PARKLAND FUEL CORPORATION

PHASE II
ENVIRONMENTAL SITE ASSESSMENT

1622 ROGER STEVENS DRIVE,
KARS (OTTAWA), ONTARIO

FINAL REPORT

APRIL 6, 2018

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PROJECT # CB1057.00

EXECUTIVE SUMMARY

Terrapex Environmental Ltd. was retained by Parkland Fuel Corporation to conduct a Phase II Environmental Site Assessment (ESA) at the property located at 1622 Roger Stevens Drive and portions of the property at 1618 Roger Stevens Drive in Kars (Ottawa), Ontario (the Site). It is our understanding that the Phase II ESA is being conducted for due diligence purposes prior to the potential redevelopment of the Site into a retail fuel outlet. A geotechnical investigation was completed concurrently with Phase II ESA and the results are reported under a separate cover.

The Site is located on the south side of Roger Stevens Drive and measures approximately 6,400 m^2. The Site is currently occupied by a single storey commercial building and a two storey residence, with the remainder of the Site being covered with asphalt pavement and grass. The Site is accessible from two entrances from Roger Stevens Drive. Neither the commercial building nor the residence were occupied during the Phase II ESA program. Reportedly the residence and commercial building were both serviced by domestic supply wells and septic systems.

The site condition standards (SCS) for Residential/Parkland/Institutional land use in a potable groundwater situation, with coarse textured soil, as specified in Table 2 of the April 15, 2011 Ministry of the Environment (MOECC) *Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the "Environmental Protection Act"* document (hereafter referenced as the *Standards*) were used to evaluate the laboratory analytical results. The SCS were determined using the criteria established by O.Reg. 153/04 *Records of Site Condition - Part XV.1 of the Act.*

On February 21 and 22, a total of nine boreholes (MW101, BH102 - BH105, MW106 to MW108, and BH109) were advanced to depths of up to 6.1 m below grade surface. Visual and/or olfactory evidence of petroleum hydrocarbon impact was not observed in soil samples collected from any of the boreholes. Combustible soil vapour (CSV) readings in all of the soil samples were <10 parts per million (ppm).

Monitoring wells were installed into four of the nine boreholes advanced at the site (MW101, MW106, MW107, and MW108). During monitoring of the newly installed monitoring wells on February 23, 2018, Combustible vapour (CV) concentrations in the well headspace of each well was <10 ppm. Depth to water ranged between 0.10 m bgs at MW107 to 2.80 m bgs at MW108. Light, non-aqueous phase liquid (LNAPL) was not detected in any of the wells.

Laboratory analysis indicated that concentrations of benzene, toluene, ethylbenzene, xylenes (collectively, BTEX) and petroleum hydrocarbon (PHC) F1 to F4 fractions in all submitted soil samples did not exceed the applicable Table 2 SCS. Additionally, two soil samples collected from boreholes MW106 and MW108 and submitted for laboratory analysis of volatile organic compounds did contain concentrations of VOCs that exceeded the applicable Table 2 SCS.

Laboratory analysis indicated that concentrations of BTEX and PHC F1 to F4 fractions in groundwater samples collected from each monitoring well did not exceed the applicable Table 2 SCS. Additionally, laboratory analysis indicated that two groundwater samples collected from monitoring wells MW106 and MW108 and submitted for laboratory analysis of VOCs did contain concentrations of VOCs that exceeded the applicable Table 2 SCS.

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1.0 INTRODUCTION

Terrapex Environmental Ltd. (Terrapex) was retained by Parkland Fuel Corporation (Parkland) to conduct a Phase II Environmental Site Assessment (ESA) at the property located at 1622 Roger Stevens Drive and portions of a property at 1618 Roger Stevens Drive in Kars (Ottawa), Ontario (the Site). It is our understanding that the Phase II ESA is being conducted for due diligence purposes prior to the potential redevelopment of the Site into a retail fuel outlet. A geotechnical investigation was completed concurrently with Phase II ESA and the results are reported under a separate cover.

1.1 SITE DESCRIPTION

The Site is located on the south side of Roger Stevens Drive and measures approximately 6,400 m^2. The Site is currently occupied by a single storey commercial building and a two storey residence, with the remainder of the Site being covered with asphalt pavement and grass. The Site is accessible from two entrances from Roger Stevens Drive.

The commercial building was located along the western portion of the Site and had a footprint of approximately 54 m^2. The commercial building was reportedly serviced by a water supply well located to the west of the building and a septic system was reportedly located to the south of the commercial building. Neither the septic system nor the water supply well were located during the Phase II ESA work program. The commercial building was supplied with natural gas. The residential building was located to the southeast of the commercial building and had a footprint of approximately 40 m^2. Reportedly the residence was serviced by a domestic supply well and septic system, however, neither were located during the Phase II ESA. Neither the commercial building nor the residence were occupied during the Phase II ESA program.

The majority of the Site slopes down towards Roger Stevens Drive however the western portion of the Site features a steep decline of approximately 3.0 meters (m) to the agricultural property located to the west of the property. The Site location and general site layout are shown on Figures 1 and 2, respectively. Selected photographs of the site are provided in Appendix I.

The site is located in an area of mixed residential and commercial land uses. The surrounding land uses are as follows:

North: Roger Stevens Drive and agricultural properties beyond;
East: commercial (Tubman Funeral Homes) and residential properties beyond;
South: vacant undeveloped property and residential beyond, and;
West: agricultural property and Stevens Creek beyond.

The nearest surface water body is Stevens Creek located approximately 158 m southwest of the Site.

1.2 OBJECTIVE

The objective of the Phase II ESA work program was to assess subsurface soil and groundwater quality at the site with respect to petroleum hydrocarbon impacts, if any, in accordance with Ontario Regulation (O.Reg.) 153/04.

1.3 SCOPE OF WORK

The scope of work for the Phase II ESA included the following:

- supervising the drilling of nine boreholes (MW101, BH102 - BH105, MW106 to MW108, and BH109) to depths of up to 6.1 m below ground surface (bgs), by a subcontractor using a CME-55 track-mounted drill rig, equipped with solid-stem augers;
- supervising the installation of four monitoring wells by a licensed well technician;
- collecting representative soil samples during drilling; logging of visual, olfactory, and tactile soil characteristics, as well as any evidence of petroleum hydrocarbon impacts (if present), and measuring combustible soil vapours (CSV) in recovered soil samples;
- submitting selected soil samples from each of the drilled boreholes for laboratory analyses of benzene, toluene, ethylbenzene, xylenes (collectively, BTEX), and the petroleum hydrocarbon (PHC) F1 to F4 fraction parameters;
- submitting selected soil samples for the additional analysis volatile organic compounds (VOCs);
- conducting a well monitoring program of the four newly installed monitoring wells, including measurement of depth to water, presence/thickness of light, non-aqueous phase liquid (LNAPL), and headspace combustible vapours (CVs).
- submitting representative groundwater samples from each of the monitoring wells for laboratory analyses of BTEX and PHC F1 to F4 fractions; in addition, samples from two monitoring wells were also submitted for laboratory analysis of VOCs;
- submitting two representative soil samples for pH analysis and grain size analysis;
- determining the appropriate generic site condition standards (SCS) from the Ontario Ministry of the Environment (MOECC) April 15, 2011 *Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act* (the *Standards*) as established by O.Reg. 153/04 *Records of Site Condition*;
- evaluating soil and groundwater analytical results with respect to the appropriate SCS; and,
- preparing a Phase II ESA report detailing the findings and results of the project.

Terrapex subcontracted the services of other firms to complete specialized assignments for the project, as follows:

- private locating services were provided by Multiview Locates Inc. of Mississauga, Ontario;
- soil disposal services were provided by Clean Water Works of Ottawa, Ontario;
- drilling and monitoring well installation services were provided by George Downing Drilling (Downing) of Hawkesbury, Ontario; Downing is a MOECC-licensed well drilling contractor; and,
- laboratory analytical services were provided by Maxxam Analytics Inc. (Maxxam), under contract to Parkland, at their laboratory located in Mississauga, Ontario; at the time of the assessment, Maxxam was accredited by the Standards Council of Canada (SCC) for each of the analyses it conducted as part of this work program.

2.0 FIELD PROGRAM

Terrapex conducted the on-site field components of the Phase II ESA between February 21 and 26, 2018. The work program described herein was generally completed in accordance with the protocols described in O.Reg 153/04 and industry-standard practices.

2.1 FIELD PREPARATION

Prior to conducting intrusive field work, Terrapex contacted the appropriate public agencies to identify the locations of buried utilities at and near the subject site. Terrapex also retained Multiview to locate private buried utilities and provide clearances for buried services at the sampling locations.

A site-specific health and safety plan (HASP) and a job safety analysis (JSA) form were prepared by Terrapex prior to commencing the field work. One copy of the HASP and JSA remained with the field crew on the subject site for the duration of the field activities. The project team members and subcontractors that conducted the field activities read and signed the HASP and JSA before commencing work at the subject site.

2.2 BOREHOLE DRILLING AND SOIL SAMPLING

On February 21 and 22, 2018, a total of nine boreholes (MW101, BH102 - BH105, MW106 to MW108, and BH109) were advanced by Downing to depths of up to 6.1 m bgs at the locations shown on Figure 2. It should be noted that auger refusal at shallow depths by suspected boulders necessitated the drilling of a secondary boreholes adjacent to the primary boreholes. These secondary boreholes are considered the same borehole for environmental reporting purposes.

The locations of the nine boreholes were mainly selected to satisfy the requirements of the geotechnical investigation and give also give adequate coverage to assess soil and groundwater conditions across the Site. Borehole MW109 was drilled in close proximity of the commercial building to assess soil and groundwater conditions in the vicinity in the suspected location of a former above ground storage tank (AST). Consideration was also given to the locations of buried and overhead services, the suspected location of the septic tanks as well as surface obstructions at the site, when selecting the placement of boreholes in the field.

During drilling, 51-mm diameter split-spoon samplers were advanced into the subsurface to facilitate the collection of relatively undisturbed soil samples. Terrapex collected soil samples at depth intervals of approximately 0.76 m, and immediately logged the geologic properties of each sample. In addition, each soil sample was examined for visual and/or olfactory evidence of contamination. A vapour sample was collected from each spoon and CSV concentrations were measured in the headspace of each sampling bag with an RKI Eagle 2 Hydrocarbon Surveyor (RKI Eagle) calibrated to n-hexane and operated in the methane elimination mode. Soil samples

which were screened for vapours were not submitted for laboratory analysis; a separate split sample of the soil was collected and stored for possible laboratory analysis.

To mitigate cross-contamination between soil samples, the split-spoon samplers were decontaminated prior to each use by washing with phosphate-free detergent soap and water and then rinsing with distilled water. Terrapex personnel wore fresh nitrile gloves for the handling of each soil sample.

The soil samples were collected in pre-cleaned, laboratory-supplied jars, placed in a cooler with ice, and delivered with signed chain-of-custody forms to Maxxam for laboratory analysis. Graphic borehole logs illustrating the stratigraphy encountered and the measured CSV readings are included in Appendix II.

A total of ten soil samples (including one field duplicate) were submitted for laboratory analysis of BTEX and PHC F1 to F4 fractions. Samples for laboratory analysis were selected to represent observed "worst-case" conditions based on CSV measurements and visual/olfactory evidence of impact, and/or the assumed groundwater table. Two soil samples (MW106-4 and MW108-7) selected on the basis of spatial coverage were also submitted for additional laboratory analysis of VOCs. Soil cuttings generated during the drilling activities were temporarily stored in a waste bin located on-site pending removal for disposal at a licensed facility by Clean Water Works.

2.3 MONITORING WELL INSTALLATION

A total of four monitoring wells (MW101, MW106. MW107, and MW108), constructed of 51-mm diameter polyvinyl chloride (PVC) well pipe and screen, were installed into selected drilled boreholes. The annulus of each well was backfilled with washed silica sand to a minimum depth of approximately 0.3 m above the screened interval, and a bentonite seal was placed above the sand pack in each well to prevent infiltration of surface water. A bolt-down or stick up protective casing was installed on each well, and cemented in place. The locations of the monitoring wells are shown on Figure 2. Monitoring well construction details are provided in the borehole logs included in Appendix II.

On February 26, 2018, Terrapex surveyed the positions and elevations (tops of the well standpipes, as well as the ground surfaces) of the newly installed monitoring wells relative to a temporary site benchmark (TBM). The property pin at the northwest corner of the Site was selected as the TBM, which was assigned an arbitrary elevation of 100.000 m.

2.4 MONITORING WELL DEVELOPMENT

Following installation, the monitoring wells were instrumented with a dedicated inertial sampler comprising low density polyethylene (LDPE) tubing and a LDPE foot valve. The monitoring wells were developed on February 22 and 23, 2018. Development of the well was conducted using dedicated LDPE tubing, and a surge block to ensure adequate development across the entire screen length. The well was developed by alternating between purging and surging the well until

the purged water was free of visible sediment (e.g., water was "clear"). Approximately 30 L to 60 L of water was purged from each of the monitoring wells.

2.5 GROUNDWATER MONITORING AND SAMPLING

Groundwater monitoring of the newly installed wells was completed on February 23, 2018. Immediately upon removal of the well cap, headspace CVs were measured using the RKI Eagle. The depth to water in each well was measured using Heron H.OIL interface probe. The presence and apparent thickness of any LNAPL in each well was also measured using the interface probe. To mitigate cross-contamination between monitoring wells, the interface probe was washed with a solution of Alconox detergent and water and then rinsed with distilled water prior to use in each well.

Groundwater samples were collected from the four monitoring wells on February 23, 2018. Groundwater samples were collected using a “low-flow” sampling method using a peristaltic pump and a YSI water quality meter. The dedicated tubing was placed in the mid-section of the wetted screened interval and groundwater was pumped from the monitoring well at a rate between 0.1 and 0.5 L/min. Geochemical parameters such as temperature, pH, conductivity, dissolved oxygen, and oxidation-reduction potential were measured during purging. Groundwater samples were collected once the geochemical parameters stabilized.

Groundwater samples were collected from the wells directly into pre-cleaned, laboratory supplied bottles with preservative (where required). The groundwater samples were placed in a cooler with ice, and delivered with signed chain-of-custody forms to Maxxam for laboratory analysis of BTEX and PHC F1 to F4 fractions. Two groundwater samples (MW106 and MW108) were also selected for additional laboratory analysis of VOCs

3.0 SUBSURFACE CONDITIONS

3.1 SOIL

In general, the stratigraphy encountered during the work program comprised of surficial grass or asphalt, underlain by sand and gravel fill to depths between 0.1 and 2.2 m bgs. The fill layer was underlain by a native silty sand with embedded gravel to the maximum depth of the investigation of 6.1 m bgs. Auger refusal was recorded at several locations in close proximity at varying depths, indicative the presence of boulders.

Visual and/or olfactory evidence of petroleum hydrocarbon impact was not observed in soil samples collected from all boreholes. Combustible soil vapour readings in all of the soil samples were <10 parts per million (ppm).

The soil stratigraphy and corresponding soil sample CSV readings for each borehole are shown in the graphic borehole logs provided in Appendix II.

3.2 GROUNDWATER

Apparent wet to saturated conditions in soil were encountered during drilling at approximately 1.5 to 2.2 m bgs in the native soil.

Terrapex monitored the wells on February 23, 2018. During the groundwater monitoring event, CV concentrations in the well headspace of all four monitoring wells was <10 ppm. Depth to water ranged between 0.10 m bgs (MW107) to 2.80 m bgs at MW108. LNALPL was not detected in any of the wells. The survey and monitoring data are summarized in Table 1.

Based on relative groundwater elevations, the inferred direction of groundwater flow is generally to the northwest towards Stevens Creek. Interpreted groundwater contours and the inferred groundwater flow direction for the monitoring event are shown on Figure 3.

4.0 RESULTS

4.1 SOIL AND GROUNDWATER STANDARDS

The site specific details which formed the basis of the selection of the soil and groundwater SCS are summarized below:

- greater than 2 m of overburden was observed during the work program;
- soil pH is between 5 and 9; laboratory analysis of confirmed a pH values of 7.10, 7.85, and 7.93 from soil samples BH104-1, MW102-4, and BH103-2, respectively;
- the site is not within, or adjacent to, an area of “Natural Significance” (as defined by O.Reg. 153/04), or otherwise considered “potentially sensitive”;
- the site does not include land which is within 30 m of a water body;
- since the Site was last used for both residential and commercial purposes, the site conditions standards will default to the most sensitive, therefore the property use will be deemed residential;
- The Site and surrounding properties are serviced with drinking water wells;
- stratified site conditions will not be used when evaluating laboratory analytical results; and,
- grain size analysis completed by Terrapex classified the soil at the site as coarse textured, for the purposes of O.Reg. 153/04; a copy of the grain size analysis is included in Appendix III.

Based on the preceding information and assumptions, the SCS applicable for residential/parkland/institutional land use and coarse textured soil in a potable groundwater condition that are described in Table 2 of the *Standards* have been selected for evaluating laboratory analytical results from the site at this time.

4.2 ANALYTICAL RESULTS

4.2.1 SOIL

The results of the laboratory analyses for soil samples submitted for BTEX and PHC F1 to F4 fractions, and VOCs are presented in Tables 2 and 3, respectively. As shown in Table 2, concentrations of BTEX and PHC F1 to F4 fractions in all soil samples submitted for laboratory analysis were less than the applicable Table 2 SCS. As shown in Table 3, concentrations of VOCs in all soil samples submitted for laboratory analysis were less than the applicable Table 2 SCS.

Visual representation of the soil analytical results are provided in Figure 4A and Figure 4B. Copies of the laboratory certificates of analyses are provided in Appendix III.

4.2.2 SOIL WASTE CHARACTERIZATION

One representative sample of the soil cuttings was submitted to Maxxam for waste characterization analysis and included a Toxicity Characteristics Leachate Procedure (TCLP) analysis of metals, as well as bulk VOCs, semi-volatile organic compounds (sVOCSs), and PHC F1 to F4 fraction analysis.

The results of the waste characterization analyses indicated that the soil may be managed as non-ignitable, non-hazardous (non-leachate toxic) waste for the purposes of off-site disposal. Copies of the Laboratory Certificates of Analysis for the analyzed soil sample are included in Appendix III.

4.2.3 GROUNDWATER

Laboratory results for groundwater samples analyzed for BTEX and PHC F1 to F4 fractions, and VOCs are presented in Tables 4 and 5, respectively. As shown in Tables 4 and 5, concentrations of BTEX, PHC F1 to F4 fractions, and VOCs in groundwater samples collected from all monitoring wells were less than the applicable Table 2 SCS

Visual representation of the groundwater analytical results is shown on Figure 5A and Figure 5B. Copies of the Laboratory Certificates of Analyses are included in Appendix III.

4.2.4 QUALITY ASSURANCE/QUALITY CONTROL

The Maxxam QA/QC program consisted of the analysis of laboratory replicates, method blanks, percent recoveries, matrix spikes, and surrogate percent recoveries as appropriate for the particular analysis protocol. A review of the quality assurance reports attached to the laboratory certificates of analysis indicate that the laboratory QA/QC program results were within quality control limits.

QA/QC samples submitted by Terrapex for this work program consisted of the following:

- one blind field duplicate soil samples for analysis of BTEX and PHC F1-F4 fractions (MW107-18, duplicate pair of MW108-7);
- one soil methanol vial (labeled field blank) analyzed for BTEX and PHC F1;
- one blind field duplicate groundwater sample for analysis of BTEX and PHC F1-F4 (MW112, duplicate pair of MW101);
- one groundwater trip spike sample for analysis of BTEX and PHC F1;
- one groundwater field blank (labelled blank) sample for analysis of BTEX and PHC F1, and;
- one groundwater trip blank sample for analysis of BTEX and PHC F1 fraction.

No relative percent differences (RPDs) were able to be calculated for either the groundwater or soil duplicate pairs since no concentrations were greater than five times the laboratory method detection limit (MDL). All parameters were not detected at the laboratory MDL in the trip blank sample, and the percent recoveries from the trip spike sample were within quality control limits (±30%).

Based on the above, the QA/QC results for this work program are considered acceptable. The laboratory certificates of analyses are provided in Appendix III.

5.0 SUMMARY

A Phase II Environmental Site Assessment was conducted at the property located at 1622 Roger Stevens Drive and portions of 1618 Roger Stevens Drive property in Kars (Ottawa) Ontario. The Phase II ESA was conducted concurrently with a geotechnical investigation.

On February 21 and 22, 2018, a total of nine boreholes ((MW101, BH102 - BH105, MW106 to MW108, and BH109)) were advanced to depths of up to 6.1 m bgs. Visual and/or olfactory evidence of petroleum hydrocarbon impact was not observed in soil samples collected from any of the boreholes. CSV readings in all of the soil samples were <10 ppm.

Monitoring wells were installed into four of the nine boreholes advanced at the site (MW101, MW106, MW107, and MW108). During monitoring of the newly installed monitoring wells on February 23, 2018, CV concentrations in the headspace of the wells were all <10 ppm. Depth to water ranged between 0.10 m bgs at MW107 to 2.80 m bgs at MW108. LNAPL was not detected in any of the wells.

The SCS for coarse textured soil in a potable groundwater condition that are described in Table 2 of the *Standards* for Residential/Parkland/Institutional land use have been selected to evaluate laboratory analytical results.

Laboratory analysis indicated that concentrations of BTEX, PHC F1 to F4 fractions, and VOCs in all soil and groundwater samples submitted from each borehole/monitoring well did not exceed the applicable Table 2 SCS.

6.0 CLOSURE

The environmental assessment described herein was conducted in accordance with the terms of reference for this project as agreed upon by Parkland Fuel Corporation and Terrapex Environmental Ltd. and to generally accepted engineering or environmental consulting practices in this area.

Terrapex Environmental Ltd. has exercised due care, diligence, and judgement in the performance of this subsurface investigation; 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 of the assessment, however, the data were collected at discrete locations and conditions may vary at other locations or may change with the passage of time. The assessment was also limited to a study of those chemical parameters specifically addressed in this report.

This report was prepared for the sole use of Parkland Fuel Corporation. Terrapex Environmental Ltd. accepts no liability for claims arising from the use of this report, or from decisions made or actions taken as a result of this report, by parties other than Parkland Fuel Corporation.

TERRAPEX ENVIRONMENTAL LTD.

Greg Sabourin, P.Eng.
Environmental Engineer

Geoff Lussier, Dipl.
Senior Project Manager

Jeff Stevenson, P.Geo.
Senior Reviewer

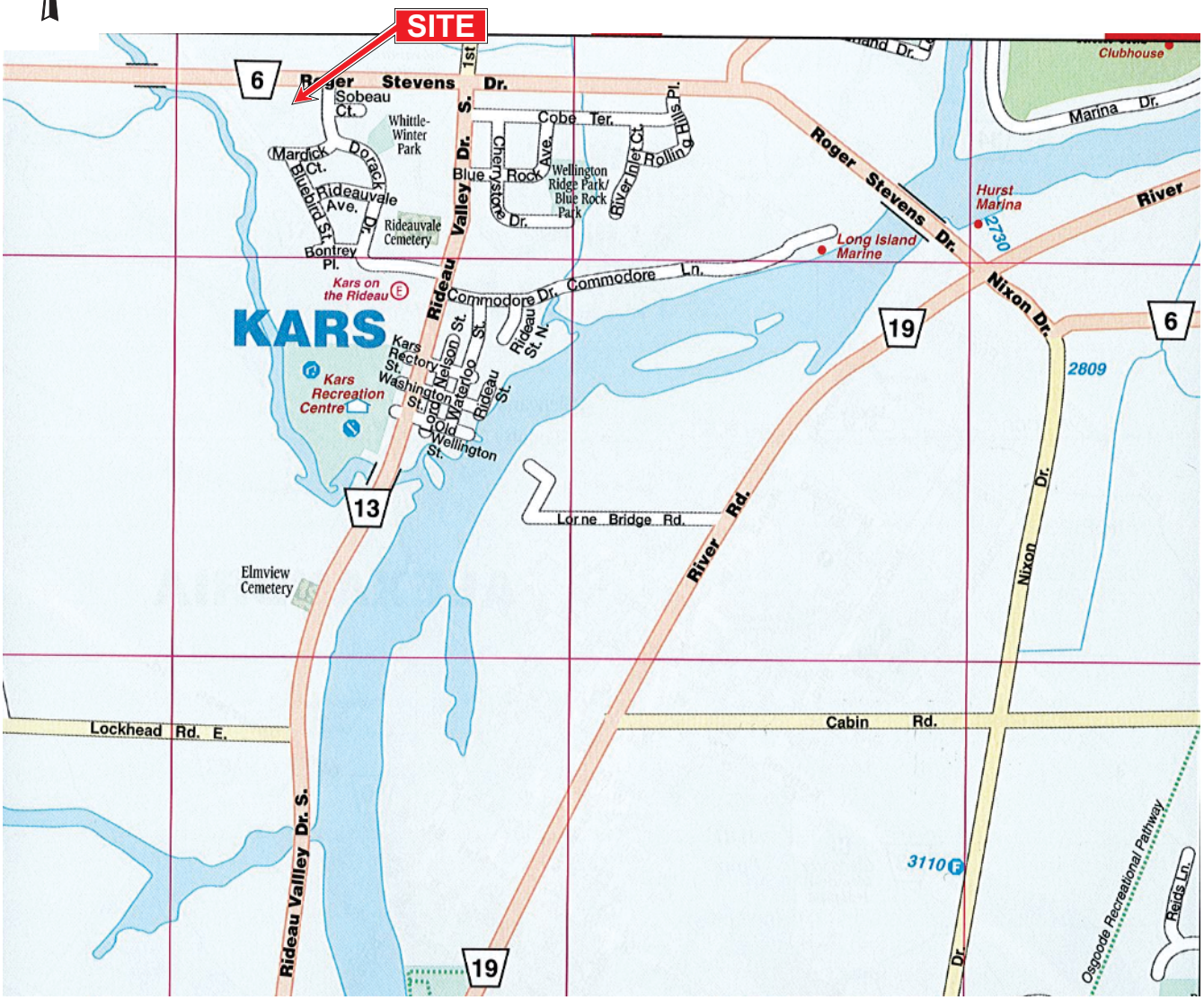
FIGURES

TERRAPEX

SITE LOCATION

1622 ROGER STEVENS DRIVE
KARS, ONTARIO

CLIENT
Parkland FUEL CORPORATION



0 500m 1km
(APPROXIMATE)

NOTE: FIGURE FROM CCCMAPS.COM ATLAS PAGE 99.

PROJECT #	CB1057.00
SCALE	AS SHOWN
DATE	MARCH 2018
DRAWN	ECV
CHECKED	
DRAWING #	FIGURE 1

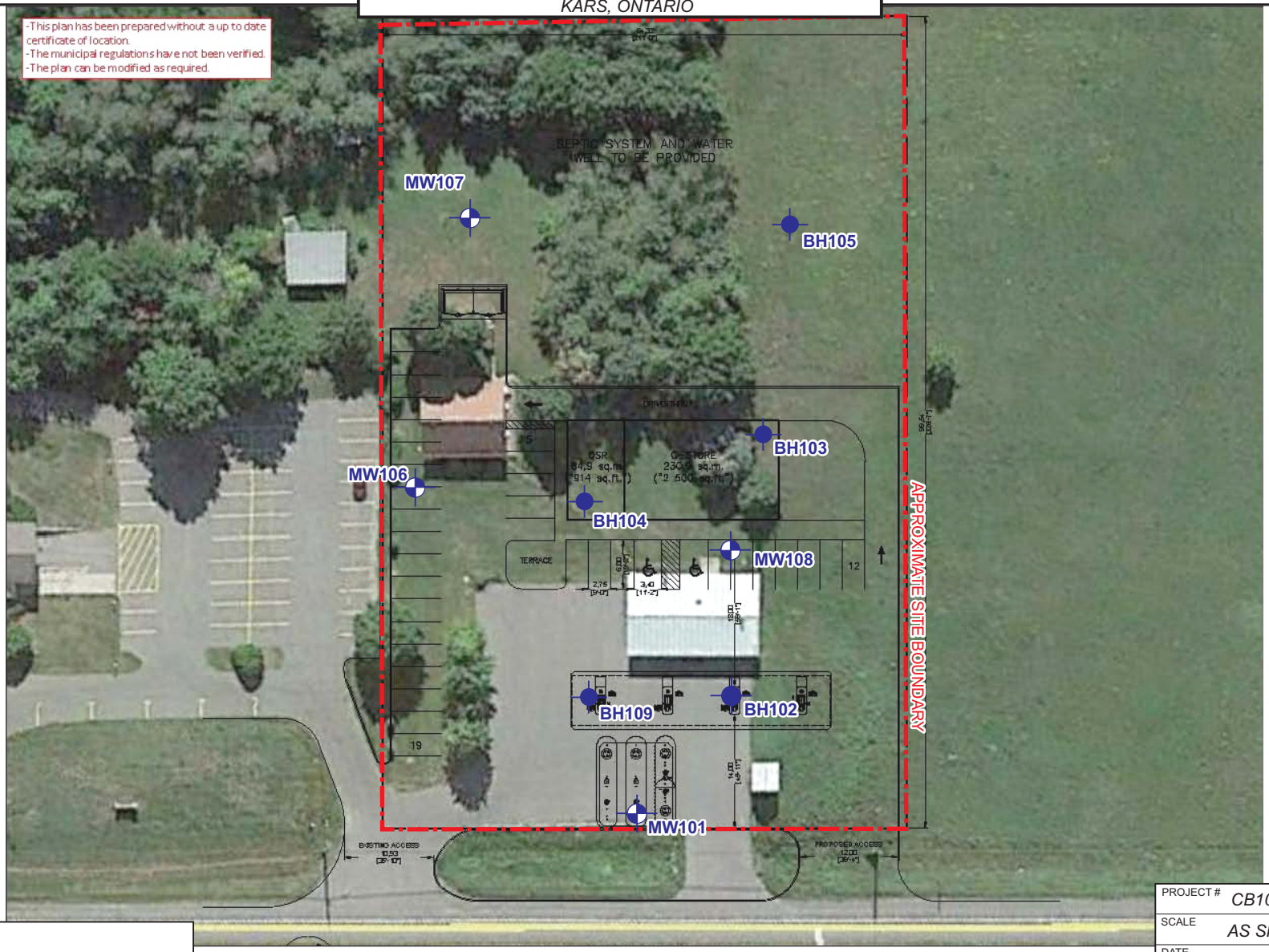
TERRAPEX

GENERAL SITE LAYOUT

1622 ROGER STEVENS DRIVE
KARS, ONTARIO

CLIENT

Parkland
FUEL CORPORATION



LEGEND

- MONITORING WELL (TERRAPEX)
- BOREHOLE (TERRAPEX)

0 15m 30m

(APPROXIMATE)

SOURCE: PROVIDED BY CLIENT.

PROJECT #	CB1057.00
SCALE	AS SHOWN
DATE	MARCH 2018
DRAWN	GS
CHECKED	GLL
DRAWING #	FIGURE 2

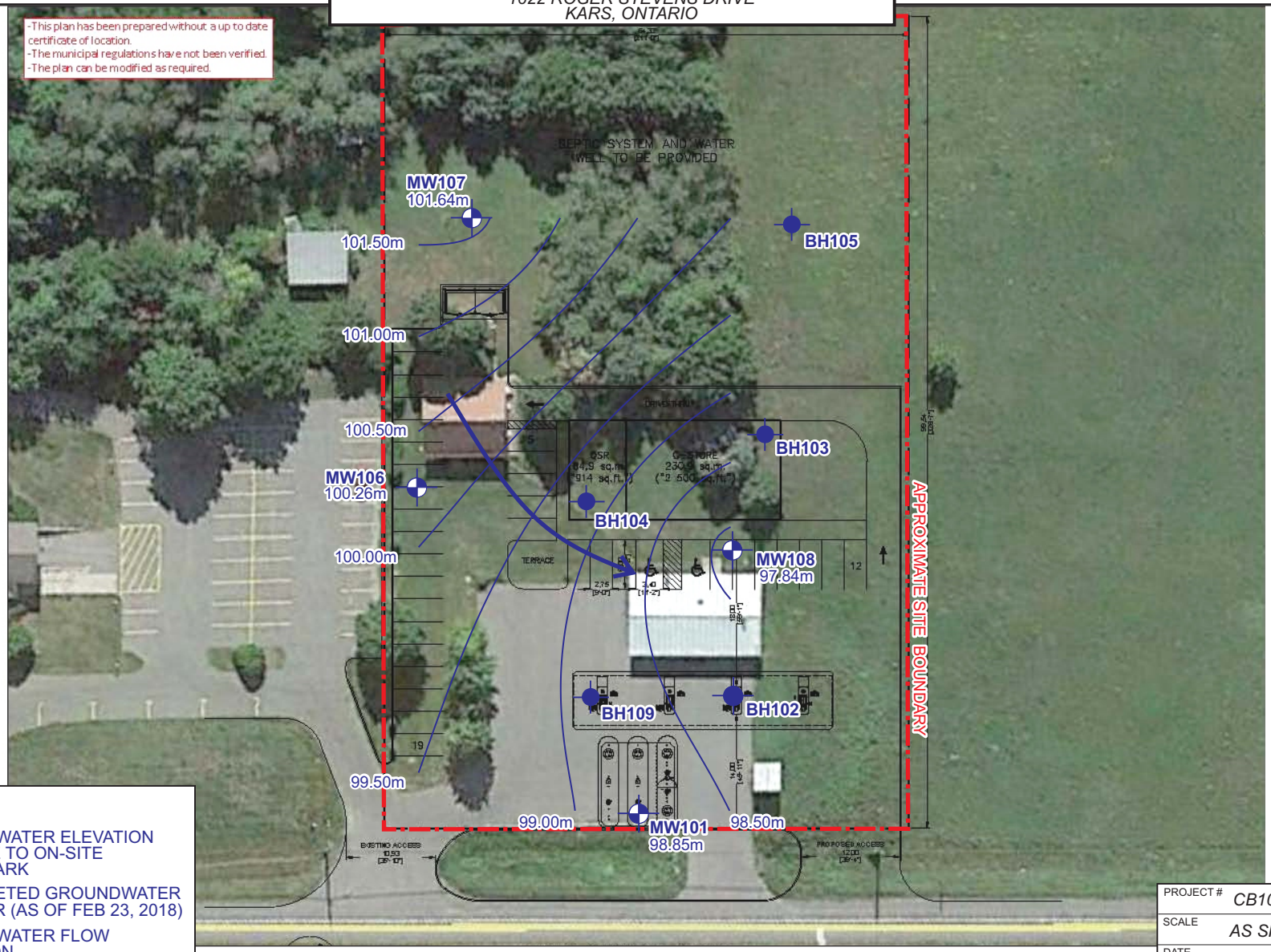
TERRAPEX

INTERPRETED GROUNDWATER FLOW (AS OF FEBRUARY 23, 2018)

1622 ROGER STEVENS DRIVE
KARS, ONTARIO

CLIENT

Parkland FUEL CORPORATION



LEGEND

- 94.66m — GROUNDWATER ELEVATION RELATIVE TO ON-SITE BENCHMARK
- INTERPRETED GROUNDWATER CONTOUR (AS OF FEB 23, 2018)
- GROUNDWATER FLOW DIRECTION
- MONITORING WELL (TERRAPEX)
- BOREHOLE (TERRAPEX)

0 15m 30m

(APPROXIMATE)

SOURCE: PROVIDED BY CLIENT.

PROJECT #	CB1057.00
SCALE	AS SHOWN
DATE	MARCH 2018
DRAWN	GS
CHECKED	JM
DRAWING #	FIGURE 3

TERRAPEX

SOIL ANALYTICAL RESULTS - PHCs

1622 ROGER STEVENS DRIVE
KARS, ONTARIO

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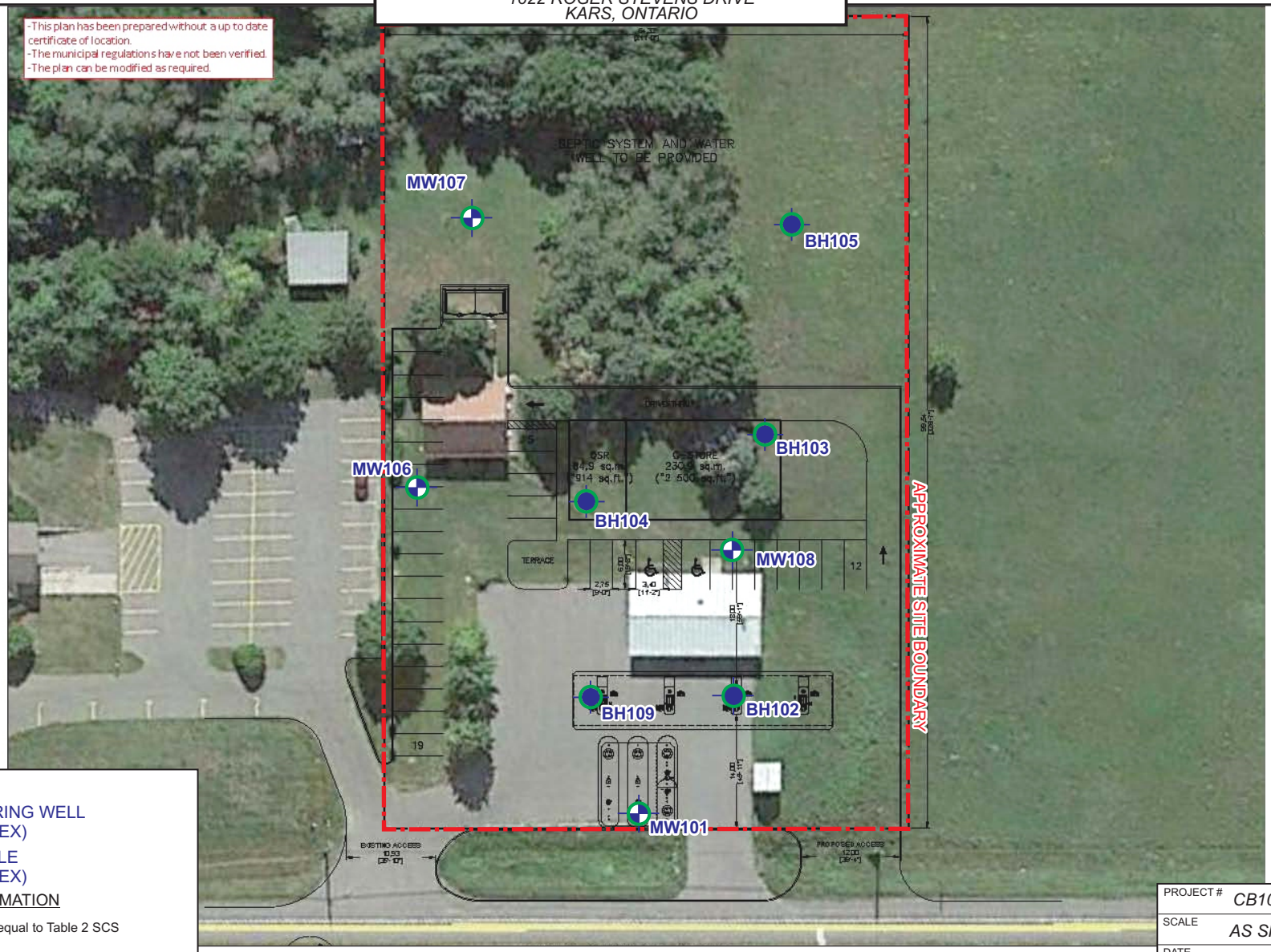
Parkland
FUEL CORPORATION



LEGEND

- MONITORING WELL (TERRAPEX)
- BOREHOLE (TERRAPEX)

ANALYSIS INFORMATION

- Less than or equal to Table 2 SCS
- Greater than Table 2 SCS

SCS (Site Conditions Standards) refer to Standards from *Table 2 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

0 15m 30m
(APPROXIMATE)

SOURCE: PROVIDED BY CLIENT.

PROJECT #	CB1057.00
SCALE	AS SHOWN
DATE	MARCH 2018
DRAWN	GS
CHECKED	JM
DRAWING #	FIGURE 4A

TERRAPEX

SOIL ANALYTICAL RESULTS - VOCs

1622 ROGER STEVENS DRIVE
KARS, ONTARIO

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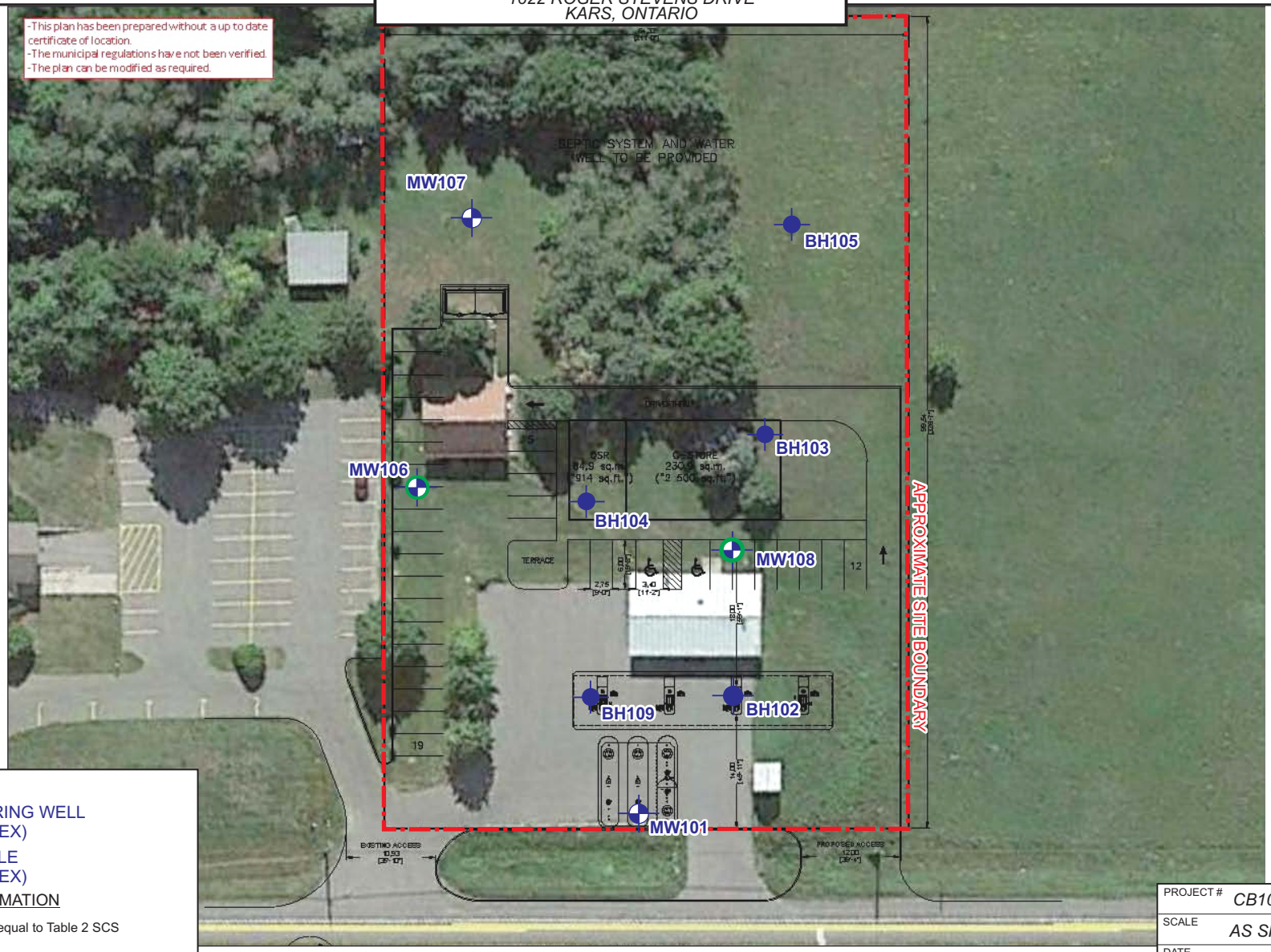
FUEL CORPORATION



LEGEND

- MONITORING WELL (TERRAPEX)
- BOREHOLE (TERRAPEX)

ANALYSIS INFORMATION

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0 15m 30m
(APPROXIMATE)

SOURCE: PROVIDED BY CLIENT.

PROJECT #	CB1057.00
SCALE	AS SHOWN
DATE	MARCH 2018
DRAWN	GS
CHECKED	JM
DRAWING #	FIGURE 4B

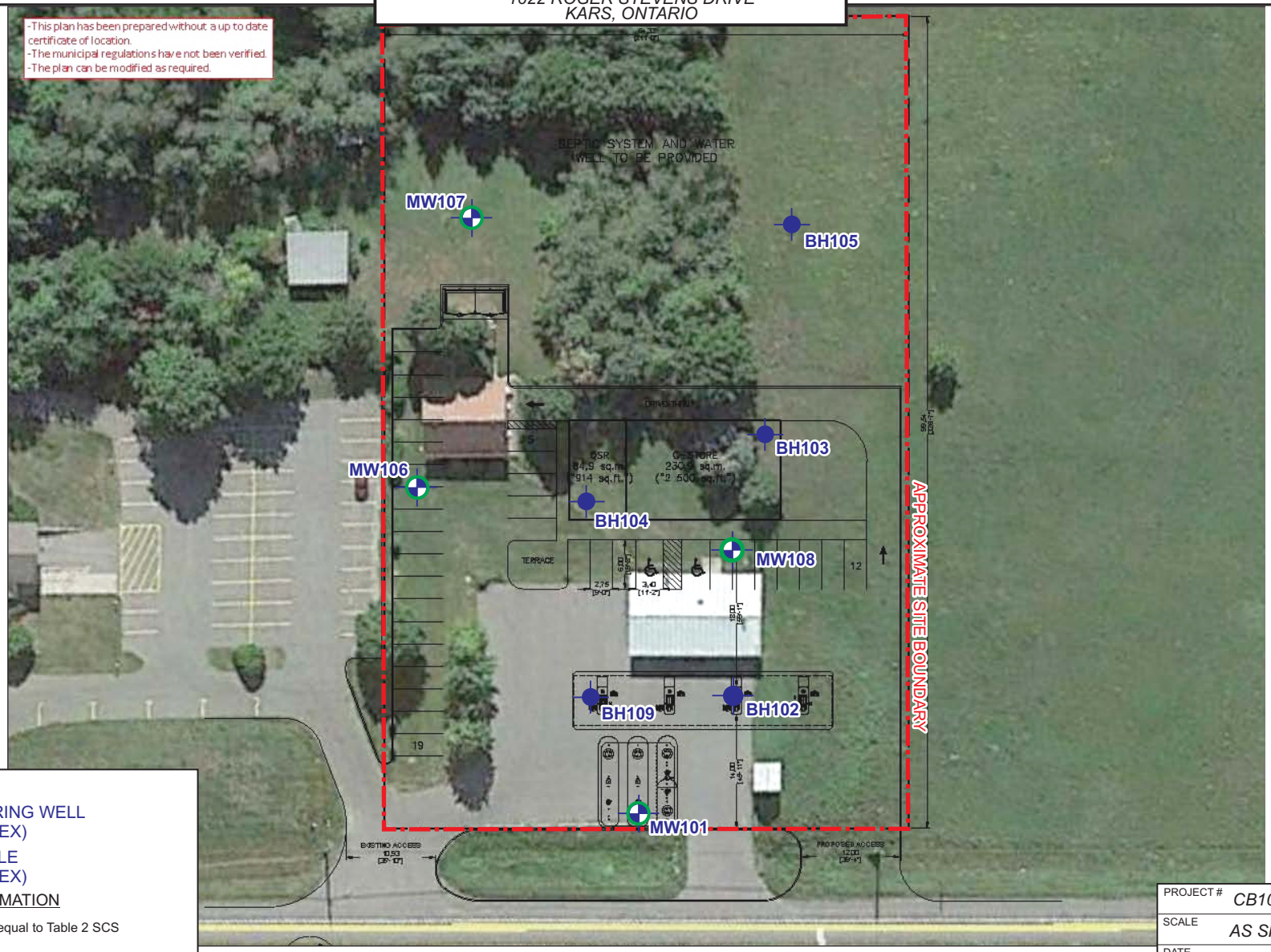
TERRAPEX

GROUNDWATER ANALYTICAL RESULTS - PHCs

1622 ROGER STEVENS DRIVE
KARS, ONTARIO

CLIENT

Parkland FUEL CORPORATION



LEGEND

- MONITORING WELL (TERRAPEX)
- BOREHOLE (TERRAPEX)

ANALYSIS INFORMATION

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SCS (Site Conditions Standards) refer to Standards from *Table 2 of April 15, 2011 Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act*; coarse textured soil

0 15m 30m

(APPROXIMATE)

SOURCE: PROVIDED BY CLIENT.

PROJECT #	CB1057.00
SCALE	AS SHOWN
DATE	MARCH 2018
DRAWN	GS
CHECKED	JM
DRAWING #	FIGURE 5A

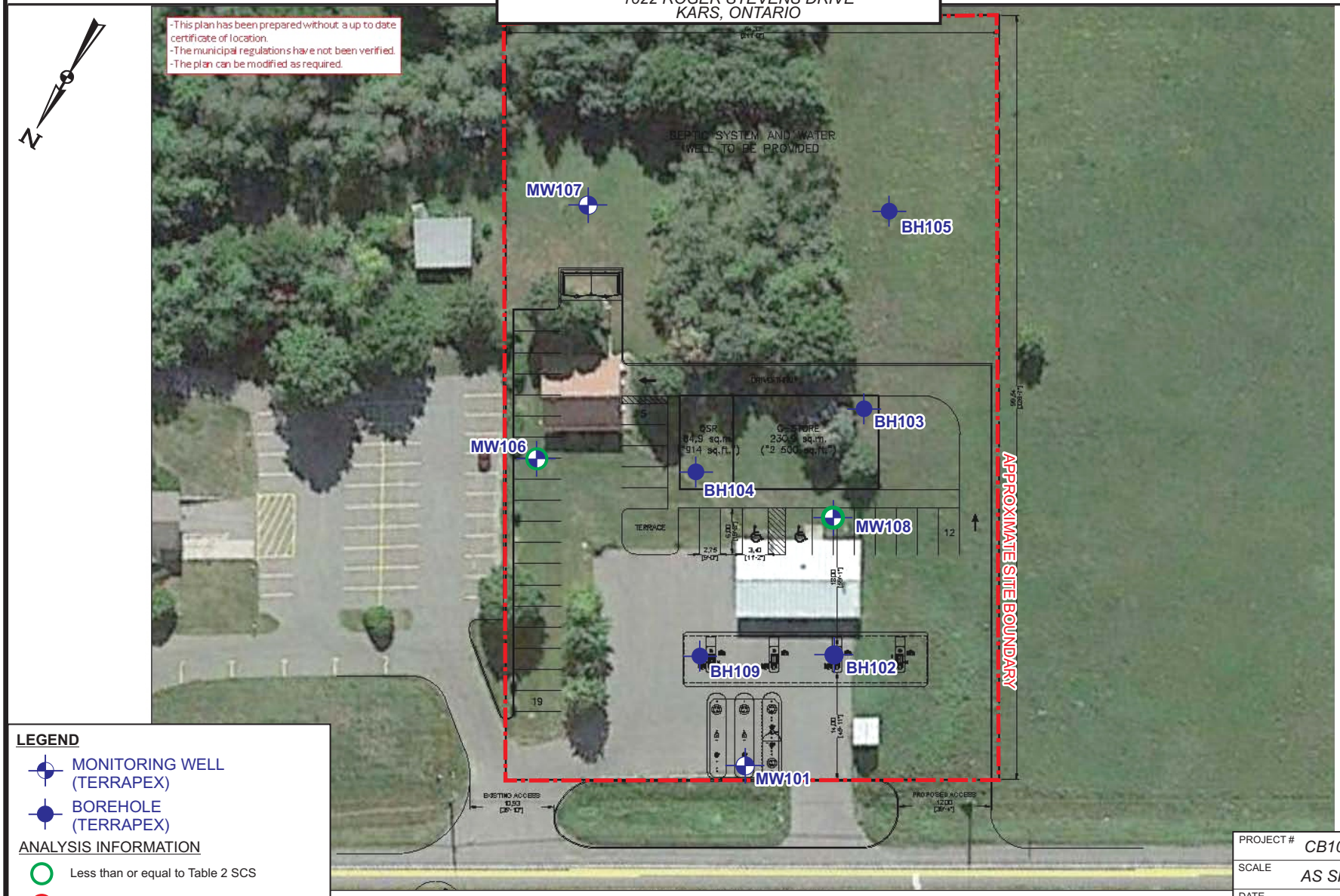
TERRAPEX

GROUNDWATER ANALYTICAL RESULTS - VOCs

1622 ROGER STEVENS DRIVE
KARS, ONTARIO

CLIENT

Parkland FUEL CORPORATION



LEGEND

- MONITORING WELL (TERRAPEX)
- BOREHOLE (TERRAPEX)

ANALYSIS INFORMATION

- Less than or equal to Table 2 SCS
- Greater than Table 2 SCS

SCS (Site Conditions Standards) refer to Standards from *Table 2 of April 15, 2011 Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act*; coarse textured soil

0 15m 30m

(APPROXIMATE)

SOURCE: PROVIDED BY CLIENT.

PROJECT #	CB1057.00
SCALE	AS SHOWN
DATE	MARCH 2018
DRAWN	GS
CHECKED	JM
DRAWING #	FIGURE 5B

TABLES

TABLE 1 GROUNDWATER MONITORING DATA
1622 Roger Stevens Drive, Kars, Ontario

WELL NUMBER	DATE	GROUND ELEVATION[1] (m)	T.O.P. ELEVATION[2] (m)	SCREEN LENGTH (m)	BOTTOM OF SCREEN[3] (m)	CV[4]	DEPTH TO WATER FROM T.O.P. (m)	DEPTH TO WATER FROM GROUND (m)	GROUNDWATER ELEVATION[5] (m)	LNAPL THICKNESS[6] (m)
MW101	23-Feb-18	100.53	100.39	3.00	100.39	<10 ppm	1.55	1.68	98.85	None
MW106	23-Feb-18	101.62	102.53	3.00	102.53	<10 ppm	2.27	1.35	100.26	None
MW107	23-Feb-18	101.74	102.49	2.45	102.49	<10 ppm	0.86	0.10	101.64	None
MW108	23-Feb-18	100.64	101.69	3.00	101.69	<10 ppm	3.85	2.80	97.84	None

[1] Elevation of ground surface at well location, relative to site benchmark
[2] Elevation of highest point of well pipe ("top of pipe"), relative to site benchmark
[3] Elevation of bottom of well screened interval, relative to site benchmark
[4] Combustible vapour concentration in well headspace in parts per million by volume (ppm) or percent of lower explosive limit (%LEL)
[5] Adjusted static water level elevation, relatve to site benchmark, using indicated relative density of LNAPL to groundwater
[6] Measured thickness of light, non-aqueous liquid, if any

Entered by: GS
Checked by: RH

TABLE 2 SOIL ANALYTICAL RESULTS - PHCs
1622 Roger Stevens Drive, Kars, Ontario

Terrapex Sample Name	Units	STANDARDS 2011 Table 2 R / P / I coarse	MW101-8	BH102-5	BH103-4	BH104-1	BH105-3	MW106-4	MW107-3
Sample Depth	m bg	-	4.3 - 4.9	3.8 - 4.4	3.0 - 3.7	0.8 - 1.4	2.3 - 2.9	3.0 - 3.7	2.3 - 2.9
CSV Reading	-	-	<10 ppm	<10 ppm	<10 ppm	<10 ppm	<10 ppm	<10 ppm	<10 ppm
Sampling Date	-	-	22-Feb-18	22-Feb-18	22-Feb-18	22-Feb-18	22-Feb-18	22-Feb-18	22-Feb-18
Analysis Date	-	-	23-Feb-18	23-Feb-18	23-Feb-18	23-Feb-18	23-Feb-18	23-Feb-18	23-Feb-18
Certificate of Analysis No.	-	-	B841113	B841113	B841113	B841113	B841113	B841113	B841113
Benzene	µg/g	0.21	<0.02	<0.02	<0.02	<0.02	<0.02	<0.020	<0.02
Toluene	µg/g	2.3	<0.02	<0.02	<0.02	<0.02	<0.02	<0.020	<0.02
Ethylbenzene	µg/g	1.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.020	<0.02
Xylenes (total)	µg/g	3.1	<0.04	<0.04	<0.04	<0.04	<0.04	<0.020	<0.04
Petroleum Hydrocarbons, F1	µg/g	55	<10	<10	<10	<10	<10	<10	<10
Petroleum Hydrocarbons, F2	µg/g	98	<10	<10	<10	<10	<10	<10	<10
Petroleum Hydrocarbons, F3	µg/g	300	<50	<50	<50	<50	<50	<50	<50
Petroleum Hydrocarbons, F4	µg/g	2,800	<50	<50	<50	<50	<50	<50	<50

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

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: GS
Checked by: JM

TABLE 2 SOIL ANALYTICAL RESULTS - PHCs
1622 Roger Stevens Drive, Kars, Ontario

Terrapex Sample Name	Units	STANDARDS 2011 Table 2 R / P / I coarse	MW108-7	MW108-17 Duplicate of MW108-78	BH109-4
Sample Depth	m bg	-	4.6 - 5.2	-	2.3 - 2.9
CSV Reading	-	-	<10 ppm	-	<10 ppm
Sampling Date	-	-	22-Feb-18	22-Feb-18	22-Feb-18
Analysis Date	-	-	23-Feb-18	23-Feb-18	23-Feb-18
Certificate of Analysis No.	-	-	B841113	B841113	B841113
Benzene	µg/g	0.21	<0.020	<0.02	<0.02
Toluene	µg/g	2.3	<0.020	<0.02	<0.02
Ethylbenzene	µg/g	1.1	<0.020	<0.02	<0.02
Xylenes (total)	µg/g	3.1	<0.020	<0.04	<0.04
Petroleum Hydrocarbons, F1	µg/g	55	<10	<10	<10
Petroleum Hydrocarbons, F2	µg/g	98	<10	<10	<10
Petroleum Hydrocarbons, F3	µg/g	300	<50	<50	<50
Petroleum Hydrocarbons, F4	µg/g	2,800	<50	<50	<50

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

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: GS
Checked by: JM

TABLE 3 SOIL ANALYTICAL RESULTS - VOCs
1622 Roger Stevens Drive, Kars, Ontario

Terrapex Sample Name	Units	STANDARDS[1] 2011 Table 2 R / P / I coarse	MW 106-4	MW 108-7
Sample Depth	m bg	-	3.0 - 3.7	4.6 - 5.2
SV Reading	-	-	<10 ppm	<10 ppm
Sampling Date	-	-	22-Feb-18	22-Feb-18
Analysis Date	-	-	23-Feb-18	23-Feb-18
Certificate of Analysis No.	-	-	B841113	B841113
Acetone	µg/g	16	<0.50	<0.50
Benzene	µg/g	0.21	<0.020	<0.020
Bromodichloromethane	µg/g	1.5	<0.050	<0.050
Bromoform	µg/g	0.27	<0.050	<0.050
Bromomethane	µg/g	0.05	<0.050	<0.050
Carbon tetrachloride	µg/g	0.05	<0.050	<0.050
Chlorobenzene	µg/g	2.4	<0.050	<0.050
Chloroform	µg/g	0.05	<0.050	<0.050
Dibromochloromethane	µg/g	2.3	<0.050	<0.050
Dichlorobenzene 1,2-	µg/g	1.2	<0.050	<0.050
Dichlorobenzene, 1,3-	µg/g	4.8	<0.050	<0.050
Dichlorobenzene,1,4-	µg/g	0.083	<0.050	<0.050
Dichlorodifluoromethane	µg/g	16	<0.050	<0.050
Dichloroethane, 1,1-	µg/g	0.47	<0.050	<0.050
Dichloroethane, 1,2-	µg/g	0.05	<0.050	<0.050
Dichloroethylene, 1,1-	µg/g	0.05	<0.050	<0.050
Dichloroethylene, cis-1,2-	µg/g	1.9	<0.050	<0.050
Dichloroethylene, trans-1,2-	µg/g	0.084	<0.050	<0.050
Dichloropropane, 1,2-	µg/g	0.05	<0.050	<0.050
Dichloropropene, cis-1,3-	µg/g	-	<0.030	<0.030
Dichloropropene, trans-1,3-	µg/g	-	<0.040	<0.040
Ethylbenzene	µg/g	1.1	<0.020	<0.020
Ethylene dibromide	µg/g	0.05	<0.050	<0.050
Hexane	µg/g	2.8	<0.050	<0.050
Methyl ethyl ketone	µg/g	16	<0.50	<0.50
Methyl isobutyl ketone	µg/g	1.7	<0.50	<0.50
Methyl tert butyl ether	µg/g	0.75	<0.050	<0.050
Methylene Chloride	µg/g	0.1	<0.050	<0.050
Styrene	µg/g	0.7	<0.050	<0.050
Tetrachloroethane, 1,1,1,2-	µg/g	0.058	<0.050	<0.050
Tetrachloroethane, 1,1,2,2-	µg/g	0.05	<0.050	<0.050
Tetrachloroethylene	µg/g	0.28	<0.050	<0.050
Toluene	µg/g	2.3	<0.020	<0.020
Trichloroethane, 1,1,1-	µg/g	0.38	<0.050	<0.050
Trichloroethane, 1,1,2-	µg/g	0.05	<0.050	<0.050
Trichloroethylene	µg/g	0.061	<0.050	<0.050
Trichlorofluoromethane	µg/g	4	<0.050	<0.050
Vinyl chloride	µg/g	0.02	<0.020	<0.020
m,p-Xylenes	µg/g	-	<0.020	<0.020
o-Xylene	µg/g	-	<0.020	<0.020
Xylenes (total)	µg/g	3.1	<0.020	<0.020

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

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

TABLE 4 GROUNDWATER ANALYTICAL RESULTS - PHCs
1622 Roger Stevens Drive, Kars, Ontario

Terrapex Sample Name	Units	STANDARDS[1] 2011 Table 2 coarse	MW101	MW112 Field Duplicate of MW101	MW106	MW107	MW108	BLANK FIELD BLANK	Trip Blank
CV Reading	-	-	<10 ppm	-	<10 ppm	<10 ppm	<10 ppm	-	
Sampling Date	-	-	23-Feb-18	23-Feb-18	23-Feb-18	23-Feb-18	23-Feb-18	23-Feb-18	23-Feb-18
Analysis Date	-	-	23/24-Feb-18	23/24-Feb-18	23/24-Feb-18	23/24-Feb-18	23/24-Feb-18	23-Feb-18	23/24-Feb-18
Certificate of Analysis No.	-	-	B841230	B841230	B841230	B841230	B841230	B841230	B841230
Benzene	µg/L	5	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Toluene	µg/L	24	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Ethylbenzene	µg/L	2.4	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Xylenes (total)	µg/L	300	1.4	1.3	<0.20	<0.40	<0.20	<0.40	<0.40
Petroleum Hydrocarbons, F1	µg/L	750	<25	<25	<25	<25	<25	<25	<25
Petroleum Hydrocarbons, F2	µg/L	150	<100	<100	<100	<100	<100	<100	-
Petroleum Hydrocarbons, F3	µg/L	500	<200	<200	<200	<200	<200	<200	-
Petroleum Hydrocarbons, F4	µg/L	500	<200	<200	<200	<200	<200	<200	-

[1] Standards from Table 2 of April 15, 2011 *Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act* ; coarse soil

ppm Parts per million (by volume)
CV Reading Combustible vapour reading (ppm or % LEL)
% LEL Percent of the lower explosive limit
- not applicable
BOLD Exceeds standard

Entered by: GS
Checked by: JM

TABLE 5 GROUNDWATER ANALYTICAL RESULTS - VOCs
1622 Roger Stevens Drive, Kars, Ontario

Terrapex Sample Name	Units	STANDARDS 2011 Table 2[1] coarse	MW106	MW108
CV Reading	-	-	<10 ppm	<10 ppm
Sampling Date	-	-	23-Feb-18	23-Feb-18
Analysis Date	-	-	23/24-Feb-18	23/24-Feb-18
Certificate of Analysis No.	-	-	B841230	B841230
Acetone	µg/L	2,700	<10	<10
Benzene	µg/L	5	<0.20	<0.20
Bromodichloromethane	µg/L	16	<0.50	<0.50
Bromoform	µg/L	25	<1.0	<1.0
Bromomethane	µg/L	0.89	<0.50	<0.50
Carbon tetrachloride	µg/L	0.79	<0.20	<0.20
Chlorobenzene	µg/L	30	<0.20	<0.20
Chloroform	µg/L	2.4	<0.20	<0.20
Dibromochloromethane	µg/L	25	<0.50	<0.50
Dichlorobenzene 1,2-	µg/L	3	<0.50	<0.50
Dichlorobenzene, 1,3-	µg/L	59	<0.50	<0.50
Dichlorobenzene,1,4-	µg/L	1	<0.50	<0.50
Dichlorodifluoromethane	µg/L	590	<1.0	<1.0
Dichloroethane, 1,1-	µg/L	5	<0.20	<0.20
Dichloroethane, 1,2-	µg/L	1.6	<0.50	<0.50
Dichloroethylene, 1,1-	µg/L	1.6	<0.20	<0.20
Dichloroethylene, cis-1,2-	µg/L	1.6	<0.50	<0.50
Dichloroethylene, trans-1,2-	µg/L	1.6	<0.50	<0.50
Dichloropropane, 1,2-	µg/L	5	<0.20	<0.20
Dichloropropene, cis-1,3-	µg/L	-	<0.30	<0.30
Dichloropropene, trans-1,3-	µg/L	-	<0.40	<0.40
Dichloropropene, 1,3-	µg/L	0.5	<0.50	<0.50
Ethylbenzene	µg/L	2.4	<0.20	<0.20
Ethylene dibromide	µg/L	0.2	<0.20	<0.20
Hexane	µg/L	51	<1.0	<1.0
Methyl ethyl ketone	µg/L	1,800	<10	<10
Methyl isobutyl ketone	µg/L	640	<5.0	<5.0
Methyl tert butyl ether	µg/L	15	<0.50	<0.50
Methylene Chloride	µg/L	50	<2.0	<2.0
Styrene	µg/L	5.4	<0.50	<0.50
Tetrachloroethane, 1,1,1,2-	µg/L	1.1	<0.50	<0.50
Tetrachloroethane, 1,1,2,2-	µg/L	1	<0.50	<0.50
Tetrachloroethylene	µg/L	1.6	<0.20	<0.20
Toluene	µg/L	24	<0.20	<0.20
Trichloroethane, 1,1,1-	µg/L	200	<0.20	<0.20
Trichloroethane, 1,1,2-	µg/L	4.7	<0.50	<0.50
Trichloroethylene	µg/L	1.6	<0.20	<0.20
Trichlorofluoromethane	µg/L	150	<0.50	<0.50
Vinyl chloride	µg/L	0.5	<0.20	<0.20
m,p-Xylenes	µg/L	-	<0.20	<0.20
o-Xylene	µg/L	-	<0.20	<0.20

[1] Standards from Table 2 of April 15, 2011 *Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act* ; coarse soil

ns No standard
CV Reading Combustible vapour reading (ppm or % LEL)
ppm Parts per million (by volume)
% LEL Percent of the lower explosive limit
BOLD Exceeds standard

APPENDIX I

SITE PHOTOGRAPHS

TERRAPEX	PHOTOGRAPHIC LOG Page 1 of 4		
Client: Parkland Fuel Corporation	**Site Location**:	1622 Roger Stevens Drive, Kars, Ontario	**Project No**: CO1057.00

Photo No: 1 **Date:** February 21, 2018 **Viewing Direction:** North **Description:** View of the track-mounted drill rig drilling monitoring well MW101.	

Photo No: 2 **Date:** February 21, 2018 **Viewing Direction:** South **Description:** View of the slope located in the eastern portion of the Site.	

Client: Parkland Fuel Corporation	**Site Location**:	1622 Roger Stevens Drive, Kars, Ontario	**Project No**: CO1057.00

Photo No: 3 **Date:** February 21, 2018 **Viewing Direction:** East **Description:** View of the track-mounted drill rig drilling monitoring well MW101.	

Photo No: 4 **Date:** February 22, 2018 **Viewing Direction:** East **Description:** View of the drillers auguring the borehole at monitoring well MW106.	

Client: Parkland Fuel Corporation	**Site Location**:	1622 Roger Stevens Drive, Kars, Ontario	**Project No**: CO1057.00

Photo No: 5 **Date:** February 21, 2018 **Viewing Direction:** West **Description:** View of the drilling of borehole BH103.	

Photo No: 6 **Date:** February 21, 2018 **Viewing Direction:** Southwest **Description:** A view of the residence located along the eastern portion of the property prior to the drilling and installation of monitoring well MW106.	

Client: Parkland Fuel Corporation	**Site Location**:	1622 Roger Stevens Drive, Kars, Ontario	**Project No**: CO1057.00

Photo No: 7 **Date:** February 22, 2018 **Viewing Direction:** East **Description:** View of the drilling of monitoring well MW107.	

Photo No: 8 **Date:** February 22, 2018 **Viewing Direction:** West **Description:** View of the drilling of the borehole for monitoring well MW108.	

APPENDIX II

BOREHOLE/MONITORING WELL LOGS

CLIENT: Parkland Fuel Corporation	METHOD: Split Spoon Sampling		**BH No.: MW101**
PROJECT: 1622 Roger Stevens Drive	PROJECT ENGINEER: Vic	ELEV. (m) 100.529	
LOCATION: Kars, Ontario	NORTHING: 0448260	EASTING: 5000463	PROJECT NO.: CB1057.00

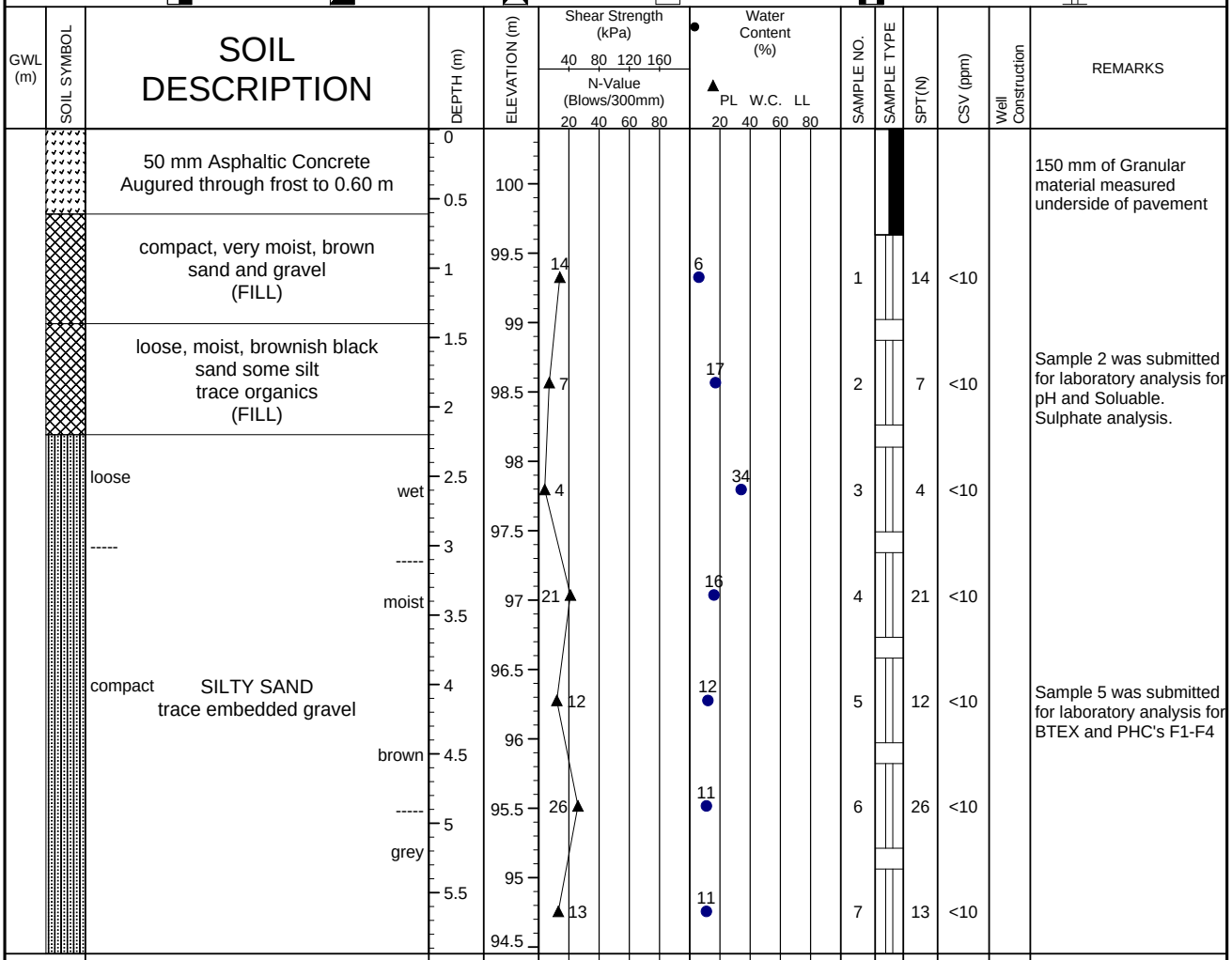
SAMPLE TYPE: AUGER | DRIVEN | CORING | DYNAMIC CONE | SHELBY | SPLIT SPOON

GWL (m)	SOIL DESCRIPTION	DEPTH (m)	ELEVATION (m)	Shear Strength (kPa) / N-Value (Blows/300mm)	Water Content (%) PL W.C. LL	SAMPLE NO.	SAMPLE TYPE	SPT(N)	CSV (ppm)	Well Construction	REMARKS
	100 mm Asphaltic Concrete Augured through frost to 0.61 m	0	100.5								
▼	compact, moist, brown sandy gravel trace silt (FILL)	0.5	100	21	13	1		21	<10		
		1	99.5	11	6	2		11	<10		
		1.5	99								
		2	98.5	22	11	3		22	<10		
		2.5	98	34	8	4		34	<10		
		3	97.5								
		3.5	97	19	10	5		19	<10		
	compact brown SAND some gravel some silt ----- wet grey loose	4	96.5	30	10	6		30	<10		
		4.5	96	15	11	7		15	<10		
		5	95.5	8	11	8		8	<10		Sample 8 submittted for laboratory analysis for BTEX and PHC (F1-F4)
		5.5	95	6	9	9		6	<10		
		6	94.5								
	END OF BOREHOLE										

	LOGGED BY: RH	DRILLING DATE: February 26, 2018
	REVIEWED BY: VN	Page 1 of 1

CLIENT: Parkland Fuel Corporation	METHOD: Split Spoon Sampling		**BH No.: BH102**
PROJECT: 1622 Roger Stevens Drive	PROJECT ENGINEER: Vic	ELEV. (m) 100.392	
LOCATION: Kars, Ontario	NORTHING:	EASTING:	PROJECT NO.: CB1057.00

SAMPLE TYPE: AUGER | DRIVEN | CORING | DYNAMIC CONE | SHELBY | SPLIT SPOON



END OF BOREHOLE

	LOGGED BY: RH	DRILLING DATE: February 26, 2018
	REVIEWED BY: VN	Page 1 of 1

CLIENT: Parkland Fuel Corporation	METHOD: Split Spoon Sampling		**BH No.: BH103**
PROJECT: 1622 Roger Stevens Drive	PROJECT ENGINEER: Vic	ELEV. (m)	
LOCATION: Kars, Ontario	NORTHING:	EASTING:	PROJECT NO.: CB1057.00

SAMPLE TYPE: AUGER | DRIVEN | CORING | DYNAMIC CONE | SHELBY | SPLIT SPOON

GWL (m)	SOIL SYMBOL	SOIL DESCRIPTION	DEPTH (m)	ELEVATION (m)	Shear Strength (kPa) 40 80 120 160 / N-Value (Blows/300mm) 20 40 60 80	Water Content (%) PL W.C. LL 20 40 60 80	SAMPLE NO.	SAMPLE TYPE	SPT(N)	CSV (ppm)	Well Construction	REMARKS
		100 mm Topsoil Augured through frost to 0.75 m	0									102 mm of Topsoil measured in Borehole
		loose, wet, dark brown SILTY SAND some organics	0.5		4	24	1		4	<10		
		-----	1									
		dense	1.5		56	9	2		56	<10		Sample 2 was submitted for laboratory analysis for pH and Soluable. Sulphate analysis.
		moist, brown SILTY SAND some embedded gravel	2		46	9	3		46	<10		
		-----	2.5									Sample 4 was submitted for laboratory analysis of BTEX and PHC's (F1-F2).
		compact	3		14	11	4		14	<10		
			3.5									
			4		17	11	5		17	<10		Auger refusal at 2.9 and 4.42 m on possible boulders.
		END OF BOREHOLE										

	LOGGED BY: RH	DRILLING DATE: February 26, 2018
	REVIEWED BY: VN	Page 1 of 1

CLIENT: Parkland Fuel Corporation	METHOD: Split Spoon Sampling		**BH No.: BH104**
PROJECT: 1622 Roger Stevens Drive	PROJECT ENGINEER: Vic	ELEV. (m) 100.651	
LOCATION: Kars, Ontario	NORTHING:	EASTING:	PROJECT NO.: CB1057.00

SAMPLE TYPE: AUGER | DRIVEN | CORING | DYNAMIC CONE | SHELBY | SPLIT SPOON

GWL (m)	SOIL SYMBOL	SOIL DESCRIPTION	DEPTH (m)	ELEVATION (m)	Shear Strength (kPa) 40 80 120 160 / N-Value (Blows/300mm) 20 40 60 80	Water Content (%) PL W.C. LL 20 40 60 80	SAMPLE NO.	SAMPLE TYPE	SPT(N)	CSV (ppm)	Well Construction	REMARKS
		Topsoil at surface Augured through frost to 0.76 m	0	100.5								
		loose ----- compact to dense moist, dark brown sand some silt some organics (FILL)	0.5 1 1.5	100 99.5 99	6 56		1 2		6 56	<10 <10		Sample 1 was submitted for laboratory analysis of BTEX, PHC's F1-F2 and pH. Auger refusal at 1.82 m on possible boulders.
		END OF BOREHOLE										

LOGGED BY: RH | DRILLING DATE: February 26, 2018

REVIEWED BY: VN | Page 1 of 1

CLIENT: Parkland Fuel Corporation	METHOD: Split Spoon Sampling		**BH No.: BH105**
PROJECT: 1622 Roger Stevens Drive	PROJECT ENGINEER: Vic	ELEV. (m) 99.306	
LOCATION: Kars, Ontario	NORTHING:	EASTING:	PROJECT NO.: CB1057.00

SAMPLE TYPE: AUGER | DRIVEN | CORING | DYNAMIC CONE | SHELBY | SPLIT SPOON

GWL (m)	SOIL SYMBOL	SOIL DESCRIPTION	DEPTH (m)	ELEVATION (m)	Shear Strength (kPa) 40 80 120 160 / N-Value (Blows/300mm) 20 40 60 80	Water Content (%) PL W.C. LL 20 40 60 80	SAMPLE NO.	SAMPLE TYPE	SPT(N)	CSV (ppm)	Well Construction	REMARKS
		Topsoil at surface Augured through frost to 0.75 m	0	99								
		compact, moist, brown SILTY SAND trace organics	0.5 1	98.5	30		1		30	<10		
			1.5	98								
		compact, moist, brown SILTY SAND some embedded gravel	2	97.5	30		2		30	<10		Sample 3 was submitted for laboratory analysis for BTEX and PHC's F1-F4.
			2.5	97	11		3		11	<10		
			3	96.5								
			3.5	96	26		4		26	<10		
		END OF BOREHOLE										

	LOGGED BY: RH	DRILLING DATE: February 26, 2018
	REVIEWED BY: VN	Page 1 of 1

CLIENT: Parkland Fuel Corporation	METHOD: Split Spoon Sampling		**BH No.: MW106**
PROJECT: 1622 Roger Stevens Drive	PROJECT ENGINEER: Vic	ELEV. (m) 101.615	
LOCATION: Kars, Ontario	NORTHING: 0448302	EASTING: 5000442	PROJECT NO.: CB1057.00

SAMPLE TYPE: AUGER | DRIVEN | CORING | DYNAMIC CONE | SHELBY | SPLIT SPOON

GWL (m)	SOIL SYMBOL	SOIL DESCRIPTION	DEPTH (m)	ELEVATION (m)	Shear Strength (kPa) 40 80 120 160 / N-Value (Blows/300mm) 20 40 60 80	Water Content (%) PL W.C. LL 20 40 60 80	SAMPLE NO.	SAMPLE TYPE	SPT(N)	CSV (ppm)	Well Construction	REMARKS
		Augured through frost to 0.75 m	0	101.5								
		loose, moist, brown SAND trace organics	0.5	101								
			1	100.5	6	12	1		6	<10		
▼		loose	1.5	100	8	9	2		8	<10		
		-----	2	99.5								
		compact	2.5	99	22	11	3		22	<10		
		-----	3	98.5		12						
		loose	3.5	98	7		4		7	<10		Sample 4 submitted for laboratory analysis of BTEX, PHC's F1-F4 and VOC's.
		moist, brown SILTY SAND trace embedded gravel -----	4	97.5	13	11	5		13	<10		
		----- compact brownish grey	4.5	97								
		-----	5	96.5	2		6		2	<10		
		loose ----- grey	5.5	96	2	12	7		2	<10		
			6									
		END OF BOREHOLE										

	LOGGED BY: RH	DRILLING DATE: February 22, 2018
	REVIEWED BY: VN	Page 1 of 1

CLIENT: Parkland Fuel Corporation	METHOD: Split Spoon Sampling		**BH No.: MW107**
PROJECT: 1622 Roger Stevens Drive	PROJECT ENGINEER: Vic	ELEV. (m) 101.741	
LOCATION: Kars, Ontario	NORTHING: 0448315	EASTING: 5000409	PROJECT NO.: CB1057.00

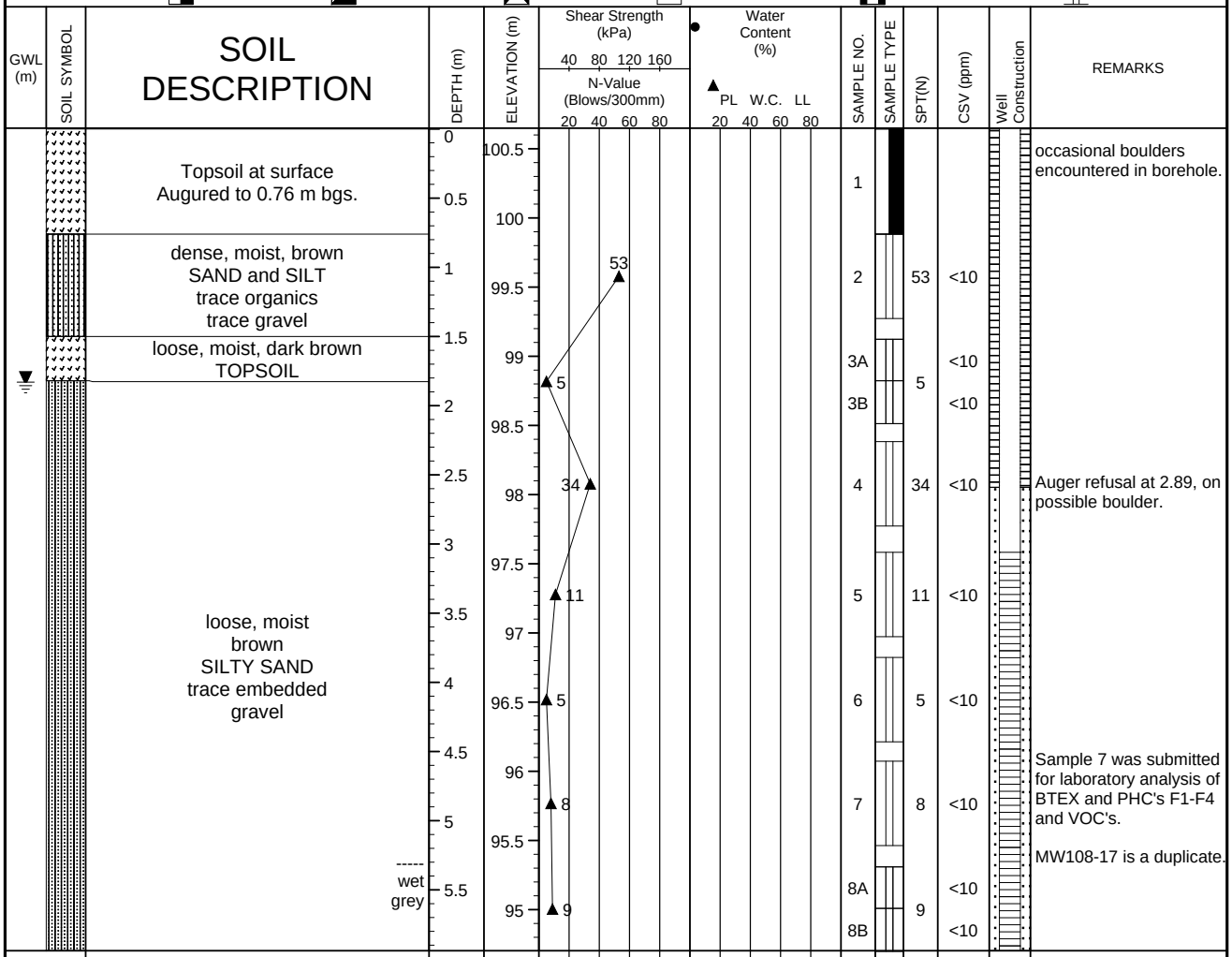
SAMPLE TYPE: AUGER | DRIVEN | CORING | DYNAMIC CONE | SHELBY | SPLIT SPOON

GWL (m)	SOIL SYMBOL	SOIL DESCRIPTION	DEPTH (m)	ELEVATION (m)	Shear Strength (kPa) 40 80 120 160 / N-Value (Blows/300mm) 20 40 60 80	Water Content (%) PL W.C. LL 20 40 60 80	SAMPLE NO.	SAMPLE TYPE	SPT(N)	CSV (ppm)	Well Construction	REMARKS
▼		Topsoil at surface Augured through frost to 0.76 m	0	101.5								
		dense, moist, brown SILTY SAND some embedded gravel	0.5 1 1.5 2 2.5 3 3.5	101 100.5 100 99.5 99 98.5	39 50 50 50		1 2 3 4		39 50 50 50	<10 <10 <10 <10		Sample 3 submitted for laboratory analysis of BTEX and PHC's F1-F4. Auger Refusal at 3.7 m bgs, on possible boulders.
		END OF BOREHOLE										

	LOGGED BY: RH	DRILLING DATE: February 22, 2018
	REVIEWED BY: VN	Page 1 of 1

CLIENT: Parkland Fuel Corporation	METHOD: Split Spoon Sampling		**BH No.: MW108**
PROJECT: 1622 Roger Stevens Drive	PROJECT ENGINEER: Vic	ELEV. (m) 100.643	
LOCATION: Kars, Ontario	NORTHING: 0448270	EASTING: 5000428	PROJECT NO.: CB1057.00

SAMPLE TYPE: AUGER | DRIVEN | CORING | DYNAMIC CONE | SHELBY | SPLIT SPOON



END OF BOREHOLE

alston associates geotechnical division of TERRAPEX	LOGGED BY: RH	DRILLING DATE: February 22, 2018
	REVIEWED BY: VN	Page 1 of 1

CLIENT: Parkland Fuel Corporation	METHOD: Split Spoon Sampling		**BH No.: BH109**
PROJECT: 1622 Roger Stevens Drive	PROJECT ENGINEER: Vic	ELEV. (m) 101.051	
LOCATION: Kars, Ontario	NORTHING:	EASTING:	PROJECT NO.: CB1057.00

SAMPLE TYPE: AUGER | DRIVEN | CORING | DYNAMIC CONE | SHELBY | SPLIT SPOON

GWL (m)	SOIL SYMBOL	SOIL DESCRIPTION	DEPTH (m)	ELEVATION (m)	Shear Strength (kPa) 40 80 120 160 / N-Value (Blows/300mm) 20 40 60 80	Water Content (%) PL W.C. LL 20 40 60 80	SAMPLE NO.	SAMPLE TYPE	SPT(N)	CSV (ppm)	Well Construction	REMARKS
		50 mm of Asphaltic Concrete Aurgured through frost to 0.76 m.	0	101			1			<10		occasional boulders encountered in borehole.
		cmpact, moist, brown sand and gravel (FILL)	0.5	100.5								
			1	100	16		2		16	<10		
			1.5	99.5								
					11		3		11	<10		
		compact, moist brown SILTY SAND trace embedded gravel	2	99								
			2.5	98.5	20		4		20	<10		Sample 4 was submitted for laboratory analysis for BTEX and PHC F1-F4. Duplicate was taken.
			3	98								
					18		5		18	<10		Auger refusal at 3.7 m on possible boulder.
			3.5	97.5								
		END OF BOREHOLE										

	LOGGED BY: RH	DRILLING DATE: February 26, 2018
	REVIEWED BY: VN	Page 1 of 1

APPENDIX III

WELL RECORD

APPENDIX IV

LABORATORY CERTIFICATES OF ANALYSIS

Maxxam
A Bureau Veritas Group Company

Your P.O. #: PIONEER
Your Project #: CB1057.00
Site Location: 1622 Roger Stevens Drive
Your C.O.C. #: 650870-01-01, 650870-02-01

Attention: Geoff Lussier

Terrapex Environmental Ltd
920 Brant St.
Suite 16
Burlington, ON
Canada L7R 4J1

Report Date: 2018/03/06
Report #: R5031879
Version: 2 - Revision

CERTIFICATE OF ANALYSIS – REVISED REPORT

MAXXAM JOB #: B841113
Received: 2018/02/23, 10:10

Sample Matrix: Soil
Samples Received: 11

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Reference
1,3-Dichloropropene Sum	2	N/A	2018/02/23	OTT SOP-00002	EPA 8260C m
Petroleum Hydro. CCME F1 & BTEX in Soil (2)	9	N/A	2018/02/23	OTT SOP-00002	CCME CWS
Petroleum Hydrocarbons F2-F4 in Soil (3)	10	2018/02/23	2018/02/23	OTT SOP-00001	CCME CWS
Moisture	10	N/A	2018/02/23	CAM SOP-00445	McKeague 2nd ed 1978
pH CaCl2 EXTRACT (1)	1	2018/03/06	2018/03/06	CAM SOP-00413	EPA 9045 D m
Volatile Organic Compounds and F1 PHCs	2	N/A	2018/02/23	OTT SOP-00002	EPA 8260C m

Remarks:

Maxxam Analytics' laboratories are accredited to ISO/IEC 17025:2005 for specific parameters on scopes of accreditation. Unless otherwise noted, procedures used by Maxxam are based upon recognized Provincial, Federal or US method compendia such as CCME, MDDELCC, EPA, APHA.

All work recorded herein has been done in accordance with procedures and practices ordinarily exercised by professionals in Maxxam's profession using accepted testing methodologies, quality assurance and quality control procedures (except where otherwise agreed by the client and Maxxam in writing). All data is in statistical control and has met quality control and method performance criteria unless otherwise noted. All method blanks are reported; unless indicated otherwise, associated sample data are not blank corrected.

Maxxam Analytics' liability is limited to the actual cost of the requested analyses, unless otherwise agreed in writing. There is no other warranty expressed or implied. Maxxam has been retained to provide analysis of samples provided by the Client using the testing methodology referenced in this report. Interpretation and use of test results are the sole responsibility of the Client and are not within the scope of services provided by Maxxam, unless otherwise agreed in writing.

Solid sample results, except biota, are based on dry weight unless otherwise indicated. Organic analyses are not recovery corrected except for isotope dilution methods.
Results relate to samples tested.
This Certificate shall not be reproduced except in full, without the written approval of the laboratory.

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) This test was performed by Maxxam Analytics Mississauga
(2) 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.
(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.

Maxxam Analytics International Corporation o/a Maxxam Analytics 32 Colonnade Rd, Unit #1000, Nepean, ON K2E 7J6 Phone: 613 274-0573 Fax: 613 274-0574 Website: www.maxxam.ca

Your P.O. #: PIONEER
Your Project #: CB1057.00
Site Location: 1622 Roger Stevens Drive
Your C.O.C. #: 650870-01-01, 650870-02-01

Attention: Geoff Lussier

Terrapex Environmental Ltd
920 Brant St.
Suite 16
Burlington, ON
Canada L7R 4J1

Report Date: 2018/03/06
Report #: R5031879
Version: 2 - Revision

CERTIFICATE OF ANALYSIS – REVISED REPORT

MAXXAM JOB #: B841113
Received: 2018/02/23, 10:10

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.
Augustyna Dobosz, Project Manager
Email: ADobosz@maxxam.ca
Phone# (905)817-5700 Ext:5798

==========

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 Job #: B841113
Report Date: 2018/03/06

Terrapex Environmental Ltd
Client Project #: CB1057.00
Site Location: 1622 Roger Stevens Drive
Your P.O. #: PIONEER
Sampler Initials: GS

O.REG 153 PETROLEUM HYDROCARBONS (SOIL)

Maxxam ID		GDG333			GDG333			GDG334	GDG335		
Sampling Date		2018/02/22 08:30			2018/02/22 08:30			2018/02/22 09:30	2018/02/22 12:00		
COC Number		650870-01-01			650870-01-01			650870-01-01	650870-01-01		
	UNITS	MW 101-8	RDL	QC Batch	MW 101-8 Lab-Dup	RDL	QC Batch	MW 102-5	BH 103-4	RDL	QC Batch
Inorganics											
Moisture	%	9.7	0.2	5412285	11	0.2	5412285	11	9.7	0.2	5412285
BTEX & F1 Hydrocarbons											
Benzene	ug/g	<0.02	0.02	5412284				<0.02	<0.02	0.02	5412284
Toluene	ug/g	<0.02	0.02	5412284				<0.02	<0.02	0.02	5412284
Ethylbenzene	ug/g	<0.02	0.02	5412284				<0.02	<0.02	0.02	5412284
o-Xylene	ug/g	<0.02	0.02	5412284				<0.02	<0.02	0.02	5412284
p+m-Xylene	ug/g	<0.04	0.04	5412284				<0.04	<0.04	0.04	5412284
Total Xylenes	ug/g	<0.04	0.04	5412284				<0.04	<0.04	0.04	5412284
F1 (C6-C10)	ug/g	<10	10	5412284				<10	<10	10	5412284
F1 (C6-C10) - BTEX	ug/g	<10	10	5412284				<10	<10	10	5412284
F2-F4 Hydrocarbons											
F2 (C10-C16 Hydrocarbons)	ug/g	<10	10	5412136				<10	<10	10	5412136
F3 (C16-C34 Hydrocarbons)	ug/g	<50	50	5412136				<50	<50	50	5412136
F4 (C34-C50 Hydrocarbons)	ug/g	<50	50	5412136				<50	<50	50	5412136
Reached Baseline at C50	ug/g	Yes		5412136				Yes	Yes		5412136
Surrogate Recovery (%)											
1,4-Difluorobenzene	%	105		5412284				106	106		5412284
4-Bromofluorobenzene	%	114		5412284				114	117		5412284
D10-Ethylbenzene	%	93		5412284				100	97		5412284
D4-1,2-Dichloroethane	%	104		5412284				105	105		5412284
o-Terphenyl	%	83		5412136				77	94		5412136

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate

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Maxxam Job #: B841113
Report Date: 2018/03/06

Terrapex Environmental Ltd
Client Project #: CB1057.00
Site Location: 1622 Roger Stevens Drive
Your P.O. #: PIONEER
Sampler Initials: GS

O.REG 153 PETROLEUM HYDROCARBONS (SOIL)

Maxxam ID		GDG336	GDG337	GDG339	GDG341	GDG342		
Sampling Date		2018/02/22 14:30	2018/02/22 16:30	2018/02/22 10:30	2018/02/22 15:15	2018/02/22 14:15		
COC Number		650870-01-01	650870-01-01	650870-01-01	650870-01-01	650870-01-01		
	UNITS	**BH 104-1**	**BH 105-3**	**MW 107-3**	**BH 109-4**	**MW 108-17**	**RDL**	**QC Batch**
Inorganics								
Moisture	%	20	9.3	8.0	10	11	0.2	5412285
BTEX & F1 Hydrocarbons								
Benzene	ug/g	<0.02	<0.02	<0.02	<0.02	<0.02	0.02	5412284
Toluene	ug/g	<0.02	<0.02	<0.02	<0.02	<0.02	0.02	5412284
Ethylbenzene	ug/g	<0.02	<0.02	<0.02	<0.02	<0.02	0.02	5412284
o-Xylene	ug/g	<0.02	<0.02	<0.02	<0.02	<0.02	0.02	5412284
p+m-Xylene	ug/g	<0.04	<0.04	<0.04	<0.04	<0.04	0.04	5412284
Total Xylenes	ug/g	<0.04	<0.04	<0.04	<0.04	<0.04	0.04	5412284
F1 (C6-C10)	ug/g	<10	<10	<10	<10	<10	10	5412284
F1 (C6-C10) - BTEX	ug/g	<10	<10	<10	<10	<10	10	5412284
F2-F4 Hydrocarbons								
F2 (C10-C16 Hydrocarbons)	ug/g	<10	<10	<10	<10	<10	10	5412136
F3 (C16-C34 Hydrocarbons)	ug/g	<50	<50	<50	<50	<50	50	5412136
F4 (C34-C50 Hydrocarbons)	ug/g	<50	<50	<50	<50	<50	50	5412136
Reached Baseline at C50	ug/g	Yes	Yes	Yes	Yes	Yes		5412136
Surrogate Recovery (%)								
1,4-Difluorobenzene	%	105	106	106	106	104		5412284
4-Bromofluorobenzene	%	110	113	107	109	107		5412284
D10-Ethylbenzene	%	88	99	104	108	97		5412284
D4-1,2-Dichloroethane	%	103	102	103	103	103		5412284
o-Terphenyl	%	93	95	90	91	92		5412136

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Maxxam Job #: B841113
Report Date: 2018/03/06

Terrapex Environmental Ltd
Client Project #: CB1057.00
Site Location: 1622 Roger Stevens Drive
Your P.O. #: PIONEER
Sampler Initials: GS

O.REG 153 VOCS BY HS & F1-F4 (SOIL)

Maxxam ID		GDG338	GDG340		
Sampling Date		2018/02/22 08:30	2018/02/22 14:45		
COC Number		650870-01-01	650870-01-01		
	UNITS	MW 106-4	MW 108-7	RDL	QC Batch
Inorganics					
Moisture	%	11	11	0.2	5412285
Calculated Parameters					
1,3-Dichloropropene (cis+trans)	ug/g	<0.050	<0.050	0.050	5412280
Volatile Organics					
Acetone (2-Propanone)	ug/g	<0.50	<0.50	0.50	5412288
Benzene	ug/g	<0.020	<0.020	0.020	5412288
Bromodichloromethane	ug/g	<0.050	<0.050	0.050	5412288
Bromoform	ug/g	<0.050	<0.050	0.050	5412288
Bromomethane	ug/g	<0.050	<0.050	0.050	5412288
Carbon Tetrachloride	ug/g	<0.050	<0.050	0.050	5412288
Chlorobenzene	ug/g	<0.050	<0.050	0.050	5412288
Chloroform	ug/g	<0.050	<0.050	0.050	5412288
Dibromochloromethane	ug/g	<0.050	<0.050	0.050	5412288
1,2-Dichlorobenzene	ug/g	<0.050	<0.050	0.050	5412288
1,3-Dichlorobenzene	ug/g	<0.050	<0.050	0.050	5412288
1,4-Dichlorobenzene	ug/g	<0.050	<0.050	0.050	5412288
Dichlorodifluoromethane (FREON 12)	ug/g	<0.050	<0.050	0.050	5412288
1,1-Dichloroethane	ug/g	<0.050	<0.050	0.050	5412288
1,2-Dichloroethane	ug/g	<0.050	<0.050	0.050	5412288
1,1-Dichloroethylene	ug/g	<0.050	<0.050	0.050	5412288
cis-1,2-Dichloroethylene	ug/g	<0.050	<0.050	0.050	5412288
trans-1,2-Dichloroethylene	ug/g	<0.050	<0.050	0.050	5412288
1,2-Dichloropropane	ug/g	<0.050	<0.050	0.050	5412288
cis-1,3-Dichloropropene	ug/g	<0.030	<0.030	0.030	5412288
trans-1,3-Dichloropropene	ug/g	<0.040	<0.040	0.040	5412288
Ethylbenzene	ug/g	<0.020	<0.020	0.020	5412288
Ethylene Dibromide	ug/g	<0.050	<0.050	0.050	5412288
Hexane	ug/g	<0.050	<0.050	0.050	5412288
Methylene Chloride(Dichloromethane)	ug/g	<0.050	<0.050	0.050	5412288
Methyl Ethyl Ketone (2-Butanone)	ug/g	<0.50	<0.50	0.50	5412288

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Maxxam Job #: B841113
Report Date: 2018/03/06

Terrapex Environmental Ltd
Client Project #: CB1057.00
Site Location: 1622 Roger Stevens Drive
Your P.O. #: PIONEER
Sampler Initials: GS

O.REG 153 VOCS BY HS & F1-F4 (SOIL)

Maxxam ID		GDG338	GDG340		
Sampling Date		2018/02/22 08:30	2018/02/22 14:45		
COC Number		650870-01-01	650870-01-01		
	UNITS	MW 106-4	MW 108-7	RDL	QC Batch
Methyl Isobutyl Ketone	ug/g	<0.50	<0.50	0.50	5412288
Methyl t-butyl ether (MTBE)	ug/g	<0.050	<0.050	0.050	5412288
Styrene	ug/g	<0.050	<0.050	0.050	5412288
1,1,1,2-Tetrachloroethane	ug/g	<0.050	<0.050	0.050	5412288
1,1,2,2-Tetrachloroethane	ug/g	<0.050	<0.050	0.050	5412288
Tetrachloroethylene	ug/g	<0.050	<0.050	0.050	5412288
Toluene	ug/g	<0.020	<0.020	0.020	5412288
1,1,1-Trichloroethane	ug/g	<0.050	<0.050	0.050	5412288
1,1,2-Trichloroethane	ug/g	<0.050	<0.050	0.050	5412288
Trichloroethylene	ug/g	<0.050	<0.050	0.050	5412288
Trichlorofluoromethane (FREON 11)	ug/g	<0.050	<0.050	0.050	5412288
Vinyl Chloride	ug/g	<0.020	<0.020	0.020	5412288
p+m-Xylene	ug/g	<0.020	<0.020	0.020	5412288
o-Xylene	ug/g	<0.020	<0.020	0.020	5412288
Total Xylenes	ug/g	<0.020	<0.020	0.020	5412288
F1 (C6-C10)	ug/g	<10	<10	10	5412288
F1 (C6-C10) - BTEX	ug/g	<10	<10	10	5412288
F2-F4 Hydrocarbons					
F2 (C10-C16 Hydrocarbons)	ug/g	<10	<10	10	5412136
F3 (C16-C34 Hydrocarbons)	ug/g	<50	<50	50	5412136
F4 (C34-C50 Hydrocarbons)	ug/g	<50	<50	50	5412136
Reached Baseline at C50	ug/g	Yes	Yes		5412136
Surrogate Recovery (%)					
o-Terphenyl	%	93	90		5412136
4-Bromofluorobenzene	%	89	88		5412288
D10-o-Xylene	%	74	68		5412288
D4-1,2-Dichloroethane	%	94	98		5412288
D8-Toluene	%	95	93		5412288

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Maxxam Analytics International Corporation o/a Maxxam Analytics 32 Colonnade Rd, Unit #1000, Nepean, ON K2E 7J6 Phone: 613 274-0573 Fax: 613 274-0574 Website: www.maxxam.ca

Maxxam Job #: B841113
Report Date: 2018/03/06

Terrapex Environmental Ltd
Client Project #: CB1057.00
Site Location: 1622 Roger Stevens Drive
Your P.O. #: PIONEER
Sampler Initials: GS

RESULTS OF ANALYSES OF SOIL

Maxxam ID		GDG336	
Sampling Date		2018/02/22 14:30	
COC Number		650870-01-01	
	UNITS	**BH 104-1**	**QC Batch**
Inorganics			
Available (CaCl2) pH	pH	7.10	5427526
QC Batch = Quality Control Batch			

Maxxam Analytics International Corporation o/a Maxxam Analytics 32 Colonnade Rd, Unit #1000, Nepean, ON K2E 7J6 Phone: 613 274-0573 Fax: 613 274-0574 Website: www.maxxam.ca

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Report Date: 2018/03/06

Terrapex Environmental Ltd
Client Project #: CB1057.00
Site Location: 1622 Roger Stevens Drive
Your P.O. #: PIONEER
Sampler Initials: GS

PETROLEUM HYDROCARBONS (CCME)

Maxxam ID		GDG354		
Sampling Date		2018/02/22		
COC Number		650870-02-01		
	UNITS	FIELD BLANK	RDL	QC Batch
BTEX & F1 Hydrocarbons				
Benzene	ug/g	<0.02	0.02	5412284
Toluene	ug/g	<0.02	0.02	5412284
Ethylbenzene	ug/g	<0.02	0.02	5412284
o-Xylene	ug/g	<0.02	0.02	5412284
p+m-Xylene	ug/g	<0.04	0.04	5412284
Total Xylenes	ug/g	<0.04	0.04	5412284
F1 (C6-C10)	ug/g	<10	10	5412284
F1 (C6-C10) - BTEX	ug/g	<10	10	5412284
Surrogate Recovery (%)				
1,4-Difluorobenzene	%	107		5412284
4-Bromofluorobenzene	%	106		5412284
D10-Ethylbenzene	%	116		5412284
D4-1,2-Dichloroethane	%	104		5412284

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Maxxam Job #: B841113
Report Date: 2018/03/06

Terrapex Environmental Ltd
Client Project #: CB1057.00
Site Location: 1622 Roger Stevens Drive
Your P.O. #: PIONEER
Sampler Initials: GS

TEST SUMMARY

Maxxam ID: GDG333 **Collected:** 2018/02/22
Sample ID: MW 101-8 **Shipped:**
Matrix: Soil **Received:** 2018/02/23

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	5412284	N/A	2018/02/23	Steve Roberts
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	5412136	2018/02/23	2018/02/23	Liliana Gaburici
Moisture	BAL	5412285	N/A	2018/02/23	Liliana Gaburici

Maxxam ID: GDG333 Dup **Collected:** 2018/02/22
Sample ID: MW 101-8 **Shipped:**
Matrix: Soil **Received:** 2018/02/23

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Moisture	BAL	5412285	N/A	2018/02/23	Liliana Gaburici

Maxxam ID: GDG334 **Collected:** 2018/02/22
Sample ID: MW 102-5 **Shipped:**
Matrix: Soil **Received:** 2018/02/23

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	5412284	N/A	2018/02/23	Steve Roberts
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	5412136	2018/02/23	2018/02/23	Liliana Gaburici
Moisture	BAL	5412285	N/A	2018/02/23	Liliana Gaburici

Maxxam ID: GDG335 **Collected:** 2018/02/22
Sample ID: BH 103-4 **Shipped:**
Matrix: Soil **Received:** 2018/02/23

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	5412284	N/A	2018/02/23	Steve Roberts
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	5412136	2018/02/23	2018/02/23	Liliana Gaburici
Moisture	BAL	5412285	N/A	2018/02/23	Liliana Gaburici

Maxxam ID: GDG336 **Collected:** 2018/02/22
Sample ID: BH 104-1 **Shipped:**
Matrix: Soil **Received:** 2018/02/23

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	5412284	N/A	2018/02/23	Steve Roberts
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	5412136	2018/02/23	2018/02/23	Liliana Gaburici
Moisture	BAL	5412285	N/A	2018/02/23	Liliana Gaburici
pH CaCl2 EXTRACT	AT	5427526	2018/03/06	2018/03/06	Neil Dassanayake

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Report Date: 2018/03/06

Terrapex Environmental Ltd
Client Project #: CB1057.00
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TEST SUMMARY

Maxxam ID: GDG337 **Collected:** 2018/02/22
Sample ID: BH 105-3 **Shipped:**
Matrix: Soil **Received:** 2018/02/23

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	5412284	N/A	2018/02/23	Steve Roberts
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	5412136	2018/02/23	2018/02/23	Liliana Gaburici
Moisture	BAL	5412285	N/A	2018/02/23	Liliana Gaburici

Maxxam ID: GDG338 **Collected:** 2018/02/22
Sample ID: MW 106-4 **Shipped:**
Matrix: Soil **Received:** 2018/02/23

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
1,3-Dichloropropene Sum	CALC	5412280	N/A	2018/02/23	Automated Statchk
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	5412136	2018/02/23	2018/02/23	Liliana Gaburici
Moisture	BAL	5412285	N/A	2018/02/23	Liliana Gaburici
Volatile Organic Compounds and F1 PHCs	GC/MSFD	5412288	N/A	2018/02/23	Liliana Gaburici

Maxxam ID: GDG339 **Collected:** 2018/02/22
Sample ID: MW 107-3 **Shipped:**
Matrix: Soil **Received:** 2018/02/23

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	5412284	N/A	2018/02/23	Steve Roberts
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	5412136	2018/02/23	2018/02/23	Liliana Gaburici
Moisture	BAL	5412285	N/A	2018/02/23	Liliana Gaburici

Maxxam ID: GDG340 **Collected:** 2018/02/22
Sample ID: MW 108-7 **Shipped:**
Matrix: Soil **Received:** 2018/02/23

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
1,3-Dichloropropene Sum	CALC	5412280	N/A	2018/02/23	Automated Statchk
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	5412136	2018/02/23	2018/02/23	Liliana Gaburici
Moisture	BAL	5412285	N/A	2018/02/23	Liliana Gaburici
Volatile Organic Compounds and F1 PHCs	GC/MSFD	5412288	N/A	2018/02/23	Liliana Gaburici

Maxxam ID: GDG341 **Collected:** 2018/02/22
Sample ID: BH 109-4 **Shipped:**
Matrix: Soil **Received:** 2018/02/23

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	5412284	N/A	2018/02/23	Steve Roberts
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	5412136	2018/02/23	2018/02/23	Liliana Gaburici
Moisture	BAL	5412285	N/A	2018/02/23	Liliana Gaburici

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TEST SUMMARY

Maxxam ID: GDG342
Sample ID: MW 108-17
Matrix: Soil

Collected: 2018/02/22
Shipped:
Received: 2018/02/23

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	5412284	N/A	2018/02/23	Steve Roberts
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	5412136	2018/02/23	2018/02/23	Liliana Gaburici
Moisture	BAL	5412285	N/A	2018/02/23	Liliana Gaburici

Maxxam ID: GDG354
Sample ID: FIELD BLANK
Matrix: Soil

Collected: 2018/02/22
Shipped:
Received: 2018/02/23

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	5412284	N/A	2018/02/23	Steve Roberts

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GENERAL COMMENTS

Each temperature is the average of up to three cooler temperatures taken at receipt

Package 1	8.3°C

Revised report (2018/03/06): pH analysis added to sample BH104-1 per client request

Results relate only to the items tested.

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Terrapex Environmental Ltd
Client Project #: CB1057.00
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QUALITY ASSURANCE REPORT

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
5412136	LGA	Spiked Blank	o-Terphenyl	2018/02/23		106	%	30 - 130
			F2 (C10-C16 Hydrocarbons)	2018/02/23		97	%	80 - 120
			F3 (C16-C34 Hydrocarbons)	2018/02/23		97	%	80 - 120
			F4 (C34-C50 Hydrocarbons)	2018/02/23		97	%	80 - 120
5412136	LGA	RPD	F2 (C10-C16 Hydrocarbons)	2018/02/23	1.0		%	50
			F3 (C16-C34 Hydrocarbons)	2018/02/23	1.0		%	50
			F4 (C34-C50 Hydrocarbons)	2018/02/23	1.0		%	50
5412136	LGA	Method Blank	o-Terphenyl	2018/02/23		94	%	30 - 130
			F2 (C10-C16 Hydrocarbons)	2018/02/23	<10		ug/g	
			F3 (C16-C34 Hydrocarbons)	2018/02/23	<50		ug/g	
			F4 (C34-C50 Hydrocarbons)	2018/02/23	<50		ug/g	
5412284	STE	Spiked Blank	1,4-Difluorobenzene	2018/02/23		104	%	60 - 140
			4-Bromofluorobenzene	2018/02/23		116	%	60 - 140
			D10-Ethylbenzene	2018/02/23		103	%	30 - 130
			D4-1,2-Dichloroethane	2018/02/23		112	%	60 - 140
			Benzene	2018/02/23		92	%	60 - 140
			Toluene	2018/02/23		83	%	60 - 140
			Ethylbenzene	2018/02/23		86	%	60 - 140
			o-Xylene	2018/02/23		86	%	60 - 140
			p+m-Xylene	2018/02/23		87	%	60 - 140
			F1 (C6-C10)	2018/02/23		95	%	80 - 120
			F1 (C6-C10) - BTEX	2018/02/23		95	%	N/A
5412284	STE	RPD	Benzene	2018/02/23	7.2		%	50
			Toluene	2018/02/23	2.5		%	50
			Ethylbenzene	2018/02/23	0.98		%	50
			o-Xylene	2018/02/23	2.2		%	50
			p+m-Xylene	2018/02/23	0.46		%	50
			F1 (C6-C10)	2018/02/23	0.33		%	50
			F1 (C6-C10) - BTEX	2018/02/23	0		%	50
5412284	STE	Method Blank	1,4-Difluorobenzene	2018/02/23		103	%	60 - 140
			4-Bromofluorobenzene	2018/02/23		116	%	60 - 140
			D10-Ethylbenzene	2018/02/23		101	%	30 - 130
			D4-1,2-Dichloroethane	2018/02/23		110	%	60 - 140
			Benzene	2018/02/23	<0.02		ug/g	
			Toluene	2018/02/23	<0.02		ug/g	
			Ethylbenzene	2018/02/23	<0.02		ug/g	
			o-Xylene	2018/02/23	<0.02		ug/g	
			p+m-Xylene	2018/02/23	<0.04		ug/g	
			Total Xylenes	2018/02/23	<0.04		ug/g	
			F1 (C6-C10)	2018/02/23	<10		ug/g	
			F1 (C6-C10) - BTEX	2018/02/23	<10		ug/g	
5412285	LGA	RPD [GDG333-01]	Moisture	2018/02/23	7.9		%	50
5412288	LGA	Spiked Blank	4-Bromofluorobenzene	2018/02/23		102	%	60 - 140
			D10-o-Xylene	2018/02/23		79	%	60 - 130
			D4-1,2-Dichloroethane	2018/02/23		102	%	60 - 140
			D8-Toluene	2018/02/23		102	%	60 - 140
			Acetone (2-Propanone)	2018/02/23		103	%	60 - 140
			Benzene	2018/02/23		103	%	60 - 130
			Bromodichloromethane	2018/02/23		95	%	60 - 130
			Bromoform	2018/02/23		112	%	60 - 130
			Bromomethane	2018/02/23		82	%	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
			Carbon Tetrachloride	2018/02/23		89	%	60 - 130
			Chlorobenzene	2018/02/23		91	%	60 - 130
			Chloroform	2018/02/23		88	%	60 - 130
			Dibromochloromethane	2018/02/23		108	%	60 - 130
			1,2-Dichlorobenzene	2018/02/23		95	%	60 - 130
			1,3-Dichlorobenzene	2018/02/23		92	%	60 - 130
			1,4-Dichlorobenzene	2018/02/23		96	%	60 - 130
			Dichlorodifluoromethane (FREON 12)	2018/02/23		71	%	60 - 140
			1,1-Dichloroethane	2018/02/23		94	%	60 - 130
			1,2-Dichloroethane	2018/02/23		100	%	60 - 130
			1,1-Dichloroethylene	2018/02/23		83	%	60 - 130
			cis-1,2-Dichloroethylene	2018/02/23		94	%	60 - 130
			trans-1,2-Dichloroethylene	2018/02/23		84	%	60 - 130
			1,2-Dichloropropane	2018/02/23		84	%	60 - 130
			cis-1,3-Dichloropropene	2018/02/23		96	%	60 - 130
			trans-1,3-Dichloropropene	2018/02/23		97	%	60 - 130
			Ethylbenzene	2018/02/23		95	%	60 - 130
			Ethylene Dibromide	2018/02/23		109	%	60 - 130
			Hexane	2018/02/23		86	%	60 - 130
			Methylene Chloride(Dichloromethane)	2018/02/23		83	%	60 - 130
			Methyl Ethyl Ketone (2-Butanone)	2018/02/23		107	%	60 - 140
			Methyl Isobutyl Ketone	2018/02/23		116	%	60 - 130
			Methyl t-butyl ether (MTBE)	2018/02/23		87	%	60 - 130
			Styrene	2018/02/23		110	%	60 - 130
			1,1,1,2-Tetrachloroethane	2018/02/23		103	%	60 - 130
			1,1,2,2-Tetrachloroethane	2018/02/23		107	%	60 - 130
			Tetrachloroethylene	2018/02/23		92	%	60 - 130
			Toluene	2018/02/23		95	%	60 - 130
			1,1,1-Trichloroethane	2018/02/23		87	%	60 - 130
			1,1,2-Trichloroethane	2018/02/23		90	%	60 - 130
			Trichloroethylene	2018/02/23		91	%	60 - 130
			Trichlorofluoromethane (FREON 11)	2018/02/23		87	%	60 - 130
			Vinyl Chloride	2018/02/23		86	%	60 - 130
			p+m-Xylene	2018/02/23		90	%	60 - 130
			o-Xylene	2018/02/23		103	%	60 - 130
			F1 (C6-C10)	2018/02/23		104	%	80 - 120
5412288	LGA	RPD	Acetone (2-Propanone)	2018/02/23	22		%	50
			Benzene	2018/02/23	5.7		%	50
			Bromodichloromethane	2018/02/23	19		%	50
			Bromoform	2018/02/23	24		%	50
			Bromomethane	2018/02/23	12		%	50
			Carbon Tetrachloride	2018/02/23	3.9		%	50
			Chlorobenzene	2018/02/23	3.8		%	50
			Chloroform	2018/02/23	7.4		%	50
			Dibromochloromethane	2018/02/23	15		%	50
			1,2-Dichlorobenzene	2018/02/23	1.7		%	50
			1,3-Dichlorobenzene	2018/02/23	4.3		%	50
			1,4-Dichlorobenzene	2018/02/23	1.4		%	50
			Dichlorodifluoromethane (FREON 12)	2018/02/23	5.1		%	50
			1,1-Dichloroethane	2018/02/23	9.6		%	50
			1,2-Dichloroethane	2018/02/23	25		%	50

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			1,1-Dichloroethylene	2018/02/23	2.4		%	50
			cis-1,2-Dichloroethylene	2018/02/23	13		%	50
			trans-1,2-Dichloroethylene	2018/02/23	2.4		%	50
			1,2-Dichloropropane	2018/02/23	11		%	50
			cis-1,3-Dichloropropene	2018/02/23	26		%	50
			trans-1,3-Dichloropropene	2018/02/23	33		%	50
			Ethylbenzene	2018/02/23	6.8		%	50
			Ethylene Dibromide	2018/02/23	26		%	50
			Hexane	2018/02/23	15		%	50
			Methylene Chloride(Dichloromethane)	2018/02/23	14		%	50
			Methyl Ethyl Ketone (2-Butanone)	2018/02/23	41		%	50
			Methyl Isobutyl Ketone	2018/02/23	40		%	50
			Methyl t-butyl ether (MTBE)	2018/02/23	5.1		%	50
			Styrene	2018/02/23	5.1		%	50
			1,1,1,2-Tetrachloroethane	2018/02/23	3.0		%	50
			1,1,2,2-Tetrachloroethane	2018/02/23	27		%	50
			Tetrachloroethylene	2018/02/23	2.6		%	50
			Toluene	2018/02/23	0.53		%	50
			1,1,1-Trichloroethane	2018/02/23	0.80		%	50
			1,1,2-Trichloroethane	2018/02/23	17		%	50
			Trichloroethylene	2018/02/23	2.8		%	50
			Trichlorofluoromethane (FREON 11)	2018/02/23	4.7		%	50
			Vinyl Chloride	2018/02/23	0.88		%	50
			p+m-Xylene	2018/02/23	4.6		%	50
			o-Xylene	2018/02/23	0.94		%	50
			F1 (C6-C10)	2018/02/23	1.9		%	30
5412288	LGA	Method Blank	4-Bromofluorobenzene	2018/02/23		89	%	60 - 140
			D10-o-Xylene	2018/02/23		81	%	60 - 130
			D4-1,2-Dichloroethane	2018/02/23		114	%	60 - 140
			D8-Toluene	2018/02/23		88	%	60 - 140
			Acetone (2-Propanone)	2018/02/23	<0.50		ug/g	
			Benzene	2018/02/23	<0.020		ug/g	
			Bromodichloromethane	2018/02/23	<0.050		ug/g	
			Bromoform	2018/02/23	<0.050		ug/g	
			Bromomethane	2018/02/23	<0.050		ug/g	
			Carbon Tetrachloride	2018/02/23	<0.050		ug/g	
			Chlorobenzene	2018/02/23	<0.050		ug/g	
			Chloroform	2018/02/23	<0.050		ug/g	
			Dibromochloromethane	2018/02/23	0.0		ug/g	
			1,2-Dichlorobenzene	2018/02/23	<0.050		ug/g	
			1,3-Dichlorobenzene	2018/02/23	<0.050		ug/g	
			1,4-Dichlorobenzene	2018/02/23	<0.050		ug/g	
			Dichlorodifluoromethane (FREON 12)	2018/02/23	<0.050		ug/g	
			1,1-Dichloroethane	2018/02/23	<0.050		ug/g	
			1,2-Dichloroethane	2018/02/23	<0.050		ug/g	
			1,1-Dichloroethylene	2018/02/23	<0.050		ug/g	
			cis-1,2-Dichloroethylene	2018/02/23	<0.050		ug/g	
			trans-1,2-Dichloroethylene	2018/02/23	<0.050		ug/g	
			1,2-Dichloropropane	2018/02/23	<0.050		ug/g	
			cis-1,3-Dichloropropene	2018/02/23	<0.030		ug/g	
			trans-1,3-Dichloropropene	2018/02/23	<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
			Ethylbenzene	2018/02/23	<0.020		ug/g	
			Ethylene Dibromide	2018/02/23	<0.050		ug/g	
			Hexane	2018/02/23	<0.050		ug/g	
			Methylene Chloride(Dichloromethane)	2018/02/23	<0.050		ug/g	
			Methyl Ethyl Ketone (2-Butanone)	2018/02/23	<0.50		ug/g	
			Methyl Isobutyl Ketone	2018/02/23	<0.50		ug/g	
			Methyl t-butyl ether (MTBE)	2018/02/23	<0.050		ug/g	
			Styrene	2018/02/23	<0.050		ug/g	
			1,1,1,2-Tetrachloroethane	2018/02/23	<0.050		ug/g	
			1,1,2,2-Tetrachloroethane	2018/02/23	<0.050		ug/g	
			Tetrachloroethylene	2018/02/23	<0.050		ug/g	
			Toluene	2018/02/23	<0.020		ug/g	
			1,1,1-Trichloroethane	2018/02/23	<0.050		ug/g	
			1,1,2-Trichloroethane	2018/02/23	<0.050		ug/g	
			Trichloroethylene	2018/02/23	<0.050		ug/g	
			Trichlorofluoromethane (FREON 11)	2018/02/23	<0.050		ug/g	
			Vinyl Chloride	2018/02/23	<0.020		ug/g	
			p+m-Xylene	2018/02/23	<0.020		ug/g	
			o-Xylene	2018/02/23	<0.020		ug/g	
			Total Xylenes	2018/02/23	<0.020		ug/g	
			F1 (C6-C10)	2018/02/23	<10		ug/g	
			F1 (C6-C10) - BTEX	2018/02/23	<10		ug/g	
5427526	NYS	Spiked Blank	Available (CaCl2) pH	2018/03/06		99	%	97 - 103
5427526	NYS	RPD	Available (CaCl2) pH	2018/03/06	0.52		%	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.

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.

Maxxam Analytics International Corporation o/a Maxxam Analytics 32 Colonnade Rd, Unit #1000, Nepean, ON K2E 7J6 Phone: 613 274-0573 Fax: 613 274-0574 Website: www.maxxam.ca

Maxxam Job #: B841113
Report Date: 2018/03/06

Terrapex Environmental Ltd
Client Project #: CB1057.00
Site Location: 1622 Roger Stevens Drive
Your P.O. #: PIONEER
Sampler Initials: GS

VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by the following individual(s).

Cristina Carriere, Scientific Service Specialist

Steve Roberts, Ottawa Lab Manager

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
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

Page 1 of 2

INVOICE TO:		REPORT TO:		PROJECT INFORMATION:		Laboratory Use Only:	
Company Name:	#30396 Parkland Industries Ltd	Company Name:	#19684 Terrapex Environmental Ltd	Quotation #:	B75111	Maxxam Job #:	Bottle Order #:
Attention:	Retail Invoices	Attention:	Geoff Lussier	P.O. #:			650870
Address:	4919-59th St Suite 100 Red Deer AB T4N 6C9	Address:	920 Brant St. Suite 16 Burlington ON L7R 4J1	Project:	CB1057.00	COC #:	Project Manager:
Tel:	(403) 357-6400 x Fax: (403) 356-3015 x	Tel:	(905) 632-5939 x228 Fax:	Project Name:	Parkland Kars	C#650870-01-01	Augustyna Dobosz
Email:	emilie.price@parkland.ca, victoria.pianarosa@parkland.	Email:	g.lussier@terrapex.com	Site #:	1622 Roger Stevens Drive		
				Sampled By:	Greg Sabourin		

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
☐ Table ___

Other Regulations
☐ CCME ☐ Sanitary Sewer Bylaw
☐ Reg 558. ☐ Storm Sewer Bylaw
☐ MISA Municipality _____
☐ PWQO
☐ Other _____

Special Instructions

Include Criteria on Certificate of Analysis (Y/N)? _____

Field Filtered (please circle): Metals / Hg / Cr VI

ANALYSIS REQUESTED (PLEASE BE SPECIFIC)

	Sample Barcode Label	Sample (Location) Identification	Date Sampled	Time Sampled	Matrix	Petroleum Hydrocarbons CCME F1 & BTEX	Petroleum Hydrocarbons F2-F4	O.Reg 153 ICPMS Metals and Sulphate	Soil Texture (%sand, %silt, %clay)	Moisture VOCs	pH CaCl2 EXTRACT	Flashpoint	O.Reg 558 TCLP Inorganics Package	O.Reg 558 TCLP PCBs	O.Reg 558 TCLP Volatile Organics HS	# of Bottles	Comments
1		~~MW108~~ MW101-8	Feb22'18	8:30	SOIL	X	X									3	
2		MW102-5	Feb21'18	9:30	SOIL	X	X									3	
3		BH103-4	Feb21'18	12:00	SOIL	X	X									3	
4		BH104-1	Feb.21'18	2:30	SOIL	X	X									3	
5		BH105-3	Feb.21'18	4:30	SOIL	X	X									3	
6		MW106-4	Feb.22'18	8:30	SOIL	X	X			X						3	
7		MW107-3	Feb.22'18	10:30	SOIL	X	X									3	
8		MW108-7	Feb.22'18	2:45	SOIL	X	X			X						3	
9		BH109-4	Feb.22'18	3:15	SOIL	X	X									3	On ice
10		MW108-17	Feb.22'18	2:45	SOIL	X	X									3	

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.

Job Specific Rush TAT (if applies to entire submission)
Date Required: Feb.23'18 Time Required: ___ ☒
Rush Confirmation Number: AD20180223-01 (call lab for #)

23-Feb-18 10:10
Augustyna Dobosz
B841113

RECEIVED IN OTTAWA

* RELINQUISHED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	RECEIVED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	# jars used and not submitted
Greg Sabourin	18/02/23	10:10	Mariana Fascia Fascia	2018/02/23	10:10	

Laboratory Use Only

Time Sensitive	Temperature (°C) on Recei	Custody Seal	Yes	No
	4.8.9	Present	✓	
		Intact	✓	

* UNLESS OTHERWISE AGREED TO IN WRITING, WORK SUBMITTED ON THIS CHAIN OF CUSTODY IS SUBJECT TO MAXXAM'S STANDARD TERMS AND CONDITIONS. SIGNING OF THIS CHAIN OF CUSTODY DOCUMENT IS ACKNOWLEDGMENT AND ACCEPTANCE OF OUR TERMS WHICH ARE AVAILABLE FOR VIEWING AT WWW.MAXXAM.CA/TERMS.

* 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.

** SAMPLE CONTAINER, PRESERVATION, HOLD TIME AND PACKAGE INFORMATION CAN BE VIEWED AT HTTP://MAXXAM.CA/WP-CONTENT/UPLOADS/ONTARIO-COC.PDF.

SAMPLES MUST BE KEPT COOL (< 10° C) FROM TIME OF SAMPLING UNTIL DELIVERY TO MAXXAM

White: Maxxa Yellow: Client

Maxxam Analytics International Corporation o/a Maxxam Analytics

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Maxxam Analytics International Corporation o/a Maxxam Analytics
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CHAIN OF CUSTODY RECORD

INVOICE TO:		REPORT TO:		PROJECT INFORMATION:		Laboratory Use Only:	
Company Name:	#30396 Parkland Industries Ltd	Company Name:	#19684 Terrapex Environmental Ltd	Quotation #:	B75111	Maxxam Job #:	Bottle Order #: 650870
Attention:	Retail Invoices	Attention:	Geoff Lussier	P.O. #:			
Address:	4919-59th St Suite 100 Red Deer AB T4N 6C9	Address:	920 Brant St. Suite 16 Burlington ON L7R 4J1	Project:	CB1057.00		
				Project Name:	Parkland Kars	COC #: C#650870-02-01	Project Manager: Augustyna Dobosz
Tel:	(403) 357-6400 x Fax: (403) 356-3015 x	Tel:	(905) 632-5939 x228 Fax:	Site #:	1622 Roger Stevens Drive		
Email:	emilie.price@parkland.ca, victoria.pianarosa@parkland.	Email:	g.lussier@terrapex.com	Sampled By:	Greg Sabourin		

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	Special Instructions
☐ Table 1 ☐ Res/Park ☐ Medium/Fine ☒ Table 2 ☒ Ind/Comm ☐ Coarse ☐ Table 3 ☐ Agri/Other ☐ For RSC ☐ Table ___	☐ CCME ☐ Sanitary Sewer Bylaw ☐ Reg 558 ☐ Storm Sewer Bylaw ☐ MISA Municipality ___ ☐ PWQO ☐ Other ___	

Include Criteria on Certificate of Analysis (Y/N)? ___

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.

Job Specific Rush TAT (if applies to entire submission)
Date Required: Feb. 23 '18 Time Required: ___ ☒
Rush Confirmation Number: AD20180223-01 (call lab for #)

	Sample Barcode Label	Sample (Location) Identification	Date Sampled	Time Sampled	Matrix	Field Filtered (please circle): Metals / Hg / Cr VI	Petroleum Hydrocarbons CCME F1 & BTEX	Petroleum Hydrocarbons F2-F4	O.Reg 153 ICPMS Metals and Sulphate	Soil Texture (%sand, %silt, %clay)	~~Volatiles~~ BTEX / PHC F1	pH CaCl2 EXTRACT	Flashpoint	O.Reg 558 TCLP Inorganics Package	O.Reg 558 TCLP PCBs	O.Reg 558 TCLP Volatile Organics HS	# of Bottles	Comments
1		Field Blank	Feb. 22 '18	—	SOIL						X						2	
2					SOIL													
3					SOIL													
4					SOIL													
5					SOIL													RECEIVED IN OTTAWA
6					SOIL													
7					SOIL													
8					SOIL													
9					SOIL													On ice
10					SOIL													

23-Feb-18 10:10
Augustyna Dobosz
B841113
KIV OTT 001

* 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				
	18/02/23	10:16	Mariana Vascon Fonseca	2018/02/23	10:10		Time Sensitive	Temperature (°C) on Recei 4.1, 4.9	Custody Seal Present	Yes ☑	No
Greg Sabourin									Intact	☑	

* UNLESS OTHERWISE AGREED TO IN WRITING, WORK SUBMITTED ON THIS CHAIN OF CUSTODY IS SUBJECT TO MAXXAM'S STANDARD TERMS AND CONDITIONS. SIGNING OF THIS CHAIN OF CUSTODY DOCUMENT IS ACKNOWLEDGMENT AND ACCEPTANCE OF OUR TERMS WHICH ARE AVAILABLE FOR VIEWING AT WWW.MAXXAM.CA/TERMS.

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** SAMPLE CONTAINER, PRESERVATION, HOLD TIME AND PACKAGE INFORMATION CAN BE VIEWED AT HTTP://MAXXAM.CA/WP-CONTENT/UPLOADS/ONTARIO-COC.PDF.

SAMPLES MUST BE KEPT COOL (< 10° C) FROM TIME OF SAMPLING UNTIL DELIVERY TO MAXXAM

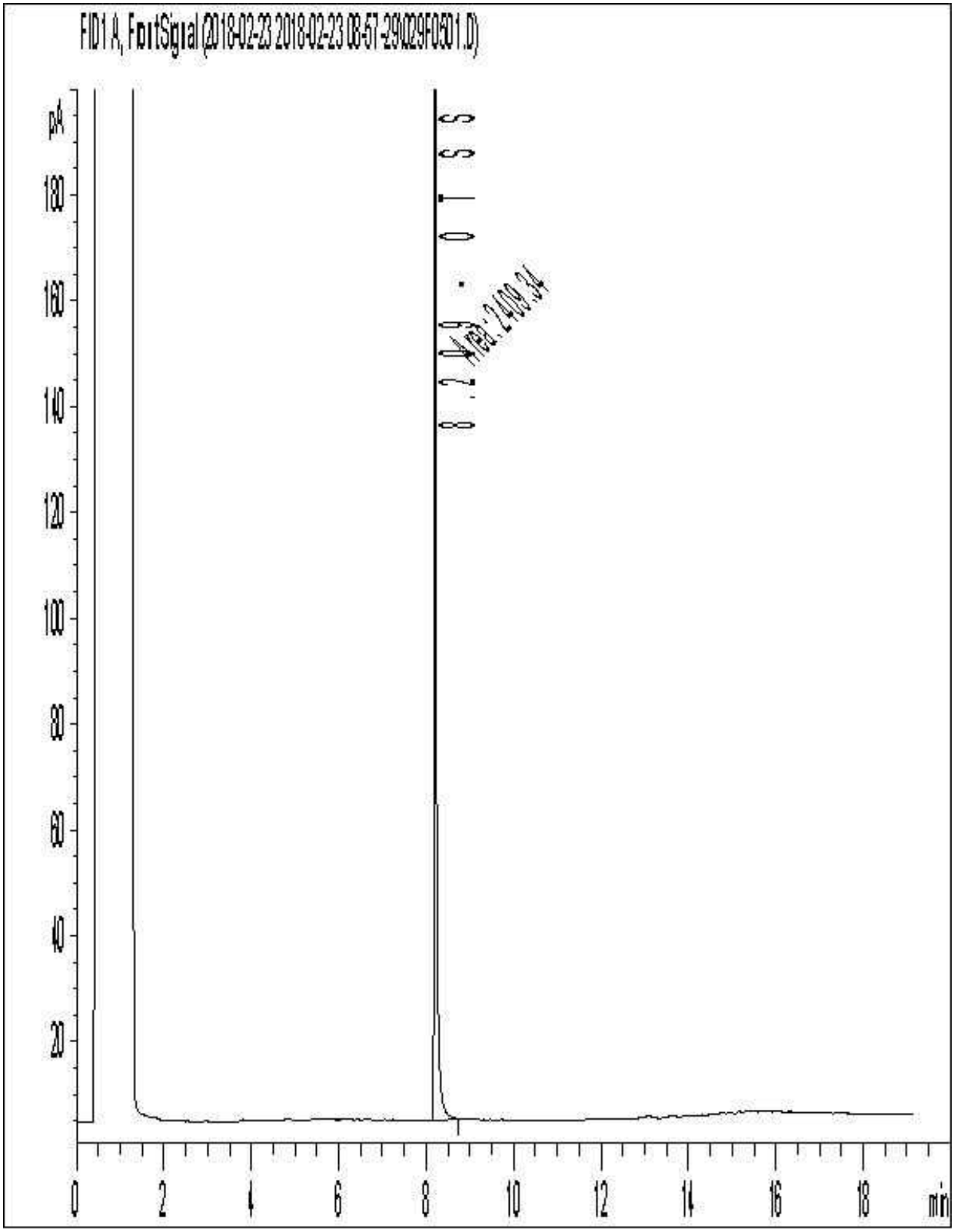
White: Maxxa Yellow: Client

Maxxam Analytics International Corporation o/a Maxxam Analytics

Maxxam Job #: B841113
Report Date: 2018/03/06
Maxxam Sample: GDG333

Terrapex Environmental Ltd
Client Project #: CB1057.00
Project name: 1622 Roger Stevens Drive
Client ID: MW 101-8

Petroleum Hydrocarbons F2-F4 in Soil Chromatogram

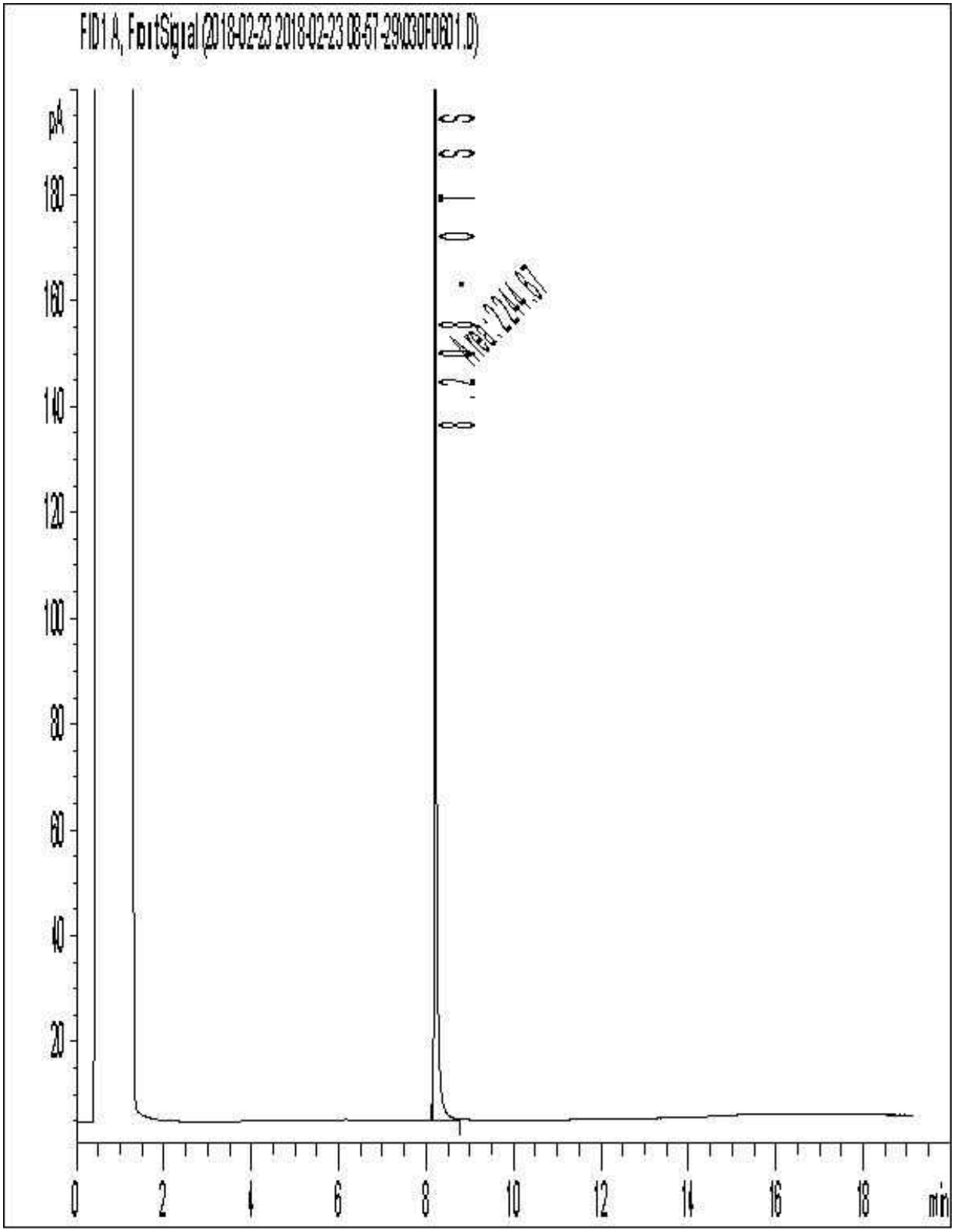


Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Maxxam Job #: B841113
Report Date: 2018/03/06
Maxxam Sample: GDG334

Terrapex Environmental Ltd
Client Project #: CB1057.00
Project name: 1622 Roger Stevens Drive
Client ID: MW 102-5

Petroleum Hydrocarbons F2-F4 in Soil Chromatogram

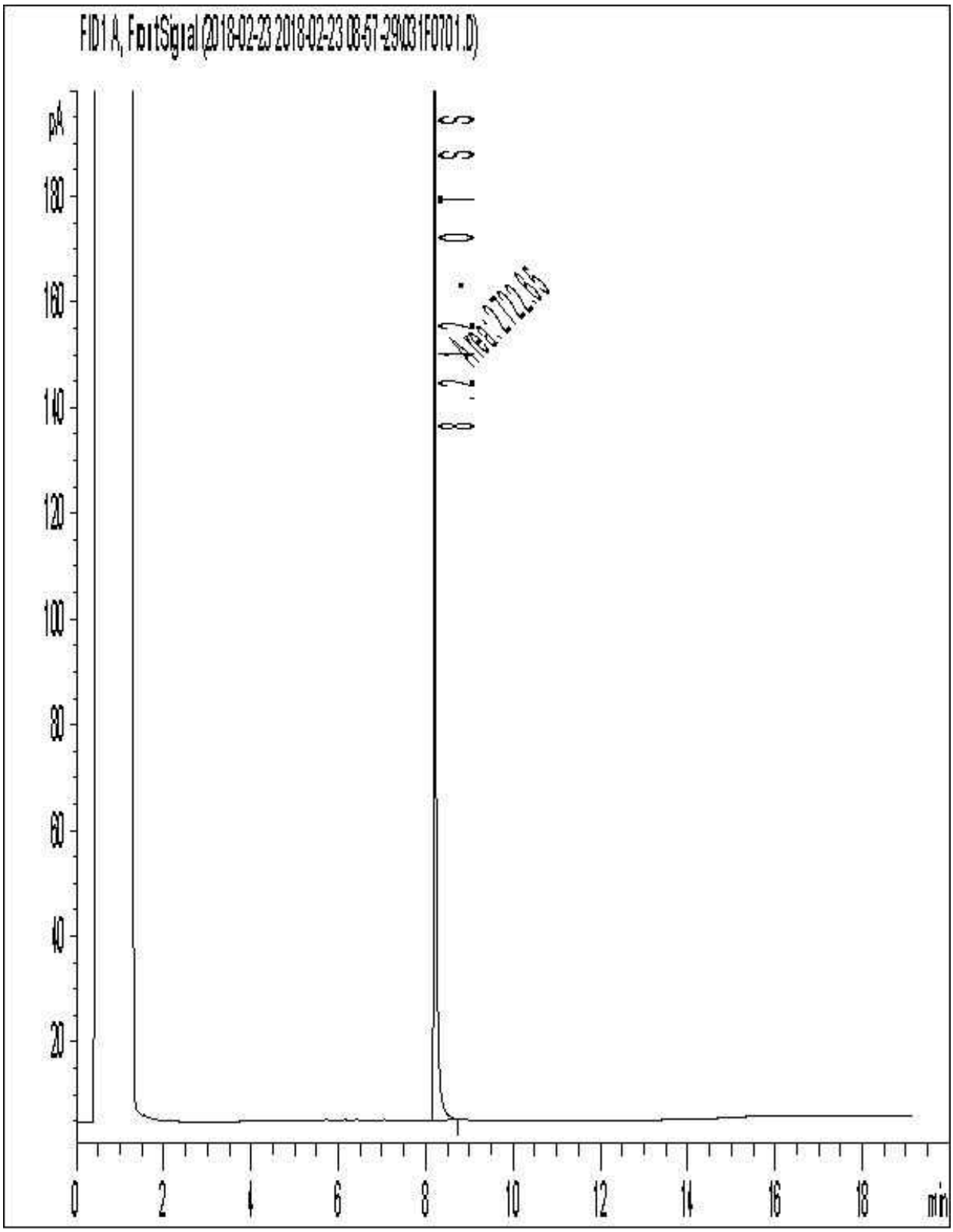


Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Maxxam Job #: B841113
Report Date: 2018/03/06
Maxxam Sample: GDG335

Terrapex Environmental Ltd
Client Project #: CB1057.00
Project name: 1622 Roger Stevens Drive
Client ID: BH 103-4

Petroleum Hydrocarbons F2-F4 in Soil Chromatogram

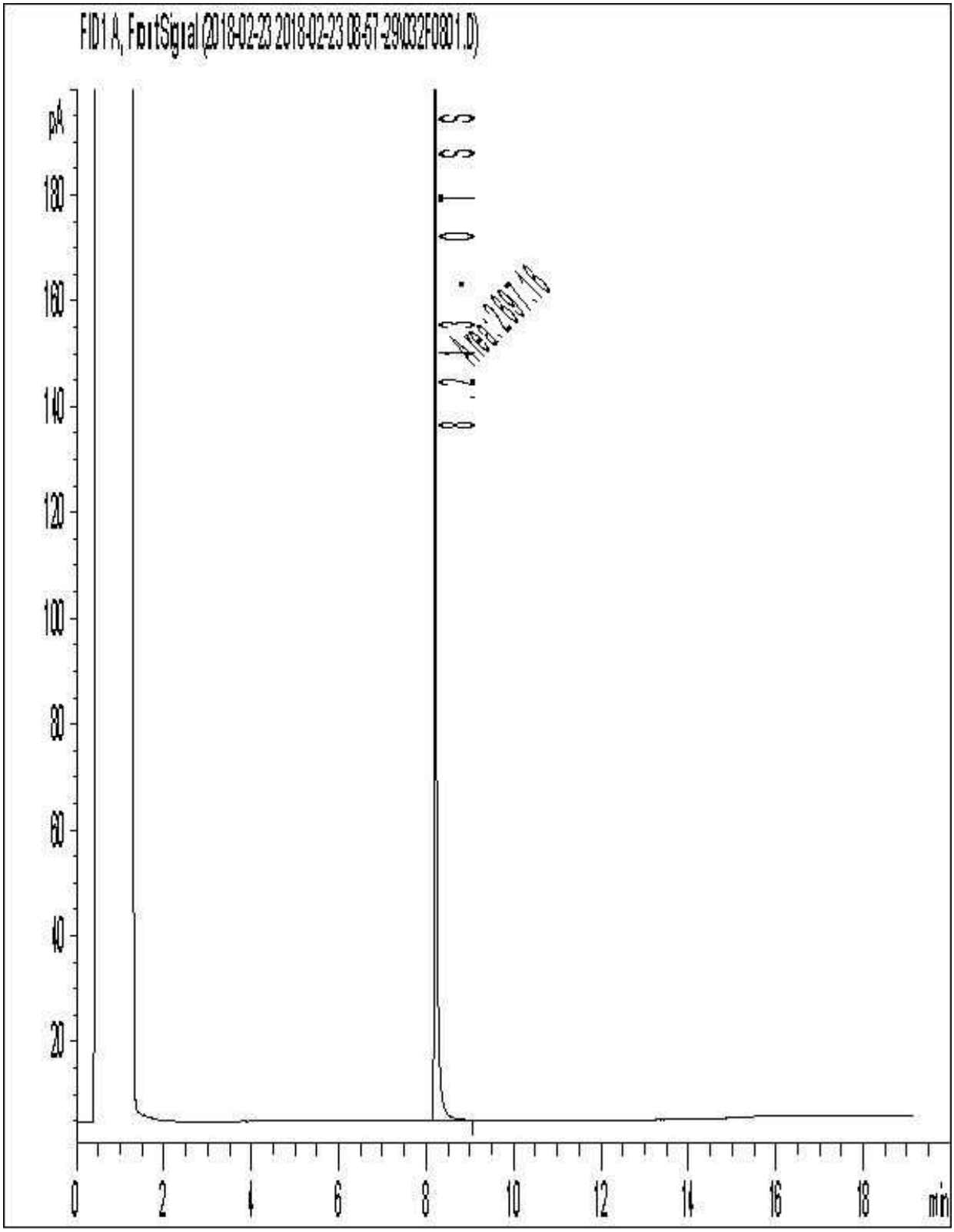


Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Maxxam Job #: B841113
Report Date: 2018/03/06
Maxxam Sample: GDG336

Terrapex Environmental Ltd
Client Project #: CB1057.00
Project name: 1622 Roger Stevens Drive
Client ID: BH 104-1

Petroleum Hydrocarbons F2-F4 in Soil Chromatogram

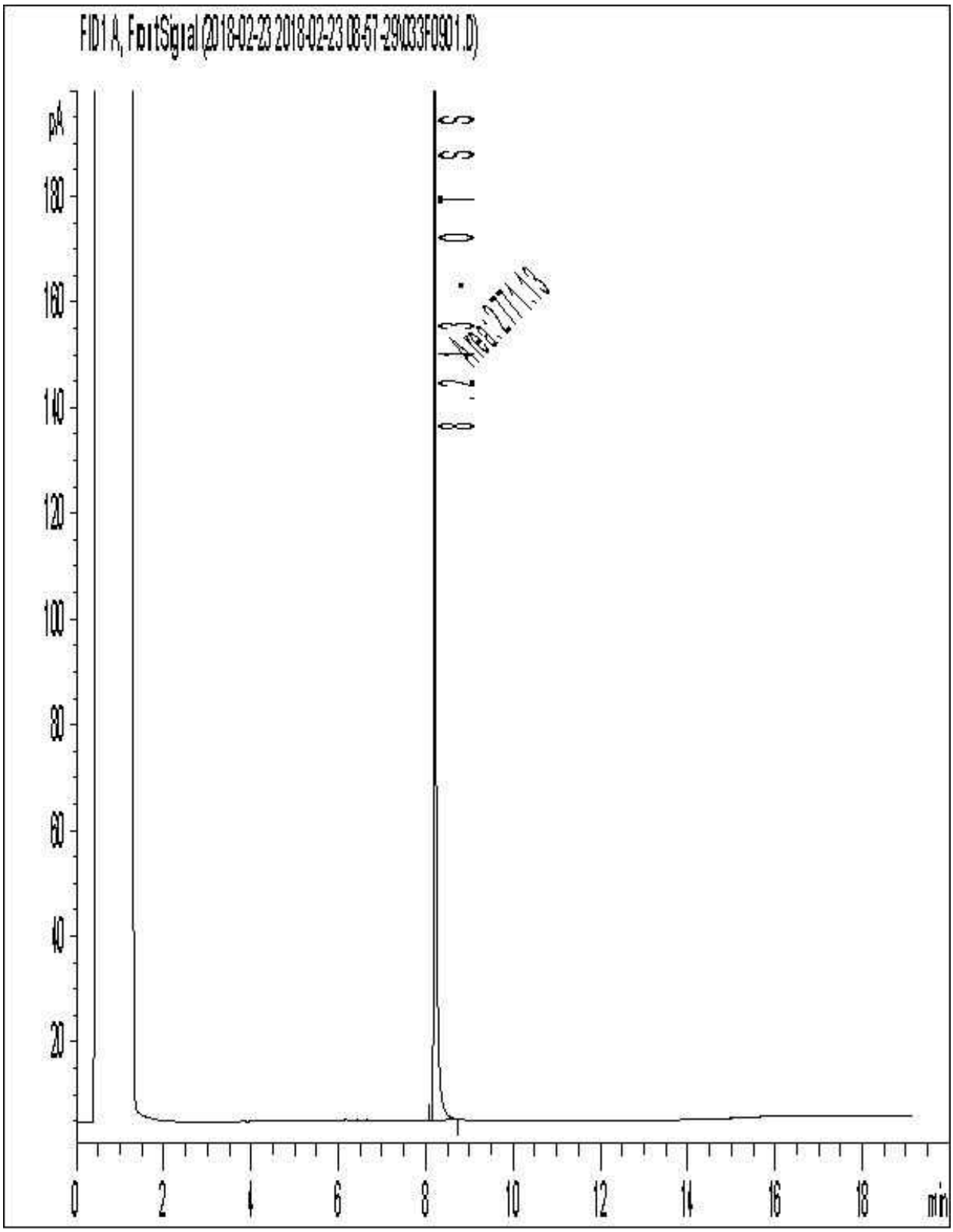


Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Maxxam Job #: B841113
Report Date: 2018/03/06
Maxxam Sample: GDG337

Terrapex Environmental Ltd
Client Project #: CB1057.00
Project name: 1622 Roger Stevens Drive
Client ID: BH 105-3

Petroleum Hydrocarbons F2-F4 in Soil Chromatogram

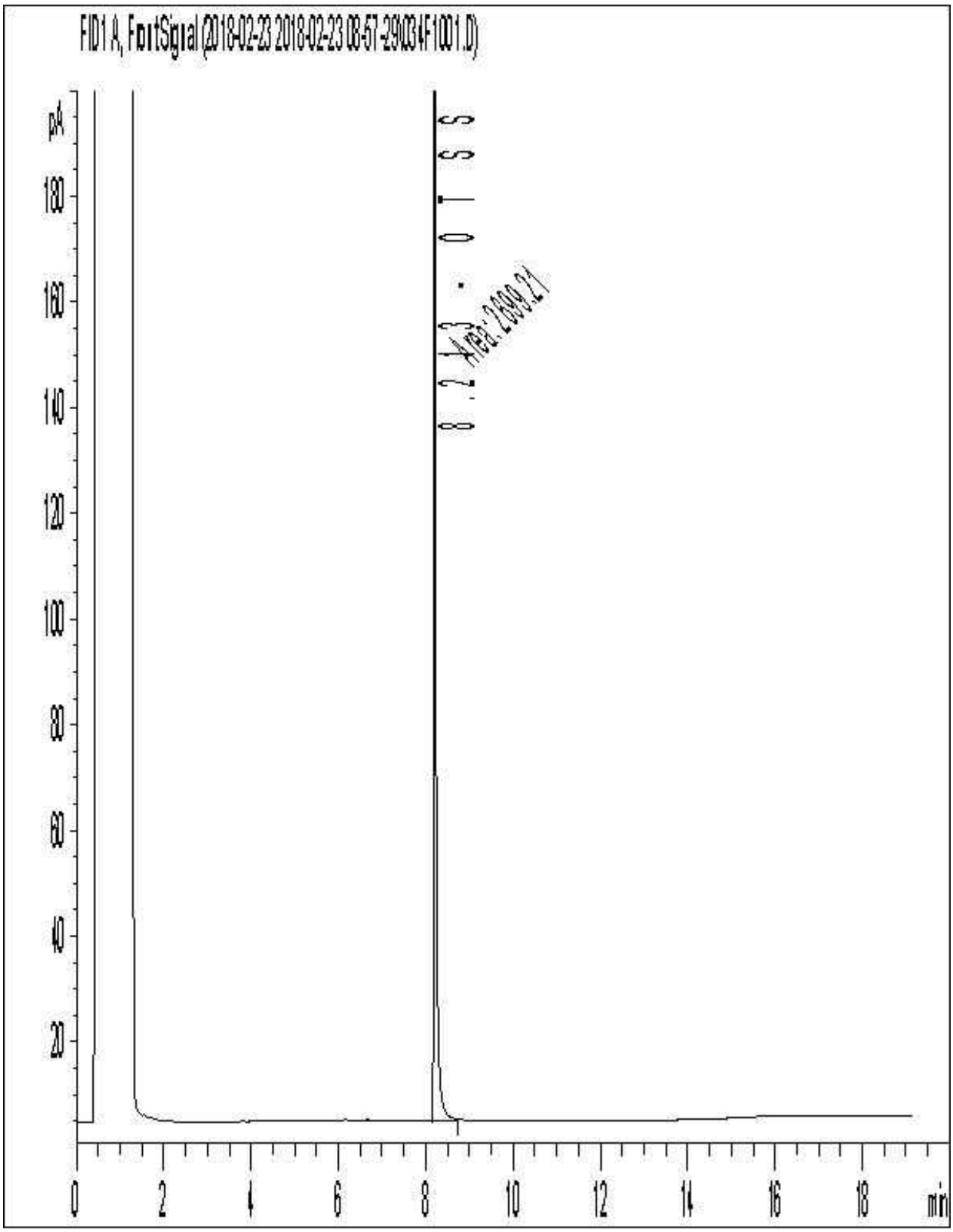


Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Maxxam Job #: B841113
Report Date: 2018/03/06
Maxxam Sample: GDG338

Terrapex Environmental Ltd
Client Project #: CB1057.00
Project name: 1622 Roger Stevens Drive
Client ID: MW 106-4

Petroleum Hydrocarbons F2-F4 in Soil Chromatogram

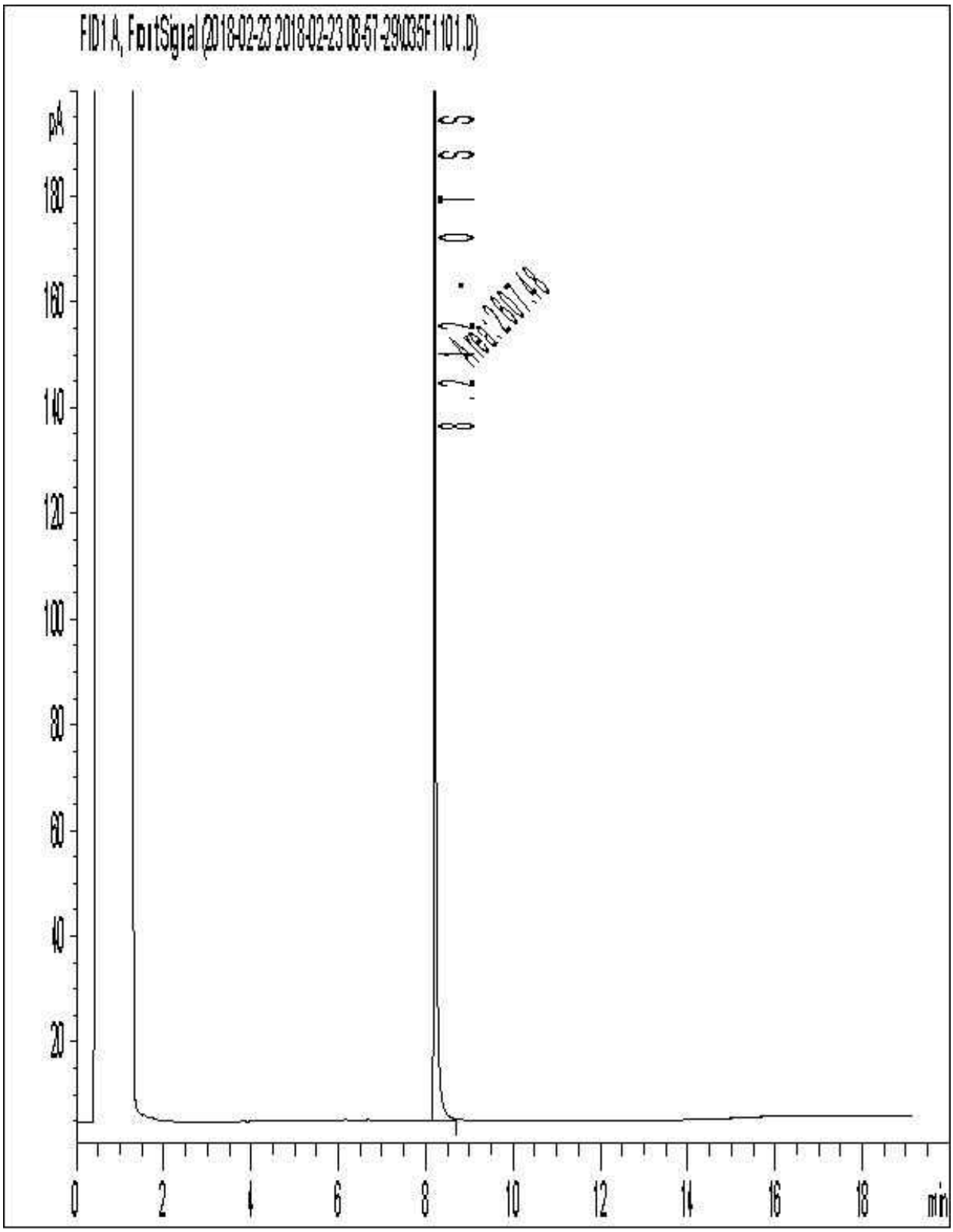


Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Maxxam Job #: B841113
Report Date: 2018/03/06
Maxxam Sample: GDG339

Terrapex Environmental Ltd
Client Project #: CB1057.00
Project name: 1622 Roger Stevens Drive
Client ID: MW 107-3

Petroleum Hydrocarbons F2-F4 in Soil Chromatogram

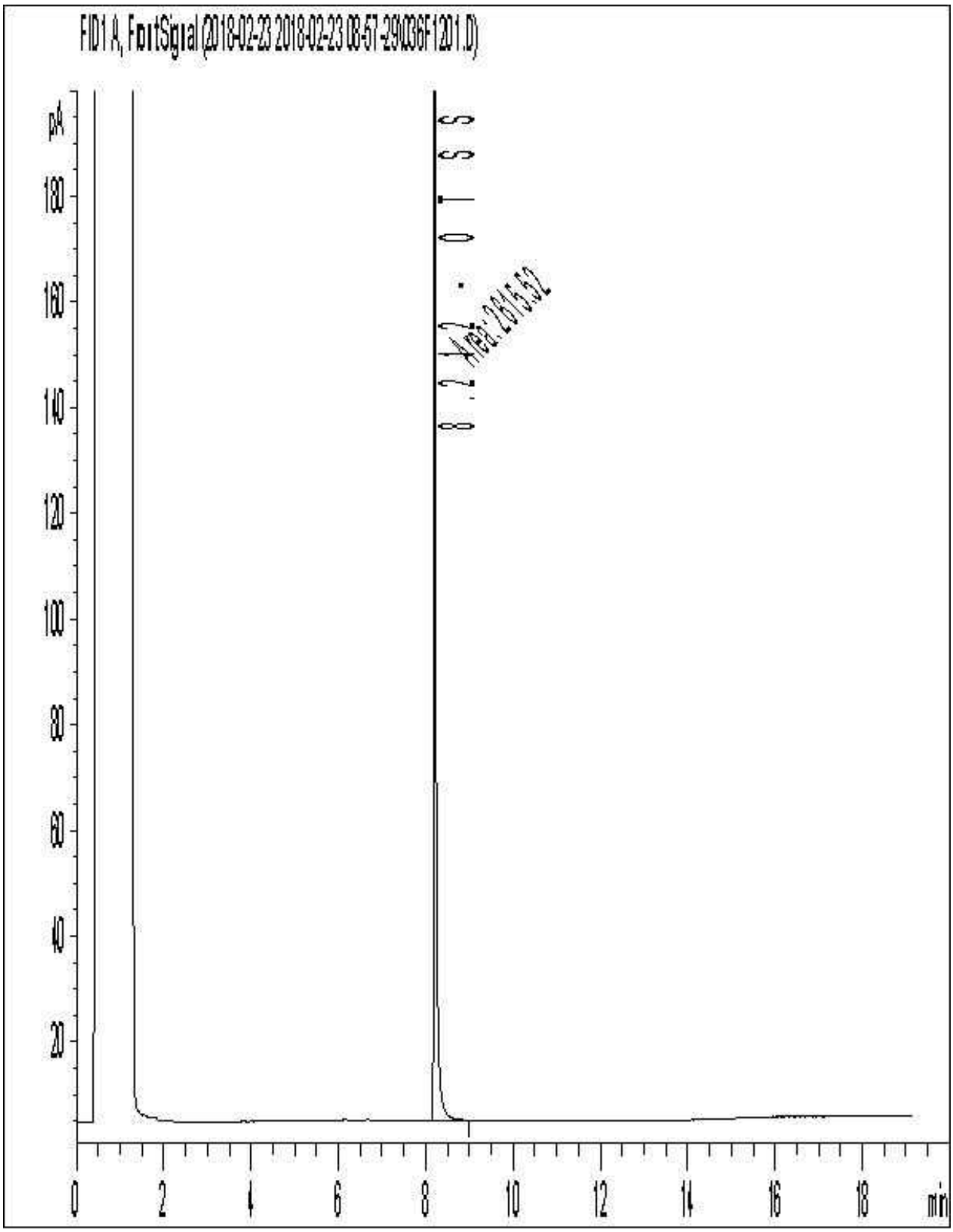


Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Maxxam Job #: B841113
Report Date: 2018/03/06
Maxxam Sample: GDG340

Terrapex Environmental Ltd
Client Project #: CB1057.00
Project name: 1622 Roger Stevens Drive
Client ID: MW 108-7

Petroleum Hydrocarbons F2-F4 in Soil Chromatogram

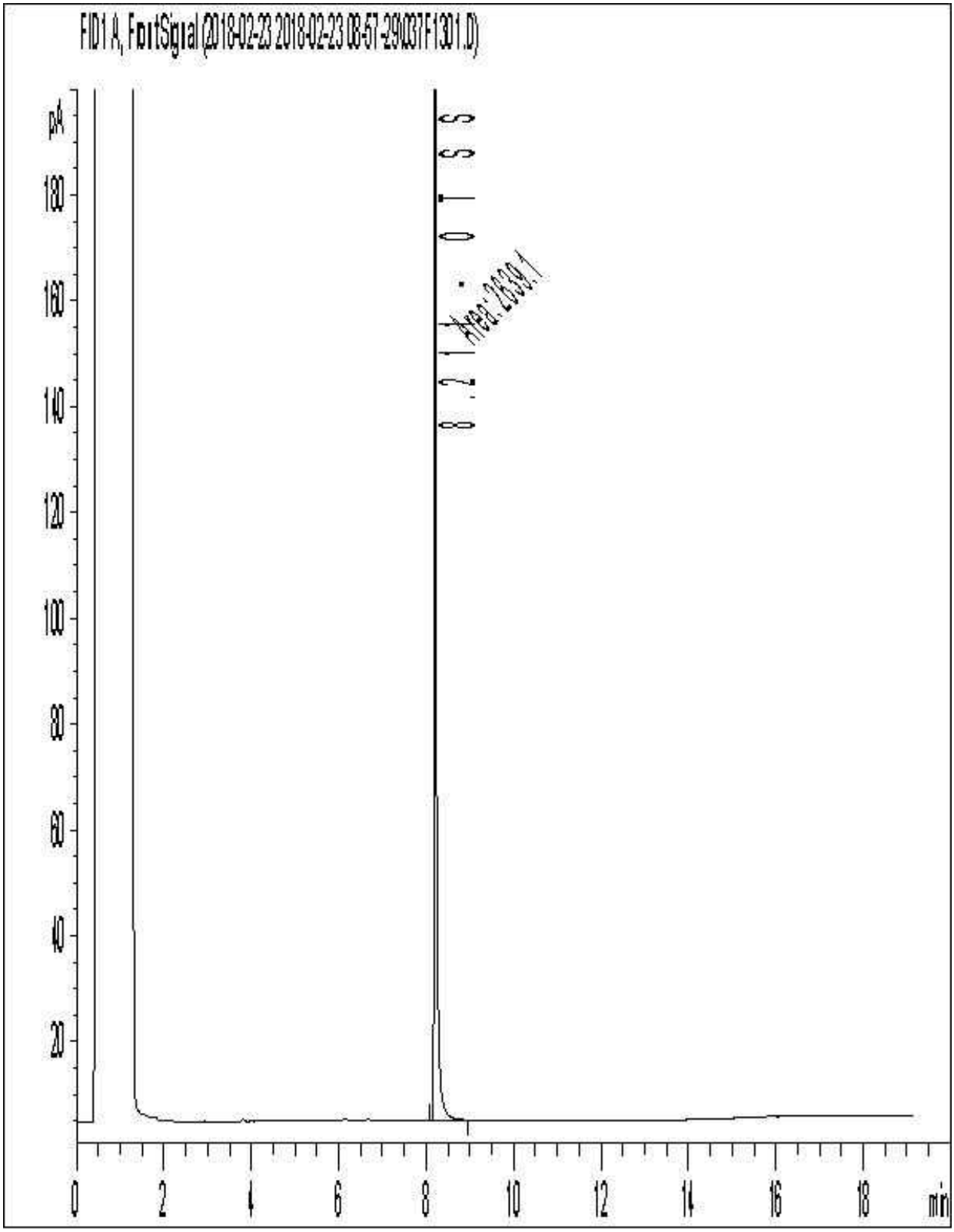


Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Maxxam Job #: B841113
Report Date: 2018/03/06
Maxxam Sample: GDG341

Terrapex Environmental Ltd
Client Project #: CB1057.00
Project name: 1622 Roger Stevens Drive
Client ID: BH 109-4

Petroleum Hydrocarbons F2-F4 in Soil Chromatogram

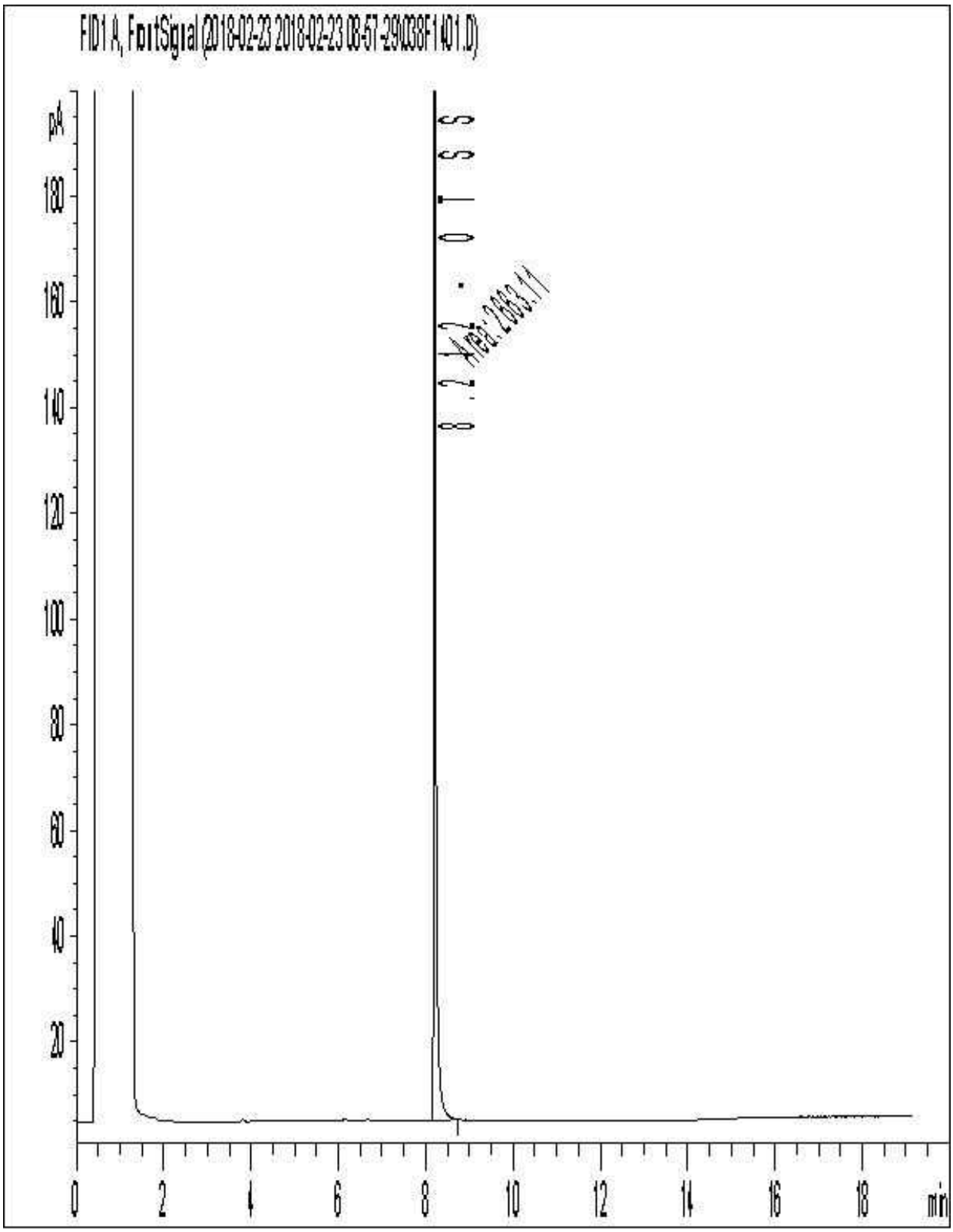


Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Maxxam Job #: B841113
Report Date: 2018/03/06
Maxxam Sample: GDG342

Terrapex Environmental Ltd
Client Project #: CB1057.00
Project name: 1622 Roger Stevens Drive
Client ID: MW 108-17

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.

Maxxam
A Bureau Veritas Group Company

Your Project #: CB1057.00
Site Location: 1622 Roger Stevens Drive
Your C.O.C. #: 650870-04-01

Attention: Geoff Lussier

Terrapex Environmental Ltd
920 Brant St.
Suite 16
Burlington, ON
Canada L7R 4J1

Report Date: 2018/02/26
Report #: R5017915
Version: 1 - Final

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B841230
Received: 2018/02/23, 10:10

Sample Matrix: Water
Samples Received: 8

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Reference
1,3-Dichloropropene Sum	2	N/A	2018/02/26	OTT SOP-00002	EPA 8260C m
Petroleum Hydro. CCME F1 & BTEX in Water	6	N/A	2018/02/23	OTT SOP-00002	CCME CWS
Petroleum Hydrocarbons F2-F4 in Water (1)	6	2018/02/23	2018/02/24	OTT SOP-00001	CCME Hydrocarbons
Volatile Organic Compounds and F1 PHCs	2	N/A	2018/02/23	OTT SOP-00002	EPA 8260C m

Remarks:

Maxxam Analytics' laboratories are accredited to ISO/IEC 17025:2005 for specific parameters on scopes of accreditation. Unless otherwise noted, procedures used by Maxxam are based upon recognized Provincial, Federal or US method compendia such as CCME, MDDELCC, EPA, APHA.

All work recorded herein has been done in accordance with procedures and practices ordinarily exercised by professionals in Maxxam's profession using accepted testing methodologies, quality assurance and quality control procedures (except where otherwise agreed by the client and Maxxam in writing). All data is in statistical control and has met quality control and method performance criteria unless otherwise noted. All method blanks are reported; unless indicated otherwise, associated sample data are not blank corrected.

Maxxam Analytics' liability is limited to the actual cost of the requested analyses, unless otherwise agreed in writing. There is no other warranty expressed or implied. Maxxam has been retained to provide analysis of samples provided by the Client using the testing methodology referenced in this report. Interpretation and use of test results are the sole responsibility of the Client and are not within the scope of services provided by Maxxam, unless otherwise agreed in writing.

Solid sample results, except biota, are based on dry weight unless otherwise indicated. Organic analyses are not recovery corrected except for isotope dilution methods.
Results relate to samples tested.

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.

Maxxam Analytics International Corporation o/a Maxxam Analytics 32 Colonnade Rd, Unit #1000, Nepean, ON K2E 7J6 Phone: 613 274-0573 Fax: 613 274-0574 Website: www.maxxam.ca

Your Project #: CB1057.00
Site Location: 1622 Roger Stevens Drive
Your C.O.C. #: 650870-04-01

Attention: Geoff Lussier

Terrapex Environmental Ltd
920 Brant St.
Suite 16
Burlington, ON
Canada L7R 4J1

Report Date: 2018/02/26
Report #: R5017915
Version: 1 - Final

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B841230
Received: 2018/02/23, 10:10

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.
Augustyna Dobosz, Project Manager
Email: ADobosz@maxxam.ca
Phone# (905)817-5700 Ext:5798

==========

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 32 Colonnade Rd, Unit #1000, Nepean, ON K2E 7J6 Phone: 613 274-0573 Fax: 613 274-0574 Website: www.maxxam.ca

Maxxam Job #: B841230
Report Date: 2018/02/26

Terrapex Environmental Ltd
Client Project #: CB1057.00
Site Location: 1622 Roger Stevens Drive
Sampler Initials: RH

PETROLEUM HYDROCARBONS (CCME)

Maxxam ID		GDG968	GDG969		
Sampling Date		2018/02/23 09:00	2018/02/23 14:00		
COC Number		650870-04-01	650870-04-01		
	UNITS	TRIP BLANK	TRIP SPIKE	RDL	QC Batch
BTEX & F1 Hydrocarbons					
Benzene	ug/L	<0.20	92.77%	0.20	5412712
Toluene	ug/L	<0.20	95.68%	0.20	5412712
Ethylbenzene	ug/L	<0.20	90.32%	0.20	5412712
o-Xylene	ug/L	<0.20	90.72%	0.20	5412712
p+m-Xylene	ug/L	<0.40	92.77%	0.40	5412712
Total Xylenes	ug/L	<0.40	NA	0.40	5412712
F1 (C6-C10)	ug/L	<25	97.64%	25	5412712
F1 (C6-C10) - BTEX	ug/L	<25	NA	25	5412712
Surrogate Recovery (%)					
1,4-Difluorobenzene	%	107	112		5412712
4-Bromofluorobenzene	%	105	114		5412712
D10-Ethylbenzene	%	116	117		5412712
D4-1,2-Dichloroethane	%	106	111		5412712

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Maxxam Analytics International Corporation o/a Maxxam Analytics 32 Colonnade Rd, Unit #1000, Nepean, ON K2E 7J6 Phone: 613 274-0573 Fax: 613 274-0574 Website: www.maxxam.ca

Maxxam Job #: B841230
Report Date: 2018/02/26

Terrapex Environmental Ltd
Client Project #: CB1057.00
Site Location: 1622 Roger Stevens Drive
Sampler Initials: RH

O.REG 153 PETROLEUM HYDROCARBONS (WATER)

Maxxam ID		GDG963			GDG963			GDG965	GDG967		
Sampling Date		2018/02/23 09:18			2018/02/23 09:18			2018/02/23 10:00	2018/02/23 09:30		
COC Number		650870-04-01			650870-04-01			650870-04-01	650870-04-01		
	UNITS	MW 101	RDL	QC Batch	MW 101 Lab-Dup	RDL	QC Batch	MW 107	BLANK	RDL	QC Batch
BTEX & F1 Hydrocarbons											
Benzene	ug/L	<0.20	0.20	5412712	<0.20	0.20	5412712	<0.20	<0.20	0.20	5412712
Toluene	ug/L	<0.20	0.20	5412712	<0.20	0.20	5412712	<0.20	<0.20	0.20	5412712
Ethylbenzene	ug/L	<0.20	0.20	5412712	<0.20	0.20	5412712	<0.20	<0.20	0.20	5412712
o-Xylene	ug/L	0.66	0.20	5412712	0.61	0.20	5412712	<0.20	<0.20	0.20	5412712
p+m-Xylene	ug/L	0.72	0.40	5412712	0.71	0.40	5412712	<0.40	<0.40	0.40	5412712
Total Xylenes	ug/L	1.4	0.40	5412712	1.3	0.40	5412712	<0.40	<0.40	0.40	5412712
F1 (C6-C10)	ug/L	<25	25	5412712	<25	25	5412712	<25	<25	25	5412712
F1 (C6-C10) - BTEX	ug/L	<25	25	5412712	<25	25	5412712	<25	<25	25	5412712
F2-F4 Hydrocarbons											
F2 (C10-C16 Hydrocarbons)	ug/L	<100	100	5412185				<100	<100	100	5412185
F3 (C16-C34 Hydrocarbons)	ug/L	<200	200	5412185				<200	<200	200	5412185
F4 (C34-C50 Hydrocarbons)	ug/L	<200	200	5412185				<200	<200	200	5412185
Reached Baseline at C50	ug/L	Yes		5412185				Yes	Yes		5412185
Surrogate Recovery (%)											
1,4-Difluorobenzene	%	105		5412712	105		5412712	106	105		5412712
4-Bromofluorobenzene	%	112		5412712	112		5412712	113	108		5412712
D10-Ethylbenzene	%	120		5412712	103		5412712	108	113		5412712
D4-1,2-Dichloroethane	%	105		5412712	104		5412712	106	103		5412712
o-Terphenyl	%	99		5412185				103	98		5412185

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate

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Maxxam Job #: B841230
Report Date: 2018/02/26

Terrapex Environmental Ltd
Client Project #: CB1057.00
Site Location: 1622 Roger Stevens Drive
Sampler Initials: RH

O.REG 153 PETROLEUM HYDROCARBONS (WATER)

Maxxam ID		GDG970		
Sampling Date		2018/02/23 09:15		
COC Number		650870-04-01		
	UNITS	**MW 112**	**RDL**	**QC Batch**
BTEX & F1 Hydrocarbons				
Benzene	ug/L	<0.20	0.20	5412712
Toluene	ug/L	<0.20	0.20	5412712
Ethylbenzene	ug/L	<0.20	0.20	5412712
o-Xylene	ug/L	0.62	0.20	5412712
p+m-Xylene	ug/L	0.63	0.40	5412712
Total Xylenes	ug/L	1.3	0.40	5412712
F1 (C6-C10)	ug/L	<25	25	5412712
F1 (C6-C10) - BTEX	ug/L	<25	25	5412712
F2-F4 Hydrocarbons				
F2 (C10-C16 Hydrocarbons)	ug/L	<100	100	5412185
F3 (C16-C34 Hydrocarbons)	ug/L	<200	200	5412185
F4 (C34-C50 Hydrocarbons)	ug/L	<200	200	5412185
Reached Baseline at C50	ug/L	Yes		5412185
Surrogate Recovery (%)				
1,4-Difluorobenzene	%	105		5412712
4-Bromofluorobenzene	%	111		5412712
D10-Ethylbenzene	%	103		5412712
D4-1,2-Dichloroethane	%	94		5412712
o-Terphenyl	%	100		5412185

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Report Date: 2018/02/26

Terrapex Environmental Ltd
Client Project #: CB1057.00
Site Location: 1622 Roger Stevens Drive
Sampler Initials: RH

O.REG 153 VOCS BY HS & F1-F4 (WATER)

Maxxam ID		GDG964			GDG964			GDG966		
Sampling Date		2018/02/23 09:25			2018/02/23 09:25			2018/02/23 08:15		
COC Number		650870-04-01			650870-04-01			650870-04-01		
	UNITS	MW 106	RDL	QC Batch	MW 106 Lab-Dup	RDL	QC Batch	MW 108	RDL	QC Batch
Calculated Parameters										
1,3-Dichloropropene (cis+trans)	ug/L	<0.50	0.50	5412500				<0.50	0.50	5412500
Volatile Organics										
Acetone (2-Propanone)	ug/L	<10	10	5413136	<10	10	5413136	<10	10	5413136
Benzene	ug/L	<0.20	0.20	5413136	<0.20	0.20	5413136	<0.20	0.20	5413136
Bromodichloromethane	ug/L	<0.50	0.50	5413136	<0.50	0.50	5413136	<0.50	0.50	5413136
Bromoform	ug/L	<1.0	1.0	5413136	<1.0	1.0	5413136	<1.0	1.0	5413136
Bromomethane	ug/L	<0.50	0.50	5413136	<0.50	0.50	5413136	<0.50	0.50	5413136
Carbon Tetrachloride	ug/L	<0.20	0.20	5413136	<0.20	0.20	5413136	<0.20	0.20	5413136
Chlorobenzene	ug/L	<0.20	0.20	5413136	<0.20	0.20	5413136	<0.20	0.20	5413136
Chloroform	ug/L	<0.20	0.20	5413136	<0.20	0.20	5413136	<0.20	0.20	5413136
Dibromochloromethane	ug/L	<0.50	0.50	5413136	<0.50	0.50	5413136	<0.50	0.50	5413136
1,2-Dichlorobenzene	ug/L	<0.50	0.50	5413136	<0.50	0.50	5413136	<0.50	0.50	5413136
1,3-Dichlorobenzene	ug/L	<0.50	0.50	5413136	<0.50	0.50	5413136	<0.50	0.50	5413136
1,4-Dichlorobenzene	ug/L	<0.50	0.50	5413136	<0.50	0.50	5413136	<0.50	0.50	5413136
Dichlorodifluoromethane (FREON 12)	ug/L	<1.0	1.0	5413136	<1.0	1.0	5413136	<1.0	1.0	5413136
1,1-Dichloroethane	ug/L	<0.20	0.20	5413136	<0.20	0.20	5413136	<0.20	0.20	5413136
1,2-Dichloroethane	ug/L	<0.50	0.50	5413136	<0.50	0.50	5413136	<0.50	0.50	5413136
1,1-Dichloroethylene	ug/L	<0.20	0.20	5413136	<0.20	0.20	5413136	<0.20	0.20	5413136
cis-1,2-Dichloroethylene	ug/L	<0.50	0.50	5413136	<0.50	0.50	5413136	<0.50	0.50	5413136
trans-1,2-Dichloroethylene	ug/L	<0.50	0.50	5413136	<0.50	0.50	5413136	<0.50	0.50	5413136
1,2-Dichloropropane	ug/L	<0.20	0.20	5413136	<0.20	0.20	5413136	<0.20	0.20	5413136
cis-1,3-Dichloropropene	ug/L	<0.30	0.30	5413136	<0.30	0.30	5413136	<0.30	0.30	5413136
trans-1,3-Dichloropropene	ug/L	<0.40	0.40	5413136	<0.40	0.40	5413136	<0.40	0.40	5413136
Ethylbenzene	ug/L	<0.20	0.20	5413136	<0.20	0.20	5413136	<0.20	0.20	5413136
Ethylene Dibromide	ug/L	<0.20	0.20	5413136	<0.20	0.20	5413136	<0.20	0.20	5413136
Hexane	ug/L	<1.0	1.0	5413136	<1.0	1.0	5413136	<1.0	1.0	5413136
Methylene Chloride(Dichloromethane)	ug/L	<2.0	2.0	5413136	<2.0	2.0	5413136	<2.0	2.0	5413136
Methyl Ethyl Ketone (2-Butanone)	ug/L	<10	10	5413136	<10	10	5413136	<10	10	5413136
Methyl Isobutyl Ketone	ug/L	<5.0	5.0	5413136	<5.0	5.0	5413136	<5.0	5.0	5413136

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate

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Maxxam Job #: B841230
Report Date: 2018/02/26

Terrapex Environmental Ltd
Client Project #: CB1057.00
Site Location: 1622 Roger Stevens Drive
Sampler Initials: RH

O.REG 153 VOCS BY HS & F1-F4 (WATER)

Maxxam ID		GDG964			GDG964			GDG966		
Sampling Date		2018/02/23 09:25			2018/02/23 09:25			2018/02/23 08:15		
COC Number		650870-04-01			650870-04-01			650870-04-01		
	UNITS	MW 106	RDL	QC Batch	MW 106 Lab-Dup	RDL	QC Batch	MW 108	RDL	QC Batch
Methyl t-butyl ether (MTBE)	ug/L	<0.50	0.50	5413136	<0.50	0.50	5413136	<0.50	0.50	5413136
Styrene	ug/L	<0.50	0.50	5413136	<0.50	0.50	5413136	<0.50	0.50	5413136
1,1,1,2-Tetrachloroethane	ug/L	<0.50	0.50	5413136	<0.50	0.50	5413136	<0.50	0.50	5413136
1,1,2,2-Tetrachloroethane	ug/L	<0.50	0.50	5413136	<0.50	0.50	5413136	<0.50	0.50	5413136
Tetrachloroethylene	ug/L	<0.20	0.20	5413136	<0.20	0.20	5413136	<0.20	0.20	5413136
Toluene	ug/L	<0.20	0.20	5413136	<0.20	0.20	5413136	<0.20	0.20	5413136
1,1,1-Trichloroethane	ug/L	<0.20	0.20	5413136	<0.20	0.20	5413136	<0.20	0.20	5413136
1,1,2-Trichloroethane	ug/L	<0.50	0.50	5413136	<0.50	0.50	5413136	<0.50	0.50	5413136
Trichloroethylene	ug/L	<0.20	0.20	5413136	<0.20	0.20	5413136	<0.20	0.20	5413136
Trichlorofluoromethane (FREON 11)	ug/L	<0.50	0.50	5413136	<0.50	0.50	5413136	<0.50	0.50	5413136
Vinyl Chloride	ug/L	<0.20	0.20	5413136	<0.20	0.20	5413136	<0.20	0.20	5413136
p+m-Xylene	ug/L	<0.20	0.20	5413136	<0.20	0.20	5413136	<0.20	0.20	5413136
o-Xylene	ug/L	<0.20	0.20	5413136	<0.20	0.20	5413136	<0.20	0.20	5413136
Total Xylenes	ug/L	<0.20	0.20	5413136	<0.20	0.20	5413136	<0.20	0.20	5413136
F1 (C6-C10)	ug/L	<25	25	5413136	<25	25	5413136	<25	25	5413136
F1 (C6-C10) - BTEX	ug/L	<25	25	5413136	<25	25	5413136	<25	25	5413136
F2-F4 Hydrocarbons										
F2 (C10-C16 Hydrocarbons)	ug/L	<100	100	5412185				<100	100	5412185
F3 (C16-C34 Hydrocarbons)	ug/L	<200	200	5412185				<200	200	5412185
F4 (C34-C50 Hydrocarbons)	ug/L	<200	200	5412185				<200	200	5412185
Reached Baseline at C50	ug/L	Yes		5412185				Yes		5412185
Surrogate Recovery (%)										
o-Terphenyl	%	99		5412185				103		5412185
4-Bromofluorobenzene	%	83		5413136	86		5413136	85		5413136
D4-1,2-Dichloroethane	%	110		5413136	106		5413136	109		5413136
D8-Toluene	%	88		5413136	86		5413136	88		5413136

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Maxxam Job #: B841230
Report Date: 2018/02/26

Terrapex Environmental Ltd
Client Project #: CB1057.00
Site Location: 1622 Roger Stevens Drive
Sampler Initials: RH

TEST SUMMARY

Maxxam ID: GDG963
Sample ID: MW 101
Matrix: Water

Collected: 2018/02/23
Shipped:
Received: 2018/02/23

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Petroleum Hydro. CCME F1 & BTEX in Water	HSGC/MSFD	5412712	N/A	2018/02/23	Lyndsey Hart
Petroleum Hydrocarbons F2-F4 in Water	GC/FID	5412185	2018/02/23	2018/02/24	Liliana Gaburici

Maxxam ID: GDG963 Dup
Sample ID: MW 101
Matrix: Water

Collected: 2018/02/23
Shipped:
Received: 2018/02/23

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Petroleum Hydro. CCME F1 & BTEX in Water	HSGC/MSFD	5412712	N/A	2018/02/23	Lyndsey Hart

Maxxam ID: GDG964
Sample ID: MW 106
Matrix: Water

Collected: 2018/02/23
Shipped:
Received: 2018/02/23

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
1,3-Dichloropropene Sum	CALC	5412500	N/A	2018/02/26	Automated Statchk
Petroleum Hydrocarbons F2-F4 in Water	GC/FID	5412185	2018/02/23	2018/02/24	Liliana Gaburici
Volatile Organic Compounds and F1 PHCs	GC/MSFD	5413136	N/A	2018/02/23	Liliana Gaburici

Maxxam ID: GDG964 Dup
Sample ID: MW 106
Matrix: Water

Collected: 2018/02/23
Shipped:
Received: 2018/02/23

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Volatile Organic Compounds and F1 PHCs	GC/MSFD	5413136	N/A	2018/02/23	Liliana Gaburici

Maxxam ID: GDG965
Sample ID: MW 107
Matrix: Water

Collected: 2018/02/23
Shipped:
Received: 2018/02/23

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Petroleum Hydro. CCME F1 & BTEX in Water	HSGC/MSFD	5412712	N/A	2018/02/23	Lyndsey Hart
Petroleum Hydrocarbons F2-F4 in Water	GC/FID	5412185	2018/02/23	2018/02/24	Liliana Gaburici

Maxxam ID: GDG966
Sample ID: MW 108
Matrix: Water

Collected: 2018/02/23
Shipped:
Received: 2018/02/23

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
1,3-Dichloropropene Sum	CALC	5412500	N/A	2018/02/26	Liliana Gaburici
Petroleum Hydrocarbons F2-F4 in Water	GC/FID	5412185	2018/02/23	2018/02/24	Liliana Gaburici
Volatile Organic Compounds and F1 PHCs	GC/MSFD	5413136	N/A	2018/02/23	Liliana Gaburici

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Maxxam Job #: B841230
Report Date: 2018/02/26

Terrapex Environmental Ltd
Client Project #: CB1057.00
Site Location: 1622 Roger Stevens Drive
Sampler Initials: RH

TEST SUMMARY

Maxxam ID: GDG967 **Collected:** 2018/02/23
Sample ID: BLANK **Shipped:**
Matrix: Water **Received:** 2018/02/23

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Petroleum Hydro. CCME F1 & BTEX in Water	HSGC/MSFD	5412712	N/A	2018/02/23	Lyndsey Hart
Petroleum Hydrocarbons F2-F4 in Water	GC/FID	5412185	2018/02/23	2018/02/24	Liliana Gaburici

Maxxam ID: GDG968 **Collected:** 2018/02/23
Sample ID: TRIP BLANK **Shipped:**
Matrix: Water **Received:** 2018/02/23

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Petroleum Hydro. CCME F1 & BTEX in Water	HSGC/MSFD	5412712	N/A	2018/02/23	Lyndsey Hart

Maxxam ID: GDG969 **Collected:** 2018/02/23
Sample ID: TRIP SPIKE **Shipped:**
Matrix: Water **Received:** 2018/02/23

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Petroleum Hydro. CCME F1 & BTEX in Water	HSGC/MSFD	5412712	N/A	2018/02/23	Lyndsey Hart

Maxxam ID: GDG970 **Collected:** 2018/02/23
Sample ID: MW 112 **Shipped:**
Matrix: Water **Received:** 2018/02/23

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Petroleum Hydro. CCME F1 & BTEX in Water	HSGC/MSFD	5412712	N/A	2018/02/23	Lyndsey Hart
Petroleum Hydrocarbons F2-F4 in Water	GC/FID	5412185	2018/02/23	2018/02/24	Liliana Gaburici

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Report Date: 2018/02/26

Terrapex Environmental Ltd
Client Project #: CB1057.00
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GENERAL COMMENTS

Each temperature is the average of up to three cooler temperatures taken at receipt

Package 1	3.0°C

Results relate only to the items tested.

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Report Date: 2018/02/26

Terrapex Environmental Ltd
Client Project #: CB1057.00
Site Location: 1622 Roger Stevens Drive
Sampler Initials: RH

QUALITY ASSURANCE REPORT

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
5412185	LGA	Matrix Spike	o-Terphenyl	2018/02/23		115	%	30 - 130
			F2 (C10-C16 Hydrocarbons)	2018/02/23		100	%	50 - 130
			F3 (C16-C34 Hydrocarbons)	2018/02/23		100	%	50 - 130
			F4 (C34-C50 Hydrocarbons)	2018/02/23		100	%	50 - 130
5412185	LGA	Spiked Blank	o-Terphenyl	2018/02/23		104	%	30 - 130
			F2 (C10-C16 Hydrocarbons)	2018/02/23		93	%	80 - 120
			F3 (C16-C34 Hydrocarbons)	2018/02/23		93	%	80 - 120
			F4 (C34-C50 Hydrocarbons)	2018/02/23		93	%	80 - 120
5412185	LGA	Method Blank	o-Terphenyl	2018/02/23		101	%	30 - 130
			F2 (C10-C16 Hydrocarbons)	2018/02/23	<100		ug/L	
			F3 (C16-C34 Hydrocarbons)	2018/02/23	<200		ug/L	
			F4 (C34-C50 Hydrocarbons)	2018/02/23	<200		ug/L	
5412185	LGA	RPD	F2 (C10-C16 Hydrocarbons)	2018/02/23	NC		%	50
			F3 (C16-C34 Hydrocarbons)	2018/02/23	NC		%	50
			F4 (C34-C50 Hydrocarbons)	2018/02/23	NC		%	50
5412712	LHR	Matrix Spike [GDG965-02]	1,4-Difluorobenzene	2018/02/23		103	%	70 - 130
			4-Bromofluorobenzene	2018/02/23		115	%	70 - 130
			D10-Ethylbenzene	2018/02/23		112	%	70 - 130
			D4-1,2-Dichloroethane	2018/02/23		104	%	70 - 130
			Benzene	2018/02/23		97	%	70 - 130
			Toluene	2018/02/23		89	%	70 - 130
			Ethylbenzene	2018/02/23		90	%	70 - 130
			o-Xylene	2018/02/23		90	%	70 - 130
			p+m-Xylene	2018/02/23		91	%	70 - 130
			F1 (C6-C10)	2018/02/23		123	%	70 - 130
5412712	LHR	Spiked Blank	1,4-Difluorobenzene	2018/02/23		103	%	70 - 130
			4-Bromofluorobenzene	2018/02/23		114	%	70 - 130
			D10-Ethylbenzene	2018/02/23		121	%	70 - 130
			D4-1,2-Dichloroethane	2018/02/23		105	%	70 - 130
			Benzene	2018/02/23		101	%	70 - 130
			Toluene	2018/02/23		98	%	70 - 130
			Ethylbenzene	2018/02/23		101	%	70 - 130
			o-Xylene	2018/02/23		98	%	70 - 130
			p+m-Xylene	2018/02/23		101	%	70 - 130
			F1 (C6-C10)	2018/02/23		115	%	70 - 130
5412712	LHR	Method Blank	1,4-Difluorobenzene	2018/02/23		102	%	70 - 130
			4-Bromofluorobenzene	2018/02/23		115	%	70 - 130
			D10-Ethylbenzene	2018/02/23		115	%	70 - 130
			D4-1,2-Dichloroethane	2018/02/23		104	%	70 - 130
			Benzene	2018/02/23	<0.20		ug/L	
			Toluene	2018/02/23	<0.20		ug/L	
			Ethylbenzene	2018/02/23	<0.20		ug/L	
			o-Xylene	2018/02/23	<0.20		ug/L	
			p+m-Xylene	2018/02/23	<0.40		ug/L	
			Total Xylenes	2018/02/23	<0.40		ug/L	
			F1 (C6-C10)	2018/02/23	<25		ug/L	
			F1 (C6-C10) - BTEX	2018/02/23	<25		ug/L	
5412712	LHR	RPD [GDG963-02]	Benzene	2018/02/23	NC		%	40
			Toluene	2018/02/23	NC		%	40
			Ethylbenzene	2018/02/23	NC		%	40
			o-Xylene	2018/02/23	7.5		%	40

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			p+m-Xylene	2018/02/23	1.1		%	40
			Total Xylenes	2018/02/23	4.1		%	40
			F1 (C6-C10)	2018/02/23	NC		%	40
			F1 (C6-C10) - BTEX	2018/02/23	NC		%	40
5413136	LGA	Matrix Spike [GDG966-02]	4-Bromofluorobenzene	2018/02/23		99	%	70 - 130
			D4-1,2-Dichloroethane	2018/02/23		99	%	70 - 130
			D8-Toluene	2018/02/23		94	%	70 - 130
			Acetone (2-Propanone)	2018/02/23		93	%	60 - 140
			Benzene	2018/02/23		94	%	70 - 130
			Bromodichloromethane	2018/02/23		86	%	70 - 130
			Bromoform	2018/02/23		95	%	70 - 130
			Bromomethane	2018/02/23		79	%	60 - 140
			Carbon Tetrachloride	2018/02/23		84	%	70 - 130
			Chlorobenzene	2018/02/23		85	%	70 - 130
			Chloroform	2018/02/23		85	%	70 - 130
			Dibromochloromethane	2018/02/23		96	%	70 - 130
			1,2-Dichlorobenzene	2018/02/23		89	%	70 - 130
			1,3-Dichlorobenzene	2018/02/23		89	%	70 - 130
			1,4-Dichlorobenzene	2018/02/23		90	%	70 - 130
			Dichlorodifluoromethane (FREON 12)	2018/02/23		69	%	60 - 140
			1,1-Dichloroethane	2018/02/23		84	%	70 - 130
			1,2-Dichloroethane	2018/02/23		87	%	70 - 130
			1,1-Dichloroethylene	2018/02/23		81	%	70 - 130
			cis-1,2-Dichloroethylene	2018/02/23		83	%	70 - 130
			trans-1,2-Dichloroethylene	2018/02/23		77	%	70 - 130
			1,2-Dichloropropane	2018/02/23		71	%	70 - 130
			cis-1,3-Dichloropropene	2018/02/23		89	%	70 - 130
			trans-1,3-Dichloropropene	2018/02/23		96	%	70 - 130
			Ethylbenzene	2018/02/23		88	%	70 - 130
			Ethylene Dibromide	2018/02/23		93	%	70 - 130
			Hexane	2018/02/23		82	%	70 - 130
			Methylene Chloride(Dichloromethane)	2018/02/23		72	%	70 - 130
			Methyl Ethyl Ketone (2-Butanone)	2018/02/23		84	%	60 - 140
			Methyl Isobutyl Ketone	2018/02/23		87	%	70 - 130
			Methyl t-butyl ether (MTBE)	2018/02/23		76	%	70 - 130
			Styrene	2018/02/23		91	%	70 - 130
			1,1,1,2-Tetrachloroethane	2018/02/23		95	%	70 - 130
			1,1,2,2-Tetrachloroethane	2018/02/23		89	%	70 - 130
			Tetrachloroethylene	2018/02/23		80	%	70 - 130
			Toluene	2018/02/23		81	%	70 - 130
			1,1,1-Trichloroethane	2018/02/23		82	%	70 - 130
			1,1,2-Trichloroethane	2018/02/23		76	%	70 - 130
			Trichloroethylene	2018/02/23		84	%	70 - 130
			Trichlorofluoromethane (FREON 11)	2018/02/23		84	%	70 - 130
			Vinyl Chloride	2018/02/23		81	%	70 - 130
			p+m-Xylene	2018/02/23		81	%	70 - 130
			o-Xylene	2018/02/23		84	%	70 - 130
			F1 (C6-C10)	2018/02/23		93	%	60 - 140
5413136	LGA	Spiked Blank	4-Bromofluorobenzene	2018/02/23		102	%	70 - 130
			D4-1,2-Dichloroethane	2018/02/23		100	%	70 - 130
			D8-Toluene	2018/02/23		105	%	70 - 130

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Acetone (2-Propanone)	2018/02/23		80	%	60 - 140
			Benzene	2018/02/23		108	%	70 - 130
			Bromodichloromethane	2018/02/23		92	%	70 - 130
			Bromoform	2018/02/23		96	%	70 - 130
			Bromomethane	2018/02/23		84	%	60 - 140
			Carbon Tetrachloride	2018/02/23		101	%	70 - 130
			Chlorobenzene	2018/02/23		96	%	70 - 130
			Chloroform	2018/02/23		90	%	70 - 130
			Dibromochloromethane	2018/02/23		101	%	70 - 130
			1,2-Dichlorobenzene	2018/02/23		96	%	70 - 130
			1,3-Dichlorobenzene	2018/02/23		98	%	70 - 130
			1,4-Dichlorobenzene	2018/02/23		99	%	70 - 130
			Dichlorodifluoromethane (FREON 12)	2018/02/23		83	%	60 - 140
			1,1-Dichloroethane	2018/02/23		96	%	70 - 130
			1,2-Dichloroethane	2018/02/23		88	%	70 - 130
			1,1-Dichloroethylene	2018/02/23		95	%	70 - 130
			cis-1,2-Dichloroethylene	2018/02/23		94	%	70 - 130
			trans-1,2-Dichloroethylene	2018/02/23		92	%	70 - 130
			1,2-Dichloropropane	2018/02/23		81	%	70 - 130
			cis-1,3-Dichloropropene	2018/02/23		89	%	70 - 130
			trans-1,3-Dichloropropene	2018/02/23		82	%	70 - 130
			Ethylbenzene	2018/02/23		103	%	70 - 130
			Ethylene Dibromide	2018/02/23		95	%	70 - 130
			Hexane	2018/02/23		101	%	70 - 130
			Methylene Chloride(Dichloromethane)	2018/02/23		79	%	70 - 130
			Methyl Ethyl Ketone (2-Butanone)	2018/02/23		83	%	60 - 140
			Methyl Isobutyl Ketone	2018/02/23		88	%	70 - 130
			Methyl t-butyl ether (MTBE)	2018/02/23		85	%	70 - 130
			Styrene	2018/02/23		109	%	70 - 130
			1,1,1,2-Tetrachloroethane	2018/02/23		107	%	70 - 130
			1,1,2,2-Tetrachloroethane	2018/02/23		91	%	70 - 130
			Tetrachloroethylene	2018/02/23		106	%	70 - 130
			Toluene	2018/02/23		98	%	70 - 130
			1,1,1-Trichloroethane	2018/02/23		97	%	70 - 130
			1,1,2-Trichloroethane	2018/02/23		81	%	70 - 130
			Trichloroethylene	2018/02/23		100	%	70 - 130
			Trichlorofluoromethane (FREON 11)	2018/02/23		100	%	70 - 130
			Vinyl Chloride	2018/02/23		95	%	70 - 130
			p+m-Xylene	2018/02/23		97	%	70 - 130
			o-Xylene	2018/02/23		106	%	70 - 130
			F1 (C6-C10)	2018/02/23		104	%	60 - 140
5413136	LGA	Method Blank	4-Bromofluorobenzene	2018/02/23		89	%	70 - 130
			D4-1,2-Dichloroethane	2018/02/23		107	%	70 - 130
			D8-Toluene	2018/02/23		88	%	70 - 130
			Acetone (2-Propanone)	2018/02/23	<10		ug/L	
			Benzene	2018/02/23	<0.20		ug/L	
			Bromodichloromethane	2018/02/23	<0.50		ug/L	
			Bromoform	2018/02/23	<1.0		ug/L	
			Bromomethane	2018/02/23	<0.50		ug/L	
			Carbon Tetrachloride	2018/02/23	<0.20		ug/L	
			Chlorobenzene	2018/02/23	<0.20		ug/L	
			Chloroform	2018/02/23	<0.20		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
			Dibromochloromethane	2018/02/23	<0.50		ug/L	
			1,2-Dichlorobenzene	2018/02/23	<0.50		ug/L	
			1,3-Dichlorobenzene	2018/02/23	<0.50		ug/L	
			1,4-Dichlorobenzene	2018/02/23	<0.50		ug/L	
			Dichlorodifluoromethane (FREON 12)	2018/02/23	<1.0		ug/L	
			1,1-Dichloroethane	2018/02/23	<0.20		ug/L	
			1,2-Dichloroethane	2018/02/23	<0.50		ug/L	
			1,1-Dichloroethylene	2018/02/23	<0.20		ug/L	
			cis-1,2-Dichloroethylene	2018/02/23	<0.50		ug/L	
			trans-1,2-Dichloroethylene	2018/02/23	<0.50		ug/L	
			1,2-Dichloropropane	2018/02/23	<0.20		ug/L	
			cis-1,3-Dichloropropene	2018/02/23	<0.30		ug/L	
			trans-1,3-Dichloropropene	2018/02/23	<0.40		ug/L	
			Ethylbenzene	2018/02/23	<0.20		ug/L	
			Ethylene Dibromide	2018/02/23	<0.20		ug/L	
			Hexane	2018/02/23	<1.0		ug/L	
			Methylene Chloride(Dichloromethane)	2018/02/23	<2.0		ug/L	
			Methyl Ethyl Ketone (2-Butanone)	2018/02/23	<10		ug/L	
			Methyl Isobutyl Ketone	2018/02/23	<5.0		ug/L	
			Methyl t-butyl ether (MTBE)	2018/02/23	<0.50		ug/L	
			Styrene	2018/02/23	<0.50		ug/L	
			1,1,1,2-Tetrachloroethane	2018/02/23	<0.50		ug/L	
			1,1,2,2-Tetrachloroethane	2018/02/23	<0.50		ug/L	
			Tetrachloroethylene	2018/02/23	<0.20		ug/L	
			Toluene	2018/02/23	<0.20		ug/L	
			1,1,1-Trichloroethane	2018/02/23	<0.20		ug/L	
			1,1,2-Trichloroethane	2018/02/23	<0.50		ug/L	
			Trichloroethylene	2018/02/23	<0.20		ug/L	
			Trichlorofluoromethane (FREON 11)	2018/02/23	<0.50		ug/L	
			Vinyl Chloride	2018/02/23	<0.20		ug/L	
			p+m-Xylene	2018/02/23	<0.20		ug/L	
			o-Xylene	2018/02/23	<0.20		ug/L	
			Total Xylenes	2018/02/23	<0.20		ug/L	
			F1 (C6-C10)	2018/02/23	<25		ug/L	
			F1 (C6-C10) - BTEX	2018/02/23	<25		ug/L	
5413136	LGA	RPD [GDG964-02]	Acetone (2-Propanone)	2018/02/23	NC		%	30
			Benzene	2018/02/23	NC		%	30
			Bromodichloromethane	2018/02/23	NC		%	30
			Bromoform	2018/02/23	NC		%	30
			Bromomethane	2018/02/23	NC		%	30
			Carbon Tetrachloride	2018/02/23	NC		%	30
			Chlorobenzene	2018/02/23	NC		%	30
			Chloroform	2018/02/23	NC		%	30
			Dibromochloromethane	2018/02/23	NC		%	30
			1,2-Dichlorobenzene	2018/02/23	NC		%	30
			1,3-Dichlorobenzene	2018/02/23	NC		%	30
			1,4-Dichlorobenzene	2018/02/23	NC		%	30
			Dichlorodifluoromethane (FREON 12)	2018/02/23	NC		%	30
			1,1-Dichloroethane	2018/02/23	NC		%	30
			1,2-Dichloroethane	2018/02/23	NC		%	30
			1,1-Dichloroethylene	2018/02/23	NC		%	30
			cis-1,2-Dichloroethylene	2018/02/23	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
			trans-1,2-Dichloroethylene	2018/02/23	NC		%	30
			1,2-Dichloropropane	2018/02/23	NC		%	30
			cis-1,3-Dichloropropene	2018/02/23	NC		%	30
			trans-1,3-Dichloropropene	2018/02/23	NC		%	30
			Ethylbenzene	2018/02/23	NC		%	30
			Ethylene Dibromide	2018/02/23	NC		%	30
			Hexane	2018/02/23	NC		%	30
			Methylene Chloride(Dichloromethane)	2018/02/23	NC		%	30
			Methyl Ethyl Ketone (2-Butanone)	2018/02/23	NC		%	30
			Methyl Isobutyl Ketone	2018/02/23	NC		%	30
			Methyl t-butyl ether (MTBE)	2018/02/23	NC		%	30
			Styrene	2018/02/23	NC		%	30
			1,1,1,2-Tetrachloroethane	2018/02/23	NC		%	30
			1,1,2,2-Tetrachloroethane	2018/02/23	NC		%	30
			Tetrachloroethylene	2018/02/23	NC		%	30
			Toluene	2018/02/23	NC		%	30
			1,1,1-Trichloroethane	2018/02/23	NC		%	30
			1,1,2-Trichloroethane	2018/02/23	NC		%	30
			Trichloroethylene	2018/02/23	NC		%	30
			Trichlorofluoromethane (FREON 11)	2018/02/23	NC		%	30
			Vinyl Chloride	2018/02/23	NC		%	30
			p+m-Xylene	2018/02/23	NC		%	30
			o-Xylene	2018/02/23	NC		%	30
			Total Xylenes	2018/02/23	NC		%	30
			F1 (C6-C10)	2018/02/23	NC		%	30
			F1 (C6-C10) - BTEX	2018/02/23	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 (absolute difference <= 2x RDL).

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Maxxam Job #: B841230
Report Date: 2018/02/26

Terrapex Environmental Ltd
Client Project #: CB1057.00
Site Location: 1622 Roger Stevens Drive
Sampler Initials: RH

VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by the following individual(s).

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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CHAIN OF CUSTODY RECORD

Page 1 of 1

INVOICE TO:		REPORT TO:		PROJECT INFORMATION:		Laboratory Use Only:	
Company Name:	#30396 Parkland Industries Ltd	Company Name:	#19684 Terrapex Environmental Ltd	Quotation #:	B75111	Maxxam Job #:	Bottle Order #:
Attention:	Retail Invoices	Attention:	Geoff Lussier	P.O. #:			650870
Address:	4919-59th St Suite 100 Red Deer AB T4N 6C9	Address:	920 Brant St. Suite 16 Burlington ON L7R 4J1	Project:	CB1057.00	COC #:	Project Manager:
Tel:	(403) 357-6400 x Fax: (403) 356-3015 x	Tel:	(905) 632-5939 x228 Fax:	Project Name:	1622 Roger Stevens Drive	C#650870-04-01	Augustyna Dobosz
Email:	emilie.price@parkland.ca, victoria.pianarosa@parkland.	Email:	g.lussier@terrapex.com	Site #:			
				Sampled By:	RH		

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 ☐ Table ___

Other Regulations: ☐ CCME ☐ Sanitary Sewer Bylaw ☐ Reg 558. ☐ Storm Sewer Bylaw ☐ MISA Municipality ☐ PWQO ☐ Other

Special Instructions

Include Criteria on Certificate of Analysis (Y/N)? _____

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.

Job Specific Rush TAT (if applies to entire submission)
Date Required: Feb 23 18 Time Required: ___ ☒
Rush Confirmation Number: AD2018a223-01 *(call lab for #)*

	Sample Barcode Label	Sample (Location) Identification	Date Sampled	Time Sampled	Matrix	Field Filtered (please circle): Metals / Hg / Cr VI	Petroleum Hydrocarbons CCME F1 & BTEX	Petroleum Hydrocarbons F2-F4	O.Reg 153 ICPMS Metals and Sulphate	Soil Texture (%sand, %silt, %clay)	Moisture O.Reg 153 2003	pH CaCl2 EXTRACT	Flashpoint	O.Reg 558 TCLP Inorganics Package	O.Reg 558 TCLP PCBs	O.Reg 558 TCLP Volatile Organics HS	# of Bottles	Comments
1		MW101	Feb 23	9:18	~~SOIL~~ GW	–	X	X									#4	
2		MW106	Feb 23	9:25	~~SOIL~~ GW	–	X	X			X						#4	
3		MW107	Feb 23	10:00	~~SOIL~~ GW	–	X	X									#4	
4		MW108	Feb 23	8:15	~~SOIL~~ GW		X	X			X						#4	
5		Blank	Feb 23	9:30	~~SOIL~~ GW		X	X									#4	
6		~~Trip~~ Blank	Feb 23	9:00	~~SOIL~~ GW		X										#2	
7		trip spike	Feb 23	14:00	~~SOIL~~ GW		X										2	
8		MW112	Feb 23	9:15	~~SOIL~~ GW		X	X									#4	
9					SOIL													On ice
10					SOIL													

23-Feb-18 10:10
Augustyna Dobosz
B841230

RECEIVED IN OTTAWA

* RELINQUISHED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	RECEIVED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	# jars used and not submitted
RH RACHEL HERZOG	18/02/23	10:10	Mariana Fasson Fasson	2018/02/23	10:10	

Laboratory Use Only

Time Sensitive	Temperature (°C) on Recei	Custody Seal	Yes	No
	3,3,3	Present	9	
		Intact	9	

* UNLESS OTHERWISE AGREED TO IN WRITING, WORK SUBMITTED ON THIS CHAIN OF CUSTODY IS SUBJECT TO MAXXAM'S STANDARD TERMS AND CONDITIONS. SIGNING OF THIS CHAIN OF CUSTODY DOCUMENT IS ACKNOWLEDGMENT AND ACCEPTANCE OF OUR TERMS WHICH ARE AVAILABLE FOR VIEWING AT WWW.MAXXAM.CA/TERMS.

* 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.

** SAMPLE CONTAINER, PRESERVATION, HOLD TIME AND PACKAGE INFORMATION CAN BE VIEWED AT HTTP://MAXXAM.CA/WP-CONTENT/UPLOADS/ONTARIO-COC.PDF.

SAMPLES MUST BE KEPT COOL (< 10° C) FROM TIME OF SAMPLING UNTIL DELIVERY TO MAXXAM

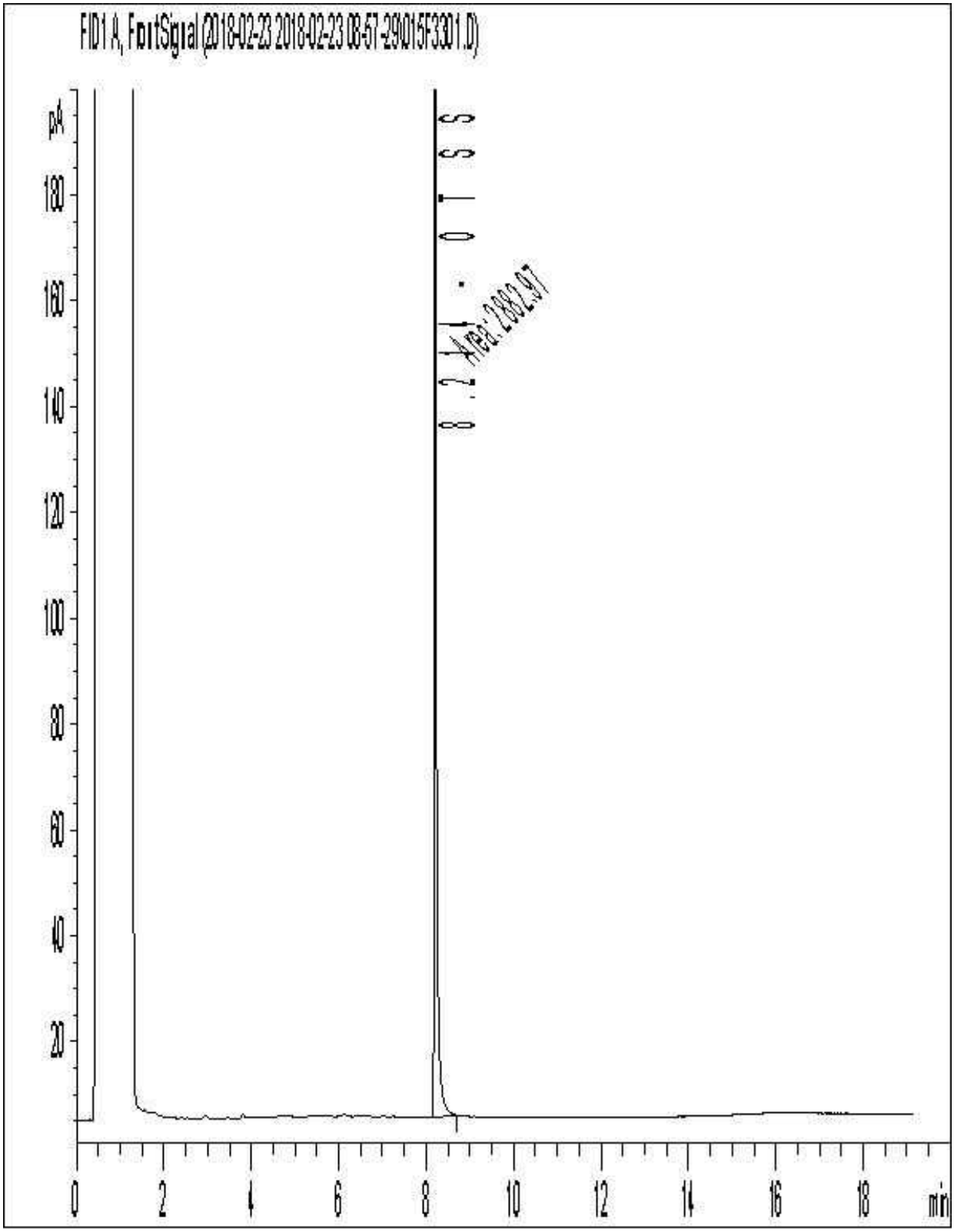
White: Maxxa Yellow: Client

Maxxam Analytics International Corporation o/a Maxxam Analytics

Maxxam Job #: B841230
Report Date: 2018/02/26
Maxxam Sample: GDG963

Terrapex Environmental Ltd
Client Project #: CB1057.00
Project name: 1622 Roger Stevens Drive
Client ID: MW 101

Petroleum Hydrocarbons F2-F4 in Water Chromatogram

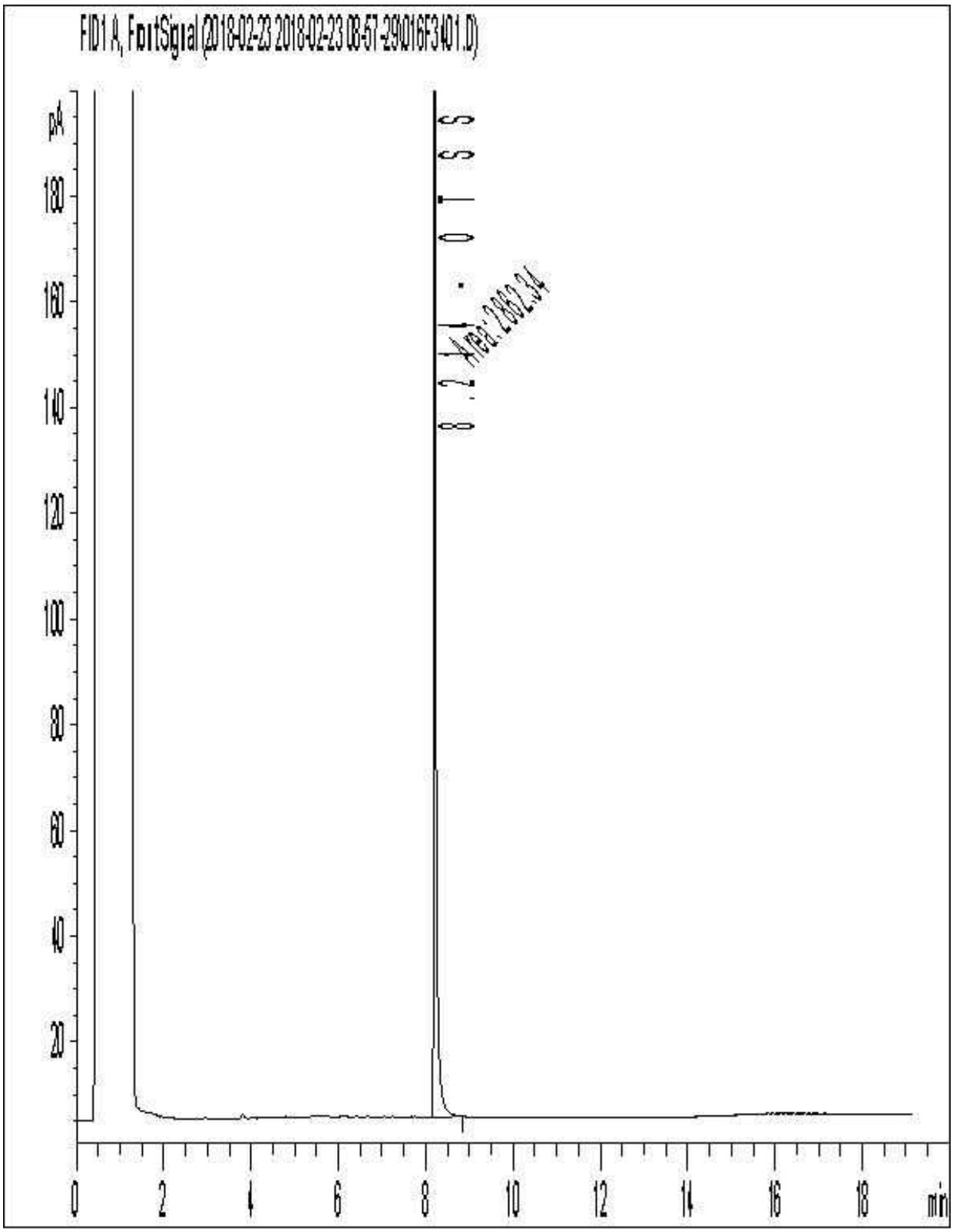


Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Maxxam Job #: B841230
Report Date: 2018/02/26
Maxxam Sample: GDG964

Terrapex Environmental Ltd
Client Project #: CB1057.00
Project name: 1622 Roger Stevens Drive
Client ID: MW 106

Petroleum Hydrocarbons F2-F4 in Water Chromatogram

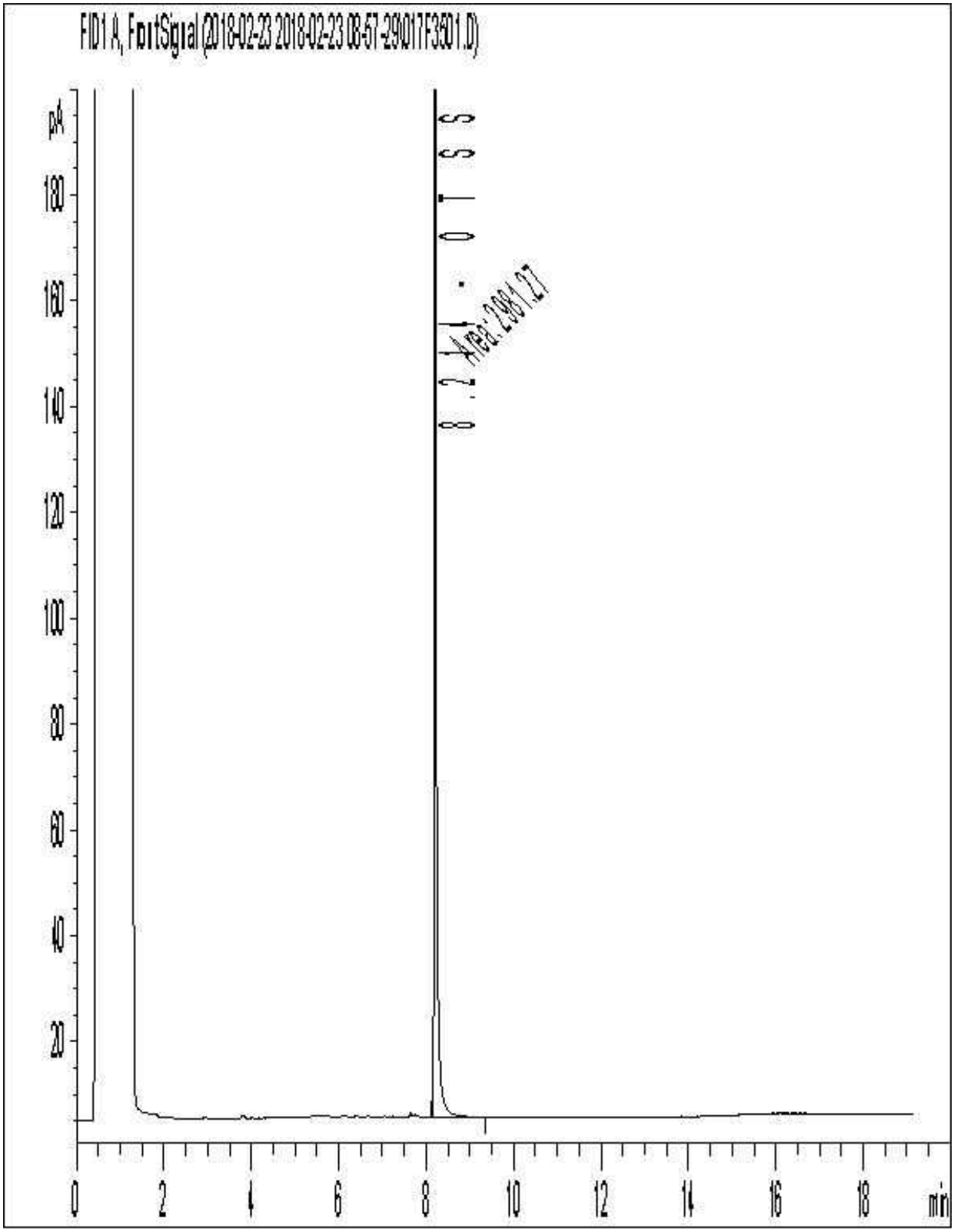


Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Maxxam Job #: B841230
Report Date: 2018/02/26
Maxxam Sample: GDG965

Terrapex Environmental Ltd
Client Project #: CB1057.00
Project name: 1622 Roger Stevens Drive
Client ID: MW 107

Petroleum Hydrocarbons F2-F4 in Water Chromatogram

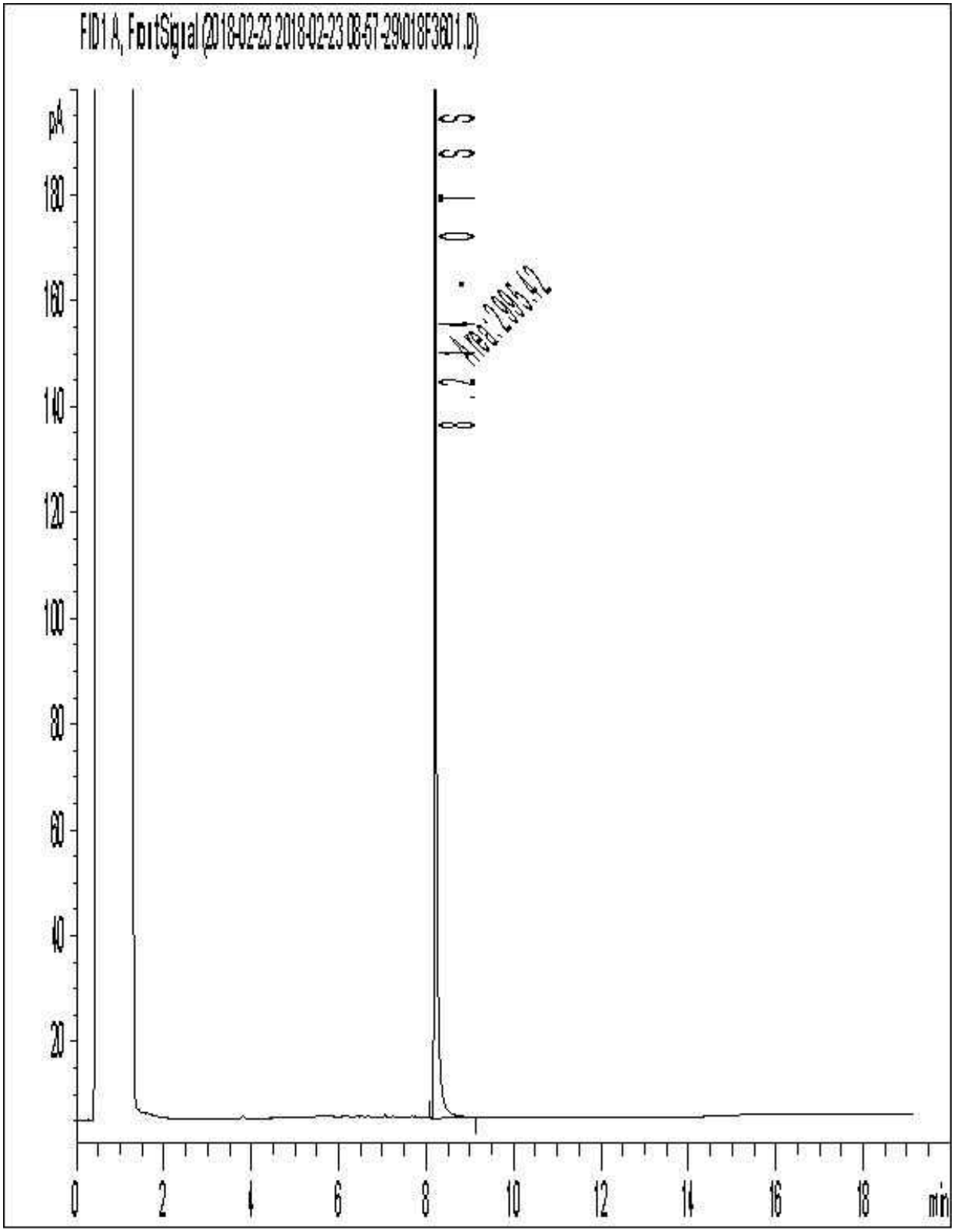


Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Maxxam Job #: B841230
Report Date: 2018/02/26
Maxxam Sample: GDG966

Terrapex Environmental Ltd
Client Project #: CB1057.00
Project name: 1622 Roger Stevens Drive
Client ID: MW 108

Petroleum Hydrocarbons F2-F4 in Water Chromatogram

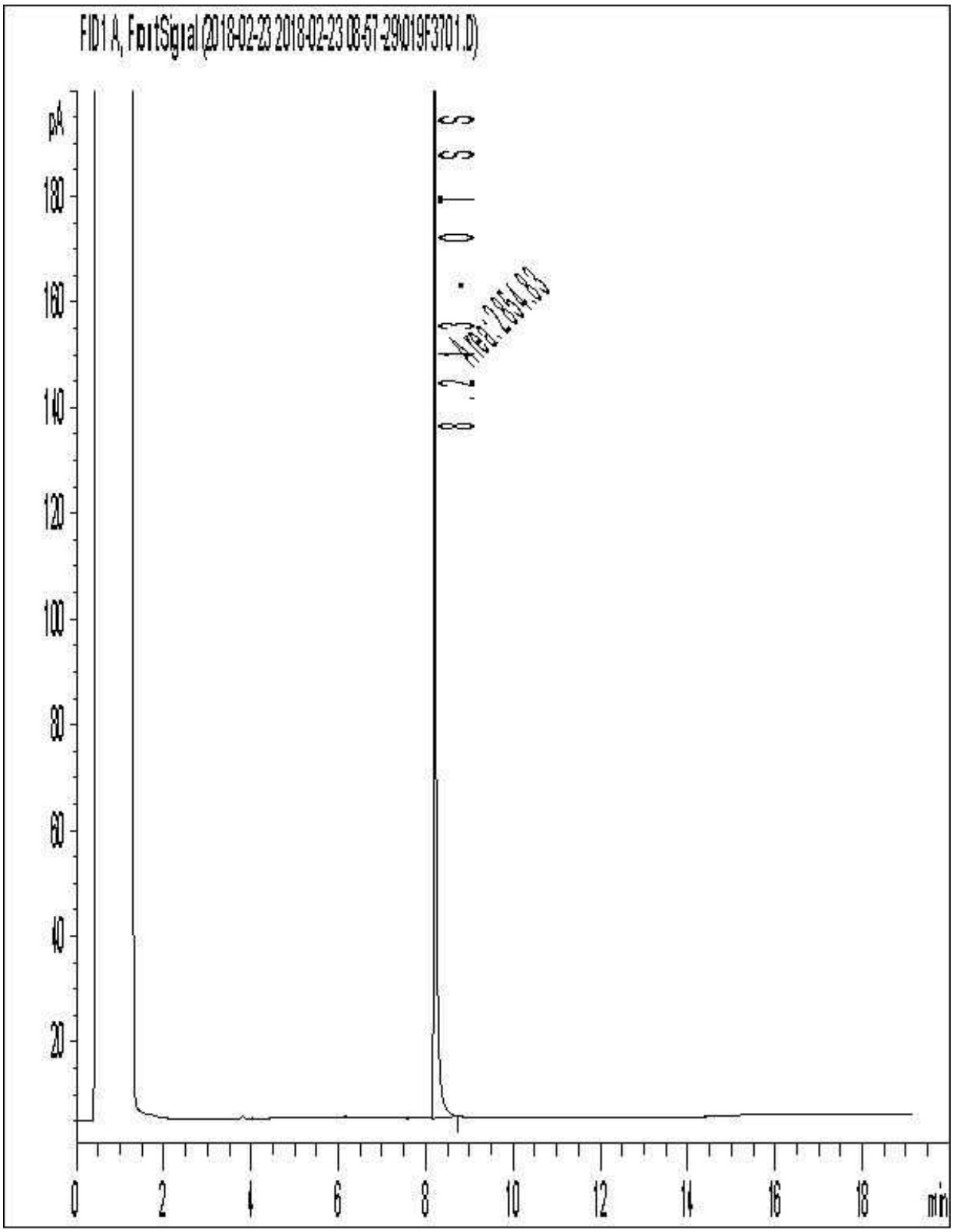


Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Maxxam Job #: B841230
Report Date: 2018/02/26
Maxxam Sample: GDG967

Terrapex Environmental Ltd
Client Project #: CB1057.00
Project name: 1622 Roger Stevens Drive
Client ID: BLANK

Petroleum Hydrocarbons F2-F4 in Water Chromatogram

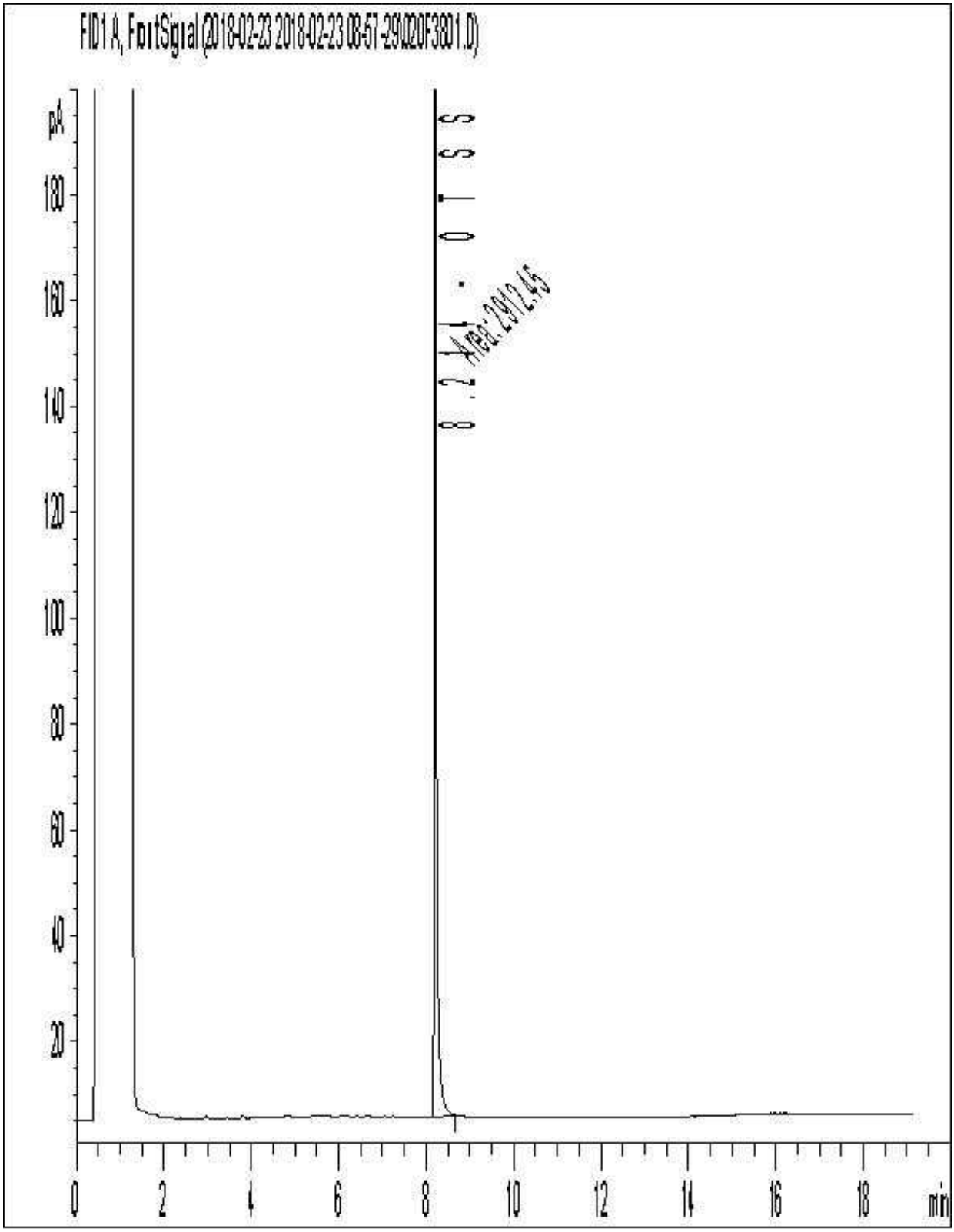


Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Maxxam Job #: B841230
Report Date: 2018/02/26
Maxxam Sample: GDG970

Terrapex Environmental Ltd
Client Project #: CB1057.00
Project name: 1622 Roger Stevens Drive
Client ID: MW 112

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.

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Your P.O. #: PIONEER
Your Project #: CB1057.00
Site Location: 1622 Roger Stevens Drive
Your C.O.C. #: 650870-05-01

Attention: Geoff Lussier

Terrapex Environmental Ltd
920 Brant St.
Suite 16
Burlington, ON
Canada L7R 4J1

Report Date: 2018/03/05
Report #: R5029583
Version: 1 - Final

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B842304
Received: 2018/02/23, 15:05

Sample Matrix: Soil
Samples Received: 2

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Reference
pH CaCl2 EXTRACT (1)	2	2018/03/02	2018/03/02	CAM SOP-00413	EPA 9045 D m
Sulphate (20:1 Extract) (1)	2	N/A	2018/03/02	CAM SOP-00464	EPA 375.4 m

Remarks:

Maxxam Analytics' laboratories are accredited to ISO/IEC 17025:2005 for specific parameters on scopes of accreditation. Unless otherwise noted, procedures used by Maxxam are based upon recognized Provincial, Federal or US method compendia such as CCME, MDDELCC, EPA, APHA.

All work recorded herein has been done in accordance with procedures and practices ordinarily exercised by professionals in Maxxam's profession using accepted testing methodologies, quality assurance and quality control procedures (except where otherwise agreed by the client and Maxxam in writing). All data is in statistical control and has met quality control and method performance criteria unless otherwise noted. All method blanks are reported; unless indicated otherwise, associated sample data are not blank corrected.

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Solid sample results, except biota, are based on dry weight unless otherwise indicated. Organic analyses are not recovery corrected except for isotope dilution methods.
Results relate to samples tested.

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) This test was performed by Maxxam Analytics Mississauga

Maxxam Analytics International Corporation o/a Maxxam Analytics 32 Colonnade Rd, Unit #1000, Nepean, ON K2E 7J6 Phone: 613 274-0573 Fax: 613 274-0574 Website: www.maxxam.ca

Maxxam
A Bureau Veritas Group Company

Your P.O. #: PIONEER
Your Project #: CB1057.00
Site Location: 1622 Roger Stevens Drive
Your C.O.C. #: 650870-05-01

Attention: Geoff Lussier

Terrapex Environmental Ltd
920 Brant St.
Suite 16
Burlington, ON
Canada L7R 4J1

Report Date: 2018/03/05
Report #: R5029583
Version: 1 - Final

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B842304
Received: 2018/02/23, 15:05

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.
Augustyna Dobosz, Project Manager
Email: ADobosz@maxxam.ca
Phone# (905)817-5700 Ext:5798

==========

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 Job #: B842304
Report Date: 2018/03/05

Terrapex Environmental Ltd
Client Project #: CB1057.00
Site Location: 1622 Roger Stevens Drive
Your P.O. #: PIONEER

RESULTS OF ANALYSES OF SOIL

Maxxam ID		GDL933	GDL934		GDL934		
Sampling Date		2018/02/21 13:00	2018/02/21 14:00		2018/02/21 14:00		
COC Number		650870-05-01	650870-05-01		650870-05-01		
	UNITS	**MW102 SAMPLE 4**	**BH103 SAMPLE 2**	**QC Batch**	**BH103 SAMPLE 2 Lab-Dup**	**RDL**	**QC Batch**
Inorganics							
Available (CaCl2) pH	pH	7.85	7.93	5422743			
Soluble (20:1) Sulphate (SO4)	ug/g	54	54	5420892	42	20	5420892

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate

Maxxam Analytics International Corporation o/a Maxxam Analytics 32 Colonnade Rd, Unit #1000, Nepean, ON K2E 7J6 Phone: 613 274-0573 Fax: 613 274-0574 Website: www.maxxam.ca

Maxxam Job #: B842304
Report Date: 2018/03/05

Terrapex Environmental Ltd
Client Project #: CB1057.00
Site Location: 1622 Roger Stevens Drive
Your P.O. #: PIONEER

TEST SUMMARY

Maxxam ID: GDL933
Sample ID: MW102 SAMPLE 4
Matrix: Soil

Collected: 2018/02/21
Shipped:
Received: 2018/02/23

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
pH CaCl2 EXTRACT	AT	5422743	2018/03/02	2018/03/02	Tahir Anwar
Sulphate (20:1 Extract)	KONE/EC	5420892	N/A	2018/03/02	Alina Dobreanu

Maxxam ID: GDL934
Sample ID: BH103 SAMPLE 2
Matrix: Soil

Collected: 2018/02/21
Shipped:
Received: 2018/02/23

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
pH CaCl2 EXTRACT	AT	5422743	2018/03/02	2018/03/02	Tahir Anwar
Sulphate (20:1 Extract)	KONE/EC	5420892	N/A	2018/03/02	Alina Dobreanu

Maxxam ID: GDL934 Dup
Sample ID: BH103 SAMPLE 2
Matrix: Soil

Collected: 2018/02/21
Shipped:
Received: 2018/02/23

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Sulphate (20:1 Extract)	KONE/EC	5420892	N/A	2018/03/02	Alina Dobreanu

Maxxam Analytics International Corporation o/a Maxxam Analytics 32 Colonnade Rd, Unit #1000, Nepean, ON K2E 7J6 Phone: 613 274-0573 Fax: 613 274-0574 Website: www.maxxam.ca

Maxxam Job #: B842304
Report Date: 2018/03/05

Terrapex Environmental Ltd
Client Project #: CB1057.00
Site Location: 1622 Roger Stevens Drive
Your P.O. #: PIONEER

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.

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Maxxam
A Bureau Veritas Group Company

Your P.O. #: PIONEER
Your Project #: CB1057.00
Site Location: 1622 Roger Stevens Drive
Your C.O.C. #: 650870-06-01

Attention: Geoff Lussier

Terrapex Environmental Ltd
920 Brant St.
Suite 16
Burlington, ON
Canada L7R 4J1

Report Date: 2018/03/12
Report #: R5038214
Version: 1 - Final

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B847405
Received: 2018/03/01, 17:00

Sample Matrix: Soil
Samples Received: 1

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Reference
Methylnaphthalene Sum (1)	1	N/A	2018/03/09	CAM SOP-00301	EPA 8270D m
ABN Compounds in soil by GC/MS (1)	1	2018/03/08	2018/03/09	CAM SOP-00301	EPA 8270 m
1,3-Dichloropropene Sum (1)	1	N/A	2018/03/07		EPA 8260C m
Dinitrotoluene Sum (1)	1	2018/03/02	2018/03/09	CAM SOP - 00301	EPA 8270
Petroleum Hydrocarbons F2-F4 in Soil (1, 2)	1	2018/03/06	2018/03/07	CAM SOP-00316	CCME CWS m
F4G (CCME Hydrocarbons Gravimetric) (1)	1	2018/03/09	2018/03/09	CAM SOP-00316	CCME PHC-CWS m
Mercury (TCLP Leachable) (mg/L) (1)	1	N/A	2018/03/07	CAM SOP-00453	EPA 7470A m
Total Metals in TCLP Leachate by ICPMS (1)	1	2018/03/07	2018/03/07	CAM SOP-00447	EPA 6020B m
Moisture (1)	1	N/A	2018/03/05	CAM SOP-00445	Carter 2nd ed 51.2 m
TCLP - % Solids (1)	1	2018/03/06	2018/03/07	CAM SOP-00401	EPA 1311 Update I m
TCLP - Extraction Fluid (1)	1	N/A	2018/03/07	CAM SOP-00401	EPA 1311 Update I m
TCLP - Initial and final pH (1)	1	N/A	2018/03/07	CAM SOP-00401	EPA 1311 Update I m
Volatile Organic Compounds and F1 PHCs (1)	1	N/A	2018/03/06	CAM SOP-00230	EPA 8260C m

Remarks:

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Solid sample results, except biota, are based on dry weight unless otherwise indicated. Organic analyses are not recovery corrected except for isotope dilution methods.
Results relate to samples tested.

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Your P.O. #: PIONEER
Your Project #: CB1057.00
Site Location: 1622 Roger Stevens Drive
Your C.O.C. #: 650870-06-01

Attention: Geoff Lussier

Terrapex Environmental Ltd
920 Brant St.
Suite 16
Burlington, ON
Canada L7R 4J1

Report Date: 2018/03/12
Report #: R5038214
Version: 1 - Final

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B847405
Received: 2018/03/01, 17:00

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) This test was performed by Maxxam Analytics Mississauga
(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.
Augustyna Dobosz, Project Manager
Email: ADobosz@maxxam.ca
Phone# (905)817-5700 Ext:5798

==========

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Maxxam Job #: B847405
Report Date: 2018/03/12

Terrapex Environmental Ltd
Client Project #: CB1057.00
Site Location: 1622 Roger Stevens Drive
Your P.O. #: PIONEER

O.REG 153 VOCS BY HS & F1-F4 (SOIL)

Maxxam ID		GEL410		
Sampling Date		2018/02/26 12:00		
COC Number		650870-06-01		
	UNITS	TCLP	RDL	QC Batch
Inorganics				
Moisture	%	8.3	1.0	5425860
Calculated Parameters				
1,3-Dichloropropene (cis+trans)	ug/g	<0.050	0.050	5423161
Volatile Organics				
Acetone (2-Propanone)	ug/g	<0.50	0.50	5425684
Benzene	ug/g	<0.020	0.020	5425684
Bromodichloromethane	ug/g	<0.050	0.050	5425684
Bromoform	ug/g	<0.050	0.050	5425684
Bromomethane	ug/g	<0.050	0.050	5425684
Carbon Tetrachloride	ug/g	<0.050	0.050	5425684
Chlorobenzene	ug/g	<0.050	0.050	5425684
Chloroform	ug/g	<0.050	0.050	5425684
Dibromochloromethane	ug/g	<0.050	0.050	5425684
1,2-Dichlorobenzene	ug/g	<0.050	0.050	5425684
1,3-Dichlorobenzene	ug/g	<0.050	0.050	5425684
1,4-Dichlorobenzene	ug/g	<0.050	0.050	5425684
Dichlorodifluoromethane (FREON 12)	ug/g	<0.050	0.050	5425684
1,1-Dichloroethane	ug/g	<0.050	0.050	5425684
1,2-Dichloroethane	ug/g	<0.050	0.050	5425684
1,1-Dichloroethylene	ug/g	<0.050	0.050	5425684
cis-1,2-Dichloroethylene	ug/g	<0.050	0.050	5425684
trans-1,2-Dichloroethylene	ug/g	<0.050	0.050	5425684
1,2-Dichloropropane	ug/g	<0.050	0.050	5425684
cis-1,3-Dichloropropene	ug/g	<0.030	0.030	5425684
trans-1,3-Dichloropropene	ug/g	<0.040	0.040	5425684
Ethylbenzene	ug/g	<0.020	0.020	5425684
Ethylene Dibromide	ug/g	<0.050	0.050	5425684
Hexane	ug/g	<0.050	0.050	5425684
Methylene Chloride(Dichloromethane)	ug/g	<0.050	0.050	5425684
Methyl Ethyl Ketone (2-Butanone)	ug/g	<0.50	0.50	5425684

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Maxxam Job #: B847405
Report Date: 2018/03/12

Terrapex Environmental Ltd
Client Project #: CB1057.00
Site Location: 1622 Roger Stevens Drive
Your P.O. #: PIONEER

O.REG 153 VOCS BY HS & F1-F4 (SOIL)

Maxxam ID		GEL410		
Sampling Date		2018/02/26 12:00		
COC Number		650870-06-01		
	UNITS	TCLP	RDL	QC Batch
Methyl Isobutyl Ketone	ug/g	<0.50	0.50	5425684
Methyl t-butyl ether (MTBE)	ug/g	<0.050	0.050	5425684
Styrene	ug/g	<0.050	0.050	5425684
1,1,1,2-Tetrachloroethane	ug/g	<0.050	0.050	5425684
1,1,2,2-Tetrachloroethane	ug/g	<0.050	0.050	5425684
Tetrachloroethylene	ug/g	<0.050	0.050	5425684
Toluene	ug/g	<0.020	0.020	5425684
1,1,1-Trichloroethane	ug/g	<0.050	0.050	5425684
1,1,2-Trichloroethane	ug/g	<0.050	0.050	5425684
Trichloroethylene	ug/g	<0.050	0.050	5425684
Trichlorofluoromethane (FREON 11)	ug/g	<0.050	0.050	5425684
Vinyl Chloride	ug/g	<0.020	0.020	5425684
p+m-Xylene	ug/g	<0.020	0.020	5425684
o-Xylene	ug/g	<0.020	0.020	5425684
Total Xylenes	ug/g	<0.020	0.020	5425684
F1 (C6-C10)	ug/g	<10	10	5425684
F1 (C6-C10) - BTEX	ug/g	<10	10	5425684
F2-F4 Hydrocarbons				
F2 (C10-C16 Hydrocarbons)	ug/g	<10	10	5428073
F3 (C16-C34 Hydrocarbons)	ug/g	290	50	5428073
F4 (C34-C50 Hydrocarbons)	ug/g	720	50	5428073
Reached Baseline at C50	ug/g	No		5428073
Surrogate Recovery (%)				
o-Terphenyl	%	92		5428073
4-Bromofluorobenzene	%	90		5425684
D10-o-Xylene	%	88		5425684
D4-1,2-Dichloroethane	%	116		5425684
D8-Toluene	%	99		5425684

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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O.REG 153 SEMIVOLATILES PACKAGE (SOIL)

Maxxam ID		GEL410			GEL410		
Sampling Date		2018/02/26 12:00			2018/02/26 12:00		
COC Number		650870-06-01			650870-06-01		
	UNITS	TCLP	RDL	QC Batch	TCLP Lab-Dup	RDL	QC Batch
Semivolatile Organics							
1,2,4-Trichlorobenzene	ug/g	<0.1	0.1	5431382	<0.1	0.1	5431382
1-Methylnaphthalene	ug/g	<0.06	0.06	5431382	<0.06	0.06	5431382
2,4,5-Trichlorophenol	ug/g	<0.2	0.2	5431382	<0.2	0.2	5431382
2,4,6-Trichlorophenol	ug/g	<0.2	0.2	5431382	<0.2	0.2	5431382
2,4-Dichlorophenol	ug/g	<0.2	0.2	5431382	<0.2	0.2	5431382
2,4-Dimethylphenol	ug/g	<0.4	0.4	5431382	<0.4	0.4	5431382
2,4-Dinitrophenol	ug/g	<1	1	5431382	<1	1	5431382
2,4-Dinitrotoluene	ug/g	<0.2	0.2	5431382	<0.2	0.2	5431382
2,6-Dinitrotoluene	ug/g	<0.2	0.2	5431382	<0.2	0.2	5431382
2-Chlorophenol	ug/g	<0.2	0.2	5431382	<0.2	0.2	5431382
2-Methylnaphthalene	ug/g	<0.06	0.06	5431382	<0.06	0.06	5431382
3,3'-Dichlorobenzidine	ug/g	<1	1	5431382	<1	1	5431382
Acenaphthene	ug/g	<0.06	0.06	5431382	<0.06	0.06	5431382
Acenaphthylene	ug/g	<0.1	0.1	5431382	<0.1	0.1	5431382
Anthracene	ug/g	<0.06	0.06	5431382	<0.06	0.06	5431382
Benzo(a)anthracene	ug/g	<0.1	0.1	5431382	<0.1	0.1	5431382
Benzo(a)pyrene	ug/g	<0.1	0.1	5431382	<0.1	0.1	5431382
Benzo(b/j)fluoranthene	ug/g	<0.2	0.2	5431382	<0.2	0.2	5431382
Benzo(g,h,i)perylene	ug/g	<0.2	0.2	5431382	<0.2	0.2	5431382
Benzo(k)fluoranthene	ug/g	<0.06	0.06	5431382	<0.06	0.06	5431382
Biphenyl	ug/g	<0.1	0.1	5431382	<0.1	0.1	5431382
Bis(2-chloroethyl)ether	ug/g	<0.4	0.4	5431382	<0.4	0.4	5431382
Bis(2-chloroisopropyl)ether	ug/g	<0.2	0.2	5431382	<0.2	0.2	5431382
Bis(2-ethylhexyl)phthalate	ug/g	<2	2	5431382	<2	2	5431382
Chrysene	ug/g	<0.1	0.1	5431382	<0.1	0.1	5431382
Dibenz(a,h)anthracene	ug/g	<0.1	0.1	5431382	<0.1	0.1	5431382
Diethyl phthalate	ug/g	<0.4	0.4	5431382	<0.4	0.4	5431382
Dimethyl phthalate	ug/g	<0.4	0.4	5431382	<0.4	0.4	5431382
Fluoranthene	ug/g	<0.1	0.1	5431382	<0.1	0.1	5431382
Fluorene	ug/g	<0.06	0.06	5431382	<0.06	0.06	5431382

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate

Maxxam Job #: B847405
Report Date: 2018/03/12

Terrapex Environmental Ltd
Client Project #: CB1057.00
Site Location: 1622 Roger Stevens Drive
Your P.O. #: PIONEER

O.REG 153 SEMIVOLATILES PACKAGE (SOIL)

Maxxam ID		GEL410			GEL410		
Sampling Date		2018/02/26 12:00			2018/02/26 12:00		
COC Number		650870-06-01			650870-06-01		
	UNITS	**TCLP**	**RDL**	**QC Batch**	**TCLP Lab-Dup**	**RDL**	**QC Batch**
Indeno(1,2,3-cd)pyrene	ug/g	<0.2	0.2	5431382	<0.2	0.2	5431382
Naphthalene	ug/g	<0.06	0.06	5431382	<0.06	0.06	5431382
p-Chloroaniline	ug/g	<0.4	0.4	5431382	<0.4	0.4	5431382
Pentachlorophenol	ug/g	<0.2	0.2	5431382	<0.2	0.2	5431382
Phenanthrene	ug/g	<0.1	0.1	5431382	<0.1	0.1	5431382
Phenol	ug/g	<0.2	0.2	5431382	<0.2	0.2	5431382
Pyrene	ug/g	<0.1	0.1	5431382	<0.1	0.1	5431382
Calculated Parameters							
2,4- & 2,6-Dinitrotoluene	ug/g	<0.28	0.28	5423858			
Methylnaphthalene, 2-(1-)	ug/g	<0.085	0.085	5423856			
Surrogate Recovery (%)							
2,4,6-Tribromophenol	%	73		5431382	69		5431382
2-Fluorobiphenyl	%	92		5431382	88		5431382
D14-Terphenyl (FS)	%	96		5431382	94		5431382
D5-Nitrobenzene	%	74		5431382	72		5431382

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate

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Maxxam Job #: B847405
Report Date: 2018/03/12

Terrapex Environmental Ltd
Client Project #: CB1057.00
Site Location: 1622 Roger Stevens Drive
Your P.O. #: PIONEER

O.REG 558 TCLP LEACHATE PREPARATION (SOIL)

Maxxam ID		GEL410		
Sampling Date		2018/02/26 12:00		
COC Number		650870-06-01		
	UNITS	**TCLP**	**RDL**	**QC Batch**
Inorganics				
Final pH	pH	6.26		5428355
Initial pH	pH	9.41		5428355
TCLP - % Solids	%	100	0.2	5428353
TCLP Extraction Fluid	N/A	FLUID 1		5428354

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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O.REG 558 TCLP METALS (SOIL)

Maxxam ID		GEL410		
Sampling Date		2018/02/26 12:00		
COC Number		650870-06-01		
	UNITS	TCLP	RDL	QC Batch
Metals				
Leachable Mercury (Hg)	mg/L	<0.0010	0.0010	5429337
Leachable Arsenic (As)	mg/L	<0.2	0.2	5429454
Leachable Barium (Ba)	mg/L	0.6	0.2	5429454
Leachable Boron (B)	mg/L	0.1	0.1	5429454
Leachable Cadmium (Cd)	mg/L	<0.05	0.05	5429454
Leachable Chromium (Cr)	mg/L	<0.1	0.1	5429454
Leachable Lead (Pb)	mg/L	<0.1	0.1	5429454
Leachable Selenium (Se)	mg/L	<0.1	0.1	5429454
Leachable Silver (Ag)	mg/L	<0.01	0.01	5429454
Leachable Uranium (U)	mg/L	<0.01	0.01	5429454

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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PETROLEUM HYDROCARBONS (CCME)

Maxxam ID		GEL410		
Sampling Date		2018/02/26 12:00		
COC Number		650870-06-01		
	UNITS	**TCLP**	**RDL**	**QC Batch**
F2-F4 Hydrocarbons				
F4G-sg (Grav. Heavy Hydrocarbons)	ug/g	2400	100	5433583

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Maxxam Job #: B847405
Report Date: 2018/03/12

Terrapex Environmental Ltd
Client Project #: CB1057.00
Site Location: 1622 Roger Stevens Drive
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TEST SUMMARY

Maxxam ID: GEL410
Sample ID: TCLP
Matrix: Soil

Collected: 2018/02/26
Shipped:
Received: 2018/03/01

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	5423856	N/A	2018/03/09	Automated Statchk
ABN Compounds in soil by GC/MS	GC/MS	5431382	2018/03/08	2018/03/09	Milijana Avramovic
1,3-Dichloropropene Sum	CALC	5423161	N/A	2018/03/07	Automated Statchk
Dinitrotoluene Sum	CALC	5423858	2018/03/09	2018/03/09	Automated Statchk
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	5428073	2018/03/06	2018/03/07	Zhiyue (Frank) Zhu
F4G (CCME Hydrocarbons Gravimetric)	BAL	5433583	2018/03/09	2018/03/09	Debra Deslandes
Mercury (TCLP Leachable) (mg/L)	CV/AA	5429337	N/A	2018/03/07	Ron Morrison
Total Metals in TCLP Leachate by ICPMS	ICP1/MS	5429454	2018/03/07	2018/03/07	Matthew Ritenburg
Moisture	BAL	5425860	N/A	2018/03/05	Min Yang
TCLP - % Solids	BAL	5428353	2018/03/06	2018/03/07	Jian (Ken) Wang
TCLP - Extraction Fluid		5428354	N/A	2018/03/07	Jian (Ken) Wang
TCLP - Initial and final pH	PH	5428355	N/A	2018/03/07	Jian (Ken) Wang
Volatile Organic Compounds and F1 PHCs	GC/MSFD	5425684	N/A	2018/03/06	Karen Hughes

Maxxam ID: GEL410 Dup
Sample ID: TCLP
Matrix: Soil

Collected: 2018/02/26
Shipped:
Received: 2018/03/01

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
ABN Compounds in soil by GC/MS	GC/MS	5431382	2018/03/08	2018/03/09	Milijana Avramovic

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GENERAL COMMENTS

Each temperature is the average of up to three cooler temperatures taken at receipt

Package 1	0.0°C

Sample GEL410 [TCLP] : VOCF1 Analysis: Greater than 10g of soil was submitted in the field preserved vial. This significantly exceeds the protocol specification of approximately 5g. Additional methanol was added to the vial to ensure extraction efficiency.

ABN Analysis: Due to the sample matrix, sample required dilution. Detection limits were adjusted accordingly.

Results relate only to the items tested.

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Terrapex Environmental Ltd
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Site Location: 1622 Roger Stevens Drive
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QUALITY ASSURANCE REPORT

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
5425684	KH2	Matrix Spike	4-Bromofluorobenzene	2018/03/06		96	%	60 - 140
			D10-o-Xylene	2018/03/06		96	%	60 - 130
			D4-1,2-Dichloroethane	2018/03/06		110	%	60 - 140
			D8-Toluene	2018/03/06		100	%	60 - 140
			Acetone (2-Propanone)	2018/03/06		104	%	60 - 140
			Benzene	2018/03/06		99	%	60 - 140
			Bromodichloromethane	2018/03/06		95	%	60 - 140
			Bromoform	2018/03/06		85	%	60 - 140
			Bromomethane	2018/03/06		108	%	60 - 140
			Carbon Tetrachloride	2018/03/06		101	%	60 - 140
			Chlorobenzene	2018/03/06		94	%	60 - 140
			Chloroform	2018/03/06		101	%	60 - 140
			Dibromochloromethane	2018/03/06		91	%	60 - 140
			1,2-Dichlorobenzene	2018/03/06		95	%	60 - 140
			1,3-Dichlorobenzene	2018/03/06		96	%	60 - 140
			1,4-Dichlorobenzene	2018/03/06		102	%	60 - 140
			Dichlorodifluoromethane (FREON 12)	2018/03/06		122	%	60 - 140
			1,1-Dichloroethane	2018/03/06		103	%	60 - 140
			1,2-Dichloroethane	2018/03/06		102	%	60 - 140
			1,1-Dichloroethylene	2018/03/06		108	%	60 - 140
			cis-1,2-Dichloroethylene	2018/03/06		101	%	60 - 140
			trans-1,2-Dichloroethylene	2018/03/06		98	%	60 - 140
			1,2-Dichloropropane	2018/03/06		96	%	60 - 140
			cis-1,3-Dichloropropene	2018/03/06		95	%	60 - 140
			trans-1,3-Dichloropropene	2018/03/06		97	%	60 - 140
			Ethylbenzene	2018/03/06		94	%	60 - 140
			Ethylene Dibromide	2018/03/06		94	%	60 - 140
			Hexane	2018/03/06		102	%	60 - 140
			Methylene Chloride(Dichloromethane)	2018/03/06		106	%	60 - 140
			Methyl Ethyl Ketone (2-Butanone)	2018/03/06		102	%	60 - 140
			Methyl Isobutyl Ketone	2018/03/06		96	%	60 - 140
			Methyl t-butyl ether (MTBE)	2018/03/06		98	%	60 - 140
			Styrene	2018/03/06		87	%	60 - 140
			1,1,1,2-Tetrachloroethane	2018/03/06		92	%	60 - 140
			1,1,2,2-Tetrachloroethane	2018/03/06		94	%	60 - 140
			Tetrachloroethylene	2018/03/06		97	%	60 - 140
			Toluene	2018/03/06		93	%	60 - 140
			1,1,1-Trichloroethane	2018/03/06		104	%	60 - 140
			1,1,2-Trichloroethane	2018/03/06		103	%	60 - 140
			Trichloroethylene	2018/03/06		97	%	60 - 140
			Trichlorofluoromethane (FREON 11)	2018/03/06		112	%	60 - 140
			Vinyl Chloride	2018/03/06		107	%	60 - 140
			p+m-Xylene	2018/03/06		92	%	60 - 140
			o-Xylene	2018/03/06		93	%	60 - 140
			F1 (C6-C10)	2018/03/06		112	%	60 - 140
5425684	KH2	Spiked Blank	4-Bromofluorobenzene	2018/03/06		96	%	60 - 140
			D10-o-Xylene	2018/03/06		90	%	60 - 130
			D4-1,2-Dichloroethane	2018/03/06		109	%	60 - 140
			D8-Toluene	2018/03/06		100	%	60 - 140
			Acetone (2-Propanone)	2018/03/06		102	%	60 - 140
			Benzene	2018/03/06		98	%	60 - 130
			Bromodichloromethane	2018/03/06		94	%	60 - 130

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Bromoform	2018/03/06		83	%	60 - 130
			Bromomethane	2018/03/06		104	%	60 - 140
			Carbon Tetrachloride	2018/03/06		101	%	60 - 130
			Chlorobenzene	2018/03/06		94	%	60 - 130
			Chloroform	2018/03/06		101	%	60 - 130
			Dibromochloromethane	2018/03/06		89	%	60 - 130
			1,2-Dichlorobenzene	2018/03/06		96	%	60 - 130
			1,3-Dichlorobenzene	2018/03/06		99	%	60 - 130
			1,4-Dichlorobenzene	2018/03/06		105	%	60 - 130
			Dichlorodifluoromethane (FREON 12)	2018/03/06		121	%	60 - 140
			1,1-Dichloroethane	2018/03/06		103	%	60 - 130
			1,2-Dichloroethane	2018/03/06		101	%	60 - 130
			1,1-Dichloroethylene	2018/03/06		108	%	60 - 130
			cis-1,2-Dichloroethylene	2018/03/06		101	%	60 - 130
			trans-1,2-Dichloroethylene	2018/03/06		100	%	60 - 130
			1,2-Dichloropropane	2018/03/06		96	%	60 - 130
			cis-1,3-Dichloropropene	2018/03/06		91	%	60 - 130
			trans-1,3-Dichloropropene	2018/03/06		90	%	60 - 130
			Ethylbenzene	2018/03/06		95	%	60 - 130
			Ethylene Dibromide	2018/03/06		92	%	60 - 130
			Hexane	2018/03/06		101	%	60 - 130
			Methylene Chloride(Dichloromethane)	2018/03/06		105	%	60 - 130
			Methyl Ethyl Ketone (2-Butanone)	2018/03/06		100	%	60 - 140
			Methyl Isobutyl Ketone	2018/03/06		94	%	60 - 130
			Methyl t-butyl ether (MTBE)	2018/03/06		98	%	60 - 130
			Styrene	2018/03/06		88	%	60 - 130
			1,1,1,2-Tetrachloroethane	2018/03/06		92	%	60 - 130
			1,1,2,2-Tetrachloroethane	2018/03/06		93	%	60 - 130
			Tetrachloroethylene	2018/03/06		98	%	60 - 130
			Toluene	2018/03/06		92	%	60 - 130
			1,1,1-Trichloroethane	2018/03/06		104	%	60 - 130
			1,1,2-Trichloroethane	2018/03/06		102	%	60 - 130
			Trichloroethylene	2018/03/06		98	%	60 - 130
			Trichlorofluoromethane (FREON 11)	2018/03/06		112	%	60 - 130
			Vinyl Chloride	2018/03/06		107	%	60 - 130
			p+m-Xylene	2018/03/06		93	%	60 - 130
			o-Xylene	2018/03/06		94	%	60 - 130
			F1 (C6-C10)	2018/03/06		98	%	80 - 120
5425684	KH2	Method Blank	4-Bromofluorobenzene	2018/03/06		92	%	60 - 140
			D10-o-Xylene	2018/03/06		94	%	60 - 130
			D4-1,2-Dichloroethane	2018/03/06		110	%	60 - 140
			D8-Toluene	2018/03/06		100	%	60 - 140
			Acetone (2-Propanone)	2018/03/06	<0.50		ug/g	
			Benzene	2018/03/06	<0.020		ug/g	
			Bromodichloromethane	2018/03/06	<0.050		ug/g	
			Bromoform	2018/03/06	<0.050		ug/g	
			Bromomethane	2018/03/06	<0.050		ug/g	
			Carbon Tetrachloride	2018/03/06	<0.050		ug/g	
			Chlorobenzene	2018/03/06	<0.050		ug/g	
			Chloroform	2018/03/06	<0.050		ug/g	
			Dibromochloromethane	2018/03/06	<0.050		ug/g	
			1,2-Dichlorobenzene	2018/03/06	<0.050		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
			1,3-Dichlorobenzene	2018/03/06	<0.050		ug/g	
			1,4-Dichlorobenzene	2018/03/06	<0.050		ug/g	
			Dichlorodifluoromethane (FREON 12)	2018/03/06	<0.050		ug/g	
			1,1-Dichloroethane	2018/03/06	<0.050		ug/g	
			1,2-Dichloroethane	2018/03/06	<0.050		ug/g	
			1,1-Dichloroethylene	2018/03/06	<0.050		ug/g	
			cis-1,2-Dichloroethylene	2018/03/06	<0.050		ug/g	
			trans-1,2-Dichloroethylene	2018/03/06	<0.050		ug/g	
			1,2-Dichloropropane	2018/03/06	<0.050		ug/g	
			cis-1,3-Dichloropropene	2018/03/06	<0.030		ug/g	
			trans-1,3-Dichloropropene	2018/03/06	<0.040		ug/g	
			Ethylbenzene	2018/03/06	<0.020		ug/g	
			Ethylene Dibromide	2018/03/06	<0.050		ug/g	
			Hexane	2018/03/06	<0.050		ug/g	
			Methylene Chloride(Dichloromethane)	2018/03/06	<0.050		ug/g	
			Methyl Ethyl Ketone (2-Butanone)	2018/03/06	<0.50		ug/g	
			Methyl Isobutyl Ketone	2018/03/06	<0.50		ug/g	
			Methyl t-butyl ether (MTBE)	2018/03/06	<0.050		ug/g	
			Styrene	2018/03/06	<0.050		ug/g	
			1,1,1,2-Tetrachloroethane	2018/03/06	<0.050		ug/g	
			1,1,2,2-Tetrachloroethane	2018/03/06	<0.050		ug/g	
			Tetrachloroethylene	2018/03/06	<0.050		ug/g	
			Toluene	2018/03/06	<0.020		ug/g	
			1,1,1-Trichloroethane	2018/03/06	<0.050		ug/g	
			1,1,2-Trichloroethane	2018/03/06	<0.050		ug/g	
			Trichloroethylene	2018/03/06	<0.050		ug/g	
			Trichlorofluoromethane (FREON 11)	2018/03/06	<0.050		ug/g	
			Vinyl Chloride	2018/03/06	<0.020		ug/g	
			p+m-Xylene	2018/03/06	<0.020		ug/g	
			o-Xylene	2018/03/06	<0.020		ug/g	
			Total Xylenes	2018/03/06	<0.020		ug/g	
			F1 (C6-C10)	2018/03/06	<10		ug/g	
			F1 (C6-C10) - BTEX	2018/03/06	<10		ug/g	
5425684	KH2	RPD	Acetone (2-Propanone)	2018/03/06	NC		%	50
			Benzene	2018/03/06	NC		%	50
			Bromodichloromethane	2018/03/06	NC		%	50
			Bromoform	2018/03/06	NC		%	50
			Bromomethane	2018/03/06	NC		%	50
			Carbon Tetrachloride	2018/03/06	NC		%	50
			Chlorobenzene	2018/03/06	NC		%	50
			Chloroform	2018/03/06	NC		%	50
			Dibromochloromethane	2018/03/06	NC		%	50
			1,2-Dichlorobenzene	2018/03/06	NC		%	50
			1,3-Dichlorobenzene	2018/03/06	NC		%	50
			1,4-Dichlorobenzene	2018/03/06	NC		%	50
			Dichlorodifluoromethane (FREON 12)	2018/03/06	NC		%	50
			1,1-Dichloroethane	2018/03/06	NC		%	50
			1,2-Dichloroethane	2018/03/06	NC		%	50
			1,1-Dichloroethylene	2018/03/06	NC		%	50
			cis-1,2-Dichloroethylene	2018/03/06	NC		%	50
			trans-1,2-Dichloroethylene	2018/03/06	NC		%	50
			1,2-Dichloropropane	2018/03/06	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
			cis-1,3-Dichloropropene	2018/03/06	NC		%	50
			trans-1,3-Dichloropropene	2018/03/06	NC		%	50
			Ethylbenzene	2018/03/06	NC		%	50
			Ethylene Dibromide	2018/03/06	NC		%	50
			Hexane	2018/03/06	NC		%	50
			Methylene Chloride(Dichloromethane)	2018/03/06	NC		%	50
			Methyl Ethyl Ketone (2-Butanone)	2018/03/06	NC		%	50
			Methyl Isobutyl Ketone	2018/03/06	NC		%	50
			Methyl t-butyl ether (MTBE)	2018/03/06	NC		%	50
			Styrene	2018/03/06	NC		%	50
			1,1,1,2-Tetrachloroethane	2018/03/06	NC		%	50
			1,1,2,2-Tetrachloroethane	2018/03/06	NC		%	50
			Tetrachloroethylene	2018/03/06	NC		%	50
			Toluene	2018/03/06	NC		%	50
			1,1,1-Trichloroethane	2018/03/06	NC		%	50
			1,1,2-Trichloroethane	2018/03/06	NC		%	50
			Trichloroethylene	2018/03/06	NC		%	50
			Trichlorofluoromethane (FREON 11)	2018/03/06	NC		%	50
			Vinyl Chloride	2018/03/06	NC		%	50
			p+m-Xylene	2018/03/06	NC		%	50
			o-Xylene	2018/03/06	NC		%	50
			Total Xylenes	2018/03/06	NC		%	50
			F1 (C6-C10)	2018/03/06	NC		%	30
			F1 (C6-C10) - BTEX	2018/03/06	NC		%	30
5425860	JGH	RPD	Moisture	2018/03/05	2.7		%	20
5428073	ZZ	Matrix Spike	o-Terphenyl	2018/03/07		94	%	60 - 130
			F2 (C10-C16 Hydrocarbons)	2018/03/07		93	%	50 - 130
			F3 (C16-C34 Hydrocarbons)	2018/03/07		95	%	50 - 130
			F4 (C34-C50 Hydrocarbons)	2018/03/07		97	%	50 - 130
5428073	ZZ	Spiked Blank	o-Terphenyl	2018/03/07		90	%	60 - 130
			F2 (C10-C16 Hydrocarbons)	2018/03/07		89	%	80 - 120
			F3 (C16-C34 Hydrocarbons)	2018/03/07		92	%	80 - 120
			F4 (C34-C50 Hydrocarbons)	2018/03/07		92	%	80 - 120
5428073	ZZ	Method Blank	o-Terphenyl	2018/03/07		93	%	60 - 130
			F2 (C10-C16 Hydrocarbons)	2018/03/07	<10		ug/g	
			F3 (C16-C34 Hydrocarbons)	2018/03/07	<50		ug/g	
			F4 (C34-C50 Hydrocarbons)	2018/03/07	<50		ug/g	
5428073	ZZ	RPD	F2 (C10-C16 Hydrocarbons)	2018/03/07	NC		%	30
			F3 (C16-C34 Hydrocarbons)	2018/03/07	NC		%	30
			F4 (C34-C50 Hydrocarbons)	2018/03/07	NC		%	30
5429337	RON	Matrix Spike	Leachable Mercury (Hg)	2018/03/07		98	%	75 - 125
5429337	RON	Leachate Blank	Leachable Mercury (Hg)	2018/03/07	<0.0010		mg/L	
5429337	RON	Spiked Blank	Leachable Mercury (Hg)	2018/03/07		96	%	80 - 120
5429337	RON	Method Blank	Leachable Mercury (Hg)	2018/03/07	<0.0010		mg/L	
5429337	RON	RPD	Leachable Mercury (Hg)	2018/03/07	NC		%	25
5429454	MRG	Matrix Spike	Leachable Arsenic (As)	2018/03/07		100	%	80 - 120
			Leachable Barium (Ba)	2018/03/07		94	%	80 - 120
			Leachable Boron (B)	2018/03/07		100	%	80 - 120
			Leachable Cadmium (Cd)	2018/03/07		97	%	80 - 120
			Leachable Chromium (Cr)	2018/03/07		98	%	80 - 120
			Leachable Lead (Pb)	2018/03/07		92	%	80 - 120
			Leachable Selenium (Se)	2018/03/07		98	%	80 - 120

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Leachable Silver (Ag)	2018/03/07		95	%	80 - 120
			Leachable Uranium (U)	2018/03/07		97	%	80 - 120
5429454	MRG	Leachate Blank	Leachable Arsenic (As)	2018/03/07	<0.2		mg/L	
			Leachable Barium (Ba)	2018/03/07	<0.2		mg/L	
			Leachable Boron (B)	2018/03/07	<0.1		mg/L	
			Leachable Cadmium (Cd)	2018/03/07	<0.05		mg/L	
			Leachable Chromium (Cr)	2018/03/07	<0.1		mg/L	
			Leachable Lead (Pb)	2018/03/07	<0.1		mg/L	
			Leachable Selenium (Se)	2018/03/07	<0.1		mg/L	
			Leachable Silver (Ag)	2018/03/07	<0.01		mg/L	
			Leachable Uranium (U)	2018/03/07	<0.01		mg/L	
5429454	MRG	Spiked Blank	Leachable Arsenic (As)	2018/03/07		93	%	80 - 120
			Leachable Barium (Ba)	2018/03/07		93	%	80 - 120
			Leachable Boron (B)	2018/03/07		93	%	80 - 120
			Leachable Cadmium (Cd)	2018/03/07		93	%	80 - 120
			Leachable Chromium (Cr)	2018/03/07		91	%	80 - 120
			Leachable Lead (Pb)	2018/03/07		92	%	80 - 120
			Leachable Selenium (Se)	2018/03/07		93	%	80 - 120
			Leachable Silver (Ag)	2018/03/07		95	%	80 - 120
			Leachable Uranium (U)	2018/03/07		96	%	80 - 120
5429454	MRG	RPD	Leachable Arsenic (As)	2018/03/07	NC		%	35
			Leachable Barium (Ba)	2018/03/07	15		%	35
			Leachable Boron (B)	2018/03/07	27		%	35
			Leachable Cadmium (Cd)	2018/03/07	NC		%	35
			Leachable Chromium (Cr)	2018/03/07	NC		%	35
			Leachable Lead (Pb)	2018/03/07	NC		%	35
			Leachable Selenium (Se)	2018/03/07	NC		%	35
			Leachable Silver (Ag)	2018/03/07	NC		%	35
			Leachable Uranium (U)	2018/03/07	NC		%	35
5431382	MA	Matrix Spike [GEL410-01]	2,4,6-Tribromophenol	2018/03/09		104	%	50 - 130
			2-Fluorobiphenyl	2018/03/09		95	%	50 - 130
			D14-Terphenyl (FS)	2018/03/09		101	%	50 - 130
			D5-Nitrobenzene	2018/03/09		76	%	50 - 130
			1,2,4-Trichlorobenzene	2018/03/09		85	%	50 - 130
			1-Methylnaphthalene	2018/03/09		90	%	50 - 130
			2,4,5-Trichlorophenol	2018/03/09		107	%	50 - 130
			2,4,6-Trichlorophenol	2018/03/09		100	%	50 - 130
			2,4-Dichlorophenol	2018/03/09		99	%	50 - 130
			2,4-Dimethylphenol	2018/03/09		80	%	30 - 130
			2,4-Dinitrophenol	2018/03/09		44	%	30 - 130
			2,4-Dinitrotoluene	2018/03/09		91	%	50 - 130
			2,6-Dinitrotoluene	2018/03/09		82	%	50 - 130
			2-Chlorophenol	2018/03/09		88	%	50 - 130
			2-Methylnaphthalene	2018/03/09		89	%	50 - 130
			3,3'-Dichlorobenzidine	2018/03/09		101	%	30 - 130
			Acenaphthene	2018/03/09		105	%	50 - 130
			Acenaphthylene	2018/03/09		98	%	50 - 130
			Anthracene	2018/03/09		99	%	50 - 130
			Benzo(a)anthracene	2018/03/09		107	%	50 - 130
			Benzo(a)pyrene	2018/03/09		108	%	50 - 130
			Benzo(b/j)fluoranthene	2018/03/09		116	%	50 - 130
			Benzo(g,h,i)perylene	2018/03/09		68	%	50 - 130

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Benzo(k)fluoranthene	2018/03/09		121	%	50 - 130
			Biphenyl	2018/03/09		94	%	50 - 130
			Bis(2-chloroethyl)ether	2018/03/09		75	%	50 - 130
			Bis(2-chloroisopropyl)ether	2018/03/09		82	%	50 - 130
			Bis(2-ethylhexyl)phthalate	2018/03/09		101	%	50 - 130
			Chrysene	2018/03/09		110	%	50 - 130
			Dibenz(a,h)anthracene	2018/03/09		78	%	50 - 130
			Diethyl phthalate	2018/03/09		97	%	50 - 130
			Dimethyl phthalate	2018/03/09		100	%	50 - 130
			Fluoranthene	2018/03/09		114	%	50 - 130
			Fluorene	2018/03/09		108	%	50 - 130
			Indeno(1,2,3-cd)pyrene	2018/03/09		76	%	50 - 130
			Naphthalene	2018/03/09		109	%	50 - 130
			p-Chloroaniline	2018/03/09		83	%	30 - 130
			Pentachlorophenol	2018/03/09		19 (1)	%	50 - 130
			Phenanthrene	2018/03/09		104	%	50 - 130
			Phenol	2018/03/09		88	%	30 - 130
			Pyrene	2018/03/09		106	%	50 - 130
5431382	MA	Spiked Blank	2,4,6-Tribromophenol	2018/03/08		86	%	50 - 130
			2-Fluorobiphenyl	2018/03/08		96	%	50 - 130
			D14-Terphenyl (FS)	2018/03/08		111	%	50 - 130
			D5-Nitrobenzene	2018/03/08		93	%	50 - 130
			1,2,4-Trichlorobenzene	2018/03/08		88	%	50 - 130
			1-Methylnaphthalene	2018/03/08		88	%	50 - 130
			2,4,5-Trichlorophenol	2018/03/08		102	%	50 - 130
			2,4,6-Trichlorophenol	2018/03/08		96	%	50 - 130
			2,4-Dichlorophenol	2018/03/08		81	%	50 - 130
			2,4-Dimethylphenol	2018/03/08		80	%	30 - 130
			2,4-Dinitrophenol	2018/03/08		10 (1)	%	30 - 130
			2,4-Dinitrotoluene	2018/03/08		97	%	50 - 130
			2,6-Dinitrotoluene	2018/03/08		93	%	50 - 130
			2-Chlorophenol	2018/03/08		92	%	50 - 130
			2-Methylnaphthalene	2018/03/08		86	%	50 - 130
			3,3'-Dichlorobenzidine	2018/03/08		62	%	30 - 130
			Acenaphthene	2018/03/08		100	%	50 - 130
			Acenaphthylene	2018/03/08		97	%	50 - 130
			Anthracene	2018/03/08		92	%	50 - 130
			Benzo(a)anthracene	2018/03/08		105	%	50 - 130
			Benzo(a)pyrene	2018/03/08		99	%	50 - 130
			Benzo(b/j)fluoranthene	2018/03/08		102	%	50 - 130
			Benzo(g,h,i)perylene	2018/03/08		108	%	50 - 130
			Benzo(k)fluoranthene	2018/03/08		111	%	50 - 130
			Biphenyl	2018/03/08		89	%	50 - 130
			Bis(2-chloroethyl)ether	2018/03/08		92	%	50 - 130
			Bis(2-chloroisopropyl)ether	2018/03/08		93	%	50 - 130
			Bis(2-ethylhexyl)phthalate	2018/03/08		89	%	50 - 130
			Chrysene	2018/03/08		103	%	50 - 130
			Dibenz(a,h)anthracene	2018/03/08		108	%	50 - 130
			Diethyl phthalate	2018/03/08		103	%	50 - 130
			Dimethyl phthalate	2018/03/08		95	%	50 - 130
			Fluoranthene	2018/03/08		107	%	50 - 130
			Fluorene	2018/03/08		107	%	50 - 130

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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	2018/03/08		103	%	50 - 130
			Naphthalene	2018/03/08		103	%	50 - 130
			p-Chloroaniline	2018/03/08		60	%	30 - 130
			Pentachlorophenol	2018/03/08		63	%	50 - 130
			Phenanthrene	2018/03/08		97	%	50 - 130
			Phenol	2018/03/08		98	%	30 - 130
			Pyrene	2018/03/08		118	%	50 - 130
5431382	MA	Method Blank	2,4,6-Tribromophenol	2018/03/08		73	%	50 - 130
			2-Fluorobiphenyl	2018/03/08		102	%	50 - 130
			D14-Terphenyl (FS)	2018/03/08		110	%	50 - 130
			D5-Nitrobenzene	2018/03/08		94	%	50 - 130
			1,2,4-Trichlorobenzene	2018/03/08	<0.05		ug/g	
			1-Methylnaphthalene	2018/03/08	<0.03		ug/g	
			2,4,5-Trichlorophenol	2018/03/08	<0.08		ug/g	
			2,4,6-Trichlorophenol	2018/03/08	<0.1		ug/g	
			2,4-Dichlorophenol	2018/03/08	<0.1		ug/g	
			2,4-Dimethylphenol	2018/03/08	<0.2		ug/g	
			2,4-Dinitrophenol	2018/03/08	<0.5		ug/g	
			2,4-Dinitrotoluene	2018/03/08	<0.1		ug/g	
			2,6-Dinitrotoluene	2018/03/08	<0.1		ug/g	
			2-Chlorophenol	2018/03/08	<0.08		ug/g	
			2-Methylnaphthalene	2018/03/08	<0.03		ug/g	
			3,3'-Dichlorobenzidine	2018/03/08	<0.5		ug/g	
			Acenaphthene	2018/03/08	<0.03		ug/g	
			Acenaphthylene	2018/03/08	<0.05		ug/g	
			Anthracene	2018/03/08	<0.03		ug/g	
			Benzo(a)anthracene	2018/03/08	<0.05		ug/g	
			Benzo(a)pyrene	2018/03/08	<0.05		ug/g	
			Benzo(b/j)fluoranthene	2018/03/08	<0.1		ug/g	
			Benzo(g,h,i)perylene	2018/03/08	<0.1		ug/g	
			Benzo(k)fluoranthene	2018/03/08	<0.03		ug/g	
			Biphenyl	2018/03/08	<0.05		ug/g	
			Bis(2-chloroethyl)ether	2018/03/08	<0.2		ug/g	
			Bis(2-chloroisopropyl)ether	2018/03/08	<0.1		ug/g	
			Bis(2-ethylhexyl)phthalate	2018/03/08	<1		ug/g	
			Chrysene	2018/03/08	<0.05		ug/g	
			Dibenz(a,h)anthracene	2018/03/08	<0.05		ug/g	
			Diethyl phthalate	2018/03/08	<0.2		ug/g	
			Dimethyl phthalate	2018/03/08	<0.2		ug/g	
			Fluoranthene	2018/03/08	<0.05		ug/g	
			Fluorene	2018/03/08	<0.03		ug/g	
			Indeno(1,2,3-cd)pyrene	2018/03/08	<0.08		ug/g	
			Naphthalene	2018/03/08	<0.03		ug/g	
			p-Chloroaniline	2018/03/08	<0.2		ug/g	
			Pentachlorophenol	2018/03/08	<0.1		ug/g	
			Phenanthrene	2018/03/08	<0.05		ug/g	
			Phenol	2018/03/08	<0.09		ug/g	
			Pyrene	2018/03/08	<0.05		ug/g	
5431382	MA	RPD [GEL410-01]	1,2,4-Trichlorobenzene	2018/03/09	NC		%	40
			1-Methylnaphthalene	2018/03/09	NC		%	40
			2,4,5-Trichlorophenol	2018/03/09	NC		%	40
			2,4,6-Trichlorophenol	2018/03/09	NC		%	40

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			2,4-Dichlorophenol	2018/03/09	NC		%	40
			2,4-Dimethylphenol	2018/03/09	NC		%	40
			2,4-Dinitrophenol	2018/03/09	NC		%	40
			2,4-Dinitrotoluene	2018/03/09	NC		%	40
			2,6-Dinitrotoluene	2018/03/09	NC		%	40
			2-Chlorophenol	2018/03/09	NC		%	40
			2-Methylnaphthalene	2018/03/09	NC		%	40
			3,3'-Dichlorobenzidine	2018/03/09	NC		%	40
			Acenaphthene	2018/03/09	NC		%	40
			Acenaphthylene	2018/03/09	NC		%	40
			Anthracene	2018/03/09	NC		%	40
			Benzo(a)anthracene	2018/03/09	NC		%	40
			Benzo(a)pyrene	2018/03/09	NC		%	40
			Benzo(b/j)fluoranthene	2018/03/09	NC		%	40
			Benzo(g,h,i)perylene	2018/03/09	NC		%	40
			Benzo(k)fluoranthene	2018/03/09	NC		%	40
			Biphenyl	2018/03/09	NC		%	40
			Bis(2-chloroethyl)ether	2018/03/09	NC		%	40
			Bis(2-chloroisopropyl)ether	2018/03/09	NC		%	40
			Bis(2-ethylhexyl)phthalate	2018/03/09	NC		%	40
			Chrysene	2018/03/09	NC		%	40
			Dibenz(a,h)anthracene	2018/03/09	NC		%	40
			Diethyl phthalate	2018/03/09	NC		%	40
			Dimethyl phthalate	2018/03/09	NC		%	40
			Fluoranthene	2018/03/09	NC		%	40
			Fluorene	2018/03/09	NC		%	40
			Indeno(1,2,3-cd)pyrene	2018/03/09	NC		%	40
			Naphthalene	2018/03/09	NC		%	40
			p-Chloroaniline	2018/03/09	NC		%	40
			Pentachlorophenol	2018/03/09	NC		%	40
			Phenanthrene	2018/03/09	NC		%	40
			Phenol	2018/03/09	NC		%	40
			Pyrene	2018/03/09	NC		%	40
5433583	DDS	Matrix Spike [GEL410-03]	F4G-sg (Grav. Heavy Hydrocarbons)	2018/03/09		NC	%	65 - 135
5433583	DDS	Spiked Blank	F4G-sg (Grav. Heavy Hydrocarbons)	2018/03/09		100	%	65 - 135
5433583	DDS	Method Blank	F4G-sg (Grav. Heavy Hydrocarbons)	2018/03/09	<100		ug/g	
5433583	DDS	RPD	F4G-sg (Grav. Heavy Hydrocarbons)	2018/03/09	0		%	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.

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 spike amount was too small to permit a reliable recovery calculation (matrix spike concentration was less than 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 (absolute difference <= 2x 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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Maxxam Job #: B847405
Report Date: 2018/03/12

Terrapex Environmental Ltd
Client Project #: CB1057.00
Site Location: 1622 Roger Stevens Drive
Your P.O. #: PIONEER

VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by the following individual(s).

Cristina Carriere, Scientific Service Specialist

Ewa Pranjic, 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.

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Maxxam A Bureau Veritas Group Company

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01-Mar-18 17:00
Augustyna Dobosz
B847405
MAF ENV-678

Page 1 of 1

INVOICE TO:		REPORT TO:		PROJECT INFORMATION:		
Company Name:	#30396 Parkland Industries Ltd	Company Name:	#19684 Terrapex Environmental Ltd	Quotation #:	B75111	Bottle Order #: 650870
Attention:	Retail Invoices	Attention:	Geoff Lussier	P.O. #:		
Address:	4919-59th St Suite 100	Address:	920 Brant St. Suite 16	Project:	CB1057.00	
	Red Deer AB T4N 6C9		Burlington ON L7R 4J1	Project Name:		Project Manager:
Tel:	(403) 357-6400 x Fax: (403) 356-3015 x	Tel:	(905) 632-5939 x228 Fax:	Site #:	1622 Roger Stevens Drive	C#650870-06-01 Augustyna Dobosz
Email:	emilie.price@parkland.ca, victoria.pianarosa@parkland.	Email:	g.lussier@terrapex.com	Sampled By:	GS	

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; [X] Table 2 [X] Ind/Comm [ ] Coarse; [ ] Table 3 [ ] Agri/Other [ ] For RSC; [ ] Table ___

Other Regulations: [ ] CCME [ ] Sanitary Sewer Bylaw; [ ] Reg 558 [ ] Storm Sewer Bylaw; [ ] MISA Municipality ___; [ ] PWQO; [ ] Other ___

Special Instructions

Include Criteria on Certificate of Analysis (Y/N)? ___

ANALYSIS REQUESTED (PLEASE BE SPECIFIC)

#	Sample Barcode Label	Sample (Location) Identification	Date Sampled	Time Sampled	Matrix	Field Filtered (please circle): Metals / Hg / Cr VI	Petroleum Hydrocarbons CCME F1 & BTEX	Petroleum Hydrocarbons F2-F4	~~O.Reg 153 ICP/MS Metals and Inorganics~~ O.Reg 153 VOCs	~~Soil Texture (Record % silt, %clay)~~ OReg 153 SVOCs	Moisture	pH CaCl2 EXTRACT	~~Flashpoint~~	O.Reg 558 TCLP ~~Inorganics Package~~ (Heavy metals)	~~O.Reg 558 TCLP PCBs~~	O.Reg 558 TCLP Volatile Organics HS	# of Bottles	Comments
1		TCLP	Feb 26 ~~12:00~~	12:00	SOIL	–	X	X	X	X			~~X~~	X			5	
2					SOIL													
3					SOIL													
4					SOIL													
5					SOIL													
6					SOIL													RECEIVED IN OTTAWA
7					SOIL													
8					SOIL													
9					SOIL													On ice
10					SOIL													

Turnaround Time (TAT) Required:
Please provide advance notice for rush projects

Regular (Standard) TAT: [X]
(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.

Job Specific Rush TAT (if applies to entire submission)
Date Required: ___ Time Required: ___
Rush Confirmation Number: ___ (call lab for #)

* RELINQUISHED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	RECEIVED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	# jars used and not submitted
[signature] Greg Sabourin	18/03/01	1:30	Mariana Vasconcelos	2018/03/01	17:00	
			[signature] / Idriz	2018/03/02	09:00	

Laboratory Use Only				
Time Sensitive	Temperature (°C) on Recei	Custody Seal	Yes	No
	0, 0, 0	Present	Y	
		Intact	Y	

* UNLESS OTHERWISE AGREED TO IN WRITING, WORK SUBMITTED ON THIS CHAIN OF CUSTODY IS SUBJECT TO MAXXAM'S STANDARD TERMS AND CONDITIONS. SIGNING OF THIS CHAIN OF CUSTODY DOCUMENT IS ACKNOWLEDGMENT AND ACCEPTANCE OF OUR TERMS WHICH ARE AVAILABLE FOR VIEWING AT WWW.MAXXAM.CA/TERMS.

* 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. 2/3/3

** SAMPLE CONTAINER, PRESERVATION, HOLD TIME AND PACKAGE INFORMATION CAN BE VIEWED AT HTTP://MAXXAM.CA/WP-CONTENT/UPLOADS/ONTARIO-COC.PDF.

SAMPLES MUST BE KEPT COOL (< 10° C) FROM TIME OF SAMPLING UNTIL DELIVERY TO MAXXAM

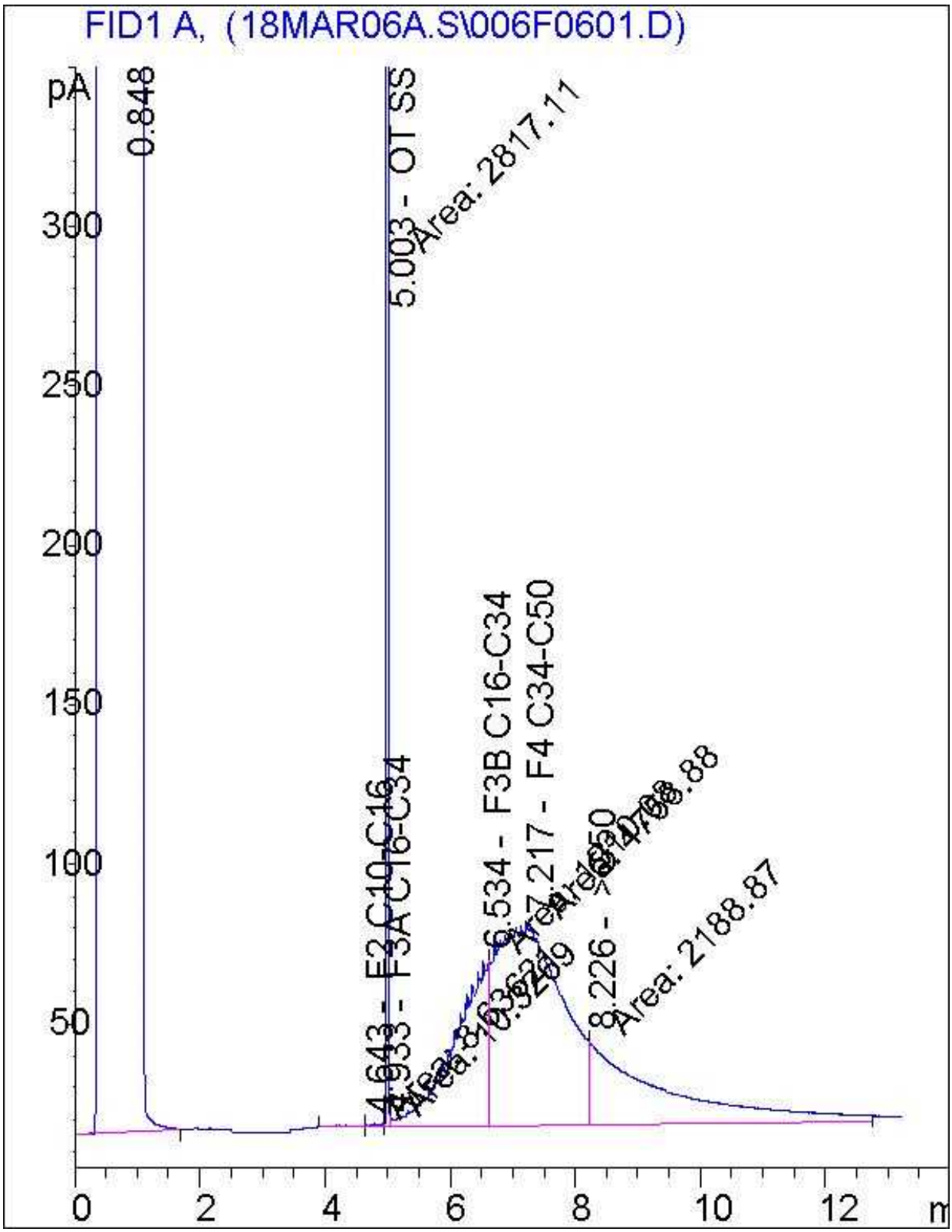
White: Maxxa Yellow: Client

Maxxam Analytics International Corporation o/a Maxxam Analytics

Maxxam Job #: B847405
Report Date: 2018/03/12
Maxxam Sample: GEL410

Terrapex Environmental Ltd
Client Project #: CB1057.00
Project name: 1622 Roger Stevens Drive
Client ID: TCLP

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.

Maxxam Job #: B842304
Report Date: 2018/03/05

Terrapex Environmental Ltd
Client Project #: CB1057.00
Site Location: 1622 Roger Stevens Drive
Your P.O. #: PIONEER

QUALITY ASSURANCE REPORT

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
5420892	ADB	Matrix Spike [GDL934-01]	Soluble (20:1) Sulphate (SO4)	2018/03/02		NC	%	70 - 130
5420892	ADB	Spiked Blank	Soluble (20:1) Sulphate (SO4)	2018/03/02		103	%	70 - 130
5420892	ADB	Method Blank	Soluble (20:1) Sulphate (SO4)	2018/03/02	<20		ug/g	
5420892	ADB	RPD [GDL934-01]	Soluble (20:1) Sulphate (SO4)	2018/03/02	25		%	35
5422743	TA1	Spiked Blank	Available (CaCl2) pH	2018/03/02		100	%	97 - 103
5422743	TA1	RPD	Available (CaCl2) pH	2018/03/02	0.22		%	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.

NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spike amount was too small to permit a reliable recovery calculation (matrix spike concentration was less than the native sample concentration)

Maxxam Analytics International Corporation o/a Maxxam Analytics 32 Colonnade Rd, Unit #1000, Nepean, ON K2E 7J6 Phone: 613 274-0573 Fax: 613 274-0574 Website: www.maxxam.ca

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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 Service 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.

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A Bureau Veritas Group Company

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CHAIN OF CUSTODY RECORD

Page 1 of 1

INVOICE TO:

Company Name: #30396 Parkland Industries Ltd
Attention: Retail Invoices
Address: 4919-59th St Suite 100
Red Deer AB T4N 6C9
Tel: (403) 357-6400 x Fax: (403) 356-3015 x
Email: emilie.price@parkland.ca, victoria.pianarosa@parkland.

REPORT TO:

Company Name: #19684 Terrapex Environmental Ltd
Attention: Geoff Lussier
Address: 920 Brant St. Suite 16
Burlington ON L7R 4J1
Tel: (905) 632-5939 x228 Fax:
Email: g.lussier@terrapex.com

PROJECT INFORMATION:

Quotation #: B75111
P.O. #:
Project: CB1057.00
Project Name: Parkland Kars
Site #: 1622 Roger Stevens Drive
Sampled By: Greg Saboian

Laboratory Use Only:

Maxxam Job #:
Bottle Order #: 650870
COC #: C#650870-05-01
Project Manager: Augustyna Dobosz

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
- [X] Table 2 [X] Ind/Comm [ ] Coarse
- [ ] Table 3 [ ] Agri/Other [ ] For RSC
- [ ] Table ___

Other Regulations
- [ ] CCME [ ] Sanitary Sewer Bylaw
- [ ] Reg 558 [ ] Storm Sewer Bylaw
- [ ] MISA Municipality ___
- [ ] PWQO
- [ ] Other ___

Special Instructions

Include Criteria on Certificate of Analysis (Y/N)? ___

Turnaround Time (TAT) Required:
Please provide advance notice for rush projects

Regular (Standard) TAT: [X]
(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 3DD and Dioxins/Furans are > 5 days - contact your Project Manager for details.

Job Specific Rush TAT (if applies to entire submission)
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	ANALYSIS REQUESTED (PLEASE BE SPECIFIC): ~~Petroleum Hydrocarbons CCME Fr4 + BTEX~~ pH + Soluble Sulphate	Petroleum Hydrocarbons F2-F4	O.Reg 153 (CPMS Metals and Sulphate	Soil Texture (%sand, %silt, %clay)	Moisture	pH CaCl2 EXTRACT	Flashpoint	O.Reg 558 TCLP Inorganics Package	O.Reg 558 TCLP PCBs	O.Reg 558 TCLP Volatile Organics HS	# of Bottles	Comments
1		MW102 Sample 4	February 21, 2018	1:00pm	SOIL	NO	X										1	
2		BH103 Sample 2	February 21, 2018	2:00pm	SOIL	NO	X										1	
3					SOIL													
4					SOIL													
5					SOIL													
6					SOIL													
7					SOIL													
8					SOIL													
9					SOIL													
10					SOIL													

23-Feb-18 15:05
Augustyna Dobosz
B842304
URE ENV-907

RECEIVED IN OTTAWA

On ice

* RELINQUISHED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	RECEIVED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	# jars used and not submitted
RH / RACHEL HARZOG	18/02/23	15:10	Mariana Fasion Rascon	2018/02/23	15:05	
			[illegible]	2018/02/24	10:04	

Laboratory Use Only

Time Sensitive	Temperature (°C) on Recei	Custody Seal	Yes	No
0,0,0		Present	✓	
		Intact	✓	

* UNLESS OTHERWISE AGREED TO IN WRITING, WORK SUBMITTED ON THIS CHAIN OF CUSTODY IS SUBJECT TO MAXXAM'S STANDARD TERMS AND CONDITIONS. SIGNING OF THIS CHAIN OF CUSTODY DOCUMENT IS ACKNOWLEDGMENT AND ACCEPTANCE OF OUR TERMS WHICH ARE AVAILABLE FOR VIEWING AT WWW.MAXXAM.CA/TERMS.

* 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.

** SAMPLE CONTAINER, PRESERVATION, HOLD TIME AND PACKAGE INFORMATION CAN BE VIEWED AT HTTP://MAXXAM.CA/WP-CONTENT/UPLOADS/ONTARIO-COC.PDF.

SAMPLES MUST BE KEPT COOL (< 10° C) FROM TIME OF SAMPLING UNTIL DELIVERY TO MAXXAM

White: Maxxa Yellow: Client

5/3/3

Maxxam Analytics International Corporation o/a Maxxam Analytics