016/05/30		99	%	70 - 130
				Chloroform	2016/05/30		94	%	70 - 130
				Dibromochloromethane	2016/05/30		96	%	70 - 130
				1,2-Dichlorobenzene	2016/05/30		95	%	70 - 130
				1,3-Dichlorobenzene	2016/05/30		93	%	70 - 130
				1,4-Dichlorobenzene	2016/05/30		94	%	70 - 130
				Dichlorodifluoromethane (FREON 12)	2016/05/30		80	%	60 - 140
				1,1-Dichloroethane	2016/05/30		94	%	70 - 130
				1,2-Dichloroethane	2016/05/30		96	%	70 - 130
				1,1-Dichloroethylene	2016/05/30		96	%	70 - 130
				cis-1,2-Dichloroethylene	2016/05/30		93	%	70 - 130
				trans-1,2-Dichloroethylene	2016/05/30		94	%	70 - 130
				1,2-Dichloropropane	2016/05/30		95	%	70 - 130
				cis-1,3-Dichloropropene	2016/05/30		95	%	70 - 130
				trans-1,3-Dichloropropene	2016/05/30		92	%	70 - 130
				Ethylbenzene	2016/05/30		96	%	70 - 130
				Ethylene Dibromide	2016/05/30		96	%	70 - 130
				Hexane	2016/05/30		99	%	70 - 130
				Methylene Chloride(Dichloromethane)	2016/05/30		101	%	70 - 130
				Methyl Ethyl Ketone (2-Butanone)	2016/05/30		99	%	60 - 140
				Methyl Isobutyl Ketone	2016/05/30		97	%	70 - 130
				Methyl t-butyl ether (MTBE)	2016/05/30		96	%	70 - 130
				Styrene	2016/05/30		96	%	70 - 130
				1,1,1,2-Tetrachloroethane	2016/05/30		95	%	70 - 130
				1,1,2,2-Tetrachloroethane	2016/05/30		99	%	70 - 130
				Tetrachloroethylene	2016/05/30		95	%	70 - 130
				Toluene	2016/05/30		93	%	70 - 130
				1,1,1-Trichloroethane	2016/05/30		92	%	70 - 130
				1,1,2-Trichloroethane	2016/05/30		96	%	70 - 130
				Trichloroethylene	2016/05/30		92	%	70 - 130
				Trichlorofluoromethane (FREON 11)	2016/05/30		93	%	70 - 130
				Vinyl Chloride	2016/05/30		94	%	70 - 130
				p+m-Xylene	2016/05/30		92	%	70 - 130
				o-Xylene	2016/05/30		97	%	70 - 130
4516620	BG1	Method Blank		4-Bromofluorobenzene	2016/05/30		99	%	70 - 130
				D4-1,2-Dichloroethane	2016/05/30		98	%	70 - 130

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			D8-Toluene	2016/05/30		100	%	70 - 130
			Acetone (2-Propanone)	2016/05/30	ND, RDL=10		ug/L	
			Benzene	2016/05/30	ND, RDL=0.20		ug/L	
			Bromodichloromethane	2016/05/30	ND, RDL=0.50		ug/L	
			Bromoform	2016/05/30	ND, RDL=1.0		ug/L	
			Bromomethane	2016/05/30	ND, RDL=0.50		ug/L	
			Carbon Tetrachloride	2016/05/30	ND, RDL=0.20		ug/L	
			Chlorobenzene	2016/05/30	ND, RDL=0.20		ug/L	
			Chloroform	2016/05/30	ND, RDL=0.20		ug/L	
			Dibromochloromethane	2016/05/30	ND, RDL=0.50		ug/L	
			1,2-Dichlorobenzene	2016/05/30	ND, RDL=0.50		ug/L	
			1,3-Dichlorobenzene	2016/05/30	ND, RDL=0.50		ug/L	
			1,4-Dichlorobenzene	2016/05/30	ND, RDL=0.50		ug/L	
			Dichlorodifluoromethane (FREON 12)	2016/05/30	ND, RDL=1.0		ug/L	
			1,1-Dichloroethane	2016/05/30	ND, RDL=0.20		ug/L	
			1,2-Dichloroethane	2016/05/30	ND, RDL=0.50		ug/L	
			1,1-Dichloroethylene	2016/05/30	ND, RDL=0.20		ug/L	
			cis-1,2-Dichloroethylene	2016/05/30	ND, RDL=0.50		ug/L	
			trans-1,2-Dichloroethylene	2016/05/30	ND, RDL=0.50		ug/L	
			1,2-Dichloropropane	2016/05/30	ND, RDL=0.20		ug/L	
			cis-1,3-Dichloropropene	2016/05/30	ND, RDL=0.30		ug/L	
			trans-1,3-Dichloropropene	2016/05/30	ND, RDL=0.40		ug/L	
			Ethylbenzene	2016/05/30	ND, RDL=0.20		ug/L	
			Ethylene Dibromide	2016/05/30	ND, RDL=0.20		ug/L	

Maxxam Job #: B6A7201
Report Date: 2016/06/03

Terrapex Environmental Ltd
Client Project #: CB644.02
Site Location: 121 Hume Street, Collingwood, ON
Your P.O. #: 4700001396
Sampler Initials: PA

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
4516620	BG1	RPD	Hexane	2016/05/30	ND, RDL=1.0		ug/L	
			Methylene Chloride(Dichloromethane)	2016/05/30	ND, RDL=2.0		ug/L	
			Methyl Ethyl Ketone (2-Butanone)	2016/05/30	ND, RDL=10		ug/L	
			Methyl Isobutyl Ketone	2016/05/30	ND, RDL=5.0		ug/L	
			Methyl t-butyl ether (MTBE)	2016/05/30	ND, RDL=0.50		ug/L	
			Styrene	2016/05/30	ND, RDL=0.50		ug/L	
			1,1,1,2-Tetrachloroethane	2016/05/30	ND, RDL=0.50		ug/L	
			1,1,2,2-Tetrachloroethane	2016/05/30	ND, RDL=0.50		ug/L	
			Tetrachloroethylene	2016/05/30	ND, RDL=0.20		ug/L	
			Toluene	2016/05/30	ND, RDL=0.20		ug/L	
			1,1,1-Trichloroethane	2016/05/30	ND, RDL=0.20		ug/L	
			1,1,2-Trichloroethane	2016/05/30	ND, RDL=0.50		ug/L	
			Trichloroethylene	2016/05/30	ND, RDL=0.20		ug/L	
			Trichlorofluoromethane (FREON 11)	2016/05/30	ND, RDL=0.50		ug/L	
			Vinyl Chloride	2016/05/30	ND, RDL=0.20		ug/L	
			p+m-Xylene	2016/05/30	ND, RDL=0.20		ug/L	
			o-Xylene	2016/05/30	ND, RDL=0.20		ug/L	
			Total Xylenes	2016/05/30	ND, RDL=0.20		ug/L	
			Acetone (2-Propanone)	2016/05/30	NC		%	30
			Benzene	2016/05/30	NC		%	30
			Bromodichloromethane	2016/05/30	NC		%	30
			Bromoform	2016/05/30	NC		%	30
			Bromomethane	2016/05/30	NC		%	30
			Carbon Tetrachloride	2016/05/30	NC		%	30
			Chlorobenzene	2016/05/30	NC		%	30
			Chloroform	2016/05/30	NC		%	30
			Dibromochloromethane	2016/05/30	NC		%	30
			1,2-Dichlorobenzene	2016/05/30	NC		%	30
			1,3-Dichlorobenzene	2016/05/30	NC		%	30
			1,4-Dichlorobenzene	2016/05/30	NC		%	30
			Dichlorodifluoromethane (FREON 12)	2016/05/30	NC		%	30

Maxxam Job #: B6A7201
Report Date: 2016/06/03

Terrapex Environmental Ltd
Client Project #: CB644.02
Site Location: 121 Hume Street, Collingwood, ON
Your P.O. #: 4700001396
Sampler Initials: PA

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC	Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
				1,1-Dichloroethane	2016/05/30	NC		%	30
				1,2-Dichloroethane	2016/05/30	NC		%	30
				1,1-Dichloroethylene	2016/05/30	NC		%	30
				cis-1,2-Dichloroethylene	2016/05/30	NC		%	30
				trans-1,2-Dichloroethylene	2016/05/30	NC		%	30
				1,2-Dichloropropane	2016/05/30	NC		%	30
				cis-1,3-Dichloropropene	2016/05/30	NC		%	30
				trans-1,3-Dichloropropene	2016/05/30	NC		%	30
				Ethylbenzene	2016/05/30	NC		%	30
				Ethylene Dibromide	2016/05/30	NC		%	30
				Hexane	2016/05/30	NC		%	30
				Methylene Chloride(Dichloromethane)	2016/05/30	NC		%	30
				Methyl Ethyl Ketone (2-Butanone)	2016/05/30	NC		%	30
				Methyl Isobutyl Ketone	2016/05/30	NC		%	30
				Methyl t-butyl ether (MTBE)	2016/05/30	NC		%	30
				Styrene	2016/05/30	NC		%	30
				1,1,1,2-Tetrachloroethane	2016/05/30	NC		%	30
				1,1,2,2-Tetrachloroethane	2016/05/30	NC		%	30
				Tetrachloroethylene	2016/05/30	0.35		%	30
				Toluene	2016/05/30	NC		%	30
				1,1,1-Trichloroethane	2016/05/30	NC		%	30
				1,1,2-Trichloroethane	2016/05/30	NC		%	30
				Trichloroethylene	2016/05/30	NC		%	30
				Trichlorofluoromethane (FREON 11)	2016/05/30	NC		%	30
				Vinyl Chloride	2016/05/30	NC		%	30
				p+m-Xylene	2016/05/30	NC		%	30
				o-Xylene	2016/05/30	NC		%	30
				Total Xylenes	2016/05/30	NC		%	30
4517247	NYS		Spiked Blank	Available (CaCl2) pH	2016/05/30		99	%	97 - 103
4517247	NYS		RPD	Available (CaCl2) pH	2016/05/30	0.29		%	N/A
4517528	XJI		Matrix Spike	4-Bromofluorobenzene	2016/05/31		99	%	60 - 140
				D10-o-Xylene	2016/05/31		101	%	60 - 130
				D4-1,2-Dichloroethane	2016/05/31		109	%	60 - 140
				D8-Toluene	2016/05/31		103	%	60 - 140
				Acetone (2-Propanone)	2016/05/31		104	%	60 - 140
				Benzene	2016/05/31		106	%	60 - 140
				Bromodichloromethane	2016/05/31		105	%	60 - 140
				Bromoform	2016/05/31		99	%	60 - 140
				Bromomethane	2016/05/31		98	%	60 - 140
				Carbon Tetrachloride	2016/05/31		110	%	60 - 140
				Chlorobenzene	2016/05/31		101	%	60 - 140
				Chloroform	2016/05/31		107	%	60 - 140
				Dibromochloromethane	2016/05/31		101	%	60 - 140
				1,2-Dichlorobenzene	2016/05/31		94	%	60 - 140
				1,3-Dichlorobenzene	2016/05/31		92	%	60 - 140
				1,4-Dichlorobenzene	2016/05/31		93	%	60 - 140
				Dichlorodifluoromethane (FREON 12)	2016/05/31		129	%	60 - 140
				1,1-Dichloroethane	2016/05/31		108	%	60 - 140
				1,2-Dichloroethane	2016/05/31		113	%	60 - 140
				1,1-Dichloroethylene	2016/05/31		112	%	60 - 140
				cis-1,2-Dichloroethylene	2016/05/31		107	%	60 - 140

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC	Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
				trans-1,2-Dichloroethylene	2016/05/31		108	%	60 - 140
				1,2-Dichloropropane	2016/05/31		104	%	60 - 140
				cis-1,3-Dichloropropene	2016/05/31		99	%	60 - 140
				trans-1,3-Dichloropropene	2016/05/31		98	%	60 - 140
				Ethylbenzene	2016/05/31		98	%	60 - 140
				Ethylene Dibromide	2016/05/31		103	%	60 - 140
				Hexane	2016/05/31		113	%	60 - 140
				Methylene Chloride(Dichloromethane)	2016/05/31		106	%	60 - 140
				Methyl Ethyl Ketone (2-Butanone)	2016/05/31		102	%	60 - 140
				Methyl Isobutyl Ketone	2016/05/31		100	%	60 - 140
				Methyl t-butyl ether (MTBE)	2016/05/31		108	%	60 - 140
				Styrene	2016/05/31		98	%	60 - 140
				1,1,1,2-Tetrachloroethane	2016/05/31		99	%	60 - 140
				1,1,2,2-Tetrachloroethane	2016/05/31		99	%	60 - 140
				Tetrachloroethylene	2016/05/31		100	%	60 - 140
				Toluene	2016/05/31		99	%	60 - 140
				1,1,1-Trichloroethane	2016/05/31		107	%	60 - 140
				1,1,2-Trichloroethane	2016/05/31		105	%	60 - 140
				Trichloroethylene	2016/05/31		99	%	60 - 140
				Trichlorofluoromethane (FREON 11)	2016/05/31		114	%	60 - 140
				Vinyl Chloride	2016/05/31		114	%	60 - 140
				p+m-Xylene	2016/05/31		94	%	60 - 140
				o-Xylene	2016/05/31		96	%	60 - 140
4517528	XII		Spiked Blank	4-Bromofluorobenzene	2016/05/31		99	%	60 - 140
				D10-o-Xylene	2016/05/31		104	%	60 - 130
				D4-1,2-Dichloroethane	2016/05/31		113	%	60 - 140
				D8-Toluene	2016/05/31		102	%	60 - 140
				Acetone (2-Propanone)	2016/05/31		124	%	60 - 140
				Benzene	2016/05/31		107	%	60 - 130
				Bromodichloromethane	2016/05/31		107	%	60 - 130
				Bromoform	2016/05/31		104	%	60 - 130
				Bromomethane	2016/05/31		101	%	60 - 140
				Carbon Tetrachloride	2016/05/31		110	%	60 - 130
				Chlorobenzene	2016/05/31		102	%	60 - 130
				Chloroform	2016/05/31		108	%	60 - 130
				Dibromochloromethane	2016/05/31		104	%	60 - 130
				1,2-Dichlorobenzene	2016/05/31		94	%	60 - 130
				1,3-Dichlorobenzene	2016/05/31		90	%	60 - 130
				1,4-Dichlorobenzene	2016/05/31		92	%	60 - 130
				Dichlorodifluoromethane (FREON 12)	2016/05/31		133	%	60 - 140
				1,1-Dichloroethane	2016/05/31		109	%	60 - 130
				1,2-Dichloroethane	2016/05/31		116	%	60 - 130
				1,1-Dichloroethylene	2016/05/31		113	%	60 - 130
				cis-1,2-Dichloroethylene	2016/05/31		109	%	60 - 130
				trans-1,2-Dichloroethylene	2016/05/31		109	%	60 - 130
				1,2-Dichloropropane	2016/05/31		106	%	60 - 130
				cis-1,3-Dichloropropene	2016/05/31		101	%	60 - 130
				trans-1,3-Dichloropropene	2016/05/31		100	%	60 - 130
				Ethylbenzene	2016/05/31		97	%	60 - 130
				Ethylene Dibromide	2016/05/31		106	%	60 - 130
				Hexane	2016/05/31		119	%	60 - 130

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
4517528	XII	Method Blank	Methylene Chloride(Dichloromethane)	2016/05/31		108	%	60 - 130
			Methyl Ethyl Ketone (2-Butanone)	2016/05/31		121	%	60 - 140
			Methyl Isobutyl Ketone	2016/05/31		111	%	60 - 130
			Methyl t-butyl ether (MTBE)	2016/05/31		108	%	60 - 130
			Styrene	2016/05/31		99	%	60 - 130
			1,1,1,2-Tetrachloroethane	2016/05/31		100	%	60 - 130
			1,1,2,2-Tetrachloroethane	2016/05/31		104	%	60 - 130
			Tetrachloroethylene	2016/05/31		99	%	60 - 130
			Toluene	2016/05/31		99	%	60 - 130
			1,1,1-Trichloroethane	2016/05/31		107	%	60 - 130
			1,1,2-Trichloroethane	2016/05/31		107	%	60 - 130
			Trichloroethylene	2016/05/31		99	%	60 - 130
			Trichlorofluoromethane (FREON 11)	2016/05/31		115	%	60 - 130
			Vinyl Chloride	2016/05/31		116	%	60 - 130
			p+m-Xylene	2016/05/31		93	%	60 - 130
			o-Xylene	2016/05/31		96	%	60 - 130
			4-Bromofluorobenzene	2016/05/31		95	%	60 - 140
			D10-o-Xylene	2016/05/31		90	%	60 - 130
			D4-1,2-Dichloroethane	2016/05/31		116	%	60 - 140
			D8-Toluene	2016/05/31		95	%	60 - 140
			Acetone (2-Propanone)	2016/05/31	ND, RDL=0.50		ug/g	
			Benzene	2016/05/31	ND, RDL=0.020		ug/g	
			Bromodichloromethane	2016/05/31	ND, RDL=0.050		ug/g	
			Bromoform	2016/05/31	ND, RDL=0.050		ug/g	
			Bromomethane	2016/05/31	ND, RDL=0.050		ug/g	
			Carbon Tetrachloride	2016/05/31	ND, RDL=0.050		ug/g	
			Chlorobenzene	2016/05/31	ND, RDL=0.050		ug/g	
			Chloroform	2016/05/31	ND, RDL=0.050		ug/g	
			Dibromochloromethane	2016/05/31	ND, RDL=0.050		ug/g	
			1,2-Dichlorobenzene	2016/05/31	ND, RDL=0.050		ug/g	
			1,3-Dichlorobenzene	2016/05/31	ND, RDL=0.050		ug/g	
			1,4-Dichlorobenzene	2016/05/31	ND, RDL=0.050		ug/g	
			Dichlorodifluoromethane (FREON 12)	2016/05/31	ND, RDL=0.050		ug/g	
			1,1-Dichloroethane	2016/05/31	ND, RDL=0.050		ug/g	

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			1,2-Dichloroethane	2016/05/31	ND, RDL=0.050		ug/g	
			1,1-Dichloroethylene	2016/05/31	ND, RDL=0.050		ug/g	
			cis-1,2-Dichloroethylene	2016/05/31	ND, RDL=0.050		ug/g	
			trans-1,2-Dichloroethylene	2016/05/31	ND, RDL=0.050		ug/g	
			1,2-Dichloropropane	2016/05/31	ND, RDL=0.050		ug/g	
			cis-1,3-Dichloropropene	2016/05/31	ND, RDL=0.030		ug/g	
			trans-1,3-Dichloropropene	2016/05/31	ND, RDL=0.040		ug/g	
			Ethylbenzene	2016/05/31	ND, RDL=0.020		ug/g	
			Ethylene Dibromide	2016/05/31	ND, RDL=0.050		ug/g	
			Hexane	2016/05/31	ND, RDL=0.050		ug/g	
			Methylene Chloride(Dichloromethane)	2016/05/31	ND, RDL=0.050		ug/g	
			Methyl Ethyl Ketone (2-Butanone)	2016/05/31	ND, RDL=0.50		ug/g	
			Methyl Isobutyl Ketone	2016/05/31	ND, RDL=0.50		ug/g	
			Methyl t-butyl ether (MTBE)	2016/05/31	ND, RDL=0.050		ug/g	
			Styrene	2016/05/31	ND, RDL=0.050		ug/g	
			1,1,1,2-Tetrachloroethane	2016/05/31	ND, RDL=0.050		ug/g	
			1,1,2,2-Tetrachloroethane	2016/05/31	ND, RDL=0.050		ug/g	
			Tetrachloroethylene	2016/05/31	ND, RDL=0.050		ug/g	
			Toluene	2016/05/31	ND, RDL=0.020		ug/g	
			1,1,1-Trichloroethane	2016/05/31	ND, RDL=0.050		ug/g	
			1,1,2-Trichloroethane	2016/05/31	ND, RDL=0.050		ug/g	
			Trichloroethylene	2016/05/31	ND, RDL=0.050		ug/g	
			Trichlorofluoromethane (FREON 11)	2016/05/31	ND, RDL=0.050		ug/g	
			Vinyl Chloride	2016/05/31	ND, RDL=0.020		ug/g	

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC	Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
				p+m-Xylene	2016/05/31	ND, RDL=0.020		ug/g	
				o-Xylene	2016/05/31	ND, RDL=0.020		ug/g	
				Total Xylenes	2016/05/31	ND, RDL=0.020		ug/g	
4517528	XII	RPD		Acetone (2-Propanone)	2016/05/31	NC		%	50
				Benzene	2016/05/31	NC		%	50
				Bromodichloromethane	2016/05/31	NC		%	50
				Bromoform	2016/05/31	NC		%	50
				Bromomethane	2016/05/31	NC		%	50
				Carbon Tetrachloride	2016/05/31	NC		%	50
				Chlorobenzene	2016/05/31	NC		%	50
				Chloroform	2016/05/31	NC		%	50
				Dibromochloromethane	2016/05/31	NC		%	50
				1,2-Dichlorobenzene	2016/05/31	NC		%	50
				1,3-Dichlorobenzene	2016/05/31	NC		%	50
				1,4-Dichlorobenzene	2016/05/31	NC		%	50
				Dichlorodifluoromethane (FREON 12)	2016/05/31	NC		%	50
				1,1-Dichloroethane	2016/05/31	NC		%	50
				1,2-Dichloroethane	2016/05/31	NC		%	50
				1,1-Dichloroethylene	2016/05/31	NC		%	50
				cis-1,2-Dichloroethylene	2016/05/31	NC		%	50
				trans-1,2-Dichloroethylene	2016/05/31	NC		%	50
				1,2-Dichloropropane	2016/05/31	NC		%	50
				cis-1,3-Dichloropropene	2016/05/31	NC		%	50
				trans-1,3-Dichloropropene	2016/05/31	NC		%	50
				Ethylbenzene	2016/05/31	NC		%	50
				Ethylene Dibromide	2016/05/31	NC		%	50
				Hexane	2016/05/31	NC		%	50
				Methylene Chloride(Dichloromethane)	2016/05/31	NC		%	50
				Methyl Ethyl Ketone (2-Butanone)	2016/05/31	NC		%	50
				Methyl Isobutyl Ketone	2016/05/31	NC		%	50
				Methyl t-butyl ether (MTBE)	2016/05/31	NC		%	50
				Styrene	2016/05/31	NC		%	50
				1,1,1,2-Tetrachloroethane	2016/05/31	NC		%	50
				1,1,2,2-Tetrachloroethane	2016/05/31	NC		%	50
				Tetrachloroethylene	2016/05/31	NC		%	50
				Toluene	2016/05/31	NC		%	50
				1,1,1-Trichloroethane	2016/05/31	NC		%	50
				1,1,2-Trichloroethane	2016/05/31	NC		%	50
				Trichloroethylene	2016/05/31	NC		%	50
				Trichlorofluoromethane (FREON 11)	2016/05/31	NC		%	50
				Vinyl Chloride	2016/05/31	NC		%	50
				p+m-Xylene	2016/05/31	NC		%	50
				o-Xylene	2016/05/31	NC		%	50
				Total Xylenes	2016/05/31	NC		%	50
4517716	ADA	Matrix Spike [CKU366-06]		Dissolved Antimony (Sb)	2016/05/31		111	%	80 - 120
				Dissolved Arsenic (As)	2016/05/31		105	%	80 - 120
				Dissolved Barium (Ba)	2016/05/31		106	%	80 - 120
				Dissolved Beryllium (Be)	2016/05/31		112	%	80 - 120

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC				Date				
Batch	Init	QC Type	Parameter	Analyzed	Value	Recovery	UNITS	QC Limits
4517716	ADA	Spiked Blank	Dissolved Boron (B)	2016/05/31		109	%	80 - 120
			Dissolved Cadmium (Cd)	2016/05/31		109	%	80 - 120
			Dissolved Chromium (Cr)	2016/05/31		101	%	80 - 120
			Dissolved Cobalt (Co)	2016/05/31		104	%	80 - 120
			Dissolved Copper (Cu)	2016/05/31		107	%	80 - 120
			Dissolved Lead (Pb)	2016/05/31		103	%	80 - 120
			Dissolved Molybdenum (Mo)	2016/05/31		112	%	80 - 120
			Dissolved Nickel (Ni)	2016/05/31		102	%	80 - 120
			Dissolved Selenium (Se)	2016/05/31		104	%	80 - 120
			Dissolved Silver (Ag)	2016/05/31		103	%	80 - 120
			Dissolved Sodium (Na)	2016/05/31		NC	%	80 - 120
			Dissolved Thallium (Tl)	2016/05/31		104	%	80 - 120
			Dissolved Uranium (U)	2016/05/31		102	%	80 - 120
			Dissolved Vanadium (V)	2016/05/31		103	%	80 - 120
			Dissolved Zinc (Zn)	2016/05/31		103	%	80 - 120
			Dissolved Antimony (Sb)	2016/05/31		102	%	80 - 120
			Dissolved Arsenic (As)	2016/05/31		101	%	80 - 120
			Dissolved Barium (Ba)	2016/05/31		101	%	80 - 120
			Dissolved Beryllium (Be)	2016/05/31		105	%	80 - 120
			Dissolved Boron (B)	2016/05/31		99	%	80 - 120
			Dissolved Cadmium (Cd)	2016/05/31		102	%	80 - 120
			Dissolved Chromium (Cr)	2016/05/31		96	%	80 - 120
			Dissolved Cobalt (Co)	2016/05/31		99	%	80 - 120
			Dissolved Copper (Cu)	2016/05/31		102	%	80 - 120
			Dissolved Lead (Pb)	2016/05/31		98	%	80 - 120
			Dissolved Molybdenum (Mo)	2016/05/31		101	%	80 - 120
			Dissolved Nickel (Ni)	2016/05/31		98	%	80 - 120
			Dissolved Selenium (Se)	2016/05/31		102	%	80 - 120
			Dissolved Silver (Ag)	2016/05/31		99	%	80 - 120
			Dissolved Sodium (Na)	2016/05/31		102	%	80 - 120
			Dissolved Thallium (Tl)	2016/05/31		100	%	80 - 120
			Dissolved Uranium (U)	2016/05/31		96	%	80 - 120
			Dissolved Vanadium (V)	2016/05/31		98	%	80 - 120
			Dissolved Zinc (Zn)	2016/05/31		99	%	80 - 120
4517716	ADA	Method Blank	Dissolved Antimony (Sb)	2016/05/31	ND, RDL=0.50		ug/L	
			Dissolved Arsenic (As)	2016/05/31	ND, RDL=1.0		ug/L	
			Dissolved Barium (Ba)	2016/05/31	ND, RDL=2.0		ug/L	
			Dissolved Beryllium (Be)	2016/05/31	ND, RDL=0.50		ug/L	
			Dissolved Boron (B)	2016/05/31	ND, RDL=10		ug/L	
			Dissolved Cadmium (Cd)	2016/05/31	ND, RDL=0.10		ug/L	
			Dissolved Chromium (Cr)	2016/05/31	ND, RDL=5.0		ug/L	
			Dissolved Cobalt (Co)	2016/05/31	ND, RDL=0.50		ug/L	

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Dissolved Copper (Cu)	2016/05/31	ND, RDL=1.0		ug/L	
			Dissolved Lead (Pb)	2016/05/31	ND, RDL=0.50		ug/L	
			Dissolved Molybdenum (Mo)	2016/05/31	ND, RDL=0.50		ug/L	
			Dissolved Nickel (Ni)	2016/05/31	ND, RDL=1.0		ug/L	
			Dissolved Selenium (Se)	2016/05/31	ND, RDL=2.0		ug/L	
			Dissolved Silver (Ag)	2016/05/31	ND, RDL=0.10		ug/L	
			Dissolved Sodium (Na)	2016/05/31	ND, RDL=100		ug/L	
			Dissolved Thallium (Tl)	2016/05/31	ND, RDL=0.050		ug/L	
			Dissolved Uranium (U)	2016/05/31	ND, RDL=0.10		ug/L	
			Dissolved Vanadium (V)	2016/05/31	ND, RDL=0.50		ug/L	
			Dissolved Zinc (Zn)	2016/05/31	ND, RDL=5.0		ug/L	
4517716	ADA	RPD [CKU366-06]	Dissolved Antimony (Sb)	2016/05/31	NC		%	20
			Dissolved Arsenic (As)	2016/05/31	NC		%	20
			Dissolved Barium (Ba)	2016/05/31	0.43		%	20
			Dissolved Beryllium (Be)	2016/05/31	NC		%	20
			Dissolved Boron (B)	2016/05/31	5.5		%	20
			Dissolved Cadmium (Cd)	2016/05/31	NC		%	20
			Dissolved Chromium (Cr)	2016/05/31	NC		%	20
			Dissolved Cobalt (Co)	2016/05/31	NC		%	20
			Dissolved Copper (Cu)	2016/05/31	NC		%	20
			Dissolved Lead (Pb)	2016/05/31	NC		%	20
			Dissolved Molybdenum (Mo)	2016/05/31	0.15		%	20
			Dissolved Nickel (Ni)	2016/05/31	NC		%	20
			Dissolved Selenium (Se)	2016/05/31	NC		%	20
			Dissolved Silver (Ag)	2016/05/31	NC		%	20
			Dissolved Sodium (Na)	2016/05/31	1.4		%	20
			Dissolved Thallium (Tl)	2016/05/31	NC		%	20
			Dissolved Uranium (U)	2016/05/31	2.4		%	20
			Dissolved Vanadium (V)	2016/05/31	NC		%	20
			Dissolved Zinc (Zn)	2016/05/31	NC		%	20
4518525	CP	Matrix Spike	Free Cyanide	2016/06/01		101	%	75 - 125
4518525	CP	Spiked Blank	Free Cyanide	2016/06/01		99	%	80 - 120
4518525	CP	Method Blank	Free Cyanide	2016/06/01	ND, RDL=0.01		ug/g	
4518525	CP	RPD	Free Cyanide	2016/06/01	NC		%	35
4518764	VIV	Matrix Spike	Acid Extractable Antimony (Sb)	2016/06/01		NC	%	75 - 125
			Acid Extractable Arsenic (As)	2016/06/01		NC	%	75 - 125
			Acid Extractable Barium (Ba)	2016/06/01		NC	%	75 - 125
			Acid Extractable Beryllium (Be)	2016/06/01		92	%	75 - 125

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
4518764	VIV	Spiked Blank	Acid Extractable Boron (B)	2016/06/01		NC	%	75 - 125
			Acid Extractable Cadmium (Cd)	2016/06/01		97	%	75 - 125
			Acid Extractable Chromium (Cr)	2016/06/01		NC	%	75 - 125
			Acid Extractable Cobalt (Co)	2016/06/01		NC	%	75 - 125
			Acid Extractable Copper (Cu)	2016/06/01		NC	%	75 - 125
			Acid Extractable Lead (Pb)	2016/06/01		NC	%	75 - 125
			Acid Extractable Molybdenum (Mo)	2016/06/01		96	%	75 - 125
			Acid Extractable Nickel (Ni)	2016/06/01		NC	%	75 - 125
			Acid Extractable Selenium (Se)	2016/06/01		93	%	75 - 125
			Acid Extractable Silver (Ag)	2016/06/01		95	%	75 - 125
			Acid Extractable Thallium (Tl)	2016/06/01		92	%	75 - 125
			Acid Extractable Uranium (U)	2016/06/01		101	%	75 - 125
			Acid Extractable Vanadium (V)	2016/06/01		NC	%	75 - 125
			Acid Extractable Zinc (Zn)	2016/06/01		NC	%	75 - 125
			Acid Extractable Mercury (Hg)	2016/06/01		95	%	75 - 125
			Acid Extractable Antimony (Sb)	2016/06/01		104	%	80 - 120
			Acid Extractable Arsenic (As)	2016/06/01		105	%	80 - 120
			Acid Extractable Barium (Ba)	2016/06/01		103	%	80 - 120
			Acid Extractable Beryllium (Be)	2016/06/01		99	%	80 - 120
			Acid Extractable Boron (B)	2016/06/01		101	%	80 - 120
			Acid Extractable Cadmium (Cd)	2016/06/01		101	%	80 - 120
			Acid Extractable Chromium (Cr)	2016/06/01		101	%	80 - 120
			Acid Extractable Cobalt (Co)	2016/06/01		101	%	80 - 120
			Acid Extractable Copper (Cu)	2016/06/01		102	%	80 - 120
			Acid Extractable Lead (Pb)	2016/06/01		101	%	80 - 120
			Acid Extractable Molybdenum (Mo)	2016/06/01		102	%	80 - 120
			Acid Extractable Nickel (Ni)	2016/06/01		102	%	80 - 120
			Acid Extractable Selenium (Se)	2016/06/01		99	%	80 - 120
			Acid Extractable Silver (Ag)	2016/06/01		101	%	80 - 120
			Acid Extractable Thallium (Tl)	2016/06/01		100	%	80 - 120
			Acid Extractable Uranium (U)	2016/06/01		103	%	80 - 120
			Acid Extractable Vanadium (V)	2016/06/01		102	%	80 - 120
			Acid Extractable Zinc (Zn)	2016/06/01		99	%	80 - 120
			Acid Extractable Mercury (Hg)	2016/06/01		102	%	80 - 120
4518764	VIV	Method Blank	Acid Extractable Antimony (Sb)	2016/06/01	ND, RDL=0.20		ug/g	
			Acid Extractable Arsenic (As)	2016/06/01	ND, RDL=1.0		ug/g	
			Acid Extractable Barium (Ba)	2016/06/01	ND, RDL=0.50		ug/g	
			Acid Extractable Beryllium (Be)	2016/06/01	ND, RDL=0.20		ug/g	
			Acid Extractable Boron (B)	2016/06/01	ND, RDL=5.0		ug/g	
			Acid Extractable Cadmium (Cd)	2016/06/01	ND, RDL=0.10		ug/g	
			Acid Extractable Chromium (Cr)	2016/06/01	ND, RDL=1.0		ug/g	
			Acid Extractable Cobalt (Co)	2016/06/01	ND, RDL=0.10		ug/g	

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Acid Extractable Copper (Cu)	2016/06/01	ND, RDL=0.50		ug/g	
			Acid Extractable Lead (Pb)	2016/06/01	ND, RDL=1.0		ug/g	
			Acid Extractable Molybdenum (Mo)	2016/06/01	ND, RDL=0.50		ug/g	
			Acid Extractable Nickel (Ni)	2016/06/01	ND, RDL=0.50		ug/g	
			Acid Extractable Selenium (Se)	2016/06/01	ND, RDL=0.50		ug/g	
			Acid Extractable Silver (Ag)	2016/06/01	ND, RDL=0.20		ug/g	
			Acid Extractable Thallium (Tl)	2016/06/01	ND, RDL=0.050		ug/g	
			Acid Extractable Uranium (U)	2016/06/01	ND, RDL=0.050		ug/g	
			Acid Extractable Vanadium (V)	2016/06/01	ND, RDL=5.0		ug/g	
			Acid Extractable Zinc (Zn)	2016/06/01	ND, RDL=5.0		ug/g	
			Acid Extractable Mercury (Hg)	2016/06/01	ND, RDL=0.050		ug/g	
4518764	VIV	RPD	Acid Extractable Antimony (Sb)	2016/06/01	1.9		%	30
			Acid Extractable Arsenic (As)	2016/06/01	9.9		%	30
			Acid Extractable Barium (Ba)	2016/06/01	0.47		%	30
			Acid Extractable Beryllium (Be)	2016/06/01	NC		%	30
			Acid Extractable Boron (B)	2016/06/01	1.1		%	30
			Acid Extractable Cadmium (Cd)	2016/06/01	NC		%	30
			Acid Extractable Cobalt (Co)	2016/06/01	6.1		%	30
			Acid Extractable Copper (Cu)	2016/06/01	4.2		%	30
			Acid Extractable Lead (Pb)	2016/06/01	2.1		%	30
			Acid Extractable Molybdenum (Mo)	2016/06/01	NC		%	30
			Acid Extractable Nickel (Ni)	2016/06/01	4.0		%	30
			Acid Extractable Selenium (Se)	2016/06/01	NC		%	30
			Acid Extractable Silver (Ag)	2016/06/01	NC		%	30
			Acid Extractable Uranium (U)	2016/06/01	1.6		%	30
			Acid Extractable Vanadium (V)	2016/06/01	8.1		%	30
			Acid Extractable Zinc (Zn)	2016/06/01	3.7		%	30
4518796	SUK	Matrix Spike	Hot Water Ext. Boron (B)	2016/05/31		110	%	75 - 125
4518796	SUK	Spiked Blank	Hot Water Ext. Boron (B)	2016/05/31		103	%	75 - 125
4518796	SUK	Method Blank	Hot Water Ext. Boron (B)	2016/05/31	ND, RDL=0.050		ug/g	
4518796	SUK	RPD	Hot Water Ext. Boron (B)	2016/05/31	NC		%	40
4518935	VGS	RPD	Moisture	2016/05/31	3.2		%	20
4518998	SAC	Matrix Spike	Chromium (VI)	2016/06/01		80	%	75 - 125
4518998	SAC	Spiked Blank	Chromium (VI)	2016/06/01		89	%	80 - 120
4518998	SAC	Method Blank	Chromium (VI)	2016/06/01	ND, RDL=0.2		ug/g	
4518998	SAC	RPD	Chromium (VI)	2016/06/01	NC		%	35
4519291	GYA	RPD	Moisture	2016/05/31	14		%	20

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC	Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
4520008	RGA	Matrix Spike [CKU365-02]		1,4-Difluorobenzene	2016/06/01		100	%	70 - 130
				4-Bromofluorobenzene	2016/06/01		98	%	70 - 130
				D10-Ethylbenzene	2016/06/01		96	%	70 - 130
				D4-1,2-Dichloroethane	2016/06/01		103	%	70 - 130
				F1 (C6-C10)	2016/06/01		90	%	70 - 130
4520008	RGA	Spiked Blank		1,4-Difluorobenzene	2016/06/01		101	%	70 - 130
				4-Bromofluorobenzene	2016/06/01		98	%	70 - 130
				D10-Ethylbenzene	2016/06/01		98	%	70 - 130
				D4-1,2-Dichloroethane	2016/06/01		102	%	70 - 130
				F1 (C6-C10)	2016/06/01		86	%	70 - 130
4520008	RGA	Method Blank		1,4-Difluorobenzene	2016/06/01		102	%	70 - 130
				4-Bromofluorobenzene	2016/06/01		98	%	70 - 130
				D10-Ethylbenzene	2016/06/01		101	%	70 - 130
				D4-1,2-Dichloroethane	2016/06/01		103	%	70 - 130
				F1 (C6-C10)	2016/06/01	ND, RDL=25		ug/L	
4520008	RGA	RPD [CKU365-02]		F1 (C6-C10)	2016/06/01	NC		%	30
				F1 (C6-C10) - BTEX	2016/06/01	NC		%	30
4520139	MC	Matrix Spike		Mercury (Hg)	2016/06/01		110	%	75 - 125
4520139	MC	Spiked Blank		Mercury (Hg)	2016/06/01		102	%	80 - 120
4520139	MC	Method Blank		Mercury (Hg)	2016/06/01	ND, RDL=0.1		ug/L	
4520139	MC	RPD		Mercury (Hg)	2016/06/01	NC		%	20
4520648	JET	Matrix Spike [CKU366-02]		D10-Anthracene	2016/06/01		101	%	50 - 130
				D14-Terphenyl (FS)	2016/06/01		98	%	50 - 130
				D8-Acenaphthylene	2016/06/01		99	%	50 - 130
				Acenaphthene	2016/06/01		110	%	50 - 130
				Acenaphthylene	2016/06/01		110	%	50 - 130
				Anthracene	2016/06/01		111	%	50 - 130
				Benzo(a)anthracene	2016/06/01		118	%	50 - 130
				Benzo(a)pyrene	2016/06/01		120	%	50 - 130
				Benzo(b,j)fluoranthene	2016/06/01		120	%	50 - 130
				Benzo(g,h,i)perylene	2016/06/01		115	%	50 - 130
				Benzo(k)fluoranthene	2016/06/01		118	%	50 - 130
				Chrysene	2016/06/01		116	%	50 - 130
				Dibenz(a,h)anthracene	2016/06/01		110	%	50 - 130
				Fluoranthene	2016/06/01		121	%	50 - 130
				Fluorene	2016/06/01		113	%	50 - 130
				Indeno(1,2,3-cd)pyrene	2016/06/01		125	%	50 - 130
				1-Methylnaphthalene	2016/06/01		103	%	50 - 130
				2-Methylnaphthalene	2016/06/01		102	%	50 - 130
				Naphthalene	2016/06/01		97	%	50 - 130
				Phenanthrene	2016/06/01		110	%	50 - 130
				Pyrene	2016/06/01		120	%	50 - 130
4520648	JET	Spiked Blank		D10-Anthracene	2016/06/02		104	%	50 - 130
				D14-Terphenyl (FS)	2016/06/02		102	%	50 - 130
				D8-Acenaphthylene	2016/06/02		99	%	50 - 130
				Acenaphthene	2016/06/02		110	%	50 - 130
				Acenaphthylene	2016/06/02		110	%	50 - 130

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
4520648	JET	Method Blank	Anthracene	2016/06/02		112	%	50 - 130
			Benzo(a)anthracene	2016/06/02		116	%	50 - 130
			Benzo(a)pyrene	2016/06/02		119	%	50 - 130
			Benzo(b/j)fluoranthene	2016/06/02		123	%	50 - 130
			Benzo(g,h,i)perylene	2016/06/02		119	%	50 - 130
			Benzo(k)fluoranthene	2016/06/02		121	%	50 - 130
			Chrysene	2016/06/02		117	%	50 - 130
			Dibenz(a,h)anthracene	2016/06/02		108	%	50 - 130
			Fluoranthene	2016/06/02		122	%	50 - 130
			Fluorene	2016/06/02		112	%	50 - 130
			Indeno(1,2,3-cd)pyrene	2016/06/02		128	%	50 - 130
			1-Methylnaphthalene	2016/06/02		102	%	50 - 130
			2-Methylnaphthalene	2016/06/02		100	%	50 - 130
			Naphthalene	2016/06/02		96	%	50 - 130
			Phenanthrene	2016/06/02		111	%	50 - 130
			Pyrene	2016/06/02		120	%	50 - 130
			D10-Anthracene	2016/06/01		105	%	50 - 130
			D14-Terphenyl (FS)	2016/06/01		103	%	50 - 130
			D8-Acenaphthylene	2016/06/01		102	%	50 - 130
			Acenaphthene	2016/06/01	ND, RDL=0.050		ug/L	
			Acenaphthylene	2016/06/01	ND, RDL=0.050		ug/L	
			Anthracene	2016/06/01	ND, RDL=0.050		ug/L	
			Benzo(a)anthracene	2016/06/01	ND, RDL=0.050		ug/L	
			Benzo(a)pyrene	2016/06/01	ND, RDL=0.010		ug/L	
			Benzo(b/j)fluoranthene	2016/06/01	ND, RDL=0.050		ug/L	
			Benzo(g,h,i)perylene	2016/06/01	ND, RDL=0.050		ug/L	
			Benzo(k)fluoranthene	2016/06/01	ND, RDL=0.050		ug/L	
			Chrysene	2016/06/01	ND, RDL=0.050		ug/L	
			Dibenz(a,h)anthracene	2016/06/01	ND, RDL=0.050		ug/L	
			Fluoranthene	2016/06/01	ND, RDL=0.050		ug/L	
			Fluorene	2016/06/01	ND, RDL=0.050		ug/L	
			Indeno(1,2,3-cd)pyrene	2016/06/01	ND, RDL=0.050		ug/L	
			1-Methylnaphthalene	2016/06/01	ND, RDL=0.050		ug/L	
			2-Methylnaphthalene	2016/06/01	ND, RDL=0.050		ug/L	

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
4520648	JET	RPD [CKU364-01]	Naphthalene	2016/06/01	ND, RDL=0.050		ug/L	
			Phenanthrene	2016/06/01	ND, RDL=0.030		ug/L	
			Pyrene	2016/06/01	ND, RDL=0.050		ug/L	
			Acenaphthene	2016/06/01	NC		%	30
			Acenaphthylene	2016/06/01	NC		%	30
			Anthracene	2016/06/01	NC		%	30
			Benzo(a)anthracene	2016/06/01	NC		%	30
			Benzo(a)pyrene	2016/06/01	NC		%	30
			Benzo(b,j)fluoranthene	2016/06/01	NC		%	30
			Benzo(g,h,i)perylene	2016/06/01	NC		%	30
			Benzo(k)fluoranthene	2016/06/01	NC		%	30
			Chrysene	2016/06/01	NC		%	30
			Dibenz(a,h)anthracene	2016/06/01	NC		%	30
			Fluoranthene	2016/06/01	NC		%	30
			Fluorene	2016/06/01	NC		%	30
			Indeno(1,2,3-cd)pyrene	2016/06/01	NC		%	30
			1-Methylnaphthalene	2016/06/01	NC		%	30
			2-Methylnaphthalene	2016/06/01	NC		%	30
			Naphthalene	2016/06/01	NC		%	30
			Phenanthrene	2016/06/01	NC		%	30
			Pyrene	2016/06/01	NC		%	30
4520892	ZZ	Matrix Spike	o-Terphenyl	2016/06/01		99	%	60 - 130
			F2 (C10-C16 Hydrocarbons)	2016/06/01		109	%	50 - 130
			F3 (C16-C34 Hydrocarbons)	2016/06/01		100	%	50 - 130
			F4 (C34-C50 Hydrocarbons)	2016/06/01		100	%	50 - 130
4520892	ZZ	Spiked Blank	o-Terphenyl	2016/06/01		102	%	60 - 130
			F2 (C10-C16 Hydrocarbons)	2016/06/01		113	%	60 - 130
			F3 (C16-C34 Hydrocarbons)	2016/06/01		105	%	60 - 130
			F4 (C34-C50 Hydrocarbons)	2016/06/01		103	%	60 - 130
4520892	ZZ	Method Blank	o-Terphenyl	2016/06/01		97	%	60 - 130
			F2 (C10-C16 Hydrocarbons)	2016/06/01	ND, RDL=100		ug/L	
			F3 (C16-C34 Hydrocarbons)	2016/06/01	ND, RDL=200		ug/L	
			F4 (C34-C50 Hydrocarbons)	2016/06/01	ND, RDL=200		ug/L	
4520892	ZZ	RPD	F2 (C10-C16 Hydrocarbons)	2016/06/02	NC		%	30
			F3 (C16-C34 Hydrocarbons)	2016/06/02	NC		%	30
			F4 (C34-C50 Hydrocarbons)	2016/06/02	NC		%	30
4521260	JOH	Spiked Blank	Soluble Calcium (Ca)	2016/06/02		97	%	80 - 120
			Soluble Magnesium (Mg)	2016/06/02		96	%	80 - 120
			Soluble Sodium (Na)	2016/06/02		92	%	80 - 120
4521260	JOH	Method Blank	Soluble Calcium (Ca)	2016/06/02	ND, RDL=0.5		mg/L	
			Soluble Magnesium (Mg)	2016/06/02	ND, RDL=0.5		mg/L	
			Soluble Sodium (Na)	2016/06/02	ND,RDL=5		mg/L	

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC	Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
4521260	JOH	RPD		Soluble Calcium (Ca)	2016/06/02	3.8		%	30
				Soluble Magnesium (Mg)	2016/06/02	NC		%	30
				Soluble Sodium (Na)	2016/06/02	NC		%	30
4521281	L_A	Spiked Blank		Conductivity	2016/06/02		100	%	90 - 110
4521281	L_A	Method Blank		Conductivity	2016/06/02	ND, RDL=0.002		mS/cm	
4521281	L_A	RPD		Conductivity	2016/06/02	0.40		%	10
4521902	JET	Matrix Spike		D10-Anthracene	2016/06/02		102	%	50 - 130
				D14-Terphenyl (FS)	2016/06/02		107	%	50 - 130
				D8-Acenaphthylene	2016/06/02		113	%	50 - 130
				Acenaphthene	2016/06/02		100	%	50 - 130
				Acenaphthylene	2016/06/02		111	%	50 - 130
				Anthracene	2016/06/02		107	%	50 - 130
				Benzo(a)anthracene	2016/06/02		111	%	50 - 130
				Benzo(a)pyrene	2016/06/02		101	%	50 - 130
				Benzo(b/j)fluoranthene	2016/06/02		95	%	50 - 130
				Benzo(g,h,i)perylene	2016/06/02		100	%	50 - 130
				Benzo(k)fluoranthene	2016/06/02		96	%	50 - 130
				Chrysene	2016/06/02		101	%	50 - 130
				Dibenz(a,h)anthracene	2016/06/02		102	%	50 - 130
				Fluoranthene	2016/06/02		106	%	50 - 130
				Fluorene	2016/06/02		104	%	50 - 130
				Indeno(1,2,3-cd)pyrene	2016/06/02		103	%	50 - 130
				1-Methylnaphthalene	2016/06/02		101	%	50 - 130
				2-Methylnaphthalene	2016/06/02		102	%	50 - 130
				Naphthalene	2016/06/02		99	%	50 - 130
				Phenanthrene	2016/06/02		103	%	50 - 130
				Pyrene	2016/06/02		106	%	50 - 130
				D10-Anthracene	2016/06/02		98	%	50 - 130
				D14-Terphenyl (FS)	2016/06/02		109	%	50 - 130
				D8-Acenaphthylene	2016/06/02		104	%	50 - 130
				Acenaphthene	2016/06/02		106	%	50 - 130
				Acenaphthylene	2016/06/02		105	%	50 - 130
				Anthracene	2016/06/02		106	%	50 - 130
				Benzo(a)anthracene	2016/06/02		107	%	50 - 130
				Benzo(a)pyrene	2016/06/02		106	%	50 - 130
				Benzo(b/j)fluoranthene	2016/06/02		105	%	50 - 130
				Benzo(g,h,i)perylene	2016/06/02		105	%	50 - 130
				Benzo(k)fluoranthene	2016/06/02		106	%	50 - 130
				Chrysene	2016/06/02		105	%	50 - 130
				Dibenz(a,h)anthracene	2016/06/02		106	%	50 - 130
				Fluoranthene	2016/06/02		107	%	50 - 130
				Fluorene	2016/06/02		105	%	50 - 130
				Indeno(1,2,3-cd)pyrene	2016/06/02		106	%	50 - 130
				1-Methylnaphthalene	2016/06/02		107	%	50 - 130
				2-Methylnaphthalene	2016/06/02		108	%	50 - 130
				Naphthalene	2016/06/02		107	%	50 - 130
				Phenanthrene	2016/06/02		105	%	50 - 130
				Pyrene	2016/06/02		106	%	50 - 130
4521902	JET	Method Blank		D10-Anthracene	2016/06/02		75	%	50 - 130
				D14-Terphenyl (FS)	2016/06/02		84	%	50 - 130

Maxxam Job #: B6A7201
Report Date: 2016/06/03

Terrapex Environmental Ltd
Client Project #: CB644.02
Site Location: 121 Hume Street, Collingwood, ON
Your P.O. #: 4700001396
Sampler Initials: PA

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
4521902	JET	RPD	D8-Acenaphthylene	2016/06/02		81	%	50 - 130
			Acenaphthene	2016/06/02	ND, RDL=0.0050		ug/g	
			Acenaphthylene	2016/06/02	ND, RDL=0.0050		ug/g	
			Anthracene	2016/06/02	ND, RDL=0.0050		ug/g	
			Benzo(a)anthracene	2016/06/02	ND, RDL=0.0050		ug/g	
			Benzo(a)pyrene	2016/06/02	ND, RDL=0.0050		ug/g	
			Benzo(b/j)fluoranthene	2016/06/02	ND, RDL=0.0050		ug/g	
			Benzo(g,h,i)perylene	2016/06/02	ND, RDL=0.0050		ug/g	
			Benzo(k)fluoranthene	2016/06/02	ND, RDL=0.0050		ug/g	
			Chrysene	2016/06/02	ND, RDL=0.0050		ug/g	
			Dibenz(a,h)anthracene	2016/06/02	ND, RDL=0.0050		ug/g	
			Fluoranthene	2016/06/02	ND, RDL=0.0050		ug/g	
			Fluorene	2016/06/02	ND, RDL=0.0050		ug/g	
			Indeno(1,2,3-cd)pyrene	2016/06/02	ND, RDL=0.0050		ug/g	
			1-Methylnaphthalene	2016/06/02	ND, RDL=0.0050		ug/g	
			2-Methylnaphthalene	2016/06/02	ND, RDL=0.0050		ug/g	
			Naphthalene	2016/06/02	ND, RDL=0.0050		ug/g	
			Phenanthrene	2016/06/02	ND, RDL=0.0050		ug/g	
			Pyrene	2016/06/02	ND, RDL=0.0050		ug/g	
			Acenaphthene	2016/06/02	NC		%	40
			Acenaphthylene	2016/06/02	NC		%	40
			Anthracene	2016/06/02	NC		%	40
			Benzo(a)anthracene	2016/06/02	NC		%	40
			Benzo(a)pyrene	2016/06/02	NC		%	40
			Benzo(b/j)fluoranthene	2016/06/02	NC		%	40
			Benzo(g,h,i)perylene	2016/06/02	NC		%	40
			Benzo(k)fluoranthene	2016/06/02	NC		%	40
			Chrysene	2016/06/02	NC		%	40
			Dibenz(a,h)anthracene	2016/06/02	NC		%	40
			Fluoranthene	2016/06/02	NC		%	40
			Fluorene	2016/06/02	NC		%	40

Maxxam Job #: B6A7201
Report Date: 2016/06/03

Terrapex Environmental Ltd
Client Project #: CB644.02
Site Location: 121 Hume Street, Collingwood, ON
Your P.O. #: 4700001396
Sampler Initials: PA

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Indeno(1,2,3-cd)pyrene	2016/06/02	NC		%	40
			1-Methylnaphthalene	2016/06/02	NC		%	40
			2-Methylnaphthalene	2016/06/02	NC		%	40
			Naphthalene	2016/06/02	NC		%	40
			Phenanthrene	2016/06/02	NC		%	40
			Pyrene	2016/06/02	NC		%	40

N/A = Not Applicable

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.

Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.

Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.

Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.

Surrogate: A pure or isotopically labeled compound whose behavior mirrors the analytes of interest. Used to evaluate extraction efficiency.

NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spiked amount was too small to permit a reliable recovery calculation (matrix spike concentration was less than 2x that of the native sample concentration).

NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (one or both samples < 5x RDL).

VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by the following individual(s).

Cristina Carriere

Cristina Carriere, Scientific Services

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

APPENDIX VII
PHASE TWO ESA 2012



SUNCOR ENERGY PRODUCTS PARTNERSHIP

PHASE II ENVIRONMENTAL SITE ASSESSMENT (ESA)

SITE LOCATION:	121 Hume Street, Collingwood, Ontario	REPORT DATE:	September 12, 2012
SITE NUMBER:	60680	DRILLING DATE:	August 22-23, 2012
SUNCOR AUTHORIZATION	Ken Tedder	MONITORING DATE:	August 24, 2012
GENERIC SITE CONDITION STANDARDS:	Ontario Regulation 153/04 as amended by O.Reg 511/09 and O.Reg 179/11 Table 3 Industrial/Commercial	PROJECT NUMBER:	CB644.00

PURPOSE	The purpose of the ESA was to assess the nature and extent of any potential Contaminants of Concern (C of C's) in the soil and groundwater across the site in accordance with Ontario Regulation (O.Reg.) 153/04.

SITE CHARACTERISTICS

- The site is a former Suncor retail fuel outlet. The fuel storage and distribution facilities were decommissioned and removed in June 2007. During an August 2007 Phase II ESA, Terrapex advanced 10 boreholes (100 series). Seven of the 10 boreholes were completed as monitoring wells. The on-site building was demolished at a later date, and, currently, the site is vacant.
- The site and surrounding area are supplied drinking water by the municipality from Georgian Bay, a non-groundwater source.
- See Figure 1 for site location and Figure 2 for site plan.

Surrounding Land Uses:

- north residential houses;
- west commercial/residential;
- south Hume Street, residential/commercial land use beyond; and,
- east Market Street, residential beyond.

Topography and Surface Drainage:

- The site is generally flat, no catch basins were observed on-site..

GENERIC SITE CONDITION STANDARDS SELECTION

- Water is supplied by the municipality from non-groundwater sources.
- The site is zoned for commercial land use.
- Grain-size analysis indicated that the site soils were primarily fine sand and silt (coarse-textured).
- Based on O.Reg. 153/04, the Table 3 Site Condition Standards (SCS) for use in a non-potable groundwater situation at commercial/industrial lands are applicable (coarse-grained SCS were chosen based on grain size analysis).
- The generic criteria selection chart (Figure 6) is attached.

SCOPE OF WORK

On August 22 and 23 2012, ten boreholes were advanced to depths ranging from approximately 2.4 to 4.6 m below grade. Nine of the 10 boreholes were advanced using a truck mounted ME-75 with direct push hollow augers. One borehole was advanced into the bedrock using a down-the-hole hammer. Monitoring wells constructed of 40-mm diameter PVC pipe were installed in seven of the boreholes. Well construction details are shown on the attached borehole/monitoring well logs. Work was conducted in accordance with O.Reg. 153/04. Borehole locations are shown on Figure 2.

Number of Boreholes	10 (200 series)	Number of Monitoring Wells	7
Depth Range	2.4 to 4.6 m	Number of Existing Wells	5 (100 series)

Soil Analysis:

- Twenty soil samples were collected (including one field duplicate) from the 10 boreholes, either with the highest soil vapour (SV) reading, from the assumed water table, or from apparent layer of fill material.
- 11 soil samples (including one field duplicate) were analysed for benzene, toluene, ethylbenzene and xylenes (BTEX) and petroleum hydrocarbons (PHCs) F1-F4 fractions.
- Five samples were submitted for analysis of volatile organic compounds (VOCs).
- Four samples for polycyclic aromatic hydrocarbons (PAHs).
- Three samples were submitted for analysis of a selected suite of metals;
- Two soil samples for pH;
- One soil sample was submitted for O.Reg. 558 TCLP analysis; and,
- Three soil samples were submitted for grain size distribution analysis.

Groundwater Analysis:

- Twelve groundwater samples (including one field duplicate) were collected from all seven of the newly installed and four of the five existing monitoring wells.
- 14 groundwater samples (including trip and field blanks) were analysed for BTEX and PHC F1-F4;
- Five water samples (including a trip blank) were submitted for analysis of VOCs;
- Three water samples for PAHs;
- Four water samples for metals; and,
- Two samples for pH.
- For QA/QC purposes, one field blank sample and one trip blank were submitted to the laboratory for analysis of BTEX and PHCs F1-F4, and VOCs and PHCs F1-F4, respectively.

SUBSURFACE CONDITIONS

The stratigraphy encountered in the boreholes advanced on-site comprised approximately 2.4 to 3.3 m of fine to medium sand, various amounts silt and gravel with minor amounts of clay underlain by bedrock. A surficial layer of asphalt was observed in west, south and east portions of the site. Apparent wet soil conditions were encountered at approximately 1.6-2 m, depending on location. Borehole logs are attached.

Soil Vapour Survey

- SV concentrations ranged from <10 ppm to 375 ppm in all soil samples surveyed.

Liquid-Phase Petroleum Hydrocarbons

- Liquid-phase petroleum hydrocarbon impacts were not observed during the drilling program.

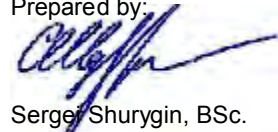
MONITORING (Table 1)

- On August 24, 2012, headspace vapours in monitoring wells ranged from 15 ppm in MW101 to 48%LEL in MW207.
- On August 24, 2012, the depth to groundwater in the newly installed and existing wells ranged from 1.84 m in MW205 to 2.55 m in MW106 below ground surface. The interpreted groundwater flow direction was north northwesterly as shown on Figure 3.
- Liquid-phase petroleum hydrocarbons were not observed during the monitoring event.

RESULTS OF ANALYSIS (Tables 2 through 10; Figures 4 and 5)

- Concentrations of PHC F1 to F4, BTEX, VOC s, PAHs and metals were less than the applicable O.Reg 153/04 Table 3 SCS in all soil samples analysed with the exception of MW202-3 and BH208-3. Concentrations of PHC F1 in MW202-3, and PHC F1-F2 in BH208-3 exceeded the applicable Table 3 SCS.
- The TCLP analysis indicated that the soil is considered non-hazardous as per O.Reg. 558.
- Concentrations of PHC F1 to F4, BTEX, VOC s, PAHs and metals were less than the applicable O.Reg 153/04 Table 3 SCS in all groundwater samples analysed with the exception of MW107, MW202, MW205, MW207 and MW210 (field duplicate of MW207). Concentrations of PHC F2 in MW107, and PHCs F1-F2 in MW202, MW207 and its duplicate exceeded the Table 3 SCS. Concentration of dichloroethane 1,2 in MW205 also exceeded the applicable SCS.

Prepared by:



Sergei Shurygin, BSc.
Environmental Scientist

Reviewed by:



Jeff Stevenson, P.Geo.
Senior Project Manager

FIGURES

SITE LOCATION

121 HUME STREET
COLLINGWOOD, ONTARIO

CLIENT



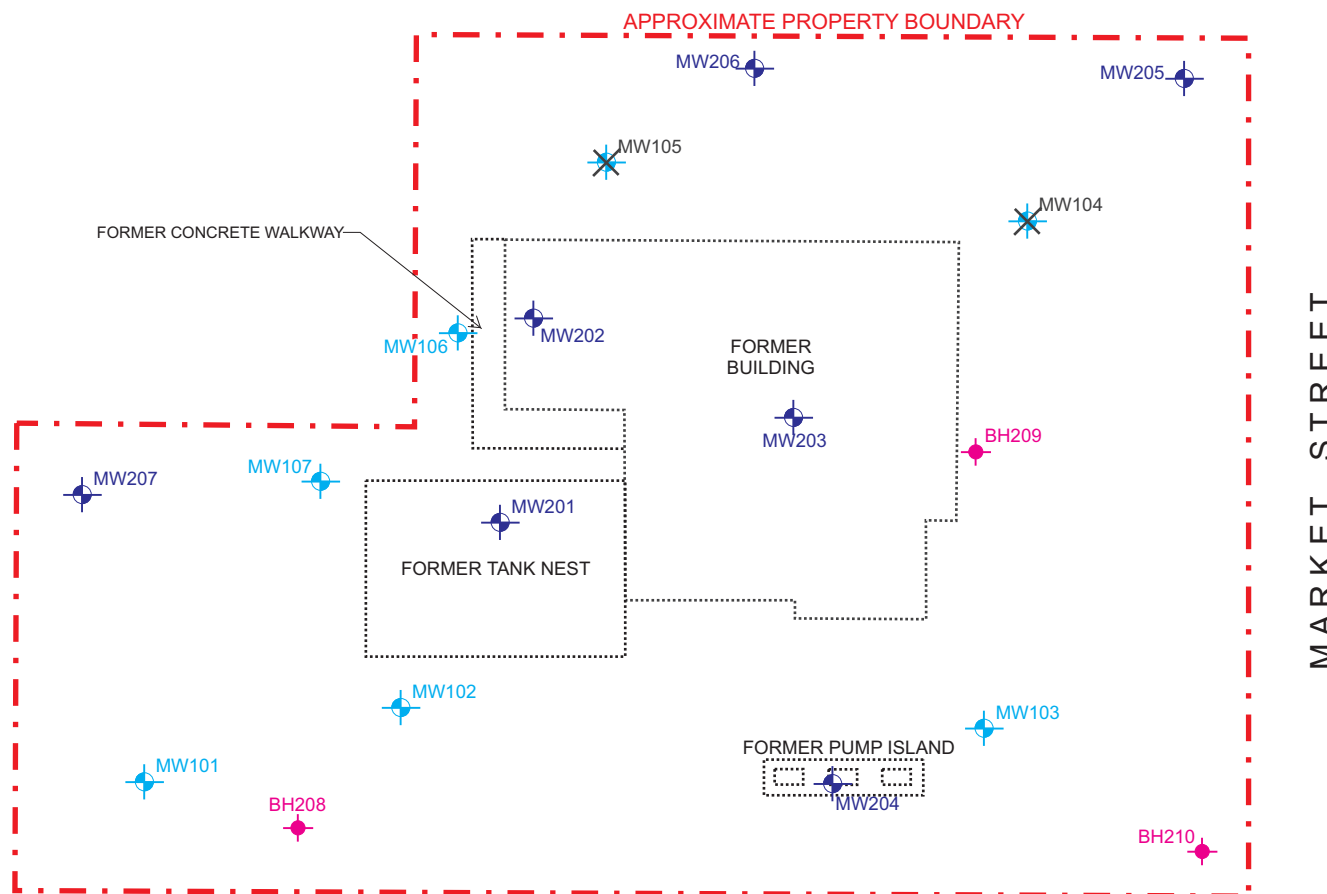
NOTE: MAP IMAGE TAKEN FROM MAPART
WESTERN ONTARIO ATLAS, PAGE 192.

PROJECT #	CB644.00		
DATE	SEPT 2012		
DRAWN	ECV/SF	CHECKED	SS
DRAWING #	FIGURE 1		

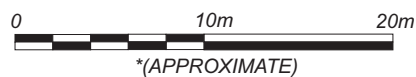
GENERAL SITE LAYOUT

121 HUME STREET
COLLINGWOOD, ONTARIO

CLIENT



HUME STREET

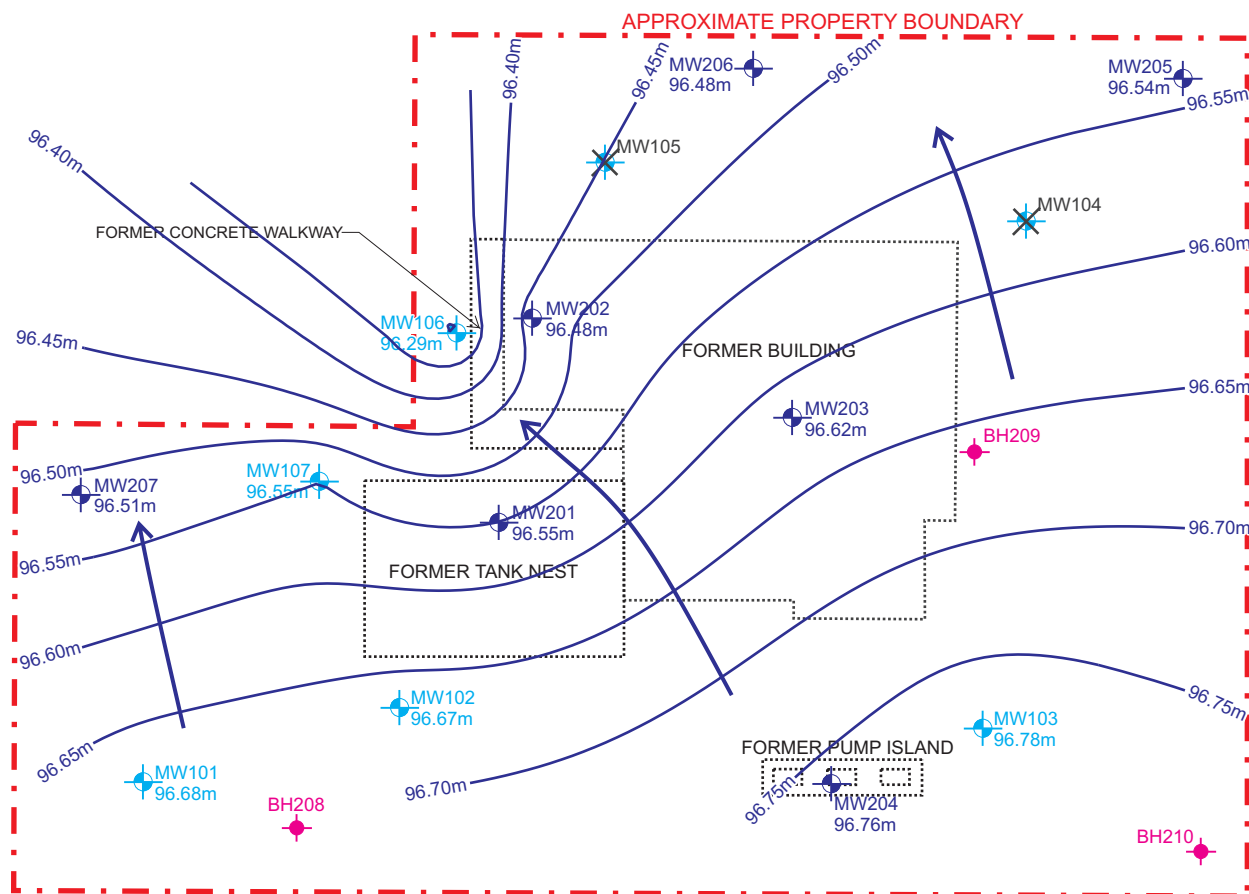


*NOTE: DRAWING TAKEN FROM SITE PLAN PROVIDED BY CLIENT, AND FROM FIELD MEASUREMENTS AND OBSERVATIONS. SCALE IS APPROXIMATE.

LEGEND

- ◆ BOREHOLE
- ⊕ MONITORING WELL (2012)
- ⊕ EXISTING MONITORING WELL (2007)
- ✱ DESTROYED MONITORING WELL

PROJECT #	CB644.00		
SCALE	AS SHOWN		
DATE	SEPT 2012		
DRAWN	ECV/SF	CHECKED	SS
DRAWING #	FIGURE 2		



LEGEND

- 94.66 m GROUNDWATER ELEVATION
RELATIVE TO ON-SITE
BENCHMARK
- INTERPRETED GROUNDWATER
CONTOUR (AS OF AUG 24 2012)
- GROUNDWATER FLOW
DIRECTION
- ◆ BOREHOLE
- MONITORING WELL (2012)
- EXISTING MONITORING WELL (2007)
- ✕ DESTROYED MONITORING WELL

0 10m 20m
*(APPROXIMATE)

*NOTE: DRAWING TAKEN FROM SITE PLAN PROVIDED BY CLIENT, AND FROM FIELD MEASUREMENTS AND OBSERVATIONS. SCALE IS APPROXIMATE.

PROJECT #	CB644.00
SCALE	AS SHOWN
DATE	SEPT 2012
DRAWN	ECV/SF
CHECKED	SS
DRAWING #	FIGURE 3

SOIL ANALYSIS RESULTS

121 HUME STREET
COLLINGWOOD, ONTARIO

CLIENT



MW202-3 – (1.8-2.1m)	
PARAMETERS	µg/g
F1	58

BH208-3 – (1.5-2.1m)	
PARAMETERS	µg/g
F1	56
F2	460

LEGEND

- BOREHOLE
- MONITORING WELL (2012)
- EXISTING MONITORING WELL (2007)
- ✕ DESTROYED MONITORING WELL

* CODE INFORMATION

- Less than or equal to Table 3 SCS
- Greater than Table 3 SCS

ANALYSIS INFORMATION

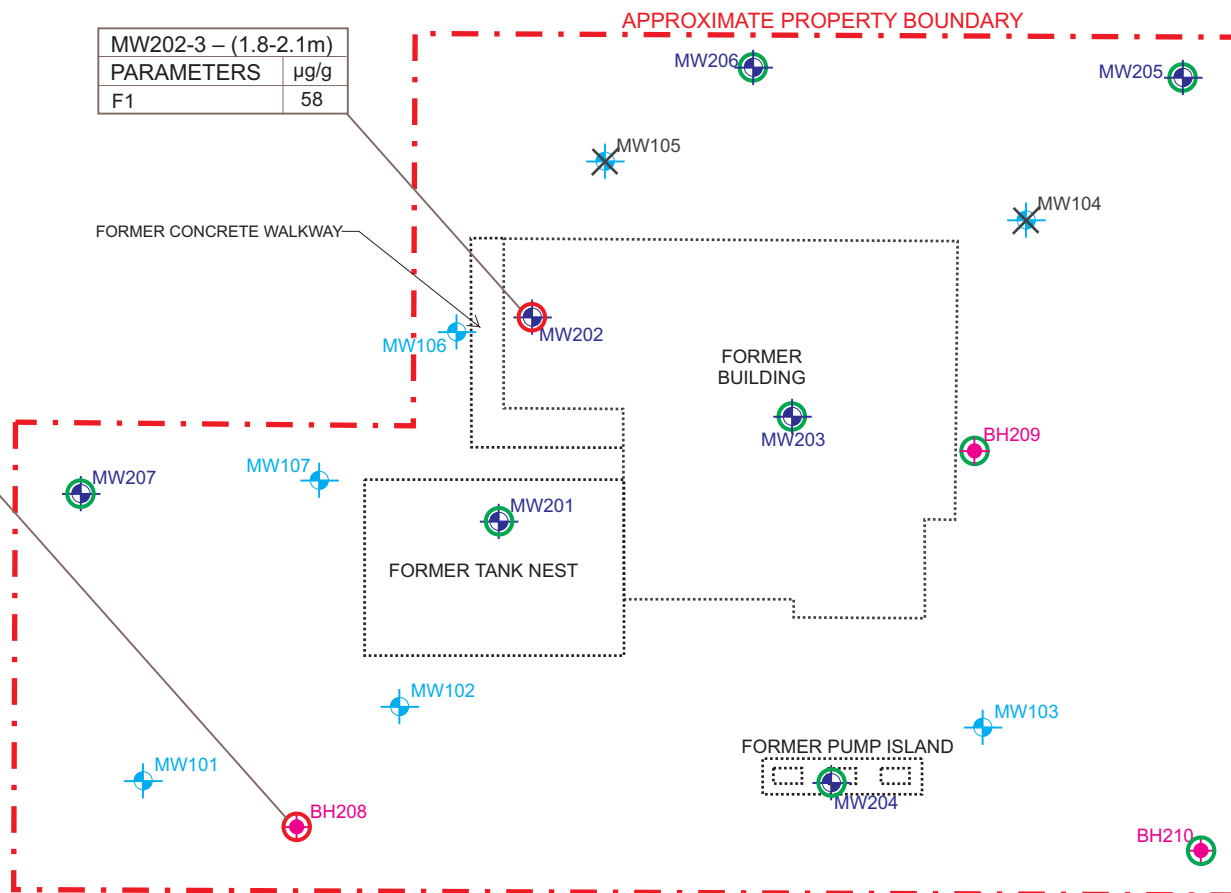
Sample I.D. Sample depth

MW202-3 – (depth)	
PARAMETERS	µg/g
benzene	0.020
toluene	0.020
ethylbenzene	0.020
xylene	0.040
F1	10
F2	10
F3	10
F4	10

TABLE 3 SCS	
benzene	0.32
toluene	68
ethylbenzene	9.5
xylene	26
F1	55
F2	230
F3	1,700
F4	3,300

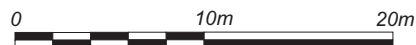
Concentration

SCS (Site Conditions Standards) refer to Standards from Table 3 of April 15, 2011 Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act; Industrial / Commercial / Community land use, coarse textured soil



HUME STREET

MARKET STREET



*(APPROXIMATE)

*NOTE: DRAWING TAKEN FROM SITE PLAN PROVIDED BY CLIENT, AND FROM FIELD MEASUREMENTS AND OBSERVATIONS. SCALE IS APPROXIMATE.

PROJECT #	CB644.00
SCALE	AS SHOWN
DATE	SEPT 2012
DRAWN	SF
CHECKED	SS
DRAWING #	FIGURE 4

GROUNDWATER ANALYSIS RESULTS

121 HUME STREET
COLLINGWOOD, ONTARIO

CLIENT

MW205 – (AUG 24/2012)	
PARAMETERS	µg/L
dichloroethane, 1,2-	1.8

MW202 – (AUG 24/2012)	
PARAMETERS	µg/L
F1	1,500
F2	430

MW107 – (AUG 24/2012)	
PARAMETERS	µg/L
F2	330

MW207 – (AUG 24/2012)	
PARAMETERS	µg/L
F1	1,300
F2	400

LEGEND

- ◆ BOREHOLE
- ⊕ MONITORING WELL (2012)
- ⊕ EXISTING MONITORING WELL (2007)
- ✕ DESTROYED MONITORING WELL

* CODE INFORMATION

- Less than or equal to Table 3 SCS
- Greater than Table 3 SCS

ANALYSIS INFORMATION

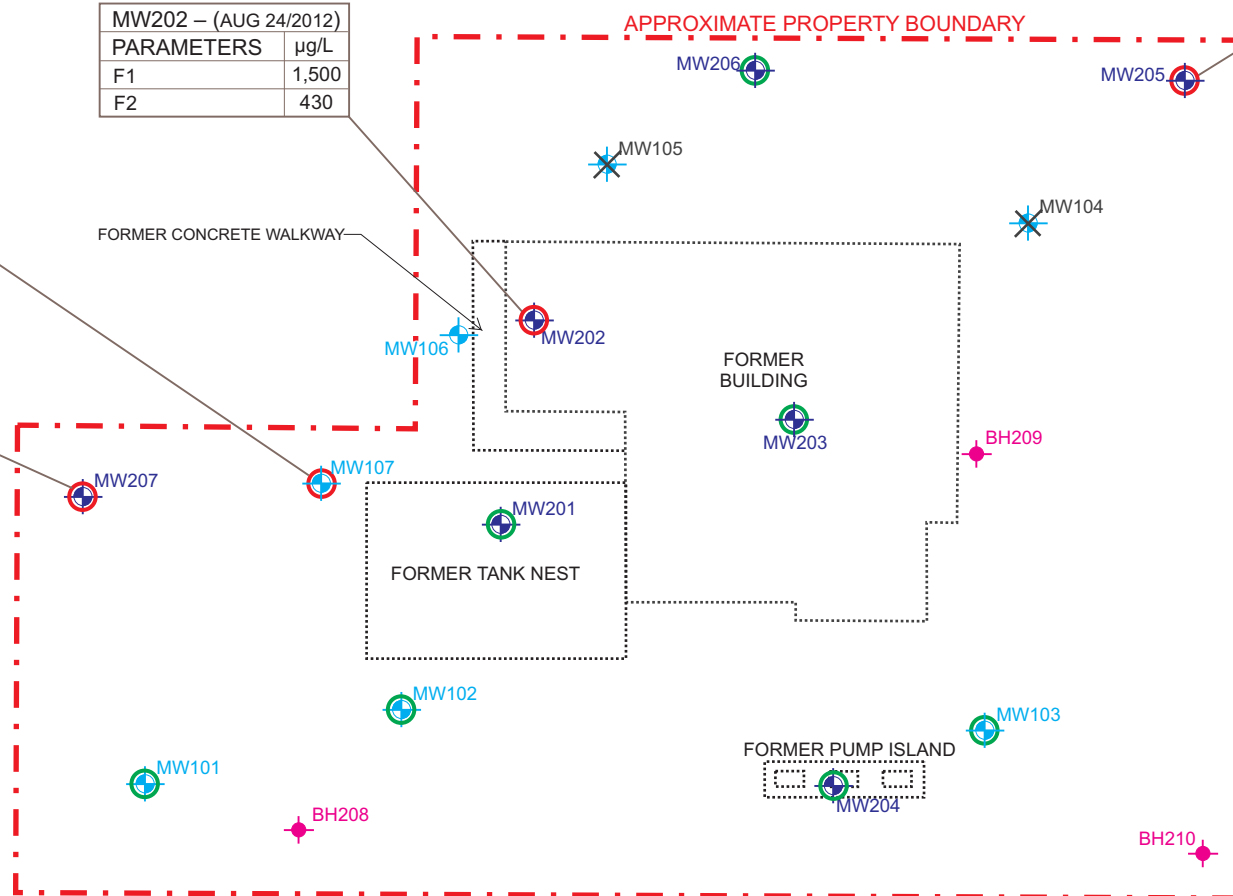
Sample I.D. Sample date

MW202 – (date)	
PARAMETERS	µg/L
benzene	0.020
toluene	0.020
ethylbenzene	0.020
xylene	0.040
F1	25
F2	100
F3	100
F4	100

Concentration

TABLE 3 SCS	
44	
18,000	
2,300	
4,200	
750	
150	
500	
500	

SCS (Site Conditions Standards) refer to Standards from Table 3 of April 15, 2011 Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act; Industrial / Commercial / Community land use, coarse textured soil



HUME STREET

MARKET STREET

0 10m 20m

*(APPROXIMATE)

*NOTE: DRAWING TAKEN FROM SITE PLAN PROVIDED BY CLIENT, AND FROM FIELD MEASUREMENTS AND OBSERVATIONS. SCALE IS APPROXIMATE.

PROJECT #	CB644.00
SCALE	AS SHOWN
DATE	SEPT 2012
DRAWN	SF
CHECKED	SS
DRAWING #	FIGURE 5

TABLES

TABLE 1 GROUNDWATER MONITORING DATA
121 Hume Street, Collingwood, Ontario

WELL NUMBER	DATE	GROUND ELEVATION ¹	T.O.P. ELEVATION ²	CV ³	DEPTH TO WATER FROM T.O.P. ⁴	DEPTH TO WATER FROM GROUND ⁵	GROUNDWATER ELEVATION ⁶	LPH THICKNESS ⁷
MW101	Aug 24, 2012	98.86	98.69	15 ppm	2.02	2.18	96.68	None
MW102	Aug 24, 2012	98.91	98.81	50 ppm	2.15	2.24	96.67	None
MW103	Aug 24, 2012	99.05	98.96	75 ppm	2.18	2.27	96.78	None
MW106	Aug 24, 2012	98.84	98.77	80 ppm	2.49	2.55	96.29	None
MW107	Aug 24, 2012	98.85	98.69	75 ppm	2.14	2.30	96.55	None
MW201	Aug 24, 2012	98.73	98.58	5% LEL	2.03	2.17	96.55	None
MW202	Aug 24, 2012	98.65	98.51	275 ppm	2.03	2.17	96.48	None
MW203	Aug 24, 2012	98.61	98.48	115 ppm	1.86	1.99	96.62	None
MW204	Aug 24, 2012	98.98	98.79	10% LEL	2.03	2.22	96.76	None
MW205	Aug 24, 2012	98.39	98.23	7% LEL	1.68	1.84	96.54	None
MW206	Aug 24, 2012	98.33	98.20	240 ppm	1.72	1.85	96.48	None
MW207	Aug 24, 2012	98.59	98.50	48% LEL	1.99	2.08	96.51	None

¹ Elevation of ground surface at well location in metres, relative to on-site benchmark.

² Elevation of highest point of well pipe in metres, relative to on-site benchmark.

³ Combustible vapour concentration in well headspace in parts per million (ppm) or percent of lower explosive limit (%LEL).

⁴ Corrected depth to groundwater, in metres from top of PVC pipe, assuming an LPH relative density of 0.8.

⁵ Corrected depth to groundwater, in metres from ground surface, assuming an LPH relative density of 0.8.

⁶ Corrected elevation of groundwater, in metres relative to on-site benchmark, assuming an LPH relative density of 0.8.

⁷ Measured thickness of liquid petroleum hydrocarbons in metres, if any.

- Not measured.

Entered by: SS

Checked by: PJS

TABLE 2 SOIL ANALYTICAL RESULTS - PHCs
121 Hume Street, Collingwood, Ontario

Terrapex Sample Name			STANDARDS 2011 Table 3 I / C / C coarse	MW201-4	MW202-3	MW203-3	MW204-4	MW205-3	MW206-3
	Units	RDL							
Sample Depth	m bg	-	-	2.3-2.5	1.8-2.1	1.7-2.1	2.3-2.4	1.5-2.1	1.5-2.1
SV Reading	-	-	-	15 ppm	140 ppm	<10 ppm	40 ppm	10 ppm	15 ppm
Sampling Date	-	-	-	Aug 22/12	Aug 22/12	Aug 22/12	Aug 23/12	Aug 23/12	Aug 23/12
Analysis Date	-	-	-	Aug 27-28/12	Aug 27-29/12	Aug 27-28/12	Aug 27-29/12	Aug 27-29/12	Aug 27-28/12
Certificate of Analysis No.	-	-	-	B2D0786	B2D0786	B2D0786	B2D0786	B2D0786	B2D0786
Benzene	µg/g	0.020	0.32	ND	ND	ND	ND	ND	ND
Toluene	µg/g	0.020	68	ND	ND	ND	ND	ND	ND
Ethylbenzene	µg/g	0.020	9.5	0.032	0.96	ND	ND	ND	ND
Xylenes (total)	µg/g	0.040	26	0.070	11	ND	ND	ND	ND
Petroleum Hydrocarbons, F1	µg/g	10	55	ND	58	ND	ND	ND	ND
Petroleum Hydrocarbons, F2	µg/g	10	230	ND	ND	ND	ND	ND	ND
Petroleum Hydrocarbons, F3	µg/g	10	1,700	22	17	49	34	ND	ND
Petroleum Hydrocarbons, F4	µg/g	10	3,300	10	ND	18	14	ND	ND

¹ Standards from Table 3 of April 15, 2011 *Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act*; Industrial / Commercial / Community land use, coarse textured soil

ns No standard

m bg Meters below grade

CSV Reading Combustible soil vapour reading (ppm or % LEL)

ppm Parts per million (by volume)

% LEL Percent of the lower explosive limit

BOLD Exceeds standard

Entered by: SS

Checked by: PJS

TABLE 2 SOIL ANALYTICAL RESULTS - PHCs
121 Hume Street, Collingwood, Ontario

(CONT'D)

Terrapex Sample Name			STANDARDS 2011 Table 3 I / C / C coarse	MW211-3 Field Duplicate of MW206-3	MW207-3	BH208-3	BH209-3	BH210-3
	Units	RDL						
Sample Depth	m bg	-	-	-	1.5-2.1	1.5-2.1	1.5-2.1	1.5-2.1
SV Reading	-	-	-	-	200 ppm	375 ppm	15 ppm	<10 ppm
Sampling Date	-	-	-	Aug 23/12	Aug 23/12	Aug 23/12	Aug 23/12	Aug 23/12
Analysis Date	-	-	-	Aug 27-28/12	Aug 27-29/12	Aug 27-29/12	Aug 27-28/12	Aug 27-28/12
Certificate of Analysis No.	-	-	-	B2D0786	B2D0786	B2D0786	B2D0786	B2D0786
Benzene	µg/g	0.020	0.32	ND	ND	ND	ND	ND
Toluene	µg/g	0.020	68	ND	ND	ND	ND	ND
Ethylbenzene	µg/g	0.020	9.5	ND	ND	ND	ND	ND
Xylenes (total)	µg/g	0.040	26	ND	0.12	ND	ND	ND
Petroleum Hydrocarbons, F1	µg/g	10	55	ND	33	56	ND	ND
Petroleum Hydrocarbons, F2	µg/g	10	230	ND	ND	460	ND	ND
Petroleum Hydrocarbons, F3	µg/g	10	1,700	ND	ND	17	ND	ND
Petroleum Hydrocarbons, F4	µg/g	10	3,300	ND	ND	ND	ND	ND

¹ Standards from Table 3 of April 15, 2011 *Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act*; Industrial / Commercial / Community land use, coarse textured soil

ns No standard
m bg Meters below grade
CSV Reading Combustible soil vapour reading (ppm or % LEL)
ppm Parts per million (by volume)
% LEL Percent of the lower explosive limit
BOLD Exceeds standard

Entered by: SS

Checked by: PJS

TABLE 3 SOIL ANALYTICAL RESULTS - VOCs
121 Hume Street, Collingwood, Ontario

Terrapex Sample Name			STANDARDS 2011 Table 3 I / C / C coarse ¹	MW202-3	MW204-4	MW205-3
	Units	RDL				
Sample Depth	m bg	-	-	1.8-2.1	2.3-2.4	1.5-2.1
SV Reading	-	-	-	140 ppm	40 ppm	10 ppm
Sampling Date	-	-	-	Aug 22/12	Aug 23/12	Aug 23/12
Analysis Date	-	-	-	Aug 29/12	Aug 29/12	Aug 29/12
Certificate of Analysis No.	-	-	-	B2D0786	B2D0786	B2D0786
Acetone	µg/g	0.50	16	ND	ND	ND
Bromodichloromethane	µg/g	0.050	18	ND	ND	ND
Bromoform	µg/g	0.050	0.61	ND	ND	ND
Bromomethane	µg/g	0.050	0.05	ND	ND	ND
Carbon tetrachloride	µg/g	0.050	0.21	ND	ND	ND
Chlorobenzene	µg/g	0.050	2.4	ND	ND	ND
Chloroform	µg/g	0.050	0.47	ND	ND	ND
Dibromochloromethane	µg/g	0.050	13	ND	ND	ND
Dichlorobenzene 1,2-	µg/g	0.050	6.8	ND	ND	ND
Dichlorobenzene, 1,3-	µg/g	0.050	9.6	ND	ND	ND
Dichlorobenzene, 1,4-	µg/g	0.050	0.2	ND	ND	ND
Dichlorodifluoromethane	µg/g	0.050	16	ND	ND	ND
Dichloroethane, 1,1-	µg/g	0.050	17	ND	ND	ND
Dichloroethane, 1,2-	µg/g	0.050	0.05	ND	ND	ND
Dichloroethylene, 1,1-	µg/g	0.050	0.064	ND	ND	ND
Dichloroethylene, cis-1,2-	µg/g	0.050	55	ND	ND	ND
Dichloroethylene, trans-1,2-	µg/g	0.050	1.3	ND	ND	ND
Dichloropropane, 1,2-	µg/g	0.050	0.16	ND	ND	ND
Dichloropropene, cis-1,3-	µg/g	0.030	-	ND	ND	ND
Dichloropropene, trans-1,3-	µg/g	0.040	-	ND	ND	ND
Ethylene dibromide	µg/g	0.050	0.05	ND	ND	ND
Hexane	µg/g	0.050	46	0.35	ND	ND
Methyl ethyl ketone	µg/g	0.50	70	ND	ND	ND
Methyl isobutyl ketone	µg/g	0.50	31	ND	ND	ND
Methyl tert butyl ether	µg/g	0.050	11	ND	ND	ND
Methylene Chloride	µg/g	0.050	1.6	ND	ND	ND
Styrene	µg/g	0.050	34	ND	ND	ND
Tetrachloroethane, 1,1,1,2-	µg/g	0.050	0.087	ND	ND	ND
Tetrachloroethane, 1,1,2,2-	µg/g	0.050	0.05	ND	ND	ND
Tetrachloroethylene	µg/g	0.050	4.5	ND	ND	ND
Trichloroethane, 1,1,1-	µg/g	0.050	6.1	ND	ND	ND
Trichloroethane, 1,1,2-	µg/g	0.050	0.05	ND	ND	ND
Trichloroethylene	µg/g	0.050	0.91	ND	ND	ND
Trichlorofluoromethane	µg/g	0.050	4	ND	ND	ND
Vinyl chloride	µg/g	0.020	0.032	ND	ND	ND

Standards from Table 3 of April 15, 2011 *Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act*; Industrial / Commercial / Community land use, coarse textured soil

ns No standard
m bg Meters below grade
CSV Reading Combustible soil vapour reading (ppm or % LEL)
ppm Parts per million (by volume)
% LEL Percent of the lower explosive limit
BOLD Exceeds standard
ND (0.060) Detection limit (in brackets) was raised due to hydrocarbon interference

Entered by: SS

Checked by: PJS

TABLE 3 SOIL ANALYTICAL RESULTS - VOCs
121 Hume Street, Collingwood, Ontario

(CONT'D)

Terrapex Sample Name			STANDARDS 2011 Table 3 I / C / C coarse ¹	MW207-3	BH208-3
	Units	RDL			
Sample Depth	m bg	-	-	1.5-2.1	1.5-2.1
SV Reading	-	-	-	200 ppm	375 ppm
Sampling Date	-	-	-	Aug 23/12	Aug 23/12
Analysis Date	-	-	-	Aug 29/12	Aug 29/12
Certificate of Analysis No.	-	-	-	B2D0786	B2D0786
Acetone	µg/g	0.50	16	ND	ND
Bromodichloromethane	µg/g	0.050	18	ND	ND
Bromoform	µg/g	0.050	0.61	ND	ND
Bromomethane	µg/g	0.050	0.05	ND	ND
Carbon tetrachloride	µg/g	0.050	0.21	ND	ND
Chlorobenzene	µg/g	0.050	2.4	ND	ND
Chloroform	µg/g	0.050	0.47	ND	ND
Dibromochloromethane	µg/g	0.050	13	ND	ND
Dichlorobenzene 1,2-	µg/g	0.050	6.8	ND	ND
Dichlorobenzene, 1,3-	µg/g	0.050	9.6	ND	ND
Dichlorobenzene, 1,4-	µg/g	0.050	0.2	ND	ND
Dichlorodifluoromethane	µg/g	0.050	16	ND	ND
Dichloroethane, 1,1-	µg/g	0.050	17	ND	ND
Dichloroethane, 1,2-	µg/g	0.050	0.05	ND	ND
Dichloroethylene, 1,1-	µg/g	0.050	0.064	ND	ND
Dichloroethylene, cis-1,2-	µg/g	0.050	55	ND	ND
Dichloroethylene, trans-1,2-	µg/g	0.050	1.3	ND	ND
Dichloropropane, 1,2-	µg/g	0.050	0.16	ND	ND
Dichloropropene, cis-1,3-	µg/g	0.030	-	ND	ND
Dichloropropene, trans-1,3-	µg/g	0.040	-	ND	ND
Ethylene dibromide	µg/g	0.050	0.05	ND	ND
Hexane	µg/g	0.050	46	1.1	ND
Methyl ethyl ketone	µg/g	0.50	70	ND	ND
Methyl isobutyl ketone	µg/g	0.50	31	ND	ND
Methyl tert butyl ether	µg/g	0.050	11	ND	ND
Methylene Chloride	µg/g	0.050	1.6	ND	ND
Styrene	µg/g	0.050	34	ND	ND
Tetrachloroethane, 1,1,1,2-	µg/g	0.050	0.087	ND	ND (0.060)
Tetrachloroethane, 1,1,2,2-	µg/g	0.050	0.05	ND	ND
Tetrachloroethylene	µg/g	0.050	4.5	ND	ND
Trichloroethane, 1,1,1-	µg/g	0.050	6.1	ND	ND
Trichloroethane, 1,1,2-	µg/g	0.050	0.05	ND	ND
Trichloroethylene	µg/g	0.050	0.91	ND	ND
Trichlorofluoromethane	µg/g	0.050	4	ND	ND
Vinyl chloride	µg/g	0.020	0.032	ND	ND

Standards from Table 3 of April 15, 2011 *Soil, Ground Water
and Sediment Standards for Use Under Part XV.1 of the
Environmental Protection Act*; Industrial / Commercial / Community
land use, coarse textured soil

ns No standard
m bg Meters below grade
CSV Reading Combustible soil vapour reading (ppm or % LEL)
ppm Parts per million (by volume)
% LEL Percent of the lower explosive limit
BOLD Exceeds standard
ND (0.060) Detection limit (in brackets) was raised due to hydrocarbon interference

Entered by: SS

Checked by: PJS

TABLE 4 SOIL ANALYTICAL RESULTS - PAHs
121 Hume Street, Collingwood, Ontario

Terrapex Sample Name			STANDARDS 2011 Table 3 I / C / C coarse ²	MW202-4	MW204-4	MW207-1	BH209-4
	Units	RDL					
Sample Depth	m bg	-	-	2.3-2.9	2.3-2.4	0.2-0.8	2.3-2.7
SV Reading	-	-	-	20 ppm	40 ppm	25 ppm	15 ppm
Sampling Date	-	-	-	Aug 22/12	Aug 23/12	Aug 23/12	Aug 23/12
Analysis Date	-	-	-	Aug 28/12	Aug 28/12	Aug 28/12	Aug 28/12
Certificate of Analysis No.	-	-	-	B2D0786	B2D0786	B2D0786	B2D0786
Acenaphthene	µg/g	0.0050	96	ND	ND	ND (0.025)	ND
Acenaphthylene	µg/g	0.0050	0.15	ND	0.0091	0.085	ND
Anthracene	µg/g	0.0050	0.67	ND	0.022	0.036	ND
Benzo(a)anthracene	µg/g	0.0050	0.96	ND	0.088	0.15	ND
Benzo(a)pyrene	µg/g	0.0050	0.3	ND	0.072	0.18	ND
Benzo(b)fluoranthene	µg/g	0.0050	0.96	ND	0.088	0.26	ND
Benzo(g,h,i)perylene	µg/g	0.0050	9.6	ND	0.044	0.15	ND
Benzo(k)fluoranthene	µg/g	0.0050	0.96	ND	0.031	0.088	ND
Chrysene	µg/g	0.0050	9.6	ND	0.080	0.20	ND
Dibenzo(a,h)anthracene	µg/g	0.0050	0.1	ND	0.011	0.035	ND
Fluoranthene	µg/g	0.0050	9.6	ND	0.15	0.31	ND
Fluorene	µg/g	0.0050	62	ND	ND	ND (0.025)	ND
Indeno(1,2,3-cd)pyrene	µg/g	0.0050	0.76	ND	0.051	0.17	ND
Methylnaphthalene, 1- ¹	µg/g	0.0050	76	0.025	ND	ND (0.025)	ND
Methylnaphthalene, 2- ¹	µg/g	0.0050	76	0.026	ND	ND (0.025)	ND
Methylnaphthalene, 1- & 2- ¹	µg/g	0.0050	76	0.052	ND (0.0071)	ND (0.035)	ND
Napthalene	µg/g	0.0050	9.6	0.036	ND	ND (0.025)	ND
Phenanthrene	µg/g	0.0050	12	ND	0.043	0.090	ND
Pyrene	µg/g	0.0050	96	ND	0.13	0.28	ND

¹ 2-methylnaphthalene standard applicable to 1-methylnaphthalene with the provision that if both are detected, the sum of the two concentrations cannot exceed the standard

² Standards from Table 3 of April 15, 2011 *Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act*; Industrial / Commercial / Community land use, coarse textured soil

ns No standard

m bg Meters below grade

CSV Reading Combustible soil vapour reading (ppm or % LEL)

ppm Parts per million (by volume)

% LEL Percent of the lower explosive limit

BOLD Exceeds standard

ND (0.060) Due to the sample matrix, sample required dilution. Detection limits (in brackets) were adjusted accordingly

Entered by: SS

Checked by: PJS

TABLE 5 SOIL ANALYTICAL RESULTS - INORGANICS
121 Hume Street, Collingwood, Ontario

Terrapex Sample Name			STANDARDS 2011 Table 3 I / C / C coarse ¹	MW204-1	MW205-1
	Units	RDL			
Sample Depth	m bg	-	-	0-0.8	0-0.8
SV Reading	-	-	-	35 ppm	15 ppm
Sampling Date	-	-	-	Aug 23/12	Aug 23/12
Analysis Date	-	-	-	Aug 28/12	Aug 28/12
Certificate of Analysis No.	-	-	-	B2D0786	B2D0786
Antimony	µg/g	0.20	40	ND	ND
Arsenic	µg/g	1.0	18	1.2	1.9
Barium	µg/g	0.50	670	2.9	13
Beryllium	µg/g	0.20	8	ND	ND
Boron (Total) ¹	µg/g	5.0	120	ND	ND
Cadmium	µg/g	0.10	1.9	ND	0.19
Chromium	µg/g	1.0	160	1.6	4.3
Cobalt	µg/g	0.10	80	0.53	1.3
Copper	µg/g	0.50	230	2.3	6.1
Lead	µg/g	1.0	120	3.2	35
Molybdenum	µg/g	0.50	40	ND	ND
Nickel	µg/g	0.50	270	ND (2.5)	3.1
Selenium	µg/g	0.50	5.5	ND	ND
Silver	µg/g	0.20	40	ND	ND
Thallium	µg/g	0.05	3.3	ND	ND
Uranium	µg/g	0.05	33	0.071	0.17
Vanadium	µg/g	5.0	86	ND	5.7
Zinc	µg/g	5.0	340	7.4	28
pH	-	-	-	8.09	-

Standards from Table 3 of April 15, 2011 *Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act*; Industrial / Commercial / Community land use, coarse textured soil

ns No standard
m bg Meters below grade
CSV Reading Combustible soil vapour reading (ppm or % LEL)
ppm Parts per million (by volume)
% LEL Percent of the lower explosive limit
BOLD Exceeds standard
ND (2.5) Detection limit (in brackets) was raised due to matrix interference

Entered by: SS

Checked by: PJS

TABLE 5 SOIL ANALYTICAL RESULTS - INORGANICS
121 Hume Street, Collingwood, Ontario

(CONT'D)

Terrapex Sample Name			STANDARDS 2011 Table 3 I / C / C coarse ¹	MW207-1	MW209-4
	Units	RDL			
Sample Depth	m bg	-	-	0.2-0.8	2.3-2.7
SV Reading	-	-	-	25 ppm	15 ppm
Sampling Date	-	-	-	Aug 23/12	Aug 23/12
Analysis Date	-	-	-	Aug 28/12	Aug 28/12
Certificate of Analysis No.	-	-	-	B2D0786	B2D0786
Antimony	µg/g	0.20	40	0.40	-
Arsenic	µg/g	1.0	18	6.7	-
Barium	µg/g	0.50	670	77	-
Beryllium	µg/g	0.20	8	0.24	-
Boron (Total) ¹	µg/g	5.0	120	8.2	-
Cadmium	µg/g	0.10	1.9	0.26	-
Chromium	µg/g	1.0	160	8.3	-
Cobalt	µg/g	0.10	80	2.6	-
Copper	µg/g	0.50	230	24	-
Lead	µg/g	1.0	120	120	-
Molybdenum	µg/g	0.50	40	ND	-
Nickel	µg/g	0.50	270	6.7	-
Selenium	µg/g	0.50	5.5	0.64	-
Silver	µg/g	0.20	40	ND	-
Thallium	µg/g	0.05	3.3	0.070	-
Uranium	µg/g	0.05	33	0.27	-
Vanadium	µg/g	5.0	86	8.5	-
Zinc	µg/g	5.0	340	93	-
pH	-	-	-	-	7.93

Standards from Table 3 of April 15, 2011 *Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act*; Industrial / Commercial / Community land use, coarse textured soil

ns No standard
m bg Meters below grade
CSV Reading Combustible soil vapour reading (ppm or % LEL)
ppm Parts per million (by volume)
% LEL Percent of the lower explosive limit
BOLD Exceeds standard
ND (2.5) Detection limit (in brackets) was raised due to matrix interference

Entered by: SS

Checked by: PJS

TABLE 6 SOIL ANALYTICAL RESULTS - WASTE CHARACTERIZATION
121 Hume Street, Collingwood, ON

PARAMETER	LEACHATE QUALITY CRITERIA ¹ HAZARDOUS WASTE	Units	COMPOSITE
Arsenic	2.5	mg/L	<0.2
Barium	100	mg/L	<0.2
Boron	500	mg/L	<0.1
Cadmium	0.5	mg/L	<0.05
Chromium	5	mg/L	<0.1
Cyanide (free)	20	mg/L	<0.002
Fluoride	150	mg/L	0.4
Lead	5	mg/L	<0.1
Mercury	0.1	mg/L	<0.001
Nitrate + Nitrite (as nitrogen)	1,000	mg/L	<1
Selenium	1	mg/L	<0.1
Silver	5	mg/L	<0.01
Uranium	10	mg/L	<0.01
Benzene	0.5	mg/L	<0.020
Carbon tetrachloride	0.5	mg/L	<0.020
Chlorobenzene	8	mg/L	<0.020
Chloroform	10	mg/L	<0.020
1,2-Dichlorobenzene	20	mg/L	<0.050
1,4-Dichlorobenzene	0.5	mg/L	<0.050
1,2-Dichloroethane	0.5	mg/L	<0.050
1,1-Dichloroethylene	1.4	mg/L	<0.020
Methyl ethyl ketone	200	mg/L	<1.0
Methylene Chloride	5	mg/L	<0.20
Tetrachloroethylene	3	mg/L	<0.020
Trichloroethylene	5	mg/L	<0.020
Vinyl chloride	0.2	mg/L	<0.020
Benzo(a)pyrene	0.001	mg/L	<0.0001
o-Cresol	200	mg/L	<0.0025
m-Cresol & p-Cresol ²	400	mg/L	<0.0025
2,4-Dichlorophenol	90	mg/L	<0.0025
Hexachlorobenzene	0.13	mg/L	<0.010
Hexachloroethane	3	mg/L	<0.010
Nitrobenzene	2	mg/L	<0.010
2,4,5-Trichlorophenol	400	mg/L	<0.0005
2,4,6-Trichlorophenol	0.5	mg/L	<0.0025
2,3,4,5-Tetrachlorophenol & 2,3,4,6-Tetrachlorophenol ³	10	mg/L	<0.0025
Pentachlorophenol	6	mg/L	<0.0025
Pyridine	5	mg/L	<0.010
PCBs (bulk analysis)	50 ⁴	µg/g	<0.01
Ignitability	-	-	nfs ⁵

¹ Schedule 4 criteria from R.R.O. 1990, Reg. 347

² The concentration of either parameter should not exceed 200 mg/L

³ The concentration in Schedule 4 is for 2,3,4,6-Tetrachlorophenol only

⁴ Criteria for classification as non-PCB waste (R.R.O. 1990, Reg. 362)

⁵ Non-flammable substance (did not ignite)

Entered by: SS

Checked by: PJS

TABLE 7 GROUNDWATER ANALYTICAL RESULTS - PHCs
121 Hume Street, Collingwood, Ontario

Terrapex Sample Name			STANDARDS 2011 Table 3	MW101	MW102	MW103	MW107	MW201
	Units	RDL	coarse ¹					
Headspace Reading	-	-	-	15 ppm	50 ppm	75 ppm	75 ppm	5% LEL
Sampling Date	-	-	-	Aug 24/12	Aug 24/12	Aug 24/12	Aug 24/12	Aug 24/12
Analysis Date	-	-	-	Aug 27-28/12	Aug 27-28/12	Aug 27-28/12	Aug 27-28/12	Aug 27-28/12
Certificate of Analysis No.	-	-	-	B2D0356	B2D0356	B2D0356	B2D0356	B2D0356
Benzene	µg/L	0.20	44	ND	ND	ND	3.2	0.22
Toluene	µg/L	0.20	18,000	ND	ND	ND	ND	0.52
Ethylbenzene	µg/L	0.20	2,300	ND	ND	ND	4.8	2.7
Xylenes (total)	µg/L	0.40	4,200	ND	ND	ND	12	2.3
Petroleum Hydrocarbons, F1	µg/L	25	750	ND	ND	ND	490	ND
Petroleum Hydrocarbons, F2	µg/L	100	150	ND	ND	ND	330	ND
Petroleum Hydrocarbons, F3	µg/L	100	500	ND	ND	ND	ND	ND
Petroleum Hydrocarbons, F4	µg/L	100	500	ND	ND	ND	ND	ND

Standards from Table 3 of April 15, 2011 *Soil, Ground Water
and Sediment Standards for Use Under Part XV.1 of the
Environmental Protection Act*; Industrial / Commercial / Community
land use, coarse textured soil

ns No standard
CSV Reading Combustible soil vapour reading (ppm or % LEL)
ppm Parts per million (by volume)
% LEL Percent of the lower explosive limit
BOLD Exceeds standard

Entered by: SS

Checked by: PJS

TABLE 7 GROUNDWATER ANALYTICAL RESULTS - PHCs
121 Hume Street, Collingwood, Ontario

(CONT'D)

Terrapex Sample Name			STANDARDS 2011 Table 3	MW202	MW203	MW204	MW205	MW206
	Units	RDL	coarse ¹					
Headspace Reading	-	-	-	275 ppm	115 ppm	10% LEL	7% LEL	240 ppm
Sampling Date	-	-	-	Aug 24/12	Aug 24/12	Aug 24/12	Aug 24/12	Aug 24/12
Analysis Date	-	-	-	Aug 27-28/12	Aug 27-28/12	Aug 27-28/12	Aug 27-28/12	Aug 27-28/12
Certificate of Analysis No.	-	-	-	B2D0356	B2D0356	B2D0356	B2D0356	B2D0356
Benzene	µg/L	0.20	44	11	1.9	0.90	ND	1.4
Toluene	µg/L	0.20	18,000	1.8	2.0	1.3	0.26	ND
Ethylbenzene	µg/L	0.20	2,300	58	0.52	0.29	ND	ND
Xylenes (total)	µg/L	0.40	4,200	750	1.7	0.73	ND	ND
Petroleum Hydrocarbons, F1	µg/L	25	750	1,500	ND	ND	ND	ND
Petroleum Hydrocarbons, F2	µg/L	100	150	430	ND	ND	ND	ND
Petroleum Hydrocarbons, F3	µg/L	100	500	ND	ND	ND	ND	ND
Petroleum Hydrocarbons, F4	µg/L	100	500	ND	ND	ND	ND	ND

Standards from Table 3 of April 15, 2011 *Soil, Ground Water
and Sediment Standards for Use Under Part XV.1 of the
Environmental Protection Act*; Industrial / Commercial / Community
land use, coarse textured soil

ns No standard
CSV Reading Combustible soil vapour reading (ppm or % LEL)
ppm Parts per million (by volume)
% LEL Percent of the lower explosive limit
BOLD Exceeds standard

Entered by: SS

Checked by: PJS

TABLE 7 GROUNDWATER ANALYTICAL RESULTS - PHCs
121 Hume Street, Collingwood, Ontario

(CONT'D)

Terrapex Sample Name			STANDARDS 2011 Table 3 coarse ¹	MW207	MW210 Field Duplicate of MW207	BLANK	TRIP BLANK
	Units	RDL					
Headspace Reading	-	-	-	48% LEL	-	-	-
Sampling Date	-	-	-	Aug 24/12	Aug 24/12	Aug 24/12	Aug 24/12
Analysis Date	-	-	-	Aug 27-28/12	Aug 27-28/12	Aug 27-28/12	Aug 27-28/12
Certificate of Analysis No.	-	-	-	B2D0356	B2D0356	B2D0356	B2D0356
Benzene	µg/L	0.20	44	0.58	0.64	ND	ND
Toluene	µg/L	0.20	18,000	1.5	1.2	ND	ND
Ethylbenzene	µg/L	0.20	2,300	6.9	6.3	ND	ND
Xylenes (total)	µg/L	0.40	4,200	44	40	ND	ND
Petroleum Hydrocarbons, F1	µg/L	25	750	1,300	1,200	ND	ND
Petroleum Hydrocarbons, F2	µg/L	100	150	400	430	ND	ND
Petroleum Hydrocarbons, F3	µg/L	100	500	ND	ND	ND	ND
Petroleum Hydrocarbons, F4	µg/L	100	500	ND	ND	ND	ND

Standards from Table 3 of April 15, 2011 *Soil, Ground Water
and Sediment Standards for Use Under Part XV.1 of the
Environmental Protection Act*; Industrial / Commercial / Community
land use, coarse textured soil

ns No standard
CSV Reading Combustible soil vapour reading (ppm or % LEL)
ppm Parts per million (by volume)
% LEL Percent of the lower explosive limit
BOLD Exceeds standard

Entered by: SS

Checked by: PJS

TABLE 8 GROUNDWATER ANALYTICAL RESULTS - VOCs
121 Hume Street, Collingwood, Ontario

Terrapex Sample Name			STANDARDS 2011 Table 3	MW201	MW204	MW205
	Units	RDL	coarse ¹			
Headspace Reading	-	-	-	5% LEL	10% LEL	7% LEL
Sampling Date	-	-	-	Aug 24/12	Aug 24/12	Aug 24/12
Analysis Date	-	-	-	Aug 27-28/12	Aug 27-28/12	Aug 27-28/12
Certificate of Analysis No.	-	-	-	B2D0356	B2D0356	B2D0356
Acetone	µg/L	10	130,000	20	ND	ND
Bromodichloromethane	µg/L	0.50	85,000	ND	ND	ND
Bromoform	µg/L	1.0	380	ND	ND	ND
Bromomethane	µg/L	0.50	5.6	ND	ND	ND
Carbon tetrachloride	µg/L	0.20	0.79	ND	ND	ND
Chlorobenzene	µg/L	0.20	630	ND	ND	ND
Chloroform	µg/L	0.20	2.4	ND	ND	ND
Dibromochloromethane	µg/L	0.50	82,000	ND	ND	ND
Dichlorobenzene 1,2-	µg/L	0.50	4,600	ND	ND	ND
Dichlorobenzene, 1,3-	µg/L	0.50	9,600	ND	ND	ND
Dichlorobenzene, 1,4-	µg/L	0.50	8	ND	ND	ND
Dichlorodifluoromethane	µg/L	1.0	4,400	ND	ND	ND
Dichloroethane, 1,1-	µg/L	0.20	320	ND	ND	ND
Dichloroethane, 1,2-	µg/L	0.50	1.6	ND	ND	1.8
Dichloroethylene, 1,1-	µg/L	0.20	1.6	ND	ND	ND
Dichloroethylene, cis-1,2-	µg/L	0.50	1.6	ND	ND	ND
Dichloroethylene, trans-1,2-	µg/L	0.50	1.6	ND	ND	ND
Dichloropropane, 1,2-	µg/L	0.20	16	ND	ND	ND
Dichloropropene, cis-1,3-	µg/L	0.30	-	ND	ND	ND
Dichloropropene, trans-1,3-	µg/L	0.40	-	ND	ND	ND
Dichloropropene, 1,3-	µg/L	0.50	5.2	ND	ND	ND
Ethylene dibromide	µg/L	0.20	0.25	ND	ND	ND
Hexane	µg/L	1.0	51	ND	ND	ND
Methyl ethyl ketone	µg/L	10	470,000	ND	ND	ND
Methyl isobutyl ketone	µg/L	5.0	140,000	ND	ND	ND
Methyl tert butyl ether	µg/L	0.50	190	ND	ND	ND
Methylene Chloride	µg/L	2.0	610	ND	ND	ND
Styrene	µg/L	0.50	1,300	ND	ND	ND
Tetrachloroethane, 1,1,1,2-	µg/L	0.50	3.3	ND	ND	ND
Tetrachloroethane, 1,1,2,2-	µg/L	0.50	3.2	ND	ND	ND
Tetrachloroethylene	µg/L	0.20	1.6	ND	ND	ND
Trichloroethane, 1,1,1-	µg/L	0.20	640	ND	ND	ND
Trichloroethane, 1,1,2-	µg/L	0.50	4.7	ND	ND	ND
Trichloroethylene	µg/L	0.20	1.6	ND	ND	ND
Trichlorofluoromethane	µg/L	0.50	2,500	ND	ND	ND
Vinyl chloride	µg/L	0.20	0.5	ND	ND	ND

¹ Standards from Table 3 of April 15, 2011 *Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act*; Industrial / Commercial / Community land use, coarse textured soil

ns No standard
 CSV Reading Combustible soil vapour reading (ppm or % LEL)
 ppm Parts per million (by volume)
 % LEL Percent of the lower explosive limit
BOLD Exceeds standard

Entered by: SS

Checked by: PJS

TABLE 8 GROUNDWATER ANALYTICAL RESULTS - VOCs
121 Hume Street, Collingwood, Ontario

(CONT'D)

Terrapex Sample Name			STANDARDS 2011 Table 3	MW207	TRIP BLANK
	Units	RDL	coarse ¹		
Headspace Reading	-	-	-	48% LEL	-
Sampling Date	-	-	-	Aug 24/12	Aug 24/12
Analysis Date	-	-	-	Aug 27-28/12	Aug 27-28/12
Certificate of Analysis No.	-	-	-	B2D0356	B2D0356
Acetone	µg/L	10	130,000	14	ND
Bromodichloromethane	µg/L	0.50	85,000	ND	ND
Bromoform	µg/L	1.0	380	ND	ND
Bromomethane	µg/L	0.50	5.6	ND	ND
Carbon tetrachloride	µg/L	0.20	0.79	ND	ND
Chlorobenzene	µg/L	0.20	630	ND	ND
Chloroform	µg/L	0.20	2.4	ND	ND
Dibromochloromethane	µg/L	0.50	82,000	ND	ND
Dichlorobenzene 1,2-	µg/L	0.50	4,600	ND	ND
Dichlorobenzene, 1,3-	µg/L	0.50	9,600	ND	ND
Dichlorobenzene, 1,4-	µg/L	0.50	8	ND	ND
Dichlorodifluoromethane	µg/L	1.0	4,400	ND	ND
Dichloroethane, 1,1-	µg/L	0.20	320	ND	ND
Dichloroethane, 1,2-	µg/L	0.50	1.6	ND	ND
Dichloroethylene, 1,1-	µg/L	0.20	1.6	ND	ND
Dichloroethylene, cis-1,2-	µg/L	0.50	1.6	ND	ND
Dichloroethylene, trans-1,2-	µg/L	0.50	1.6	ND	ND
Dichloropropane, 1,2-	µg/L	0.20	16	ND	ND
Dichloropropene, cis-1,3-	µg/L	0.30	-	ND	ND
Dichloropropene, trans-1,3-	µg/L	0.40	-	ND	ND
Dichloropropene, 1,3-	µg/L	0.50	5.2	ND	ND
Ethylene dibromide	µg/L	0.20	0.25	ND	ND
Hexane	µg/L	1.0	51	30	ND
Methyl ethyl ketone	µg/L	10	470,000	ND	ND
Methyl isobutyl ketone	µg/L	5.0	140,000	ND	ND
Methyl tert butyl ether	µg/L	0.50	190	ND	ND
Methylene Chloride	µg/L	2.0	610	ND	ND
Styrene	µg/L	0.50	1,300	ND	ND
Tetrachloroethane, 1,1,1,2-	µg/L	0.50	3.3	ND	ND
Tetrachloroethane, 1,1,1,2,2-	µg/L	0.50	3.2	ND	ND
Tetrachloroethylene	µg/L	0.20	1.6	ND	ND
Trichloroethane, 1,1,1-	µg/L	0.20	640	ND	ND
Trichloroethane, 1,1,2-	µg/L	0.50	4.7	ND	ND
Trichloroethylene	µg/L	0.20	1.6	ND	ND
Trichlorofluoromethane	µg/L	0.50	2,500	ND	ND
Vinyl chloride	µg/L	0.20	0.5	ND	ND

¹ Standards from Table 3 of April 15, 2011 *Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act*; Industrial / Commercial / Community land use, coarse textured soil

ns No standard
 CSV Reading Combustible soil vapour reading (ppm or % LEL)
 ppm Parts per million (by volume)
 % LEL Percent of the lower explosive limit
BOLD Exceeds standard

Entered by: SS

Checked by: PJS

TABLE 9 GROUNDWATER ANALYTICAL RESULTS - PAHs
121 Hume Street, Collingwood, Ontario

Terrapex Sample Name			STANDARDS 2011 Table 3	MW204	MW205	MW207
	Units	RDL	coarse ²			
Headspace Reading	-	-	-	10% LEL	7% LEL	48% LEL
Sampling Date	-	-	-	Aug 24/12	Aug 24/12	Aug 24/12
Analysis Date	-	-	-	Aug 28/12	Aug 28/12	Aug 28/12
Certificate of Analysis No.	-	-	-	B2D0356	B2D0356	B2D0356
Acenaphthene	µg/L	0.050	600	ND	ND	ND
Acenaphthylene	µg/L	0.050	1.8	ND	ND	ND
Anthracene	µg/L	0.050	2.4	ND	ND	ND
Benzo(a)anthracene	µg/L	0.050	4.7	ND	ND	ND
Benzo(a)pyrene	µg/L	0.010	0.81	ND	ND	ND
Benzo(b)fluoranthene	µg/L	0.050	0.75	ND	ND	ND
Benzo(g,h,i)perylene	µg/L	0.050	0.2	ND	ND	ND
Benzo(k)fluoranthene	µg/L	0.050	0.4	ND	ND	ND
Chrysene	µg/L	0.050	1	ND	ND	ND
Dibenzo(a,h)anthracene	µg/L	0.050	0.52	ND	ND	ND
Fluoranthene	µg/L	0.050	130	ND	ND	ND
Fluorene	µg/L	0.050	400	ND	ND	0.071
Indeno(1,2,3-cd)pyrene	µg/L	0.050	0.2	ND	ND	ND
Methylnapthalene, 1- ¹	µg/L	0.050	1,800	0.065	ND	4.9
Methylnapthalene, 2- ¹	µg/L	0.050	1,800	0.059	ND	6.4
Methylnapthalene, 1- & 2- ¹	µg/L	0.071	1,800	0.12	ND	11
Napthalene	µg/L	0.050	1,400	ND	ND	6.9
Phenanthrene	µg/L	0.030	580	0.084	0.20	0.14
Pyrene	µg/L	0.050	68	ND	ND	ND

- ¹ 2-methylnapthalene standard applicable to 1-methylnapthalene with the provision that if both are detected, the sum of the two concentrations cannot exceed the standard
- ² Standards from Table 3 of April 15, 2011 *Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act*; Industrial / Commercial / Community land use, coarse textured soil
- ns No standard
- CSV Reading Combustible soil vapour reading (ppm or % LEL)
- ppm Parts per million (by volume)
- % LEL Percent of the lower explosive limit
- BOLD** Exceeds standard

Entered by: SS

Checked by: PJS

TABLE 10 GROUNDWATER ANALYTICAL RESULTS - INORGANICS
121 Hume Street, Collingwood, Ontario

Terrapex Sample Name			STANDARDS 2011 Table 3	MW103	MW201	MW204	MW205	MW206	MW207
	Units	RDL	coarse ¹						
Headspace Reading	-	-	-	75 ppm	5% LEL	10% LEL	7% LEL	240 ppm	48% LEL
Sampling Date	-	-	-	Aug 24/12	Aug 24/12	Aug 24/12	Aug 24/12	Aug 24/12	Aug 24/12
Analysis Date	-	-	-	Aug 27/12	Aug 28/12	Aug 27/12	Aug 27/12	Aug 27/12	Aug 27/12
Certificate of Analysis No.	-	-	-	B2D0356	B2D0356	B2D0356	B2D0356	B2D0356	B2D0356
Antimony	µg/L	0.50	20,000	-	0.8	0.75	ND	-	ND
Arsenic	µg/L	1.0	1,900	-	1.1	1.0	1.1	-	ND
Barium	µg/L	2.0	29,000	-	64	60	83	-	130
Beryllium	µg/L	0.50	67	-	ND	ND	ND	-	ND
Boron	µg/L	10	45,000	-	120	79	260	-	69
Cadmium	µg/L	0.10	2.7	-	ND	ND	ND	-	0.32
Chromium	µg/L	5.0	810	-	ND	ND	ND	-	ND
Cobalt	µg/L	0.50	66	-	1.7	2.4	6.3	-	18
Copper	µg/L	1.0	87	-	1.0	1.4	ND	-	ND
Lead	µg/L	0.50	25	-	ND	0.62	ND	-	ND
Molybdenum	µg/L	0.50	9,200	-	22	19	12	-	12
Nickel	µg/L	1.0	490	-	3.5	3.9	8.8	-	23
Selenium	µg/L	2.0	63	-	ND	2.4	ND	-	ND
Silver	µg/L	0.10	1.5	-	ND	ND	ND	-	ND
Sodium	µg/L	100	2,300,000	-	38,000	240,000	51,000	-	400,000
Thallium	µg/L	0.050	510	-	ND	ND	ND	-	0.10
Uranium	µg/L	0.10	420	-	2.8	2.4	2.1	-	2.2
Vanadium	µg/L	0.50	250	-	0.77	ND	ND	-	ND
Zinc	µg/L	5.0	1,100	-	ND	10	5.9	-	13
pH	-	-	-	7.25	-	-	-	7.26	-

Standards from Table 3 of April 15, 2011 *Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act*; Industrial / Commercial / Community land use, coarse textured soil

ns No standard

CSV Reading Combustible soil vapour reading (ppm or % LEL)

ppm Parts per million (by volume)

% LEL Percent of the lower explosive limit

BOLD Exceeds standard

Entered by: SS

Checked by: PJS

SITE CONDITION STANDARDS SELECTION

ASSESS / ESTABLISH THE RELEVANT
ENVIRONMENTAL SITE CONDITIONS / SITUATIONS

IS THE SITE A "SHALLOW
SOIL PROPERTY" AS PER
O.Reg. 511/09 Section 43.1(3)?

YES

NO

IS THE SITE WITHIN,
ADJACENT, OR WITHIN 30m
OF A WATER BODY AS PER
O.Reg.511/09, Section 43.1(1)?

YES

NO

IS THE SITE WITHIN, ADJACENT,
OR WITHIN 30m OF AN "AREA
OF NATURAL SIGNIFICANCE", OR
DO SOIL pH VALUES FALL
OUTSIDE OF THE RANGES
DEFINED IN
O.Reg.511/09, Section 41?

YES

NO

IS THE LAND USE
AGRICULTURAL
O.Reg. 511/09, Section 40

YES

NO

IS POTABLE GROUNDWATER
RESTORATION REQUIRED
O.Reg. 511/09 Section 35

YES

NO

WILL STRATIFIED SITE
CONDITION STANDARDS
APPLY
O.Reg. 511/09, Section 38?

NO

YES

WILL STRATIFIED SITE
CONDITION STANDARDS
APPLY
O.Reg. 511/09, Section 38?

YES

NO

RESTORE SOIL,
GROUNDWATER
AND SEDIMENT
TO **TABLE 1** STANDARDS

RESTORE SOIL,
GROUNDWATER
AND SEDIMENT
TO **TABLE 2** STANDARDS

RESTORE SOIL,
GROUNDWATER
AND SEDIMENT
TO **TABLE 4** STANDARDS.

RESTORE SOIL,
GROUNDWATER
AND SEDIMENT
TO **TABLE 3** STANDARDS

RESTORE SOIL,
GROUNDWATER
AND SEDIMENT
TO **TABLE 5** STANDARDS

LEGEND

→ CRITICAL PATH

PROJECT # CB644.00

DATE SEPT 2012

DRAWN SF CHECKED SS

DRAWING #

FIGURE 6

Your Project #: MB2D3329
Site Location: CB644.00

Attention: SUB CONTRACTOR

MAXXAM ANALYTICS
CAMPOBELLO
6740 CAMPOBELLO ROAD
MISSISSAUGA, ON
CANADA L5N 2L8

Report Date: 2012/09/04

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B278207

Received: 2012/09/01, 10:20

Sample Matrix: Soil
Samples Received: 3

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Moisture	3	N/A	2012/09/02	AB SOP-00002	CCME PHC-CWS
Particle Size by Sieve (Dry) (1)	3	N/A	2012/09/04	AB SOP-00022	SSMA 55.4
Particle Size by Sieve (Grain Size)	3	N/A	2012/09/04	AB SOP-00022	SSMA 55.4

* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.

(1) Result indicates % of sample retained on the sieve.

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.

Carmen McKay, Project Manager Assistant
Email: CMcKay@maxxam.ca
Phone# (403) 291-3077

=====

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

Total cover pages: 1

Maxxam Job #: B278207
Report Date: 2012/09/04

MAXXAM ANALYTICS
Client Project #: MB2D3329
Site Location: CB644.00

RESULTS OF CHEMICAL ANALYSES OF SOIL

Maxxam ID		EJ0224	EJ0224	EJ0225	EJ0226		
Sampling Date		2012/08/23	2012/08/23	2012/08/23	2012/08/23		
	UNITS	GS206-2 (OR3230-01R)	GS206-2 (OR3230-01R) Lab-Dup	GS208-1 (OR3231-01R)	GS209-3 (OR3232-01R)	RDL	QC Batch

Physical Properties							
Grain Size	N/A	COARSE	N/A	COARSE	COARSE	N/A	6135253
Moisture	%	8.6	N/A	5.2	14	0.30	6135668
Sieve - #4 (>4.75mm)	%	<0.20	<0.20	<0.20	<0.20	0.20	6136124
Sieve - #10 (>2.00mm)	%	<0.20	<0.20	8.0	<0.20	0.20	6136124
Sieve - #40 (>0.425mm)	%	0.73	0.57	21	0.63	0.20	6136124
Sieve - #200 (>0.075mm)	%	93	94	58	93	0.20	6136124
Sieve - Pan	%	6.6	5.7	13	6.4	0.20	6136124

N/A = Not Applicable
RDL = Reportable Detection Limit

Maxxam Job #: B278207
Report Date: 2012/09/04

MAXXAM ANALYTICS
Client Project #: MB2D3329
Site Location: CB644.00

Package 1	1.3°C

Each temperature is the average of up to three cooler temperatures taken at receipt

General Comments

Results relate only to the items tested.

MAXXAM ANALYTICS
 Attention: SUB CONTRACTOR
 Client Project #: MB2D3329
 P.O. #:
 Site Location: CB644.00

Quality Assurance Report
 Maxxam Job Number: CB278207

QA/QC Batch Num Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	UNITS	QC Limits
6135668 KSA	Method Blank	Moisture	2012/09/02	<0.30		%	
	RPD	Moisture	2012/09/02	2.2		%	20
6136124 YU	QC Standard	Sieve - #200 (>0.075mm)	2012/09/04		103	%	92 - 108
		Sieve - Pan	2012/09/04		99	%	97 - 103
	RPD [EJ0224-01]	Sieve - #4 (>4.75mm)	2012/09/04	NC		%	35
		Sieve - #10 (>2.00mm)	2012/09/04	NC		%	35
		Sieve - #40 (>0.425mm)	2012/09/04	NC		%	35
		Sieve - #200 (>0.075mm)	2012/09/04	1.1		%	35
		Sieve - Pan	2012/09/04	14.1		%	35

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.
 QC Standard: A blank matrix to which a known amount of the analyte has been added. Used to evaluate analyte recovery.
 Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.
 NC (RPD): The RPD was not calculated. The level of analyte detected in the parent sample and its duplicate was not sufficiently significant to permit a reliable calculation.

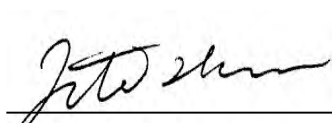
Validation Signature Page

Maxxam Job #: B278207

The analytical data and all QC contained in this report were reviewed and validated by the following individual(s).



Luba Shymushovska, Senior Analyst, Organic Department



Lili Zhou, Senior analyst, Inorganic department.

=====

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

BOREHOLE/MONITORING WELL LOGS

RECORD OF: MW201PROJECT NO: **CB644.00**CLIENT: **SUNCOR ENERGY PRODUCTS PARTNERSHIP**ADDRESS: **121 HUME STREET**CITY / PROVINCE: **COLLINGWOOD, ONTARIO**BORING DATE: **AUGUST 22, 2012**TYPE OF AUGER: **HOLLOW/AIR HAMMER**TYPE OF RIG: **CME-75 TRUCK MOUNTED**CONTRACTOR: **PONTIL DRILLING**
TERRAPEX
Environmental Ltd.

SUBSURFACE PROFILE			SAMPLE							Piezometer or Monitoring Well Installation
Depth	Strataplot	Description	Number	Type	% Recovery	SPT (n)	SV (ppm or %LEL - if applicable)	Comment	Laboratory Testing	
0		Ground Surface								
1		FINE TO MEDIUM SAND, SILTY, SOME TO TRACE FINE TO COARSE GRAVEL BROWN, MOIST TO WET, VERY LOOSE	1	SS	40	8	<10 PPM			
2										
3			2	SS	80	9	15 PPM			
4		CLAY, SILTY BROWN, VERY MOIST, SOFT								BTEX/F1-F4
5			3	SS	60	5	<10 PPM			
6										
7		BEDROCK	4	SS	100	50	15 PPM			
8										
9										
10		END OF BOREHOLE								
11										
12										
13										
14										
15										
16										
17										
18										
19										
20										
21										
22										
23										
24										
25										
26										
27										
28										
29										

LOGGED BY: **SS**INPUT BY: **SS**CHECKED BY: **PJS**INPUT DATE: **AUGUST 31, 2012**

RECORD OF: MW202PROJECT NO: **CB644.00**CLIENT: **SUNCOR ENERGY PRODUCTS PARTNERSHIP**ADDRESS: **121 HUME STREET**CITY / PROVINCE: **COLLINGWOOD, ONTARIO**BORING DATE: **AUGUST 22, 2012**TYPE OF AUGER: **HOLLOW**TYPE OF RIG: **CME-75 TRUCK MOUNTED**CONTRACTOR: **PONTIL DRILLING**
TERRAPEX
Environmental Ltd.

SUBSURFACE PROFILE			SAMPLE							Piezometer or Monitoring Well Installation
Depth	Strataplot	Description	Number	Type	% Recovery	SPT (n)	SV (ppm or %LEL - if applicable)	Comment	Laboratory Testing	
0		Ground Surface								
0 to 2		FINE TO MEDIUM SAND, SILT, TRACE TO SOME ORGANICS BROWN, MOIST, LOOSE	1	SS	60	4	10 PPM			
2 to 3		FINE TO MEDIUM SAND, SILTY BROWN, MOIST TO VERY MOIST, LOOSE	2	SS	70	5	<10 PPM			
3 to 6			3	SS	100	9	140 PPM		VOCs/F1-F4	
6 to 8		- BECOMES SATURATED AT 2.1 m								
8 to 10		SILT, SOME FINE TO COARSE GRAVEL, TRACE FINE SAND AND CLAY BROWN, VERY MOIST TO MOIST, DENSE	4	SS	100	50	20 PPM		PAHs	
10 to 11			5	SS	100	>50	<10 PPM			
11 to 29		END OF BOREHOLE (REFUSAL)								

LOGGED BY: **SS**INPUT BY: **SS**CHECKED BY: **PJS**INPUT DATE: **AUGUST 31, 2012**

RECORD OF: MW203PROJECT NO: **CB644.00**CLIENT: **SUNCOR ENERGY PRODUCTS PARTNERSHIP**ADDRESS: **121 HUME STREET**CITY / PROVINCE: **COLLINGWOOD, ONTARIO**BORING DATE: **AUGUST 22, 2012**TYPE OF AUGER: **HOLLOW**TYPE OF RIG: **CME-75 TRUCK MOUNTED**CONTRACTOR: **PONTIL DRILLING**

SUBSURFACE PROFILE			SAMPLE							Piezometer or Monitoring Well Installation
Depth	Strataplot	Description	Number	Type	% Recovery	SPT (n)	SV (ppm or %LEL - if applicable)	Comment	Laboratory Testing	
0		Ground Surface								
0 to 2		<i>FINE TO MEDIUM SAND, SILTY, SOME FINE TO COARSE GRAVEL AND CRUSHED STONE, TRACE ORGANICS (GRASS ROOTS)</i> BROWN, MOIST, LOOSE	1	SS	60	7	<10 PPM			
2 to 3		<i>FINE TO MEDIUM SAND, SILTY, TRACE FINE GRAVEL</i> BROWN, MOIST, LOOSE	2	SS	60	4	10 PPM			
3 to 6		CONCRETE/ROCK								
6 to 8		<i>FINE TO MEDIUM SAND, SOME SILT, TRACE FINE GRAVEL</i> BROWN, VERY MOIST TO SATURATED, LOOSE	3	SS	60	9	<10 PPM		BTEX/F1-F4	
8 to 9		<i>FINE SAND, SOME SILT, TRACE TO SOME FINE TO COARSE GRAVEL</i> BROWN, SATURATED, COMPACT END OF BOREHOLE (REFUSAL)	4	SS	100	16	<10 PPM			
9 to 10										
10 to 11										
11 to 12										
12 to 13										
13 to 14										
14 to 15										
15 to 16										
16 to 17										
17 to 18										
18 to 19										
19 to 20										
20 to 21										
21 to 22										
22 to 23										
23 to 24										
24 to 25										
25 to 26										
26 to 27										
27 to 28										
28 to 29										
29 to 30										

LOGGED BY: **SS**INPUT BY: **SS**CHECKED BY: **PJS**INPUT DATE: **AUGUST 31, 2012**

RECORD OF: MW204PROJECT NO: **CB644.00**CLIENT: **SUNCOR ENERGY PRODUCTS PARTNERSHIP**ADDRESS: **121 HUME STREET**CITY / PROVINCE: **COLLINGWOOD, ONTARIO**BORING DATE: **AUGUST 23, 2012**TYPE OF AUGER: **HOLLOW**TYPE OF RIG: **CME-75 TRUCK MOUNTED**CONTRACTOR: **PONTIL DRILLING**
TERRAPEX
 Environmental Ltd.

SUBSURFACE PROFILE			SAMPLE							Piezometer or Monitoring Well Installation
Depth	Strataplot	Description	Number	Type	% Recovery	SPT (n)	SV (ppm or %LEL - if applicable)	Comment	Laboratory Testing	
0		Ground Surface								
0 to 2		FINE TO MEDIUM SAND, FINE TO COARSE GRAVEL/CRUSHED STONE, SOME SILT, TRACE ASPHALT DEBRIS BROWN, MOIST, COMPACT	1	SS	50	15	35 PPM		INORGANICS	
2 to 3		FINE TO MEDIUM SAND, SILTY, TRACE COARSE GRAVEL BROWN, MOIST, LOOSE	2	SS	80	6	25 PPM			
3 to 4										
4 to 6			3	SS	60	4	80 PPM			
6 to 8										
8		- BECOMES GREY AND SATURATED AT 2.3 m	4	SS/AU	100	>50	40 PPM		VOCs/F1-F4; PAHs	
8 to 9		BEDROCK/ROCK FRAGMENTS AUGERED TO 2.7 m								
9		END OF BOREHOLE (REFUSAL)								
9 to 10										
10 to 11										
11 to 12										
12 to 13										
13 to 14										
14 to 15										
15 to 16										
16 to 17										
17 to 18										
18 to 19										
19 to 20										
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LOGGED BY: **SS**INPUT BY: **SS**CHECKED BY: **PJS**INPUT DATE: **AUGUST 31, 2012**

RECORD OF: MW205PROJECT NO: **CB644.00**CLIENT: **SUNCOR ENERGY PRODUCTS PARTNERSHIP**ADDRESS: **121 HUME STREET**CITY / PROVINCE: **COLLINGWOOD, ONTARIO**BORING DATE: **AUGUST 23, 2012**TYPE OF AUGER: **HOLLOW**TYPE OF RIG: **CME-75 TRUCK MOUNTED**CONTRACTOR: **PONTIL DRILLING**

SUBSURFACE PROFILE			SAMPLE							Piezometer or Monitoring Well Installation
Depth	Strataplot	Description	Number	Type	% Recovery	SPT (n)	SV (ppm or %LEL - if applicable)	Comment	Laboratory Testing	
0		Ground Surface								
0 to 1		FINE TO MEDIUM SAND, SILT, SOME FINE TO COARSE GRAVEL BROWN, MOIST, LOOSE	1	SS	90	6	15 PPM		INORGANICS	
1 to 3		FINE TO MEDIUM SAND, SOME SILT BROWN, MOIST, LOOSE TO COMPACT	2	SS	100	8	15 PPM			
3 to 4		- BECOMES WET AT 1.6 m.								
4 to 6			3	SS	60	11	10 PPM		VOCs/F1-F4	
6 to 8		SILT, CLAYEY, FINE TO MEDIUM SAND SOME FINE TO COARSE GRAVEL GREY, WET TO MOIST, VERY STIFF	4	SS	70	18	10 PPM			
8		END OF BOREHOLE (REFUSAL)								
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RECORD OF: MW206PROJECT NO: **CB644.00**CLIENT: **SUNCOR ENERGY PRODUCTS PARTNERSHIP**ADDRESS: **121 HUME STREET**CITY / PROVINCE: **COLLINGWOOD, ONTARIO**BORING DATE: **AUGUST 23, 2012**TYPE OF AUGER: **HOLLOW**TYPE OF RIG: **CME-75 TRUCK MOUNTED**CONTRACTOR: **PONTIL DRILLING**
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Environmental Ltd.

SUBSURFACE PROFILE			SAMPLE							Piezometer or Monitoring Well Installation
Depth	Strataplot	Description	Number	Type	% Recovery	SPT (n)	SV (ppm or %LEL - if applicable)	Comment	Laboratory Testing	
0		Ground Surface								
1		<i>FINE TO MEDIUM SAND, SILTY TO SOME SILT, TRACE ORGANICS (GRASS ROOTS) AND FINE TO COARSE GRAVEL</i>	1	SS	60	7	10 PPM			
2		BROWN, MOIST, LOOSE								
3			2	SS	80	8	10 PPM			
4										BTEX/F1-F4
5										
6		- BECOMES COMPACT AND VERY MOIST TO SATURATED AT 1.6 m	3	SS	90	15	15 PPM			
7										
8		CRUSHED STONE	4	SS	80	>50	15 PPM			
9		<i>SILT, SOME FINE TO MEDIUM SAND AND GRAVEL, TRACE CLAY</i>								
10		BROWN, VERY MOIST, VERY DENSE								
11		END OF BOREHOLE (REFUSAL)								
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LOGGED BY: **SS**INPUT BY: **SS**CHECKED BY: **PJS**INPUT DATE: **AUGUST 31, 2012**

RECORD OF: MW207PROJECT NO: **CB644.00**CLIENT: **SUNCOR ENERGY PRODUCTS PARTNERSHIP**ADDRESS: **121 HUME STREET**CITY / PROVINCE: **COLLINGWOOD, ONTARIO**BORING DATE: **AUGUST 23, 2012**TYPE OF AUGER: **HOLLOW**TYPE OF RIG: **CME-75 TRUCK MOUNTED**CONTRACTOR: **PONTIL DRILLING**

SUBSURFACE PROFILE			SAMPLE							Piezometer or Monitoring Well Installation
Depth	Strataplot	Description	Number	Type	% Recovery	SPT (n)	SV (ppm or %LEL - if applicable)	Comment	Laboratory Testing	
0		Ground Surface								
0		ASPHALT								
1		FINE TO MEDIUM SAND, SILTY, TRACE GRAVEL AND ASPHALT DEBRIS	1	SS	50	5	25 PPM		INORGANICS, PAHs	
2		BROWN, DARK GREY SEAMS, MOIST, LOOSE								
3		FINE SAND, SOME SILT	2	SS	60	8	<10 PPM			
4		BROWN, MOIST, LOOSE TO COMPACT								
5		- BECOMES GREY AND VERY MOIST TO WET AT 1.6 m								
6			3	SS	60	14	200 PPM		VOCs/F1-F4	
7										
8		SILT, SOME SAND AND GRAVEL, TRACE CLAY	4	SS	10	15	20 PPM			
9										
10		GREY, MOIST, COMPACT	5	SS	100	>50	10 PPM			
11		END OF BOREHOLE (REFUSAL)								
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RECORD OF: BH208PROJECT NO: **CB644.00**CLIENT: **SUNCOR ENERGY PRODUCTS PARTNERSHIP**ADDRESS: **121 HUME STREET**CITY / PROVINCE: **COLLINGWOOD, ONTARIO**BORING DATE: **AUGUST 23, 2012**TYPE OF AUGER: **HOLLOW**TYPE OF RIG: **CME-75 TRUCK MOUNTED**CONTRACTOR: **PONTIL DRILLING**
TERRAPEX
Environmental Ltd.

SUBSURFACE PROFILE			SAMPLE							Piezometer or Monitoring Well Installation
Depth	Strataplot	Description	Number	Type	% Recovery	SPT (n)	SV (ppm or %LEL - if applicable)	Comment	Laboratory Testing	
0		Ground Surface								
0		ASPHALT								
1		MEDIUM SAND, COARSE GRAVEL, SOME SILT, TRACE ASPHALT DEBRIS	1	SS	90	8	10 PPM			
2		BROWN, MOIST, LOOSE								
3		FINE SAND, SOME SILT	2	SS	65	7	10 PPM			
4		BROWN, MOIST, LOOSE TO COMPACT								
5										
6		- BECOMES GREY AND WET TO SATURATED AT 1.9 m.	3	SS	80	17	375 PPM		VOCs/F1-F4	
7										
8										
9		SILT, SOME FINE TO COARSE GRAVEL, TRACE TO SOME FINE SAND, TRACE CLAY	4	SS	90	27	20 PPM			
10		GREY, MOIST, COMPACT								
11		END OF BOREHOLE (REFUSAL)								
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RECORD OF: BH209PROJECT NO: **CB644.00**CLIENT: **SUNCOR ENERGY PRODUCTS PARTNERSHIP**ADDRESS: **121 HUME STREET**CITY / PROVINCE: **COLLINGWOOD, ONTARIO**BORING DATE: **AUGUST 23, 2012**TYPE OF AUGER: **HOLLOW**TYPE OF RIG: **CME-75 TRUCK MOUNTED**CONTRACTOR: **PONTIL DRILLING**

SUBSURFACE PROFILE			SAMPLE							Piezometer or Monitoring Well Installation
Depth	Strataplot	Description	Number	Type	% Recovery	SPT (n)	SV (ppm or %LEL - if applicable)	Comment	Laboratory Testing	
0		Ground Surface								
0		ASPHALT								
1		SUBGRADE (SAND, SILT) BROWN, MOIST								
2		SILT, FINE SAND, TRACE TO SOME SILT BROWN, MOIST, FIRM	1	AU	0	8	10 PPM			
3		FINE SAND, SOME SILT BROWN, MOIST, LOOSE	2	SS	85	5	<10 PPM			
4										
5										
6		- BECOMES WET TO SATURATED AT 1.7 m	3	SS	80	8	15 PPM		BTEX/F1-F4	
7										
8			4	SS	70	5	15 PPM		PAHs/pH	
9		END OF BOREHOLE (REFUSAL)								
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RECORD OF: BH210PROJECT NO: **CB644.00**CLIENT: **SUNCOR ENERGY PRODUCTS PARTNERSHIP**ADDRESS: **121 HUME STREET**CITY / PROVINCE: **COLLINGWOOD, ONTARIO**BORING DATE: **AUGUST 23, 2012**TYPE OF AUGER: **HOLLOW**TYPE OF RIG: **CME-75 TRUCK MOUNTED**CONTRACTOR: **PONTIL DRILLING**
TERRAPEX
Environmental Ltd.

SUBSURFACE PROFILE			SAMPLE							Piezometer or Monitoring Well Installation
Depth	Strataplot	Description	Number	Type	% Recovery	SPT (n)	SV (ppm or %LEL - if applicable)	Comment	Laboratory Testing	
0		Ground Surface								
0		ASPHALT								
1		SAND, SOME SILT AND GRAVEL, TRACE ASPHALT DEBRIS	1	AU	100	4	15 PPM			
2		DARK BROWN TO DARK GREY, MOIST, LOOSE								
3		FINE SAND, SOME SILT	2	SS	90	9	<10 PPM			
4		BROWN, MOIST, LOOSE								
5		- BECOMES COMPACT AND VERY MOIST TO SATURATED AT 1.6 m								
6		- 0.5 cm LAYER OF ROTTEN WOOD AT 1.8 m	3	SS	90	14	<10 PPM		BTEX/F1-F4	
7										
8		END OF BOREHOLE (REFUSAL)	4	SS	0	5	-			
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